

Income Analysis of Schools in Schooling Markets: The SEP targeted voucher within the Chilean school funding system

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1 Introduction

This document describes the composition of schools' revenues in Chile. Public resources come mainly from the schools' subsidy system, the principal source of income for public schools, and not less relevant for private voucher schools. This system accounts for base subsidies for schools, voucher subsidies linked to students or teachers, and some other allocation or prizes. All these types of revenue are significant economic resources that the state, through the Ministry of Education, gives to public and private subsidized education, in order to support its financing. These resources have different objectives and assignation reasons, and they can be delivered based on school enrollment or school's characteristics, among others. The subsidy system is one of the main items in the public education budget (representing between 50% and 60% of it). Information about the subsidy system can be reached from public databases released by the Ministry of Education. We will review the different sources of public datasets that allow us to compile all types of transfers for each school by month and year, and we will describe all different types of vouchers and assignations for schools, analyzing their composition and distribution. The primary sources of information to build this document are the Ministry of Education's open data platform, and the online repository of laws of the Library of the National Congress of Chile.

Schools' revenues can be obtained from different sources. On the one hand, there are incomes reported by school owners in their annual public accountability report. However, these entries are less detailed, and categories vary over the years. There is also a record for private voucher schools with co-pay, with data about their total and mean income.

The most comprehensive source of information about school revenues is the records published by the Ministry of Education about all transfers delivered to each school. These datasets contain monthly information of each school, including income from each voucher and assignation differentiated by source, considering discounts according to the conditions of the school. This data is available for each school by year and month, so it allows us to have more detailed data about income sources and to do comparative statistics about the composition of total revenue.

After a description of each type of subsidy, we will analyze per capita school revenue for schools considered in the analysis of schooling markets in Chile defined in *Targeted Vouchers, Competition Among Schools, and the Academic Achievement of Poor Students* (More details about schooling markets in *Building Schooling Markets in Chile* - Supplementary document).

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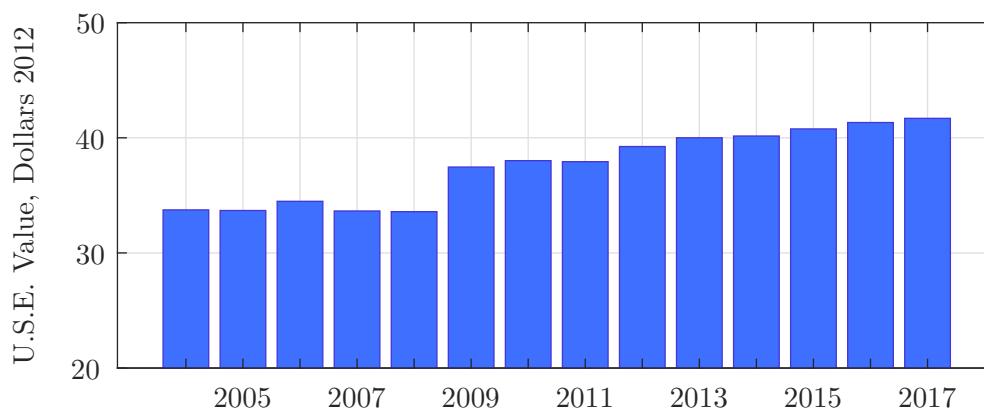
2 Subsidies and Transfers Description

Since 1980, with the educational reform which conceives the different types of school (public, private voucher and private), and the DFL No. 2 that established the diverse transfers delivered to schools, there have been various vouchers and assignments created along the years. Table 8 at the end of this section summarizes the entry of each subsidy that we will describe between 1990 and 2017.

We will classify schools transfers in three groups: (i) voucher subsidies, where resources are transferred to the school but conditioned in students attending or teachers working on it, (ii) base subsidies for schools, where the school receives unconditioned resources or resources conditioned in some of its characteristics; and (iii) other allocations and prizes. Not all subsidies or transfers can be categorized in only one of these groups because they can combine policy objectives for schools with conditions on teachers or students that may generate mixed cases.

Most of the subsidies or assignments are calculated using a factor expressed in a unit of account called USE (*Unidad de Subvención Escolar*, School Subsidy Unit in Spanish), which varies its value according to changes in the consumer price index and other economic parameters. Figure 1 shows the growth of the USE between 2004 and 2017, expressed in 2012 dollars. From here on, we will talk about total revenue referring to the total transfers received by schools from public resources. In these descriptions, we do not consider the top-off fees (co-payment) that private voucher schools can charge to families, but it will be analyzed later.

Figure 1: School Subsidy Unit growth, 2004 - 2017



Note: This figure shows the USE or School Subsidy Unit value growth between 2004 and 2017. Values are expressed as 2012 dollars.

2.1 Voucher Subsidies

In the first place, the **general/base voucher** or **educational voucher**¹ is the core of the public financing system for schools (public or private voucher). Created in 1980, it consists of a monthly payment to the owner of the establishment per student attended. This amount may differ depending on the level or grade of the student, the school day length she attends and the educational modality that the school imparts.

There are three major levels in the Chilean educational system: preschool, primary, and secondary education. Preschool education is composed of the 1st and the 2nd transition levels (students between four and five years old). Primary education accounts for levels 1 to 8 (6 to 14 years old), while secondary education has another four levels. The general voucher subsidy is different for the

¹Article 9 DFL No. 2/98 and its modifications.

following categories (depending on the school-day length): (1) preschool students; (2) 1st grade, and 2nd-grade primary students; (3) 3rd to 6th-grade primary students; (4) 7th and 8th-grade primary students; and (5) 1st to 4th-grade secondary students. However, they can have the same voucher amount established within them².

The voucher can also differ between different education modalities. In secondary school, there are two types: technical education and professional education. There are also other modalities like Differential Special Education and Adult Education.

Finally, schools can have different school day lengths. Before 1997, schools could have a full-school-day (FSD) regime or multiple (often 2) shifts for enrolling and teaching students, daytime and evening school day. In 1997, Law No. 19.532 established the FSD mandatory for most of the subsidized schools (public and private voucher) for third primary grade and above. The implementation was gradual because of infrastructure and resources-related constraints, and some schools were not included because of their education modalities.

Table 1 shows the monthly values of the general voucher subsidy in 2012, measured in dollars of the same year, for some of the different modalities, levels, and school day lengths.

Table 1: General Voucher Subsidy 2012, monthly values

	FSD	No FSD
Preschool (1st and 2nd transitional levels)	-	80
Primary (1st and 6th grade)	110	80
Primary (7th and 8th grade)	110	87
Secondary Professional (Scientist-Humanist)	131	97
Secondary Technical (Agricultural and Maritime)	177	144
Secondary Technical (Industrial)	139	112
Secondary Technical (Commercial)	131	101

Note: This table summarizes the different monthly values of the general voucher for some levels and modalities of education in 2012. Values are expressed in 2012 dollars, and they are the official values before November 2012, when Law No. 20,637 comes into force. FSD stands for “Full School Day” (JEC in Spanish), a program implemented in 1997 through Law N. 19.532, that extended the length of the school day to develop complementary activities for an integral formation (sports, arts, among others), and which comes along with an increase in the general voucher. There are other modalities, as Differential Special Education and Adult Education, that have different values for the general voucher.

There are assignments or other vouchers subsidies that add-up to the general voucher for each student enrolled in the school. The first one is the **increment for the Educational Integration Program** or **PIE increment**³- in Spanish *Programa de Integración Escolar*, that increases the general voucher for students with transitory or permanent Special Educational Needs (NEE in Spanish). The voucher is increased only if the student joins educational levels that develop school integration projects approved by the Ministry of Education.

The second one is the **geographic zone assignment** or the **area assignment**, established in the 11th article of DFL No. 2. It consists of a percentage increase applied to the general voucher, depending on where the establishment is located, and it is intended to compensate teachers and other school workers. This subsidy can also be considered a base subsidy because it depends on

²The general voucher for preschool education was only for no full-school-day (FSD) schools until October 2012, when Law No. 20,637 established an increase in the general voucher and the expansion of it for preschool students in FSD schools, among other modifications. After that, the general voucher for preschool students is the same as the one for 1st and 2nd-grade primary students in FSD schools.

³Article 9 DFL No. 2

the school’s location, but it multiplies the general voucher that is given to the enrollment of the student.

The percentage can go from 0% to 140% and is higher in areas that the cost of living could be expensive because of mobilization or connection issues⁴. Table 2 shows the percentage of schools in each range of the zone assignation for 2012, disaggregated by region. The ranges represent the percentage of the general voucher that is added to its full value. We can see that in the most central regions, such as the Metropolitan Region (13th), where the capital Santiago is located, the area assignation is zero; while if we observe more remote regions, such as the southern part of the country (regions 11th and 12th) or the northern ones (15th and 1st), we can see much higher values for this assignation.

Table 2: Percentage of schools in each range of the Zone Assignation in 2012

Region	0%	10-30%	35-70%	80-105%	115-140%
1	0	0	87	13	0
2	0	52	46	2	0
3	0	80	20	0	0
4	0	100	0	0	0
5	99	1	0	0	0
6	100	0	0	0	0
7	86	13	1	0	0
8	0	99	1	0	0
9	0	95	5	0	0
10	0	57	40	3	0
11	0	0	0	65	35
12	0	0	64	35	1
13	100	0	0	0	0
14	0	100	0	0	0
15	0	0	87	13	0

Note: This table summarizes the percentage of schools in each range of the zone assignation, by region in 2012. The percentage of increase can be: 0, 10, 15, 20, 25, 30, 35, 40, 50, 55, 60, 70, 80, 90, 95, 105. Remote regions have higher percentages for zone assignation because it compensates for the cost of living due to mobilization and connection issues. The 13th, 6th, and 5th regions are the ones with the lowest percentages because they are the central regions (the capital Santiago is located in the 13th region), while the southern (11th and 12th regions) and the northern regions(15th and 1st) are the ones with the highest percentages.

The third subsidy that add-up to the general voucher is the **Boarding School Voucher**. This subsidy goes to schools that serve as boarding schools to finance expenses for housing and feeding students, and expenses for maintenance and operation of the establishment. It also allows scholarly attention to students with access problems, either by mobilization or distance. This case is similar to the zone assignation where the transfer goes to schools that accomplish certain conditions, but it is considered a voucher subsidy because it is delivered to the school due its enrollment, so it depends on students and the transfers vary if the student moves to another school.

Another voucher subsidy that goes to the school because of the characteristics of students is the **Voucher for Student Retention**. Its objective is to promote the incorporation, continuity, and end of the twelve years of schooling of students from 7th grade (primary) to 4th grade (secondary). This voucher applies for public and private voucher schools, and for students that belong to families

⁴The percentage of increase can be: 0, 10, 15, 20, 25, 30, 35, 40, 50, 55, 60, 70, 80, 90, 95, 105

participating in the *Chile Solidario* program⁵

Finally, there is a voucher that can be classified as a base subsidy because it is intended to compensate the teaching staff, but we describe here because it directly add-ons to the general voucher (schools subsidies for teaching staff are described in the next section). The **Special Additional Subsidy** (SAE in Spanish) is a subsidy that accounts for three different assignments: the Proportional Bonus (*Bono Proporcional*), the Complementary Form (*Planilla Complementaria*) and the Extraordinary Bonus (*Bono Extraordinario*).

Law 19,410 (1995) established the SAE, which was an amount given to school owners based on the enrollment of the school (adding-up to the general voucher) for compensating teachers' wages through these three different bonuses⁶. The 8th article established the permanent right of teachers of public and private voucher schools to receive an increment proportional to their designated working hours (the proportional bonus); while the 9th article states the permanent right of receiving an amount that complements the remuneration when it is below the MNBR (the complementary form). Finally, the 10th article determines that if there are resources left from these two transfers, it will be another bonus for teachers (the extraordinary bonus). These three bonuses remained until 2016 when they were derogated by Law No. 20,903, leaving only the complementary form. In 2012, the value of the monthly SAE voucher was 3.5 US dollars (US dollars of 2012) per student on average for primary education students.

2.1.1 The SEP Voucher

In 2008, Law No. 20,248 established the **Preferential School Voucher** or *Subvención Escolar Preferencial* (SEP). This subsidy was one of the most important vouchers that add-on resources to the general voucher because it raises the transfers per kid in 50% for low-income students, changing the subsidy structure from a flat voucher to a targeted voucher. It is intended to increase funding to low-income families to improve their school choice and the students' performance. The transfer goes to *priority students*, who are students that belong to approximately 40% of the most vulnerable families of the socioeconomic distribution. One side of the SEP policy is to raise educational vouchers to vulnerable students to increase schools' incentives to enroll them. The other side is that vulnerable students can choose more and better schools because they are exempt from paying any tuition or top-off fees. These conditions rule for schools that sign an agreement with the Ministry of Education to accept priority students without financial charges or selection of any type, in exchange for receiving more resources.

There are two more voucher subsidies related to the SEP policy. The first one is the **SEP Concentration Voucher**, which accounts for additional resources for schools with a higher concentration of priority students. The value of the voucher increases as the percentage of priority students in the school grows, starting from 15% upwards, defining four concentration segments: between 15 and 30%, between 30 and 45%, between 45 and 60%, and 60% upwards. The other SEP-related voucher subsidy is the voucher for **Preferent Students**. It began in 2016, and it is an extension of the SEP voucher for students that are not priority students, but whose families are in the bottom 80% of the income distribution. This additional subsidy is half the value of the original SEP voucher.

⁵*Chile Solidario* is a public system of social protection focused on families from extreme poverty levels, aimed to promote their inclusion to social networks and to improve their living conditions (established in Law No. 19,949, 2004).

⁶Law 19,410 only established this voucher regime for 1995 and 1996, so later in 1995, Law No. 19,429 determined an annual increase of the SAE, setting it as a permanent transfer. Law No. 19,598 (1999) and Law No. 20,247 (2008) made modifications in the same direction. The first one stated that the value of SAE must be expressed in USE, meaning that it will increase proportionally with other vouchers subsidies; and the second one officially incorporated SAE to the permanent voucher system

Table 3 shows the annual values of the general voucher and each SEP voucher. Values are calculated using the official monthly value reported by the Ministry each year and multiplied for twelve months. These subsidies are paid based on the enrollment of the school according to the different types of students.

Table 3: General and SEP Vouchers transfers per Student

Year	General Voucher	SEP	Preferent SEP	SEP Concentration
2005	974	-	-	-
2006	997	-	-	-
2007	973	-	-	-
2008	1,110	564	-	102
2009	1,238	629	-	113
2010	1,256	639	-	115
2010	1,253	637	-	115
2012	1,314	798	-	142
2013	1,384	813	-	145
2014	1,390	816	-	146
2015	1,411	829	-	148
2016	1,430	1,008	504	150
2017	1,498	1,017	508	151

Note: This table shows the annual values in 2012 dollars of the general voucher and SEP-related vouchers. The values correspond to the subsidies that would receive a 1st-grade student that attends a school with a high concentration of priority students (more than 60%). Values are calculated using the official monthly value reported by the Ministry of Education each year, and it is multiplied for twelve months. These vouchers are paid based on the average enrollment of the school for the past three months. For months that are not accounted in the scholar year, the voucher considers the three nearest “active” months before the month paid.

2.2 Base Subsidies for Schools

Several subsidies are paid to schools because of their characteristics, not being conditioned directly to the enrollment of students. In this section, we describe the main base subsidies for schools. We will also consider some vouchers related to the teaching staff that are not completely “base” vouchers but not depend directly on students enrolled.

Before beginning with the description of each voucher, there is a discount on the general voucher that the school receives from its enrollment, which depends on the charge that the school does to each family to enroll their child. Private voucher schools can charge a price over the general voucher and enrollment charges to families for entering the school. There are certain conditions under which students do not pay charges, like being a priority student (as mentioned before in the description of SEP voucher). Schools that charge top-off fees are called schools with *financiamiento compartido* or shared-funding⁷, and it has consequences in the general voucher that they receive. Schools that have co-payment have a discount over the general voucher, based on the price that they charge (as shown in Table 4). The discount is known as **Shared-Funding Discount**. Table 5 shows the percentage of private voucher schools that charge co-pay each year.

⁷The shared-funding or co-payment was first announced in Law No. 18,768 (46th Article), in 1988, as a new regime only for school owners of private voucher schools. Later in 1993, Law No. 19,247 (9th Article) made more attractive this form of funding, increasing the co-payment limit and reducing the discount to the general voucher that was linked to the top-off fees charged.

Table 4: Groups of voucher discount for schools with co-payment

Group	Average amount of co-payment charged in U.S.E. in 2012 USD		% of discount in general voucher	Private Voucher schools in Schooling Markets in 2012
I	Less or equal to 0.5	Less or equal to 19.6	0 %	674
II	Over 0.5 USE to 1	Over 19.6 USD to 39.2	10 %	378
III	Over 1 USE to 2	Over 39.2 USD to 78.5	20 %	331
IV	Over 2 USE to 4	Over 78.5 USD to 157.0	35 %	270
Number of Private Voucher Schools in Schooling Markets without Co-Pay				558

Note: This table shows the groups for school voucher discounts by the amount charged as co-pay established in Law No. 19,247 (1993). Values are in USE and in the equivalent amount on USD for 2012. With the Inclusion Law in 2015, the maximum amount charged for shared funding in that year was frozen in its nominal value, so that it decreases with the devaluation of the currency, while the decrease in resources is compensated with a nominal increase of the average school voucher and the application of new types of targeted vouchers for middle and low-income families.

Table 5: Percentage of Private Voucher Schools by amount of co-payment charged yearly

Year	Co-payment amount charged			
	No charge	Less than 500 USD	Between 500 USD and 1,000 USD	More than 1,000 USD
2005	31%	48%	15%	6%
2006	30%	48%	15%	7%
2007	30%	48%	15%	6%
2008	29%	50%	14%	6%
2009	30%	48%	15%	8%
2010	30%	48%	14%	8%
2011	29%	49%	14%	8%
2012	31%	46%	14%	9%
2013	30%	45%	15%	10%
2014	31%	46%	14%	10%
2015	33%	44%	13%	10%
2016	53%	25%	13%	9%
2017	57%	22%	12%	9%

Note: This table shows the percentage of private voucher schools by groups of amount charged as shared-funding yearly. Schools considered are urban and elementary schools. Amounts are expressed in constant 2012 USD.

There are two base subsidies related to the rurality of the location where the school is placed: the Rurality Increment and the Contribution for Rural Floor. These two are transfers that seek to compensate for the higher cost of educating children in rural areas. These vouchers are unified in the **Subsidy for Rurality**, and it varies according to the number of children attending the school. It also includes urban schools that are in municipalities (*comunas* in Chile) that do not exceed 5,000 inhabitants and with a population density of no more than two inhabitants per square kilometer. In this context, this transfer is related to enrollment, but it is fully conditioned to school characteristics. The zone assignation, described as a voucher subsidy, does not multiply the subsidy

for rurality.

There are some vouchers related to the support of students' development by the school, like the Voucher for Student Retention describe above. In the context of base subsidies, there is a transfer called textbfEducational Reinforcement Voucher that aims to improve incentives from schools to enhance the educational achievements of students. Specifically, it is a transfer for schools that perform reinforcement courses to support low-performance students and help them improve, preferably considering students in higher social risk.

2.2.1 Transfers for the Teaching Staff

There are contributions and vouchers delivered to schools as base subsidies that go directly to compensate teachers and education workers, either for work conditions or for their performance, like the SAE described in the previous section. Within the compensations for working conditions, we have, in the first place, the **Assignment of Performance under Difficult Conditions**. This assignment is aimed at teachers who work in schools classified as "difficult performance schools" due to their geographical location, marginality, extreme poverty, or other similar characteristics. The benefit corresponds to a percentage of up to 30 % of the Minimum National Basic Remuneration (MNBR)⁸.

As of 2016, schools receive an additional Assignment of Performance for Difficult Conditions associated with the **Assistant Education Personnel**, in addition to that corresponding to the teachers. However, Law No. 20,903 was published in the same year, creating a new System of Professional Development for Teachers, which built a new structure of remunerations for teachers and other education workers, modifying the existing assignments. In particular, one of the vouchers that the law derogates is the Assignment for Difficult Conditions.

Another subsidy that increases teachings staff remuneration was established in Law No. 19,464 (1996). This law introduced a contribution to salaries of the education assistants staff, called **Education Assistants Voucher**. This voucher is proportional to the working hours of the assistants, and its value is determined every January for the rest of the respective year.

There are other cases in which wage compensations are delivered due to the position that the teachers fulfill in the school. In this category, we have the **Assignment for Collective Performance** or ADECO established in Law No. 19,933, which benefits education workers who fulfill teaching-directive and technical-pedagogical functions in public or private voucher schools⁹. For rural schools, there is another compensation called **Bonification to Teacher in Charge**, which is an income that goes directly to the teacher who is in charge of rural subsidized schools when there is not a director, and that additionally does teaching tasks.

2.2.2 Other Allocations and Prizes for Teachers

As we mentioned before, vouchers for compensating teachers can be attributed because of working conditions or because of teachers' performance. These latest allocations are not recorded as regular income for schools because they can change annually, but they can be a relevant contribution to total revenues every year.

In its 16th article, Law No. 19,410 creates the National System of Performance Evaluation or SNED (for *Sistema Nacional de Evaluación de Desempeño* in Spanish), which is applied since 1996 to identify best-performance schools within public and private voucher schools from the same

⁸The Minimum National Basic Remuneration is the minimum monthly income for teachers, understood as the product of the minimum value of the chronological hour set by law for each level of the educational system, multiplied by the number of weekly chronological hours for which the education professional has been hired.

⁹The school must have more than 250 students enrolled in March each year

region. Schools are evaluated in six fields: effectiveness, overcoming, initiative, school conditions improvement, opportunities equality and integration of the school community¹⁰. The best-evaluated schools become creditors of the **Excellence Performance Subsidy** (*Subvención por Desempeño de Excelencia*) for two years, which is an economic benefit for teachers aimed at the improvement of the education quality. Schools have to use 90% of these resources directly in compensating teachers, while the rest can be spent in other fields defined by each school. In 2008, Law No. 20,244 expands the voucher for Excellence Performance to education assistants.

In 2004, Law No. 19,961 established a system of evaluation for teachers who fulfill classroom teaching functions in public schools¹¹. The Center for Improvement, Experimentation, and Pedagogical Research (CPEIP in Spanish), an institution belonging to the Ministry of Education, is in charge of the technical coordination for the correct implementation of evaluation processes. The evaluation is composed of four instruments: a portfolio, an auto-evaluation, an interview with another teacher, and reference reports.

The portfolio aims to evaluate different fields of the teaching practice, inside and outside the classroom. It is composed of reflection activities about the teaching vocation and a recorded class to evaluate the class structure and the teacher's behavior with students (participation promotion, feedback, support to students). The auto-evaluation, the interview with another teacher (which finishes in a pair-evaluation), and the reference reports written by the director or other high administrators, aim to evaluate the teaching practice and performance of the teacher on its own development and within the school community.

Teachers can be qualified as outstanding, competent, basic, and unsatisfactory. These results not only imply quality and professional development signaling for the teacher but can also mean wage increases for the well-qualified teachers. Outstanding and competent teachers can apply to the **Variable Assignment for Individual Performance** (AVDI), a transfer of resources that seeks to strengthen the quality of education and recognize the merits of teachers. However, it was derogated by Law No. 20,903 in 2016.

Another benefit that was created to enhance quality education and to recognize teachers of excellence, but was also derogated by Law No. 20,903, was the **Assignment for Pedagogical Excellence** or AEP. This voucher was delivered to schools to compensate teachers that were accredited as teachers of excellence through the evaluation of a knowledge test and a portfolio, similar to the AVDI.

Finally, to recognize teachers' education level, there is a monthly remuneration benefit to teachers who are accredited having a professional degree and a major diploma. The amount of this contribution, called **Professional Acknowledgment Bonus**, is determined for a 30-hour working day (proportionally paid for teachers who work less than 30 hours) and is distributed 75% for the professional degree and 25% for the major diploma.

Some other vouchers addressed to teachers not detailed in this document are the **compensatory bonus**, the **assignment for professional development**, and the **assignment for teaching in schools with a high concentration of priority students**. The last two assignments were established with Law No. 20,903, and they replace the AVDI and the AEP for the first one, and the Assignment of Performance under Difficult Conditions for the second one.

In summary, schools' revenue coming from transfers is mainly constituted by the general voucher, with additional resources coming from the other subsidies. As mentioned before, the importance of the SEP voucher has been growing over time, while the other transfers and allocations have maintained their relative relevance. Table 6 shows the average percentage of total

¹⁰The first two fields are measured based on standardized test scores of the school. The rest of the fields have their own measures.

¹¹The evaluation is compulsory for teachers in public schools. In 2017, private voucher schools requested access to participate in the evaluation system in 2018.

revenue from transfers for each subsidy described above, between 2008 and 2012 for schools considered in markets. On the other hand, Table 7 shows the percentage of schools that receive each subsidy for the five years considered.

Table 6: Subsidies' importance over total revenue from transfers, 2005-2017

Subsidy	05	06	07	08	09	10	11	12	13	14	15	16	17
General Voucher	84.6	84.1	82.6	80.9	76.8	75.2	74.3	72.5	70.1	69.8	69.9	63.0	65.3
SEP	0.0	0.0	0.0	3.0	9.0	11.0	12.0	14.3	17.4	18.1	17.9	18.5	18.9
SEP Preferent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.7
Zone													
Assignment	6.8	6.8	6.7	6.6	6.3	6.2	6.1	6.0	5.8	5.8	5.8	5.3	2.7
SAE	3.9	3.8	3.7	3.1	2.9	2.8	2.8	2.7	2.5	2.5	2.5	2.2	1.8
SNED	1.3	1.8	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.4	0.9	1.2
Difficult													
Conditions	1.3	1.3	1.3	1.1	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.7
Boarding School	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1
Student													
Retention	0.1	0.2	0.2	0.2	0.3	0.4	0.3	0.4	0.4	0.0	0.0	0.5	0.5
AVDI	0.0	0.0	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.2
AEP	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1
ADECO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Educational													
Reinforcement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Professional													
Acknowledgment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	1.5

Note: This table shows the average percentage of each voucher over the total revenue from transfers between 2005 and 2017 for schools considered in schooling markets. Columns do not sum up 100% because of other vouchers not considered relevant for schools in markets, like the rurality voucher, the bonus for teacher in charge, the contribution for free schooling, and the school maintenance support voucher. The PIE voucher is considered in the general voucher. In 2014 and 2015, records of subsidies do not report positive values for the Student Retention Subsidy.

Table 7: Percentage of schools that receive transfers, 2005-2017

Subsidy	05	06	07	08	09	10	11	12	13	14	15	16	17
General Voucher	100	100	100	100	100	100	100	100	100	100	100	100	100
SEP	0.0	0.0	0.0	60.9	65.8	67.1	70.7	74.7	79.7	80.5	82.0	84.1	86.1
SEP Preferent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.8	72.2
Zone													
Assignment	40.1	40.0	40.2	40.5	40.5	40.7	40.7	40.8	40.7	40.8	40.9	40.9	41.1
SAE	100	100	100	100	100	100	100	100	100	100	100	100	100
SNED	21.3	28.4	28.4	30.5	30.3	30.1	29.9	30.2	30.2	31.4	31.7	31.4	31.9
Difficult													
Conditions	30.8	38.7	33.6	40.1	34.8	42.6	37.9	44.2	38.3	44.7	39.1	45.9	39.2
Boarding School	5.3	5.2	5.0	4.9	4.8	4.6	4.3	4.3	3.6	3.5	3.1	3.2	2.8
Student													
Retention	52.3	52.7	54.0	60.4	57.8	59.5	48.9	58.9	50.9	0.0	0.0	70.7	69.8
AVDI	0.0	5.5	20.5	36.4	39.1	40.0	40.5	40.4	40.3	40.2	40.6	41.2	41.4
AEP	0.0	21.1	24.7	28.2	26.5	29.0	29.0	29.0	34.2	40.0	47.1	49.9	44.5
ADECO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9	14.0
Educational													
Reinforcement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	5.1
Professional													
Acknowledgment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.9	100

Note: This table shows the percentage of schools that receive each voucher between 2005 and 2017, for schools considered in schooling markets in *Targeted Vouchers, Competition Among Schools, and the Academic Achievement of Poor Students*. Columns do not sum up 100% because schools can receive multiple vouchers. In 2014 and 2015, records of subsidies do not report positive values for the Student Retention Subsidy.

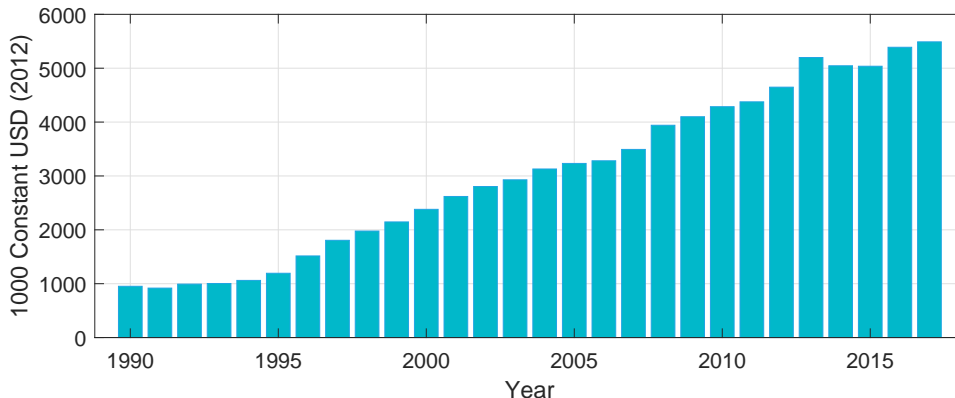
Table 8: Subsidies Timeline

Subsidy	1990	1995	2000	2000s													
				05	06	07	08	09	10	11	12	13	14	15	16	17	
General Voucher	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Educational Integration	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Zone assignation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Boarding School	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rurality Subsidy	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Educational Reinforcement		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Student Retention				X	X	X	X	X	X	X	X	X	X	X	X	X	X
SEP Voucher								X	X	X	X	X	X	X	X	X	X
SEP Preferential																	X
SEP Concentration								X	X	X	X	X	X	X	X	X	X
Difficult Conditions			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Difficult Conditions TA																	X
SAE		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Education Assistants			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SNED			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AEP			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AVDI			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ADECO			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Professional Acknowledgment						X	X	X	X	X	X	X	X	X	X	X	X

Note: This table summarizes the entry of the different transfers described in this document over the years.

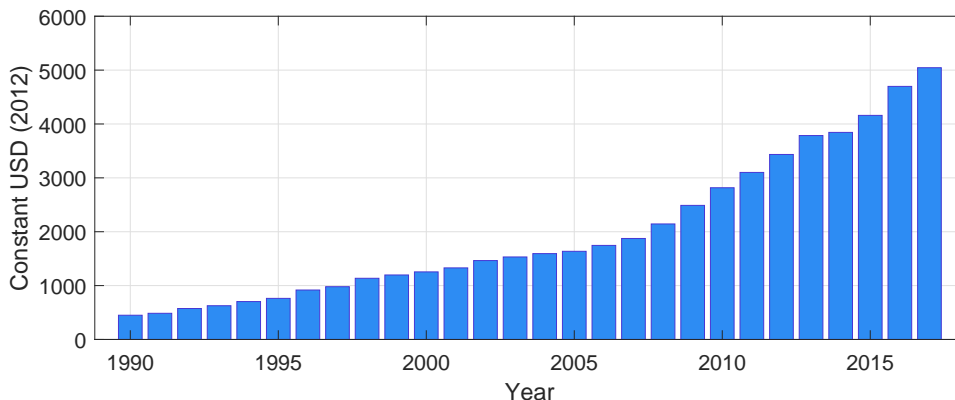
Figure 2 shows the evolution of government expenditure in the general voucher in thousands of dollars. Additionally, Figure 3 shows the evolution of total government expenditures in education per student in Chile. Both spending on the baseline voucher and total spending per student has been steadily rising in real terms since the 90s, driven by the series of policies and vouchers listed in Table 8. This fact shows the continuous delivery of resources to public education, with the aim of expanding coverage and access in the first instance, and then increasing quality and equity.

Figure 2: Government expenditure in general voucher



Note: Expenditures come from the Public Sector Budget Laws between 1990 and 2017 from DIPRES, and they account only for the general voucher.

Figure 3: Government expenditures per student in Chile

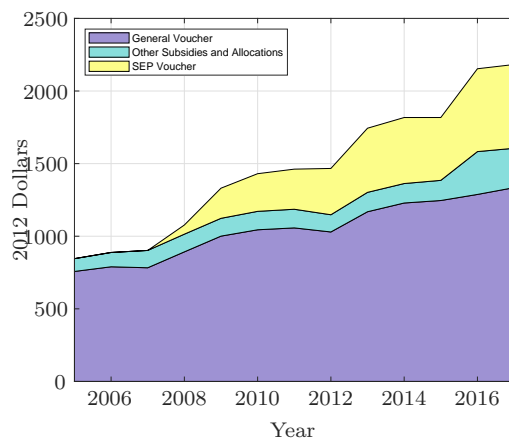


Note: Expenditures come from the Public Sector Budget Laws between 1990 and 2017 from DIPRES, and they account for all public budgets for the Ministry of Education. Enrollment comes from: *Estadísticas de la Educación 2003*, *Estadísticas de la Educación 2012*. From 1990 until 2007, public spending per student increased steadily in real terms by 320% between those years, with an average annual growth rate of 8.76%.

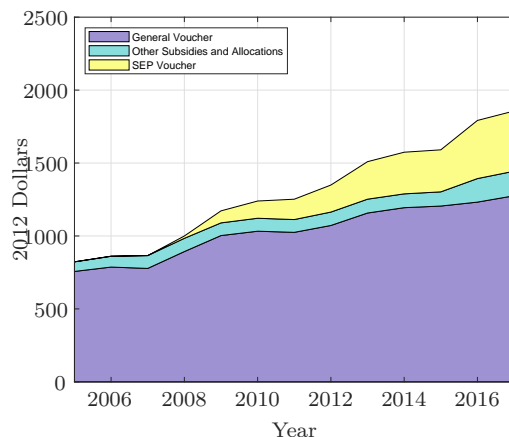
3 Revenue Analysis

As mentioned before, total school revenue is mainly composed of the educational or general voucher. Panels (a) and (b) in Figure 4 show the composition of total revenue for schools in schooling markets defined in *Targeted Vouchers, Competition Among Schools, and the Academic Achievement of Poor Students*, and they reveal once again this fact, showing the absolute contribution of subsidies to schools' budgets¹². The second highest contribution of resources for schools is the increasing share coming from the SEP voucher since 2008. This pattern is similar between public and private voucher schools. Note that private voucher schools can receive more resources from top-off fees that are not considered in this plot.

Figure 4: Schools Revenue Composition



(a) Public Schools



(b) Private Voucher Schools

Note: This figure shows per capita annual revenue from the different voucher subsidies and transfers. Other subsidies and allocations consider all the transfers described in the previous sections except for general voucher and SEP-related vouchers. This figure shows average values for urban schools, and it does not account for the area assignment, assuming schools located in centralized urban areas (as the capital city, Santiago). The figure shows that the highest contribution is made from the general voucher, while the second-highest contribution is the SEP voucher. In 2007, the general voucher provided on average 782.8 USD to public schools' budgets and 777.5 USD to private voucher schools' budgets. In 2011, the general voucher provided on average 1057.4 USD and 1024.9 USD to public and private schools, respectively, while the SEP voucher contributed in 276.2 USD and 139.5 USD. In 2017, these values raised to 1334,5 USD and 1275,6 USD from the general voucher and increased to 576.7 USD and 412.7 from the SEP voucher to public and private schools, respectively.

¹²For rural schools, not considered in the analysis of schooling markets in *Targeted Vouchers, Competition Among Schools, and the Academic Achievement of Poor Students*, both the general voucher and the rural subsidy mean a great source of resources as we would expect. Also, they received a significant share of their total revenue from the area assignment, the bonus for teacher in charge, and the assignment for difficult conditions, vouchers targeted to rural and/or vulnerable schools.

The analysis of aggregate revenue we effectuate in this report is based on per capita revenue of schools, measured as total annual income for the general voucher and other regular subsidies and allocations over the average enrollment by year. The total revenue includes the general voucher, the PIE increment, the area assignation, the boarding school subsidy, the rurality subsidy, the assignation of performance under difficult conditions, the special additional subsidy, the education assistants voucher, and the bonification to teacher in charge¹³. For private voucher schools, the total revenue also includes contributions and discounts related to shared-funding and the price that they can charge to families (top-off fees).

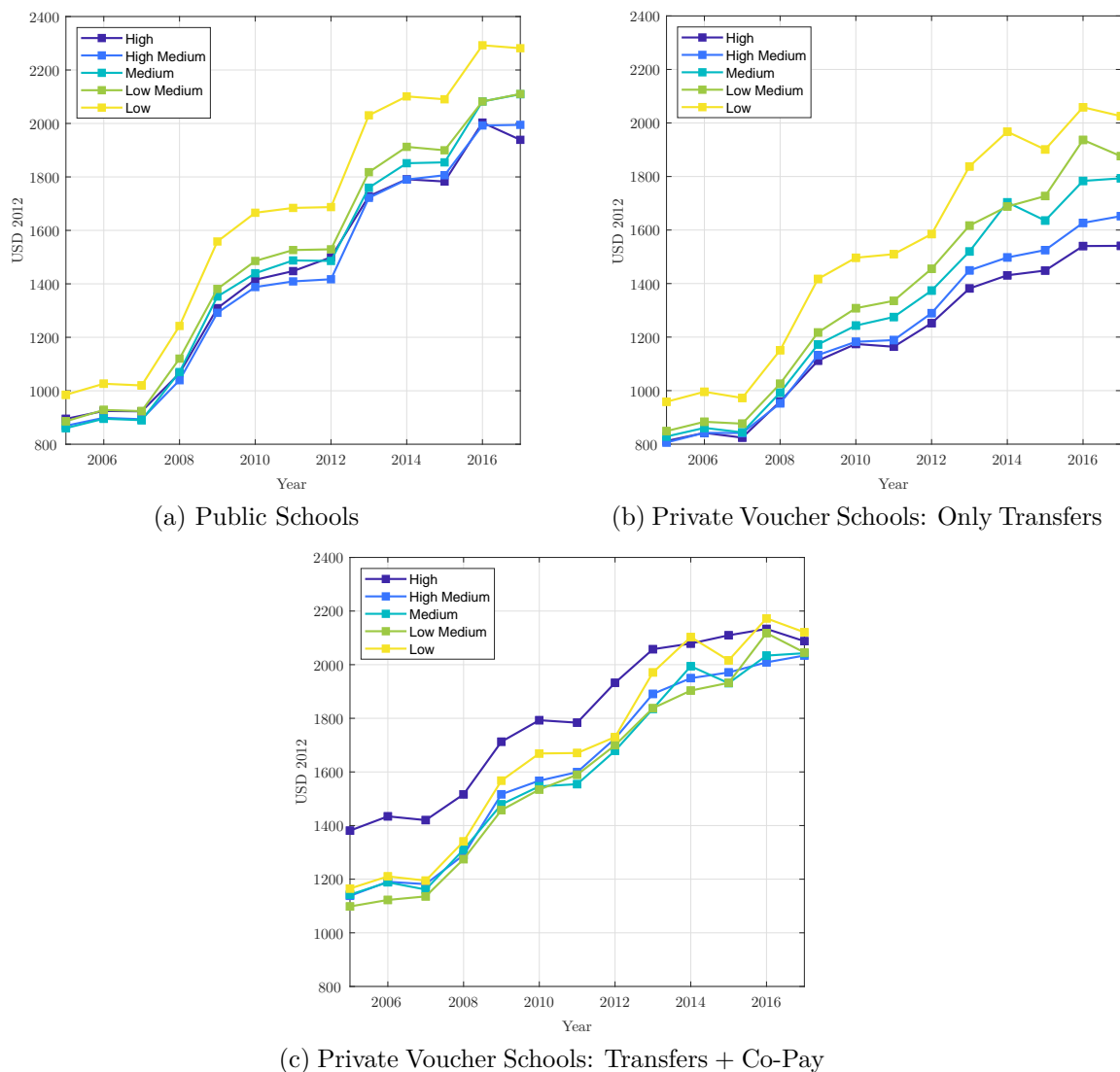
Figure 5 shows per-capita (per-student) revenues between 2005 and 2017, differentiating by socioeconomic context of the school. Panels (a) and (b) consider only public transfers for public and private voucher schools, respectively, while panel (c) shows revenues from transfers and co-pay for private voucher schools.

The socioeconomic context or status of the school is defined by quintiles of exposure to the policy. This measure is based on the concentration of eligible students in the neighborhood. Precisely, it is calculated as the share of SEP eligible students that live within a 1.5 km radius from the school. The first quintile corresponds to 20% of the schools with the lowest proportion of eligible children in the neighborhood, and it is classified as “High SES”. The fifth quintile is then classified as “Low SES”. Eligible students in 2007 are identified as eligible students in 2008 who attended second grade, assuming they would maintain their eligibility status the previous year. From 2005 to 2007, the share of eligible students defining the socioeconomic status of the school is fixed.

We can see that per-capita revenue has been growing across the years, being higher for Low SES public schools relative to other public schools. This also happens when we look at revenues from transfers for private voucher schools. However, when we consider co-pay, it is higher for High SES schools at the beginning, but then the gap between High and Low SES becomes smaller until it fully reverts near 2015. The trends observed for private voucher schools are virtually the same between panels (b) and (c) for Low and Low-Medium SES schools, while Medium, High-Medium, and High SES schools show a significant rise. In the figures we can see three major jumps on schools revenue: the implementation of the SEP policy in 2008; then its reforms throughout 2011 (noticed in 2012) that increased the value and the usage flexibility of the subsidy; and in 2015 with the Inclusion Law, which not only increased transfers to schools but also created a new category to receive resources from the SEP policy. These jumps are more notorious for public schools.

¹³The rurality subsidy and the bonification to teacher in charge are less relevant in schools considered for the analysis because rural schools are not contemplated in the studied schooling markets.

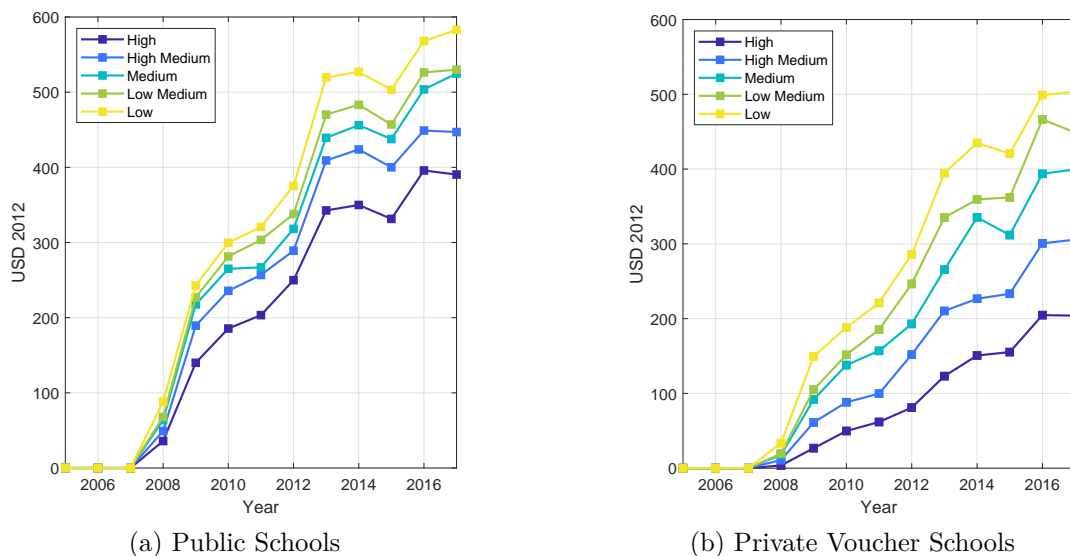
Figure 5: Per Capita Revenue by SES Group



Note: This figure shows the per capita annual revenue for public and private voucher schools, differentiated by socioeconomic group. Revenues are composed of the general voucher, the SEP voucher, and the price charged for private voucher schools with co-pay. The yearly per capita revenue for private voucher schools goes from the general voucher (US\$973) if they do not charge top-of-fees to over US\$2200 in percentile 99. It shows that schools' incomes have been increasing over time and that Low SES public schools receive more resources relative to other SES groups within public schools. On the other hand, High SES private voucher schools receive more resources (mainly for top-off fees charged to families) relative to other SES groups within private voucher schools.

Figure 6 shows the per capita revenue that schools receive from SEP vouchers. Income from the SEP policy has continuously grown for both public and private voucher schools, and it is always higher the lower is the socioeconomic status of the school. This trend arises because Low SES schools concentrate more vulnerable students, increasing not only the individual SEP voucher but the SEP concentration voucher as well.

Figure 6: Per Capita SEP Income by SES Group

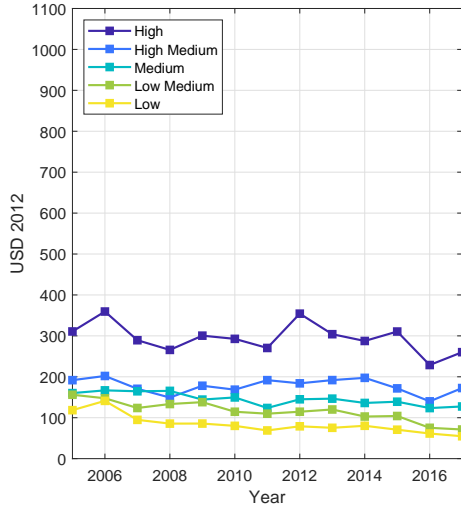


Note: This figure shows the per capita annual revenue for public and private voucher schools due to the SEP policy, differentiated by socioeconomic group. It shows that income from the SEP voucher has been increasing over time, and it is always higher the lower is the socioeconomic status of the school.

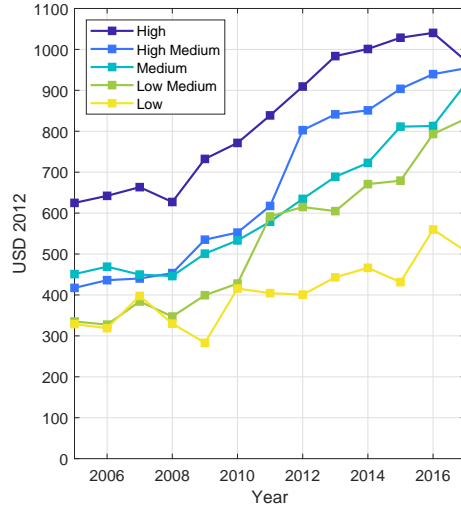
To deeply analyze the composition of revenues on private voucher schools, we divide them into SEP and Non-SEP private voucher schools. In Figure 7, we can see the evolution of the prices charged by private voucher schools differentiated by these two groups. SEP private voucher schools have maintained their average price charged since the application of the SEP Law, with a small downward trend for Low and Medium-Low SES schools. This situation arises because they can not charge priority students, so the average price decreases to a higher number of priority students. On the other hand, non-SEP private voucher schools have increased their prices since 2008. In line with this evidence, Figure 8 shows the per capita revenue for SEP and Non-SEP private voucher schools. Because of the slight difference in prices between High and Low SES schools that have SEP vouchers, incomes are higher for Low SES schools (which concentrate a higher number of vulnerable students). For non-SEP private voucher schools, the situation is the opposite, High SES schools always have more per-capita revenue within SES groups across the years, because of higher prices and the absence of compensations for public transfers related to the SEP policy.

It is essential to take into account two things about price-charging by private voucher schools: (i) for non-SEP schools, it starts to grow since 2008 when the SEP policy begins; and (ii) for all private voucher schools, it is decreasing in recent years. The second point can be addressed to the Inclusion Law (2015) because one of its objectives was to put an end to out-of-pocket payments from parents in the education of their children. It froze charges and push them downward in real terms while public funding increases to progressively eliminate co-payment in future years. As shown in Table 9, the percentage of private voucher schools that charges prices have steadily decreased in the last years.

Figure 7: Evolution of Prices Private Voucher Schools



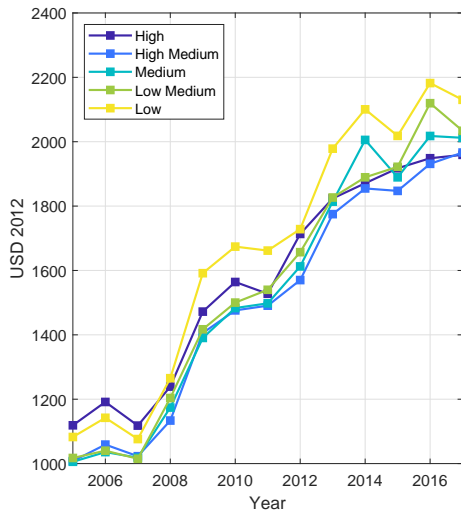
(a) SEP Private Voucher Schools



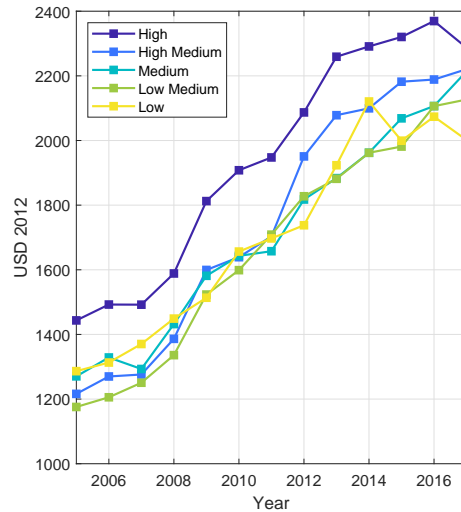
(b) Non-SEP Private Voucher Schools

Note: This figure shows the evolution of prices for private subsidized schools, differentiated by SES Group and SEP status. It shows how prices for SEP private voucher schools have remained flat with slight downward trends, while prices for non-SEP private voucher schools have increased.

Figure 8: Per Capita Revenue by SES Group and SEP status (Private Voucher Schools)



(a) SEP Private Voucher Schools



(b) Non-SEP Private Voucher Schools

Note: This figure shows the per capita annual revenue for private subsidized schools, differentiated by the socioeconomic group and the SEP status. It shows the inverse relation between SES Group and per capita revenue when we analyze SEP/non-SEP private voucher schools.

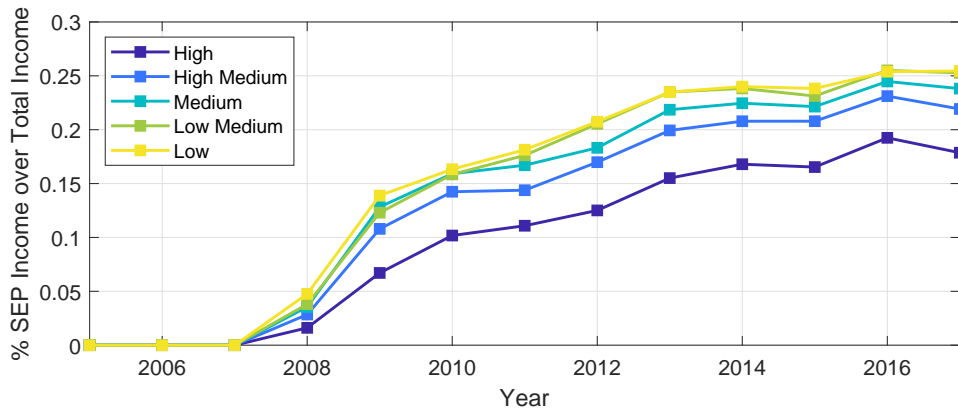
Table 9: Percentage of Private Voucher Schools with Co-Pay, 2005-2017

Private Voucher Schools	05	06	07	08	09	10	11	12	13	14	15	16	17
With Co-Pay	74.3	74.6	74.9	76.0	75.6	75.7	75.8	74.7	74.4	74.0	72.5	50.9	52.9
Without Co-Pay	25.7	25.4	25.1	24.0	24.4	24.3	24.2	25.3	25.6	26.0	27.5	49.1	47.1

Note: This table shows the percentage of private voucher schools with and without co-pay over schools considered in schooling markets.

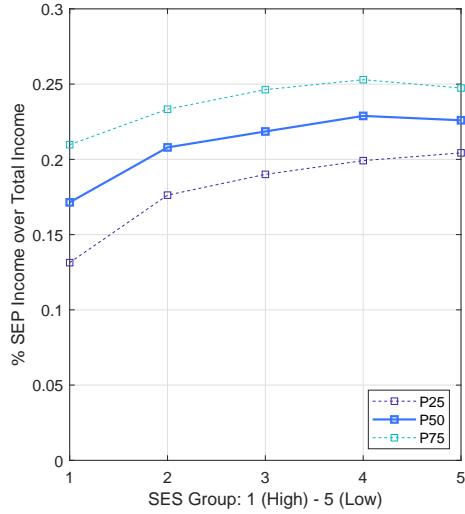
Figure 9 shows the importance of SEP income over total revenue for SEP private voucher schools, and it can be noted the growing trend of the share of SEP resources, specifically for Low SES schools. Figure 10 shows the heterogeneity of the distribution of SEP share of total revenue through its percentiles 25, 50, and 75, within public and private voucher schools in 2012.

Figure 9: SEP share of Total Revenue: SEP Private Schools

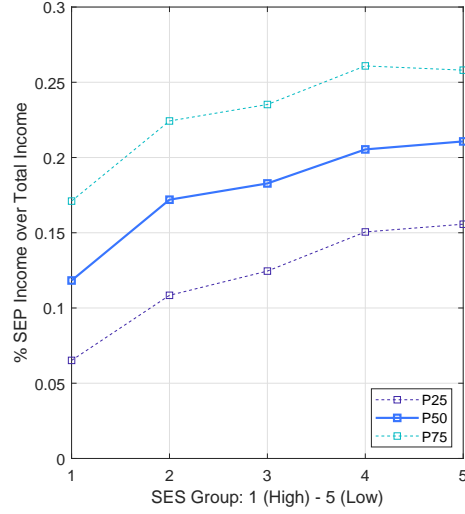


Note: This figure shows the percentage of SEP income over total revenue for SEP private voucher schools. It shows a growing trend of the share of SEP resources over total resources, being higher for the lower SES groups.

Figure 10: SEP share of Total Revenue in 2012



(a) Public Schools



(b) Private Voucher Schools

Note: This figure shows the percentage of SEP income over total revenue for public schools and SEP private voucher schools, by SES groups in 2012. It shows percentiles 25, 50, and 75 of SEP importance for SEP schools in each case. Low SES public schools have a 17% of SEP income over total income, while Low SES private voucher schools have only an 11%. In the other side, SEP incomes represent a 23% of total income for High SES public schools, and a 21% for High SES private voucher schools.