3

School Vouchers and Stratification

This chapter discusses how different types of public funding, particularly universal and targeted voucher systems, are related to socio-economic stratification.

This chapter examines the relationship between stratification and the manner in which public funding is provided to private schools. Are there more (and less) equitable ways of providing public funding to privately managed schools?

There are many ways of providing public funding to privately managed schools. This chapter considers funding provided directly to parents through vouchers. It compares universal voucher systems and targeted voucher systems, and examines how these two types of funding are related to the magnitude of stratification.[1]

SCHOOL VOUCHERS

Education reforms over the past decades have tended to give more autonomy and authority to parents and students to choose schools that better meet their educational needs or preferences (Heyneman, 2009). In order to increase the financial incentives for parents to facilitate school choice, some school systems make public funding available so that parents can send their children to private schools. Public funding to schools can be provided by allocating funding directly to parents (e.g. through student-based vouchers), the focus of this report, or to the selected school (e.g. through government subsidy).

School vouchers (or *scholarships*), are certificates issued by the government with which parents can pay for the education of their children at a school of their choice.[2] *Tuition tax credits*, another mechanism to make it easier for parents to choose a school for their children, allow parents to subtract educational expenses, including private-school tuition, from their taxes. As a result, governments pay the costs of private schools through foregone revenues. Tuition tax credits are sometimes regarded as a sort of new vouchers, which are known as "Neovouchers" (Welner, 2008). In this analysis, tuition tax credits are also considered as a part of school vouchers.

According to Levin (2002), the key elements to be considered in designing voucher programmes are: finance, regulation and support services. This chapter focuses one of these elements, *finance*, as this is directly related to public funding. Finance refers to the overall resources of the school-voucher programme, how these are allocated, and whether schools can charge tuition fees that exceed the value of the voucher (Levin, 2002). If school vouchers are available for all students, they could expand school choice and promote competition among schools. School vouchers targeting only disadvantaged students address equity issues, but they have a limited effect on expanding school choice and promoting competition among schools overall.

■ Figure 3.1 ■

Various voucher systems

	School vouchers (also referred to as scholarships) and/or tuition tax credits are available and applicable at the secondary school level	Vouchers are only available for socio-economically disadvantaged students at the secondary school level
Belgium (Fl.)	YES	YES
Belgium (Fr.)	YES	YES
Chile	YES	NO
Czech Republic	NO	NO
Denmark	NO	NO
England	NO	NO
Estonia	YES	NO
Finland	NO	NO
Germany	YES	YES
Greece	NO	NO
Hungary	NO	NO
Ireland	NO	NO
Israel	YES	YES
Italy	NO	NO
Japan	NO	NO
Korea	NO	NO
Luxembourg	NO	NO
Netherlands	NO	NO
New Zealand	NO	NO
Poland	YES	NO
Portugal	YES	NO
Slovak Republic	YES	YES
Spain	YES	NO
Sweden	NO	NO
Switzerland	NO	NO

Source: OECD, *PISA 2009 Database*; Tables B3.1 and B3.2.

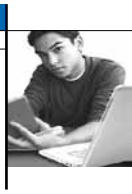


Table B3.1 and Figure 3.1 show the availability of school vouchers and tuition tax credits for lower or upper secondary education in publicly and privately managed schools, by school system.[3] The data are drawn from *Education at a Glance 2011: OECD Indicators* (OECD, 2011).

In this report, the term *voucher systems* is defined as school systems where either school vouchers (also referred to as scholarships) or tuition tax credits are available to both public and private schools (i.e. government-dependent and/or independent private schools).[4] In other words, in this analysis, the concept of "voucher system" also includes tuition tax credits, but not other forms of funding, since it is intended to measure *the availability of public funding that directly increases the financial incentives for parents to choose private schools*. When vouchers for both public and private schools are available, they encourage parents and students to choose schools regardless of whether those schools are public or private; they also give disadvantaged students the opportunity to benefit from attending private schools.

As Table B3.1 shows, in all countries where vouchers or tuition tax credits are available for public schools, they are also available for government-dependent and/or independent private schools, except in Italy, where school vouchers are available only for public schools. Differences between lower- and upper-secondary levels of education are found only in Denmark, where upper secondary education is considered to be a voucher system while lower secondary education is considered to be a non-voucher system (Table B3.1). Since over 99% of the 15-year-old students in Denmark who participated in PISA 2009 are in lower secondary schools, the information on the availability of vouchers in Denmark is drawn from lower secondary education (Table B2.2). In New Zealand and Switzerland, data from lower secondary level are used, as data from upper secondary level are missing.

According to this report's definition, 10 OECD school systems are classified as *voucher systems* and 15 OECD school systems are classified as *non-voucher systems* (see Column 15 in Table B3.1). The Flemish and French Communities of Belgium, Chile, Estonia, Germany, Israel, Poland, Portugal, the Slovak Republic and Spain are defined as being *voucher systems*. The Czech Republic, Denmark, England, Finland, Greece, Hungary, Ireland, Italy, Japan, Korea, Luxembourg, the Netherlands, New Zealand, Sweden and Switzerland are defined as being *non-voucher systems*. This classification is used throughout the remainder of this report.

However, some caution is advised when examining these voucher systems, as they are complex and difficult to capture in a general survey. Data collected at the national level may vary considerably at the local level, and funding may be provided through other mechanisms that may have similar effects in practice, even if the systems are considered as those that do not use vouchers. The results of this chapter need to be carefully interpreted, since they are drawn from only a subset of 25 OECD school systems with available data.[5] Some systems provide funding at the level of schools, communities or regions rather than directly to parents, and target those schools, communities or regions that accommodate greater numbers of disadvantaged students. The examination of this type of public funding is beyond the scope of this report due to the limitation of the data availability.

Figure 3.1 and Table B3.2 present data from *Education at a Glance 2011: OECD Indicators* (OECD, 2011) on whether school vouchers are only available for students from low-income families. The data are presented by school type and by the level of education (lower or upper secondary). Systems are regarded as *voucher systems targeting disadvantaged students* if school vouchers are only available for students from socio-economically disadvantaged backgrounds for both public and private schools (i.e. government-dependent and/or independent private schools). Based on this definition, six school systems, namely those in the Flemish and French Communities of Belgium, Germany, Israel and the Slovak Republic, are regarded as *targeted voucher systems* that target disadvantaged students. The other five voucher systems in Chile, Estonia, Poland, Portugal and Spain are regarded as *universal voucher systems* that do not target disadvantaged students (i.e. these are the countries with "1" in Column 15 in Table B3.1 and "0" in Column 7 in Table B3.2).

VARIOUS VOUCHER SYSTEMS AND SOCIO-ECONOMIC STRATIFICATION

The relationships between stratification and the different types of voucher systems are examined with a three-level regression analysis.[6] As seen earlier in this report, across 25 OECD school systems with available data, private schools tend, on average, to have a more advantaged student body than public schools by 0.38 index points, equivalent to one-third of the standard deviation of the index (Model 1 in Table B3.3). Socio-economic stratification between publicly and privately managed schools varies significantly across systems. The variation in stratification is related to the levels of public funding for privately managed schools (Model 2 in Table B3.3). A 20 percentage-point increase in public funding to private schools is related to a 0.13 index-point reduction in stratification on the *PISA index of economic, social and cultural status*.[7]

When comparing systems with similar levels of public funding for privately managed schools (i.e. after accounting for the levels of public funding for privately managed schools), is providing more financial incentives to parents to choose their child's school related to less stratification? Results indicate that the answer is no. The index-point difference between *voucher systems* and *non-voucher systems* is 0.14, which is not significant (Model 3 in Table B3.3). Perhaps this is because *voucher systems* include many different types of voucher programmes. Thus, it is important to examine in greater detail the design elements of *voucher systems*.

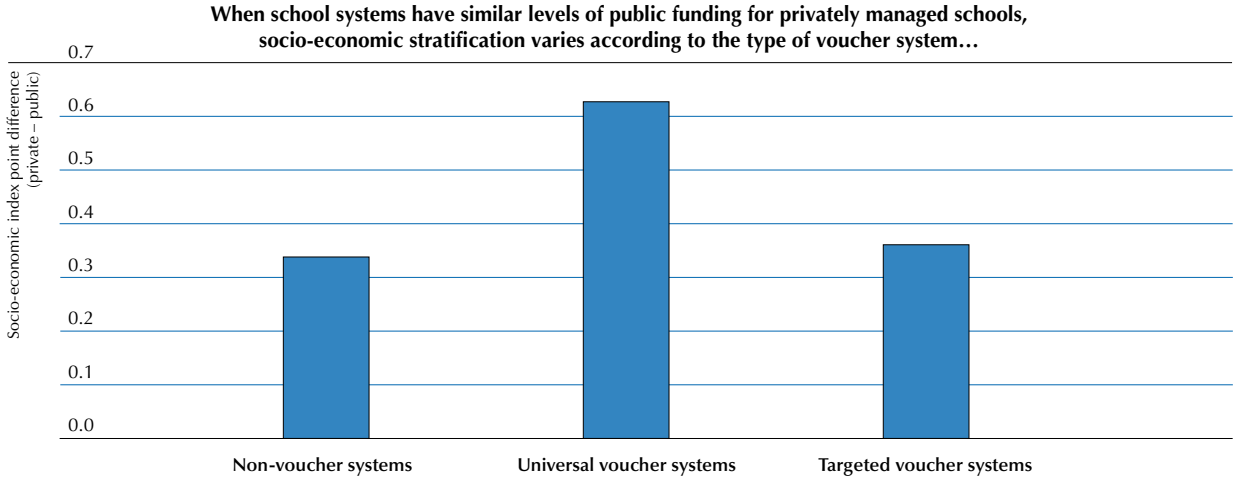
Voucher systems are grouped into two categories: *universal voucher systems*, which do not target disadvantaged students, and *targeted voucher systems*, which target disadvantaged students. The results show that universal voucher systems tend to have twice the degree of stratification as targeted voucher systems do, as shown in Figure 3.2. The stratification observed in *targeted voucher systems* is 0.36 index points,[8] which is almost equivalent to the stratification observed in non-voucher systems, while the stratification in *universal voucher systems* is 0.63 index points[9] (Model 4 in Table B3.3).

These results stand even after other characteristics of school systems are taken into account. The results from Model 4 are further examined for their robustness in Models 5 through 8 (Table B3.3). Even before accounting for the level of public funding for privately managed schools (Model 5), and even after further accounting for socio-economic disparities in a given system, (Model 6), the main finding from Model 4 (i.e. that *universal voucher systems* tend to have greater stratification than *targeted voucher systems* and *non-voucher systems*) remains unchanged. Models 7 and 8 analyse how the relationship between stratification and voucher systems, and the relationship between stratification and *targeted voucher systems* vary according to the level of public funding for privately managed schools. These interactions are not significant, partly because there are only a limited number of cases at the system level.

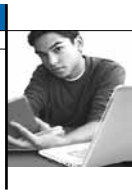
■ Figure 3.2 ■

Stratification by type of vouchers

Stratification: Difference in socio-economic background between students in privately and publicly managed schools, as measured by the PISA index of economic, social and cultural status (ESCS)



Source: OECD, *PISA 2009 Database;* Table B3.3.



References

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Levin, H.M. (2002), "A comprehensive framework for evaluating educational vouchers", *Educational Evaluation and Policy Analysis*, Vol. 24(3), pp.159-174.

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Notes

1. The question of whether systems that provide parents with more direct and obvious financial incentives to choose their children's school have less (or more) socio-economic stratification is beyond the scope of this paper.

2. This paper links data collected through PISA with that collected by the OECD's NESLI (network for the collection and adjudication of system-level descriptive information on educational structures, policies and practices). Thus, this paper applies the definition of school vouchers used in *Education at a Glance 2011: OECD Indicators* (OECD, 2011b). In most instances, parents do not actually receive a certificate or redeemable check; instead, schools verify that they are serving qualified students and the government provides funding to the school based on the number of qualified students enrolled. The definition of "qualified students" varies across school systems and often refers to the subgroup of students that is targeted by voucher or scholarship programmes. This may include ethnic minorities or students from low-income families.

3. School systems with only the valid data for the analysis are listed in Table B3.1.

4. A government-dependent private institution is one that receives more than 50% of its core funding from government agencies or whose teaching personnel are paid by a government agency; a government-independent private institution is one that receives less than 50% of its core funding from government agencies and whose teaching personnel are not paid by a government agency.

5. Belgium (Flemish Community), Belgium (French Community) and the United Kingdom (England) are regarded as individual school systems in this section's analysis.

6. The results from three-level regression models (i.e. student, school and system levels) are presented in Table B3.3. A dependent variable is the ESCS (*PISA index of economic, social and cultural status*) of students. Twenty-five school systems listed in Table B3.2 are included in the analysis. All systems are weighted equally. These are random-intercept, random-slope models. The slope of the variable PRIVATE is randomised at the system level. Models 2 to 8 are cross-level interaction models that estimate the slope of PRIVATE (school-level variable) by various system-level variables. The variables GFUNDP10 and ESSTD are grand-mean centred (i.e. the mean of GFUNDP10 across 25 school systems is set at zero).

7. This is computed as: -0.130 = -0.065*2.

8. This is computed as: 0.361 = 0.338+0.289-0.266.

9. This is computed as: 0.627 = 0.338+0.289.