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**Migrant Education in the Netherlands:
Segregation and the Role of Weighted Student Funding**

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ABSTRACT

Like many other European countries, the Netherlands now has a significant population of non-Western immigrants. Moreover, as would be expected in the presence of groups that are more economically and educationally disadvantaged than the native population, the immigrant children in the country's four largest cities attend highly segregated schools. The purpose of this paper is to document the levels of segregation in primary schools and to examine the Dutch policy of weighted student funding, with particular attention to its positive effects on the segregated schools attended by immigrant children. We find that Dutch schools with large concentrations of disadvantaged immigrant pupils have had access to far more resources than schools serving more advantaged native Dutch students. Although there are still some quality shortfalls in the schools serving immigrant children, those shortfalls are undoubtedly far smaller than they would have been in the absence of the weighted student funding program.

I. Introduction

Both theory and practice suggest that parental choice of the school their child will attend is likely to generate segregated schools, especially when members of one group are less advantaged than members of another group. The extensive Dutch experience with parental choice is interesting because, although the policy dates back to 1917, it is only recently that school segregation has emerged as a policy issue in that country. Schools in the Netherlands have historically been segregated, but that segregation was by religion and not typically by economic disadvantage. The relatively recent presence of large numbers of immigrants, many of whom have low education and low skills, has finally raised concerns among some, but by no means all, policy makers about the potentially detrimental effects of school segregation *per se* (Ladd, Fiske and Ruijs, 2009).

At the same time, because of their strong historical commitment to equity and, in particular, to the view that no group should be left behind, Dutch policy makers have quite aggressively tried to combat educational disadvantage. A major 1985 policy package toward that end included as a central component a school funding strategy that explicitly recognized that some schools faced greater educational challenges than others. Specifically, the Dutch recognized that schools with large concentrations of disadvantaged students, whether native Dutch or immigrant, would require additional funding to adequately educate their student population. The purpose of this paper is to examine that funding policy and its effects on the schools attended by immigrants within the broader context of the influx of immigrants and other education policies that the Dutch have adopted to combat educational disadvantage.

Section II describes the influx of immigrants from the former Dutch colonies of Surinam and Antilles as well as those who arrived as guest workers from Morocco and Turkey. This section also documents the extent to which the disadvantaged immigrant students in the country's four largest cities tend to enroll disproportionately in primary schools with students like themselves. This segregation reflects a number of factors, including patterns of residential segregation, choices of native Dutch families that result in flight from heavily immigrant schools, and the fact that parents, including immigrant parents, have the right to establish state-financed schools, including Islamic schools, with groups of like-minded parents. As a result, levels of segregation in Dutch cities are high both absolutely and in comparison to the segregation of African Americans in U.S. cities, levels which historically have been viewed by Europeans as a uniquely American educational problem.

Although widespread segregation of disadvantaged migrants is potentially detrimental to their educational success, migrants in the Netherlands have by many accounts progressed relatively well in the Netherlands, at least in the primary grades. We end section II with evidence in support of that conclusion.

In section III, we provide an overview of Dutch education policies related to immigrants before turning to our main focus, the school funding program. In section IV, we use detailed school level data to analyze this policy of weighted student funding that in practice directs far more resources to schools serving large proportions of disadvantaged immigrants than to other schools. We conclude that this policy, combined with the system of school inspections, goes a long way toward mitigating many of the adverse educational effects on immigrant students of attending segregated schools. The paper ends with a brief concluding discussion.

Section II. Immigrants in the Netherlands

As a trading nation, the Netherlands has a long tradition of immigration dating as far back as the 17th century. Since the end of World War II, three categories of nonwestern immigrants have been particularly notable, each with different backgrounds and reasons for moving to the Netherlands. This immigration has led to large concentrations of nonwestern immigrants in the country's four largest cities – Amsterdam, Rotterdam, The Hague and Utrecht – and to highly segregated primary schools in those cities. Despite this segregation, and the low average achievement levels of immigrant children in the Netherlands, the data suggest that they have been making educational progress over time.

The influx of non-western immigrants

The first group consisted of immigrants from the former Dutch colonies, starting with Dutch-speaking Indonesians fleeing political unrest during the Indonesian war of independence immediately after WWII (Cornelis, 1990; Herweijer, 2009). Because of their long exposure to Dutch culture and the Dutch language, however, Indonesians are not viewed by the Dutch as nonwestern migrants.¹ They were followed by groups from other former Dutch colonies, including Surinam and Antilles. Migrants from these and other smaller colonies initially came as workers in search of greater economic opportunity during the economic boom of the 1950s and 1960s. Subsequent migrants from these countries settled in the Netherlands to work, to study, for family reunification, or because of the high quality social services.

A second group of post World War II migrants came as “guest workers” to work for established labor-intensive industries that were having problems recruiting workers. Most of these migrants were from Southern European countries, starting with Italy, Spain and Yugoslavia. In the mid-1960s Dutch employers shifted their attention to Turkey and Morocco.

¹ One exception is Moluccan soldiers and their children, who are treated as a separate non-western group.

Policy makers assumed that these guest workers would return to their home countries once their labor was no longer needed, and that was initially the case. In the 1970s, however, substantial numbers of the Turkish and Moroccan migrants began to settle in the Netherlands along with their families.² Active recruitment of guest workers was curtailed in 1973 because of changing economic conditions, but the influx of migrants from Turkey and Morocco has continued, mostly for the purposes of family reunification and marriage.

A third group of migrants is refugees fleeing situations of war or political unrest in countries such as Somalia, Iraq, Iran, Afghanistan and Yugoslavia. The number of such refugees increased sharply during the 1980's, reaching a peak of about 17,500 in 1994 (Zorlu and Hartog, 2002). Since then, the Netherlands has had a more restrictive policy toward refugees.

Non-western immigrants currently make up approximately 11 percent of the overall population in the Netherlands. Figure 1 depicts the overall growth and growth by category between 1972 and 2009. The miscellaneous category of other non-Western immigrants are the largest group at 3.74 percent of the total population, with Turks at 2.3 percent and Moroccans and Surinamese each at about 2.1 percent.

The immigrants have disproportionately settled in the country's largest cities. Thus while non-Western immigrants make up only one-tenth of the overall population, they currently account for more than 35 percent of the population in Rotterdam, over 30 percent in Amsterdam and The Hague, and slightly more than 20 percent in Utrecht. Moreover, in each of these cities they account for far higher percentages of the school population. Figure 2 depicts the levels and trends of non-Western immigrants in the 5-10 year old age group (as a proxy for the relevant 4-

² Cornelis (1990) and van der Werf (1991) give several reasons for the change. The migrants had no productive economic activities to which to return; they found it more difficult to save money than they had expected; they become accustomed to life in the Netherlands; and the social services in the Netherlands were better than in their countries of origin.

12 year old age group for primary schools) as a fraction of all children in that age group for each of the four big cities between 2003 and 2008. The figure shows that the share of such immigrant children exceeds 50 percent in both Amsterdam and Rotterdam and is only slightly less than 50 percent in The Hague, with little movement in the percentages over the five-year period. The share is lower in Utrecht where it has a slight downward trajectory.

The policy relevance of these immigrants, especially the four largest groups of Moroccans, Turks, Surinamese and Antilleans, largely reflects their low skills, limited educational background, low income and, particularly in the case of Moroccans and Turks, their limited familiarity with the Dutch language. More than 70 percent of Moroccan and Turkish parents and about 55 percent of Surinamese and Antillean parents have no more than a junior level secondary education. By contrast, only 20 percent of the parents of native Dutch primary school pupils have comparatively low levels of education. (Herweijer, 2009, Table 12, p. 14). OECD data show that while 6.4 percent of all Dutch households had an income below the poverty line in 2005, the proportions of such households for the four largest immigrant groups ranged from 12.3 percent among Surinamese to 17.9 percent among Turks (Herweijer, 2009, Table 1, p. 5).

School segregation in the four big cities

The growth of the non-Western immigrant population in general and in the number of such pupils in urban primary schools in particular, has put new pressure on the longstanding Dutch commitment to the traditions of allowing parents to choose schools for their children and of giving schools considerable operational autonomy. These policies were formalized in the 1917 Constitution that provides for equal funding of all schools regardless of whether they are publicly or privately operated. Specifically, Article 23 gives any group of citizens, including

those with specific religious orientations or educational philosophies, the right to establish its own publicly funded school provided it can attract a sufficient number of students. This cherished provision, referred to as the right to “freedom of education,” was initially designed to ensure the rights of Catholic and Protestant parents to establish their own schools, but it has since been applied to schools of all types, including those with a special education focus such as Dalton or Montessori and those with another religious orientation, such as Hindu and Islamic. There are currently about 40 Islamic throughout the country, with 14 in the four big cities, and about six Hindu schools. A 2005 study reported that only 11 percent of Islamic children attended Islamic schools, with 43 percent in nonreligious schools, 34 percent in Catholic schools, and 12 percent in Protestant schools (Denessen, Driessena, and Slegers, 2005).

The secularization of the Dutch society after World War II opened up new opportunities for Dutch families to base schooling decisions not just on religion but also on other criteria, including the mix of students in the school and perceptions of school quality. That secularization combined with the influx of disadvantaged immigrants and rising political concerns about Muslim immigrants, has resulted in high levels of school segregation in the four big cities (Karsten et al, 2006; Ladd, Fiske, and Ruijs,2009). The extent of the segregation in primary schools in those cities is shown in Figure 3.

This figure provides levels and trends in three measures of the extent to which educationally disadvantaged immigrant pupils, defined as first and second generation immigrants from non-Western countries whose parents have limited education, are segregated from other pupils. The top line indicates that close to 80 percent of the disadvantaged immigrant students in the four big cities are in schools with more than a majority of students like themselves. The proportion of such students in schools with more than 70 percent disadvantaged immigrants is

correspondingly lower but still exceeds 60 percent in all years, reaching a peak in 2002.

Consistent with these two measures, the isolation index indicates that the typical disadvantaged immigrant student living in one of the four big cities was in a school with 70 percent or more disadvantaged students throughout the period.³ These measures all indicate high levels of segregation.

Achievement trends and comparisons

Despite these high levels of segregation, immigrant students appear to be progressing relatively well in the Netherlands, at least at the primary level. Table 1 shows scores on language and arithmetic tests for students in year 8 (that is, 12 year olds) over the period 1994-2004 for the major immigrant groups as well as for native Dutch students. The data show that pupils from the migrant groups, especially Turks and Moroccans, have test scores that are considerably below those of native Dutch pupils, including Dutch pupils whose parents have low education. The striking finding, though, is that while the gaps between immigrants and native Dutch pupils with more educated parents narrowed during this period, there was no such narrowing of the gap between native Dutch pupils whose parents had low education and Dutch pupils whose parents had high education. For example, the language gaps for Turkish and Moroccan residents fell by 28 and 34 percent respectively, while the gap widened slightly for native Dutch pupils whose parents have low education. Other studies covering much the same period generate similar patterns (Mulder et al, 2005). Some of these gains undoubtedly reflect the increasing proportions

³ In related work we have also provided measures of imbalance using both a dissimilarity index and a gap-based measure of segregation (Ladd, Fiske, and Ruijs, 2009). We have not included those measures here simply to avoid having to explain the measures and putting them in perspective. In any case. All the measures indicate that the re, segregation levels are high in the Dutch cities. Although Figure 3 suggests a relatively constant level of segregation over time, city-specific patterns based on the gap-based measure of segregation show that segregation is the lowest in Amsterdam but that it was rising somewhat over the period, and that segregation in The Hague and Utrecht has also been rising. Only in Rotterdam has segregation been consistently falling.

of second generation immigrants who would be expected to achieve at higher levels than their first generation counterparts. Nonetheless, these achievement patterns could also reflect in part productive educational policies related to immigrants.

In addition, not only do Dutch students perform well above average on international tests such as the Program for International Student Assessment (PISA), but it is also the case that Dutch students whose parents have very low levels of education (many of whom are immigrants) perform relatively well compared to those whose parents have higher levels of education. In all three of the subjects, math, reading and science, the ratio of average test scores for students whose parents have the lowest levels of educational attainment to those with the highest levels are higher in the Netherlands than for the typical students in OECD countries.⁴

Section III. Dutch education policy toward immigrants

Dutch education policy toward immigrants should be viewed as part of the country's overall efforts to combat educational disadvantage. The three prongs of that strategy are programs for language development and multiculturalism, a broad set of social services and programs related to youth development, and a weighted student funding system under which the per pupil allocation to primary schools differs according to the educational disadvantage of the pupils in the school. Among these policies, those related to language policy were initially most explicitly targeted to immigrants. Weighted student funding addresses disadvantage more generally, but in practice has generated far more additional resources to schools serving disadvantaged immigrants than to schools serving disadvantaged native Dutch children.

⁴ Statement based on calculations by the authors from data available at <http://pisa2006.acer.edu.au>.

Language development and multiculturalism

Education policies related to language development and multiculturalism have evolved over time as views about immigrants and their likelihood of remaining in the country have changed. The initial assumption was that children of “guest workers” would eventually return to their home countries. Hence, policies were initiated in the 1970s as a means of enabling newly arrived immigrants, especially those from Turkey and Morocco, to study in their mother tongue and to maintain contact with their home country while at the same time learning sufficient Dutch to be able to enter regular primary schools. When it became clear in the 1980s that most of these workers were in the Netherlands for the long haul, the focus shifted to combating educational disadvantage and promoting facility in the Dutch language. In addition, starting in 1985, primary schools have been required to provide all pupils, native Dutch as well as immigrants, with intercultural education aimed at teaching them how to live alongside persons from other population groups (Herweijer, 2009). Education in the mother tongue and culture was no longer intended to facilitate re-migration but rather was adopted for the purpose of learning Dutch and for psychological reasons such as promoting well-being and avoiding alienation from pupils’ parents and family (Elderling, 1989).

In 1995, in response to questions and concerns about the effectiveness of mother tongue instruction and multicultural education, Dutch policy makers at the national level decided that education in minority languages should take place outside normal school hours and that municipalities were in a far better position than the central government to implement it. At that time language instruction came to be seen not so much as a means of eliminating educational disadvantage but rather as a way to promote independent cultural functioning, and this shift was

accompanied by a new name: Minority Language Teaching (MLT). In practice, local officials had considerable discretion in deciding whether to emphasize mother tongue instruction as a way to facilitate acquisition of the Dutch language or as a way to promote the cultural functions. Continued debate led to a cessation of funding for the MLT program in 2004, though some private initiatives have continued to provide teaching in pupils' own language on a modest scale in after school hours (Herwijer, pp. 47-48).

With the end of the MLT program, the Dutch turned their focus to teaching Dutch as a second language within schools with programs designed for toddlers, school aged newcomers, and migrant pupils already in the country. In 2006 new goals were established providing that by 2011 all students with language disadvantages should be able to obtain pre-school education, including intensive language education. The language programs in primary schools now often take the form of full year induction classes designed both for migrants and for others with language disadvantages (Herwijer, 2009, p. 48, Ledoux & Veen, 2009). The funding for such programs comes from the central government and is not part of the weighted student funding program.

Youth development programs

The second component of Dutch policy to combat educational disadvantage focuses on the broader context in which students live. It includes a variety of social services and activities that are largely financed centrally but are offered primarily through the various municipalities, which are judged to be in a better position than the central government to address out-of school challenges facing disadvantaged youth. These services, authorized in 1985 as part of an Educational Priority Policy, include pre-school programs for children aged 2½ to 4 years old and “extended” or “community” (*brede scholen*) schools that provide enrichment activities for

pupils. From the outset municipalities were required to consult with local schools and with welfare agencies such as libraries and day care centers in designing and operating the programs (Driessen and Dekkers, 2007). All of these programs exist within the context of a strong health care system in which the health of children is monitored in a systematic way as they progress through primary school.

In practice the nature of these “community schools” varies among different municipalities and from school to school, with different programs, different goals and different levels of quality and coherence. This variation has made them difficult to evaluate. To date, there is no clear evidence of positive effects on test scores, although that does not rule out the possibility of other positive outcomes.

Weighted student funding (WSF)

In practice, the most important of the three policy prongs for the education of immigrant students is the program of weighted student funding (WSF) of primary schools. Under this policy, which was introduced in the mid-1980s, the central government provides funding to primary schools on a weighted per pupil basis with the additional weights for some categories of students intended to reflect their educational disadvantage. Between 1985 and 2006, four categories of students were identified as deserving of additional weights. The two major categories were native Dutch students whose parents have little education and non-Western first and second generation immigrant students whose parents have limited education or work in low skilled occupations.⁵ The additional weight (over and above the 1.0 weight that applies to most children) was 0.25 for the native Dutch children and 0.9 for the immigrant children.

⁵ Additional weights of 0.4 and 0.7 apply to the children of shippers who live away from their families and to children who live in caravans but are not important for this analysis.

We interpret the main goal of weighted student funding to be the promotion of equal quality schooling across schools.⁶ Such an objective is a logical extension of the earlier Dutch commitment to equal funding of public and religious schools that emerged from the 1917 political struggle that led to the public funding of privately operated schools. In the presence of the segregation described in the previous section, equal funding would not lead to equal quality schools. Only with additional resources would the schools serving large numbers of disadvantaged students have sufficient resources to meet the needs of all their students.

As we document in the next section, this funding system – as it operated through 2006 – successfully generated more resources for schools serving disadvantaged students than for those with more advantaged students. The combination of the higher weights for immigrant children than for native Dutch children and the introduction of a weighting threshold, however, meant that the schools serving large proportions of disadvantaged immigrants were by far the biggest beneficiaries of the program.

In 2006 some significant policy changes altered the impact of WSF on migrant students. The most significant was the elimination of migrant status from the weighting formula and the shift to full reliance on parental education as the measure of disadvantage. Replacing the 0.25 and 0.9 weights were two new additional weights: 0.3 for pupils whose parents have low education and 1.2 for pupils whose parents have extremely low education. Our investigations have uncovered several reasons for the change. One pragmatic consideration was the observation that the number of third generation immigrant children in primary school was increasing, a trend

⁶ Not everyone agrees with our interpretation. Because the program is part of the larger overall effort to combat educational disadvantage, many observers view the main goal as raising the achievement of disadvantaged students. In support of that view, the magnitudes of the weights were based on empirical studies that looked at achievement differences between groups of students. We note, however, that the program includes no requirement that the additional funds be spent within the school on behalf of the disadvantaged immigrants. For further discussion of the goals of the program, see Ladd and Fiske, 2009a and 2009b.

that made use of country of origin of the parent increasingly problematical. Another was that a growing proportion of the immigrant population consisted of children of higher educated asylum seekers for whom the 0.9 weight was less justified (Bosker, Mulder and Glas, 2001). There were also political imperatives. The rise in anti-immigrant fervor, seen in the rising popularity of the anti-immigrant politician Pim Fortuyn (who was subsequently killed by an animal rights activist) increased the willingness of conservative parties to criticize policies that favored immigrants over the native Dutch, especially after the terrorist attacks of September 11, 2001 in the U.S. In addition, the progressives understood the political advantages of taking the migrant issue off the table in return for a policy change that would continue to address the same issue in a more politically acceptable way. That goal was accomplished by the new higher weight for pupils whose parents had extremely low educational attainment, most of whom would be migrants.

But political considerations were not the only explanation. Further support for dropping the migrant criterion was evidence, noted in the previous section, that the achievement gap for migrant vs. Dutch students was closing. In fact, though, research commissioned by an advisory council to the Ministry showed that even after the researchers controlled statistically for the education level of the parents, a significant adverse effect of migrant status was still evident (Bosker, Mulder and Glass, 2001). Based on that study, the advisory body recommended to the Ministry that migrant status not be dropped as a criterion for additional funding, but in the eventual changes, that advice was not accepted as part of the eventual changes.

Section IV. Weighted student funding

The extent to which the program of weighted student funding provides more resources to schools with large proportions of immigrant students is an empirical question and is the topic of the first part of this section. The second part addresses the extent to which the additional funding

in the high weight schools serving immigrant students is sufficient to equalize the quality of those schools relative to schools serving more advantaged children. Throughout this section we use data based primarily on the period prior to the 2006 change in weights.

Resource patterns by school weighting index

In practice, the funding system is more complicated than first meets the eye. The most important complications are a 9 percent funding threshold and the role of school boards.⁷

Because of cost considerations, the only way that policy makers could afford the proposed weights in 1985 was to introduce a threshold of 9 percent below which schools receive no extra funding based on the weights. They justified this threshold on the ground that schools can cope with the challenge of educating disadvantaged students provided they are limited in number. Instead of defining the threshold as the proportion of a school's students who have non-zero weights attached to them, however, the new provision was defined in terms of full time equivalent students, which worked to the disadvantage of schools serving students with the 0.25 weight and to the clear relative advantage of the schools serving immigrant students.⁸ Moreover, the additional funding applies only to the number of students above the threshold.

A second complication arises from the fact that all schools are run by school boards, with the boards rather than schools being the legal entities entitled to receive government funds on behalf of the schools they operate. Further, information is available only on what the boards received for each school, not on what they passed through to the specific schools they manage.

⁷ We thank Joop Gross at the Dutch Ministry of Education for his detailed explanation of how the system works. (personal interview 2/20/2009). Two other complications are worth noting. The first is that the funding for each school is the sum of four components (personnel, board management, professional development, and materials), with slightly different applications of the weighting formula to each component. Second, some schools have multiple locations (which in some cases are quite different schools), but the funding calculations are done at the level of the school, not that of the location. For more information, see Ladd and Fiske, 2009b.

⁸ Consider a school with 200 students. While the school would need only 18 students with a 0.9 weight to meet the threshold and hence to be eligible for additional funding, it would need 72 students with a 0.25 weight.

Given that boards differ greatly in the number of schools they operate (from one to over 100) and in their pass-through policies, the absence of actual funding data at the school level is a problem.⁹ For that reason, in the following discussion we put more emphasis on the distribution of teachers across schools, data for which is available at the school level, than on the distribution of funding allocations.

For each primary school we use the student weights to construct a weighting index (WI) as follows:

$$WI_i = (N_i + \sum_j(n_{ij} w_j)) / N_i$$

where N_i is the total students in the school, n_{ij} is the number of students in school i with additional weight j , and w_j is the j th weight. This weighting index ranges from 1 for a school with no students with extra weights up to a maximum of 1.9 for a school in which all pupils have an extra weight of 0.9, that is, one with all disadvantaged immigrant students. Thus, one can interpret this school weighting index as one plus the average additional weight of the school's students. In the absence of any program complications, the school weighting index would also be an index of funding. A school with an index of 1.45 in that case, for example, could expect to receive 45 percent more funding per pupil than a school with an index of 1. By definition, the high weight schools are those serving the highest concentrations of disadvantaged immigrant students.

⁹ Describing the Dutch school boards is not easy given their diversity and the fact that they differ in some significant ways from U.S. school boards. School boards are organized by type of school, but within each type there can be multiple boards within a city. Amsterdam currently has close to 40 boards. Rotterdam is more centralized, with one public school board responsible for all 66 public primary schools and 23 other boards overseeing private schools. Our interviews with school boards uncovered different policies with respect to the proportion of funds retained by the board for collective purposes. In addition we found one school board that "taxed" the additional funds intended for high weight schools and redirected them to low-weight schools under their control (Ladd and Fiske, 2009a and 2009b).

Our analysis of funding allocations (not shown) indicates that the high weight schools are indeed allocated far more funding than are the low weight schools. Specifically, schools in the highest weight category (above 1.8) are allocated on average 74 percent more total funding per pupil than schools in the low weight category (with weights between 1 and 1.1). Moreover, we find little or no evidence to suggest that this pattern of funding is countered by a less progressive distribution of other types of funding. As far as we can tell the small amounts of funding distributed to boards by municipal governments are also disproportionately allocated on behalf of the high weight schools (Fiske and Ladd, 2009a). Only in a few low weight schools are (voluntary) school fees sufficiently large to change the funding position of those schools relative to others with higher weighting indices.

Consistent with the patterns of funding allocations, high weight schools on average are able to hire many more teachers (measured in full time equivalents) per pupil than low weight schools. Figure 4 shows that schools in the highest weight index category have on average about 58 percent more teachers per pupil than do the schools in the lowest weight categories. If the different types of schools made similar use of remedial and other teachers, that would imply class sizes in the low weight schools are 58 percent larger than those in the high weight schools serving immigrants. Figure 5 depicts a similar pattern for the number of full time equivalent support staff per teacher. In particular, the high weight schools have about one support staff person for every three teachers, which is about twice the ratio in the low weight schools. Further analysis (not shown here) suggests that the patterns for both teachers and support staff by weight class differ somewhat across categories of schools, suggesting that some schools in special categories, including Islamic schools, make different choices about how they use resources than

other schools. Nonetheless, there is little doubt that weighted student funding works in the sense of assuring far higher levels of resources for the high-weight than for the low-weight schools.

Does weighted student funding generate equal quality schools?¹⁰

The more effectively that the funding system compensates for the educational challenges faced by the high weight schools, the more equal should be the average quality of schools in different weighting index categories. We measure school quality using the external reviews of the Dutch School Inspectorate.

During the relevant period for this study, each school was inspected every four years (with return visits to weak schools as deemed necessary).¹¹ Included in the public report for each school are more than 20 submeasures based on a scale of 1, 2, 3 and 4. These measures are evaluated on a common standard across all schools and hence are suitable for the current purpose.¹² For its own internal purposes (but not for the public reports) the research division of the Inspectorate combined the submeasures into eight broader measures and then collapsed the original four-point scale for each of the submeasures into a simpler two-point scale where a 2 indicates that the school is not sufficient on the quality measure and a 3 that it is sufficient.¹³

¹⁰ This section draws heavily on the analysis in Ladd and Fiske, 2009a and b.

¹¹ The Inspectorate is currently developing a risk based approach for school evaluations in which schools that show evidence of adequate self monitoring will be inspected less frequently.

¹² The Inspectorate also evaluates the achievement levels of students, but that part of the evaluation is not useful here because schools are compared not to all schools but only to schools with similar types of students.

¹³ They collapsed the scale because of their concern that some inspectors may be more willing to use the extreme scores of 1 and 4 than others. That concern notwithstanding, the Inspectorate appears to have confidence in the validity and reliability of the average scores that comprise the eight measures. This confidence is based on the quality of the training provided to the inspectors, the discussions within inspectorate offices that lead to common understandings of the various measures, and the results of formal reliability tests. We thank Inge de Wolf, research director at the Inspectorate for making this data set available to us and for helping us to work with the data.

To assure coverage of all the primary schools in the big four cities, we use school reports for the years 2003-2007.¹⁴ From the data provided to us by the Inspectorate we constructed for each school an overall measure of school quality as the simple average of the eight measures and defined three components of school quality as follows:¹⁵

Student-related school quality.

1. The school tailors its education program and process to the differing learning styles and educational needs of its students.
2. The school collects data on the developmental needs of lagging students in a systematic way, has a plan to meet them, and monitors the effectiveness of that plan.

School related school quality.

3. The school gives attention to quality control in a systematic way
4. The curriculum meets the core requirements, and progresses appropriately from grade to grade.
5. The school has robust procedures for assuring the well-being and safety of pupils and teachers, and promotes respect among pupils.
6. The school systematically monitors student progress and has a comprehensive system of tools and processes for doing so.

Teacher-related school quality.

7. Teachers make efficient use of instruction time
8. Teachers are task oriented and clear, with students actively engaged in their learning.

The results are reported in Table 2, with the basic patterns displayed in Figures 6-9. The table reports two models for each of the quality measures. The first is a regression model with a

¹⁴ Actually, a few of the reports are from the year 2002/03, so that in fact the data are from that year to the year 2006/07.

¹⁵ Given that each of the eight measures is based on two or more submeasures, the following definitions simply indicate the nature of each of the component measures and do not provide a complete account of the specific components, a task that is made difficult in any case because they are in Dutch and not always amenable to easy translation.

constant for the base category and indicator variables for each of the other school weighting index categories. Hence the reported coefficients can be interpreted as deviations from the base category. The second model adds control variables for each city (relative to Amsterdam), type of school (relative to public schools), size of board (relative to a board with 2-14 schools) and year (relative to 2006/07). The figures display the deviations as estimated in the first model for each measure. The dark stripes indicate that the deviation is statistically significant at the 5 percent level and the lighter stripes at the 10 percent level.

The figures tell the story. Overall quality (Figure 6) is lower in three of the four high weight categories, and that quality shortfall is driven primarily by the negative deviations in the student-related component of school quality (Figure 7). Interestingly, the negative deviation for the highest weight category in both figures is smaller than for the prior three categories and is not statistically different from zero. Turning to the other components of school quality, we find no significant deviations for the school-related component (Figure 8) and only one in the 1.3-1.4 category for the teacher-related component (Figure 9). Thus, the challenge for many of the high weight schools appears to be the difficulty they face in addressing the educational challenges faced by so many of their students.

We extended the analysis by adding control variables to make sure that the findings do not simply reflect idiosyncrasies in the inspection process or peculiarities of a small group of schools. Even with all the control variables – those for cities, types of schools or boards, and year of inspection – the basic patterns remain, although the estimated deviations are slightly smaller in some cases. With respect to the teacher component, the negative deviations are larger and become statistically significant in two of the high weight categories.

The coefficients of the control variables exhibit some interesting patterns. Relative to Amsterdam, overall school quality appears to be higher in both Rotterdam and The Hague even after controlling the school weight categories. The higher quality in Rotterdam for three of the four measures is consistent with the general impression that emerged from several of our interviews, namely that the elected official in charge of education in that city has been working particularly hard to improve school quality. The negative coefficient for the category of “other” schools for overall quality and for two of the three components indicates that such schools – which include the Islamic schools in the four big cities – receive statistically significantly lower quality ratings than the base category of public schools. Finally, the fact that many of the indicator variables for the early years enter with negative signs suggests either that the inspectors have become more lenient over time or that schools have improved.

Potential explanations for the quality shortfalls. A full exploration of the reasons for the quality shortfalls in the high weight categories is beyond the scope of this analysis. Nonetheless, our interviews generated two hypotheses that deserve further investigation and analysis. The first is that the high weight schools may find it difficult to attract high quality teachers and principals. Stated differently, although weighted student funding makes it possible for such schools to hire more teachers, more quantity may not translate into high quality. The second starts from the recognition that teaching concentrations of disadvantaged students is difficult and posits that teachers in the high weight schools may not have the particular skills and knowledge necessary to do it well.

Many U.S. studies document that the schools serving high proportions of challenging-to-educate students tend to have teachers of lower quality, on average, than do other schools (e.g, Clotfelter, Ladd, and Vigdor, 2007; and Boyd, Lankford and Wyckoff, 2008). This pattern

typically reflects the combination of a uniform salary structure (at least within districts) and the observation that many, but certainly not all, teachers apparently prefer to teach in schools with more advantaged students where the working conditions are more attractive. In the United States new teachers frequently start out in disadvantaged schools but soon move to more advantaged schools, which generates greater turnover, more vacancies and a lower quality teaching staff in the disadvantaged schools than in the schools serving more advantaged students. The fact that the Netherlands has a nationally uniform salary schedule suggests that the incentives for Dutch teachers could be similar to those in the U.S. The Dutch pattern might differ, however, because the presence of additional staff in the high weight schools could potentially improve working conditions sufficiently to make such schools no less attractive than other schools. But there is no evidence that it does so.

Unfortunately, there is very little information on how teacher and principal quality are distributed across primary schools in the Netherlands, largely because of the absence of quality measures. In contrast to the U.S., for example, it is not possible to distinguish Dutch primary school teachers by their teacher licensure test scores, their graduate training or by their value-added in the classroom. The only information of this type we have found emerges from a survey based on a relatively small number of teachers which shows that teachers in underprivileged schools have taken fewer extra courses than those at more privileged schools (Jongbluth, 2003, p. 84). In addition the statistically significant negative coefficients for some of the high weight school categories that emerge of our analysis of the teacher component of the school quality measure – at least in the full model with the control variables – is also consistent with the hypothesis of lower quality teachers in the high weight schools.

Some additional suggestive evidence emerges from the higher unfilled vacancy rates found in the primary schools serving high proportions of minority pupil than in other schools. National survey data show, for example, that for the school year 2007/08 the unfilled vacancy rate – defined as a fraction of all jobs in the school in all schools – was low in all schools, but that it was more than four times as high in the schools serving more than 50 percent minority pupils as in schools with fewer than 5 percent of such students (Regioplan, 2009).¹⁶ Because difficulty filling vacancies typically means that schools often have to settle for lower quality teachers, the patterns provide suggestive evidence that the schools with large minority populations have lower quality teachers than others. Further evidence of this type emerges from a recent study of segregation in Amsterdam schools, which found that teacher vacancies in that city were far more numerous in the schools serving more than 70 percent disadvantaged migrants than in other schools (summarized in Karsten et al, 2006, p. 240).¹⁷

Why are the shortfalls smaller in the highest weight schools? One of the intriguing findings to emerge from our analysis is the smaller quality shortfall in the highest weight category relative to that in the other high weight categories. Our discussions with Dutch policy makers and researchers have generated a number of potential explanations. Among these is the

¹⁶ The unfilled vacancy rate is defined as the unfilled jobs divided by the total jobs in a school averaged over the year and ranges from 0.2 in the schools with few cultural minority students to 0.9 in the schools with more than 50 percent such students. The information is based on a sample of 2000 primary schools which, according to the authors of the report, is not large enough to separate the effects of being in a big city from those of having a disproportionate share of minority students.

¹⁷ One limitation of that study is that it reports total vacancies in a school not relative to the number of teachers, which are far higher in the schools serving disproportionate numbers of disadvantaged minority students. Other evidence could be less consistent with the hypothesis but is hard to interpret. Based on data on teacher inflows and outflows as well as information on teacher experience for both full and part time teachers, we find no evidence that departure rates are higher in the high weight schools or that such schools have a disproportionate share of teachers with limited experience. In fact, the reverse is usually true. The implications of these patterns for teacher quality are not clear because we do not know how the quality of relatively new teachers compares to that of more experienced teachers in the Dutch context. Nor do we know anything about the quality of part-time relative to full time teachers.

possibility that it may be easier for schools to focus on the needs of their disadvantaged students when most come from a disadvantaged background or from the same ethnic group than when the student body is more mixed. Within the highest weight category in our data set, more than two out of three students are Moroccan or Turkish, most of whom are Muslims. This concentration contrasts with the slightly lower weight categories, which not only have smaller overall proportions of disadvantaged immigrants but also have a broader mix of immigrant groups. This explanation is consistent with the following conclusion in a recent background report on immigrant education based on research by Gijsberts (2006): “By tailoring their education to the pupil population, ‘ethnic schools’ are becoming increasingly successful in enabling comparable pupils to achieve comparable results” (quoted in Herweijer, 2009, 36). Further support for this hypothesis comes from Driessen et al. 2003 (reported in Karsten et al, 2006, p. 240). Our efforts to test this hypothesis within the context of our regression analysis of school quality, however, were inconclusive.

An alternative, and related, explanation is that because many of the schools in the highest weight category have served very large proportions of migrant students for long periods of time, they have had time to adjust to the demands of their challenging environment. This situation contrasts with that in many of the schools in other relatively high weight categories, where the student bodies may be more in flux as the schools either become less disadvantaged or more disadvantaged over time. The descriptive data are consistent with this hypothesis in that there is less variation from year to year in the ethnic mix of the highest weight schools than in those with slightly lower weights. At the same time, however, we find no clear statistical evidence to support that explanation as the cause of the lower quality shortfall in the highest weight category.

Other potential explanations include the possibility that the municipalities give special attention to the schools with the highest proportions of disadvantaged students. That story is generally consistent with the current situation in Amsterdam, for example, where certain schools and particularly schools serving very high proportions of Moroccan and Turkish students have been singled out to receive substantial additional support to develop school management plans. A variant of that explanation is the “Rotterdam effect” already noted. Given that Rotterdam has both a large number of very high weight schools and an active alderman pushing for high quality schools, we hypothesized that the differentially small quality shortfall in the highest weight schools might reflect the above average performance of those schools in Rotterdam. A statistical test based on an interaction effect for Rotterdam, however, rules out that hypothesis. A final hypothesis is that the Inspectorate may simply be more sympathetic to those schools than to other schools. Our discussions with the Inspectorate about their procedures provide no support for that hypothesis, though we cannot rule it out.

Conclusions about weighted student funding

Emerging from this analysis of weighted student funding is at least one clear conclusion: the schools in Dutch cities that disproportionately serve immigrant children have access to far more resources, at least as defined by the number of their teachers and staff, than those serving more advantaged native Dutch students. Somewhat less clear are the effects of these additional resources on school quality. As our analysis shows, the program of weighted student funding does not succeed in reducing all quality shortfalls in the high weight schools. Nonetheless, it seems safe to conclude that those shortfalls would have been far larger had there been no program of weighted student funding.

Section V. Discussion and conclusion

Disadvantaged immigrants in the four largest Dutch cities typically attend highly segregated primary schools. Part of that segregation is by their own choice, but part reflects larger patterns of residential segregation and decisions by native Dutch households about the schools they want for their children. The Dutch have only recently begun to try to reduce the pressures for segregation, but for a number of reasons -- not the least of which is their strong commitment to “freedom of education” – they are not likely to be very successful in doing so (Ladd, Fiske and Ruijs, 2009). In other countries, such as the United States, the existence of schools with large concentrations of economically disadvantaged students has raised concerns in part because, despite the greater educational needs of their students, such schools often have access to fewer resources than those serving more advantaged students. The remarkable thing about the Dutch education system is that, at least until the recent policy changes to the policy of weighted student funding, Dutch schools with large concentrations of disadvantaged immigrant pupils have had access to far more resources than schools serving more advantaged native Dutch students. The recent changes, which eliminated the explicit weight for immigrant status, will reduce the differential resource benefit for schools serving large numbers of immigrants, but will not eliminate it.

We have argued in this paper that by directing more resources to the high weight schools, the Dutch funding system has given disadvantaged immigrants access to schools of far more equal quality than would have been the case without such a funding scheme. While our analysis shows that some quality shortfalls remain, and we cannot know for certain what would have happened in the absence of the weighted funding programs, it seems safe to conclude that the shortfalls would have been far larger in the absence of the additional resources provided to

the high weight schools. Thus, we believe that the system of weighted student funding has played a major positive role in promoting the education of immigrants in the Netherlands.

But we end with cautionary notes of two types. The first is that weighted student funding alone is not a panacea for the successful education of disadvantaged immigrants. That is true in part because of the distinction between the quantity and quality of resources that we discussed in section IV. To the extent that high quality teachers or school principals are reluctant to teach in schools with large concentrations of disadvantaged immigrants, more resources need not translate into equal quality resources. In addition, as Dutch policy makers seem to understand, many other strategies both in and around schools are needed to address the specific needs of disadvantaged immigrant students. Language programs that can bring students up to speed in the language of their new country, preschools that can prepare children (and their immigrant parents) for formal schooling, access to high quality health care that can keep children healthy as they progress through school, and various enrichment programs, including after school programs, that can give disadvantaged immigrants some of the out of school opportunities available to their more advantaged peers are all potential elements of a broader policy package.

The second cautionary note relates to the distinction between success in school and success in the broader society. Although weighted student funding combined with other programs may help to offset many of the adverse educational effects for immigrants of attending segregated schools, such schools could well make it difficult for disadvantaged immigrants to integrate into the Dutch society. Limited numbers of native Dutch classmates, for example, could make it difficult for immigrant children to excel in the Dutch language and to understand Dutch culture, and could limit their access to the higher levels of secondary education as well as

access into the Dutch labor market. This larger issue of integration into Dutch society, however, is well beyond the scope of this paper.

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Tables

Table 1. Scores on language and arithmetic tests in primary school year group 8, by ethnic origin, 1994-2004

	Turkey	Morocco	Suriname	Antilles	Native Dutch low ^a	Native Dutch high ^b
Language						
1994	36.4	38.8	42.1	40.9	48.1	53.4
1996	37.6	39.2	43.6	40.3	48.0	52.8
1998	37.2	40.5	44.2	40.1	47.6	52.8
2000	38.8	40.8	44.9	40.5	47.3	52.9
2002	39.3	42.0	45.7	40.7	47.5	52.6
2004	40.3	42.8	44.4	41.9	47.1	52.5
Change in gap 1994-2004 (%) ^c	-28	-34	-28	-15	+2	--
Arithmetic						
1994	42.8	42.5	42.6	41.5	47.7	52.8
1996	44.7	43.2	44.1	39.2	47.6	52.4
1998	45.1	44.1	44.6	42.3	47.1	52.2
2000	46.0	44.6	45.8	41.6	46.8	52.2
2002	45.7	44.7	44.0	42.2	46.6	51.9
2004	46.1	45.7	45.4	41.5	46.3	51.8
Change in gap 1994-2004 (%) ^a	-44	-41	-37	-9	+6	--

Notes. a. Highest educated parent has completed a low vocational education. b Highest educated parent has completed an education to the level of senior general secondary education or higher. C. Gap is relative to native Dutch high.

Source. Lex Herweijer. OECD Thematic Review on Migrant Education Country: Background Report on the Netherlands The Netherlands Institute for Social Research. 2009, Table 30.

Table 2 . School quality patterns by weighting index category, with and without control variables.

	Overall school quality		Student-related quality		School-related school quality		Teacher- related school quality	
	I	II	I	II	I	II	I	II
WI categories								
1.-1.1 (base)	2.832 (0.014)	2.797 (0.22)	2.738 (0.026)	2.654 (0.043)	2.823 (0.016)	2.772 (0.025)	2.961 (0.013)	2.993 (0.023)
1.1-1.2	-0.014 (0.023)	-0.022 (0.024)	-0.033 (0.045)	-0.027 (0.044)	-0.014 (0.028)	-0.025 (0.027)	0.012 (0.023)	-0.006 (0.023)
1.2-1.3	-0.016 (0.026)	-0.005 (0.025)	-0.045 (0.048)	-0.014 (0.048)	-0.008 (0.029)	-0.002 (0.029)	-0.021 (0.025)	-0.080 (0.029)
1.3-1.4	-0.028 (0.30)	-0.039 (0.029)	-0.096# (0.057)	-0.090# (0.055)	0.001 (0.034)	-0.015 (0.033)	-0.060* (0.029)	-0.080* (0.029)
1.4-1.5	0.002 (0.032)	-0.004 (0.030)	-0.024 (0.057)	-0.009 (0.056)	0.007 (0.035)	-0.004 (0.034)	0.023 (0.029)	0.007 (0.030)
1.5-1.6	-0.046# (0.027)	-0.070* (0.025)	-0.131* (0.052)	-0.095# (0.050)	-0.028 (0.030)	-0.014 (0.030)	0.005 (0.026)	-0.003 (0.027)
1.6-1.7	-0.065* (0.025)	-0.045* (0.022)	-0.153* (0.046)	-0.132* (0.047)	-0.032 (0.028)	-0.039 (0.028)	-0.036 (0.024)	-0.052* (0.025)
1.7-1.8	-0.053* (0.022)	-0.026 (0.023)	-0.140* (0.040)	-0.101* (0.043)	-0.021 (0.025)	-0.016 (0.026)	-0.031 (0.021)	-0.048* (0.023)
1.8-1.9	-0.017 (0.023)	-0.026 (0.023)	-0.079# (0.043)	-0.072# (0.044)	-0.005 (0.025)	-0.018 (0.026)	0.000 (0.022)	-0.007 (0.024)
Other variables								
Rotterdam		0.120* (0.018)		0.182* (0.034)		0.125* (0.020)		-0.029 (0.018)
The Hague		0.078* (0.020)		0.183* (0.038)		0.070* (0.023)		-0.040* (0.021)
Utrecht		0.029 (0.024)		0.070 (0.043)		0.042 (0.027)		-0.023 (0.023)
Roman Catholic		0.019 (0.017)		0.067 (0.032)		0.014 (0.687)		-0.001 (0.017)
Protestant		0.012 (0.018)		0.015 (0.031)		0.020 (0.018)		0.012 (0.017)
Special program		-0.044 (0.031)		-0.059 (0.059)		-0.052 (0.035)		-0.010 (0.032)
Other		-0.087* (0.028)		-0.132* (0.054)		-0.103* (0.032)		-0.027 (0.029)
1-school board		0.036 (0.025)		0.069 (0.047)		0.041 (0.028)		0.007 (0.025)
Large board		0.001 (0.017)		-0.003 (0.032)		-0.009 (0.019)		0.011 (0.017)
Year 2003/04		-0.085 (0.031)		-0.160* (0.062)		-0.044 (0.036)		-0.088* (0.034)

Year 2004/05		- 0.058 (0.019)		-0.128* (0.039)		-0.018 (0.022)		-0.065* (0.021)
Year 2005/06		-0.023 (0.019)		-0.024 (0.035)		-0.006 (0.021)		-0.015 (0.019)
Year 2005/06		0.009 (0.020)		-0.014 (0.040)		0.036 (0.023)		-0.008 (0.020)
R ²	0.026	0.229	0.040	0.191	0.006	0.168	0.023	0.097
No. of observations	461	460	518	517	462	461	516	516

Notes. The entries are the coefficients from the regression equations described in the text. Model I includes a constant for the base category and the other eight weighting index categories and model II also includes the specified control variables, all of which are 0-1 variables. The city coefficients are relative to Amsterdam; the school type coefficients are relative to public schools; the board size coefficients are relative to average size boards (those with 2-14 schools); and the year coefficients are relative to 2006/07. The sample sizes represent the set of complete observations for each of the dependent variables.

Figures

Figure 1: Percent of migrants in the Netherlands

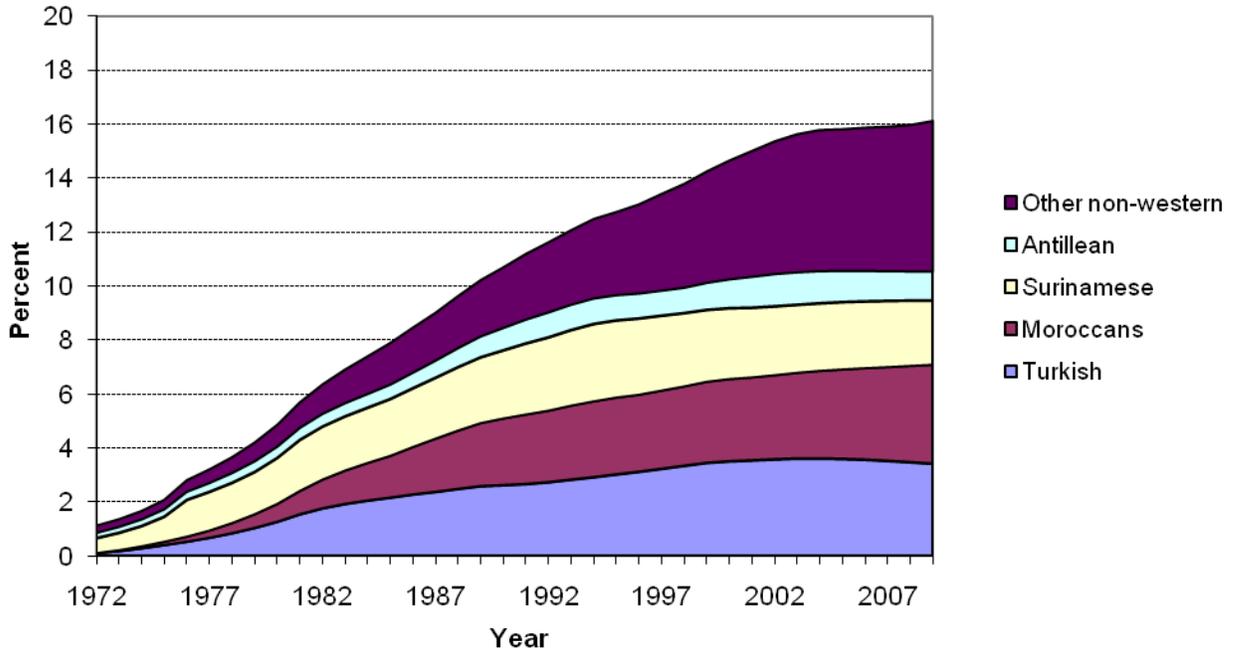


Figure 2. Percent of non-western migrants 5-10 years old, four big cities, 2003-2008 (CBS data)

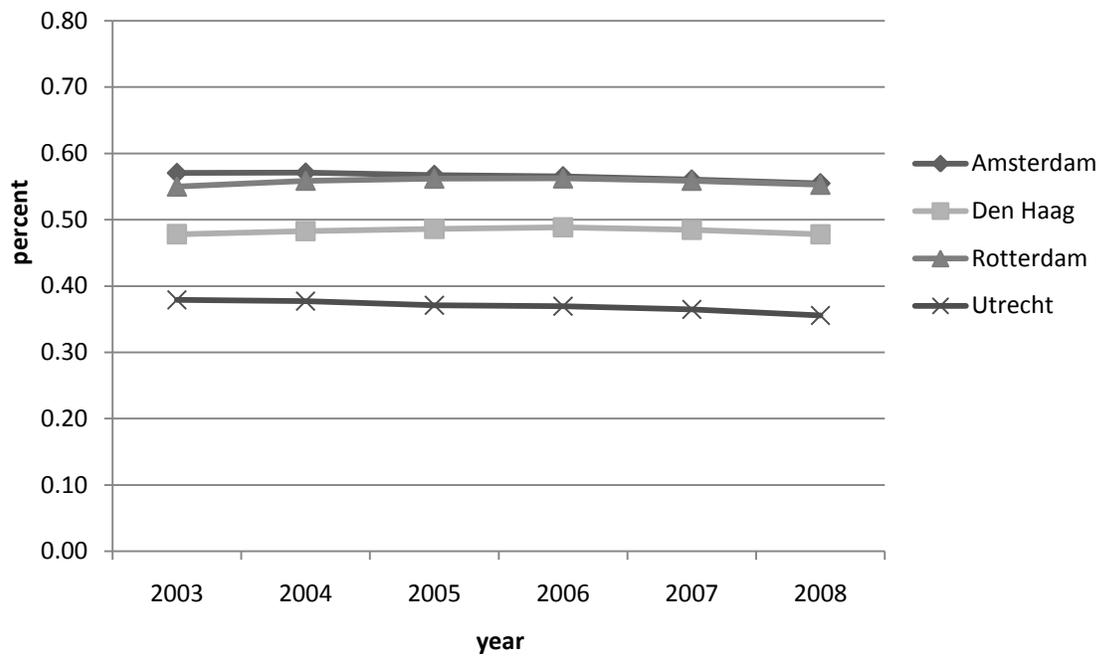


Figure 3. Three measures of segregation of disadvantaged immigrants (DI) vs. all other primary school students, aggregated across the four big cities, 1997-2005

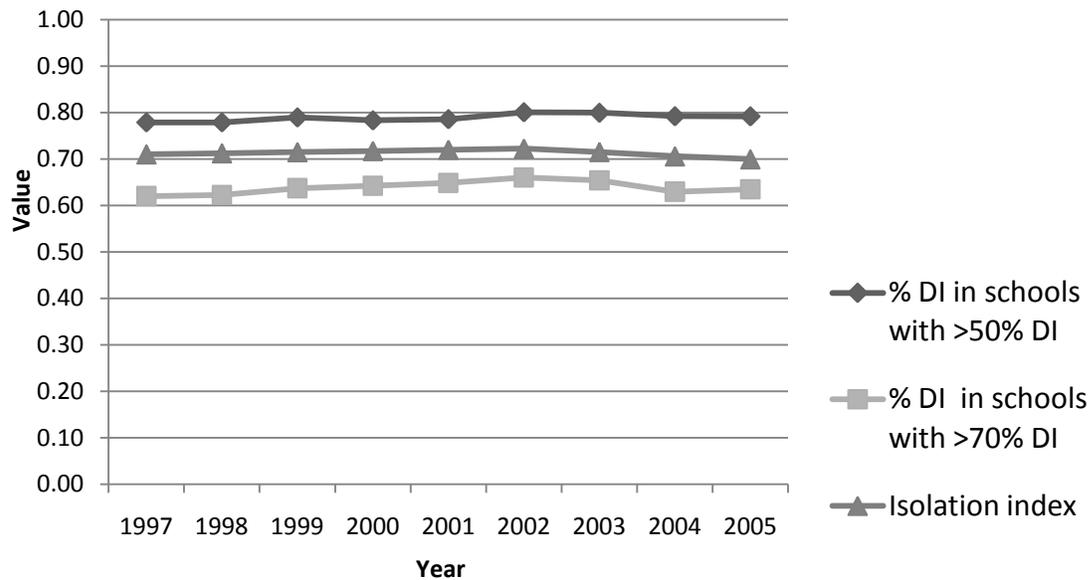
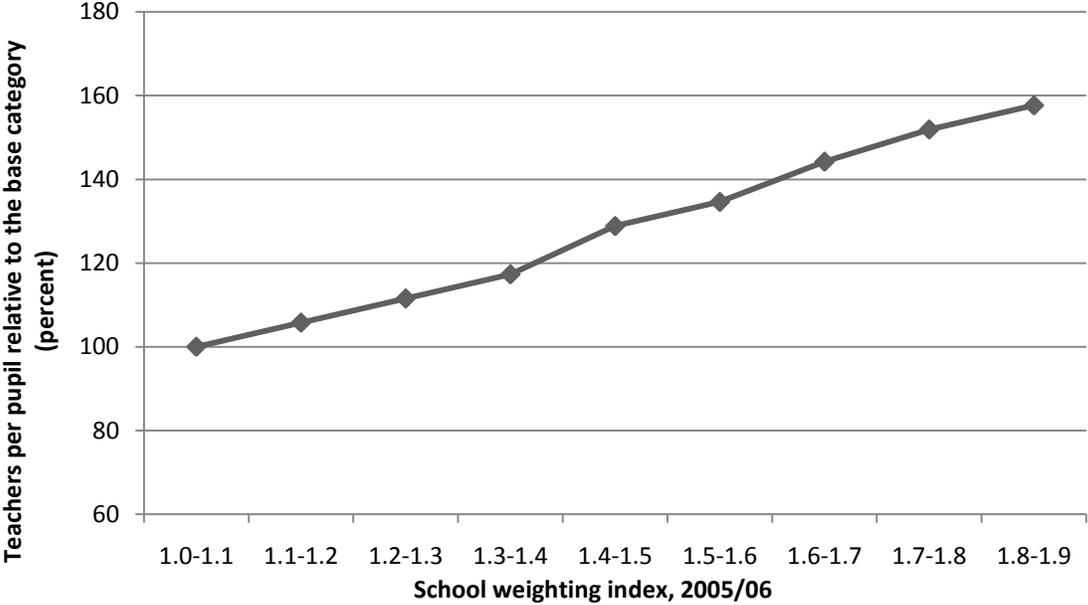


Figure 4. Teachers per pupil, 2006/07, by school weighting index



**Figure 5. Support personnel per teacher, 2006/07,
by school weighting index**

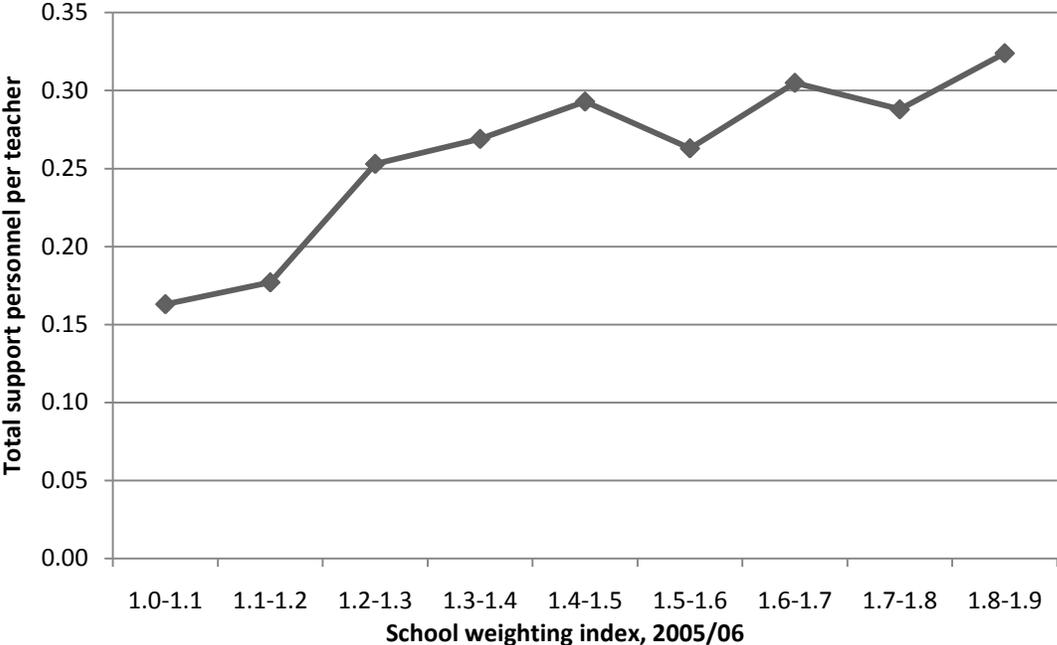


Figure 6. Overall quality by school weighting index

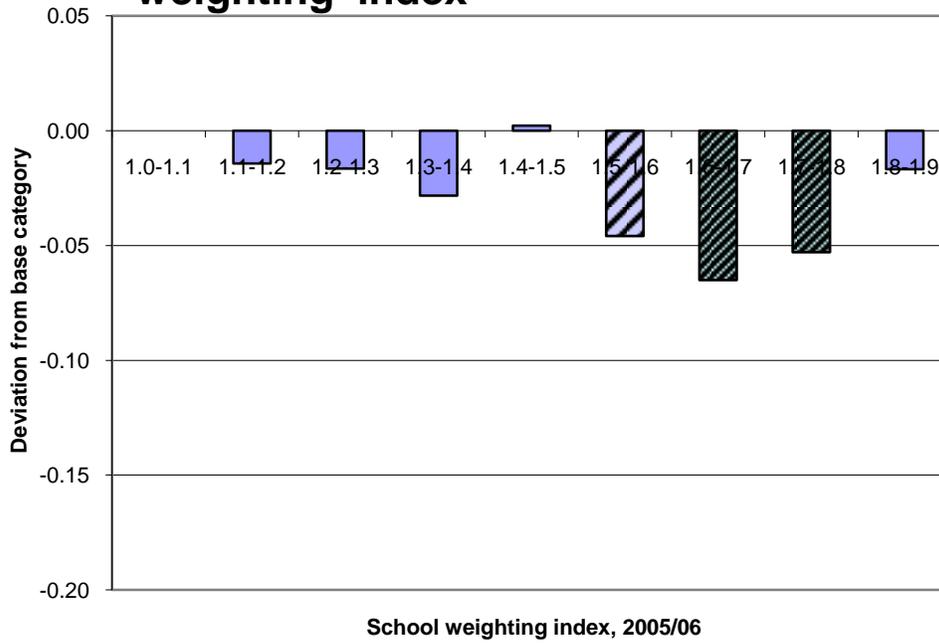


Figure 7. Student -related component of school quality by school weighting index

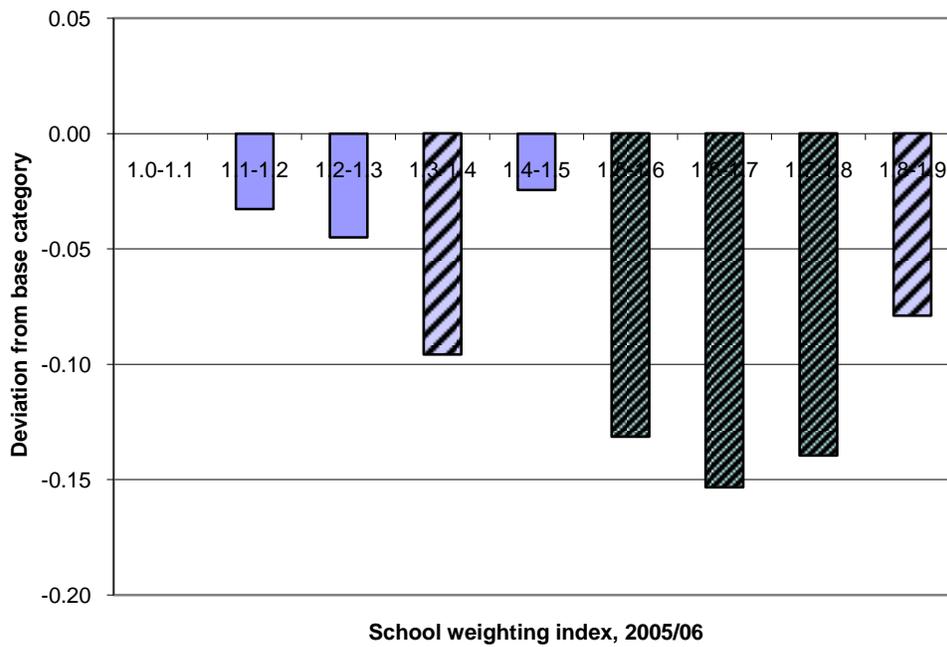


Figure 8. School-related component of school quality by school weighting index

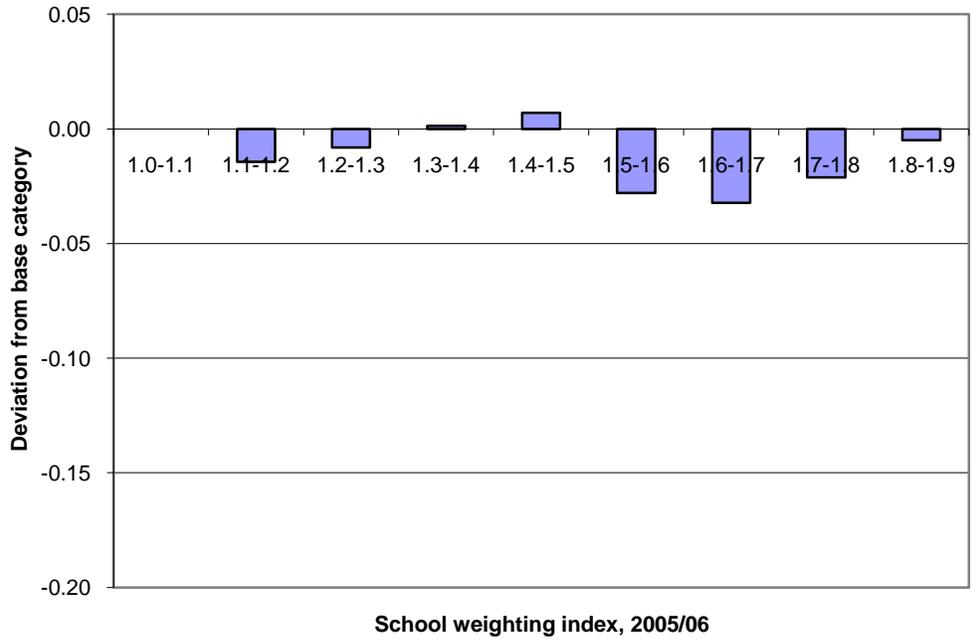


Figure 9. Teacher-related component of school quality by school weighting index

