Untapped Skills

REALISING THE POTENTIAL OF IMMIGRANT STUDENTS



Programme for International Student Assessment

OECD

PISA

Untapped Skills

REALISING THE POTENTIAL OF IMMIGRANT STUDENTS



BETTER POLICIES FOR BETTER LIVES

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Please cite this publication as:
OECD (2012), *Untapped Skills: Realising the Potential of Immigrant Students*, OECD Publishing.
http://dx.doi.org/10.1787/9789264172470-en

ISBN 978-92-64-17229-6 (print)
ISBN 978-92-64-17247-0 (PDF)

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Foreword

Integrating immigrant student populations poses significant challenges to the quality and equity of education systems across OECD countries. Migration is not a new phenomenon, but ageing populations and the looming threat of labour and skill shortages have brought the issue to the top of the policy agenda in many countries. A country's success in integrating immigrants' children is a key benchmark of the efficacy of social policy in general and educational policy in particular. Education systems that allow all students to achieve their potential manage to combine excellence and equity.

Designing education policy to address the needs of immigrants' children is not easy or cheap. It takes a concerted effort to try to understand what those needs are and the best ways to address them. Furthermore, what works for non-immigrant students might not work for children of immigrants. The diversity of immigrant student populations across countries signals the wide variety of challenges these students face. The variance in performance gaps between immigrant and non-immigrant students across countries, even after adjusting for socio-economic background, suggests that policy has an important role to play in eliminating such gaps.

Yet education policy alone is unlikely to fully address these challenges. For example, immigrant children's performance in PISA is more strongly (and negatively) associated with the concentration of educational disadvantage in schools than with the concentration of immigrants *per se* or the concentration of students who speak a different language at home than at school. Reducing the concentration of educational disadvantage may imply changes in housing policy, to enable a more balanced social mix in schools at an early age.

This report is the product of a collaborative effort between the countries participating in PISA, the experts and institutions working within the framework of the PISA Consortium, the OECD Directorate for Education (EDU) and the OECD Directorate for Employment, Labour and Social Affairs (ELS). Georges Lemaitre from ELS and Pablo Zoido from EDU co-ordinated the work on the report. Chapter 1 was drafted by Georges Lemaitre, Guillermo Montt and Francesca Borgonovi. Chapter 2 was drafted by Pablo Zoido. Chapter 3 was drafted by Josep Mestres. Chapter 4 was drafted by Anthony Heath of the University of Oxford and Elina Kilpi-Jakonen of the Otto-Friedrich-University in Bamberg. Chapter 5 was drafted by Georges Lemaitre. Chapter 6 was drafted by Garnett Picot of Queens University and Feng Hou from Statistics Canada. Satya Brink and Stephen Wolter provided useful comments for the report. Giannina Rech provided analytical input while Marilyn Achiron, Elizabeth Del Bourgo, Juliet Evans, Marlène Mohier and Elisabeth Villoutreix provided editorial and administrative support. The development of the report was steered by the PISA Governing Board, which is chaired by Lorna Bertrand (United Kingdom).



Lorna Bertrand
Chair of the PISA Governing Board



Barbara Ischinger
Director for Education, OECD



John P. Martin
Director for Employment, Labour and Social Affairs, OECD



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Executive Summary

The successful integration of the children of immigrants is a key benchmark of success for social, education and migration policies.

The best way to measure how well immigrants are integrated into a society is arguably not by how their outcomes compare with those of their native-born peers, but rather by their children's outcomes. There are always reasons to explain why adult immigrants do not do as well as native-born individuals in the labour market. For example, they may not speak the language of their new country fluently, or their qualifications or work experience obtained abroad may not be recognised, or equivalent to domestic qualifications, or adapted to what is required in the destination country. However, one would not necessarily expect such reasons to apply to immigrants' children who were born in the country or who arrived when they were quite young and were fully, or almost fully, educated in the country of residence. This would particularly be the case if immigrant parents had the same educational attainment or, more generally, a similar socio-economic background as non-immigrant parents, on average.

In a number of countries, however, many immigrant parents have lower educational attainment than non-immigrant parents. They are also often employed in low-skilled occupations. The educational outcomes of their children have, in consequence, become a litmus test for how well education systems and indeed the broader society address social and educational disadvantage, especially for immigrant students born in the new country. Is it really possible that the fact of having immigrant parents has a stronger influence on how well someone does in life than being immersed from a very early age in a country's society and educational institutions?

This book looks at the educational attainment of immigrant children and how it could be improved, drawing on results from the OECD Programme for International Student Assessment (PISA), which measures the performance of students at the age of 15 across the OECD and a number of other countries.

Immigrant students underperform in PISA, but the performance gap between them and non-immigrant students varies considerably across countries, even after adjusting for socio-economic differences.

For the children of immigrants, the basic outcomes in reading are well-documented, thanks to the PISA surveys. There are only a few OECD countries where reading outcomes at age 15 are similar to those of non-immigrant students; these are countries such as Australia, Canada and New Zealand, which have practiced selective immigration policies for many years and where arriving immigrants tend to be highly educated. This is also the case in Israel, which in recent decades has seen an increase in the migration of educated Jewish people from around the world, especially from Russia, and in Singapore, which has favoured and encouraged skilled migration since the 1980s. In other countries where immigrants' children do well, the migration often occurred when these countries were part of larger states and/or had a different international status.

In most other countries, reading levels for immigrant students lag far behind those for non-immigrant students, even after controlling for parental education. As the previous PISA publication on immigrant outcomes demonstrated (OECD, 2006), it is difficult to link this empirical finding clearly to differences between countries in education policies concerning immigrant children. On the other hand, there have been significant improvements in reading outcomes in some countries since 2000, when reading was also the main assessment focus in PISA. The improvement is especially apparent in Belgium, Germany and Switzerland, and it appears to be related to changes in the composition of migration.

Language is an obstacle to school achievement for many immigrant students.

The most obvious challenge for many students with immigrant parents is adapting to a new language and a new learning environment. It is a commonly held view that young children have little difficulty in picking up a new language and one might therefore expect that this would not constitute an insurmountable or persistent barrier. However, PISA results suggest that the older a child is at arrival, the less well he or she does in reading at age 15. Also, at least as far as reading outcomes are concerned, there does not seem to a be a critical age for language learning – in other words, there is no arrival age after which there is an abrupt fall-off in performance. Moreover, some of the decline with age does not appear to be related to the language barrier itself, but rather to the fact that some students have spent significant time in an education system in the origin country with different standards, curricula, and instructional characteristics. Immigration may thus mean not only learning a new language, but also adapting to a



more demanding education system.[1] The most vulnerable immigrant students would then be those who arrive at a late age, unable to speak the host country language, and from a country where education standards are weaker.[2] Such students would benefit from policies and programmes that take these multiple disadvantages into account. Ignoring them may result in the marginalisation of such students at a critical age and the acceptance of poor integration prospects.

The most effective way to tackle disadvantages related to age at arrival would be to favour the earlier arrival of immigrant children whenever possible. Of course this is not something that is entirely subject to policy influence or even a matter of immigrant choice, such as when immigrants and their families are fleeing persecution or life-threatening situations. However, the results concerning the impact of age at arrival on outcomes suggest that immigrants who intend to settle or are thinking of doing so should be encouraged to bring their families over as soon as they can. Most countries have policies in place that require certain immigrants to have adequate income and housing before they can bring over their families. Such policies, intended to ensure minimum living standards for immigrant families, may delay the arrival of immigrant children and thus have the unintended consequence of delaying the acquisition of the language of instruction or of falling behind in school for certain immigrant children.

Not understanding the language of the country of residence upon arrival is a disadvantage; but so too is little exposure to that language outside school. PISA results suggest that students who mostly speak a different language at home from that which is used in school have significantly lower reading scores than those who tend to use the test language at home most of the time. This effect is very strong, accounting for a difference of about 30 points in reading scores, on average, between those who mostly speak the test language at home and those who do not, in both OECD countries and elsewhere. The performance gap is still apparent even when comparing students of similar socio-economic backgrounds. This amounts to almost a full year of schooling.

It is undoubtedly the case that current communication technologies make it substantially easier for immigrants and their families to maintain their knowledge of and familiarity with the language and culture of their country of origin much more so than used to be the case several decades ago when, for example, most television channels were in the national language and the Internet did not exist. There is thus a greater need to disseminate information to immigrant parents about the benefits of language exposure so that immigrant households do not always take the path of greater familiarity and least resistance. It is well known that the presence of reading materials in the home in the host-country language is strongly associated with better reading outcomes, and the PISA results confirm this, even when parental education and language have been taken into account.

Other lines of evidence also point to the importance of language exposure. Second-generation students in OECD countries, for example, benefit more from attending pre-primary education for at least one year than do non-immigrant students. Certain countries show nearly the same effects for both groups. Pooling results from OECD countries together suggests a sizeable additional benefit for those who speak another language at home of more than 20 points, and this also holds after taking into account the mother's educational attainment. For those who speak the test language at home, there is no such additional benefit.

Lower performance is more strongly associated with a higher concentration of socio-economic disadvantage than with a higher concentration of immigrants or foreign-language speakers.

PISA data also show a heavy concentration of immigrants in schools with students who mostly speak another language at home. On average across OECD countries, some 15% of immigrant students are in schools where more than 40% of students mostly speak another language at home, and some 40% are in schools where more than 20% of students mostly speak another language. If this does not necessarily imply that they speak another language among themselves at school, it nevertheless does place students whose reading performance is weakest together in the same schools, which is surely not a good basis for improving overall outcomes. This raises larger questions regarding the concentration of immigrants in schools, an issue that is considered further in this report.

Most education systems provide language learning and remedial reading classes for children of immigrants. No doubt these help to improve and accelerate language acquisition, but the scale of the remaining difference in outcomes among those who mostly speak another language at home compared with those who do not, suggests that current language and reading programmes may need to be reinforced, especially at earlier ages when their impact is greatest. Policy obviously cannot impose the use of the host-country language in the home environment, but it needs to ensure that the host-country language can better compete for the attention and interest of immigrant children. Parents clearly have a role to play in this and should be encouraged to expose their children to national-language publications and media at home.



Some education and social policies have different effects on immigrants and non-immigrants.

If high educational attainment among parents seems the most likely explanation for the favourable outcomes of immigrant children in the selective immigration countries noted above, poor parental education seems to be an inadequate explanation, by itself, for the unfavourable outcomes of immigrant students observed in many other countries. Indeed, adjusting for parental educational seems to explain at best 25% of the difference between the outcomes of immigrant and non-immigrant students. Differences in parental education also fail to explain why, in some cases, second-generation students do not perform as well as first-generation students. Nonetheless, parental educational attainment is significant for student reading outcomes and is a factor that policy may not be able to change, but can at least mediate.

To a certain extent, all education systems depend upon or are characterised by parental assistance with schoolwork, which clearly places poorly educated families at a disadvantage that increases as the student progresses through the education system. The generally lower reading outcomes of students with poorly educated mothers are undoubtedly associated with less of an inclination and, for some, an inability to read to their children and assist them with reading tasks, whether associated with schoolwork or in general. While this is not an issue specific to immigrant students, it is magnified by the especially low attainment levels of some immigrant parents. Compensatory policies, such as tutoring and other out-of-class assistance, need to be introduced or reinforced. Policies targeted at parents, both to support them and enhance their engagement with schools, are also appropriate in this context.[3]

But parental attainment levels alone cannot explain immigrant students' outcomes, suggesting that something else is at play. In many countries, the impact of higher parental attainment levels is weaker among immigrant than among non-immigrant children. One simply does not observe the same level of positive association between reading achievement and parental attainment as one observes among non-immigrant children. This does not appear to be related to the language spoken at home, nor does it seem to reflect the educational qualifications of immigrant parents, which are effectively, if not formally, lower than those from domestic institutions.

What one does observe, however, is that immigrant children with highly-educated mothers – as well as those with mothers with lower levels of education – are over-represented in disadvantaged schools. In addition, the differences in reading performance between disadvantaged schools and the most advantaged schools are large in many countries, mostly cancelling out any gains that are associated with high parental attainment. Education policy and funding rarely compensate for this disadvantage, as formulas tend to be based on the number of students and programmes. Quality resources, such as highly educated teachers, tend to be concentrated in more socio-economically advantaged schools. Indeed, the concentration of immigrant students in disadvantaged schools is a more powerful explanatory factor for outcomes than either immigrant concentration in schools or the proportion of immigrant students who speak another language at home.

The social and economic phenomena that lead to the concentration of disadvantage in certain geographic areas, which include private housing prices, thus have a powerful effect on reading outcomes, for both immigrant and non-immigrant students. With immigrant populations, which are more skewed towards disadvantage than non-immigrant populations in many countries, the concentration effect for immigrants is magnified. What is unexpected, however, is the presence of so many immigrant children of highly educated mothers in disadvantaged schools. This seems to be correlated with the fact that they come from families with low-status occupations and lower incomes, despite high maternal educational attainment. Low occupational status may result when qualifications or work experience are not recognised or considered equivalent, because of a language barrier, or because of discrimination in the hiring process, which is found in practically all countries to a greater or lesser extent. Technical occupations, such as teaching, nursing or healthcare, where women are generally over-represented compared to men, are also professions where accreditation is a factor for immigrant mothers. It seems unlikely that the high concentration of immigrant students in disadvantaged schools, particularly of those whose parents are highly educated, is a consequence of parental choice alone.

Countries whose education systems tend to have a stronger concentration of disadvantaged students, where low-cost housing is segregated and immigrant populations are generally less educated would appear to be part of a social dynamic that generally, if not inexorably, leads to poor outcomes for immigrant children. Some countries seem to be able to avoid this, among them the United Kingdom and the United States, but the reasons are not obvious.

Focus on language, concentration of disadvantage and the concerns specific to immigrant families.

What can reverse or attenuate these poor outcomes for immigrant children? The first thing to note is that although there are success stories among immigrant students coming from disadvantaged schools, the average outcomes are generally unsatisfactory. The problem is difficult to tackle, because it appears to be as much structural as a consequence of weak or less-than-adequate policies.



Short of making large-scale changes in housing policies that would ensure a better social mix in schools, the less-favourable outcomes of many immigrant students need to be addressed through education policies.

The three key elements stand out:

- **Language-learning policies need to be reinforced, both for very young immigrant children and for those students who arrive later with little knowledge of the host-country language**. Relying too heavily on the "natural" language-learning ability of young children or on the assumption that a basic level of language proficiency is sufficient will not yield satisfactory results. Children may learn quickly, but not to the level required to progress adequately in school. The language skills of parents, particularly of mothers, may not be sufficient to allow them to assist their children in their schoolwork. The objective needs to be more exposure to the host-country language, both in and out of school. This is especially the case in the Internet age when media in the language of the country of origin are more present in immigrant households than they ever used to be. Parents need to be sensitised to this so that the home environment contributes to improving outcomes.
- **The adverse effects of the concentration of disadvantage need to be reduced**. The policy choices here are difficult. There is the option of investing more heavily in disadvantaged schools, without attempting to change the extent of concentration. The expectation is that education policy measures, whether in the form of better teachers, smaller classes or more remedial help, can indeed improve outcomes, even under unfavourable conditions. But this is a costly option. A different policy choice would involve attempting to reduce the degree of concentration through housing or school-choice policies, options that are likely, however, to be more difficult and controversial to implement. All things being equal, a more balanced social mix in schools would go a long way towards improving outcomes for both immigrant and non-immigrant students from disadvantaged backgrounds. The first to benefit would be the numerous immigrant students with highly educated parents in disadvantaged schools whose performance is much poorer compared to their peers in schools where there is less concentration of disadvantage. All of these policies would need to be implemented early on in the school trajectory, before immigrant children fall too far behind.
- **Social phenomena and education policies may have specific effects on immigrants beyond those observed among non-immigrants**. The impact of the concentration of disadvantage, for example, seems to be more severe among immigrant students than non-immigrant students. The weaker relationship between reading performance and parental education levels, and the greater benefits of attending pre-school for immigrant students who largely speak another language at home, compared with those who do not, are two more examples. This suggests that analyses of immigrant-related phenomena must not only adjust for differences in characteristics between immigrant and non-immigrant students, but must also focus on differences in the impact of social phenomena or policies. Integration means that everyone has the opportunity to achieve his or her potential. It would appear that, in some cases, the route taken is not always the same, a difference that policy makers need to consider more closely.

Notes

1. In some cases, migration may be from a country where standards are higher, which would imply a late-arrival premium rather than a penalty.
2. Both educational standards and student performance tend to rise with economic development.
3. A new PISA Thematic Report to be published in 2012 focusing on parental involvement will explore these issues in more depth.

References

OECD (2006), *Where Immigrant Students Succeed – A Comparative Review of Performance and Engagement in PISA 2003*, OECD Publishing.



Reader's Guide

DATA UNDERLYING THE FIGURES

The data referred to in this volume are presented in Annex B and, in greater detail, on the PISA website (*www.pisa.oecd.org*).

Five symbols are used to denote missing data:

a The category does not apply in the country concerned. Data are therefore missing.

c There are too few observations or no observation to provide reliable estimates (i.e. there are fewer than 30 students or less than five schools with valid data).

m Data are not available. These data were not submitted by the country or were collected but subsequently removed from the publication for technical reasons.

w Data have been withdrawn or have not been collected at the request of the country concerned.

x Data are included in another category or column of the table.

COUNTRY COVERAGE

This publication features data on 65 countries and economies, including all 34 OECD countries and 31 partner countries and economies.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

CALCULATING INTERNATIONAL AVERAGES

An OECD average was calculated for most indicators presented in this report. The OECD average corresponds to the arithmetic mean of the respective country estimates. In the case of some indicators, a total representing the OECD area as a whole was also calculated.

Where the focus is on comparing performance across education systems, the OECD average is used. In the case of some countries, data may not be available for specific indicators, or specific categories may not apply. Readers should, therefore, keep in mind that the terms "OECD average" refer to the OECD countries included in the respective comparisons.

ROUNDING FIGURES

Because of rounding, some figures in tables may not exactly add up to the totals. Totals, differences and averages are always calculated on the basis of exact numbers and are rounded only after calculation.

All standard errors in this publication have been rounded to one or two decimal places. Where the value 0.00 is shown, this does not imply that the standard error is zero, but that it is smaller than 0.005.

REPORTING STUDENT DATA

The report uses "15-year-olds" as shorthand for the PISA target population. PISA covers students who are aged between 15 years 3 months and 16 years 2 months at the time of assessment and who have completed at least 6 years of formal schooling, regardless of the type of institution in which they are enrolled and of whether they are in full-time or part-time education, of whether they attend academic or vocational programmes, and of whether they attend public or private schools or foreign schools within the country.

REPORTING SCHOOL DATA

The principals of the schools in which students were assessed provided information on their schools' characteristics by completing a school questionnaire. Where responses from school principals are presented in this publication, they are weighted so that they are proportionate to the number of 15-year-olds enrolled in the school.



FOCUSING ON STATISTICALLY SIGNIFICANT DIFFERENCES

This report discusses only statistically significant differences or changes. These are denoted in darker colours in figures and in bold font in tables. See Annex A of OECD (2010), *PISA 2009 Results: What Students Know and Can Do* (Volume I), PISA, OECD Publishing, for further information.

CATEGORISING STUDENT PERFORMANCE

This report uses a shorthand to describe students' levels of proficiency in the subjects assessed by PISA:

Top performers are those students proficient at Levels 5 and 6 of the assessment

Strong performers are those students proficient at Level 4 of the assessment

Moderate performers are those students proficient at Levels 2 and 3 of the assessment

Lowest performers are those students proficient at Level 1 or below of the assessment

ABBREVIATIONS USED IN THIS REPORT

ESCS	PISA index of economic, social and cultural status
GDP	Gross domestic product
ISCED	International Standard Classification of Education
ISEI	International socio-economic index of occupational status
PPP	Purchasing power parity
S.D.	Standard deviation
S.E.	Standard error

FURTHER DOCUMENTATION

For further information on the PISA assessment instruments and the methods used in PISA, see the *PISA 2009 Technical Report* (OECD, 2012) and the PISA website (*www.pisa.oecd.org*).



1

Overview of Immigration Regimes and Education Systems

Different immigration and education policies across countries shape the context in which the children of immigrants strive to learn. History, international treaties and domestic immigration policy are all factors which have influenced and continue to influence the immigrant intake in a particular country. Education systems differ in the way they distribute resources and establish system-wide and school-level policies. The following overview of the context in which children of immigrants learn is intended to provide a frame of reference for the evidence and results discussed in subsequent chapters.



INTRODUCTION

The Programme for International Student Assessment (PISA) tests 15-year-old students at school across countries. Some of these students and/or their parents were not born in the country of assessment. It is they who are the focus of this report. Some of these students speak a language at home different from that of the PISA assessment. Box 1.1 categorises students who participated in PISA across immigrant backgrounds and provides key definitions used in this report.

This chapter first reviews recent trends in international migration, describing the size of current foreign-born populations across countries and presenting elements associated with the size and nature of these populations. The chapter then reviews a set of important differences and similarities across national educational systems. It ends with a brief overview of population sizes across countries.

Box 1.1 Key definitions: Immigrant background

PISA 2009 asked students to report the country where they and their parents were born. The countries or country groups identified vary by assessment country. All countries differentiate between the country of assessment and other countries. In some cases, a list of countries was provided. For example, among OECD countries, Australia, Austria, Belgium, Denmark, Luxembourg, New Zealand and Switzerland all had at least three options (specific countries or regions) in addition to "other country".

This report distinguishes between immigrant and non-immigrant students based on the information reported by students on the country of origin of both their parents. If both of the student's parents were born in a country other than the country where the student sat the PISA test, the student is classified as an immigrant student. Non-immigrant students are the remainder, that is, students who have at least one parent who was born in the country where the student took the assessment.

Among immigrant students, the report distinguishes between first- and second-generation students based on the information they reported on their own country of birth. Second-generation students are immigrant students born in the country of assessment (where they sat the PISA test). First-generation students are foreign-born, like their parents.

While this categorisation of students is useful for analysis, it hides some variation across family characteristics, age of arrival or countries of origin. For example, non-immigrant students include students with one parent born abroad or students who are themselves foreign-born but have at least one parent who was born in the country of assessment. Immigrant students vary by country of origin, as do their parents, sometimes even within the same family. For example, families may include children born both abroad and in the country. First-generation students vary according to the age they arrived in the country.

Another important dimension of variation among immigrant students is the language they speak at home. PISA asked students to report whether or not the language they mostly speak at home was the same as the language in which they were assessed by PISA, which is always the language of instruction. It is therefore possible to distinguish between immigrant students who mostly speak the assessment language at home and those who do not.

OVERVIEW OF INTERNATIONAL MIGRATION

International migration trends in recent decades

In part because of aging and demographic decline, international migration has jumped up the policy agenda in many countries across the globe in recent decades, but it is hardly a new phenomenon. The post-World War II years saw large movements of workers crossing borders to fill jobs for which there were not enough domestic workers in many European countries. At the same time, the traditional settlement countries of Australia, Canada, New Zealand and the United States resumed admission of immigrants from across the oceans, which had been interrupted by the two world wars and the Great Depression. Workers arrived from countries across the globe, as the settlement countries abandoned former restrictive policies, sometimes based on geographic origin.

The seventies oil crisis put a stop to labour migration in many countries, as economies adjusted to higher energy prices. But migration as a whole did not stop. Many workers stayed on, bringing over their families from abroad. Others fled their homelands in the wake of civil wars and political persecution. The transfer of wealth to the Gulf States transformed them into magnets for workers moving to take on jobs in oil production, construction, commerce and domestic help. More than a decade later, the fall

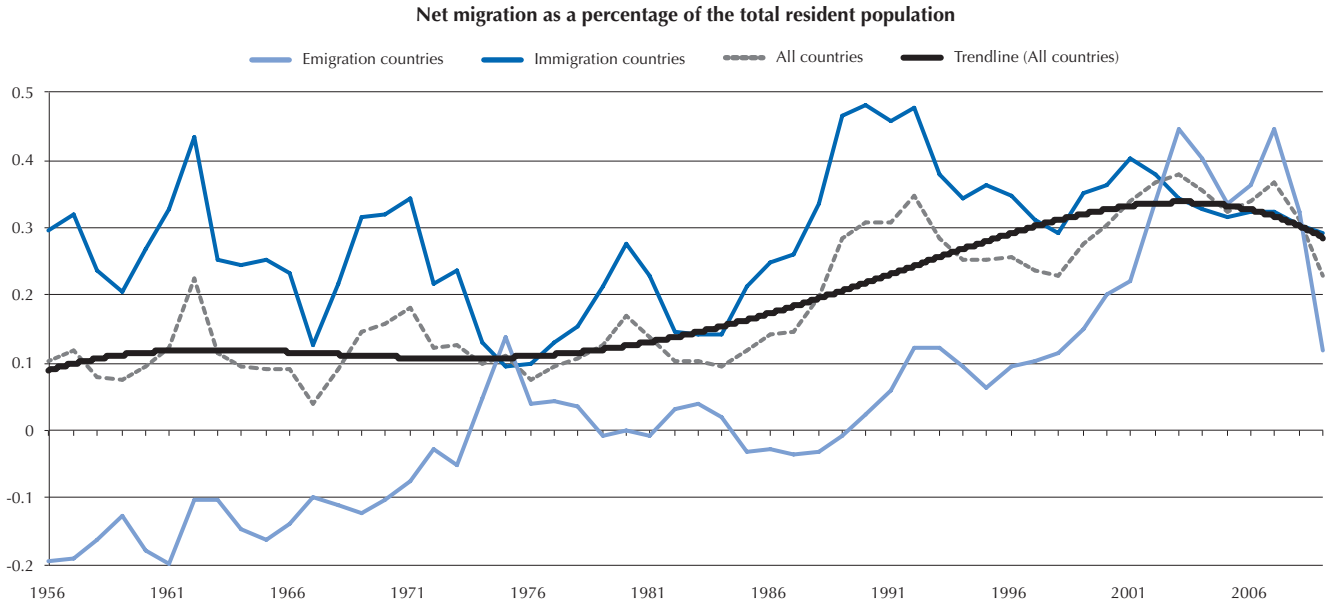


of the Iron Curtain ushered in a new era of international migration, as barriers to out-migration, if not to immigration, came down almost everywhere. In addition, economic globalisation created needs and opportunities for workers, both skilled and lesser skilled, in new centres of development, production and growth, such as Korea, Thailand, Malaysia, Singapore, China and India.

At the same time, most former OECD emigration countries became immigration countries, showing immigration rates (before the economic crisis) that were on average as large as those of traditional OECD immigration countries (Figure 1.1). Such countries are thus being faced with new challenges, in both their educational systems and their labour markets, which they have not had to face before in a significant way.

▪ Figure 1.1 ▪

50 years of net migration in selected OECD countries, 1959-2009



Note: Immigration countries include Australia, Austria, Belgium, Canada, France, Germany, Luxembourg, the Netherlands, New Zealand, Sweden, Switzerland, the United Kingdom and the United States. Emigration countries include the Czech Republic, Denmark, Finland, Iceland, Italy, Norway, the Slovak Republic, Japan, Greece, Hungary, Ireland, Poland, Portugal and Spain. Korea, Mexico and Turkey are out of the scope of the study for data availability reasons.

Source: OECD (2011), *Labour Force Statistics*.

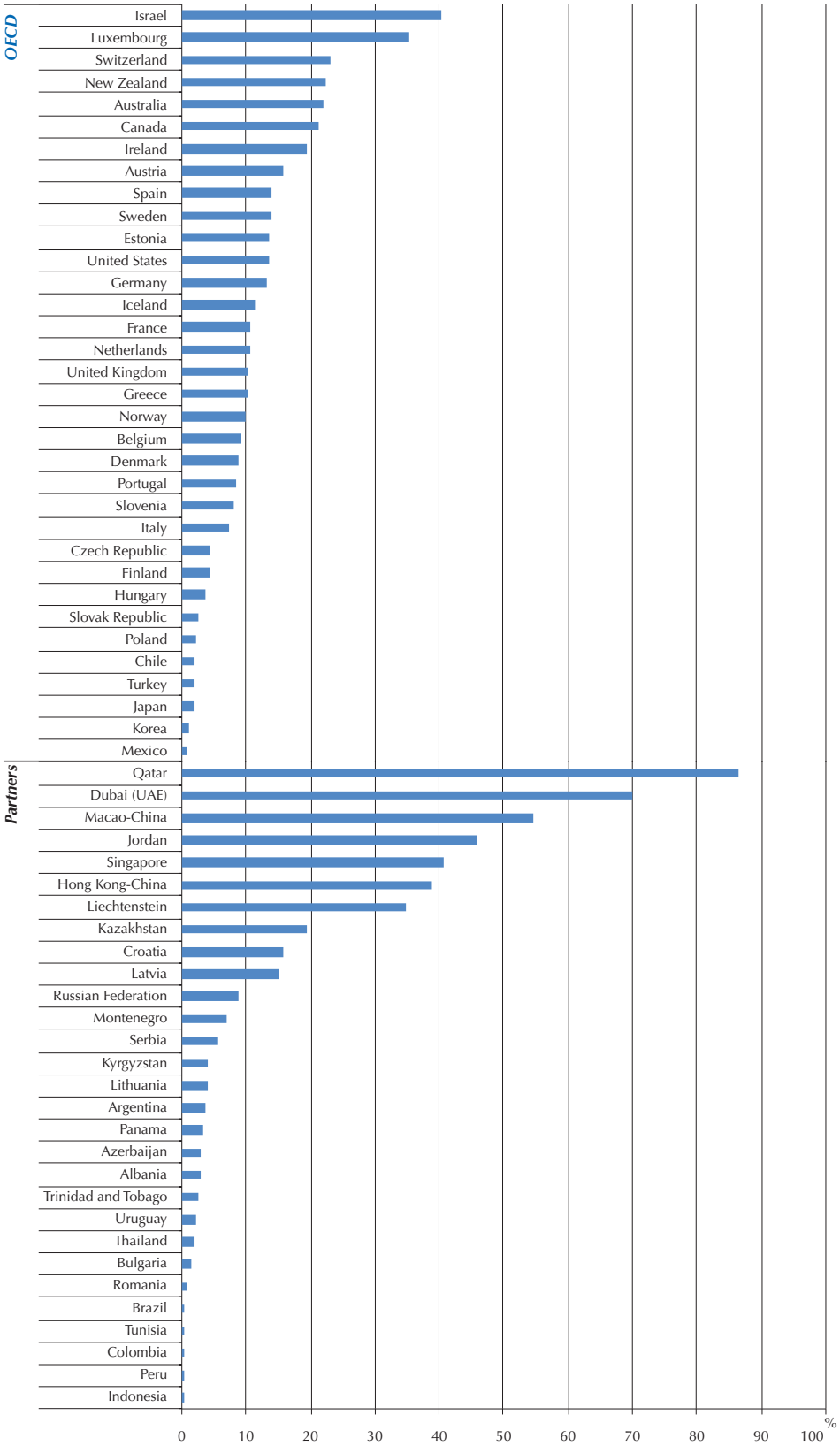
By 2010, foreign-born individuals as a percentage of the total population reached an average of about 14% for countries participating in PISA 2009 and 11% for OECD countries (Figure 1.2). These averages over countries mask a considerable variability in immigrant prevalence. In Israel the size of the foreign-born population reaches 40%, Luxembourg follows with 35% and in Switzerland, New Zealand, Australia and Canada it ranges from 21% to 23%. Ireland with 20% and Austria with 16% are also above the OECD average. Spain, Sweden, Estonia, the United States and Germany are all near the OECD average. In contrast, Mexico, Korea, Japan, Turkey, Chile, Poland and the Slovak Republic have foreign born populations at less than 2% (Table B1.2).

Among partner countries and economies, some countries have negligible numbers of immigrants in percentage terms, such as Indonesia, Tunisia and most Latin American countries. At the other end of the spectrum are countries such as Dubai (UAE) and Qatar, where the immigrant population is almost as large if not larger than the native-born population, and countries or regions which have been involved in border changes, break-ups or changes in international status, such as the republics of former Yugoslavia and the Soviet Union and Macao- and Hong Kong-China. In the countries of former Yugoslavia, the foreign-born populations largely consist of individuals from other republics of the former country who had migrated (internally) before the break-up. In the former republics of the Soviet Union, such as Estonia, Latvia, Kyrgyzstan and Kazakhstan, immigrants are often ethnic Russians who attend Russian-language schools in those countries. Immigrants in Macao- and Hong Kong-China are mostly ethnic Chinese from the rest of China. Many immigrants in the Czech Republic are from the Slovak Republic. Most immigrants from Hungary are ethnic Hungarians who have "returned" to Hungary from their homes in the Slovak Republic, Romania and Serbia. All of these countries are included in the analyses of this publication, sample sizes permitting, with the cautionary note that much of the international migration in these cases does not bear all of the hallmarks usually associated with the cross-border movement of populations with ethnic, cultural and linguistic backgrounds different from those of the destination country. Table B1.5, which shows the assessment



▪ Figure 1.2 ▪

The foreign-born population as a percentage of the total population, 2010



Countries are ranked ascending order of the percentage of the foreign-born population.

Source: United Nations (2011), *Trends in International Migrant Stock*.



languages for each country and the percentage of immigrants assessed in each language who speak a different language at home, gives an illuminating view of the nature of migration movements in the countries assessed in PISA. In some countries immigrants are assessed in a language which is not the main language of the native-born population.

The regulation of international migration

In any particular country, the size and composition of the immigrant population are determined by international treaties and country-specific immigration policies and practices. International migration movements are extremely diverse and have tended to be regulated since the beginning of the 20th century. The regulation of migration affects the composition and skill-level of immigrant populations across countries, but it would be an exaggeration to assume that the link is always strong. Governments do not necessarily even have full control over legal movements because, among other reasons, of past decisions concerning particular types of migration. For example, many movements are subject to international agreements or treaties, and governments generally cannot restrict such movements without reneging on the treaties. Examples of such treaties are free-mobility regimes in certain regions, such as the free-circulation regime for the citizens of European Union member countries, the Trans-Tasman Travel Arrangement between Australia and New Zealand, or the MERCOSUR Agreement on the Free Movement of Persons and Residence between the countries of the southern cone of South America.

Likewise many governments have signed the Geneva Convention, which requires that they examine requests for asylum by people arriving or present in the country or country's territory and grant refugee status to those satisfying the criteria defined in the convention. Those not satisfying the criteria in principle must return to their country of origin.

Most governments also recognise the right of residents to live with their families or to marry or adopt whom they want. There may be restrictions on the arrival of family migrants, such as minimum income levels or adequate lodgings, but these cannot be made overly restrictive without calling into the question the commitment of countries to the rights in question.

All of these describe situations in which governments have limited discretionary authority over the nature and composition of movements, and ultimately on the nature of the immigrant student populations as a result of these movements. Free-circulation regimes, for example, may not always be between countries with similar wage and education levels, with the consequence that significant movements of lesser-skilled migrants may occur from lower- to higher-wage countries. Likewise, refugee movements from some developing countries may involve and indeed have involved at times populations of extreme educational disadvantage.

Labour migration and immigration policy

Labour migration, on the other hand, tends to be discretionary in nature, that is, governments define the conditions of entry and stay and, in principle, have full discretion to increase or decrease the flows as they wish. Movements are often restricted, either through numerical limits or by assessments of whether local labour is available, both to ensure political acceptability and to avoid adverse wage and employment effects on resident workers.

The education or skill level of labour migrants can and is often regulated by governments, whether the labour migrants are recruited directly by employers (demand-driven migration) or are selected by the national administration on the basis of an assessment of their characteristics and deemed aptitude to integrate into the labour market and society of the destination country (supply-driven migration). Most OECD governments have tended to favour highly skilled labour migration over recent decades, not the least because their labour market outcomes and contribution to the economy have generally been far more favourable than for lesser-skilled migration. At the same time, the children of such migrants have tended to have better educational outcomes than the children of lesser-skilled migrants. While highly skilled migration has been preferred by almost all countries, the scale of such migration has varied considerably across countries.

It is essentially only in the settlement countries of Australia, Canada and New Zealand that discretionary labour migration was significant in numbers until approximately the mid 1990s, when Ireland and the United Kingdom also began opening up to skilled labour migration. This was also the case in Singapore since the 1980s and in Israel, with the migration of highly educated Russian Jewish people in the 1990s. In most other countries, highly skilled labour migration remained low in proportional terms and lower-skilled humanitarian and family migration predominated, even if education levels were generally increasing for immigrants from developing countries as well. It is hardly a coincidence that students of immigrant parents in the countries where there has been significant highly skilled migration generally have had favourable reading outcomes. In other countries, this is less often observed although, as will be seen, there are factors other than low parental educational attainment alone which influence outcomes in these countries.

The extent of discretionary skilled labour migration in countries would appear to be about the only facet of migration policy regimes which seems to be useful in explaining immigrant student reading outcomes. Other categorisations of countries according to their migration history or policy, such as whether or not they had guest-worker regimes in the 1960s and 1970s, colonial pasts or were important destination countries for refugee populations, may well have affected the composition of migration in these countries, but have not proven useful in distinguishing countries from each other with respect to the reading outcomes of immigrant students.



The countries of southern Europe constitute an interesting example, because they are among the countries which have seen very high levels of labour migration over the past 15 years. However, the education levels of immigrant parents have not been especially high, although they have not been substantially different from those of its (older) working-age population. Despite this, the PISA reading outcomes of immigrant children in these countries have not been especially favourable.

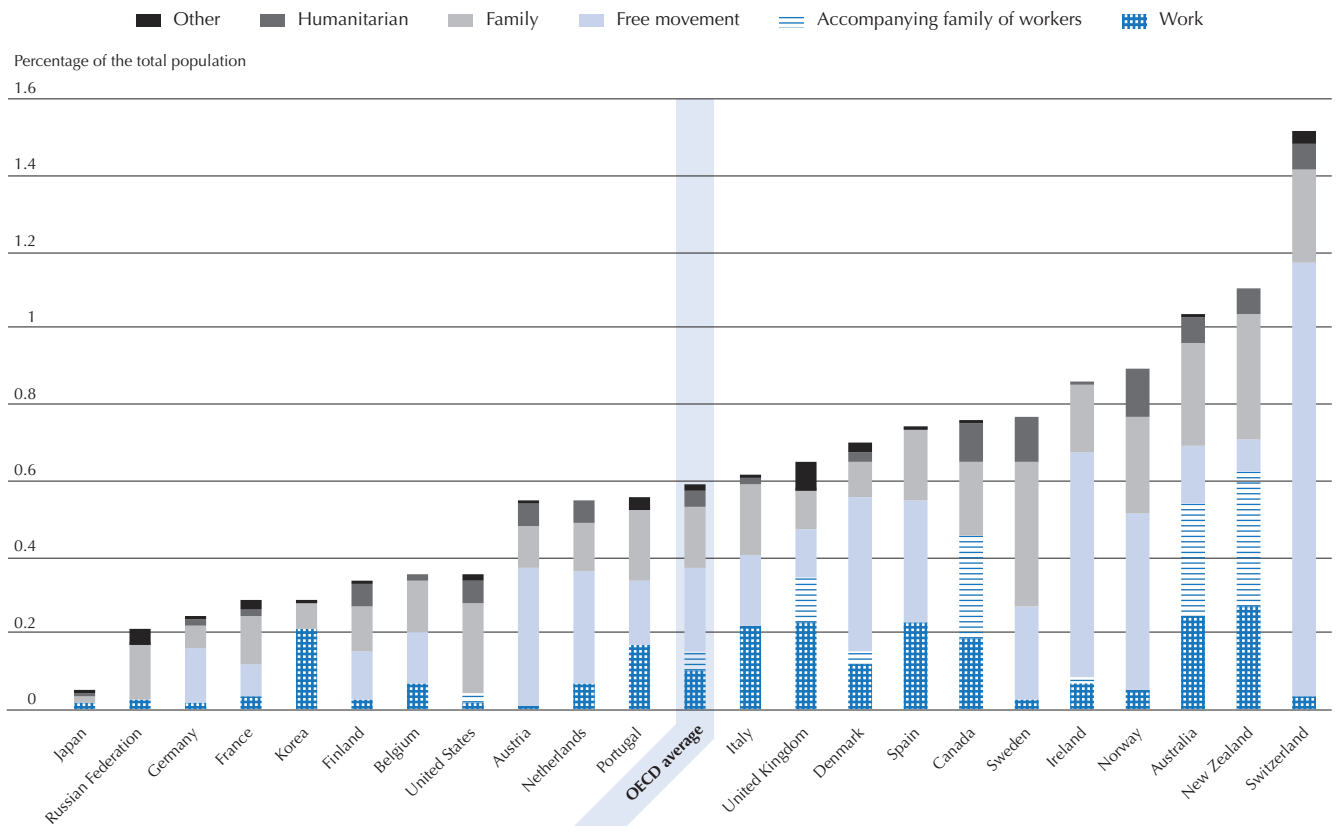
Other aspects of migration policy can affect the migration of family members and in particular of immigrant students. Historically, not all immigrants have been allowed to bring in their families at the same time they themselves migrated, nor have their spouses necessarily been allowed to work. Family reunification continues to be subject to certain conditions in most countries, in particular the requirement of adequate income and lodgings. In practice, these requirements may delay family reunification and the arrival of immigrant children in the educational systems of destination countries. By contrast, highly skilled migrants are normally allowed, and indeed in many countries encouraged, to come with their families from the beginning.

The composition of international migration

For both historical and policy reasons, the scale and nature of international migration movements differ from country to country. Figure 1.3 gives an indication of this variability across OECD countries for a recent year (2009), showing both the relative importance of permanent migration and the distribution by category of entry. These statistics show immigration for a given year, that is immigration flows, as opposed to Figure 1.2, which shows the extent of the entire immigrant population. Note that most of the large countries in Figure 1.3 have relatively low immigration rates, even if the absolute numbers of immigrants in these countries may seem large. Free circulation has become an important category of entry for many European countries, although it was less so prior to the enlargement of the European Union (EU) in 2004. Labour migration (excluding free-circulation movements) tends to be a minority phenomenon in almost all countries and the number of people entering under this category is generally smaller than those entering as family migrants.

▪ Figure 1.3 ▪

Permanent immigration into selected OECD and non-OECD countries, total and by category of entry, 2009



Countries are ranked in ascending order of the percentage of the total population.

Source: OECD (2011).



The extent of discretionary labour migration tends to understate the impact of this form of migration, however. Spouses of migrants tend to have educational attainment levels that are similar to those of the migrants, and tend to transmit their educational situation to their children. In practice, this means that the impact of relatively modest labour migration regimes can be much greater than the actual size of a labour migration programme might lead one to believe. The selective migration countries of Australia, Canada and New Zealand, for example, tend to include accompanying family members in their statistics when they cite the relative importance of their skilled migration programmes. Although it is generally only the labour migrants who are directly settled, from the point of view of impact, it is undoubtedly the entire family which is the relevant group. Including family members of skilled labour migrants in the statistics for these countries raises the share of this group to over 60% of annual entries.

Migration movements tend to be strongly influenced by current migration policies but also by previous migration waves, which in turn may reflect the colonial history of the country, as is the case of Belgium, France, Netherlands and the United Kingdom. Table B1.1 provides circa 2000 statistics on the geographic origin of immigrants, for those PISA-assessed countries for which such data are readily obtainable from the most recent Census. This is not a recent year, but nonetheless provides a good overview of both the scale of international migration over recent decades, as well as its composition by continent and by OECD and non-OECD countries.

OECD countries are the origin countries of about 44% of all immigrants in OECD countries, but represent only 8% of all immigrants among the partner countries shown. Immigrants in European countries are generally European in origin, but there are significant populations from Africa in certain countries, in particular France and Portugal and to a lesser extent in Belgium, Italy, the Netherlands, Spain and the United Kingdom. Asia is strongly represented in Scandinavia, the Netherlands and the United Kingdom, but also in the settlement countries of Australia, Canada and New Zealand as well as in Japan. Migration in Latin America is heavily intra-regional, but also to the United States and Spain. In most countries, there is substantial diversity in origin countries, with more than 100 origin countries represented, but also often strong representation from a more limited number of countries (Table B1.1).

The immigrant student population

The children of immigrants may be immigrants themselves, having arrived with their parents or having been brought over some time later (first-generation students in PISA), or they may have been born in the country (second-generation students in PISA). First-generation immigrants may have arrived as adults or may have themselves entered the country when young and been largely educated in the country. Second-generation 15-year-old students in 2009 will generally have mothers roughly aged between 33 and 60, which means that they were born between 1949 and 1976. As immigrants, they must have entered the country in a year between their own birth and that of their PISA-assessed offspring in 1994, which provides for a rather broad range of possibilities. By contrast the mothers of first-generation students would only have entered the country as adults after 1994.

In practice then, second generation students may be a rather heterogeneous group, some being similar to first-generation students who arrived when quite young and some having parents who have been largely educated in the country of residence and thus more akin to children of the native-born.

Table B1.2 gives some indication of this diversity for a number of countries, using data for 13-17-year-olds from labour force surveys. It can be seen that the "older" migration countries tend to show more children of immigrants with parents who themselves arrived in the country when they were young. This is far less the case for recent migration countries such as Italy, Spain and Greece. It would be instructive to be able to distinguish between these different groups in practice. The better performance of second-generation students, which one generally observes in most countries, may well correspond to the fact that their parents in many cases may have been educated in the host country.

INTRODUCTION TO PISA

The PISA surveys

Are students well prepared to meet the challenges of the future? Can they analyse, reason and communicate their ideas effectively? Have they found the kinds of interests they can pursue throughout their lives as productive members of the economy and society? The OECD Programme for International Student Assessment (PISA) seeks to answer these questions through its triennial surveys of key competencies of 15-year-old students in OECD member countries and partner countries/economies. Together, the group of countries participating in PISA represents nearly 90% of the world economy.[1]

PISA assesses the extent to which students near the end of compulsory education have acquired some of the knowledge and skills that are essential for full participation in modern societies, with a focus on reading, mathematics and science.

PISA has now completed its fourth round of surveys. Following the detailed assessment of each of PISA's three main subjects – reading, mathematics and science – in 2000, 2003 and 2006, the 2009 survey marks the beginning of a new round with a return to a focus on reading, but in ways that reflect the extent to which reading has changed since 2000, including the prevalence of texts in digital form.



Box 1.2 Key features of PISA 2009

Content

- The main focus of PISA 2009 was reading. The survey also updated performance assessments in mathematics and science. PISA considers students' knowledge in these areas not in isolation, but in relation to their ability to reflect on their knowledge and experience and to apply them to real-world issues. The emphasis is on mastering processes, understanding concepts and functioning in various contexts within each assessment area.
- For the first time, the PISA 2009 survey also assessed 15-year-old students' ability to read, understand and apply digital texts.

Methods

- Around 470 000 students participated in PISA 2009, representing about 26 million 15-year-olds in the schools of the 65 participating countries and economies. Some 50 000 students took part in a second round of this assessment, representing about 2 million 15-year-olds from ten additional partner countries and economies.
- Each participating student spent two hours carrying out pencil-and-paper tasks in reading, mathematics and science. In 20 countries, students were given additional questions via computer to assess their capacity to read texts in digital form.
- The assessment included tasks requiring students to construct their own answers as well as multiple-choice questions. The latter were typically organised in units based on a written passage or graphic, much like the kind of texts or figures that students might encounter in real life.
- Students also answered a questionnaire that took about 30 minutes to complete. This questionnaire focused on their personal background, their learning habits, their attitudes towards reading, and their involvement and motivation.
- School principals completed a questionnaire about their school that included demographic characteristics and an assessment of the quality of the learning environment at school.

Outcomes

PISA 2009 results provide:

- a profile of knowledge and skills among 15-year-olds in 2009, consisting of a detailed profile for reading and an update for mathematics and science;
- contextual indicators relating performance results to student and school characteristics;
- an assessment of students' engagement in reading activities, and their knowledge and use of different learning strategies;
- a knowledge base for policy research and analysis; and
- trend data on changes in student knowledge and skills in reading, mathematics, science, on changes in student attitudes and socio-economic indicators, and in the impact of some indicators on performance results.

Future assessments

- The PISA 2012 survey will return to mathematics as the major assessment area, PISA 2015 will focus on science. Thereafter, PISA will turn to another cycle beginning with reading again.
- Tests will place greater emphasis on assessing students' capacity to read and understand digital texts and solve problems presented in a digital format, reflecting the importance of information and computer technologies in modern societies.



PISA 2009 offers the most comprehensive and rigorous international measurement of student reading skills to date. It assesses not only reading knowledge and skills, but also students' attitudes and their learning strategies in reading. PISA 2009 updates the assessment of student performance in mathematics and science as well.

The assessment focuses on young people's ability to use their knowledge and skills to meet real-life challenges. This orientation reflects a change in the goals and objectives of curricula themselves, which are increasingly concerned with what students can do and what they learn at school and not merely whether they have mastered specific curricular content. PISA's unique features include its:

- Policy orientation, which connects data on student learning outcomes with data on students' characteristics and on key factors shaping their learning in and out of school in order to draw attention to differences in performance patterns and to identify the characteristics of students, schools and education systems which have high performance standards.
- Innovative concept of "literacy", which refers to the capacity of students to apply knowledge and skills in key subject areas and to analyse, reason and communicate effectively as they pose, interpret and solve problems in a variety of situations.
- Relevance to lifelong learning, which does not limit PISA to assessing students' competencies in school subjects, but also asks them to report on their own motivations to learn, their beliefs about themselves and their learning strategies.
- Regularity, which enables countries to monitor their progress in meeting key learning objectives.
- Breadth of geographical coverage and collaborative nature. PISA 2009 covers the 34 OECD member countries and 40 partner countries and economies.[2]

The relevance of the knowledge and skills measured by PISA is confirmed by studies tracking young people in the years after they have been assessed by PISA. Longitudinal studies in Australia, Canada and Switzerland display a strong relationship between performance in reading on the PISA 2000 assessment at age 15 and future educational attainment and success in the labour-market (see Volume I, Chapter 2).[3]

The frameworks for assessing reading, mathematics and science in 2009 are described in detail in *PISA 2009 Assessment Framework: Key Competencies in Reading, Mathematics and Science* (OECD, 2010a).

Decisions about the scope and nature of the PISA assessments and the background information to be collected are made by leading experts in participating countries. Governments guide these decisions based on shared policy-driven interests. Considerable efforts and resources are devoted to achieving cultural and linguistic breadth and balance in the assessment materials. Stringent quality-assurance mechanisms are applied in designing the test, in translation, sampling and data collection. As a result, PISA data tend to be of high statistical quality.

PISA findings are useful in gauging the knowledge and skills of students in one country in comparison with those in other countries, especially the highest performing countries. They are also of use in assessing the pace of educational progress, through the possibility of contrasting performance changes observed nationally with those seen elsewhere. In a growing number of countries, PISA is used to set policy targets in terms of measurable goals achieved by other systems, and to initiate research and peer-learning designed to identify appropriate policy levers to improve educational outcomes. While it is difficult with PISA data to identify cause-and-effect relationships between inputs, processes and educational outcomes, they can highlight the key features common to education systems or by which they differ, making the findings available to educators, policy makers and the general public.

The PISA student population

In order to ensure the comparability of the results across countries, PISA devoted a great deal of attention to assessing comparable target populations. Differences between countries with respect to the nature and extent of pre-primary education and care, the age of entry to formal schooling, and the structure of the education system make it difficult to define school grade levels so that they are internationally comparable. PISA instead defines its population with reference to a specific target age, namely students who are aged between 15 years 3 months and 16 years 2 months at the time of the assessment and who have completed at least six years of formal schooling, regardless of the type of institution in which they are enrolled, whether they are in full-time or part-time education, whether they attend academic or vocational programmes, and whether they attend public or private schools or foreign schools within the country. (For an operational definition of this target population, see the *PISA 2009 Technical Report* [OECD, 2012].) Using a set age in PISA, across countries and over time, allows the performance of students to be compared in a consistent manner, prior to the upper age limit for compulsory education.

Stringent technical standards were established to define the national target populations and to identify permissible exclusions from this definition (for more information, see the PISA website *www.pisa.oecd.org*). The overall exclusion rate within a country was required to be below 5% to ensure that, under reasonable assumptions, any distortions in national mean scores would remain within plus or minus 5 score points, i.e. typically within the order of magnitude of two standard sampling errors (see *PISA 2009 Results Volume I*, Annex A2 [OECD, 2010b]). Exclusion could take place either at the school or student level. There are several reasons why



a school or a student could be excluded from PISA. Schools might be excluded because they are situated in remote regions and are inaccessible or because they are very small, or because of organisational or operational factors that preclude participation. Students might be excluded because of intellectual disability or limited proficiency in the language of the test.

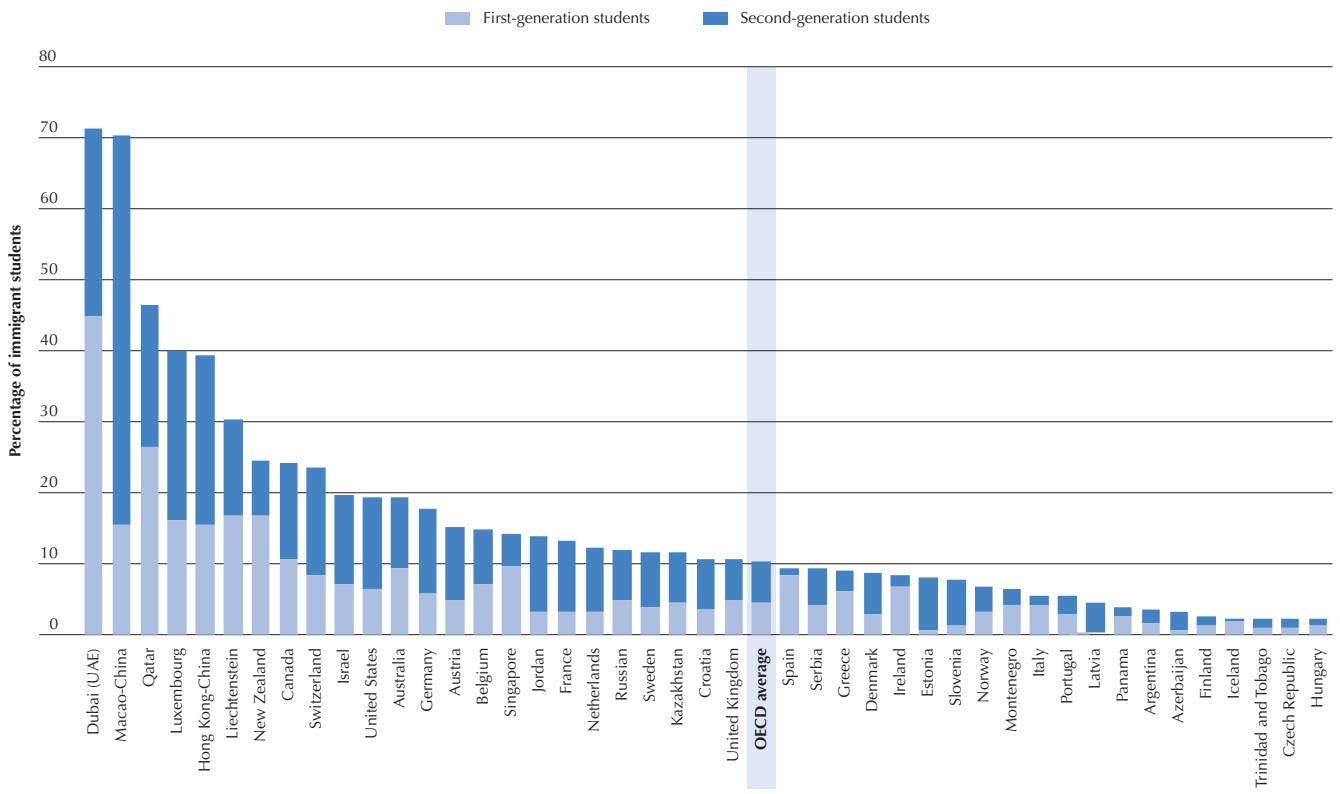
The specific sample design and size for each country aimed to maximise sampling efficiency for student-level estimates. In OECD countries, sample sizes ranged from 4 410 students in Iceland to 38 250 students in Mexico. Countries with large samples have often implemented PISA both at national and regional/state levels (e.g. Australia, Belgium, Canada, Italy, Mexico, Spain, Switzerland and the United Kingdom). The selection of samples was monitored internationally and adhered to rigorous standards for the participation rate, both among schools selected by the international contractor and among students within these schools, to ensure that the PISA results reflect the skills of the 15-year-old students in participating countries. Countries were also required to administer the test to students in identical ways, to ensure that students received the same information prior to and during the test (for details, see *PISA 2009 Results*, Volume I, Annex A4 [OECD, 2010b]).

THE PREVALENCE OF IMMIGRANT STUDENTS ACROSS COUNTRIES

Immigrant students represent more than 5% of the student population in 25 of the 34 OECD and 13 of the 30 partner countries and economies that participated in PISA 2009. Figure 1.4 shows the proportion of 15-year-old students who have an immigrant background. The grey bar represents the percentage of first-generation students and the blue bar represents the percentage of second-generation students. Across OECD countries, 10% of the students assessed by PISA have an immigrant background. This group represents 40% of students in Luxembourg. In New Zealand, Canada and Switzerland, immigrant students represent around 24% of students. In Israel, the United States, Australia, Germany and Austria, immigrant students represent between 15% and 23% of the student population, and in Belgium, France, the Netherlands, Sweden and the United Kingdom, between 10% and 15%. Among the partner countries and economies, immigrant students represent around 70% of the student population in Dubai (UAE) and Macao-China. They also represent a sizeable percentage of the student population in Qatar, Hong Kong-China and Liechtenstein (between 30% and 50%). In Singapore, Jordan, the Russian Federation, Kazakhstan and Croatia, the percentage is between 10% and 15% (Table B1.3).

▪ Figure 1.4 ▪

Percentage of immigrant students



Countries are ranked in descending order of the percentage of immigrant students (first- and second-generation students).

Source: OECD PISA 2009 Database, Table II.4.1.



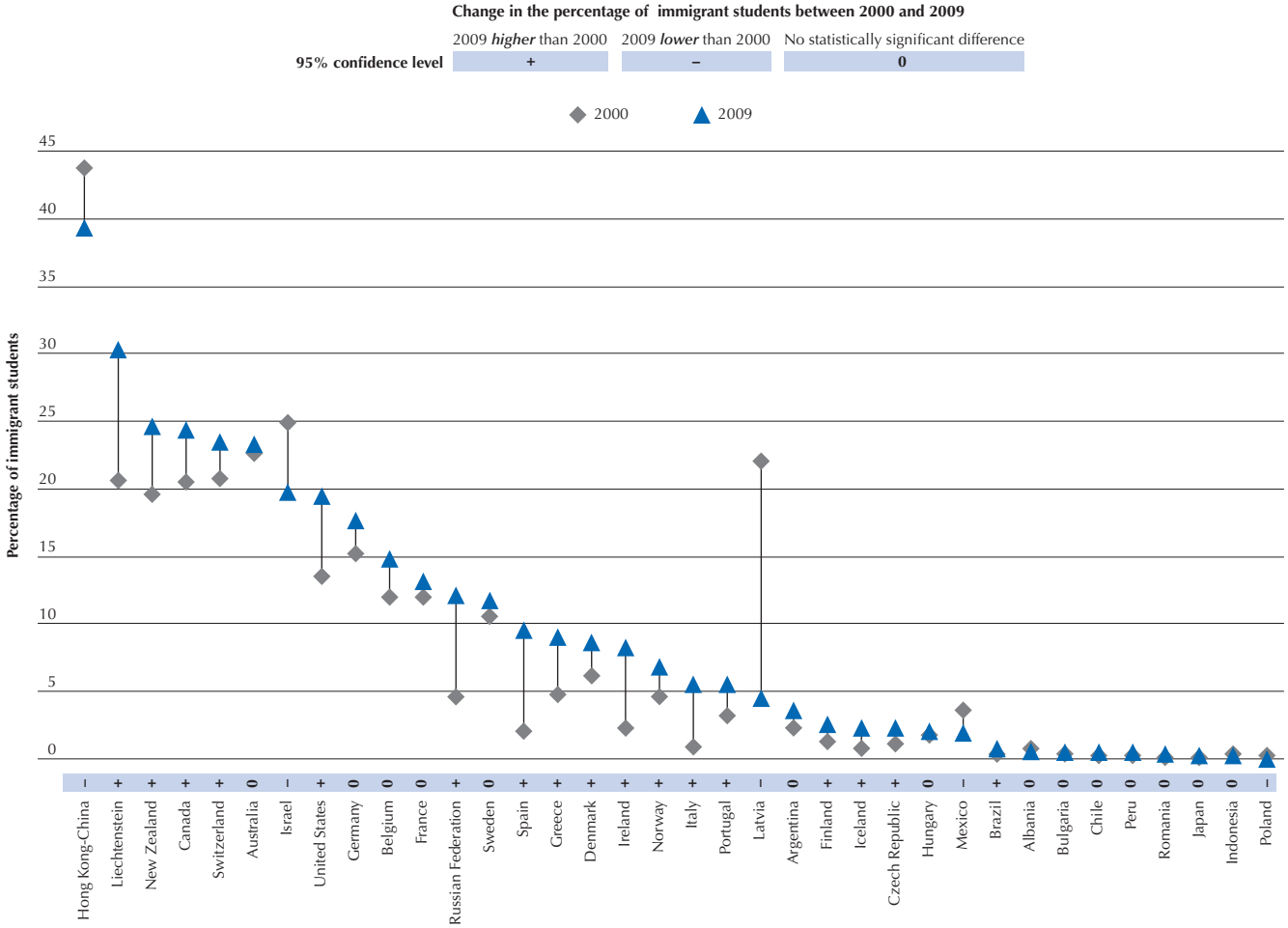
First-generation students represent 4.8% of the student population across OECD countries. However they represent more than 10% of the 15-year-old student population in Australia, Canada, Luxembourg, New Zealand and in the partner countries and economies of Dubai (UAE), Hong-Kong China, Liechtenstein, Macao-China and Qatar. Second-generation students represent a larger share of the student population – 6.2% across OECD countries – and in many countries represent sizeable minorities. Second-generation students represent more than 10% of the student population in Australia, Austria, Canada, France, Germany, Israel, Luxembourg, Switzerland and the United States among OECD countries and in Dubai (UAE), Hong-Kong China, Jordan, Liechtenstein, Macao-China and Qatar among partner countries and economies. In most countries second-generation students represent a larger proportion of students than first-generation students, reflecting established migration histories. In other countries, first-generation students represent the majority. First-generation students represent more than 50% of immigrant students in Spain, Chile, Shanghai-China, Ireland, Iceland, Italy, Romania, Greece, New Zealand, Singapore, Panama, Dubai (UAE), Montenegro, Mexico, Hungary, Qatar, Bulgaria, Finland, Liechtenstein, Uruguay, Japan, and Portugal (Table B1.3).

THE PROPORTION OF IMMIGRANT STUDENTS CONTINUES TO GROW

Based on information gathered from questionnaires distributed with the PISA 2009 assessment, the percentage of 15-year-old immigrant students grew by two percentage points, on average, between 2000 and 2009 among OECD countries with comparable data (Figure 1.5). In Ireland, New Zealand, Spain, the United States, and the partner countries Liechtenstein and the Russian Federation, the percentage of immigrant students increased by five percentage points or more over the past decade, and these students now represent from 8% to 30% of these countries' student populations. In Italy, Greece and Canada, the percentage of immigrant students increased by three to five percentage points over the same period. Nearly 25% of Canada's student population has an immigrant background.

▪ Figure 1.5 ▪

Percentage of immigrant students in PISA 2000 and PISA 2009



Countries are ranked in descending order of the percentage of immigrant students in 2009.

Source: Table B1.6.



OVERVIEW OF EDUCATION SYSTEMS

Education systems are charged with the task of teaching students and ensuring that they learn according to the standards and expectations set in each country. This is a particularly complex task because of the resources involved, the size and the diversity of the student population and because although standards and expectations may be determined at central levels, learning eventually takes place in the classrooms of many schools scattered around each country.

To accommodate the complexity of educating a large and diverse student population, school systems face at least four distinct and relevant issues that determine the organisation and character of the education system. These issues are: *i)* defining the level of resources to invest and how they are distributed across the school system ; *ii)* determining how to deal with the diversity in interests, abilities and backgrounds of the student population; *iii)* determining how individual schools are governed; and *iv)* evaluating the progress of their students and schools and motivating them.

PISA results show that the choices school systems make with respect to these issues have an impact on the average performance of students, but also on their dispersion, which concerns inequities in the distribution of learning opportunities available to students. Performance is a measure of students' cognitive achievement, and a country's average performance is an important benchmark against which to compare the quality of its education system. Equity, on the other hand refers to the degree to which student performance is related to students' economic, social and cultural backgrounds. In more equitable school systems, educational success tends to more independent of students' socio-economic, cultural or linguistic background.

Due to the particular needs of immigrant students, the distribution of resources, the differentiation of students and the governance of schools may affect the level and quality of the opportunities to learn available to these students.

This overview draws on *PISA 2009 Results: What Makes a School Successful (Volume IV)* (OECD, 2010c) which offers a categorisation of school systems across these organisational dimensions. The organisation of school systems, even at the highest level in the hierarchy, eventually influences what happens in the classroom, that is students' (including immigrant students) exposure to opportunities to learn and their scholastic performance.

The level and distribution of resources

Countries must decide on the level of resources to invest in education and how to distribute them. The decision on the distribution of resources hinges on deciding whether all students will be offered the same opportunities or whether students who have lower educational achievement are offered more resources in order to compensate for socio-economic, cultural or linguistic disadvantages. In general, effective school systems require the right combination of trained and talented personnel, adequate educational resources and facilities and motivated students ready to learn.

Countries must decide not only on the level of monetary resources to invest in education, but also where these resources will be invested in terms of learning time (in the classroom, in pre-primary institutions, and in extra-curricular learning and activities), human resources (number of teachers, teacher salaries and class size) and material resources (building and instructional infrastructure).

At the level of individual students, in practically all countries students who have attended pre-primary schools for more than one year tend to have higher reading performance. At the school level, higher student scores tend to be related to more learning time in mathematics and science, and the availability of better educational resources. PISA results also shows that the association between school resources and schools' performance is also largely related to schools' socio-economic intake. In other words, high socio-economic status students usually enjoy a higher level of educational resources than low socio-economic status students. Therefore school resources may be an important mediator through which the socio-economic background of students and schools affects performance.

At the system level with respect to resources, high-performing school systems tend to prioritise higher salaries for teachers over smaller classes. OECD countries can be grouped into four categories, depending on the amount of resources they invest and the spending choices they make (Figure 1.6). Countries may invest relatively small or large amounts of resources in education, and each of these countries may choose to focus this investment on factors such as teachers' salaries or smaller class sizes. In general, high-performing countries spend more than USD 35 000 per student from ages 6 to 15, but the level of expenditure above this level is unrelated to performance or equity. Most OECD countries prioritise smaller class sizes: the Czech Republic, Estonia, Greece, Hungary, Israel, New Zealand, Poland, Portugal, the Slovak Republic and Turkey spend relatively less on education than the average OECD country and focus these limited resources on smaller class sizes. Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the United States spend more on education and also focus resources on smaller classes. Only four OECD countries prioritise teachers' salaries: two of these countries, Mexico and Chile, spend relatively small amounts on education and two, Japan and Korea, invest relatively large amounts in education.



▪ Figure 1.6 ▪

How school systems allocate resources for education

		***Small* class size and/or low teacher salaries**	***Large* class size and high teacher salaries**
		Class size for the language of instruction: 23	Class size for the language of instruction: 36
		Teacher salary relative to GDP/capita[1]: 118	Teacher salary relative to GDP/capita[1]: 172
***Low* cumulative expenditure on education**	Cumulative expenditure by educational institutions per students aged 6 to 15: 39 463	Czech Republic, Estonia,** Hungary, Greece, Israel, New Zealand,* Poland,* Portugal, Slovak Republic, Turkey, Albania, Argentina, Azerbaijan, Bulgaria, Croatia, Dubai (UAE), Kazakhstan, Kyrgyzstan, Latvia, Liechtenstein, Lithuania, Montenegro, Panama, Peru, Qatar, Romania, Russian Federation, Serbia, Tunisia, Trinidad and Tobago, Uruguay	Chile, Mexico, Brazil, Colombia, Hong Kong-China,** Jordan, Indonesia, Macao-China, Shanghai-China,* Singapore,* Chinese Taipei, Thailand
***High* cumulative expenditure on education**	Cumulative expenditure by educational institutions per students aged 6 to 15: 81 238	Australia,* Austria, Belgium,* Canada,** Denmark, Finland,** France, Germany, Iceland,** Ireland, Italy, Luxembourg, Norway,** Netherlands,* Slovenia, Spain, Sweden, Switzerland,* the United Kingdom, United States	Japan,** Korea*

*Perform higher than the OECD average in reading.

**Perform higher than the OECD average in reading and have the relationship between students' socio-economic background and reading performance weaker than the OECD average.

Note: The estimates in the grey cells indicate the average values of the variables used in latent profile analysis in each group. See Annex A5 in *PISA 2009 Initial Results: What Makes a School Successful* (*Volume IV*) for technical details.

1. This is the weighted average of upper and lower secondary teachers. The average is computed with weighting teacher salaries for upper and lower secondary education according to the respective 15-year-old students enrolment (for countries with valid information on both if 15-year-old students are both at the upper and lower secondary schools).

Source: OECD (2010c), Figure IV.3.7.

Managing student diversity: the selection and grouping of students across and within schools

The educational task of school systems is particularly complex given the diversity of student populations. Students vary not only with respect to their age, but also with respect to their interests, abilities and socio-economic, cultural and linguistic background. Governments must decide how they manage this diversity and many choose either to adopt a comprehensive approach to student diversity or differentiate students to create homogeneous learning environments. While the latter opt for similarity in the classroom to cater teaching to students' academic potential and/or interests in specific programmes, comprehensive schools seek to provide all students with similar opportunities, leaving it to each teacher and school to provide for the full range of student abilities, interests and backgrounds. In comprehensive school systems immigrant students are more likely to share the classroom and the school with non-immigrant students, as well as with both high- and low-achieving students. Depending on the perceived academic potential and interests of the immigrant student population and immigrant sub-groups, in school systems that differentiate, immigrant students may tend to be concentrated in particular schools through the selection practices of students into schools, through school transfers or by the establishment of different types of educational programmes (academic or vocational/technical programmes for example) which may differentiate students into different schools or into different tracks/streams within schools.

When analysing the academic outcomes of students it is important to bear in mind how students are grouped into schools, grades and classrooms. Figure 1.7 categorises school systems in PISA by how they sort students into schools and classrooms and how they differentiate students with different academic potential and interests. Among OECD countries, Australia, Canada, Denmark, Estonia, Finland, Greece, Iceland, New Zealand, Norway, Poland, Sweden, the United Kingdom and the United States (and Kazakhstan, Latvia, Lithuania and the Russian Federation among partner countries) adopt more comprehensive approaches to schooling, implying that students of different academic potential and interests attend the same schools and, generally, the same classrooms. Other school systems, differentiate students across schools, selecting students at an early age into schools with different educational programmes, for example (as is the case in Austria, the Czech Republic, Hungary, the Slovak Republic in the OECD, as well as in Croatia, Liechtenstein and Singapore). Other school systems, in turn, homogenise schools and classrooms by transferring students with behavioural or low academic achievement and/or retaining students that fail to meet the grade's standards (Spain, Chile, Argentina, Brazil, Colombia, Tunisia, Peru and Uruguay, for example).



PISA results show that school systems that track students at an early age tend to show a stronger impact of socio-economic background on learning outcomes, signalling larger socio-economic inequalities which may affect immigrant students if they generally have lower socio-economic status or tend to be selected in specific educational programmes. PISA results also show that school systems that are underpinned by a philosophy that all students can succeed and commit to having all students succeed (e.g. school systems with low grade-repetition, low transfer rates and low prevalence of ability grouping within schools) tend to show better student performance and a weaker impact of socio-economic background on learning outcomes. Selective schools perform at higher levels than non-selective schools, but a system as a whole does not benefit from having more selective schools.

▪ Figure 1.7 ▪

How school systems select and group students for schools, grades and programmes

		***Low* vertical differentiation**		***High* vertical differentiation**	
		Students who repeated one or more grades: 7% Students out of modal starting ages: 7%		Students who repeated one or more grades: 29% Students out of modal starting ages: 11%	
		***Low* horizontal differentiation at the school level**	***High* horizontal differentiation at the school level**	***Low* horizontal differentiation at the school level**	***High* horizontal differentiation at the school level**
		Schools that transfer students to other schools due to low achievement, behavioural problems or special learning needs: 15%	Schools that transfer students to other schools due to low achievement, behavioural problems or special learning needs: 33%	Schools that transfer students to other schools due to low achievement, behavioural problems or special learning needs: 15%	Schools that transfer students to other schools due to low achievement, behavioural problems or special learning needs: 33%
		Schools that group students by ability in all subjects: 8%	Schools that group students by ability in all subjects: 38%	Schools that group students by ability in all subjects: 8%	Schools that group students by ability in all subjects: 38%
***Low* horizontal differentiation at the system level**	Number of school types or distinct educational programmes: 1.1 First age of selection: 15.8 Selective schools: 17%	Australia,* Canada,** Denmark, Estonia,** Finland,** Greece, Iceland,** New Zealand,* Norway,** Poland,* Sweden, United States, United Kingdom, Kazakhstan, Latvia, Lithuania, Russian Federation	Jordan	Spain, Argentina, Brazil, Tunisia, Uruguay	Chile, Colombia, Peru
***Medium* horizontal differentiation at the system level**	Number of school types or distinct educational programmes: 3.0 First age of selection: 14.5 Selective schools: 42%	Ireland, Israel, Italy, Japan,** Korea,* Slovenia, Albania, Azerbaijan, Dubai (UAE), Hong Kong-China,** Montenegro, Shanghai-China,* Thailand	Indonesia, Kyrgyzstan, Qatar, Romania, Chinese Taipei	Mexico, Portugal	Luxembourg, Macao-China, Panama
***High* horizontal differentiation at the system level**	Number of school types or distinct educational programmes: 4.3 First age of selection: 11.2 Selective schools: 61%	Austria, Czech Republic, Hungary, Slovak Republic, Croatia, Liechtenstein, Singapore*	Turkey, Bulgaria, Serbia	Belgium,* Germany, Trinidad and Tobago	Netherlands,* Switzerland*

* Perform higher than the OECD average in reading.

** Perform higher than the OECD average in reading and have the relationship between students' socio-economic background and reading performance weaker than the OECD average.

Note: The estimates in the grey cells indicate the average values of the variables used in latent profile analysis in each group. See Annex A5 in *PISA 2009 Initial Results: What Makes a School Successful* (*Volume IV*) for technical details.

Source: OECD (2010c), Figure IV.3.2.

Because PISA assesses students when they are 15-years-old, they may have been in school for a different number of years (given the different ages of entry into primary school in different countries), or be in different educational levels (i.e. lower or upper secondary school given the curricular organisation of the school). As a result, students assessed in PISA attend a wide variety of grades and may be in lower or upper secondary schools in different countries. PISA does not assess curricular content but the ability of students to apply knowledge to everyday-life situations. As a result, PISA scores are less sensitive to the fact that 15-year-old students in one country may be in different grade levels or ISCED levels than performance assessments that are curriculum-based.

Governance of schools

Another important organisational feature of school systems is the extent to which parents and students can choose the school they attend and the degree to which schools are considered autonomous entities that make organisational decisions independently of district, regional or national entities. Since the early 1980s, educational reforms in many countries have intended to improve the



quality of instruction in schools by offering a greater diversity of courses, greater autonomy for schools to respond to local needs, and more choice for parents.

Figure 1.8 shows how school systems organise the governance of schools in terms of the autonomy they give schools to decide over the curriculum and assessment, and the extent to which they allow parents to choose schools (and schools to compete for students). Across OECD countries, the most common configuration is the one that gives schools discretion over curricular and assessment decisions, and restricts competition for enrolment among schools. These school systems have relatively little competition for enrolment among schools, and private schools are not widely available in these countries. Twenty-three OECD countries and 15 partner countries and economies share this configuration. The configuration that offers relatively low levels of autonomy to schools and low levels of school competition is found in 4 OECD countries and 11 partner countries. Six OECD countries and five partner countries and economies reported configurations that offer high levels of autonomy and competition, either in the form of a high prevalence of privately managed schools or greater competition among schools for enrolment. In these school systems, schools have the authority to design curricula, and parents and students can choose from a variety of schools for their children.

PISA results highlight the fact that education systems which grant autonomy to schools over curricular decisions tend to perform better, particularly when autonomy is coupled with accountability measures that guide autonomy towards national standards and expectations. School systems that promote competition between schools do not perform better than school systems that limit competition, nor is the prevalence of private schools in the system associated with national reading performance.

The governance of school systems may impact the educational opportunities available to immigrant students in many ways. For example, schools with more autonomy over curricular decisions may be better able to cater to the particular needs of immigrant students (as long as the decision makers in the school are able to make informed decisions). Greater levels of school choice may also mean more educational opportunities available for immigrant students. School choice depends on parents' access to information and ability to make decisions based on that information. When immigrant parents have restricted access or a limited ability to choose schools, school choice may lead to segregation of students across immigrant status lines. In this regard, PISA results show that socio-economically disadvantaged parents are less likely to choose schools for their children and those school systems that promote parental choice of schools have lower equity levels than school systems that limit competition between schools.

▪ Figure 1.8 ▪

How school systems are governed

		***Less* school competition**	***More* school competition**
		Schools that compete with other schools for students in the same area: 73%	Schools that compete with other schools for students in the same area: 89%
		Private schools: 8%	Private schools: 52%
***Less* school autonomy for curriculum and assessment**	Establish student assessment policies: 61% Choose which textbooks are used: 55% Determine course content: 14% Decide which courses are offered: 18%	Greece, Mexico, Portugal, Turkey, Albania, Azerbaijan, Bulgaria, Croatia, Kazakhstan, Jordan, Montenegro, Qatar, Serbia, Tunisia, Uruguay	—
***More* school autonomy for curriculum and assessment**	Establish student assessment policies: 92% Choose which textbooks are used: 97% Determine course content: 85% Decide which courses are offered: 87%	Austria, Canada,** Czech Republic, Denmark, Estonia,** Finland,** Germany, Hungary, Iceland,** Israel, Italy, Japan,** Luxembourg, New Zealand,* Norway,** Poland,* Slovak Republic, Slovenia, Spain, Sweden, Switzerland,* United Kingdom, United States, Panama, Argentina, Brazil, Colombia, Kyrgyzstan, Latvia, Liechtenstein, Lithuania, Peru, Romania, Russian Federation, Shanghai-China,* Singapore,* Thailand, Trinidad and Tobago	Australia,* Belgium,* Chile, Ireland, Korea,* Netherlands,* Dubai (UAE), Hong Kong-China,** Indonesia, Macao-China, Chinese Taipei

* Perform higher than the OECD average in reading.

** Perform higher than the OECD average in reading and have the relationship between students' socio-economic background and reading performance weaker than the OECD average.

Note: The estimates in the grey cells indicate the average values of the variables used in latent profile analysis in each group. See Annex A5 in *PISA 2009 Initial Results: What Makes a School Successful* (*Volume IV*) for technical details.

Source: OECD (2010c), Figure IV.3.5.



Assessment and accountability

To ensure that instruction is effective, most schools evaluate student learning, usually through teachers' assessments, required assignments or tests. Standardised tests are often used to compare students and schools at the national or regional level. Evaluation of student learning outcomes can also be used to hold schools and other actors in education accountable for what is one of the principal functions of schooling.

PISA results show that the use of standards-based external examinations tends to be positively related to a system's overall performance, while the use of standardised tests or assessment data for benchmarking or-decision making is not consistently related to learning outcomes. However, in some countries, schools that post achievement data publicly tend to perform better. Assessment and accountability practices may be related to the educational opportunities of immigrant students, as assessments may provide useful information to schools and teachers on the educational needs of immigrant students. In this regard, results from PISA suggest that the use of standardised tests tends to be associated with a lower impact of socio-economic background on student performance.

SUMMARY AND CONCLUSIONS

Increasing levels of migration and the associated increases in immigrant student populations will continue to pose challenges and opportunities for governments and educators. Differences and similarities in the composition of migrant populations and the characteristics of education systems allow for shared experiences and mutual learning among countries. What may work in some contexts might not be appropriate in different circumstances.

This chapter provides an overview of immigration regimes and education systems among PISA 2009 participants. The evidence and results presented in subsequent chapters must be interpreted within this framework.

Notes

1. The GDP of the countries that participated in PISA 2009 represents 86% of the 2007 world GDP. Some of the entities represented in this report are referred to as partner economies. This is because they are not strictly national entities.
2. Thirty-one partner countries and economies originally participated in the PISA 2009 assessment and ten additional partner countries and economies took part in a second round of the assessment.
3. Marks (2007); Bertschy, et al. (2009); OECD (2010b).

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2

The Performance Profiles of Immigrant Students

This chapter provides an overview of the results emerging from PISA 2009 on the performance and socio-economic background of immigrant students. What do they know and what can they do? How do they differ from other students? The evidence highlights the differences and similarities across countries with respect to the challenges and opportunities posed by immigrant student populations. Recent trends show that performance differences are related to both policy and the underlying profiles of immigrant populations.



INTRODUCTION

Students who come from other countries, or whose parents do, add to the diversity of student populations. While this diversity enriches education systems, it can also pose significant challenges for educators and policy makers. In many countries, immigrant students constitute a sizable proportion of the student population – and form a diverse group, with different backgrounds and skill levels.

What distinguishes immigrant students? Are there common patterns in their outcomes and characteristics across countries?

KNOWLEDGE AND SKILLS DISADVANTAGE AMONG IMMIGRANT STUDENTS

Average performance

Figure 2.1 highlights the performance differences in the PISA 2009 reading scale between immigrant and non-immigrant students.[1] The PISA reading scale was set to yield a mean of 500 score points for OECD countries in PISA 2000, with a standard deviation of 100 (in 2009, these were 493 and 93 respectively). In 2009, immigrant students scored lower in reading than non-immigrant students in 23 out of 28 OECD countries with sufficient data. The performance gap reaches 99 score points in Mexico, more than 80 in Iceland and more than 72 in Italy. In Finland, Austria, Belgium, Sweden, Denmark and France, the gap is 60 score points or more, the equivalent of more than a year and a half of schooling (Table B2.1a).

Among OECD countries, only Australia, Canada, the Czech Republic, Hungary and Israel show no overall performance differences between students by immigrant background. In Hungary, most migrants consist of ethnic Hungarians from neighbouring countries and in the Czech Republic, they consist mainly of persons born in the Slovak Republic. Australia and Canada select and admit significant numbers of highly educated migrants every year, whose children do well in school. In Israel, most migration is of an ethnic/religious character. All of these are special situations which may encourage better outcomes by immigrant students.

In general, immigrant populations are less prominent in partner countries and economies; in ten of them, the populations are too small to be included in this report.[2] Patterns in performance gaps are also more complex. In Qatar, Dubai (UAE), Kyrgyzstan, Serbia, Jordan and Macao-China, immigrant students perform better in reading than non-immigrant students. None of these cases, however, correspond to typical immigrant situations encountered in OECD countries. In Qatar and Dubai (UAE), significant numbers of immigrant students were administered the PISA test in English and in Kyrgyzstan it was administered in Russian. In Serbia, most immigrants speak Serbian at home, in Jordan, Arabic, and in Macao-China, Chinese (Table B1.5). In Croatia, Lithuania, the Russian Federation, Liechtenstein, Argentina, Brazil and Colombia, immigrant students have lower reading scores than non-immigrant students. In Montenegro, Kazakhstan, Singapore, Trinidad and Tobago, Azerbaijan, Hong Kong-China, Latvia and Panama, there are no apparent differences in the performance between immigrant students and those without (Figure 2.1 and Table B2.1a).

The performance advantage in reading among non-immigrant students is mirrored in other assessment domains. Performance gaps are similar for mathematics and science (Tables B2.1b and B2.1c, respectively). Out of 28 OECD countries with sufficient data, non-immigrant students outscore immigrant students in 25 countries in science and 24 countries in mathematics. Only in Australia do immigrant students perform better in mathematics than non-immigrant students. The patterns among partner countries and economies are similar to those described for reading.

Performance differences across the distribution of performance

Over- or under-representation of immigrant students among low or high achievers

Average performance gaps can mask important differences between immigrant and non-immigrant students in the distribution of performance. PISA proficiency levels provide an indication of what students know and can do; they describe the kinds of reading skills 15-year-olds students demonstrated in the assessment. Therefore, differences in the proportion of students who reach a certain level of proficiency provide a deeper understanding of the differences in skills between students by immigrant background.

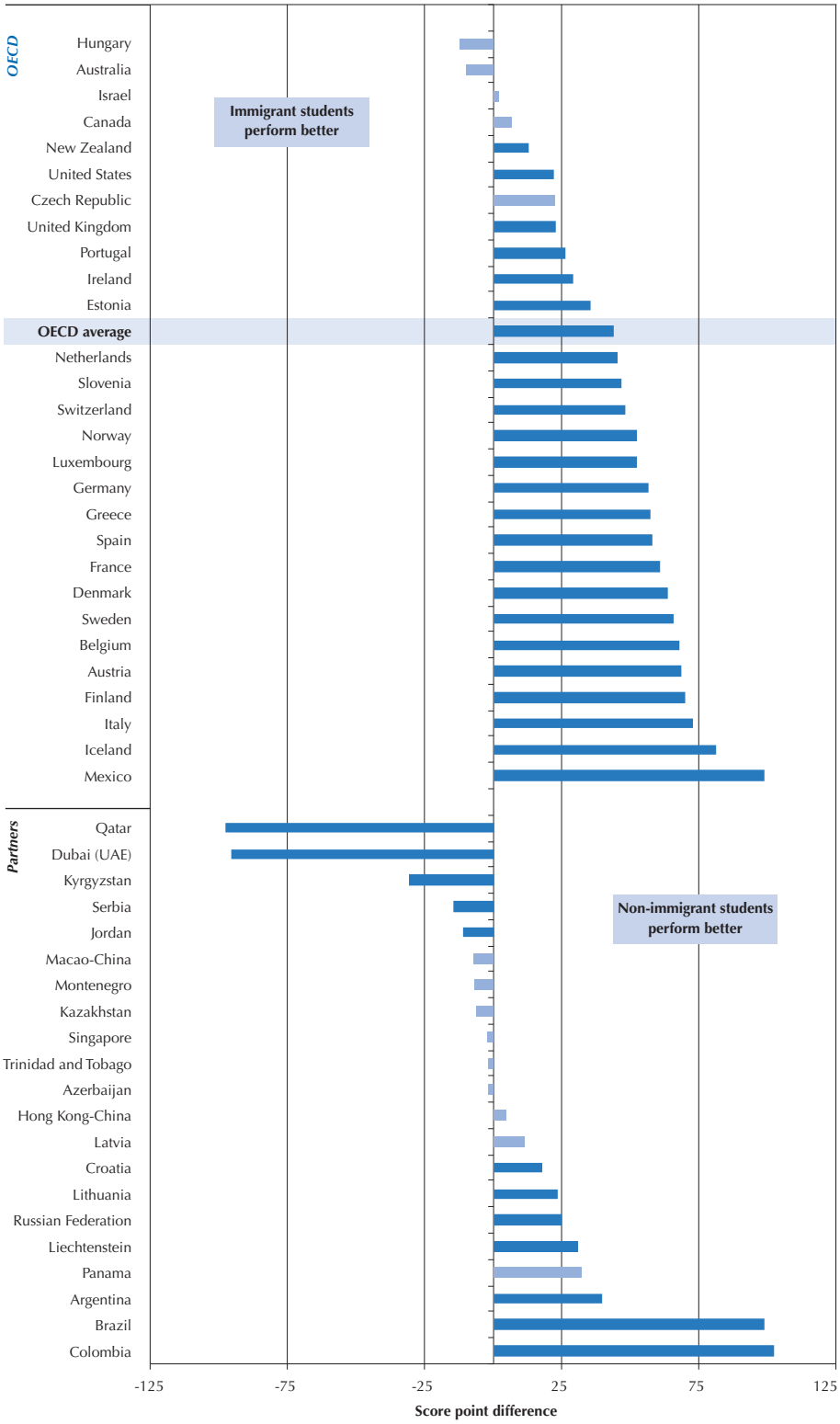
The 25th percentile among non-immigrant students provides a practical country-specific benchmark for low performance. Likewise, the 75th percentile will be used as a benchmark for high performance. The 50th percentile divides the population of non-immigrant students into two halves and provides a measure of the typical performance for this group of students. Figure 2.2 shows the proportion of immigrant students who scored below the 25th, 50th and 75th percentiles.

With a couple of important exceptions, immigrant students are over-represented among low achievers and under-represented among high achievers, as shown in Figure 2.2. Given their performance disadvantage, it is no surprise that the proportion of immigrant students that score below the 25th percentile exceeds 25% in all OECD countries (except Australia, Hungary and Israel). Perhaps more surprisingly, it is as high as 72% in Mexico and exceeds 50% in eight OECD countries (Spain, Sweden, Belgium, Austria, Denmark, Italy, Finland and Iceland). Except for Australia, Hungary and the Czech Republic, in no OECD country is the proportion of immigrant students who score below the 75th percentile lower than 75%. On average, it reaches 86% in the OECD and it is above 90% in 10 OECD countries (Mexico, Iceland, Italy, Spain, Denmark, Austria, Slovenia, Belgium and Germany) (Table B2.1d).



▪ Figure 2.1 ▪

Performance disadvantage of immigrant students



Note: Score point differences that are statistically significant are shown in a darker tone.

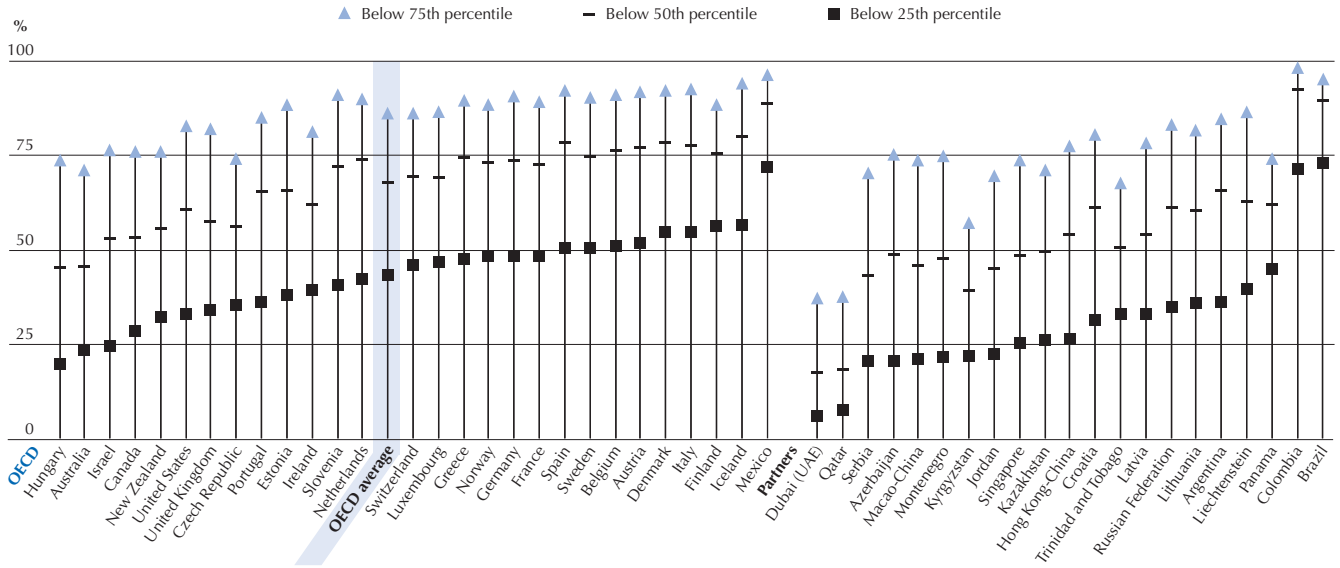
Countries are ranked in ascending order of the score point difference between non-immigrant students and immigrant students (first- and second-generation).

Source: Table B2.1a.



▪ Figure 2.2 ▪

Representation of immigrant students among high and low achievers



Countries are ranked in ascending order of the percentage of immigrant students below the 25th percentile of performance among non-immigrant students.

Source: Table B2.1d.

The Czech Republic, Ireland and Finland represent important exceptions to the general patterns of over/under representation. These are all cases of countries where the under-representation of immigrant students among high achievers is relatively low compared with the over-representation of immigrant students among low performers. This finding suggests that in these countries the population of immigrant students is quite diverse and can sensibly be divided into two groups: high- and low-performing immigrant students.

The same general patterns are also evident among partner countries and economies, but the extremes are even more marked. For example, more than 70% of immigrant students score below the 25th percentile in Brazil and Colombia, whereas in Dubai (UAE) and Qatar, it is less than 8%. In Kyrgyzstan, Trinidad and Tobago and Panama, there is evidence of a significant proportion of high achievers among immigrant students, especially given the proportion of immigrant students scoring below the 25th percentile (Table B2.1d).

Reading skills by immigrant background

In PISA reading skills are described in terms of proficiency levels. These levels are helpful for providing information on what students' scores in the PISA reading scale mean in substantive terms. For PISA 2009, the range of difficulty of the test questions allowed for the description of seven levels of reading proficiency: Level 1b is the lowest described proficiency level, then Level 1a, Level 2, Level 3 and so on up to Level 6.

Each proficiency level is described based on the kinds of skills and knowledge students need to successfully complete the assessment tasks and questions. Students proficient at Level 1b are likely to be able to complete Level 1b tasks successfully, but are unlikely to be able to complete tasks at higher levels. Level 6 reflects tasks that present the greatest challenge in terms of reading skills and knowledge. Students with scores in this range are likely to be able to successfully complete reading tasks at that level, as well as all the other reading tasks in PISA.

A student's performance on the questions in the test is associated with a score which corresponds to a specific level on the reading scale. This allows the score to be associated with a defined proficiency level. The student's level is defined to be the highest level for which he or she would be expected to answer a majority of a random selection of questions correctly at that particular level. Thus, for example, in an assessment composed of tasks spread uniformly across Level 3, students with a score located at Level 3 would be expected to complete at least 50% of the tasks successfully. Because a level covers a range of difficulties and proficiencies, success rates across this range can vary. Students near the bottom of the level would be likely to succeed on just over 50% of the tasks spread uniformly across the level, while students at the top of the level would be likely to succeed on well over 70% of the same tasks.

Figure 2.3 provides details on the nature of the reading skills, knowledge and understanding required at each level of the reading scale.



■ Figure 2.3 ■

PISA reading proficiency levels

Level	Lower score limit	Percentage of students able to perform tasks at each level or above (OECD average)	Characteristics of tasks
6	698	0.8% of students across the OECD can perform tasks at Level 6 on the reading scale	Tasks at this level typically require the reader to make multiple inferences, comparisons and contrasts that are both detailed and precise. They require demonstration of a full and detailed understanding of one or more texts and may involve integrating information from more than one text. Tasks may require the reader to deal with unfamiliar ideas, in the presence of prominent competing information, and to generate abstract categories for interpretations. Reflect and evaluate tasks may require the reader to hypothesise about or critically evaluate a complex text on an unfamiliar topic, taking into account multiple criteria or perspectives, and applying sophisticated understandings from beyond the text. A salient condition for access and retrieve tasks at this level is precision of analysis and fine attention to detail that is inconspicuous in the texts.
5	626	7.6% of students across the OECD can perform tasks at least at Level 5 on the reading scale	Tasks at this level that involve retrieving information require the reader to locate and organise several pieces of deeply embedded information, inferring which information in the text is relevant. Reflective tasks require critical evaluation or hypothesis, drawing on specialised knowledge. Both interpretative and reflective tasks require a full and detailed understanding of a text whose content or form is unfamiliar. For all aspects of reading, tasks at this level typically involve dealing with concepts that are contrary to expectations.
4	553	28.3% of students across the OECD can perform tasks at least at Level 4 on the reading scale	Tasks at this level that involve retrieving information require the reader to locate and organise several pieces of embedded information. Some tasks at this level require interpreting the meaning of nuances of language in a section of text by taking into account the text as a whole. Other interpretative tasks require understanding and applying categories in an unfamiliar context. Reflective tasks at this level require readers to use formal or public knowledge to hypothesise about or critically evaluate a text. Readers must demonstrate an accurate understanding of long or complex texts whose content or form may be unfamiliar.
3	480	57.2% of students across the OECD can perform tasks at least at Level 3 on the reading scale	Tasks at this level require the reader to locate, and in some cases recognise the relationship between, several pieces of information that must meet multiple conditions. Interpretative tasks at this level require the reader to integrate several parts of a text in order to identify a main idea, understand a relationship or construe the meaning of a word or phrase. They need to take into account many features in comparing, contrasting or categorising. Often the required information is not prominent or there is much competing information; or there are other obstacles in the text, such as ideas that are contrary to expectation or negatively worded. Reflective tasks at this level may require connections, comparisons, and explanations, or they may require the reader to evaluate a feature of the text. Some reflective tasks require readers to demonstrate a fine understanding of the text in relation to familiar, everyday knowledge. Other tasks do not require detailed text comprehension but require the reader to draw on less common knowledge.
2	407	81.2% of students across the OECD can perform tasks at least at Level 2 on the reading scale	Some tasks at this level require the reader to locate one or more pieces of information, which may need to be inferred and may need to meet several conditions. Others require recognising the main idea in a text, understanding relationships, or construing meaning within a limited part of the text when the information is not prominent and the reader must make low level inferences. Tasks at this level may involve comparisons or contrasts based on a single feature in the text. Typical reflective tasks at this level require readers to make a comparison or several connections between the text and outside knowledge, by drawing on personal experience and attitudes.
1a	335	94.3% of students across the OECD can perform tasks at least at Level 1a on the reading scale	Tasks at this level require the reader: to locate one or more independent pieces of explicitly stated information; to recognise the main theme or author's purpose in a text about a familiar topic; or to make a simple connection between information in the text and common, everyday knowledge. Typically the required information in the text is prominent and there is little, if any, competing information. The reader is explicitly directed to consider relevant factors in the task and in the text.
1b	262	98.9% of students across the OECD can perform tasks at least at Level 1b on the reading scale	Tasks at this level require the reader to locate a single piece of explicitly stated information in a prominent position in a short, syntactically simple text with a familiar context and text type, such as a narrative or a simple list. The text typically provides support to the reader, such as repetition of information, pictures or familiar symbols. There is minimal competing information. In tasks requiring interpretation the reader may need to make simple connections between adjacent pieces of information.

Source: OECD PISA 2009 Database, Figure I.2.12.

Proficiency Level 2 is considered a baseline level of proficiency, at which students begin to demonstrate the reading skills that will enable them to participate effectively and productively in life. Students who do not reach Level 2 have difficulties locating basic information that meets several conditions, making comparisons or contrasts around a single feature, working out what a well-defined part of a text means when the information is not prominent, or making connections between the text and outside knowledge by drawing on personal experience and attitudes. Students scoring below Level 2 are the lowest performers in PISA.

Top performers are those students proficient at Levels 5 or 6 of the assessment. Top performers can tackle some of the most complex tasks and questions in PISA. At a minimum, they can infer what is relevant in a text and retrieve information by locating and organising several pieces of information deeply embedded in the text. They are capable of critical evaluation, drawing on specialised knowledge and can deal with concepts that are contrary to their expectations. And they can interpret and reflect on texts that are unfamiliar both in terms of the content or form.

Analysing PISA performance across performance levels highlights important skill differences across immigrant background in the student populations of each system. One way to do this is by studying the proportion of lowest and top performers among immigrant and non-immigrant students. In general, there are higher proportions of low performers among immigrant students and higher proportions of top performers among non-immigrant students. The ratio of low performers among students with and without an immigrant background is a good measure of skill inequality at the bottom of the distribution: the higher the ratio, the bigger the proportion of low performers among immigrant students relative to the proportion of low performers among non-immigrant students. At the top of the distribution, the reverse is true and therefore it is the ratio of top performers among immigrant and non-immigrant students that provides a good measure of inequality. In the case of skill inequality at the top of the performance distribution, the higher the ratio, the bigger the proportion of top performers will be among non-immigrant students relative to the proportion of top performers among immigrant students.

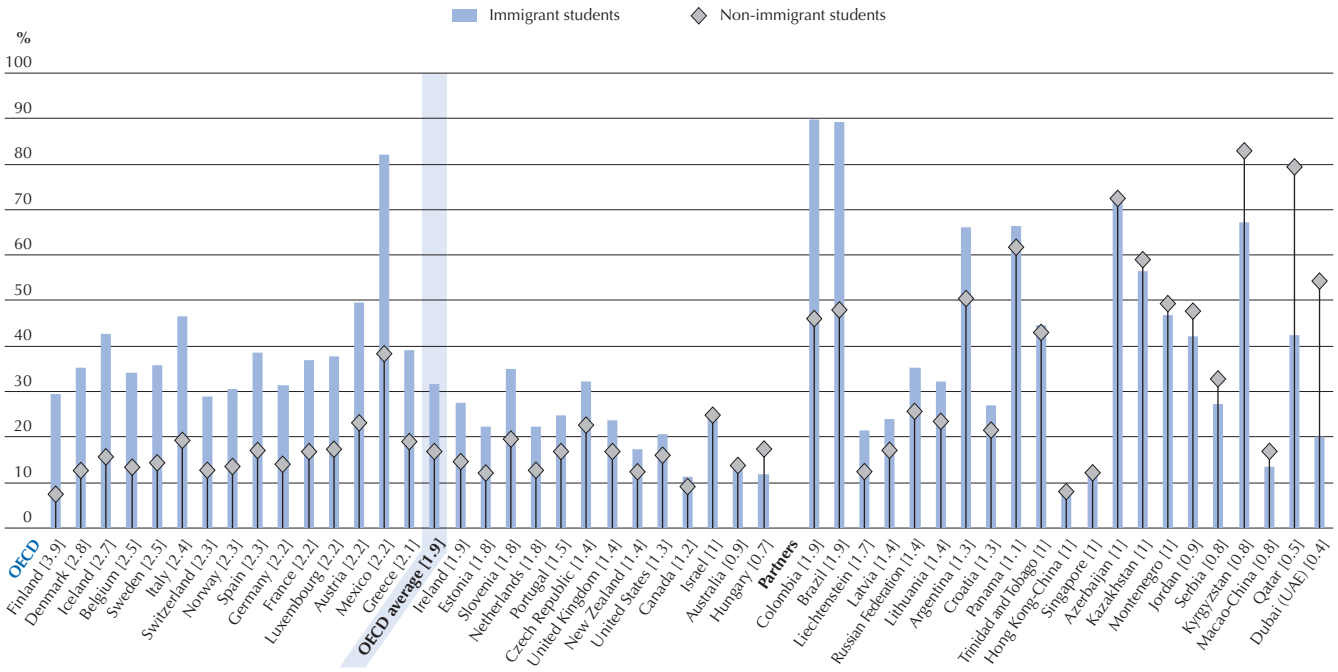


In Figure 2.4, education systems are ranked according to the ratio of the lowest performers among immigrant and non-immigrant students, which appears in parenthesis next to the country name in the horizontal axis. As the figure shows, the proportion of the lowest performers is higher among immigrant than non-immigrant students. The disadvantage for immigrant students is apparent in all OECD countries except for Australia, Hungary, Israel, the Czech Republic and Iceland (Table B2.1f). In no OECD country are the lowest performers more common among non-immigrant students.

Across the OECD the proportion of the lowest performers among immigrant students is almost twice as high as the proportion of the lowest performers among non-immigrant students. Skill inequality at the bottom of the distribution, the ratio of the lowest performers, reaches 3.9 in Finland and more than 2.5 in Denmark, Iceland, Belgium and Sweden.[3] In contrast, in Israel, Australia and Hungary the ratio falls below one because the proportion of low performers is higher among non-immigrant than among immigrant students.

▪ Figure 2.4 ▪

Skills and knowledge inequality across immigrant background at the bottom of the performance distribution, lowest performers by immigrant background



Note: Relative risk of low performance for immigrant students is indicated in brackets next to the country names.

Countries are ranked in descending order of the relative risk of low performance for immigrant students.

Source: Table B2.1f.

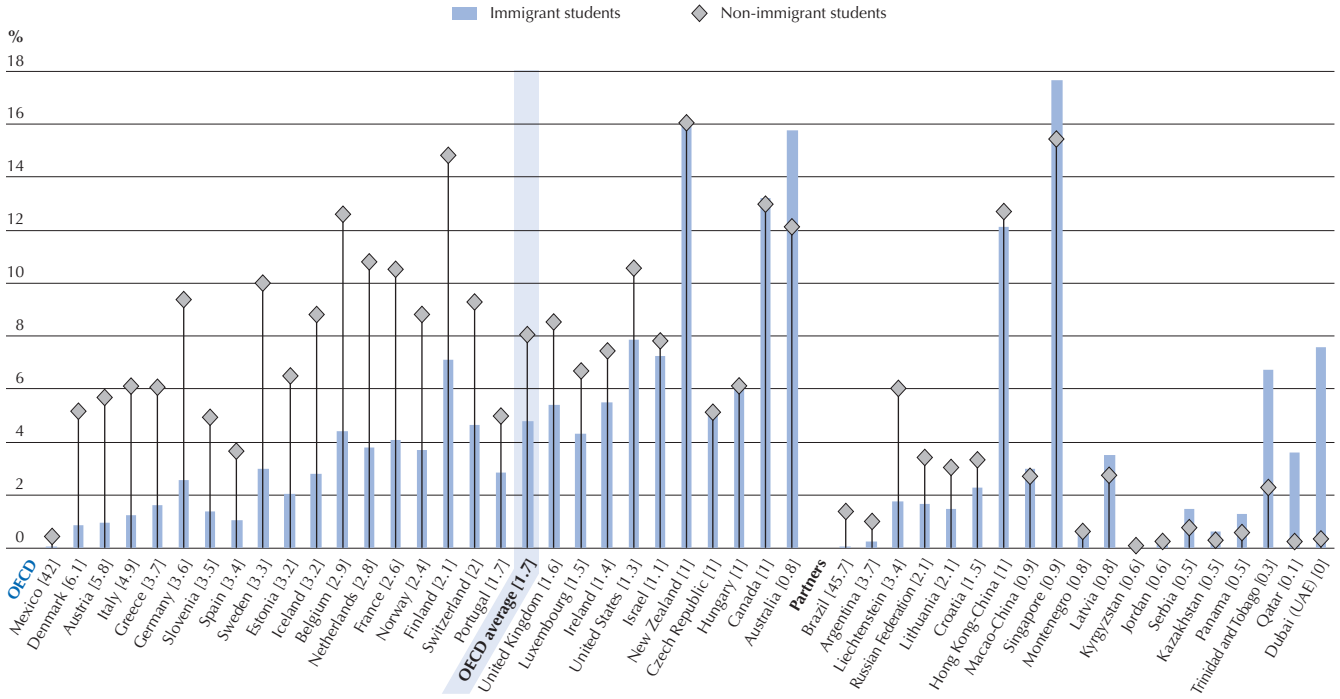
As evident in Figure 2.4, skill inequality at the bottom of the distribution is not necessarily associated with the proportion of low performers among immigrant or non-immigrant students. For example, Finland and Canada have relatively few low performers among non-immigrant students, 7% and 9% respectively. Yet, the proportion of the lowest performers among immigrant students reaches 29% in Finland and it stands at 11% in Canada. In general, low proportions of the lowest performers among immigrant students are associated with lower skills inequality at the bottom of the distribution. However, there are countries with average proportions of low performers among immigrant students where this measure of inequality is still high. For example, Finland, Denmark, Belgium, Sweden, Switzerland, Norway, Spain and Germany have relatively average proportions of the lowest performers among immigrant students, but skill inequality at the bottom of the distribution is well above the OECD average of 1.9.

In Figure 2.5 systems are ranked according to skill inequality across immigrant background at the top of the distribution. Across the OECD the proportion of top performers among non-immigrant students is 1.7 times as large as the proportion among top performers among immigrant students. Top performers are less common among immigrant students in all OECD countries except Portugal, Ireland, the United States, Israel, New Zealand, the Czech Republic, Hungary, Canada and Australia, where there are no apparent differences. In no OECD country are top performers more common among immigrant students. Beyond the odd case of Mexico,[4] skill inequality at the top of the distribution is highest in Denmark and Austria where the proportion of top performers among non-immigrant students is respectively 6.1 times and 5.8 times larger than the proportion of top performers among immigrant students. The ratio is also above 3.1 in Italy, Greece, Germany, Slovenia, Spain, Sweden, Estonia and Iceland (Table B2.1e).



▪ Figure 2.5 ▪

Skills and knowledge inequality across immigrant background at the top of the performance distribution, top performers by immigrant background



Note: Relative risk of top performance for immigrant students is indicated in brackets next to the country names.

Countries are ranked in descending order of the relative risk of top performance for immigrant students.

Source: Table B2.1e.

Figure 2.5 shows that a high proportion of top performers among immigrant students is related to lower inequality across immigrant background at the top of the distribution. Finland is the only OECD country where the proportion of top performers among immigrant students is at or above the OECD average of 5% and the proportion of top performers among non-immigrant students are well above twice that at 15%. And in a number of OECD countries – Germany, Sweden, Iceland, Belgium, Netherlands, France, Norway and Switzerland – the proportion of top performers among non-immigrant students is at or above the OECD average of 8% but the proportion of top performers among immigrant students is 4% or less.

Considering both inequality at the top and bottom of the distribution across immigrant background, Austria, Denmark, Italy and Finland stand out as countries with high inequality at both ends of the distribution scale. While in Finland the inequality is more marked at the bottom, in Austria, Denmark and Italy, it is more marked at the top. Other countries with high inequality at the top and bottom are Iceland, Germany, Sweden, Greece, Spain, Belgium, France, Norway and Switzerland. Luxembourg is the only country where inequality is average at the top and high at the bottom. In Slovenia, Estonia, and the Netherlands inequality is high only at the top but it is only average at the bottom. Inequality is low both at the top and the bottom in Hungary, Australia, Israel and Canada. In New Zealand and the Czech Republic it is below average, particularly at the top. In the United States, the United Kingdom and Portugal inequality is average at the top and low at the bottom.

Knowledge and skills disadvantage among first- and second-generation students

Average performance

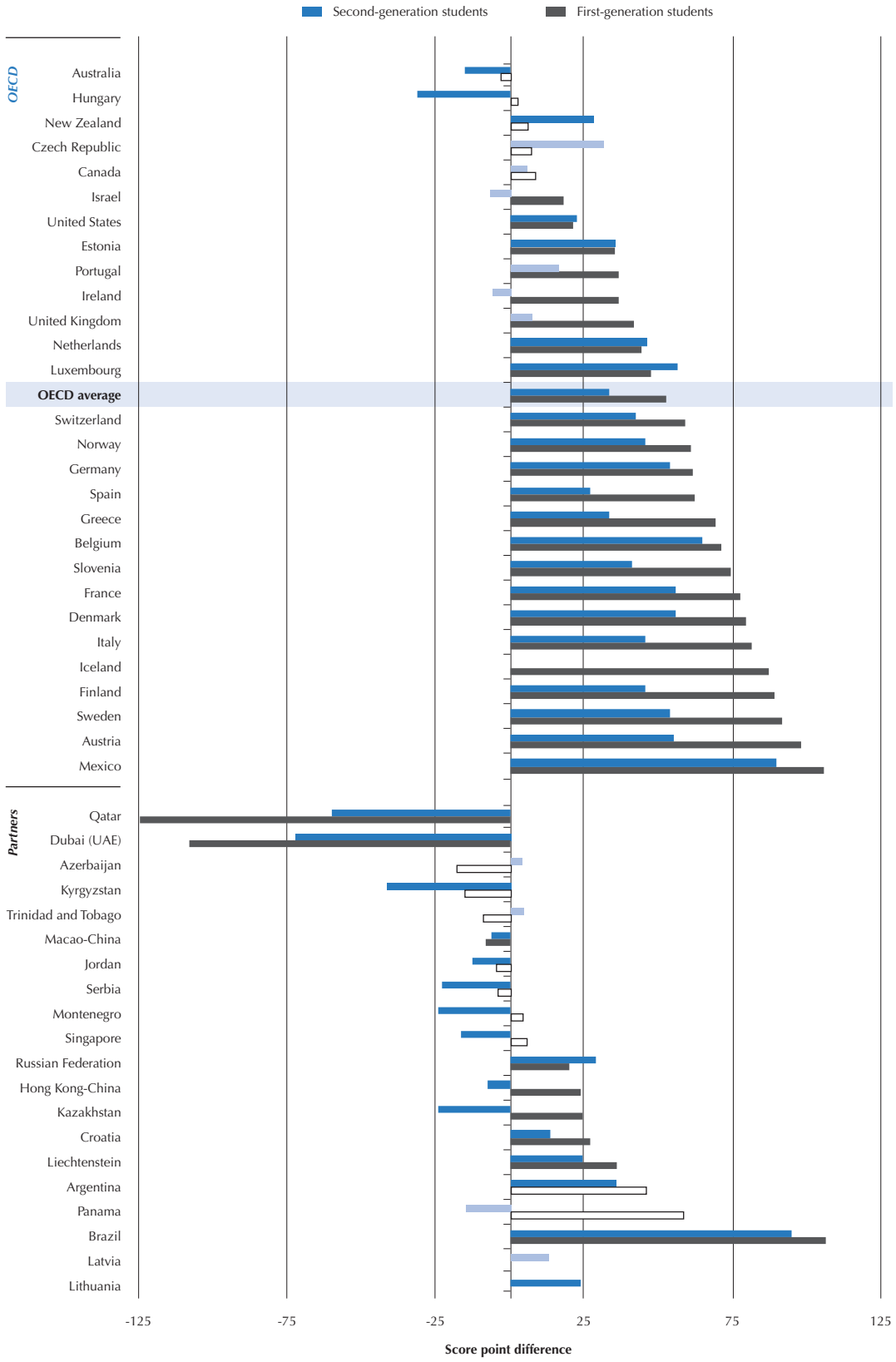
Across OECD countries, non-immigrant students outscore both first- and second- generation students, but the knowledge and skills disadvantage tends to be greatest among first-generation students. Canada and the Czech Republic are the only OECD countries where there are no differences based on students' immigrant background. Immigrant students represent almost a quarter of Canada's student population assessed in PISA 2009, while they account for only about 2% in the Czech Republic (Table B1.3).

In no OECD country do first-generation students outperform non-immigrant students. Non-immigrant students outscore first-generation students in 23 out of 28 OECD countries with sufficient data (Table B2.1a).



Figure 2.6

Performance disadvantage of first- and second-generation students



Note: Score point differences that are statistically significant are shown in a darker tone.

Countries are ranked in ascending order of score point differences in reading performance between non-immigrant students and first-generation students.

Source: Table B2.1a.



Non-immigrant students outperform second-generation students in 19 out of 27 OECD countries with sufficient data. Only in New Zealand do first-generation students outscore second-generation students (Table B2.1a). In Hungary and Australia, second-generation students outscore non-immigrant students. In Australia, immigrant students account for 23% of the student population assessed in PISA 2009, while they represent only 2% of that population in Hungary (Table B1.3).

In most cases, the knowledge and skills disadvantage among first-generation students is large. Figure 2.6 displays the performance differences between non-immigrant students and first- and second-generation students across all countries with sufficient data. In Mexico, the gap between non-immigrant and first-generation students reaches 105 score points on the PISA reading scale. This difference is larger than 90 points in Sweden and Austria and it is above 80 points in Italy, Iceland and Finland. In contrast, there are no apparent performance differences between non-immigrant students and first-generation students in Australia, Hungary, New Zealand, the Czech Republic and Canada (Table B2.1a).

The knowledge and skills gap among second-generation students tends to be narrower than among first-generation and non-immigrant students, but in most cases it remains noticeable. In Mexico, it is close to 90 score points on the PISA reading scale. In Belgium, the gap is more than 64 score points or the equivalent of a year and a half of schooling. And in Sweden, Germany, Austria, France, Denmark and Luxembourg, non-immigrant students outperform second-generation students by more than 50 score points in reading. In contrast, in Hungary and Australia, second-generation students outscore non-immigrant students by 32 and 16 score points, respectively. Ireland, the United Kingdom, Israel, Portugal, the Czech Republic and Canada are the only OECD countries where there are no performance differences between non-immigrant students and second-generation students. In Canada and the Czech Republic this is coupled with no differences between first-generation students and non-immigrant students (Table B2.1). Beyond their different size, the immigrant population in the Czech Republic and that in Canada are peculiar and cannot be easily compared.

With some important exceptions, the larger the knowledge and skills disadvantage of first-generation students, the larger the disadvantage for second-generation students. For example, second-generation students outscore first-generation students by more than 42 score points, or the equivalent of one school year, in Finland, Austria and Ireland.

SOCIO-ECONOMIC DISADVANTAGE AMONG IMMIGRANT STUDENTS

Lower levels of knowledge and skills are not the only impediments to success at school among immigrant students. Socio-economic disadvantage, which is common among these children, is closely associated with lower performance in PISA across the board. This disadvantage only partly explains the poorer performance among immigrant students. In many cases, the disadvantage in knowledge and skills remains even after accounting for socio-economic background and language spoken at home.

Student socio-economic background in PISA

Student socio-economic background in PISA is measured by the *index of economic, social and cultural status*, which is a composite index of various measures. PISA 2009 Results (OECD, 2010) contains a detailed description of how the index is constructed. The main components are: a measure of parental education (the highest educational attainment of either the father or the mother), a measure of parental occupation (the highest parental occupational status) and a measure of home possessions (including wealth, educational and cultural possessions and the number of books at home). Tables B2.2a through B2.2g explore each of these components and their subcomponents by immigrant background and provide a rich picture of differences across students from different backgrounds.

In no OECD country do immigrant students enjoy a socio-economic advantage over non-immigrant students. In the Czech Republic, Portugal, Estonia, Australia, Hungary, New Zealand and Ireland, there are no overall differences in socio-economic background between immigrant students and those without. In the other 21 of 28 OECD countries with sufficient data, immigrant students are more socio-economically disadvantaged than non-immigrant students (Table B2.2a).

The socio-economic disadvantage of immigrant students is illustrated by differences in parental education and in particular in the education of the mother. In some instances in this report, the mother's education is chosen as a proxy of socio-economic background because it provides a good approximation to the educational system of the origin country for many immigrant students. It also provides an intuitive approach to socio-economic background, which may prove helpful when designing education, immigration or other social policies. Across OECD countries, highest parental educational attainment reaches 13.4 years of education among non-immigrant students and 12.9 among immigrant students (Table B2.2b). These averages and their slight difference mask wide variation across countries. The difference in years of education is largest in Luxembourg, the Netherlands and the United States where it reaches two years or more. In Iceland, Finland, Greece, Israel, United Kingdom, Italy, the Czech Republic, Spain, Hungary and Canada there is no apparent difference. While in Australia, Estonia, New Zealand, Ireland and Portugal the gap is reversed and immigrant students have higher average parental educational attainment than non-immigrant students. Average parental attainment among immigrant students is highest in Canada, where it reaches 15.0 years, and it is lowest in Mexico, where it is less than 9.5 years.

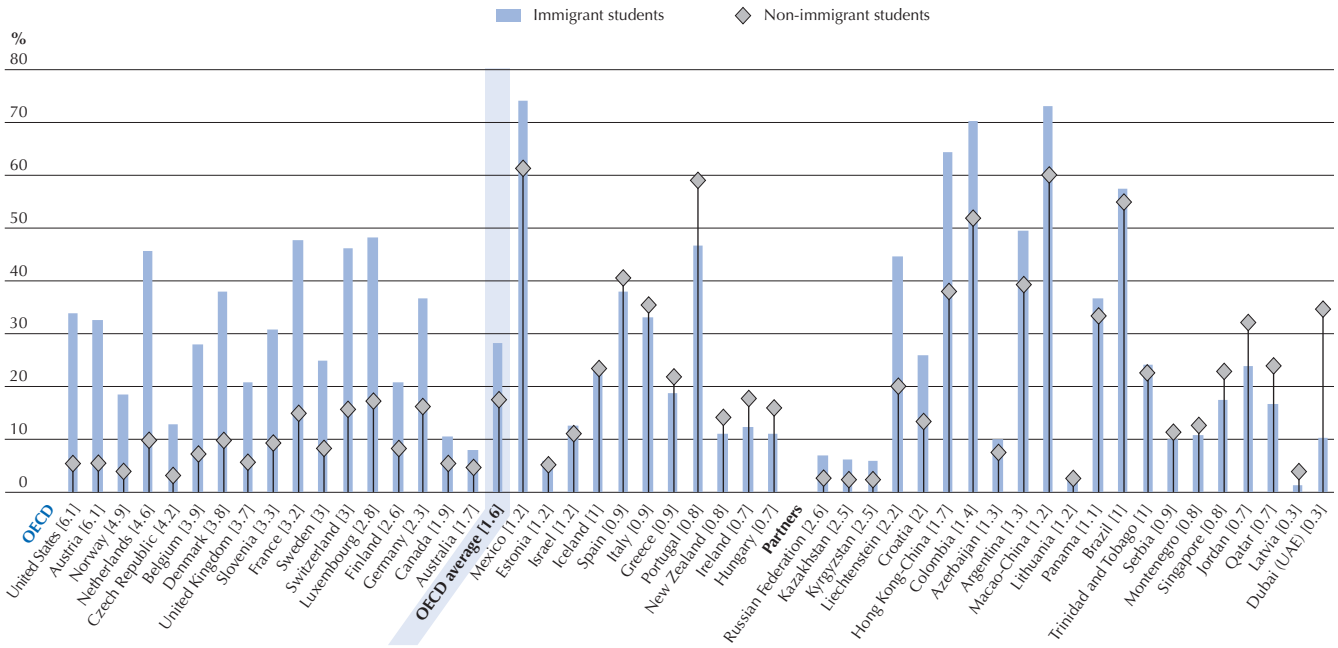


In practice, however, it is the formal educational qualification levels which mediate how individuals are perceived by employers and social actors and their access to different types of employment. In this respect, formal maternal educational attainment provides a particularly good approximation to the socio-economic disadvantage of immigrant students. Low maternal education is defined here as educational attainment up to lower secondary education. Figure 2.7 shows the proportion of students whose mother's educational attainment does not reach beyond lower secondary education, here referred to as students with low maternal education. Countries are ranked according to a measure of inequality across immigrant background, the ratio of the proportion of immigrant students with low maternal education to that of non-immigrant students: The higher the ratio, the bigger the gap between these two groups.

Figure 2.7 shows that in general the proportion of students with low maternal education is higher among immigrant students than among non-immigrant students. Across most OECD countries secondary education has been practically universal since the 1980s and this is reflected in the educational attainment of the mothers of non-immigrant students. However, many immigrant students have mothers who were educated elsewhere and whose educational attainment is low, sometimes even below lower secondary education.

▪ Figure 2.7 ▪

Proportion of students with low maternal education, by immigrant background



Note: Relative risk of students with low maternal education is indicated in brackets next to the country names. The relative risk is the proportion among immigrant students divided by the proportion among non-immigrant students.

Countries are ranked in descending order of the relative risk of low maternal education for immigrant students – the proportion of students with low educated mothers among non-immigrant students divided by the proportion of students with low educated mothers among immigrant students.

Source: Table B2.2i.

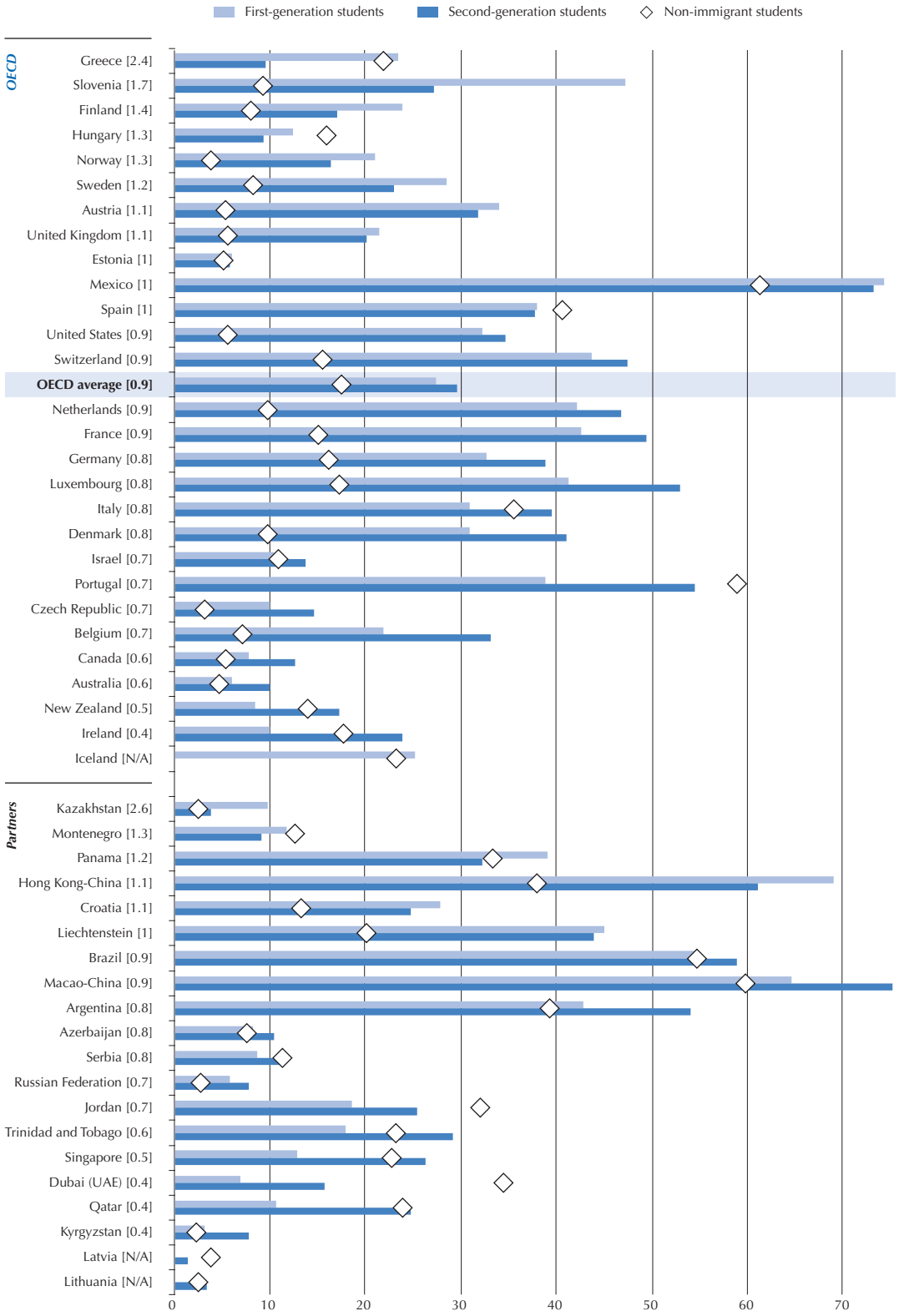
The inequality of maternal education is most marked in the United States and Austria, where the proportion of immigrant students with low maternal education is more than six times as large as among non-immigrant students. In Norway, the Netherlands and the Czech Republic, it is more than 4 times as large. In these countries, the migrant population is very different from the population of students whose parents were born in the country of assessment and it has undoubtedly posed a significant challenge to the education system.

In absolute terms, the proportion of immigrant students with low maternal education is particularly high in the Netherlands, France, Switzerland and Luxembourg where more than 40% of immigrant students have mother with low education. The only two other cases with similarly high proportions of low maternal education are Mexico and Portugal but in both cases, particularly in Mexico, non-immigrant students also have low levels of average maternal education (Table B2.2i).



▪ Figure 2.8 ▪

Proportion of students with low maternal education, by immigrant status



Note: Relative risk of students with low maternal education is indicated in brackets next to the country names. The relative risk is the proportion among immigrant students divided by the proportion among non-immigrant students.

Countries are ranked in descending order of the relative risk of low maternal education for immigrant students – the proportion of students with low educated mothers among non-immigrant students divided by the proportion of students with low educated mothers among immigrant students.

Source: Table B2.2i.



DO DIFFERENCES IN SOCIO-ECONOMIC BACKGROUND ACCOUNT FOR THE DISADVANTAGE IN KNOWLEDGE AND SKILLS?

Socio-economic background and performance are closely related. Given that the immigrant students are socio-economically disadvantaged, it is possible that their knowledge and skills disadvantage is, to a large extent, a reflection of their socio-economic disadvantage. To evaluate this hypothesis, one can compare their performance with similarly disadvantaged non-immigrant students. The change in the performance gap before and after accounting for socio-economic background gives an approximation to the extent to which differences in student performance across immigrant background are associated with differences in socio-economic background. Although controlling for socio-economic background may statistically reduce the scale of the measured score difference between immigrant students and children of the native-born, the socio-economic disadvantage itself of course does not disappear, nor does the performance gap and its downstream consequences on schooling and labour market prospects.

Immigrant students

Across the OECD the performance gap between immigrant students and non-immigrant students diminishes from 44 to 27 score points after adjusting for socio-economic background, a reduction of 16 score points or more than a third of the initial disadvantage. However, the performance advantage of non-immigrant students remains in 21 out of 28 OECD countries with sufficient data (Table B2.1a).

Comparing students of similar socio-economic background reduces the performance differences across immigrant background but the Netherlands is the only country where the performance gap across immigrant background vanishes after adjusting for socio-economic background. The gap is halved in Luxembourg, Germany and France. In Slovenia, Austria, Denmark and Switzerland the performance gap is reduced by more than 40%. Finland, Mexico, Portugal and Estonia are the only OECD countries where the reductions are less than 15% of the initial disadvantage.

A few countries deviate from the general pattern of persistent performance disadvantages. In Australia, Israel and the United States, after comparing students of similar socio-economic background, immigrant students perform better than non-immigrant students but the gap is small: the widest is in Australia with 11 score points. The United States is the only case where there is a reversal in the direction of the gap after adjusting for socio-economic background. In Canada, the Czech Republic and Hungary there is no performance gap associated with immigrant background before or after adjusting for socio-economic background.

Second-generation students

Second-generation students face an important socio-economic disadvantage but their performance disadvantage with non-immigrant students was narrower than for first-generation students. Adjusting for socio-economic background, the performance disadvantage remains but it is almost halved across the OECD – it is reduced from 33 to 18 score points or a 46% reduction of the initial disadvantage equivalent to 15 score points (Table B2.1a).

Only in the United States and the Netherlands does the observed performance difference disappear after adjusting for socio-economic background. Out of the 27 OECD countries with enough data, there are 18 countries where the performance disadvantage of second-generation students remains after adjusting for socio-economic background. Among these countries, the narrowing of the gap is largest in Luxembourg, where socio-economic differences are associated with more than two thirds of the performance disadvantage of second-generation students. In Germany, Slovenia, France, Switzerland, Austria and Denmark, the gap is more than halved. In contrast, the gap is reduced by less than a third in Spain, Mexico, Finland and Estonia.

A number of countries diverge from this general pattern. In Australia second-generation students perform better than non-immigrant students and this advantage persists after adjusting for socio-economic background. In Hungary, there is no difference after adjusting for socio-economic background, while second-generation students outperformed non-immigrant students without the adjustment. In Canada, the United Kingdom, Ireland, the Czech Republic and Portugal there is no performance difference between second-generation students and non-immigrant students before or after adjusting for socio-economic background.

First-generation students

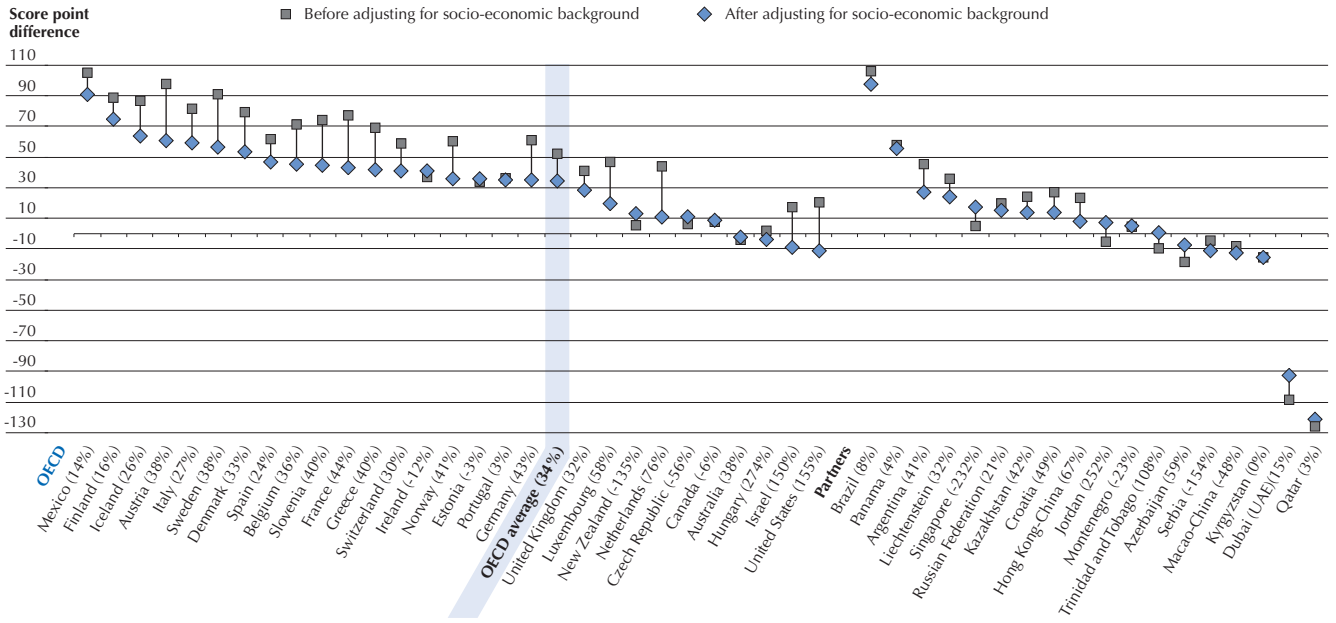
First-generation students face a large performance disadvantage in 22 out of 28 OECD countries with enough data even after adjusting for socio economic background (Table B2.1a). Figure 2.9 displays the performance disadvantage between first-generation students and non-immigrant students. Countries are ranked by the number of score points the disadvantage narrows after adjusting for socio-economic background.

Figure 2.9 shows that the performance disadvantage of first-generation students persists after adjusting for socio-economic background, but it is substantially reduced in many cases. Across the OECD, the underperformance of first-generation students when compared with non-immigrant students is reduced from 52 to 35 score points, a reduction of some 17 score points or about a third of the initial disadvantage (Table B2.1a).



▪ Figure 2.9 ▪

Performance gap between non-immigrant students and first-generation students before and after accounting for socio-economic background



Note: In parenthesis, the change in the performance gap after adjusting for socio-economic background as a proportion of the performance gap before adjusting for socio-economic background.

Countries are ranked in descending order of the score point differences in reading performance between non-immigrant students and first-generation students, after accounting for socio-economic background.

Source: Table B2.1a.

Adjusting for socio-economic background eliminates the performance difference in the United States, Israel and the Netherlands. Among the 22 countries where the disadvantage persists, the narrowing of the disadvantage is greatest in Luxembourg, where it is more than halved. In France, Germany, Norway, Slovenia and Greece the gap is narrowed by more than 40% of the initial disadvantage. In contrast, the gap is narrowed by less than a quarter of the initial disadvantage in Spain, Finland, Mexico and Portugal. In Ireland and Estonia the gap widens by a small margin. In Canada and New Zealand adjusting for socio-economic background widens the gap and makes it noticeable. While there was no apparent difference before adjusting for socio-economic background between first-generation students and non-immigrant students, after the adjustment a small but significant disadvantage for first-generation students becomes apparent in both countries (Table B2.1a).

Hungary, Australia and the Czech Republic are the only cases in the OECD where there is no performance disadvantage for first-generation students before or after adjusting for socio-economic background.

HETEROGENEITY IN KNOWLEDGE, SKILLS AND SOCIO-ECONOMIC BACKGROUND

A more diverse student population presents challenges for education systems. The immigrant students are often socio-economically disadvantaged and are unfamiliar with the language of instruction. Their knowledge and skills at age 15 reflect these deficits, but the performance of immigrant students still lags behind that of students from similar socio-economic backgrounds. However, the gap between these two groups is far from uniform across countries, as is also the diversity of immigrant populations. Indeed, the immigrant students form a relatively heterogeneous group when compared with non-immigrant students. Could this diversity be related to the performance gap between immigrant students and children of the native-born? This section evaluates the evidence in PISA on heterogeneity along two lines: knowledge and skills, and socio-economic background.

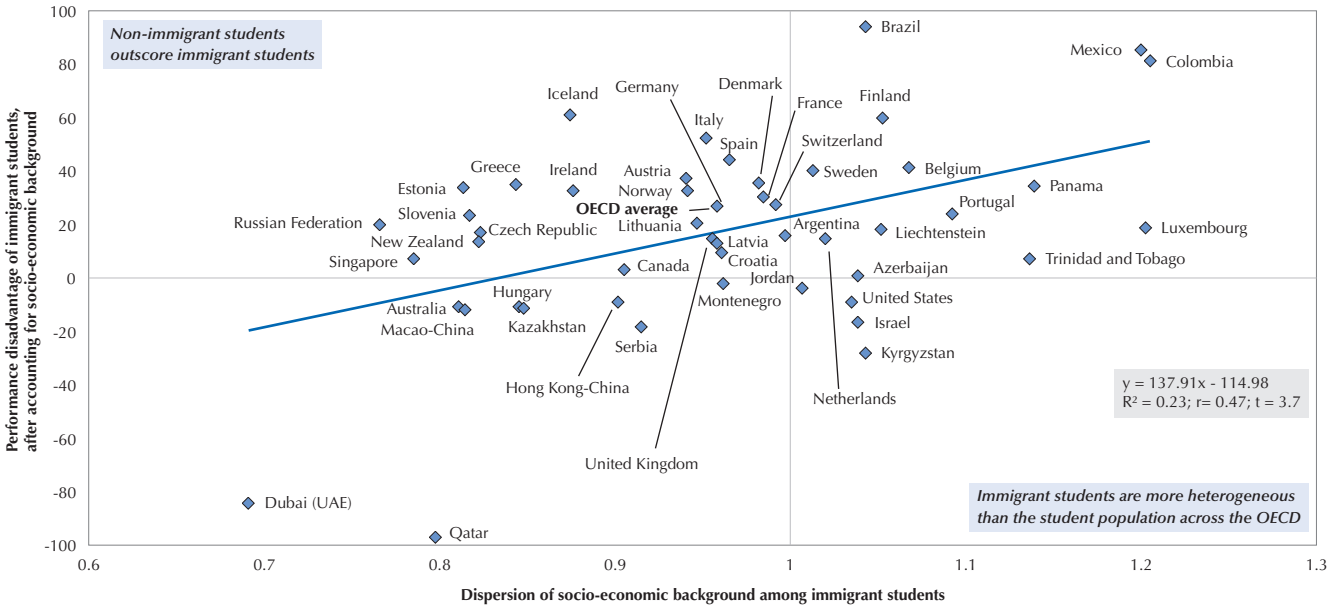
Figure 2.10 displays the relationship between the average performance difference between immigrant and non-immigrant students (on the vertical axis) and the dispersion of socio-economic background across immigrant students. While there are important exceptions to this pattern, the general pattern is that greater differences in performance are associated with immigrant populations of more diverse socio-economic backgrounds.

Beyond their disadvantaged socio-economic background, the main characteristic of the population of non-immigrant students is its diversity.



▪ Figure 2.10 ▪

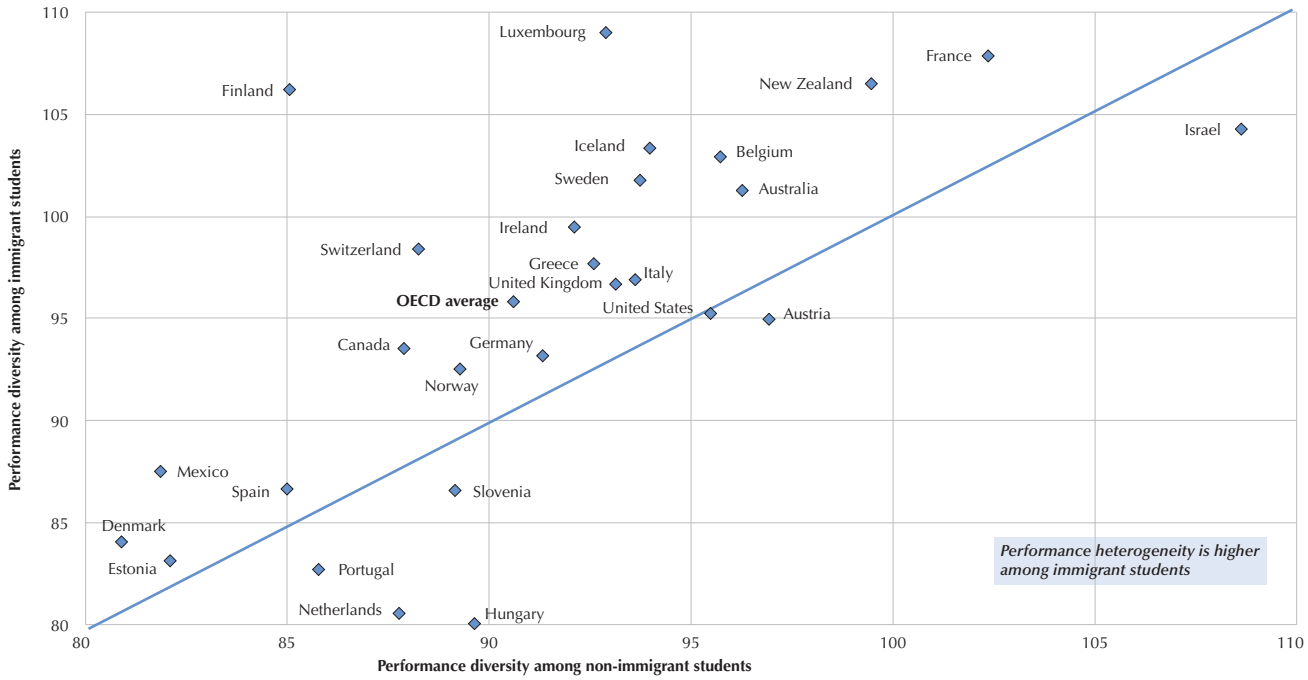
The knowledge and skill disadvantage among immigrant students and diverse socio-economic status



Source: Tables B2.1a. and B2.5.

▪ Figure 2.11 ▪

Performance dispersion among students with and without an immigrant background across OECD countries



Source: Table B2.3a.



Performance heterogeneity of immigrant students

Measures of dispersion: Standard deviation of performance

In most OECD countries, diversity among immigrant students is most evident in the dispersion of knowledge and skills within this group. Not only do these students face a disadvantage in knowledge and skills, but some of them are at a much greater disadvantage than others. Dispersion within a group is measured by the standard deviation of performance among students sharing a particular characteristic, in this case performance in reading.

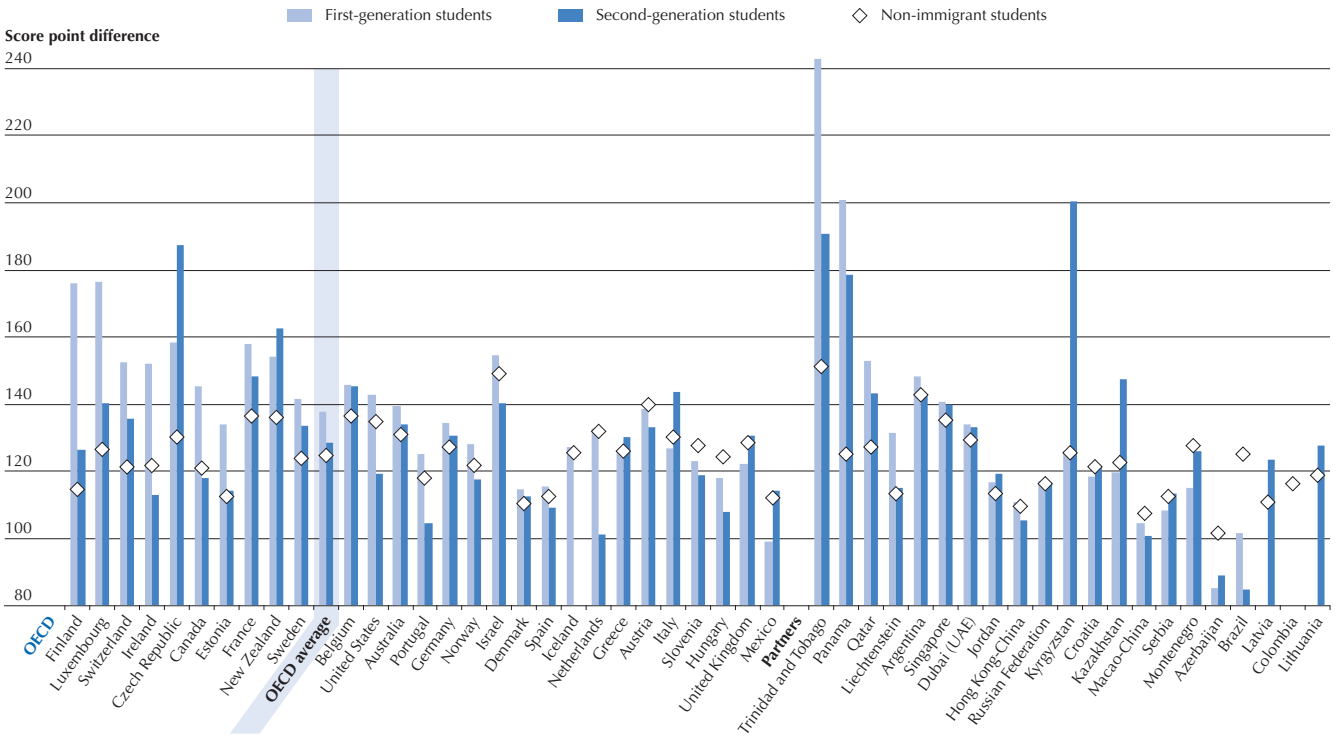
In general, the performance dispersion is wider among immigrant students than among non-immigrant students. Minimum educational standards across OECD educational systems introduce a large amount of inter-generational progress. In other countries, these minimum standards may not exist and some may not have even completed primary school.

Figure 2.11 displays the performance dispersion among immigrant and non-immigrant students across OECD countries. For example, the dispersion of performance among non-immigrant students in the typical OECD country is 90 score points on the PISA reading scale.[5] Such a dispersion implies that in the typical OECD country, the difference between the 15% of students with the lowest scores and the 15% with the highest scores is 90 score points. Only in Hungary, Slovenia, the Netherlands, Portugal, Spain, Estonia, Mexico and Denmark do immigrant students show a performance dispersion lower than 90 score points. In all other countries, the dispersion among immigrant students is about the same or much higher (Table B2.3a).

With some important exceptions, the wider the performance dispersion among non-immigrant students, the wider the performance dispersion among immigrant students. For example, in Finland and Luxembourg, dispersion among immigrant students is above 105 score points – well above the OECD average of 95 score points, and similar to that in New Zealand and France (both of which show wide performance dispersions among immigrant and non-immigrant students). Yet in Finland, the performance dispersion among non-immigrant students – 85 score points – is among the lowest across OECD countries, similar to the level found in Spain. And in Luxembourg, the performance dispersion among non-immigrant students is close to that of a typical OECD country (Table B2.3). This result suggests that performance dispersion is country-specific and thus depends in part on national policies.

▪ Figure 2.12 ▪

Inter-quartile range of performance, by immigrant background



Note: The interquartile range of performance refers to the difference between the 75th and the 25th percentile of the performance in the reading scale.

Countries are ranked in descending order of the difference in the interquartile range of performance between first-generation students and non-immigrant students.

Source: Table B2.4.



Groups of students sharing common characteristics, such as country of birth, are generally less diverse. The largest performance dispersion is therefore observed among first-generation students, whose country of origin is not necessarily the same. Second-generation students were born in the country of assessment but their parents were born abroad and not necessarily in the same country as the parents of other second-generation students. First-generation students are more diverse than second-generation students, who are, in turn, more diverse than non-immigrant students (Table B2.3).

Figure 2.12 provides the inter-quartile range of performance across immigrant background, distinguishing between first and second-generation students. The inter-quartile range of performance among a particular group of students is defined as the difference between the 75th percentile of performance (above which only 25% of students in this group score) and the 25th percentile of performance (below which only 25% of students in this group score). It provides a different perspective into how diverse performance is within a particular group of students.

Across the OECD, the inter-quartile range of performance among non-immigrant students reaches 125 score points, smaller than among immigrant students (133 score points). The inter-quartile range of performance is larger among first-generation students (138 score points) than among second-generation students (129 score points). In Figure 2.12 countries are ranked according to the difference between the inter-quartile range of first-generation students and that of non-immigrant students. The difference is largest in Finland, Luxembourg, Switzerland, Ireland, Czech Republic, Canada, Estonia, France, New Zealand and Sweden among OECD countries and it is only reversed by more than 10 score points in Mexico. The Czech Republic and New Zealand are the only countries in this group where the inter-quartile range is even larger among second-generation students (Table B2.4).

Figure 2.12 highlights some important deviations from this general pattern. In Ireland and Canada, the inter-quartile range is high for first-generation students but not for second-generation students, relative to non-immigrant students. In the United States, Portugal, the Netherlands and Hungary, the inter-quartile range is small for second-generation students, but not so for first-generation students (Table B2.4).

Socio-economic heterogeneity of immigrant students

Differences in performance heterogeneity across immigrant backgrounds are relatively limited when compared with differences in socio-economic heterogeneity. The *PISA index of economic, social and cultural status* is constructed so that the dispersion in socio-economic background across all OECD students is one. Within-country socio-economic dispersion is naturally smaller; for example, it is equal to 0.87 in the typical OECD country among non-immigrant students. Figure 2.13 plots the differences in dispersion in socio-economic background according to immigrant background.

The differences are starker among first-generation students, but they are marked in practically all OECD countries. Across the 27 OECD countries with sufficient data, only second-generation students in Greece and Mexico appear to have a more homogeneous distribution of socio-economic background than non-immigrant students. In 17 countries, the opposite is true; and there appears to be no difference in Hungary, Spain, Ireland, Austria, Portugal and Estonia. Only in Hungary, Greece, Portugal, Spain and Italy are first-generation students more homogenous in socio-economic background than non-immigrant students. In 21 of 28 OECD countries with sufficient data, first-generation students form a more heterogeneous group of students than non-immigrant students. In Mexico, Iceland, New Zealand, Slovenia and Ireland there appears to be no difference in heterogeneity between these two groups of students (Table B2.5).

Not only are differences in socio-economic dispersion across immigrant background clearly seen in most OECD countries, they are also rather large. The dispersion of socio-economic background among immigrant students appear to be widest for first-generation students. For example, socio-economic dispersion in Sweden, Austria and Luxembourg among immigrant students stands at 1.01, 0.94 and 1.20 respectively, while for non-immigrant students, socio-economic dispersion stands at 0.76, 0.77 and 0.84, respectively (Table B2.5).

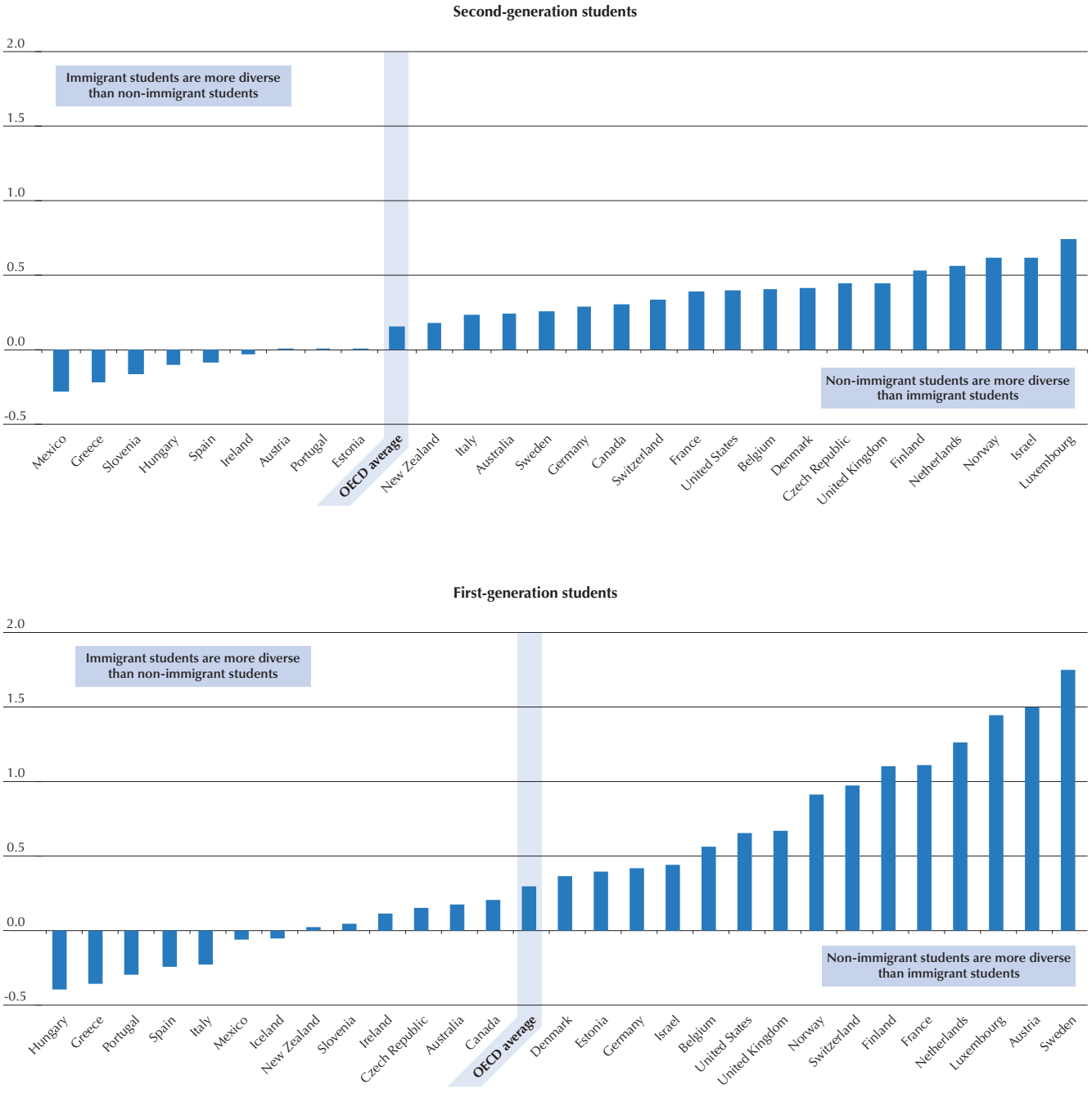
Across countries, socio-economic dispersion is associated with lower mean performance and larger performance gaps in favour of non-immigrant students. Countries where immigrant students come from more diverse socio-economic backgrounds are also those where the difference in reading performance is greater when comparing those students with non-immigrant students who have a similar socio-economic status.

However, socio-economic diversity is only part of the story. The proportion of immigrant students is actually negatively related to performance gaps in reading. Figure 2.14 shows the relationship between the proportion of immigrant students and performance gaps. Countries with larger populations of immigrant students are characterised by smaller performance differences between immigrant and non-immigrant students, after adjusting for socio-economic background. These examples show that it is possible to successfully integrate large proportions of immigrant students and reduce the performance differences between immigrant and non-immigrant students even when the size of the immigrant student population is considerable.



▪ Figure 2.13 ▪

Relative socio-economic dispersion among immigrant students across OECD countries



Note: Relative diversity is defined as the ratio of the variance in socio-economic background in the group of immigrant students (e.g. first generation students) to the variance of socio-economic background in the group of non-immigrant students (e.g. in the same case as before, non-immigrant students) minus one. If both variances are equal, the relative diversity so defined would be zero.

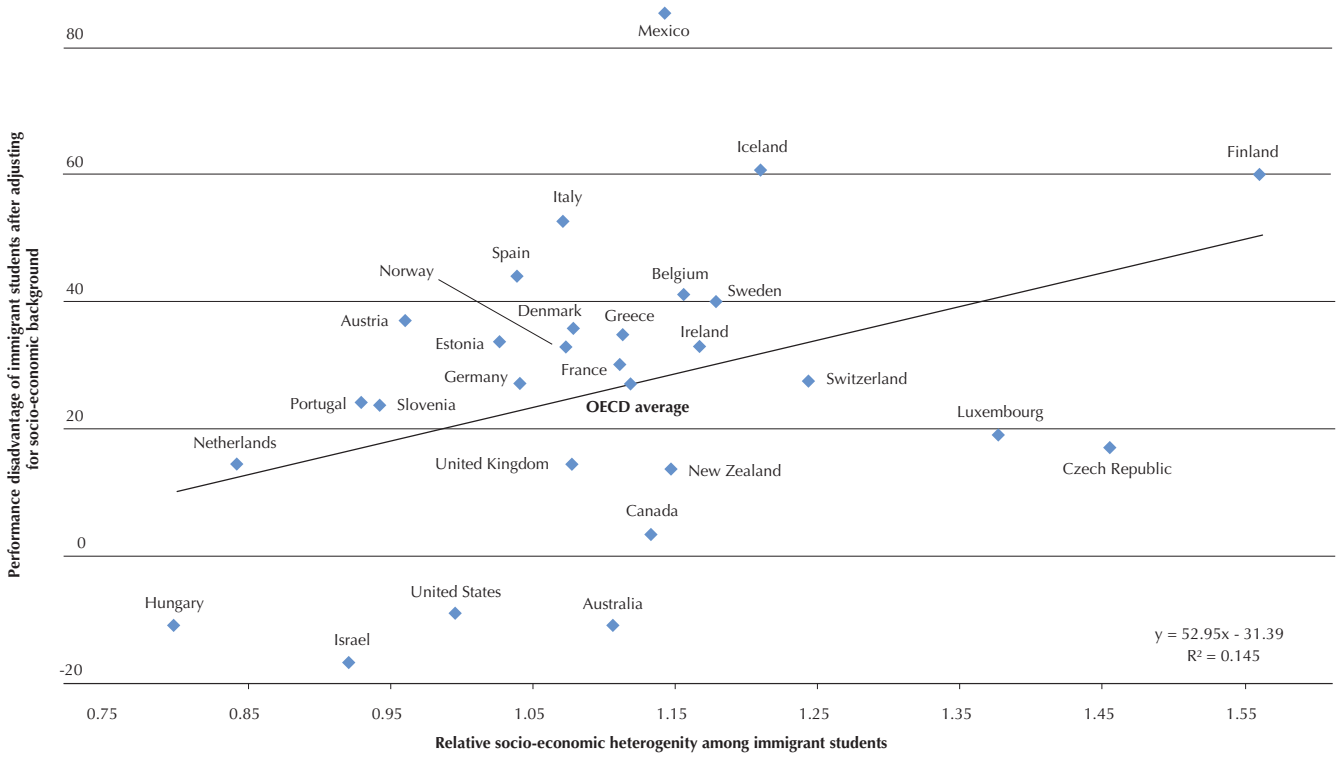
Countries are ranked in ascending order of the relative diversity of immigrant students.

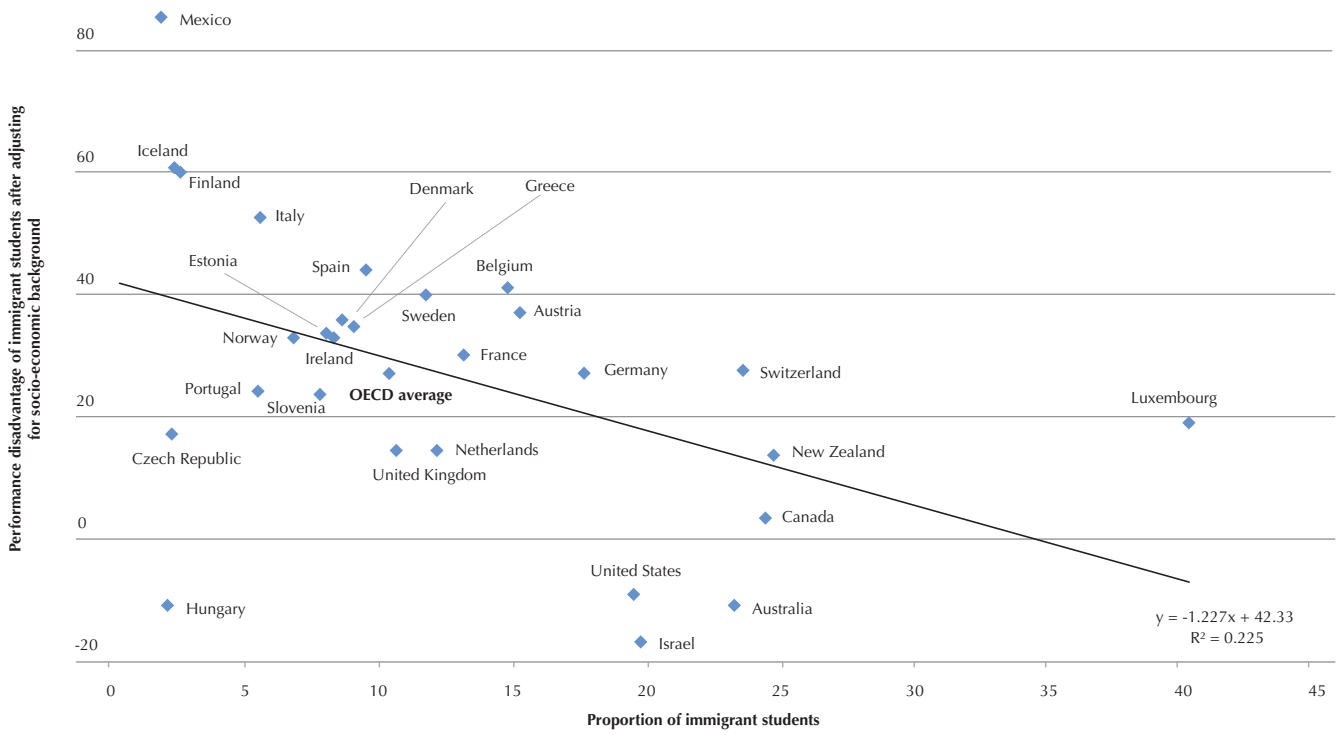
Source: Table B2.5.



▪ Figure 2.14 ▪

Prevalence, relative socio-economic dispersion, and knowledge and skills disadvantage among immigrant students across OECD countries





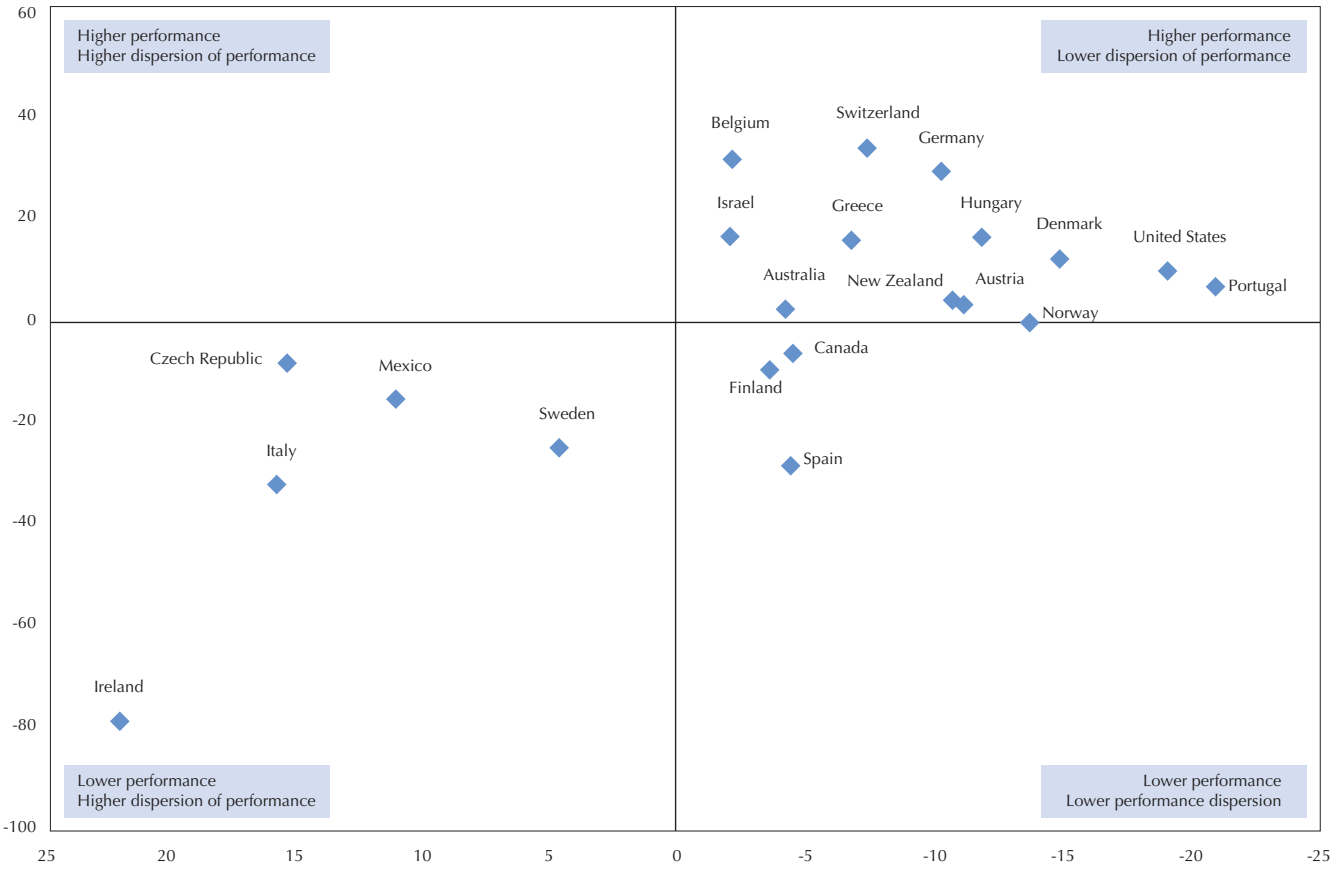
Source: Tables B1.3 and B2.1a.

TRENDS BETWEEN PISA 2000 AND PISA 2009

Between PISA 2000 and PISA 2009, most OECD countries achieved performance improvements among immigrant students by reducing performance dispersions within this group. Yet these changes are marked in only a small number of countries. Figure 2.15 plots changes in performance and performance dispersion between 2000 and 2009 among immigrant students across OECD countries. Among these countries, the average performance of immigrant students improved in Switzerland, Belgium and Germany by 37, 35 and 32 score points, respectively, on the PISA reading scale.[6] These are important improvements, close to the equivalent of a year of schooling (Table B2.6a). Among partner countries and economies, average performance also improved in Liechtenstein (61 score points) and in Hong Kong-China (10 score points). In contrast, the average performance of immigrant students declined in Ireland (79 score points), Italy (31 score points), Spain (27 score points) and Sweden (24 score points).

▪ Figure 2.15 ▪

Changes in performance and dispersion among immigrant students across OECD countries between 2000 and 2009



Source: Tables B2.6a and B2.6b.

In Germany, Sweden and the partner country Liechtenstein, the improvement was accompanied by a greater homogeneity of performance among immigrant students, while in Ireland the decline in performance was coupled with an increase in the heterogeneity of performance among this group of students (Table B2.6b).

Only in Belgium was the improvement in performance mirrored by an improvement in the average socio-economic status of immigrant students; in the rest of the countries there were no noticeable changes in the socio-economic profile of the typical immigrant student. In Hong Kong-China, the average socio-economic status of immigrant students deteriorated, which makes the improvement in average performance even more impressive (Table B2.6c).

Among the countries where the average performance of immigrant students changed substantially, socio-economic diversity increased in Sweden and Hong Kong-China while it decreased in Spain (Table B2.6d).



First and second-generation students

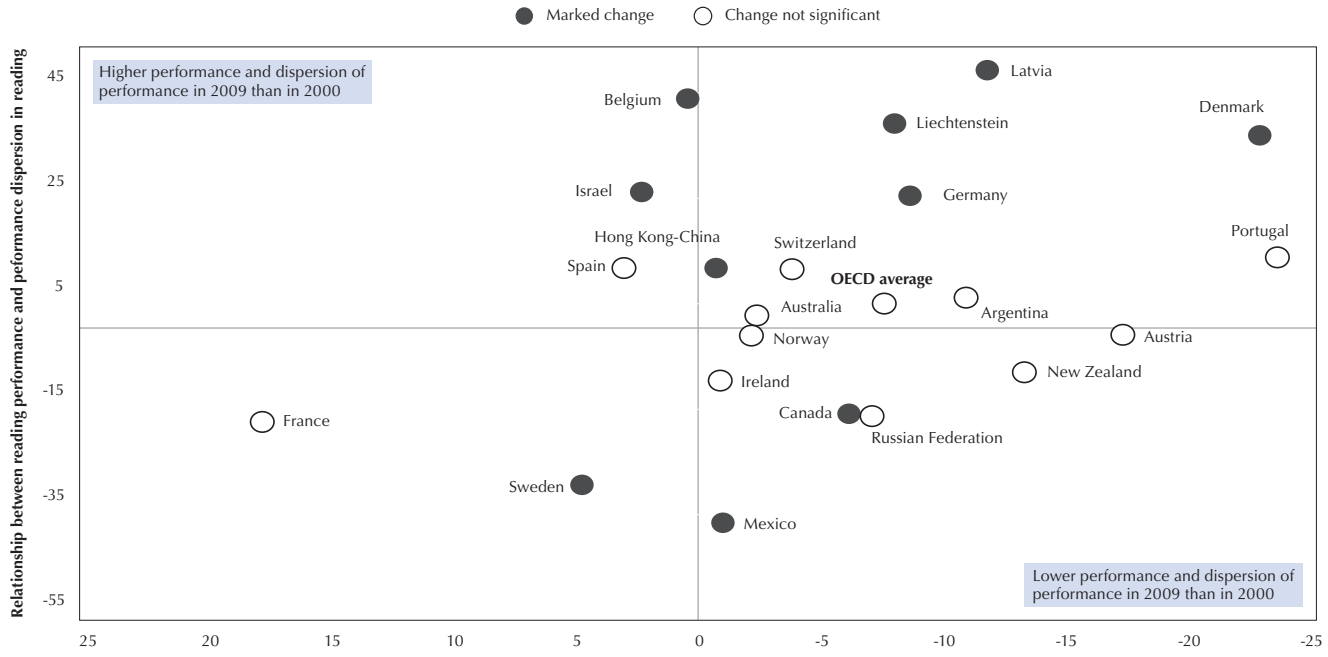
Analysing country of birth across immigrant students reveals that some of these trends are in part the result of differences in the changes taking place across sub-populations of immigrant students. The general observation that improvements in average performance and lower dispersion go hand in hand is reinforced.

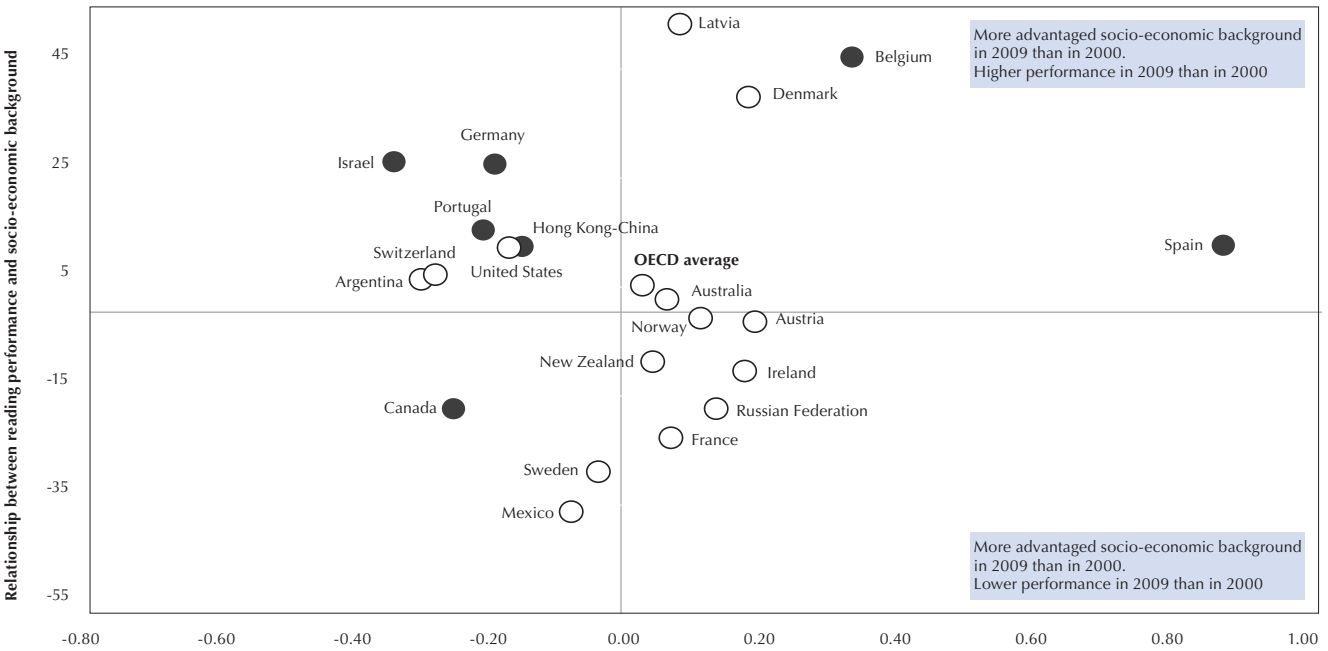
Figure 2.16 plots changes in mean socio-economic background, mean performance and dispersion of performance across country of birth for immigrant students as well as changes. To better appreciate country differences the extreme improvement in mean performance among first-generation students in the partner country Liechtenstein and the extreme decline among this group in Ireland have been excluded (Tables B2.6e and B2.6f).

▪ Figure 2.16 ▪

Changes in mean socio-economic background, performance and dispersion among immigrant students by country of birth

Figure 2.16a. Second-generation students

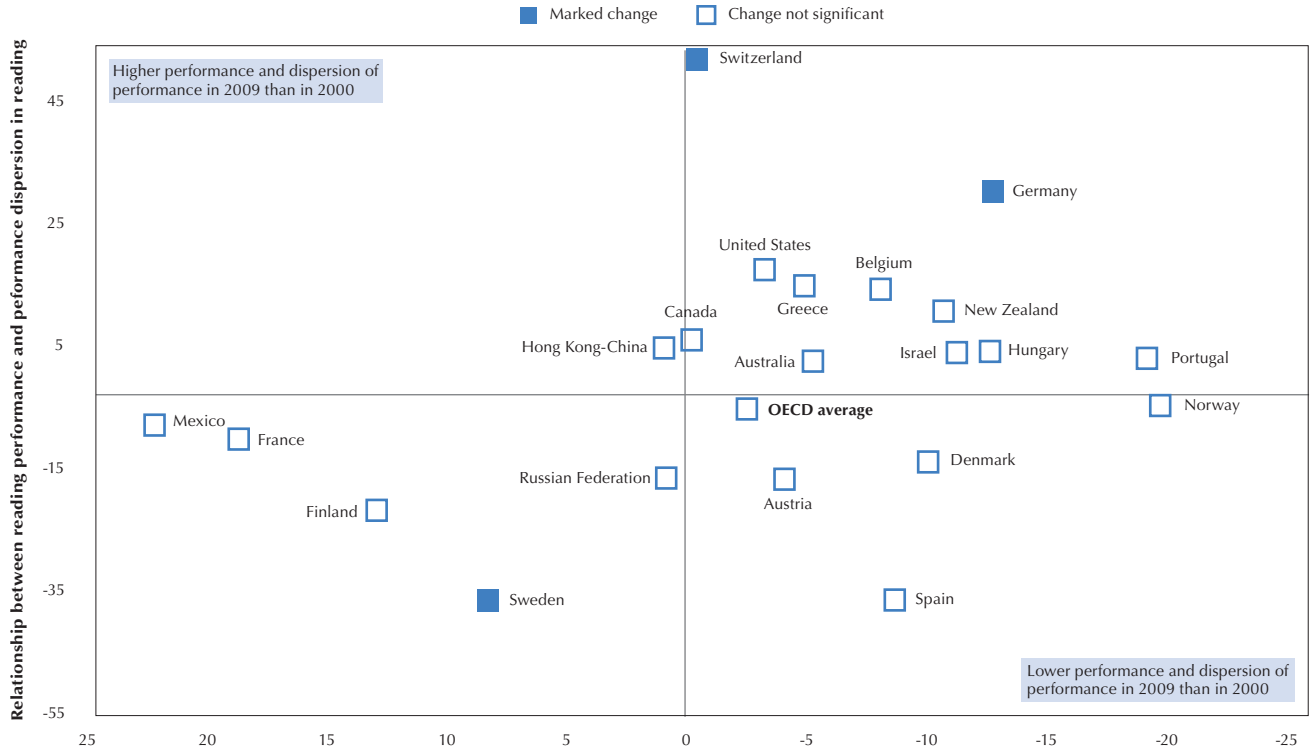


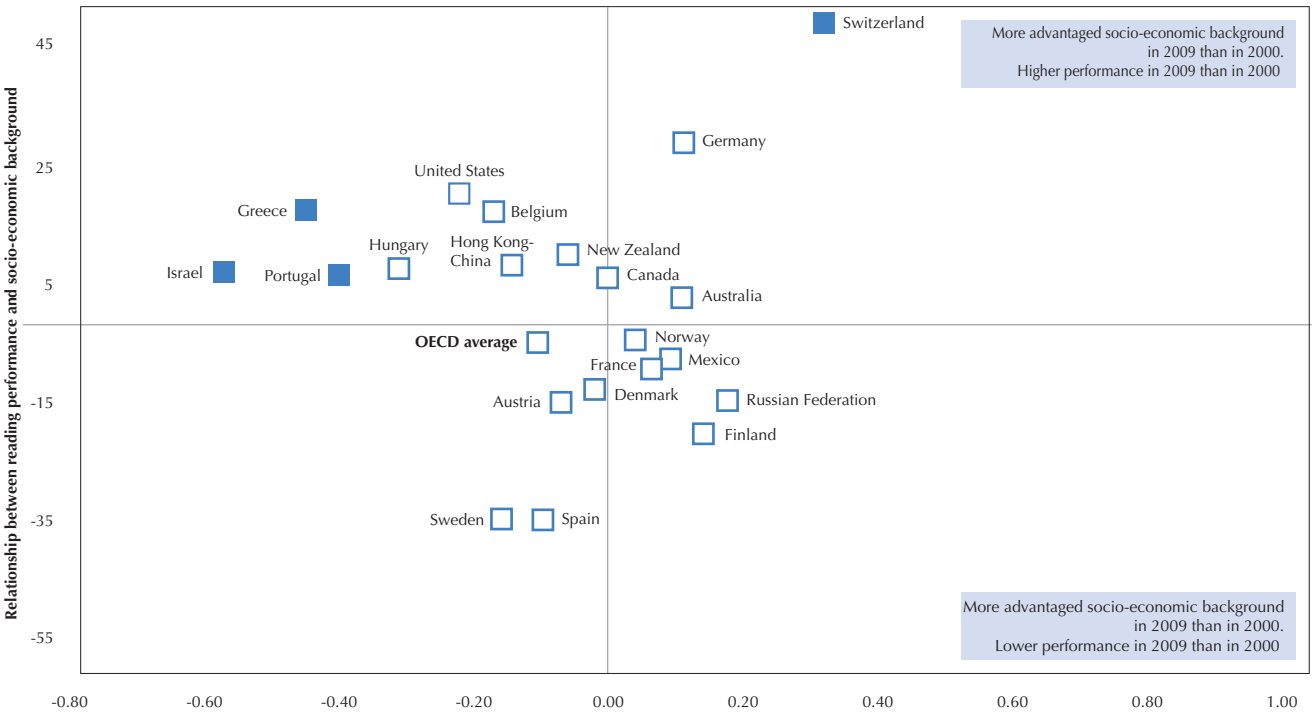


▪ Figure 2.16 ▪

Changes in mean socio-economic background, performance and dispersion among immigrant students by country of birth *(continued)*

Figure 2.16b. First-generation students





Note: Changes in mean performance and changes in mean socio-economic background that are statistically significant are shown in a darker tone.

Source: Tables B2.6f and B2.6e.



Figure 2.16 highlights general trends towards higher mean scores in PISA 2009 relative to PISA 2000 among second-generation students, where performance improved in Belgium, Denmark, Israel, Germany and the partner countries and economies Latvia, Liechtenstein and Hong Kong-China. Of these, only the performance improvement in Belgium is associated with an improvement in the mean socio-economic background. In Israel and Germany, the improvement in performance took place despite a decline in average socio-economic background. Second-generation students in Canada, Mexico and Sweden suffered a decline in average performance, associated with a decline in average socio-economic background only in Canada (Tables B2.6e and B2.6f).

Among first-generation students, only in Switzerland and Germany there are marked improvements and in the Swiss case they are associated with higher average socio-economic background (Tables B2.6e and B2.6f).

SUMMARY AND CONCLUSIONS

Designing policies that are effective in allowing all students to reach their potential requires that differences and similarities between immigrant and non-immigrant students be taken into account. While this chapter characterises those differences and similarities within and across countries, it also highlights the heterogeneity of immigrant student populations. Differences in the performance and profiles of immigrant students are associated with the varying degrees of success of educational systems in mitigating the performance differences among these students. The more diverse the immigrant student population, in absolute terms or relative to the non-immigrant student population, the greater the challenge of integrating these students will be.

Notes

1. This report only includes estimates based on at least 30 students from five different schools. According to this criterion, the data on children of immigrants in Chile, Japan, Korea, Poland, the Slovak Republic and Turkey are not sufficiently reliable to be included in this report.
2. Albania, Bulgaria, Chinese Taipei, Colombia, Peru, Romania, Shanghai-China, Tunisia, Uruguay, Indonesia and Thailand are not included in this report because the student populations with an immigrant background in these countries and economies were not sufficiently large to produce reliable estimates.
3. The differences in Iceland are very large but the number of observations is very small, therefore it is not possible to say that the estimates are statistically different with a high degree of confidence.
4. In Mexico, the proportion of top performers across all students is very small and ratio of top performers is very high (because of the low number in the denominator).
5. Across all students in the OECD area, the dispersion in performance on the PISA 2000 reading scale was set to 100. Dispersion has not decreased; rather we are looking at the average dispersion across countries as a more appropriate benchmark. The entire OECD population is quite diverse, in it of itself; however the student population within each country is less diverse.
6. For an in-depth study of the performance changes in Switzerland see Cattaneo and Wolter (2012) and for Germany see Ehmke, et al. (2012).

References

Cattaneo, M. A. and **S. C. Wolter** (2012), "Migration Policy Can Boost PISA Results: Findings from a Natural Experiment", *IZA Discussion Paper Series*, No. 6300, Institute for the Study of Labour, Bonn.

Ehmke, T., **P. Stanat** and **E. Klieme** (2012), "Erklärungsansätze für Veränderungen in der Lesekompetenz von PISA 2000 nach PISA 2009," *Zeitschrift für Pädagogik*.

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3

Mastery of the Assessment Language and Reading Outcomes

Many children of immigrants face a language barrier at school – they speak a different language at home than the language of instruction, which is also the language of their PISA test. Immigrant students with lower levels of performance in PISA tend to speak another language at home. Greater exposure to and the mastery of the assessment language is associated with better performance. Policies which promote this enhanced exposure are likely to help bridge the gap between immigrant and non-immigrant students.



INTRODUCTION

The fact that many immigrant children arrive speaking a main language different from that of the destination country is undoubtedly the most significant barrier to development of good reading skills in the host-county language. Even for immigrant students born in the country or who arrived at an early age, exposure to the language of the country of residence may not be as extensive as it is for non-immigrant students, among other reasons because the language mostly spoken at home may not be the host-country language.

The objective of this chapter is to more closely examine the issue of language proficiency among immigrant students and its link to reading outcomes in PISA. In an assessment such as PISA, the reading performance of immigrant students will often be a function both of language proficiency and of skill level with respect to the types of tasks being assessed. However, the two cannot be easily disentangled and language proficiency can be said to determine the ability of persons assessed to mobilise the skills which they possess in the accomplishment of reading tasks.

There are several factors which can affect language proficiency. Among these are the age at arrival, the analysis of which is explored in Chapter 4. The other main determinants explored in this chapter relate to the amount of exposure to the assessment language in different environments, in particular exposure to that language at home and at school.

The objective is to examine the extent to which exposure to the assessment language is related to proficiency in that language. Does greater exposure to the assessment language, for example through use at home, improve performance in PISA? Does it reduce the observed difference between immigrant and non-immigrant students? How relevant is exposure to the assessment language at school, for example through attendance at pre-primary school or indeed schools where most students' mother tongue is the language of the host-country? To what extent does extensive exposure to a different language matter, compared to parental education, for example?

WHAT FACTORS AFFECT LANGUAGE PROFICIENCY?

Migrants' lower language proficiency in the assessment language is partly explained by their lower exposure to the assessment language. For first-generation immigrants whose native language is different from the language of assessment used in PISA, the first factor that influences exposure is the amount of time immigrants have lived in the host-country; generally the earlier the arrival, the better the reading outcome. This question is pursued further in Chapter 4.

LANGUAGE EXPOSURE AT HOME

For many immigrants, the language of the country of migration is not their native language. This is a truism that typifies the challenges faced by immigrants in their adopted countries. If they must sometimes deal with a second (or third) language in their work or daily dealings with others in the country of residence, the home environment is one where the comfort and familiarity of a language they master well can be enjoyed. Even if both spouses of an immigrant household are able to speak the language of the host-country, they will normally not speak it to each other. Their children, therefore, are likely to learn the language of their parents as their first language and to be exposed to the language of the host-country only through older siblings, relatives or friends, the media (television and Internet) or school attendance.

This in itself might lead one to expect lower performance levels on the part of persons who speak mostly a foreign language at home. Moreover, over the past 20 years, the means (electronic) to maintain contact with the language, culture and way of life of the country of origin at very low cost have expanded tremendously, so that the presence and use of the assessment language in the home may well be even less frequent than in the past.

Almost two thirds of first-generation immigrants in OECD countries do not speak the language of the test assessment at home (Figure 3.1). In northern European countries like Norway, Iceland, Sweden and Finland, the percentage of first-generation immigrants not speaking the test language at home increases to over 80%. Only in a few OECD countries (Belgium, Australia, Spain, Portugal and Mexico) is the percentage of first-generation immigrants who do not speak the test language at home lower than 50%.

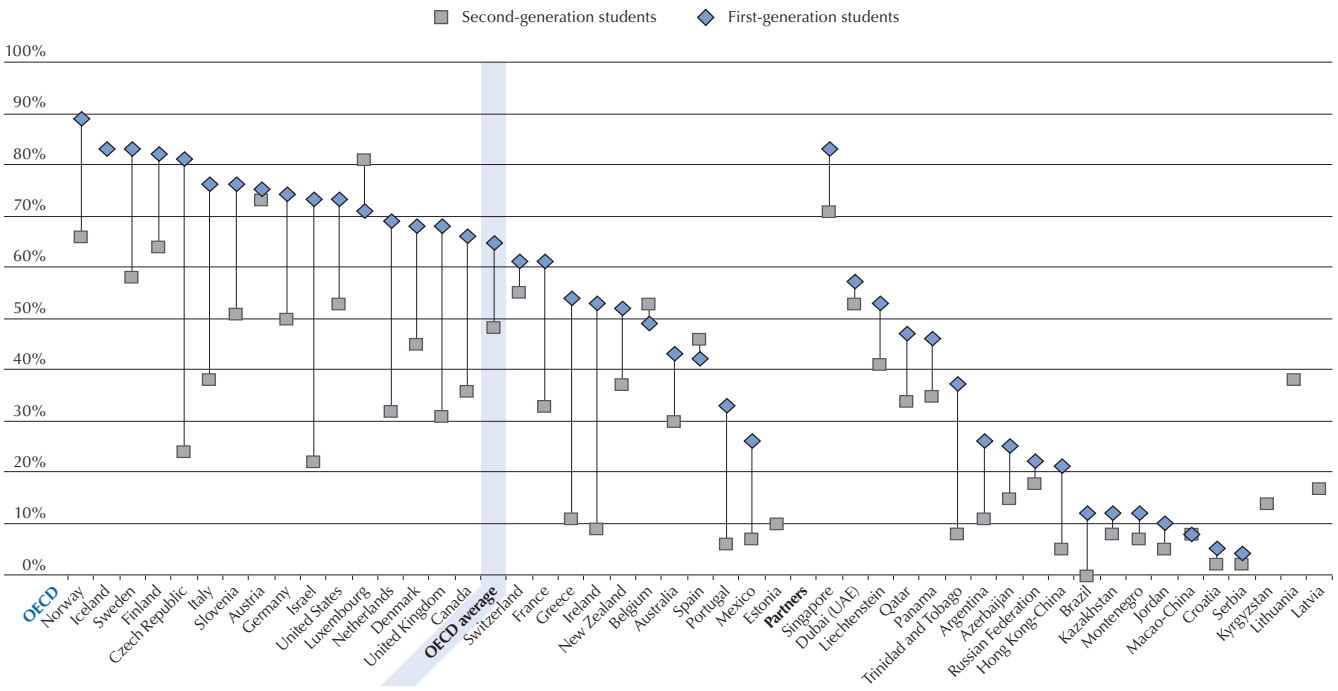
In partner countries, the situation is different: 72% of first-generation immigrants on average speak the test language at home, but there is some heterogeneity. In several partner countries, like Serbia, Croatia or Macao-China, the percentage is even higher than 90%. A notable exception is Singapore, where the percentage of first-generation immigrants speaking the test language at home is only 17%.

Second-generation immigrants tend to speak the test language at home to a greater extent than first-generation migrants. One reason for this is that the parents of many second-generation students themselves arrived in the country when they were quite young and speak the language of the host-country as their main language (Table 1.2). The share of second-generation students who do not speak the test language at home in OECD countries is on average 25 percentage points lower than that of first-generation students. In the Czech Republic, Israel, Ireland and Greece, the share is even over 40 percentage points lower. The few exceptions where the



▪ Figure 3.1 ▪

Share of students who speak a language different from the test language at home, by migration status

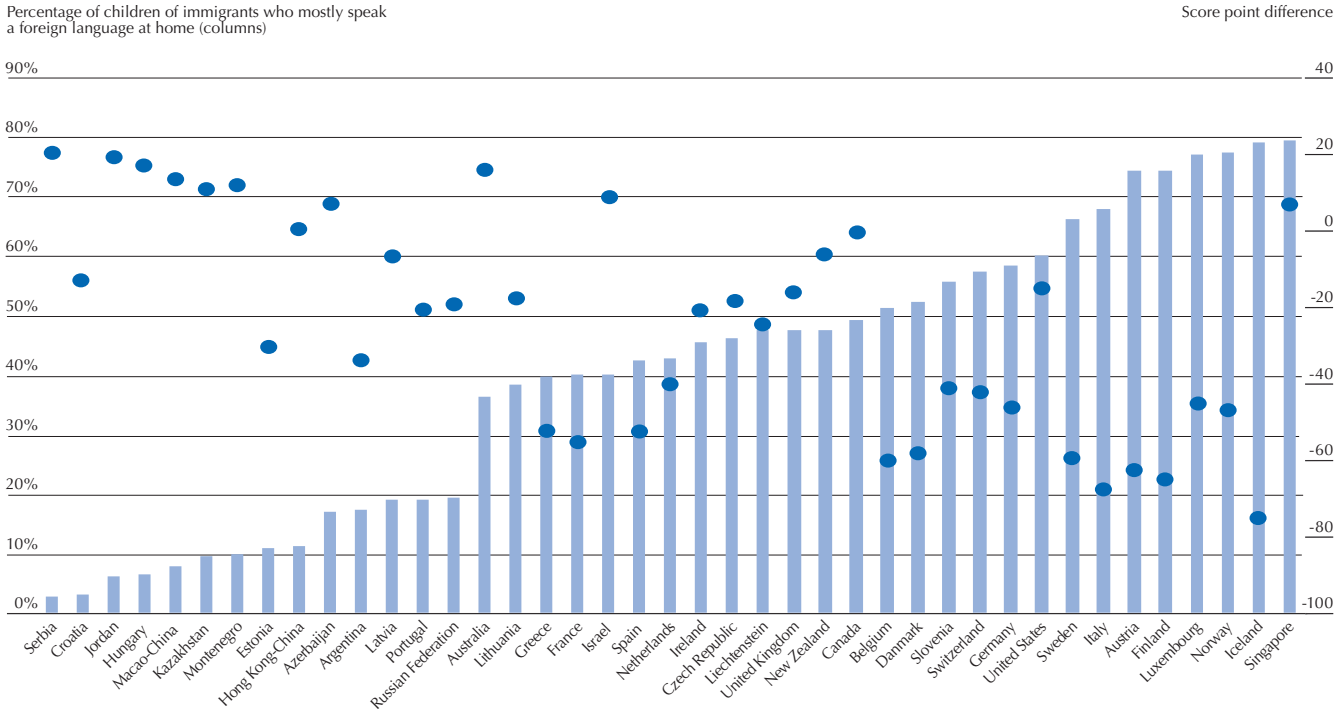


Countries are ranked in descending order of the share of students from the first generation who do no speak the test language.

Source: Table B3.1.

▪ Figure 3.2 ▪

Relationship between the share of students who speak a language different from the test language at home and score differential



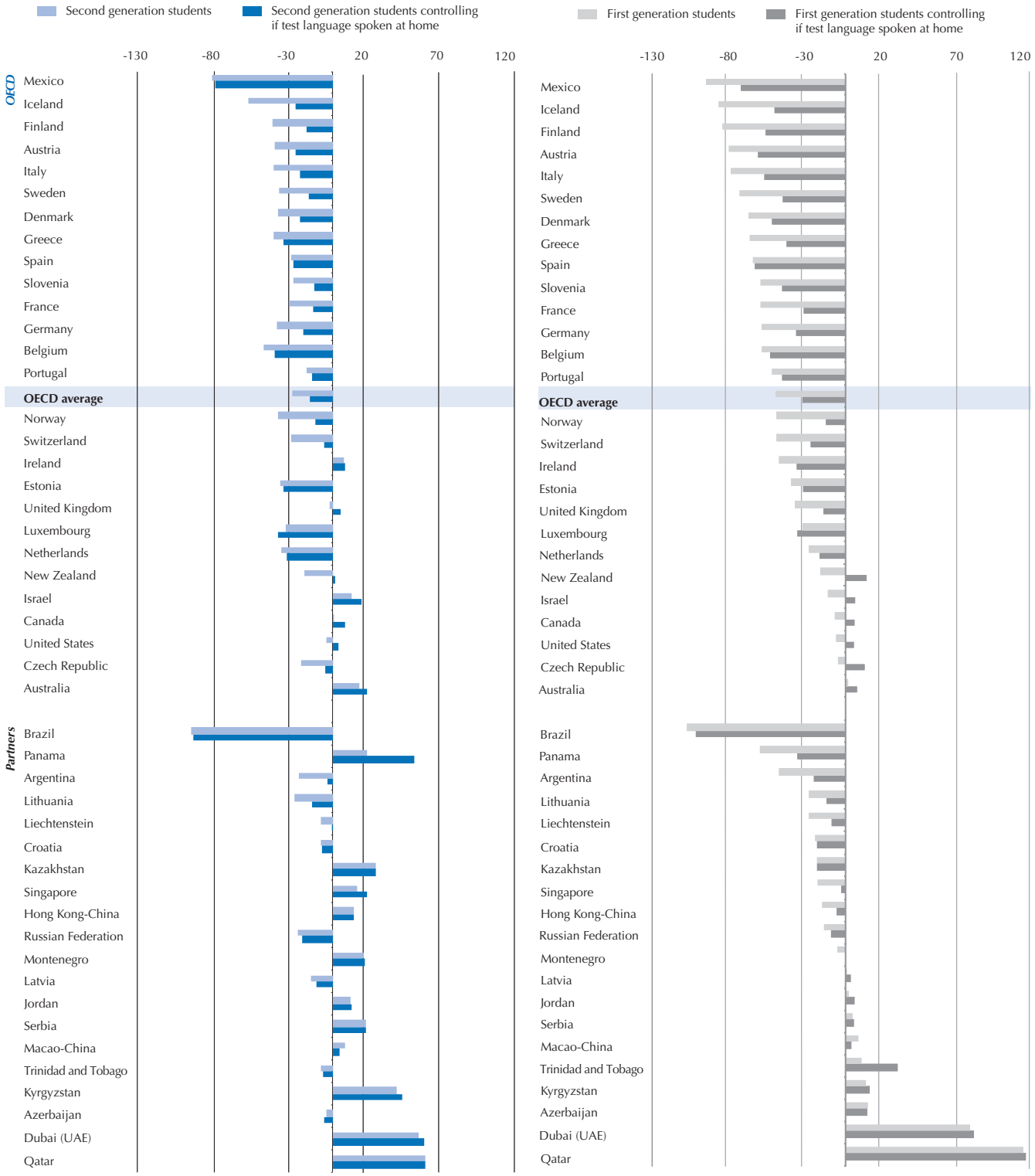
Countries are ranked in ascending order of the share of students who speak a language different from the test language at home.

Source: Tables B2.1a and B3.1.



▪ Figure 3.3 ▪

Differential score controlling (and not controlling) if the test language is spoken at home, by migration status



Note: Differential test score for first- and second-generation immigrant, controlling for parental education and controlling (or not controlling) for test language spoken at home.

Countries are ranked in ascending order of the score point difference among first-generation students, without controlling if test language is spoken at home.

Source: Tables B3.2 and B3.3.



proportion of second-generation students not speaking the test language at home is higher than that of first-generation students are Spain, Belgium and Luxembourg, probably because first- and second-generation students belong to different migration waves. For partner countries, second-generation immigrants also tend to speak the test language at home to a greater extent. On average, 81% of second-generation immigrants speak the test language at home, 9 percentage points higher than for first-generation immigrants.

The importance of language exposure for PISA reading scores is evident from Figure 3.2, which shows for each country the percentage of students mostly speaking a language at home other than the language of instruction and the score difference between immigrant students (first- and second-generation combined) and children of the native-born.

The difference in PISA reading performance between students who do not speak the assessment language at home and the children of the native-born is massive, averaging over 50 points for first-generation students and 35 points for second-generation in OECD countries. Nothing illustrates as clearly as this the paramount importance of language for the integration of the immigrant students.

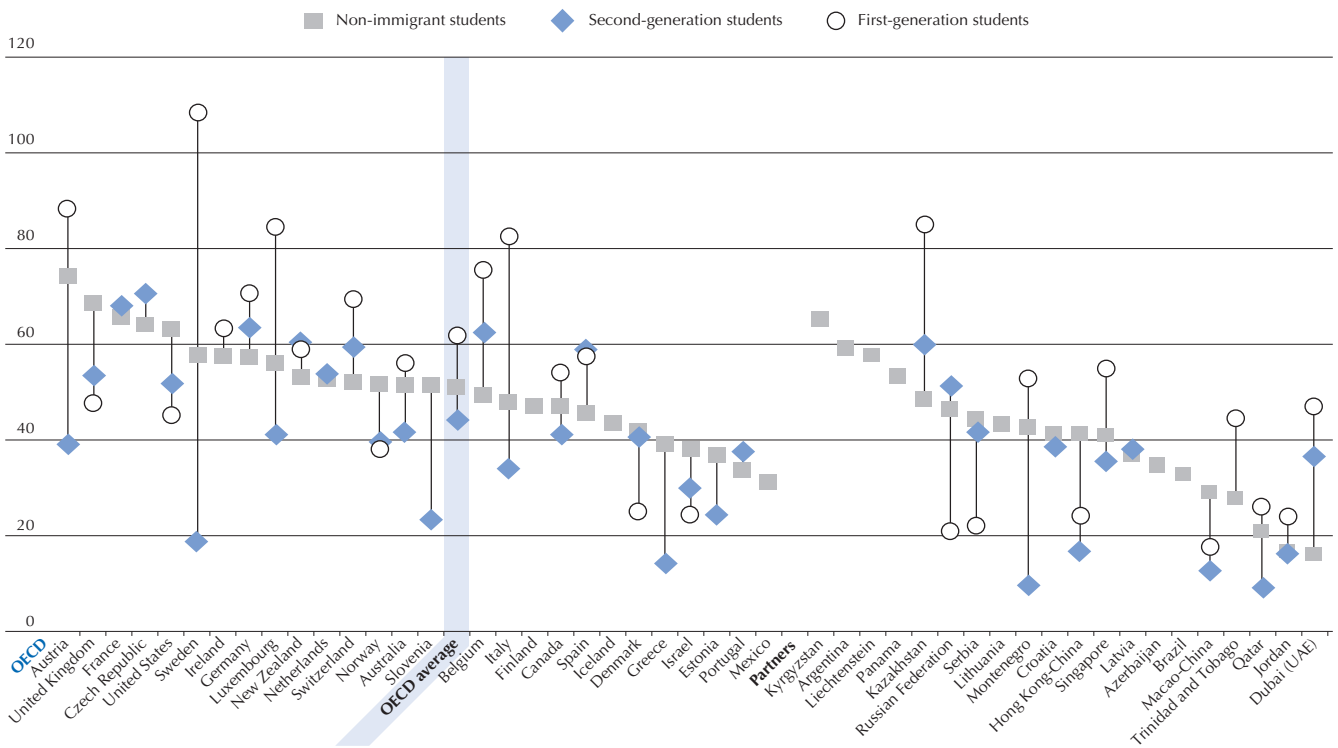
In fact, exposure to the test language at home gives a substantial advantage in language proficiency for first- and second-generation students (Figure 3.3). On average, a second-generation student in an OECD country has a reading score 27 points higher if he speaks the test language at home and a first-generation student a reading score 30 points higher.

Exposure to the test language at home can be seen to have significant impacts on reading scores (Figure 3.3). Reading score differences for both first- and second-generation students compared to non-immigrant students are substantially reduced after controlling for the language spoken at home. On average in the OECD, the score is reduced by 11 points for second-generation (a 42% reduction) and by 18 points for first-generation immigrants (a 38% reduction).

In some countries like New Zealand, Israel, Canada, United States, the Czech Republic and Australia, the score difference for first-generation students even becomes positive, implying that migrants have higher reading scores than natives after controlling for whether or not the test language is spoken at home. This highlights the importance of exposure to the assessment language at home. Admittedly policy cannot expect to impose what language should be spoken in the home environment, but it can act to increase the exposure of immigrant students in the school or para-school environment, for example, through enhanced language learning for immigrant students as well as their parents or by "open school" programmes during the summer months.

▪ Figure 3.4 ▪

Reading score advantage if having over 100 books at home, by migration status, controlling for parental education and language at home



Note: OLS coefficients of a variable indicating if the household has over 100 books. Separate regressions for immigrant and non-immigrants.

Countries are ranked in descending order of the reading score advantage if having over 100 books at home among non-immigrant students.

Source: Table B3.5.



Other factors in the home environment may act to improve the reading skills of the children, such as the availability of reading materials like books and newspapers, which is one of the strongest factors related to good reading outcomes. Both non-immigrant and first- and second-generation immigrants have higher reading scores if there are more books in the home and this remains true even after controlling for parental education and language spoken at home (Figure 3.4). On average, a first-generation immigrant in the OECD has a score 61 points higher if his household possesses over 100 books. This premium also exists for second-generation students (45 points) and for non-immigrant students (51 points).

In some countries, first-generation students tend to reap higher benefits from the availability of reading materials at home than non-immigrant students, but this is not the case everywhere, for reasons which are easily discernible (Figure 3.4).

LANGUAGE EXPOSURE AT SCHOOL

Early entry into formal education can be beneficial to immigrant students, not only because they enter the formal education system per se but also because they can increase their exposure to the host-country language. The analysis in this section is limited to immigrant students born in the country, because most of those born abroad will not have attended pre-primary schooling in the host country.

Figure 3.5 shows the score premium of attending pre-primary schooling for one year or more, for non-immigrant and second-generation students.

Attendance in pre-primary education is clearly linked with higher reading scores at age 15. On average in the OECD, a second-generation student who has attended pre-primary education has a reading score 23 points higher than one who did not attend pre-primary schooling (Table B3.4a). The premium for attending pre-primary schooling is even higher for immigrants in Italy (a score 50 points higher), Portugal (37 points higher) and Germany (32 points higher). Non-immigrant students who attended pre-primary schooling also have a higher score (27 points difference).

For students in partner countries, attendance in pre-primary education is also associated with higher scores. Immigrant students who attended pre-primary education have scores 30 points higher than those who did not. Non-immigrant students in partner countries have a similar average benefit from attending pre-primary education (31 points).

Attendance at pre-primary remains strong and significant after controlling for parental education, migration status and whether a foreign language is spoken at home (Table B3.4b). The average difference in OECD after controlling for these characteristics is over 20 points higher scores (around half a year of formal schooling). For Germany and Italy, the advantage is around 34 points, for France around 34 points, for Israel around 50 points and for Belgium almost 70 points. The effect, however, does not seem significantly more advantageous for second-generation immigrants than for non-immigrants (Table B3.4b).[1]

A higher concentration in schools of students who do not speak the test language at home is related to worse outcomes for both non-immigrant and immigrant students.

As is well known, immigrants tend to concentrate in certain neighbourhoods. The impact of this concentration on immigrant educational and labour market outcomes is a question of some interest and will be considered with respect to reading outcomes more generally in Chapter 5. This chapter looks at how individual reading outcomes vary according to the percentage of immigrants in schools who speak another language at home.[2] As noted above, reading outcomes are not as good on average if students speak another language at home, but there may also be a collective effect due to the grouping of such students in the same schools. Students learn from each other and a lower overall level of language proficiency in the school environment may hamper peer-influenced learning. In order to study the effect of concentration of those students, the share of individuals not speaking the test language at the school level is computed from the individual responses to the language spoken at home.[3] A detailed analysis of the effects of concentration in the school, in particular relating to other types of disadvantage, can be found in a separate chapter.

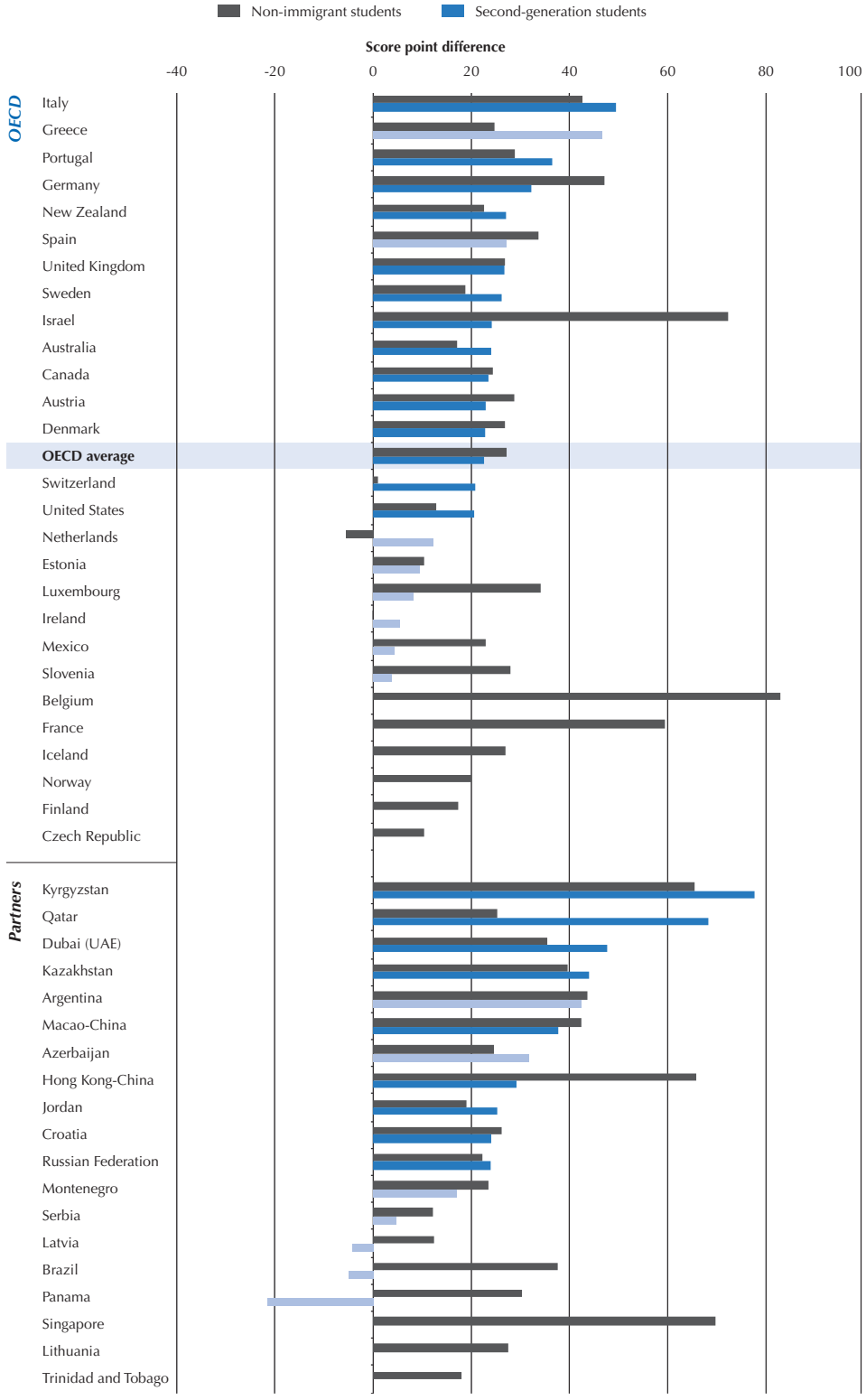
The percentage of students in a school mostly speaking another language at home varies significantly according to whether the student is of immigrant origin or not. Non-immigrant students attend mostly schools where there is a low prevalence of students who do not speak the test language at home. On average in the OECD, over 74% of non-immigrant students attend schools where less than 10% of the students mostly speak another language at home (Table B3.6). Only 6% of non-immigrants attend schools where more than 40% of the students mostly speak another language at home. In partner countries also, over 75% of non-immigrant students attend schools with a low percentage of students not speaking the test language (less than 10% of students).

First- and second-generation students tend to attend schools with a higher proportion of students who mostly do not speak the test language at home. In the OECD, around 62% of second-generation students and 64% of first-generation students are in schools where more than 10% of students do not speak the test language at home (see Figure 3.7). In partner countries, first- and second-generation students are less concentrated in schools with a high proportion of students not speaking the test language at home. Around 32% of second-generation students and 36% of first-generation students attend schools with a percentage of students not speaking the test language at home higher than 10%. A detailed distribution for each country can be found in Table B3.6.



▪ Figure 3.5 ▪

Differential score if attending pre-primary school for at least one year, non-immigrants and second-generation immigrants



Note: Lighter shades indicate non-significant differences.

Countries are ranked in descending order of the score point difference among second-generation students if they attended pre-primary school for at least one year.

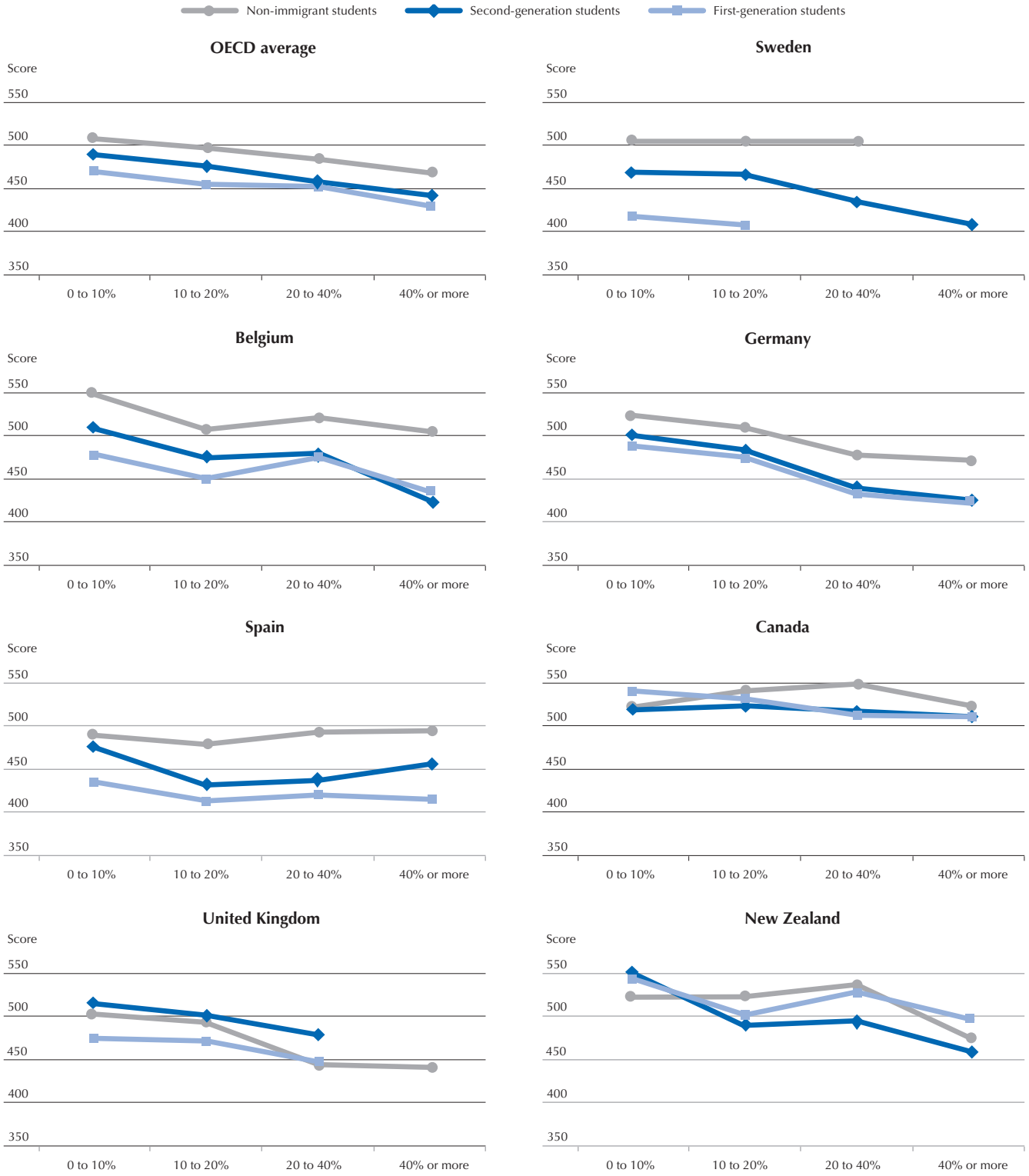
Source: Table B3.4a.



The percentage of students in schools that generally do not speak the test language at home is negatively correlated with language outcomes for non-immigrants as well as second- and first-generation students. Reading scores of non-immigrants, and first- and second-generation students are highest when it is uncommon for students to speak another language at home, that is, from 0% to under 10%. The scores decline as the concentration of foreign-language speakers increases (Figure 3.6).

▪ Figure 3.6 ▪

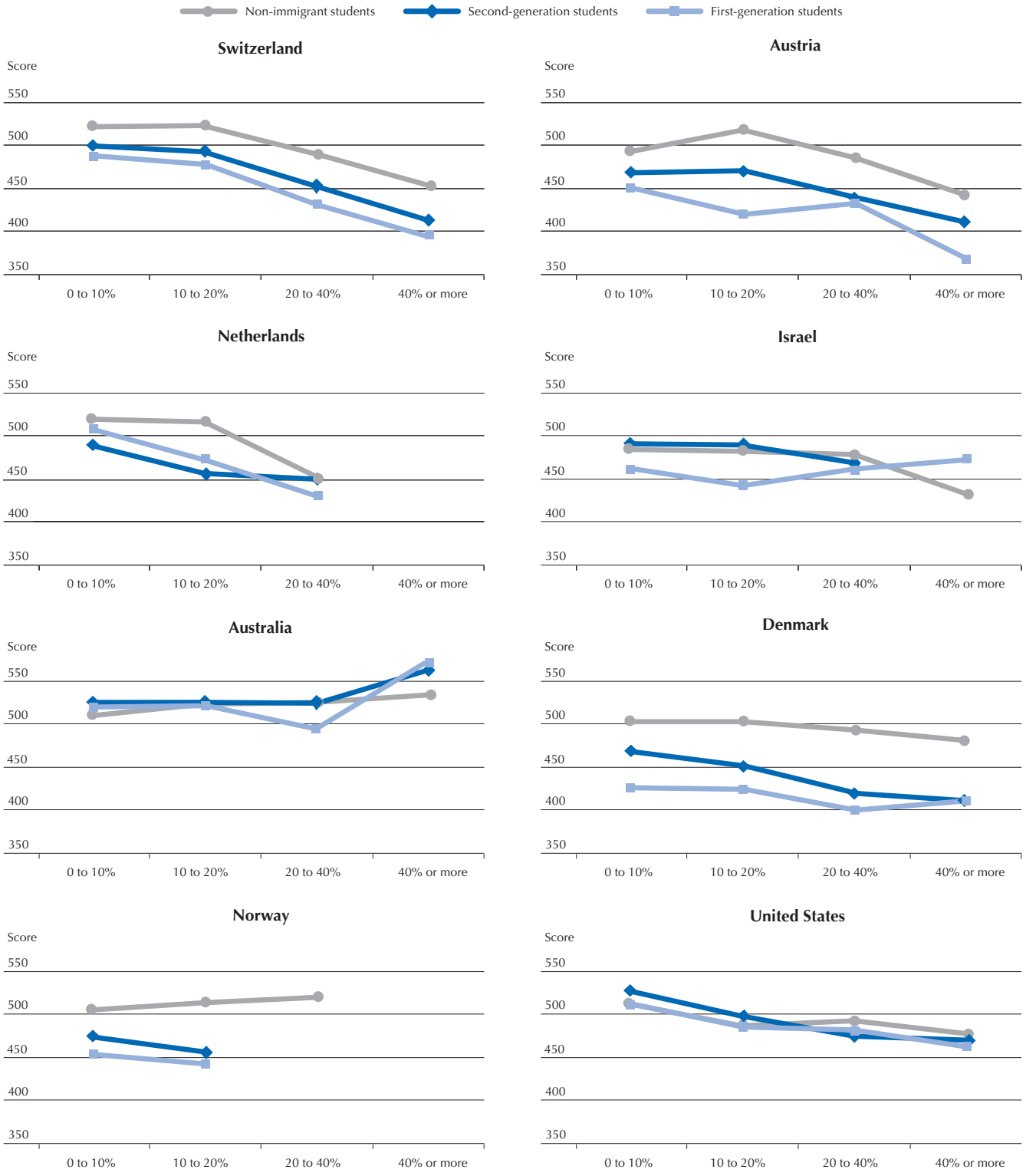
Reading scores by percentage of students in school who do not speak test language, by migration status





▪ Figure 3.6 ▪

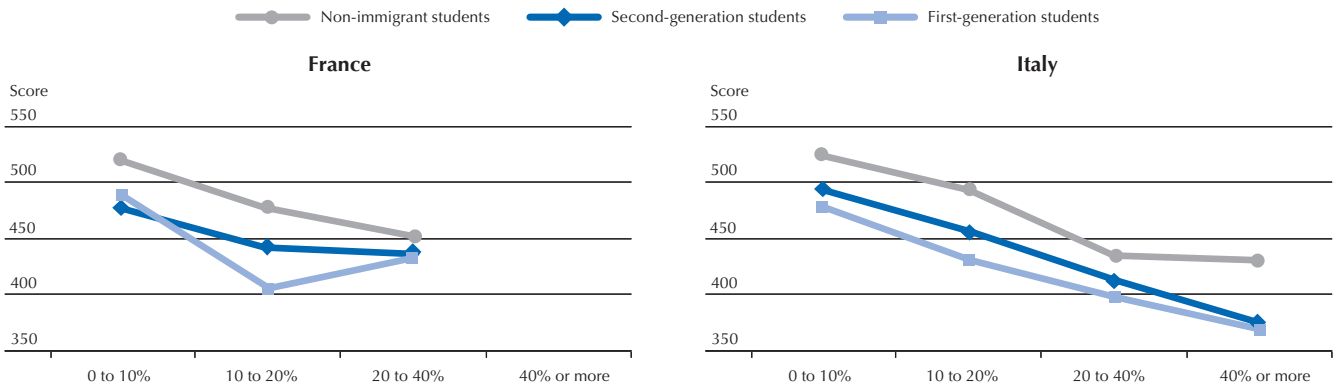
Reading scores by percentage of students in school who do not speak test language, by migration status *(continued)*





▪ Figure 3.6 ▪

Reading scores by percentage of students in school who do not speak test language, by migration status *(continued)*

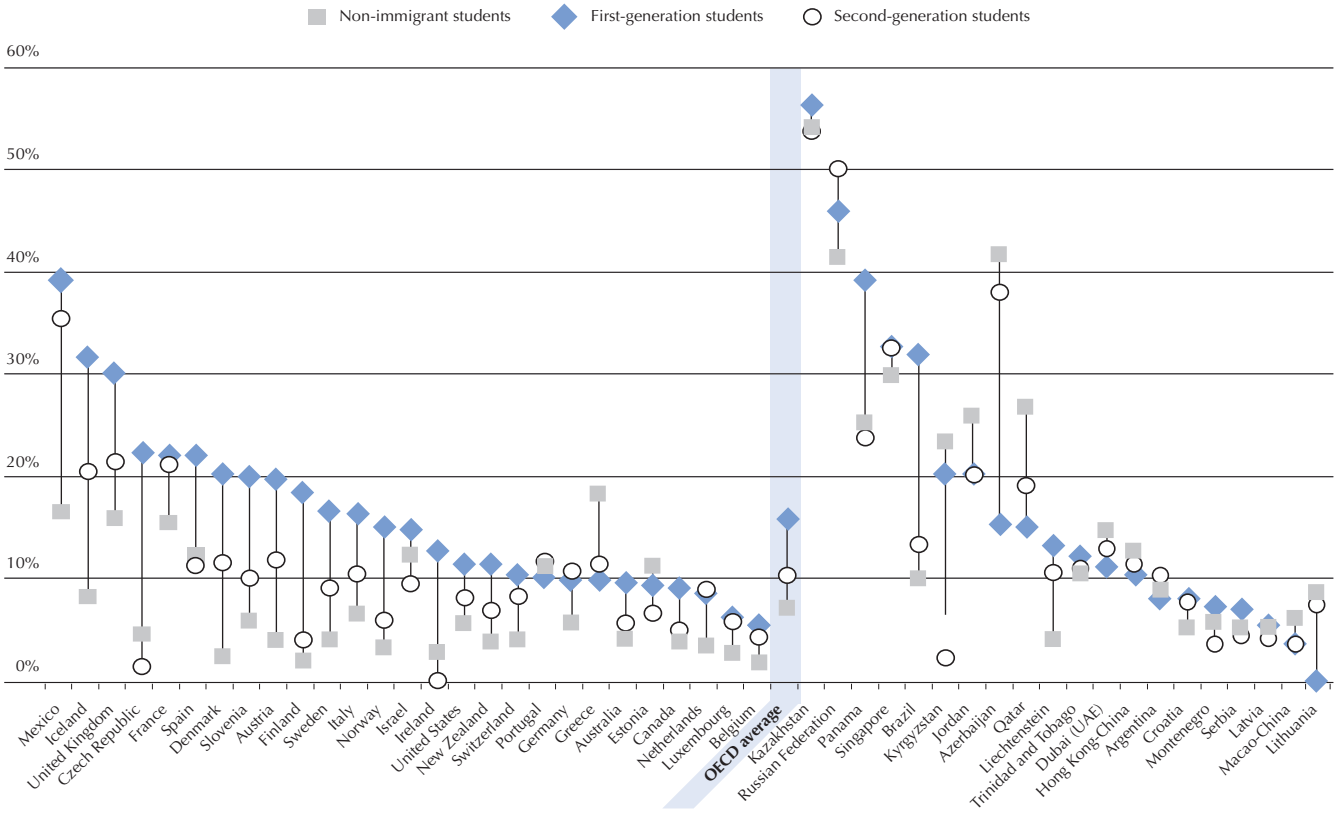


Note: For each line, when an intermediate data point did not exist because the sample was too small, it was estimated as the average between the two poins to avoid a break in the lines reported here; this same logic however was not applied to the extremes.

Source: Table B3.7.

▪ Figure 3.7 ▪

Share of students attending test language remedial classes, by migration status



Countries are ranked in descending order of the share of first-generation students attending test language remedial classes.

Source: Table 3.9.



The effect of concentration, however, is not the same for first- and second-generation students or even non-immigrant students. The reading score penalty associated with concentration is higher for first- and second-generation students than for non-immigrants. The lowest scores for non-immigrants, second- and first-generation students are observed when the concentration of pupils not speaking the test language at home is the highest (40% or plus). The results for each country can be found in Figure 3.6. Results for certain countries, such as Australia, Canada and Israel, suggest that it is not language concentration per se which is problematic; in these countries reading outcomes for immigrant students in schools where there are a high percentage of students mostly speaking another language at home are as high as in schools where foreign-language speakers are less frequent. As will be seen in Chapter 5, other determinants of outcomes play a more systematic role.

The negative association between the proportion of students in a school who do not speak the test language and lower reading proficiency is substantial. The negative correlation, however, declines if one controls for parental education, language spoken at home and migration status (Table B3.8).

First- and second-generation immigrants are more likely to attend remedial language classes

Since first- and second-generation students have lower reading scores than their non-immigrant peers, it is not surprising to find that they attend more support courses. Figure 3.7 shows the share of students who attend remedial classes in the test language. In OECD countries, around 16% of all first-generation students and 10% of second-generation students attended remedial classes (compared to 7% for non-immigrant students). Given the large reading outcome gaps between immigrant and non-immigrant students, these differences are surprisingly small. However, remedial classes are intended to be exceptions; in schools where the overall reading level of students is weak, remedial help may be required for almost all students, which may well imply that regular classes take on a remedial role. In most countries, immigrant students are more likely to attend language support courses. Exceptions are Greece and Portugal, where migrants despite having lower language skills are less likely to attend support courses.

Is attending this type of programme beneficial to poor performing students? Addressing this question would require a measure of performance both before and after receiving remedial support, to be able to determine its causal impact. Because remedial support is given to individuals with low performance, a direct comparison of performance between those who received and those who did not receive support would tend to show lower outcomes for the former.

SUMMARY AND CONCLUSIONS

The language proficiency of immigrant students depends on a number of factors. This chapter highlights the importance of exposure to the assessment language both at home and at school. Speaking the test language at home is strongly associated with better reading outcomes among immigrant students. A sizeable proportion of the difference in reading outcomes between immigrant and non-immigrant students is due to this factor alone.

Exposure to the assessment language in school at an earlier age is also beneficial for language proficiency. Pre-primary school attendance is strongly associated with higher reading skills at age 15 among immigrant students. However, many immigrant students attend schools where a high percentage of students speak another language at home. Since these students have less-favourable reading outcomes, on average, immigrant students will not benefit significantly from exposure to the assessment language at school. While policy measures to modify language behaviour are impractical, the objective of increasing exposure to the host-country language can be achieved in other ways.

Immigrants should be encouraged to enrol their children in early education. If many countries already have special language programmes for immigrant children, they do not appear to be sufficient to guarantee good reading levels in the host-country language. Children may be able to learn foreign languages quickly, but one cannot rely on that ability to ensure adequate reading levels. Measures to reinforce language programmes for children of immigrants and to increase their effectiveness would be beneficial throughout the years of schooling. Open-school policies that offer access to schools, tutors and reading materials during the summer months are another avenue for increasing exposure. Parents also need to be sensitised to the benefits of home exposure to media in the prevailing language.

People who have a good mastery of the language of instruction and are able to read well in that language are better equipped to participate in the society and economy of the country. This is a benefit not only to the individual but to the society, as well. Countries thus have an interest in funding language-learning for all adults who have been admitted for settlement and who wish to improve their language knowledge and proficiency. Canada and Sweden, among other countries, provide free language tuition to all adult permanent residents. Such measures undoubtedly contribute to better language proficiency among immigrant parents, which can only be beneficial to their children.



Notes

1. However, this counterintuitive result seems to be sample-size related, since pooling over OECD countries shows an additional benefit of some 23 points for those speaking another language at home but no significant additional benefit for those who speak the test language.
2. The percentage is measured for students participating in the PISA assessment, which covers only 15-year-olds. This may not be entirely representative of all students in the school. In addition, schools with fewer than 20 sampled students responding on the language-spoken-at-home questions are excluded from the analysis.
3. This variable should be a good proxy of the first language of the students. Alternatively, a variable at the school level could be used, where the principal declares the share of 15-year-old students that do not speak the test language as first language. While the results do not differ significantly, the variable is not available for some several countries and it might have greater measuring error that the variable constructed from the individual responses. For this reason, the results presented here correspond to the constructed variable at the school level from individual responses.



4

Immigrant Students' Age at Arrival and Assessment Results

Age at arrival is an important factor in helping to describe much of the performance gap between immigrant and non-immigrant students. In general, the later in their life immigrant student arrived in the host-country, the lower their performance in PISA. Mastery of the assessment language, once more, plays an important role in explaining this pattern. Late-arrival penalties vary across countries, but they are more pronounced for those immigrant students who do not speak the assessment language at home.



INTRODUCTION

The aim of this chapter is to examine the effect of age at arrival on the performance of immigrant students in the PISA.[1] The general expectation following earlier research (e.g. OECD, 2010) is that the later children arrive in a destination country, the further they will lag behind non-immigrant students in that country. This might be due to language difficulties or to more general difficulties in adapting to a different culture and school system, or to cross-national differences in educational standards at different ages.

This chapter focuses particularly on whether the effect of age at arrival varies according to the country of origin and the country of assessment. It is not so much the levels of performance which are of interest but rather the rate of change in performance with respect to age at arrival. Putting it more colloquially, the question is whether young people coming from or arriving in particular countries are especially vulnerable to what might be termed a "late-arrival penalty". These penalties may in turn have long-lasting implications on young people's opportunities for further educational progress, integration into the labour market, and improvement of life chances in the destination country. Substantial penalties may leave long-term negative effects with important implications for both the migrants affected and for the wider society. Chapter 6 studies these issues in the context of educational attainment in Canada and Switzerland.

Research on what might be termed the "absolute" levels of student test performance suggests that young people from certain origins (for example China) tend to score particularly well no matter the country they migrate to. However, in the case of the "late-arrival penalty", the combination of certain origins with particular destinations is likely to be of paramount importance and there are two main arguments that suggest this may be the case.

First of all, it is likely that children arriving from, say, a developed western nation will already have performed quite well at school before migrating, while those coming from a less-developed country with less-developed educational institutions and lower general levels of performance might lag further behind. For example, PISA test scores show Turkey to be below the OECD average, and so children arriving from Turkey in, say, Germany are likely to start at a considerable disadvantage. In contrast children migrating from the Netherlands to Germany are likely to be achieving already at a similar (or even at a higher) level to their peers in Germany. This suggests that the effect of age at arrival will be relatively flat in the case of immigrants from the Netherlands to Germany but could be steeper in the case of young people arriving from Turkey since the later they arrive in Germany, the greater the differential is likely to be.

Second, it is likely that, even if children were high achievers in their origin country, they will suffer a penalty on arrival if they do not speak the destination-country language. For example, children migrating from, say, the United Kingdom to continental Europe will typically have to learn a new language, whereas those migrating from the United Kingdom to Australia or New Zealand will not. One therefore expects to find that the effect of age at arrival will be more marked where children have to learn a new language.

To be sure, the possibility that there could also be some more general processes at work which affect all young people who migrate to a particular destination is not excluded. These might for example relate to the kinds of help that countries or educational systems give to the integration of newcomers, but the general expectation is that the major processes are those that involve particular origin and destination combinations.

While this kind of research cannot on its own provide direct implications for what policies to adopt, it can usefully indicate the sorts of students and countries where there are especially large "late-arrival penalties", and where some kind of policy response may be warranted. The findings may also indicate whether there are any countries which have been particularly successful at avoiding these penalties and whose institutional arrangements may be worthy of more in-depth study in order to assist policy transfer. They suggest that policies which delay family reunification may have unintended consequences on the outcomes of immigrant students and on their downstream integration into the labour market and societies of host countries.

PREVIOUS EVIDENCE ON AGE-AT-ARRIVAL PENALTIES

A small number of single-country studies have explored the effects of age at arrival on a variety of educational outcomes, while the *PISA 2009 Results Volume II: Overcoming Social Background* (OECD, 2010) compares the effects of early and late arrival on immigrant students' reading scores in different countries.

Country-specific studies

A major focus of country-specific studies has been the question of whether there is a "critical" age at arrival for learning a new language after which there is a strong negative impact on language acquisition and on educational performance more generally (given that proficiency in the destination-country language is also assumed to be crucial for wider educational success). Using Swedish register data, Böhlmark (2008) found that the critical age at arrival for grade point average (GPA) at age 16 was about nine, with the slopes of the age-at-immigration/performance profiles being similar for boys and girls and for children from different family backgrounds, but varying widely by region of origin. For Asian children the profile was substantially steeper than for Western



children, Böhlmark's interpretation being that the steep profile among the Asian children probably reflected "large differences in Sweden-specific skills between children of relatively high and those of relatively low age at migration" whereas the flatter profile for Western children probably reflected the fact that "there is not much to catch up on, i.e. that the human capital they have acquired in the source country does not differ much from that acquired in Sweden." (Böhlmark, 2008, p. 1382). He attributes the finding that immigration at age nine or later has a negative impact on GPA to the fact that these students have passed their prime age for language-learning and also because their acquisition of other subject skills is less efficient while the students are still struggling to learn the new language (Böhlmark, 2009).

In an American study, Myers and his colleagues also investigate whether a particular age at arrival is critical for self-reported fluency in English and a variety of other socio-economic outcomes. Using the 2000 census and focussing on the experiences of Mexican immigrants, their results indicated that the effect of early arrival was much greater for English proficiency than for other outcomes. They found "little evidence at any age of a sharp discontinuity demarcating a 1.5 generation from older immigrants and, in fact, a series of classifications or a continuous measurement of age at arrival may be preferred in some cases" (Myers, et al., 2009, p. 205). More generally Myers and his colleagues show that linear and curvilinear models perform better than categorical ones, with curvilinear models being slightly superior to linear ones.

In another study conducted in Israel, Cahan and his colleagues investigated the effects of age of arrival on verbal and mathematics scores on tests administered to 8th grade students. Like Böhlmark in Sweden, they found no difference between boys and girls in the effects of age at arrival. They did find, however, that the effects were stronger for verbal than for mathematics scores, and they also found clear differences between ethnic background groups. However, in their case the decrease in attainment with later arrival was greater for the Western groups (coming from Europe and North America) than among the Eastern groups (coming from Asia and North Africa) (Cahan, et al., 2001, p. 591). They also tested the "vulnerable age" hypothesis which had been advanced by earlier scholars – that is to say a U-shaped relationship between age at arrival and educational performance, with higher performance being found among early and late arrivals and the lowest performance among those arriving during the intermediate "vulnerable" years. However, they found absolutely no support for this hypothesis.

In a Dutch study, van Ours and Veenman compared age at arrival effects for Turks and Moroccans with those for Surinamese and Antilleans. Their main finding was that migration at an older age appears to be more of a disadvantage for the educational achievements (measured by level of education achieved not by test scores) of the Turks and Moroccans than for the Surinamese and Antilleans. Van Ours and Veenman's interpretation of the differences in the effects of age at arrival of the two groups focused on the congruence between the educational systems of the different origin countries and those of the Netherlands. "Since there are no indications that these differences are related to the destination country (e.g. the characteristics of the [Dutch] educational system), the explanation must be searched for in the origin country or cultural background. In this respect it seems important that the educational system in Surinam and the Antilles, being (former) Dutch colonies, has a lot in common with the Dutch educational system. Since this is not the case with the Turkish and Moroccan educational systems, this might explain the greater difficulties for the Turks and Moroccans. Migration to the Netherlands is for them a larger step than for the Surinamese and the Antilleans" (Van Ours and Veenman, 2006, pp. 314-6). They also checked whether their results were sensitive to the inclusion of statistical controls for parental education or interacted with them. They found that the results barely changed after including parental controls or splitting the sample between higher and lower-educated parents.

International evidence

Turning next to cross-national comparisons based on the PISA data, the *PISA 2009 Results Volume II: Overcoming Social Background* confirms this picture of a late-arrival penalty with respect to reading scores. Table II.4.8 of the report shows that first-generation students who arrived in the host country at a younger age outperform those who arrived when they were older with a difference of 42 points (roughly equivalent to one school year or grade level) between those who arrived when they were 5-years-old and those who arrived after they were 12-years-old. "This suggests that where the education system of the host country had a longer opportunity to shape the learning outcomes of immigrant students, it was able to improve student performance" (OECD, 2010, p. 75).

The size of these gaps, however, varied considerably across countries, with the largest late-arrival penalties being found in Italy, Belgium, Sweden and Ireland. There were also a small number of non-Western countries and economies, such Macao-China, where there were late arrival "premia" rather than penalties.[2] That is to say the late arrivals performed better in the reading test than those who arrived earlier. One possible explanation for these puzzling cross-country variations that the 2010 report was unable to address is that the kinds of students, for example their national origins, who arrive early and late may vary between destination countries. These "compositional" differences will need to be considered carefully.



COUNTRY DIFFERENCES IN LATE-ARRIVAL PENALTIES

The focus of the PISA analysis to follow is the test of reading literacy, which is particularly important for educational success and integration more generally, and for which age-at-arrival effects appear to be stronger than for mathematics or science. For this analysis the data are pooled for all relevant years in which PISA collected the necessary information (2003, 2006 and 2009), for all countries and for all origin groups. The results are also pooled for boys and girls. While girls generally perform better than boys, there is no significant gender difference with respect to late-arrival penalties. In other words, the female advantage over males is broadly similar at all ages of arrival.

This section begins with some descriptive statistics showing for each participating country and economy the differences in reading test scores between early and medium, and between early and late arrivers. Early arrivers are defined as those who arrived at or before age 5, which will generally cover children who arrived before the start of compulsory schooling (OECD, 2010). Late arrivers are defined as those who arrived after age 12. This latter group will thus have had a maximum of three years schooling in the destination country at the time of the test. Figure 4.1 shows the differences in the reading scores of the late- and mid-arrivers in comparison with those of the early-arrivers in each country and economy (which are set to zero). (The full details are provided in Table B4.3 in Annex B.) The results are shown only for cases where there are reasonable numbers of immigrant students in the sample for each country.[3] For a few countries (shown at the bottom of Figure 4.1) there are a sufficient number of cases to show the differences between mid- and early-arrivers but not sufficient for investigating late-arrivers.

The patterns shown in Figure 4.1, and throughout this chapter, are derived from cross-sectional not from panel data. That is to say, they show the differences in reading scores at the end of lower secondary education between 15-year-olds who arrived in the destination country at different ages, and have thus spent a longer or shorter time in the country of current residence. As noted earlier, since they are not derived from a panel study, the figures do not show how test scores for the same individuals change over time, although it will often be reasonable to suppose that a panel study might show patterns similar to those documented here.

These introductory descriptive statistics should be interpreted with caution and need to be studied with more sophisticated analyses in due course, in particular taking into account any "compositional" differences in the origin countries from which the migrant students come. As will be seen in the next section, migrants from countries who also speak the test language tend to have flatter age-at-arrival profiles (softer late-arrival penalties) than do migrants who come from different linguistic backgrounds. A large late-arrival penalty may therefore simply reflect a large inflow of migrants who need to learn a new language in the destination country. Nevertheless, the overall observed differences do provide an overview of the main patterns in the data as well as a yardstick against which to check for important deviations. (Figure 4.1 presents the "gross" differences before controlling for parents' socio-economic background. Table B4.4 in Annex B shows the "net" results after controls, i.e. only contrasting students with similar socio-economic background. As with van Ours and Veenman's study, the controls generally have little effect on the size of the late-arrival penalties.)

In Figure 4.1 the performance of the early arrivers is set to zero, and the performance of the mid- and late-arrivers is compared with that of the early arrivers. In general, the figure shows there is a late arrival penalty, albeit of varying size, in almost all of the developed Western countries. The OECD average late-arrival penalty is about 20 score points, roughly equivalent to about a half a year of schooling. Furthermore, in most countries the mid-arrivers are rather closer to the early arrivers than to the late arrivers. This suggests that the effect of age at arrival on test scores is not a linear one but becomes progressively larger the later the age at which the student migrates. This implies that a curvilinear characterisation of the age-at-arrival/performance profile is more appropriate than a linear one. More detailed analysis (Heath and Kilpi-Jakonen, 2012) indicates that there is no specific "critical" age for arrival but that later arrivals are increasingly vulnerable.

In contrast to this dominant pattern of a late-arrival penalty, in some partner countries and economies such as Macao-China, late arrivers actually perform better than the early arrivers. This may well reflect particular features of the migrant flows to these countries. As will be shown later, a late-arrival "premium" rather than a penalty can occur when children migrate at an older age, having spent a larger part of their educational career in a country with higher educational standards or speaking the same language.

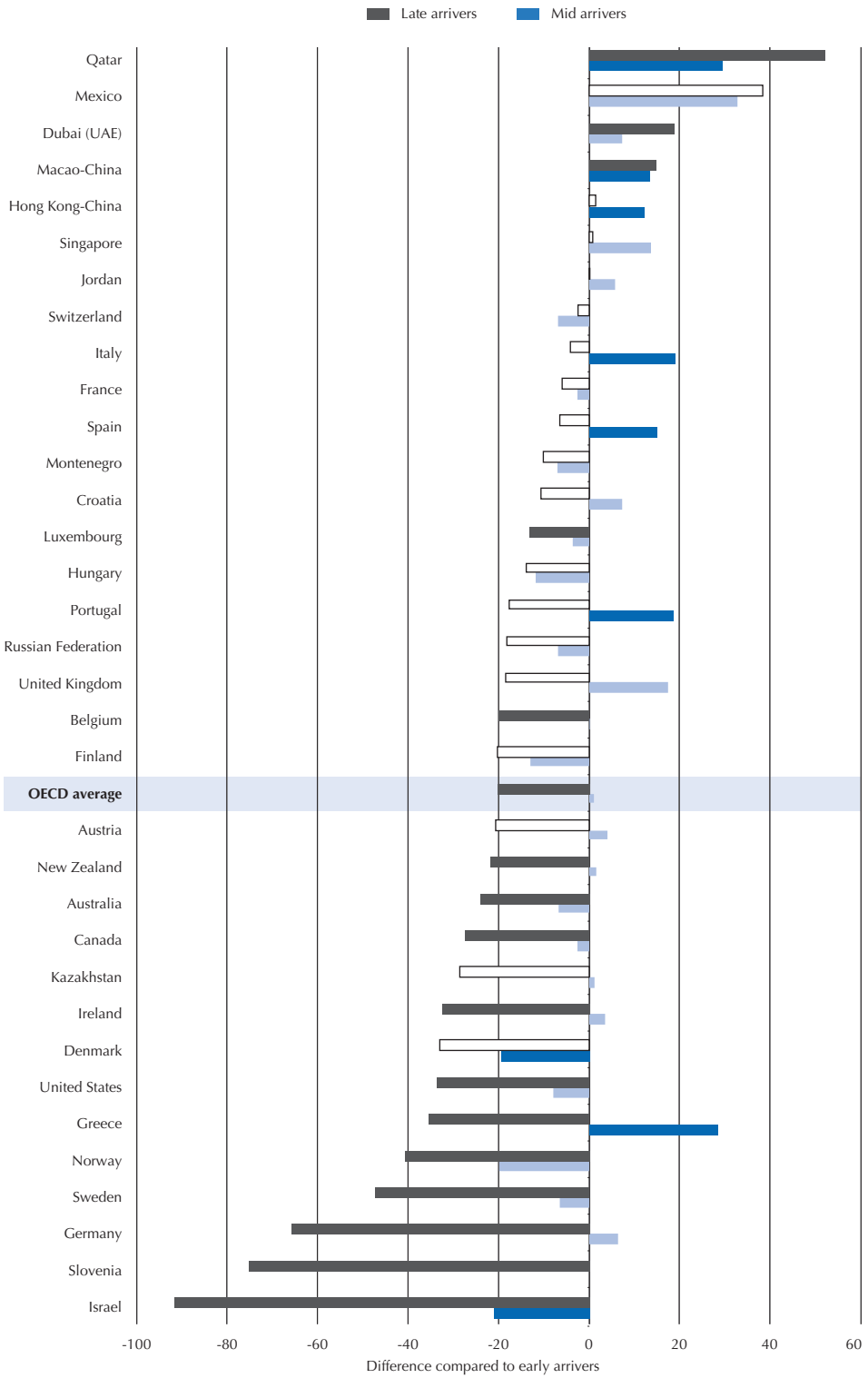
Even the early arrivers may perform less well than non-immigrant students in the country of assessment. The absence of a late-arrival penalty therefore does not mean that all is well for immigrant students. This will become more clear when comparing the results of Figure 4.1 with those of Figure 4.2, which compares the test scores of the early arrivers with those of the non-immigrant students. Figure 4.2 also compares the early-arrivers' test scores with the scores of second-generation students.

As in Figure 4.1, the performance of early arrivers is set to zero and the performance of non-immigrant students and of the second-generation are compared with this baseline. There is again considerable cross-national variation, but non-immigrant students outperform both the early arrivers and the second-generation students in many countries, sometimes by considerable margins. (As Table B4.4 in Annex B shows, the net differences between the immigrant and non-immigrant students after controls tend to be somewhat smaller than the gross differences shown in Figure 4.2, but in most cases the differences remain quite substantial and statistically significant.) Figure 4.2 also suggests that the scores of second-generation students tend to be rather close to those of the early-arrivers; in some countries the second-generation do rather better, while in others they score somewhat worse, but the overall average for OECD countries is virtually identical for early-arrivers and second-generation students.



▪ Figure 4.1 ▪

Estimated difference in PISA reading scores of late and mid arrivers compared to early arrivers



Note: See notes for Table B4.3; only differences for groups larger than 40 shown; lighter shades indicate non-significant differences. Early arrivers refers to first-generation students who arrived at or above age 5, mid arrivers refers to those who arrived at ages 6-11 and late arrivers refers to those who arrived at ages 12 and above.

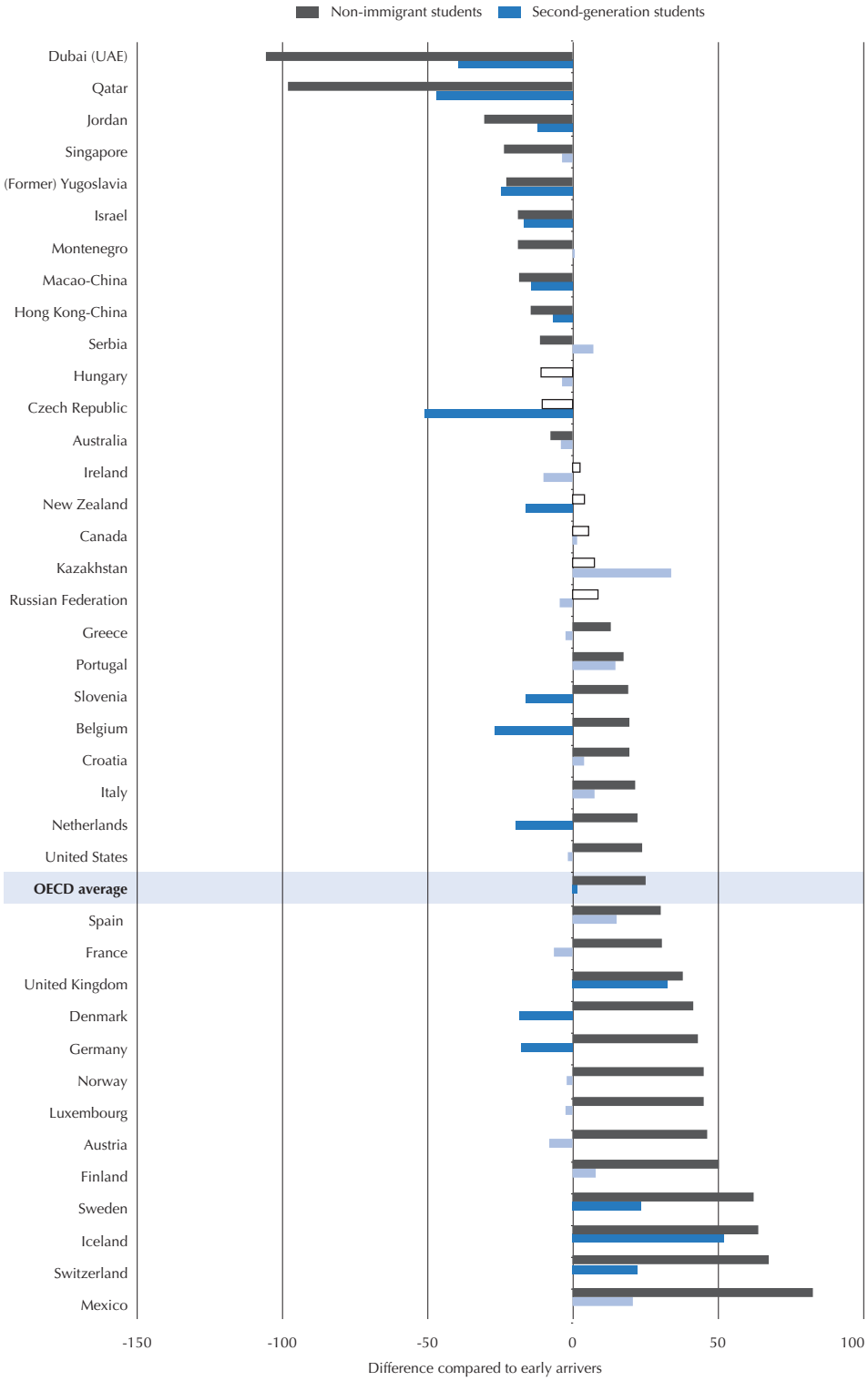
Countries are ranked in ascending order of the score point difference between early arrivers and late arrivers.

Source: Table B4.3; PISA pooled data 2003, 2006, 2009; Heath and Kilpi-Jakonen (2012).



▪ Figure 4.2 ▪

Estimated difference in PISA reading scores of non-immigrant and second-generation students compared to early arrivers



Note: See notes for Table 4.3; only differences for groups larger than 40 shown; lighter shades indicate non-significant differences.

Countries are ranked in ascending order of the score point difference between early arrivers from first-generation and non-immigrant students.

Source: Table B4.3; PISA pooled data 2003, 2006, 2009; Heath and Kilpi-Jakonen (2012).



LANGUAGE AND THE LATE-ARRIVAL PENALTY

Previous research has often found differences between origin groups in the extent to which later age at arrival depresses test performance, although the results vary across countries of residence. For example, in Israel (Cahan, et al., 2001) found that children arriving from western Europe had a much steeper age-at-arrival/performance profile, with a heavier age-of-arrival penalty, than children arriving from North Africa and western Asia. In contrast, in Sweden (Böhlmark, 2008), found that children arriving from western Europe suffered very little in the way of a late age-at-arrival penalty whereas there was a steep profile for those arriving from Asia. One reason for these differences is almost certainly, as Böhlmark suggests, the possession of destination-country specific skills, most notably language (although other factors such as the educational levels typically achieved in the country of origin may also be relevant as will be seen in the next section).

Age-at-arrival profiles have quite different characters and explanations from overall performance levels. Thus children from East Asia and India generally perform very well in performance tests, and appear to do so whatever the country they have migrated to. In contrast, their age-at-arrival profiles are likely to vary according to the particular country which they have migrated to. For example, mainland Chinese migrating to Hong Kong-China, where Chinese is the language of instruction in schools, might be expected to have a flatter profile than those migrating to Australia, where they will be taught in English and might hence experience a steeper learning curve. In other words, it is the congruence or lack of congruence between the language of the home and that of the school that is likely to affect the age-at-arrival/test score profile.

In practice it is not straightforward to investigate the differences in profiles of specific migrant groups in different countries of destination, as there are relatively few origin groups found in several different destination countries. There is also a selection problem: migrants often move to countries which are culturally and linguistically more similar, for example Britons tending to migrate to Australia or New Zealand, both English-speaking countries and hence ones where the age-at-arrival profiles of Britons are expected to be fairly flat.

However, Chinese students are found in reasonable numbers in the PISA samples in Australia, Hong Kong-China, Macao-China and New Zealand. The expectation is that Chinese migrating to Hong Kong-China and Macao-China will have relatively flat age-at-arrival profiles, since they have moved to countries with similar cultures and language of instruction in schools, whereas Chinese migrating to English-speaking Australia and New Zealand will have much steeper age-at-arrival profiles. It is important to recognise that this does not mean that Chinese or Asians in general have heavier penalties than Britons and other western Europeans: the expectation is that the penalty will vary from one destination country to another. Some western European groups migrating to countries where there is a different language of instruction in school (e.g. Germans migrating to Belgium) might therefore also be expected to have quite heavy age-at-arrival penalty.

In Tables B4.1a and B4.1b age-at-arrival profiles are shown for selected origin groups.[4] The tables show the late-arrival penalty for that origin group in the particular country of destination. The larger the reported coefficient in the table, the steeper the profile; that is the greater the late-arrival penalty. Negative coefficients indicate that a later age at arrival is associated with better, not worse, test scores which, as will be seen in the next section is a theoretically important possibility. (The models also include controls for PISA year, gender and students' school year/grade. Interactions are fitted and reported only for those cases where at least 40 respondents from a given origin country were sampled in the country of destination.)

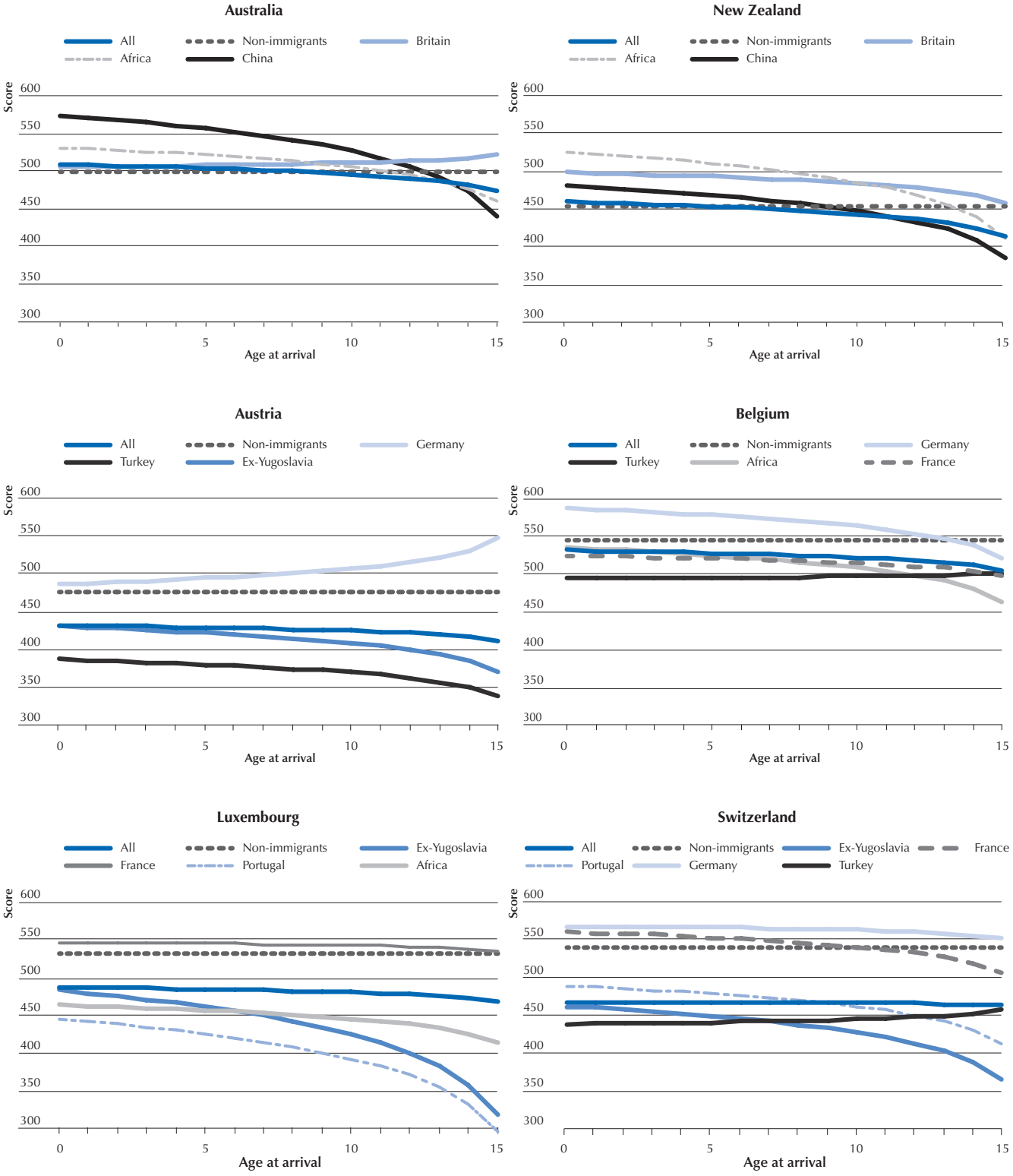
While standard errors for the coefficients reported in Tables B4.1a and B4.1b are generally rather large (because of the small sample sizes), the overall pattern is nonetheless quite striking and in line with expectations. Thus the age-at-arrival profile is indeed much steeper for Chinese in Australia and New Zealand than it is in Hong Kong-China or Macao-China. The profile for Germans migrating to Belgium is much steeper than for Germans moving to Austria or Switzerland (where it is assumed that many will have moved to German-speaking parts of Switzerland). The profile for young people from the former USSR is much steeper in Israel, Finland and Germany than it is in Russia. And the profile for young people from the former Yugoslavia is much steeper in Luxembourg, Germany and Switzerland than it is in Serbo-Croat speaking Croatia or Serbia. In contrast the profiles for Britons or French, who typically migrate to other Anglophone or Francophone countries respectively, are uniform and fairly flat.

Tables B4.1a and B4.1b also show the overall coefficient for young migrants in each destination country in the final column, and it is informative to compare this with the coefficients for the individual origin groups within a given country. Consider Germany for example, which Figure 4.1 indicated was one of the countries with the largest late-arrival penalty. Overall, Germany does indeed exhibit a large age-at-arrival coefficient of 36.0 score points. However, the main immigrant groups to Germany with sufficient numbers in the sample for detailed analysis are all ones from linguistically-dissimilar countries, namely from Turkey, the former-USSR and the former Yugoslavia. Conversely Australia, which overall displays a much smaller age-at-arrival coefficient of 12.9 score points, also exhibits a large coefficient of 48.5 score points (as large as the biggest coefficient in Germany) for the linguistically-dissimilar migrants from China. The small overall Australian coefficient can almost certainly be explained by its large number of migrants from linguistically-similar Britain with their small coefficient of minus 5.7 score points. In other words, the overall differences in the magnitude of the late-arrival penalties observed in Figure 4.1 almost certainly owe a great deal to the composition of the immigrant flows, specifically whether the immigrants come from linguistically-similar or dissimilar origin countries.



▪ Figure 4.3 ▪

Relationship between PISA reading score and age at arrival in selected destination countries by immigrant origin



Note: All estimates control for PISA year (2009 as reference), gender (male as reference) and student's grade (10th as reference)

Source: PISA pooled data 2003, 2006, 2009; Heath and Kilpi-Jakonen (2012).



To illustrate the patterns, the curves are plotted for a selection of countries. Thus in the top panel of Figure 4.3 the age-at-arrival curves are shown for Australia. Here one can see that the non-immigrant group is high-performing, that there is a flat curve for arrivals from Britain, and a steep curve for arrivals from Africa and even more so from China. Especially notable is the fact that the early arrivals from China clearly outperform non-immigrant students, whereas the late arrivals score substantially lower.

New Zealand, in the next panel, tells a rather similar story with steeper curves for migrants from Africa and China, and with early arrivals outperforming non-immigrant students and late arrivals faring worse.

In Austria the late-arrival premium for migrants from Germany is apparent, and the late-arrival penalties for migrants from the former Yugoslavia and from Turkey. However, this figure also brings out the important point that the rather flat curves for the latter two groups do not tell a positive story about these migrants. Instead, what is observed is that even the early arrivals from the former Yugoslavia and from Turkey have much lower scores than non-immigrant students at age 15. In contrast, in Belgium, immigrant students from Turkey do not appear to suffer a late-arrival penalty, performing at much the same level as non-immigrant students throughout (although one should be careful about drawing any strong conclusions from this finding as it is based on a sample of only 61 migrants from Turkey).

In Luxembourg and Switzerland late-arrival penalties and lower scores are observed for minorities coming from linguistically-dissimilar countries. In contrast the curves are much flatter for migrants from France to Luxembourg, and for migrants from Germany to Switzerland, and the scores for the migrants are comparable to those of non-immigrant students. Switzerland, despite the absence of a late-arrival penalty overall, displays major late-arrival penalties for the late arrivers from Portugal and the former Yugoslavia.

To be sure, there are some anomalies in Tables B4.1a and B4.1b (and Figure 4.3), such as the profile of migrants from Turkey in Belgium, some of which may be due to sampling error given the small sample sizes involved. A more formal test of the hypothesis that late-arrival penalties are larger when the young people come from linguistically-dissimilar countries was therefore conducted. The PISA datasets record whether the young people were tested in the same language as they speak at home. This measure can be used to test statistically the informal observations based on the coefficients displayed in Table B4.1. The result is to confirm a significant difference in the age-at-arrival coefficients for those who do and do not speak the test language at home.[5]

The measure of language spoken at home, however, provides only limited information. The measure gives the current language spoken at home, which may not always be the same as the language spoken on arrival. Thus many early arrivers (and their families) may have shifted, partly or completely, from speaking their origin-country language in their early years in the new country to speaking the destination-country language by the time of the test.[6]

While the need to learn a new language is clearly important in explaining the late-arrival penalty, it is likely not the whole story. Even among those who speak the test language or who come from linguistically-similar origin countries, there is still a modest-sized late-arrival penalty.

One possible reason for this is that migrants moving from a country with lower educational standards to one with higher standards will have more ground to make up for and thus will be particularly penalised if they arrive late (having spent a larger proportion of their academic career in the country with lower standards and thus being even further behind). There is a further possibility as well: some young people might be moving from a high-achieving to a low-achieving country. In this case one might expect that late age-at-arrival might be beneficial since the young people will have spent more time in the educational system of the country of origin. In other words, the usual pattern of a penalty for late arrival might be reversed with a premium for late arrivals. And indeed there were some hints of this in Table B4.1a, for example, where migrants from higher-achieving Germany (mean score in PISA 2009 of 497) had a late-arrival premium in lower-achieving Austria (mean score of 470) as shown by the negative coefficient.

AGE OF ARRIVAL PENALTIES AND LANGUAGE SPOKEN AT HOME: A COMBINED ANALYSIS

To isolate the role played by language and late-arrival penalties, this section presents the results of an analysis that considers how all of these factors interact for a subsample of countries sharing common characteristics. Box 4.1 provides the technical details on the analysis.

The first column of results in Table B4.2 shows the coefficients estimated from a model which includes age at arrival, destination country, and type of origin country as the predictors. Four types of origin countries are distinguished,[7] namely: *i)* Linguistically-similar Western countries (the reference category); *ii)* Linguistically-dissimilar Western countries; *iii)* Linguistically-similar non-Western countries; and *iv)* Linguistically-dissimilar non-Western countries.

As is evident, in the first model there are significant late-arrival penalties for migration from linguistically-dissimilar countries (both Western and non-Western) and for nine countries of residence (relative to the reference country of Australia). Since age at arrival is coded as the natural logarithm of years spent in the destination country, the estimates for countries of origin and destination



effectively tell us about the reading scores of young people who arrived in the destination country at ages 15 and 16 (which are combined in the coding of age at arrival). That is, late arrivals from a linguistically-dissimilar non-Western country are estimated to score on average 51 score points less than late-arrivals from a linguistically-similar Western country; and late arrivals in Finland are estimated to score on average 67 score points more than late arrivals in Australia, while late arrivals in Italy on average score 51 score points worse than those in Australia.

Box 4.1 **Analysing the role of language and late-arrival penalties**

In order to assess the relative importance of these different processes, and to determine what country differences remain after taking these processes into account, a multivariate analysis of the dataset was undertaken. The dependent variable is, as before, the reading test scores of the young migrants. Only young migrants are included in the analysis (excluding second-generation and non-immigrant students) in order to focus on the effects of late arrival. (The total sample size for these analyses is therefore 11 299 young migrants.) Furthermore, the analyses are restricted to destination countries which are relatively developed, and which generally have high overall scores on the reading test and on the Human Development Index, in order to sidestep the differing patterns to be found in the less-developed destinations (and which would have involved more complex interaction terms). Migrants with an unreported country of origin are also excluded as they cannot be classified into the categories used in this analysis (described below). All the included countries are given equal weight in the analyses, the results of which are shown in Table B4.2.

The positive sign of the age-at-arrival coefficient reflects the effect of additional years of residence on the reading score. For example, for students with 15 years of residence, that is, who arrived in the destination country when they were less than one year of age, the reading score is estimated to be higher by about 50 score points than students who arrived when they were 15.[8] Fifty score points can thus be interpreted as the late-arrival penalty for those arriving at age 15.

The second model introduces interactions between age-at-arrival and type of origin country. This in effect allows the late-arrival penalty to differ according to the type of country from which the migrants came. And the estimated coefficients indicate that late-arrival penalties are significantly greater for migrants coming from linguistically-dissimilar non-Western countries than they are for migrants coming from linguistically-similar Western countries.

Perhaps the most helpful way to interpret these interaction terms is to add them to the "main effect" of age at arrival, thus showing us what the effect of age at arrival is for migrants from a particular type of origin. Thus, for migrants moving from one Western country to another, linguistically-similar Western country, the age-at-arrival coefficient is a statistically-significant 7.6 score points, so that the reading score improves with years of residence. Thus even these migrants experience a late-arrival penalty, possibly because of the difficulties of adjustment to a new educational system (or to unmeasured heterogeneity within our Western category, for example with respect to educational standards).

For migrants arriving from linguistically-similar non-Western countries the age-at-arrival coefficient is effectively the same at 3.4 score points (7.6 – 4.2), while for those arriving from linguistically-dissimilar Western countries it is rather larger at 15.1 score points (7.6 + 7.5). Finally, for those arriving from linguistically-dissimilar non-western countries it is significantly larger at 29.3 (7.6 + 21.7). It is this latter group of migrants, then, who have both to learn a new language and to make the transition from a non-Western to a Western educational environment, who experience much the largest late-arrival penalties.

In the third model, interactions between age at arrival and destination country are introduced. These interactions indicate whether the relationship between age at arrival and test scores is steeper in some countries than in the reference country of Australia. In effect, then, these reveal whether late-arrival penalties are greater in some countries than in others. (Note that this is importantly different from the meaning of the main effects of country, which simply indicates how the test scores of late arrivals in a particular country differ from those of late arrivals in Australia.) Only two of the interactions are statistically significant, those for Israel and for Switzerland – two countries which were seen in Figure 4.1 to be quite distinctive, Israel having the largest late-arrival penalty and Switzerland having the smallest.

In the fourth model, both sets of interactions are included, but the story remains essentially the same: migrants from linguistically-dissimilar non-Western countries experience much larger late-arrival penalties than do those from other origins. Once one controls for these differences in the composition of the migrant flow and the distinctive penalties which this particular group of migrants from linguistically-dissimilar non-Western countries experience, the remaining differences between Western destination countries in their late-arrival penalties prove to be statistically non-significant (apart from Israel and Switzerland).



Given the absence of statistically-significant interaction terms, one should be careful about drawing any conclusions as to whether particular countries provide more effective institutional arrangements for integrating late arrivals in the school system. Even in the cases of Israel and Switzerland, one needs to be circumspect since their distinctive age-at-arrival/test score profiles may be due to unmeasured heterogeneity in their migrant flows; this is particularly likely to be the case in Israel where the migrant flows are rather different from those going to any other destination, but as was seen in Figure 4.3, late arrivals in Switzerland from the former Yugoslavia (many of whom were from Kosovo) experience large late-arrival penalties.

SUMMARY AND CONCLUSIONS

After considering various factors that could affect the performance of immigrant children, including their age at arrival, gender, the language of the assessment and the educational standards both in the country of origin and in the host country, the analysis identifies an especially vulnerable group composed of students who arrived when they were of lower secondary-school age from less-developed countries where the home language is different from the test language in the destination country. These students have to both quickly acquire knowledge of the test language and catch up with the higher levels of attainment achieved by their peers in the destination country, all while coping with all the problems of adjusting to a new educational and social environment.

To be sure, test performance at age 15 is not in itself a critical issue, provided that poor performance at this stage does not have major implications for young people's future school careers. However, in most countries there are major decisions to be made at age 16 regarding which track to follow in upper secondary schooling, or whether to continue with schooling at all. Relatively poor reading performance at this stage may therefore have important implications for subsequent schooling. This suggests that, in addition to language instruction, additional help to mitigate the adverse consequences of arriving when older should be offered. This might take the form of further language instruction and flexible arrangements so that those students who arrive when they are older can delay the transition to upper secondary education. Flexible arrangements of this kind might be particularly important if linguistic problems are not the only obstacles facing young migrants. In other words, while language instruction is clearly of greatest importance, it may not be the only path to greater success in school. As the analyses in Table B4.2 shows, it is the combination of coming from a linguistically-dissimilar and less-developed country that is particularly disadvantageous for those who arrive when they are older. Coming from a linguistically-dissimilar but highly developed country does not appear to pose the same risks. Different social and educational contexts will probably require different solutions to these problems.

The results also point to a dilemma in migration policy that is rarely explicitly acknowledged. Most countries require that immigrants have adequate lodgings and income before family reunification is allowed. Although such requirements are well-intentioned, they sometimes result in delaying family reunification and thus increasing the disadvantages to immigrant children, especially if they are older, in terms of poorer reading outcomes and possibly in poorer labour market outcomes later on. Thus, a legitimate concern about the welfare of immigrant children and families may translate into the possibility, if not always the certainty, of poorer educational and integration outcomes following their arrival in destination countries.

Notes

1. This chapter is based on a working paper produced by Anthony Heath and Eilina Kilpi-Jakonen. For more detailed analyses and technical issues see Heath and Kilpi-Jakonen (2012).
2. The results for Qatar were not included in this table.
3. For this analysis, only groups with more than 40 observations are considered. Note however that this database combines the data from PISA 2003, PISA 2006 and PISA 2009.
4. The table shows the main effect added to the interaction effect. Technically, for each country test scores were regressed on the natural logarithm of years since arrival (that is, the number of years spent in the destination country by the time of the test), fitting both main effects for years since arrival and interaction effects, allowing the coefficients to vary across origin groups. After experimenting with alternative functional forms, the most parsimonious and tractable form seems to be to take the natural logarithm of the number of years spent in the destination country at the time of the test. The logarithmic transformation takes account of the fact that age-at-arrival differences are relatively small during the earlier years and that the differences gradually increase thereafter. It also provides a significantly better fit to the data than a simple linear model A quadratic function provides an even better fit to the data since it better captures the lower test scores of those who arrived in the first year of life. However, a quadratic function does not lend itself easily to modelling interaction terms, which are a key feature of the analysis, and the more parsimonious logarithmic transformation is therefore preferred.
5. The coefficient for those who speak the test language at home is 5.1 with a standard error of 2.0 and the interaction for those who do not speak the test language at home is 9.6 with a standard error of 2.5 (p=0.0002).



6. This is likely to bias the results of the statistical test although possibly the bias might lead one to underestimate the difference. Thus the early arrivers can be divided into three groups: those who speak the test language at home throughout their lives, those who speak a non-test language when they migrate but switch to the test language by age 15 and those who speak a non-test language throughout their lives. If the test scores of these three groups are assumed to go from highest to lowest in the order that they are listed here, then when the age-of-arrival effect of current test language speakers is examined, it will include a slightly worse-performing group of those who did not speak the test language on arrival, whereas the non-test group is missing the better-performing students (in comparison). If those who switched language do not differ in progress from those who have always spoken the test language and these two groups perform throughout at a higher level than those who speak a non-test language, then the age-at-arrival effect is correct for the test speakers but is dampened for the non-test speakers. But this does depend on what is assumed about the test scores and progress of these three groups (which unfortunately cannot be checked with the currently available data).

7. Linguistic similarity is assumed when countries have the same majority language. In cases where it is not clear whether immigrants are likely to speak the majority language, the language spoken at home was taken as the language of the immigrant student's country of birth. For example South Africans in Australia and New Zealand (the only two countries where they are identified separately) are classified as coming from a linguistically similar country when they speak the test language at home and from a linguistically different country when they do not. The same applies to immigrant students from Oceania. Italians are always regarded as being linguistically different, except for those in Switzerland who speak the test language at home. By the term "western" here is meant "developed" ; by this classification, Korea, for example, is western.

8. The estimated coefficient 18.5 score points times the natural logarithm of 15 years of age, which equals 50.

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5

Parental Education, Immigrant Concentration and PISA Outcomes

Part of the underperformance of immigrant students in PISA can be linked to the fact that they tend to be concentrated in disadvantaged schools. Indeed, the latter is a stronger predictor of immigrant outcomes than either the concentration of immigrants in schools *per se* or even who mostly speak another language at home. Attendance in a disadvantaged school has a strong adverse impact on reading performance, whatever the origin of the student. In addition, immigrant students with highly educated mothers are more likely to attend disadvantaged schools than are non-immigrant students with mothers of similar education. So their performance suffers as well. These results highlight the fact that educational and social policies interact to limit opportunities for school success among immigrant students.



INTRODUCTION

One of the notable contrasts observed in the PISA results for children of immigrants compared to those of children of non-immigrants concerns that between the so-called settlement countries of Australia, Canada, New Zealand and the United States, as well as many European countries. In the former group of countries, PISA results for the children of immigrants have shown small differences with those of children of non-immigrants and in some cases were better, while in European countries, assessment results for children of immigrants have generally lagged behind those of the children of non-immigrants, in some countries seriously so. The immediate reaction of many observers is to attribute this result to the selective migration policies of the first three countries and the attractiveness of the United States generally to highly educated migrants.[1]

The underlying assumption is that there is a link between the educational attainment of parents and the academic outcomes of their children, with higher parental attainment generally associated with better outcomes for their children. The mechanisms by which this operates are numerous and can include, among others, the transmission, in part, of innate ability from parent to child, the presence of educational resources in the home environment, parental assistance with learning and with schoolwork, exposure to cultural events and manifestations, and proficiency in language and expression. As is well known, the link is not a deterministic one, however, with some regression towards mean outcomes by the children of highly educated parents, and some progression towards better schooling and attainment results by children of parents having at best compulsory education.

The issue is an especially pertinent one for the children of immigrants, both because the cross-generational link may be affected by a language barrier among immigrant parents but also because immigrant populations in some countries include significant proportions of individuals with a level of education that may be considerably below the compulsory education level of the country of residence. For example, in the PISA 2009 results, more than 30% of children of immigrants in a number of countries (for example, Luxembourg or the Netherlands) had mothers who at best had completed primary education, perhaps no more than eight or nine years of schooling. Many had much less than this and significant proportions had no education at all.[2] In most OECD countries, compulsory education levels are equivalent to at least ten years of schooling and have been so for some time.

The question this raises is whether educational systems are accustomed to and indeed, perhaps presupposing that the parents of entering children have the compulsory education of the country, equipped to deal with such disadvantaged populations. Are they structured to deliver adequate outcomes for the children, regardless of the home environment, and in particular whatever the education level of the parents? To what extent do they depend on parental involvement to achieve their goals? What measures are already in place, or should be in place, to compensate for the more limited ability of poorly educated immigrant parents to assist their children with their schooling?

The measure of outcomes used in this chapter is not educational attainment per se, but rather reading assessment results as measured at age 15, that is, close to the age limit for compulsory education. The link between assessment results and access to higher education is the subject of Chapter 6 in this publication.

Although one might expect the human capital endowment of parents to be a significant element in the outcomes of their children, as will be seen, the lower human capital endowment of the immigrant population by itself does not account for all of the reading differences between children of immigrants and children of non-immigrants. Other factors are at play, which exert a significant role.

One other such factor is the school's composition, that is, the characteristics of the student population. Given that immigrants tend to concentrate in certain neighbourhoods and districts of cities in virtually all countries, the issue of a possible peer effect on outcomes is an especially pertinent one. However, the dimension along which concentration occurs and which affects outcomes is not self-evident. Is it the concentration of immigrants per se in certain neighbourhoods which is associated with the less favourable outcomes one observes for the children of immigrants in many countries? Or is it rather the concentration of students who largely speak another language at home? Or the concentration of immigrant students in disadvantaged schools? This is an issue that will figure prominently in this chapter.

In examining the association between a particular characteristic and differences in outcomes between children of immigrants and non-immigrants, there are two elements to consider: how different the two populations are with respect to the characteristic in question and how different the populations are with respect to the impact of the characteristic on outcomes. Modelling exercises normally focus on adjusting for the former, often (but not always) assuming that the impact is more or less of the same magnitude for both the target and reference populations. In practice, this may not be the case, and the differences may provide some insight concerning where policy interventions may be especially effective.

The purpose of the chapter is to examine the impact of parental education on outcomes more closely and, in particular, the effect of peer educational disadvantage on assessment outcomes. As will be seen, this generally has a greater impact on outcomes that the other concentration measures cited above and indeed, than parental educational attainment. In an ideal world, immigrant children[3] would be distributed throughout all schools in the same proportion by educational attainment as their non-immigrant counterparts. In practice, this is far from being the case. The extent to which immigrant outcomes are related to this unequal distribution is a matter of some interest.



The chapter pays particular attention to differential impacts of certain factors on outcomes for the children of immigrants. The emphasis as well will be on characteristics which policy can reasonably affect or where the results suggest a means of policy intervention, the cost and feasibility of which remain to be determined. It is clear, for example, that policy can scarcely hope to affect the educational attainment of the parents of immigrants once they have arrived, but it can play a mediating role and provide the assistance which higher levels of education normally allow parents to give.

Box 5.1 **Data sources and definitions**

Participating countries and economies in PISA 2009 numbered 65, of which 34 were OECD member countries. The reading assessment that was carried out is the fourth in a series going back to the year 2000, but only the second in which reading has been a major domain of assessment. The PISA sample sizes vary from country to country, as do of course the total numbers of students of age 15. The analyses presented in this chapter are from the 2009 assessment.

Given the range of countries participating in PISA, there is considerable heterogeneity in the data, both with respect to the educational attainment of students' parents and assessment results, and in absolute terms as well as for the children of immigrants compared to the children of non-immigrants (Table B5.1a).

This poses some problems for the analysis. Some people categorised as "immigrant" in some countries became immigrants by virtue of border changes which occurred following an internal migration. This is the case, for example, in countries formed by the break-up of the Soviet Union and Yugoslavia. It is difficult to determine to what extent "migrations" in these cases partake of standard cross-border movements in which migrants are faced with new institutions, customs and perhaps languages, to which they and their children traditionally have had to adapt. Nevertheless, the choice has generally been made to include them, while recognising that the diversity of situations across very different countries may make it more difficult to identify common patterns.

Sample size considerations also limit the number of countries which one can include in the analysis. For the purposes of the analyses presented here, only countries with at least 100 first- or second-generation[4] children of immigrants in the sample have been retained. Even with the 100-student minimum, there are nonetheless some sample-size issues figuring in many of the analyses and data occasionally have to be suppressed because the sample sizes are insufficient to provide reliable estimates.[5]

For the analyses of concentration effects, each sampled school in a country has been placed into a quartile defined according to the estimated (weighted) percentage of students in the school with a particular characteristic. Three characteristic measures were considered: *i)* the percentage of students in the school who are children of immigrants; *ii)* the percentage of students in the school who are children of immigrants and largely speak another language at home; and *iii)* the percentage of students in the school with mothers with less than upper secondary attainment.[6]

The percentages were defined only for schools with at least 20 responding students for the characteristics in question, in order to ensure a reasonably reliable measure of school concentration. The number of schools and students (unweighted and weighted) excluded by this criterion is given in Table B5.2. Overall the minimum 20-student criterion excluded some 7% to 10% of the sample representing an estimated 10% to 13% of students. For some countries, however, in particular Denmark, Germany and Latvia the percentage of sample excluded was considerably larger for some of the characteristics, ranging from 25% to 35%. If the sampling rates across all schools are similar, it is likely that it was the smaller schools which were excluded. Across schools and on average across countries, the percentage of children of immigrants in included and excluded schools was broadly similar.

Analyses involving parental educational attainment are carried out on the basis of the educational attainment of the mother, if present, otherwise they are based on that of the father. The mother's educational attainment was chosen because traditionally school success has been considered to be more strongly linked to the attainment of the mother than with that of the father. In practice, however, the PISA data do not reveal much difference in this regard.



Box 5.2 Country cluster: Grouping countries by immigrant characteristics

Given sample-size limitations in general, data have had to be pooled across countries for certain analyses. Countries, however, are quite heterogeneous, both with respect to their immigrant populations and the nature of their educational systems, as well as with respect to policies concerning immigrant children. It is often difficult to account for all of these in modelling exercises. How then should countries be grouped?

The strategy adopted here has been to take a two-stage approach. The first stage consisted of grouping countries, using a standard clustering algorithm,[7] based on certain characteristics observed to be significant factors in explaining student outcomes. The characteristics are the following: the difference in the distribution of the educational attainment of the mothers of immigrant versus non-immigrant students, the percentage of immigrant students in the country mostly speaking another language (than the test language) at home; and the percentage of immigrant students in each school disadvantage quartile, from the least advantaged (quartile 1) to the most disadvantaged (quartile 4). The characteristics used for clustering thus incorporate both home and school background effects.

The clustering procedure identified three clusters:[8] Cluster 1, which includes the United States and most western and northern European countries, but excludes southern Europe; Cluster 2, which includes all non-OECD member countries with sufficient PISA sample sizes for immigrant analysis except Singapore, but also Greece and Portugal; and Cluster 3, which includes the settlement countries of Australia, Canada, New Zealand, three "new" migration countries, namely Ireland, Italy and Spain, plus Israel and Singapore.

The clusters can be characterised as follows (Figure 5.1): Cluster 1 consists of countries having a less educated immigrant population on average and a high concentration of immigrants in disadvantaged schools. Cluster 2, the "non-OECD" group is characterised by immigrants whose educational attainment is similar to that of the domestic population, who generally speak the host country language at home and whose immigrants are relatively evenly distributed across schools. The third cluster differs from the second in having a relatively high percentage of students mostly speaking another language at home, a feature which it shares with Cluster 1. On the other hand, it tends to have a somewhat more educated immigrant population compared to non-immigrants than Cluster 2.

This clustering result has a certain intuitive appeal, first of all, in splitting off most non-OECD member countries with their generally unusual immigrant populations, involving often border change migration or migration of persons of similar linguistic backgrounds or of expatriate populations often assessed in their own language or in English (Dubai [UAE] and Qatar). Secondly, the clustering procedure groups the selective migration countries together (Australia, Canada, New Zealand) and interestingly, three new migration countries (Ireland, Italy and Spain). Note that if partner countries are excluded from the clustering process, these three are joined in this same group by two other OECD member migration countries, namely Greece and Portugal, which are otherwise grouped with partner countries and economies. Although these new migration countries, which were becoming labour migration countries in the period when the immigrant parents of PISA-assessed students arrived there, are similar to the selective migration countries in certain respects, they differ in having outcomes for children of immigrants that are not generally as favourable. Cluster 3 also includes Israel, where permanent migration is almost entirely ethnic/religious in character and Singapore, where migration is very highly educated. By contrast, Cluster 1 groups countries together where immigrant children perform relatively unfavourably compared to non-immigrant children, with the possible exception of the United Kingdom and the United States, where the differences are not so large.

Figure 5.1 also shows the difference in reading scores between the children of immigrants and non-immigrants, which illustrates that the link between outcomes and characteristics is not straightforward. One could conclude provisionally, however, that the scenario associated with less educated immigrant populations, of linguistic origin different from that of the country of residence and concentrated in disadvantaged schools (Cluster 1) is not one that appears particularly conducive to positive outcomes.

...



Box 5.2 **Country cluster: Grouping countries by immigrant characteristics** *(continued)*

▪ Figure 5.1 ▪

Countries grouped according to certain immigrant-related characteristics

	Reading score of children of immigrants compared to non-immigrants	Percentage of children of immigrants speaking another language at home	Difference in distribution of educational attainment of mothers of immigrant compared to non-immigrant children (percentage points higher[+] / lower[-])				Percent of immigrant students in each school educational disadvantage quartile			
			At best primary	Lower secondary	Upper secondary	Tertiary	Advantaged (Q1)	Less advantaged (Q2)	Less disadvantaged (Q3)	Disadvantaged (Q4)
Cluster 1										
Belgium	-68	51	+16	+5	-7	-14	11	14	24	50
Austria	-68	74	+12	+16	-21	-6	12	16	24	48
Sweden	-66	66	+13	+4	-7	-10	18	20	19	43
Denmark	-61	52	+18	+10	-8	-19	10	18	22	51
France	-61	40	+16	+16	-17	-15	10	17	16	57
Germany	-57	58	+16	+5	-22	+2	13	19	22	45
Norway	-54	77	+12	+3	-1	-14	18	22	21	39
Luxembourg	-52	77	+29	+2	-16	-14	24	15	26	35
Switzerland	-49	57	+14	+16	-24	-6	19	20	23	38
Slovenia	-48	55	+1	+20	-3	-18	16	17	23	44
Netherlands	-45	43	+32	+3	-21	-14	11	13	17	59
United Kingdom	-25	47	+10	+5	-15	+1	16	13	20	51
United States	-22	60	+20	+8	-7	-21	10	10	27	53
Average	-52	58	+16	+9	-13	-12	14	17	22	47
Cluster 2										
Greece	-59	39	-3	+0	+9	-6	17	20	21	42
Argentina	-41	17	+13	-3	+2	-12	12	30	22	36
Estonia	-34	11	-0	+1	-6	+5	28	43	11	18
Portugal	-26	19	-14	+3	+2	+9	31	32	27	10
Russian Federation	-25	19	+1	+3	+4	-8	21	29	21	30
Croatia	-16	3	+2	+10	-4	-8	23	24	29	24
Latvia	-13	19	-0	-2	+0	+2	26	26	10	39
Hong Kong-China	-3	11	+17	+10	-18	-8	14	24	27	35
Montenegro	5	10	+2	-4	-6	+8	28	40	14	18
Kazakhstan	6	10	+1	+3	+0	-4	21	20	28	31
Macao-China	7	8	+3	+10	-5	-8	18	29	26	27
Jordan	11	6	-4	-5	-2	+11	38	31	21	10
Serbia	16	3	-1	-1	-1	+3	31	25	24	20
Average	-13	13	+1	+2	-2	-1	24	29	22	26
Cluster 3										
Italy	-72	67	+6	-9	-0	+3	19	26	28	27
Spain	-57	42	+1	-4	+3	+0	16	34	29	22
Ireland	-30	45	+1	-6	-12	+17	22	23	30	25
New Zealand	-13	47	+1	-5	-13	+16	24	27	23	26
Canada	-6	49	+5	+0	-6	+1	20	22	26	32
Israel	-0	40	+4	-2	-9	+7	19	31	32	18
Singapore	2	79	-6	+0	-17	+23	30	26	21	23
Australia	10	36	+3	+0	-9	+6	24	24	21	31
Average	-21	51	+2	-3	-8	+9	22	27	26	25
Outlier countries										
Brazil	-101	4	+8	-5	-12	+10	6	39	21	34
Mexico	-99	18	+21	-9	-7	-6	9	16	31	45
Dubai (UAE)	95	55	-16	-8	-7	+31	33	29	26	12
Qatar	97	42	-6	-1	-0	+8	34	26	23	17

Source: Table B2.1a, Table B3.1 and Table B5.1a.

...



Box 5.2 **Country cluster: Grouping countries by immigrant characteristics** *(continued)*

Following this initial clustering in terms of characteristics, which is still highly aggregated, subgroups have been formed, which respect the initial clustering according to characteristics, but are now grouped according to criteria involving national or migration history, linguistic/cultural affinities and/or similarity in outcomes. Many of these will appear "natural", others perhaps less so; the latter reflect inevitable compromises. The objective is to accumulate enough sampled students of immigrant origin in each group to be able to carry out more detailed analyses. The groups have been assigned names to assist in remembering their composition, which may not always do justice to the diversity of situations in the countries grouped together.

They are as follows:

Cluster 1: Germanic: Austria, Germany, Luxembourg and Switzerland

Franco-Dutch: Belgium, France and the Netherlands

Nordic: Denmark, Norway, Slovenia, and Sweden

Anglo-American: the United Kingdom and the United States

Cluster 2: China group: Macao-China and Hong Kong-China

Former Soviet Union: Estonia, Kazakhstan, Latvia and the Russian Federation

Former Yugoslavia: Croatia, Montenegro and Serbia

Mixed group: Argentina, Greece, Portugal and Jordan

Cluster 3: Settlement: Australia, Canada, Israel, New Zealand and Singapore

New migration: Italy, Spain and Ireland.

These country groups will be used on occasion, when sample sizes make it problematic to carry out results except for a limited number of countries. On occasion, the groups will be used as well to present average results across countries, when the statistics are too extensive to appropriately present individual countries. Note that in averaging across countries, each country is assigned the same weight, regardless of population. The objective is to show results for an average country and policy environment, not for all countries in a particular group confounded.

EDUCATIONAL ATTAINMENT AND ASSESSMENT RESULTS

Rather large differences exist in the educational attainment of immigrants across countries and within countries, relative to those of non-immigrants. So-called "guest-worker" migration in many European countries consisted of the migration of generally low-educated workers to take on low-skilled jobs, especially in construction and manufacturing, whereas the selective migration policies of countries like Australia and Canada guaranteed a flow of immigrants whose educational attainment was much more similar, and indeed in some cases, higher than that of the native-born population. Chain or network migration tends to ensure that past migration patterns continue to influence current patterns.

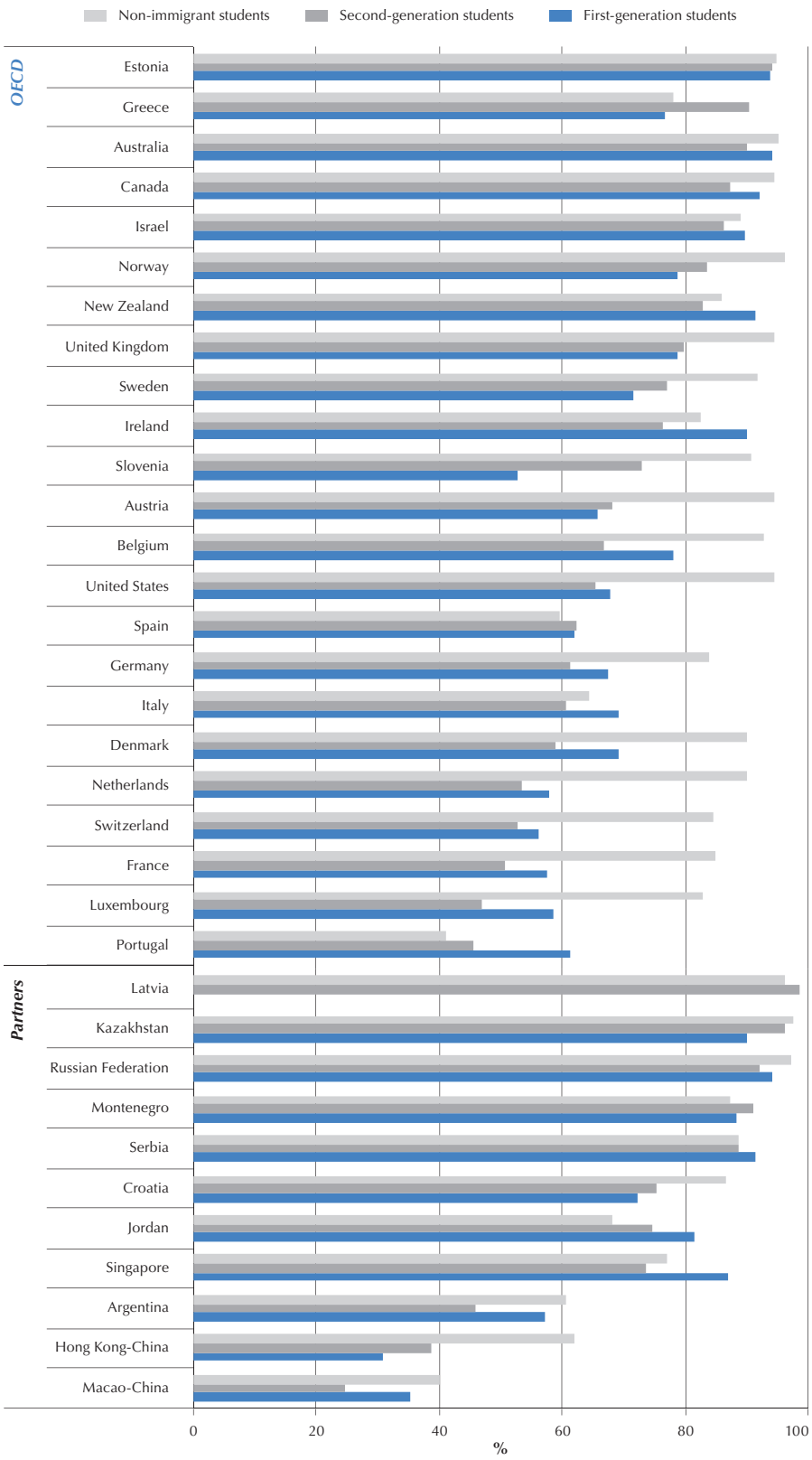
Figure 5.2 contrasts the percentage of native-born mothers with at least upper secondary attainment with that of immigrant mothers, as reported by the students assessed in PISA, where the countries are sorted according to the percentage of mothers of second-generation students with at least upper secondary attainment (Box 5.3). In many countries, the percentage of non-immigrant mothers with at least secondary attainment is higher by some 20 to 40 points than that of immigrant mothers. Many immigrant mothers in these countries have significantly less than compulsory education levels in their new countries of residence.

One would expect that reading assessment results would normally be associated with parental attainment levels. This is indeed the case and it holds true with few exceptions almost everywhere, for both children of immigrants and non-immigrants. Some of this can be attributed to innate ability being transmitted from parent to child, but this is only a partial explanation, educational attainment itself being at best an imperfect reflection of ability. It may apply even less so to the immigrant population, because greater inequalities in origin countries and generally lower levels of education in those countries mean that the link between educational attainment and ability may be weaker. In addition, educational systems also influence the link between parental attainment and reading outcomes, with some systems attenuating the effect of parental attainment on outcomes more than others.



▪ Figure 5.2 ▪

Percentage of 15-year-olds whose mother has attained at least upper secondary education



Countries are ranked in descending order of the percentage of second-generation students whose mother has attained at least upper secondary education.

Source: Table B2.2i.



Box 5.3 How 15-year-olds report parental education

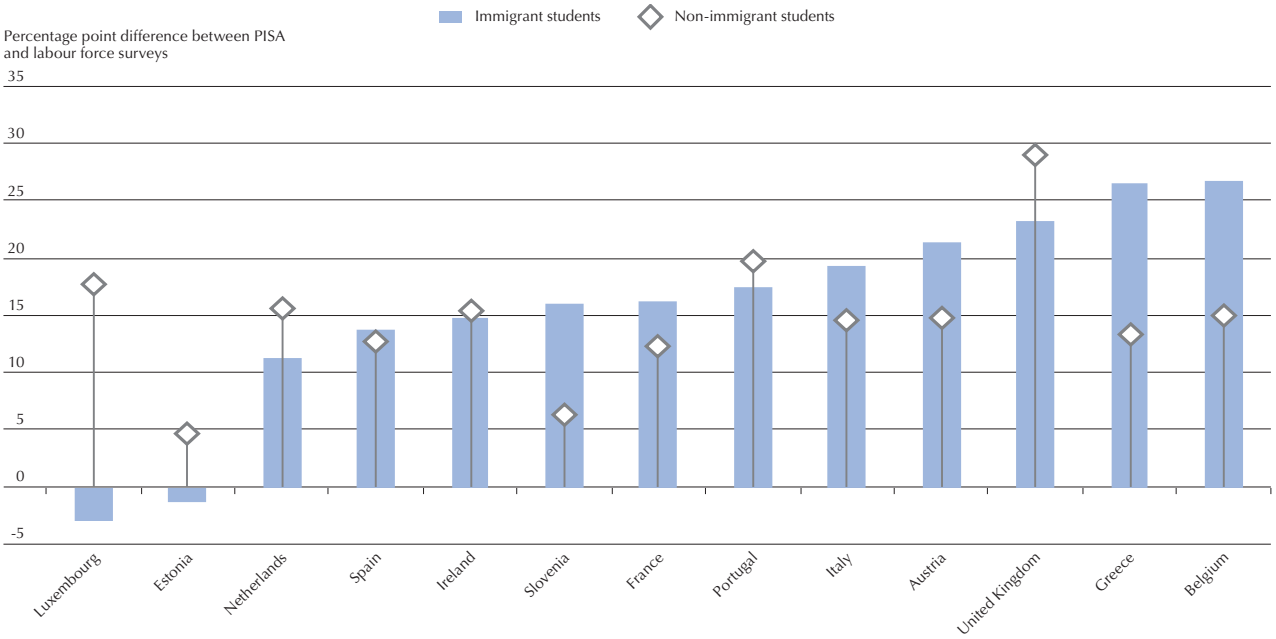
In the PISA assessments, the educational attainment level of the parents is reported by the students who are assessed. To what extent is this reporting accurate?

There are many reasons why one might expect the reporting to be subject to error, especially among children of immigrants. Many immigrants were educated in their countries of origin, where the structure of educational systems may be different from those in the country of residence. Still, one would expect that the basic levels (primary/secondary/tertiary) and their designations would tend to be well-nigh universal across countries. In addition, immigrants tend to be more often overqualified than non-immigrants for the jobs which they occupy, which may distort the perception which youth have of the educational level of their parents. On the other hand, immigrants in some countries have attainment levels which are lower on average than general education levels in the country and their children may tend to inflate the attainment of their parents, because of misperception, shame or another reason.

In most labour force surveys, one can identify mothers with children of a particular age as well as the immigrant status of persons within a household. To obtain some idea of the quality of the reporting of parental educational attainment, a comparison was carried out using the European Union Labour Force Survey, for the characteristics of households with children in the age range 13 to 17, pooling over the 2007-2009 surveys in order to accumulate a large enough sample to obtain reliable estimates.

▪ Figure 5.3 ▪

Mothers with at least upper secondary education, PISA vs. Labour Force Surveys



Note: Labour force survey estimates are for young persons 13-17 years of age and were estimated using the 2007-09 European Union Labour Force Surveys. PISA estimates are from the 2009 assessment. The estimates cover countries for which the sample sizes were large enough to yield reliable estimates.

Countries are ranked in ascending order of the percentage point difference between PISA and Labour Force Survey estimates of immigrant students whose mother has attained at least upper secondary education.

The results indicate that the 15-year-old children of immigrants in PISA generally tend to report educational levels for their parents that are higher than those reported by the parents themselves or their spouses in labour force surveys (Figure 5.3), but this is also the case for children of non-immigrants and, on average, to approximately the same extent. On average across countries the percentage of mothers with at least upper secondary attainment reported by 15-year-olds in PISA is 16 points higher than those reported by the parents of 13 to 17-year-olds in labour force surveys. However, there is considerable variation across countries. In a number of countries, there are fairly large differences in reporting bias between immigrants and non-immigrants (Luxembourg, Slovenia, Greece and Belgium), with children of non-immigrants reporting relatively higher levels in Luxembourg and lower levels in the latter three countries. If labour force survey reporting can be considered a reliable benchmark, analyses using PISA data which depend on differences in parental attainment levels between immigrants and non-immigrants may be subject to distortion for some countries.

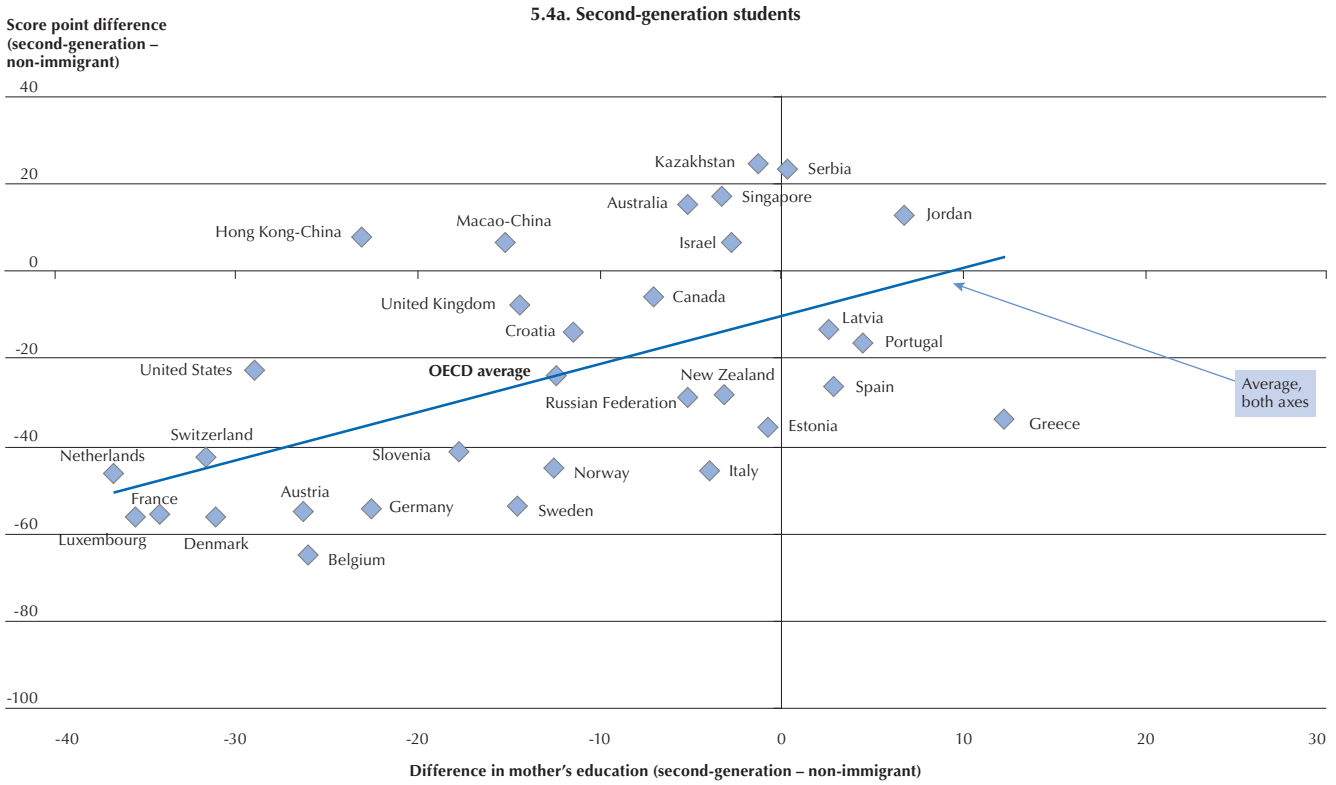


It should be noted, however, that irrespective of the quality of the educational system, there is a natural progression in the outcomes of children with the lowest parental attainment (progression towards the mean) and a regression to the mean by children with the highest parental attainment levels. Regression towards the mean in itself will result in some apparent offsetting of the effect of parental attainment on outcomes which has little to do with the particular merits or demerits of educational systems, but is a purely statistical phenomenon reflecting movement away from an extreme value. Expectations are of course that educational systems will be able to go beyond this and offset some of the real social disadvantages associated with low parental attainment, which would manifest itself through such things as a lower level of educational resources in the home, a lower ability to assist with homework, etc.

To what extent are the observed results for the children of immigrants in PISA-participating countries a function of the education attainment level of the parents? There exists considerable diversity in the composition of immigrants and in the history of migration among countries having administered the PISA assessment to 15-year-olds and the cross-country relation between differences in mothers' attainment (compared to non-immigrant mothers)[9] and differences in reading outcomes has not been found to be strong (Figures 5.4a and 5.4b). The cross-country correlations for both first and second generation students are in the neighbourhood of about 0.5. In other words, differences in mothers' attainment levels explain about 25% of the variance in reading score levels across countries.[10]

▪ Figure 5.4 ▪

Relationship between reading performance of students and mother's educational attainment, by immigrant background



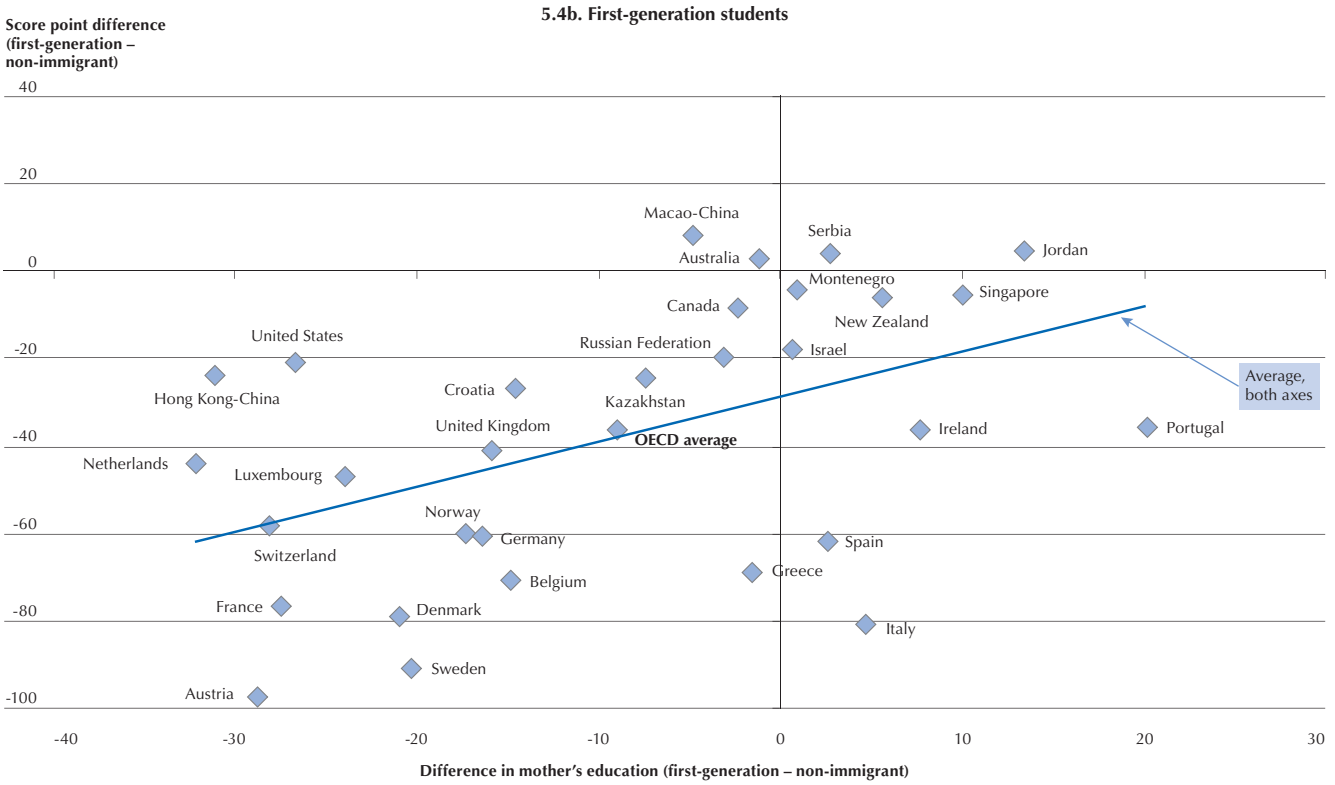
Note: The difference in mother's education is measured by the difference in the percentage of mothers having at least upper secondary education for the two comparison groups.

Source: Tables B2.1a and B2.2i.



▪ Figure 5.4 ▪

Relationship between reading performance of students and mother's educational attainment, by immigrant background *(continued)*



Note: The difference in mother's education is measured by the difference in the percentage of mothers having at least upper secondary education for the two comparison groups.

Source: Tables B2.1a and B2.2i.

Nonetheless, there are a number of regularities in the data that are worthy of note. It is generally the case that countries where immigrant children do relatively well compared to children of non-immigrants (say, within 20 points) are characterised by the fact that mothers of immigrant children have on average educational attainment levels that are better than, or do not differ substantially from those of children of non-immigrant mothers.[11] There are, however, exceptions to this general rule, in particular, the United States and Hong Kong-China for first and second generation students, where immigrant children "over perform" relative to what one would expect on the basis of the maternal attainment levels.

Conversely, if immigrant maternal attainment levels are low on average (say 15 percentage points lower), it is almost always the case that reading results for their children on average differ unfavourably from those of non-immigrants, with Hong Kong-China and the United States again being the exceptions.

One can summarise these two observations by noting that good maternal education on average (relative to that of non-immigrant mothers of 15-year-olds) appears to be a necessary condition for good results for immigrant children as a group and poor maternal education a sufficient condition for poor results, in both cases given the current educational policy environment in the countries in question. There are of course many children who perform well, despite low parental education, but it is the group performance that is being considered.

On the face of it, the conclusions drawn here are not especially auspicious regarding the ability of educational systems in general to address educational disadvantage, transferring, as it were, the responsibility for poorer / better outcomes for immigrant children to the nature of the migration intake into the country. As will be seen, however, differences in attainment levels of mothers statistically do not seem to account for many of the individual differences in reading assessment results, even if poorer maternal attainment seems to result on average in poorer outcomes for the children. Something else seems to be at play, beyond maternal immigrant educational disadvantage alone.



In addition to the exceptions of the United States and Hong Kong-China, there is another "exceptional" group of countries, where children on average appear to be "underperforming", given the rather favourable attainment levels of their mothers. The population concerned is that of first-generation students and all of the exception countries are relatively "new" immigration countries, which have had large immigration inflows over the past 15 years (Italy, Greece, Spain and Ireland, with Portugal only marginally different). The educational systems of these countries may have had some difficulties adapting to the new high levels of inflows (Table B5.3).

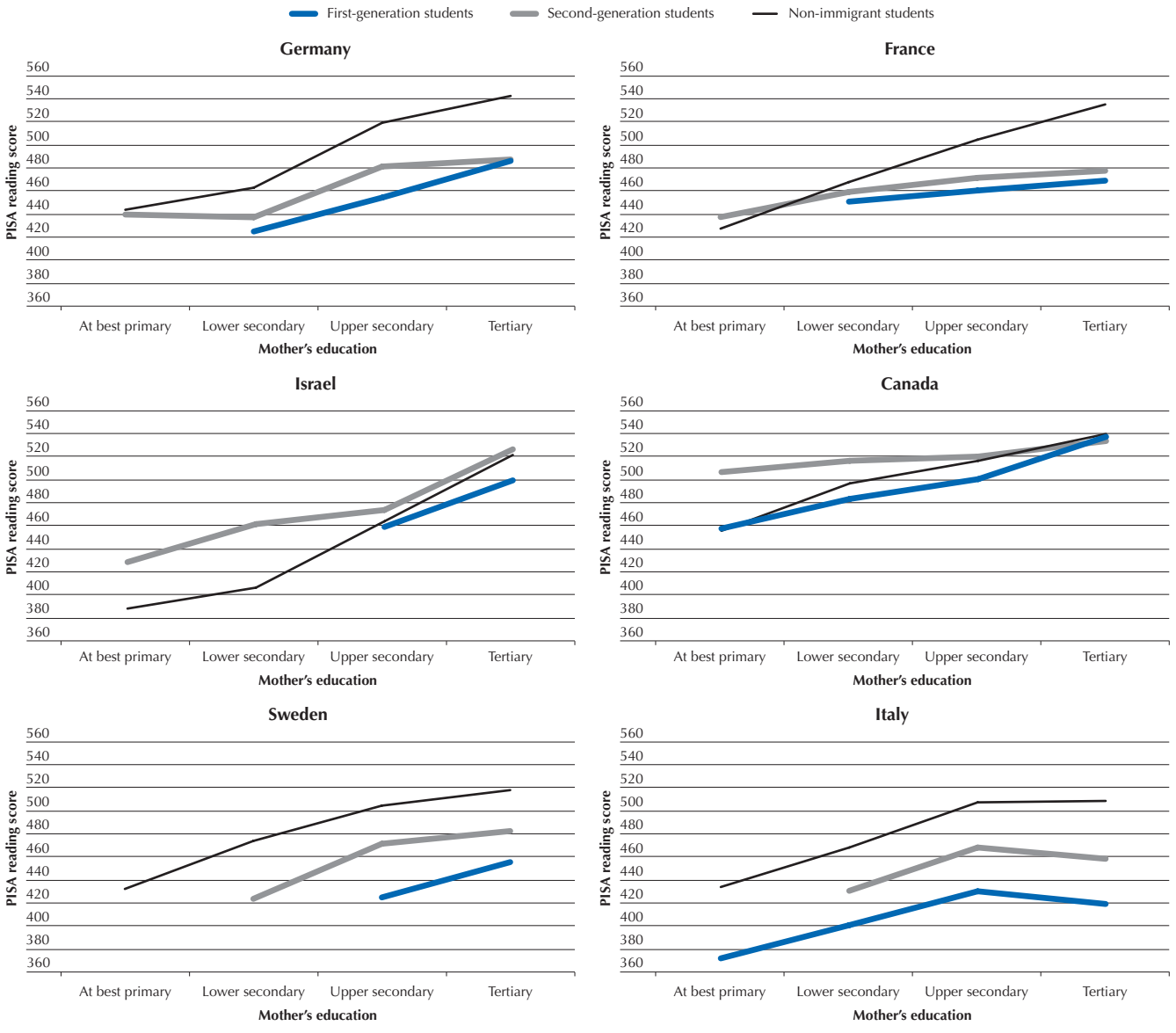
THE DIFFERENTIAL IMPACTS OF MATERNAL ATTAINMENT ON OUTCOMES

The educational composition of the immigrant population is but one element among those which exert an influence on the reading outcomes of the children of immigrants and one over which educational systems cannot have a direct impact, although they may be able to compensate for home disadvantage to some extent, through assistance at school, special classes or tutoring, etc.

A second element concerns the relation between mother's education and reading results, which may differ across countries, but also between immigrant and non-immigrant students within the same country. Figure 5.5 give some idea of the diversity observed in this regard across countries. Here one sees examples of countries where the maternal-education gradients[12] are parallel for the various migration statuses (Sweden and Italy); countries where there is convergence of the gradients with increasing educational attainment (Canada and Israel); and countries where there appears to be, on the one hand, divergence between natives and the second generation, and on the other, a parallel evolution for natives and the first generation (France and Germany and to some extent, Switzerland).

▪ Figure 5.5 ▪

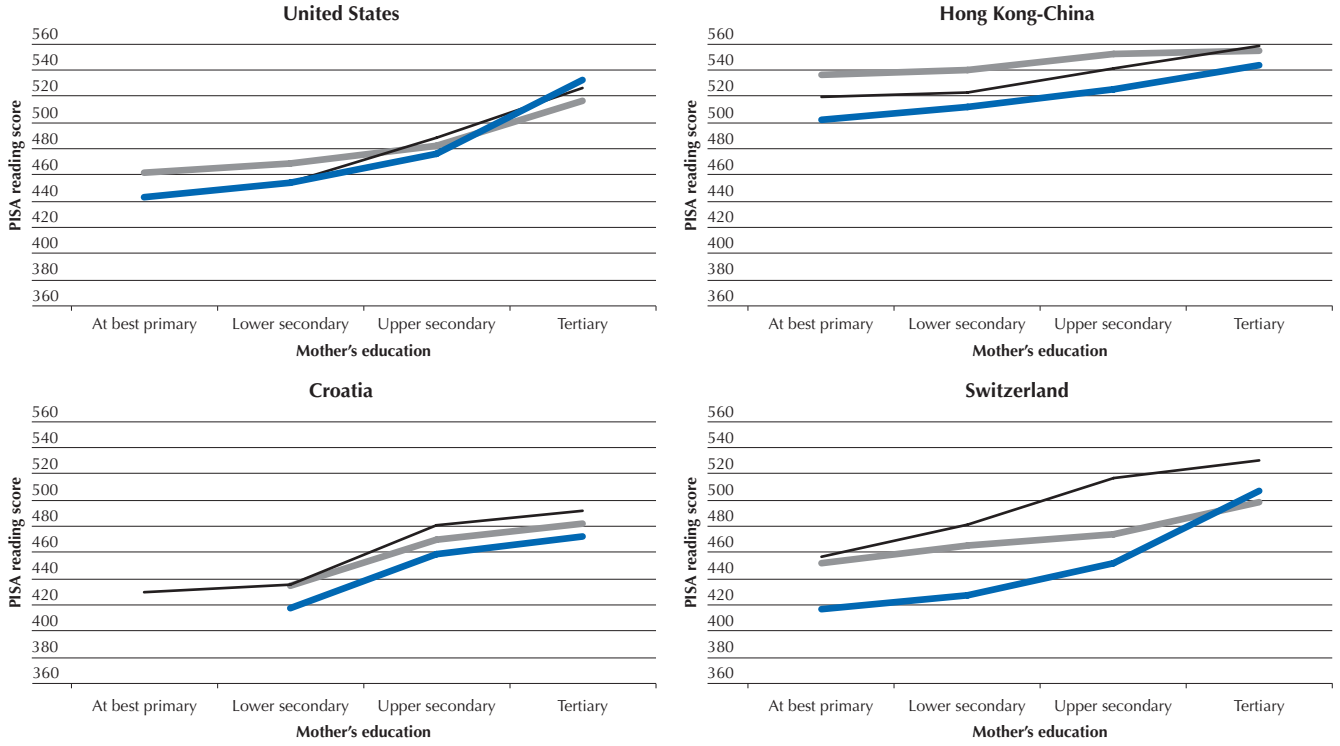
PISA reading scores as a function of mother's educational attainment, selected countries





■ Figure 5.5 ■

PISA reading scores as a function of mother's educational attainment, selected countries *(continued)*



Source: Table B5.1a.

Now in all the countries shown here and indeed in general, the curve for the second-generation students lies above that of first-generation students, as one might expect, since for native-born children of immigrants, there is no disruption of education as a result of migration and in principle, there is at least the possibility, if not always the reality, of significant exposure to the language of the destination country from a very early age. In addition, many immigrant parents of second generation students may themselves have arrived in the country at a young age and been partly educated in the country (Table B1.2, Chapter 1).

A more systematic linear regression analysis of the relationship between mothers' education and reading assessment results in shown in Table B5.3. Figure 5.6 gives the essential results. Note that all of the statistics in Table B5.3 and Figure 5.6 and in others to come can be interpreted in terms of PISA score points. In Figure 5.6 only results for Clusters 1 and 3 are portrayed; those for Cluster 2 are erratic, but can be consulted in Table B5.3.

The first observation based on the results of the table (Figures 5.6a and 5.6b) is that controlling for educational attainment accounts for only about 10-15 points of the total difference between children of immigrants and children of the non-immigrants for Cluster 1, consisting largely of most northern and European countries with immigrant populations of below average education. But this is at best a third of the total difference, indicating that differences in reading outcomes in these countries involve more than just low parental education. For Cluster 3, where the difference in attainment levels between immigrants and non-immigrants are smaller, the adjustment has little effect, indeed in some cases it even increases the difference.

The more favourable results for second-generation students compared to the first cited above are evident for all country groupings. A less obvious result than this, however, is the fact that there are significant immigrant-specific effects of education and that these are even more important that those attributed to the lower attainment levels of immigrant parent populations. In practice, this manifests itself in an apparent flattening of maternal education gradients for children of immigrants in Clusters 1 and 3, that is, there appears to be less improvement in reading results with mothers' education among children of immigrants than observed among the children of non-immigrant mothers. This is especially the case for second-generation students. This is the reason for the improvement in immigrant children outcomes seen in Figure 5.6b, when one removes the effect of this flattening.

Figures 5.7a and 5.7b show the result graphically, presented in a somewhat different way. The lines have been inserted as an aid in visualising the result. The figures show that there is less variation in PISA results across OECD countries among children of non-immigrants than among children of immigrants (the "slopes" of the lines are flatter), but there is less difference between children of high- and low-attainment immigrant mothers than between children of high- and low-attainment non-immigrant mothers (the bandwidth is smaller for children of immigrants).



▪ Figure 5.6 ▪

Differences between reading outcomes across immigrant backgrounds adjusting for mother's education

Figure 5.6a. First-generation and non-immigrant students

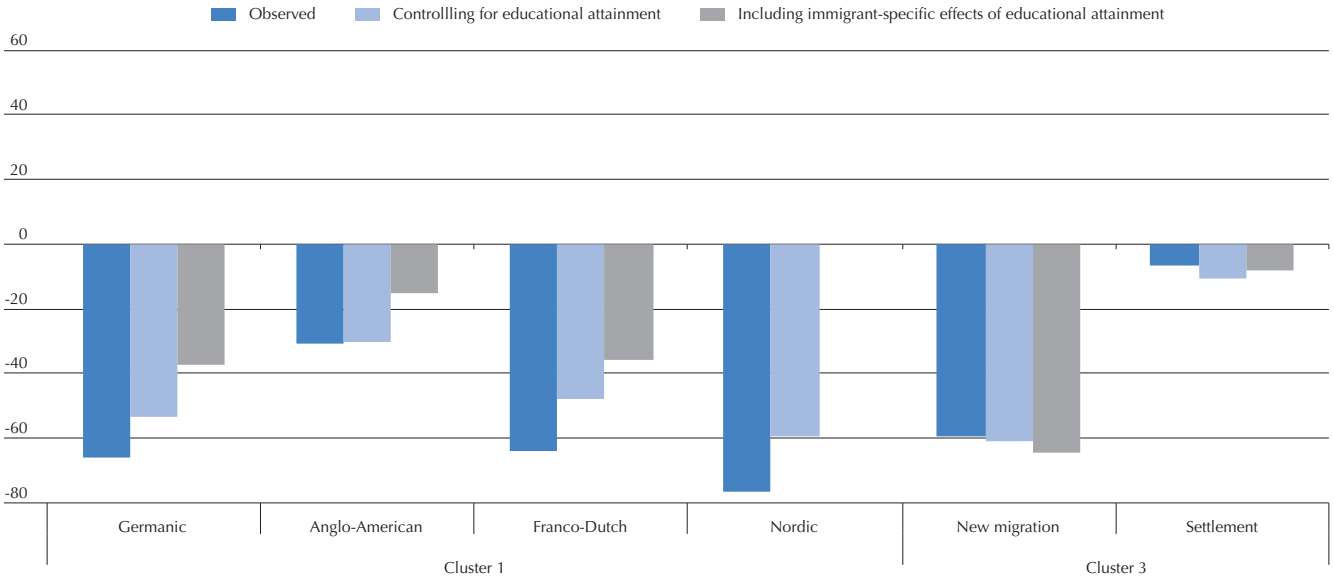
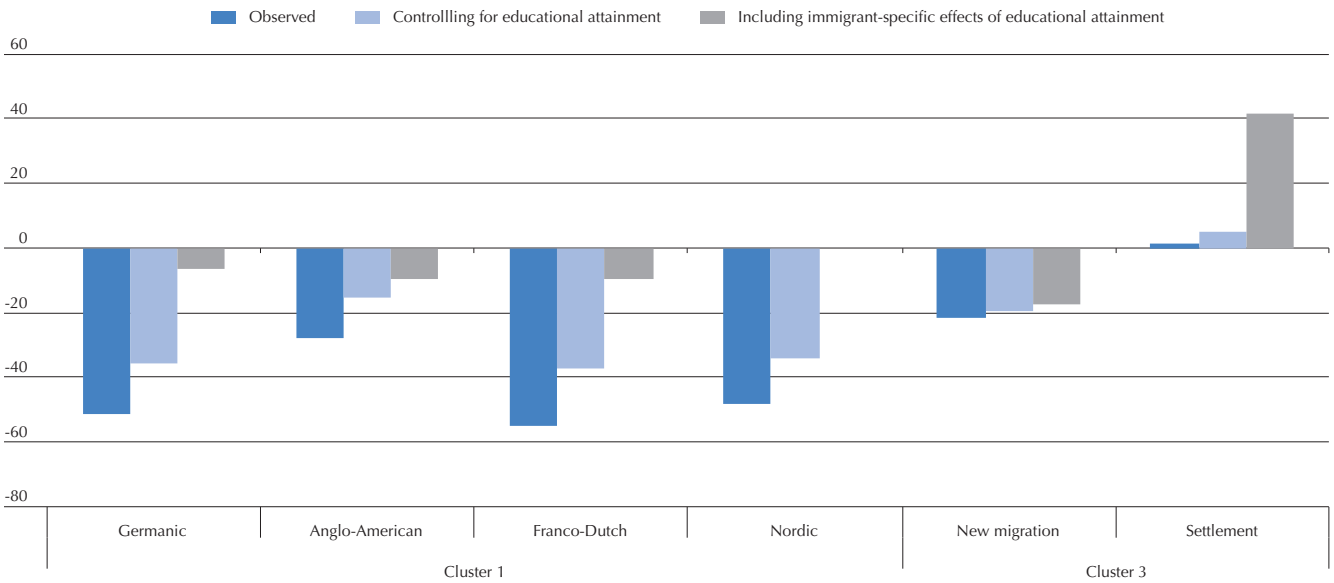


Figure 5.6b. Second-generation and non-immigrant students



Source: Table B5.3.



▪ Figure 5.7 ▪

Average reading score by educational attainment of the mother, immigrant and non-immigrant students

Figure 5.7a. Immigrant students

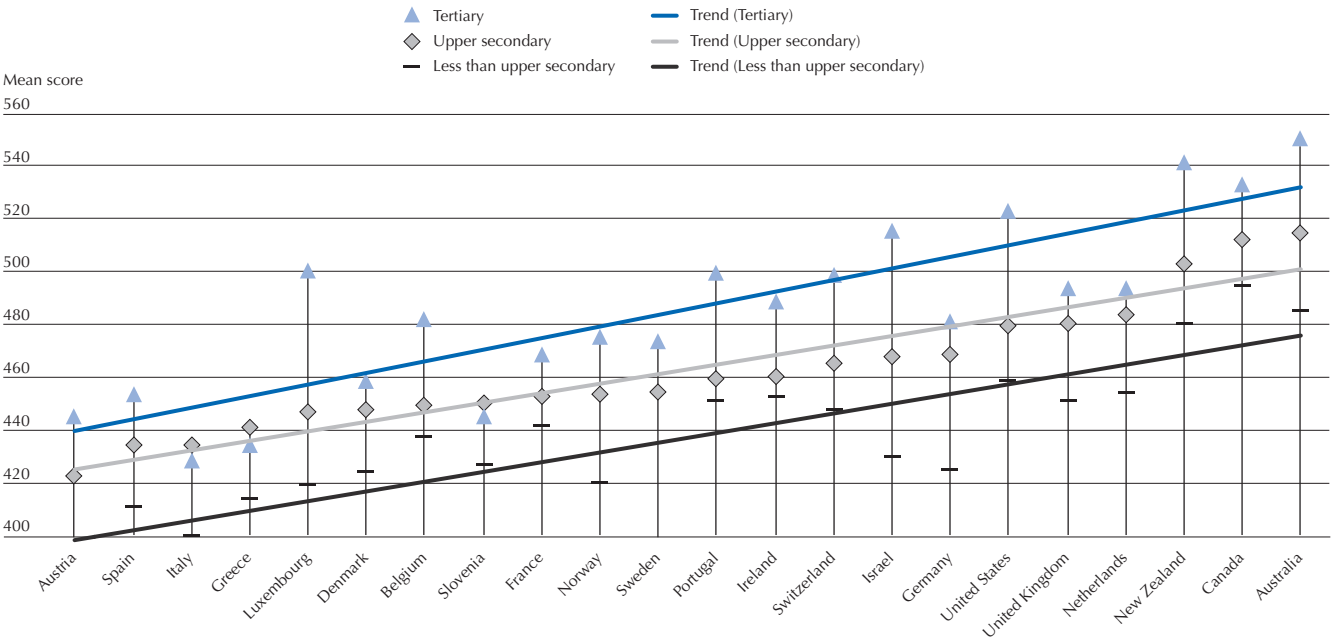
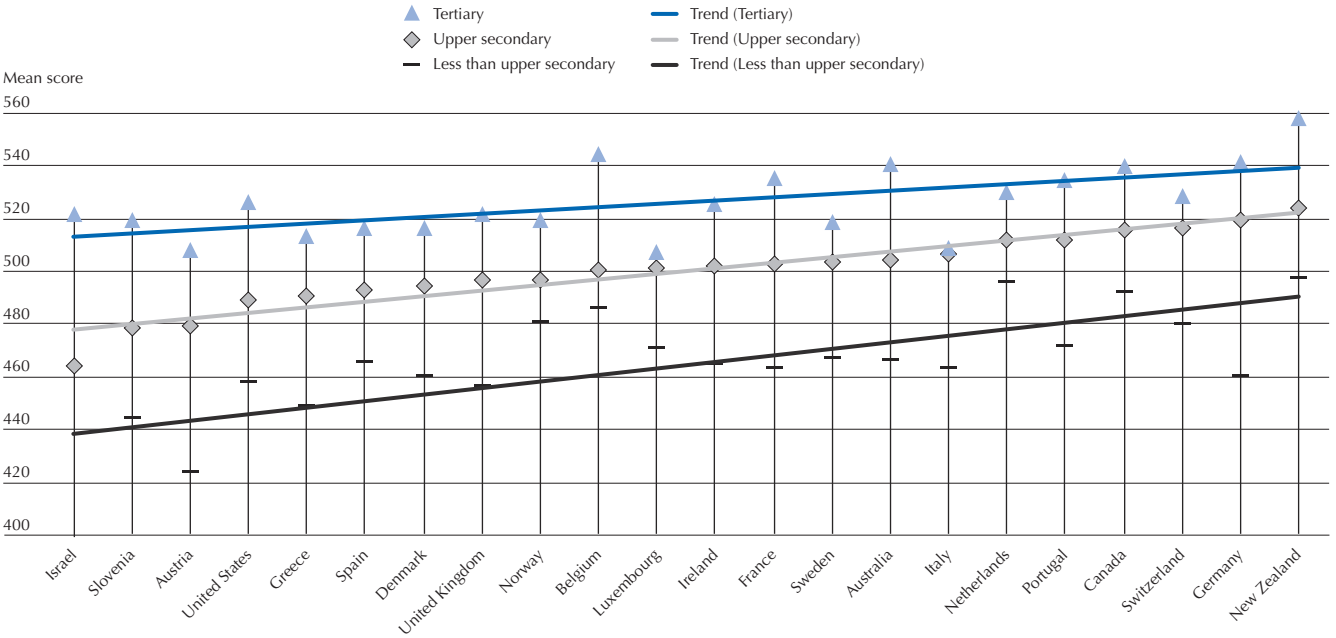


Figure 5.7b. Non-immigrant students



Countries are ranked in ascending order of the mean score in reading for the students whose mother has an educational attainment of upper secondary education.

Source: Table B5.1b.



There are a number of possible hypotheses that come to mind to "explain" why the benefits of higher parental education on children's outcomes might be less evident among children of immigrants than among children of non-immigrants. The first such explanation concerns the impact of the language spoken at home, which may often be different from that of the host country and which may hamper the acquisition of proficiency in the national language by the student. Among others, a greater recourse to a foreign language in the home environment may in particular offset the advantage which parents of higher attainment levels can be expected to have in assisting their children with school work.

A second hypothesis concerns the possibility that nominal educational attainment levels, especially at higher levels, for some immigrants may not be entirely comparable or equivalent to those obtained by non-immigrants in the host country. Hanushek and Woessmann (2008), for example, have shown that assessment results of children (as a proxy for educational quality) are better predictors of economic growth than formal educational qualifications, such as those measured here. The issue of the equivalence of qualifications is one that arises (in the labour market) generally for higher attainment levels. For some origin countries, foreign qualifications may convey only some of the impact on childrens' outcomes that one associates with host-country higher educational attainment.

A third possible explanation concerns the possibility of a group impact on student outcomes, either associated with the concentration of immigrants in particular geographic areas and schools or with the characteristics of immigrants as a group. Immigrants in all countries tend to concentrate in particular areas of cities, with shops, religious establishments, and community groups that reproduce in part the environment of the home country. If immigrants are in general well-educated, the concentration of immigrants in specific areas and schools may not have any adverse effects; they may stimulate each other to better achievement. The concentration of disadvantage, however, may compound the impact of poorer parental education levels and socio-economic background. This is a point which will be examined in more detail later.

The broader question concerns the impact which the collective characteristics (real or imagined) of the group may have on how individuals are perceived and treated by social actors, institutions, educators, and employers, amongst others, a phenomenon known as statistical discrimination (Phelps, 1972). This is not discrimination in the sense of xenophobia or racism, but partakes of the human tendency to generalise, sometimes on the basis of limited or inaccurate information.

Controlling for the language spoken at home, of having a mother born outside an OECD country or attending a disadvantaged school had little impact on the flattened maternal education/score gradients. However a more detailed examination of these issues is beyond the scope of this chapter. They do illustrate a recurring theme, namely that immigrants constitute a group on which the effects of policies, institutions or socio-economic factors may not always be the same as for non-immigrants.

THE EFFECT OF CONCENTRATION ON IMMIGRANT STUDENT OUTCOMES

In all countries and in all periods, immigrants have tended to congregate in neighbourhoods with other immigrants, often of their own origin, when they move to a new country. This is a natural process that increases social capital and allows immigrants to maintain or build a network of friends and relatives from their origin country who can help recreate a familiar social environment but also be of assistance to them in finding a job, administrative procedures and tasks required in their new country of residence. This tendency may be reinforced by the availability of affordable housing if immigrant income levels are low, but may also be counterbalanced by government measures or incentives aimed at dispersing the immigrant population over the national territory. A number of OECD countries, for example, sought to disperse refugees throughout their territory, so as to avoid undue burden on large urban centres, but also under the assumption that excessive concentration would hamper integration efforts.

Studies of this phenomenon have shown that concentration by itself need not be negative, provided that there is access to social and public services of a quality comparable to what is found elsewhere and provided that ethnic agglomerations do not become permanent enclaves, with little possibility of outward mobility (Damm and Rosholm, 2010; Edin, et al., 2005).

With respect to educational services, the policy of neighbourhood schools has tended to ensure that the composition of schools tends to reflect that of the neighbourhoods in which they are located. In some school districts,[13] there may be the possibility of attending an institution outside the neighbourhood, because of school voucher or open admission policies or because parents choose to place their children in private institutions. Lower- and upper-secondary level institutions generally draw on somewhat broader geographic areas, but perhaps not enough in order to ensure a better socio-economic mix.

To the extent that socio-economic origin is a determinant of school outcomes, early selection or tracking policies may also tend to place students of similar origins in the same institution, irrespective of their place of residence.

The question examined in this section is the extent to which the concentration of students of immigrant backgrounds in certain schools is associated with less favourable outcomes. There are, however, various ways of measuring concentration and it is not *a priori* obvious what measure of concentration is the appropriate one to use in this context. Is it the concentration of immigrant students per se that is associated with poor outcomes? Or rather the concentration of students with specific characteristics or in schools with particular characteristics?



The Coleman Report (Coleman, 1966) was among the first studies which examined the effect of school context, in particular socio-economic status and ethnic composition, on attainment. The negative correlation between immigrant concentration and attainment has been the object of a number of other more recent studies since then (Felouzis, 2003; Portes and Hao, 2004; Szulkin and Jonsson, 2007; Dronkers, 2010), which have confirmed the Coleman results. Although some studies have attempted to look at possible causes and mechanisms (Cebello-Boado and Medina, 2011), including composition effects, none have considered whether alternative measure of concentration might be more strongly associated with immigrant outcomes than immigrant concentration per se.

As indicated in the data section of this chapter three measures of concentration have been examined and the student sample for each country divided into quartiles on the basis of the three concentration measures. The first quartile is defined to have a low value on the measure and the fourth a high value. By way of recall, a listing of the three measures is repeated here:

- the percentage of children of immigrants in a school;
- the percentage of children of immigrants in a school speaking another language at home; and
- the percentage of students (whatever the origin) in a school who have mothers with less than upper secondary attainment.

The objective is to examine the extent to which concentration measured in these terms affects student outcomes in general and those of the children of immigrants in particular.

Table B5.4 and Figures 5.8a and 5.8b provide summary statistics for these measures and in particular, on the percentage of all children of immigrants who are in the high-concentration quartile, according to the measures listed above, and what share they are of all students in the quartiles. The individual country data are presented in the annex tables and the average over country groups in the figures.

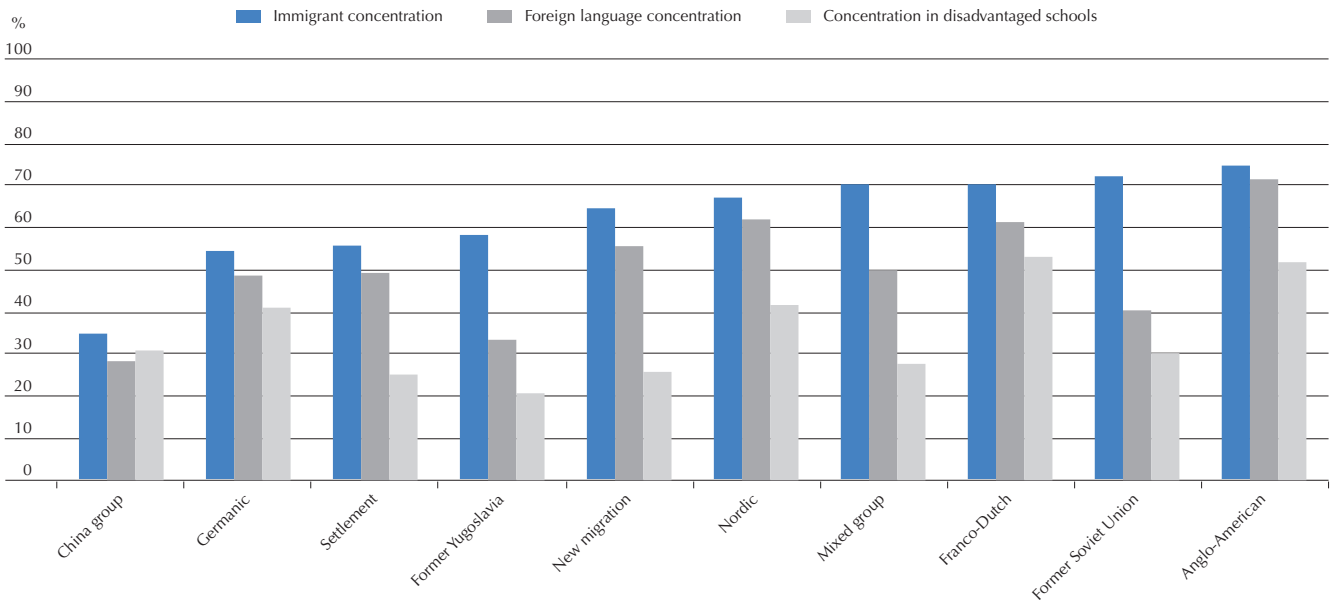
Note, first of all, that if the distribution of the children of immigrants across quartiles were the same as that for non-immigrants, each quartile would contain 25% of both children of immigrants and children of non-immigrants, and the share of the children of immigrants in each quartile would be the same as their share of all students. As is evident from the table and figures, the observed situation is rather far from this statistical ideal.

Not surprisingly, the highest concentrations of children of immigrants occur for those measures which are themselves based on immigrant characteristics and which tend to "push" those schools with higher percentages of children of immigrants into the higher quartiles. For example, in most of the country groups in Figure 5.8a, some 50% to 70% of the children of immigrants are in the high-immigrant concentration quartile. And some 30% to 60% of immigrant children are in the quartile where there is the highest percentage of students speaking another language at home.

▪ Figure 5.8 ▪

Children of immigrants in the high-concentration quartile, by various measures of concentration

Figure 5.8a. As a percentage of immigrants students



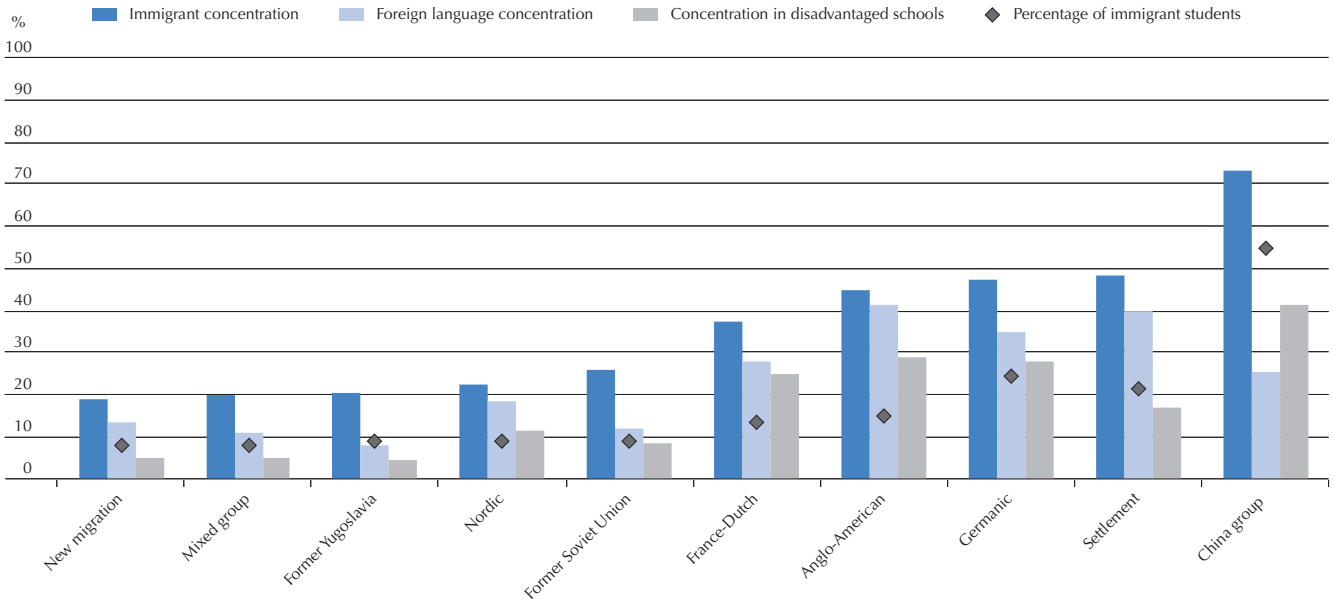


▪ Figure 5.8 ▪

Children of immigrants in the high-concentration quartile, by various measures of concentration

(continued)

Figure 5.8b. As a percentage of all students in the quartile



Countries are ranked in ascending order of the immigrant concentration measure.

Source: Table B5.4.

The same sort of automatic "push effect" is not in principle present when the quartiles are defined on the basis of an exogenous measure such as the student's mother's education. For this case, which does not explicitly include any reference to immigrant characteristics, the fourth quartile also contains significant shares of immigrant students, ranging from as less than 15% in Portugal, in the partner economy Dubai (UAE) and the partner country Jordan, to over 55% in the Netherlands, with most European countries and the United States being at the high end of the range and the settlement and new migration countries at the low end under 30%.

What connection is there between the three measures? First of all, there tends to be a high concordance between immigrant and foreign language concentrations in the country groups composed essentially of OECD countries and, with the exception of the settlement and new migration countries, a smaller difference between these measures and that based on school disadvantage. Likewise, the settlement and Nordic groups of countries have low shares of the children of immigrants in the bottom quartile, whatever the measure (Figure 5.8a), than do other OECD country groups, as does the China group. Finally the bottom disadvantage quartile tends to show a lower share of the children of immigrants than the bottom quartiles for the other two measures.

Note that only in some countries are children of immigrants overrepresented in the disadvantaged quartile, relative to their share of all students, in particular in the Nordic countries and the Germanic, Franco-Dutch and Anglo-American groups.

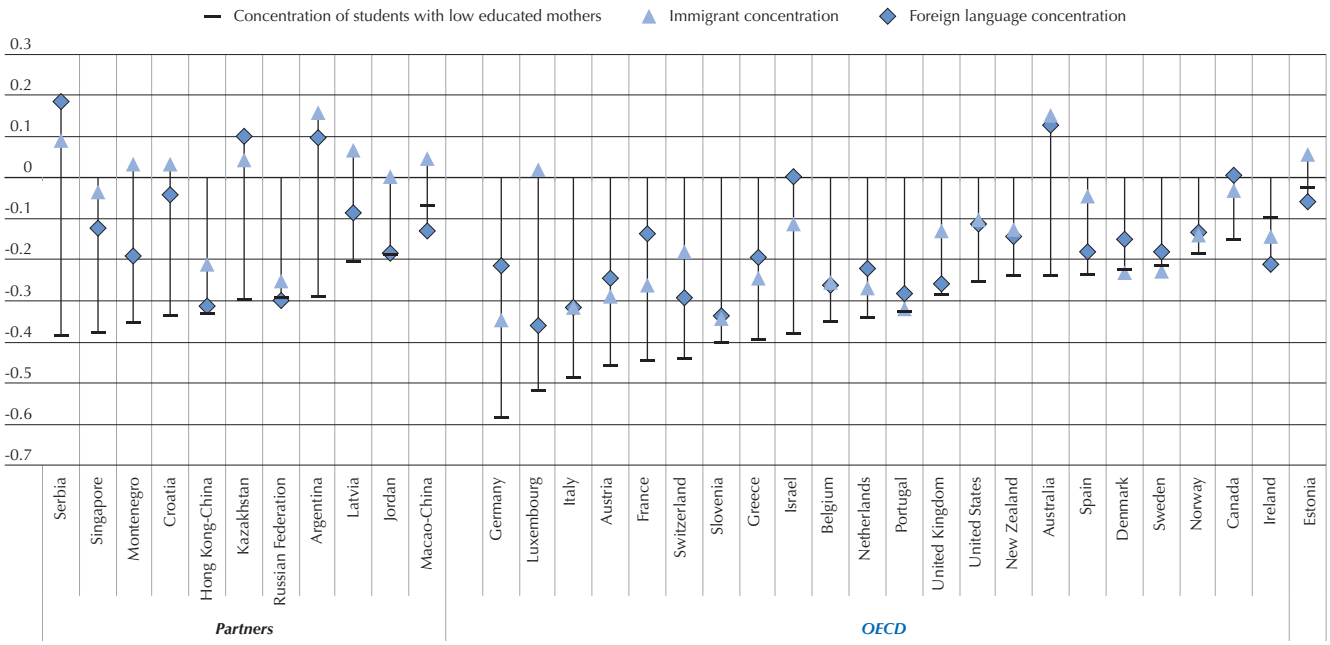
How close is the association between these various concentration measures and reading outcomes of the children of immigrants? Contrary to what one might have expected, it is generally the percentage of students from disadvantaged backgrounds (low educated mothers) in a school that is more highly (negatively) correlated with individual reading outcomes for the children of immigrants in almost all countries assessed (Figure 5.9). The percentage of children in a particular school who mostly speak a foreign language at home comes next in line, with the percentage of immigrants being the weakest covariate of the three. In many European countries, the association between immigrant outcomes and school disadvantage is especially high. The exceptions are the Nordic countries, Ireland, Estonia and Spain, although outcomes for children of immigrants in these countries are not always favourable compared to those of non-immigrant children.

In what follows the focus will be on the school disadvantage measure of concentration.



▪ Figure 5.9 ▪

Correlations between reading outcomes of children of immigrants and various measures of student concentration in schools



Countries are ranked in ascending order of the concentration of students with low educated mothers measure.

Source: Table B5.6.

SCHOOL DISADVANTAGE, MATERNAL EDUCATIONAL ATTAINMENT AND READING OUTCOMES

As was seen earlier, in many countries the educational attainment of immigrants is lower than that of non-immigrants and the fact that one finds relatively more of their children in disadvantaged schools might be simply be a reflection of this. But the story is not so simple. A higher proportion of children of low-educated immigrants than of children of low-educated non-immigrants are in disadvantaged schools in most countries (Figure 5.10a). What is even more striking, however, is the even stronger overrepresentation of immigrant students of tertiary-educated mothers in disadvantaged schools in many countries (Figure 5.10b). In a number of countries, there are in relative terms more than twice as many students of highly-educated parents of immigrant than of native origins in disadvantaged schools. Recall that the disadvantage quartiles are characterised not by immigrant characteristics but rather by maternal educational disadvantage. The question then is: why the overrepresentation in disadvantaged schools, at all parental educational levels?

The primary determinant of the socio-economic composition of a neighbourhood is housing costs, and some arriving immigrants may not always have the luxury of choosing their housing freely, either because of more limited funds, lower salaries or because of discrimination in the housing market. The choice of a neighbourhood may initially be motivated as much by the wish to be living near co-nationals or co-ethnics as by the affordability of housing. The two are often linked. The initial choice of housing may not be seen as definitive by the migrant, but may become so because of persistent low income or discrimination in housing, a reluctance to move from what has become a familiar environment, or simply inertia, among other reasons.

It is known, for example, that highly-educated immigrants tend to be more often overqualified for the jobs they are doing than is the case for non-immigrants (OECD, 2007). Over qualification is likely to be associated with lower salaries, which would precisely make it more difficult to find housing in less disadvantaged neighbourhoods. It is indeed generally the case that immigrant students in disadvantaged schools as well as those with highly educated parents are more often from low-occupation status families than students whose parents are non-immigrants (Figure 5.11).[14]

This suggests that a closer examination of the impact of attending a disadvantaged school may be warranted, in particular the impact at different maternal educational attainment levels.



▪ Figure 5.10 ▪

Students by mother's education in disadvantaged schools

Figure 5.10a. As a percentage of all students with mothers having less than upper secondary education

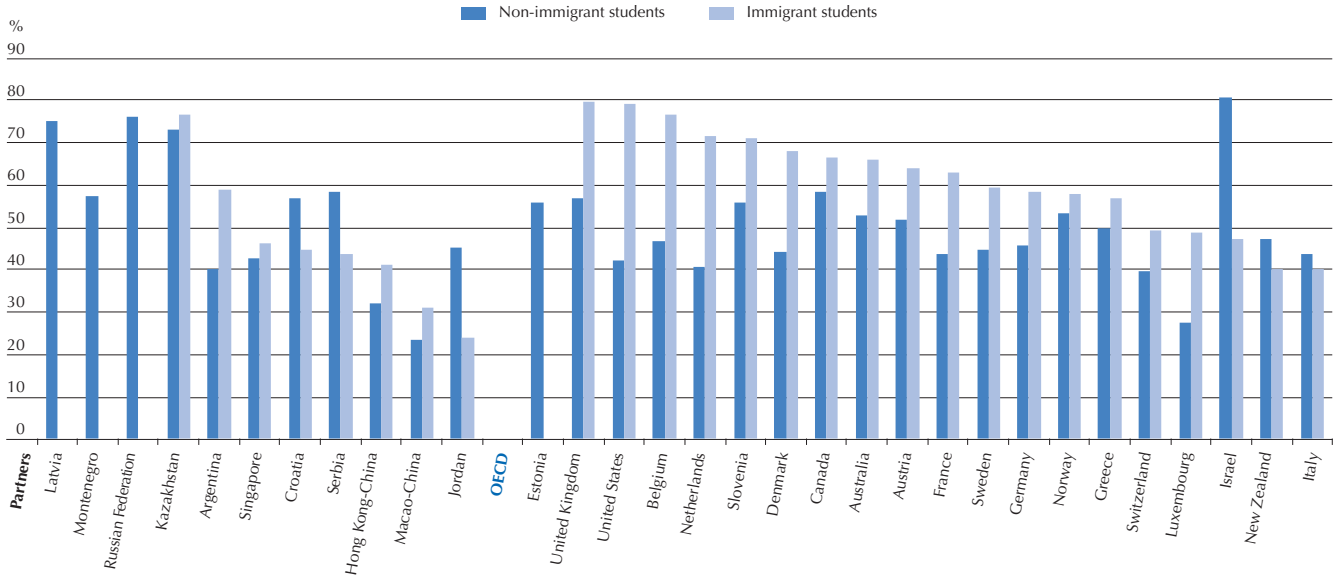
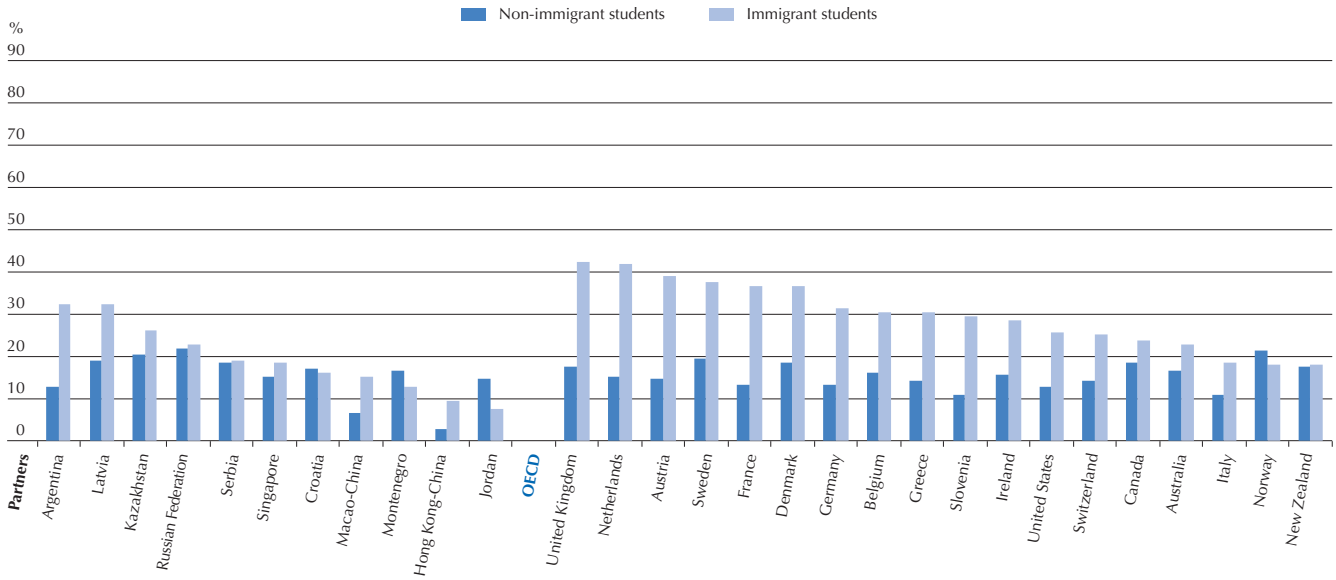


Figure 5.10b. As a percentage of all students with tertiary-educated mothers



Countries are ranked in descending order of the percentage of immigrant students.

Source: Table B5.7.



▪ Figure 5.11 ▪

Students in disadvantaged schools from low occupation status families

Figure 5.11a. Students from low occupation status families

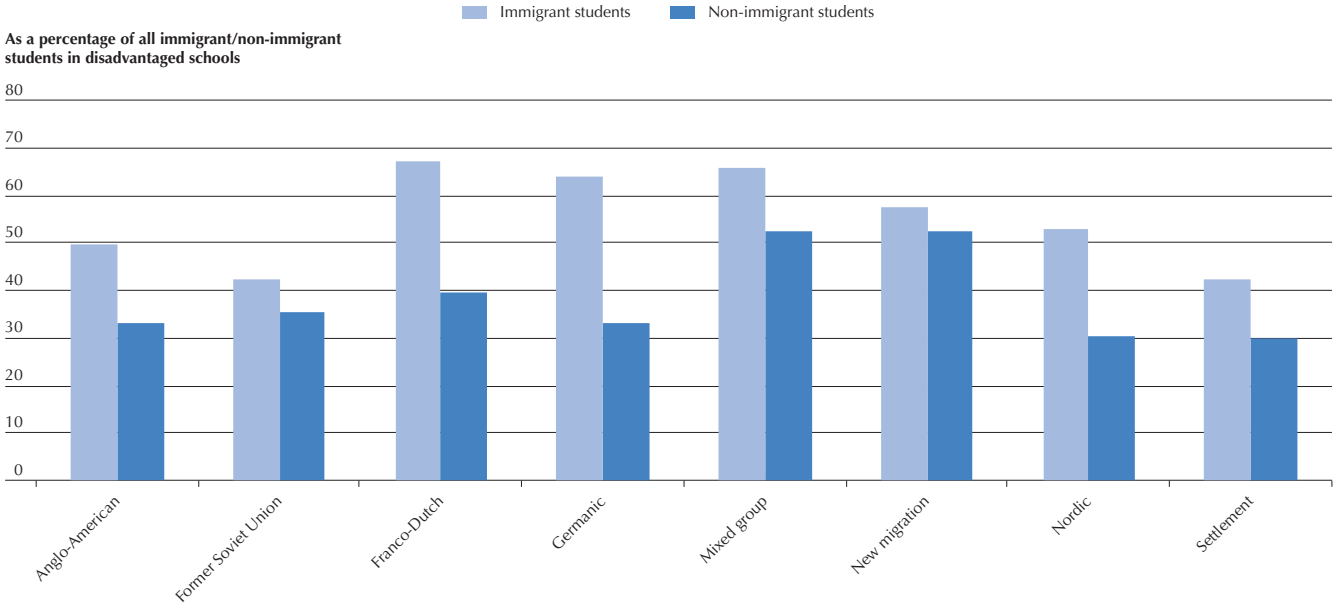
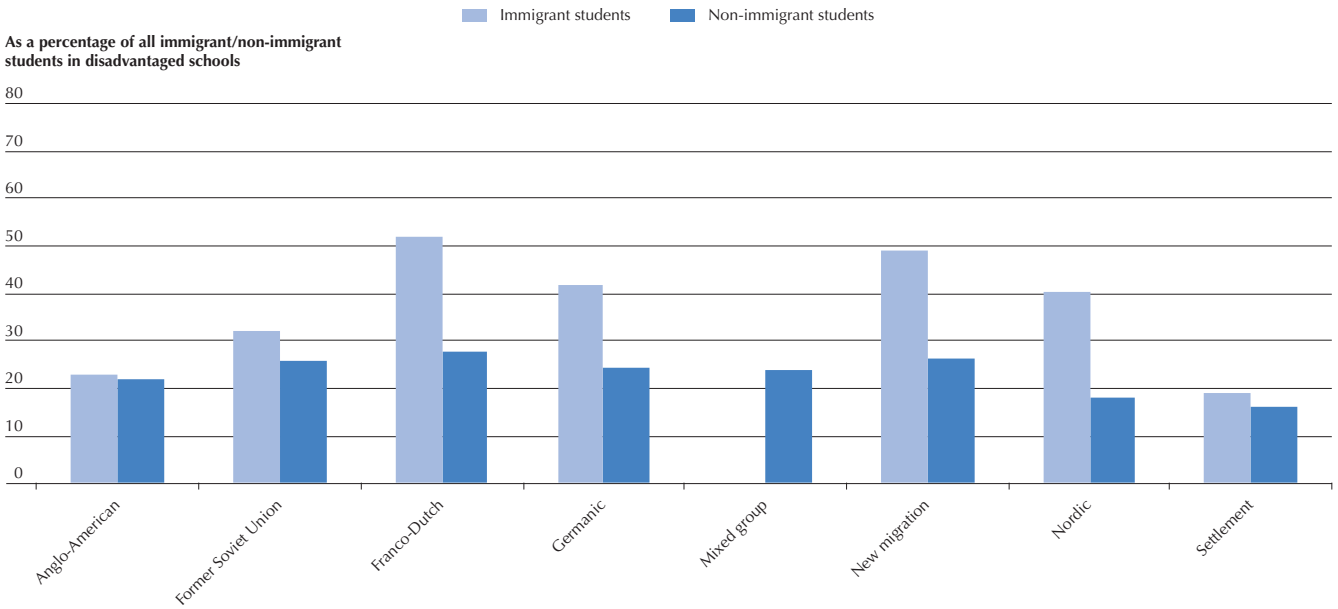


Figure 5.11b. Students with tertiary-educated mothers from low occupation status families



Note: Low status occupations are those with an ISEI (International Socio-Economic Index of Occupational Status) index value lower than 40.

Source: Table B5.8.



Two questions will be addressed by the analysis which follows:

1. What is the association between school disadvantage and reading outcomes overall and by educational attainment of the mother? Can the fact that a mother is highly educated compensate for attendance of their children at disadvantaged schools?

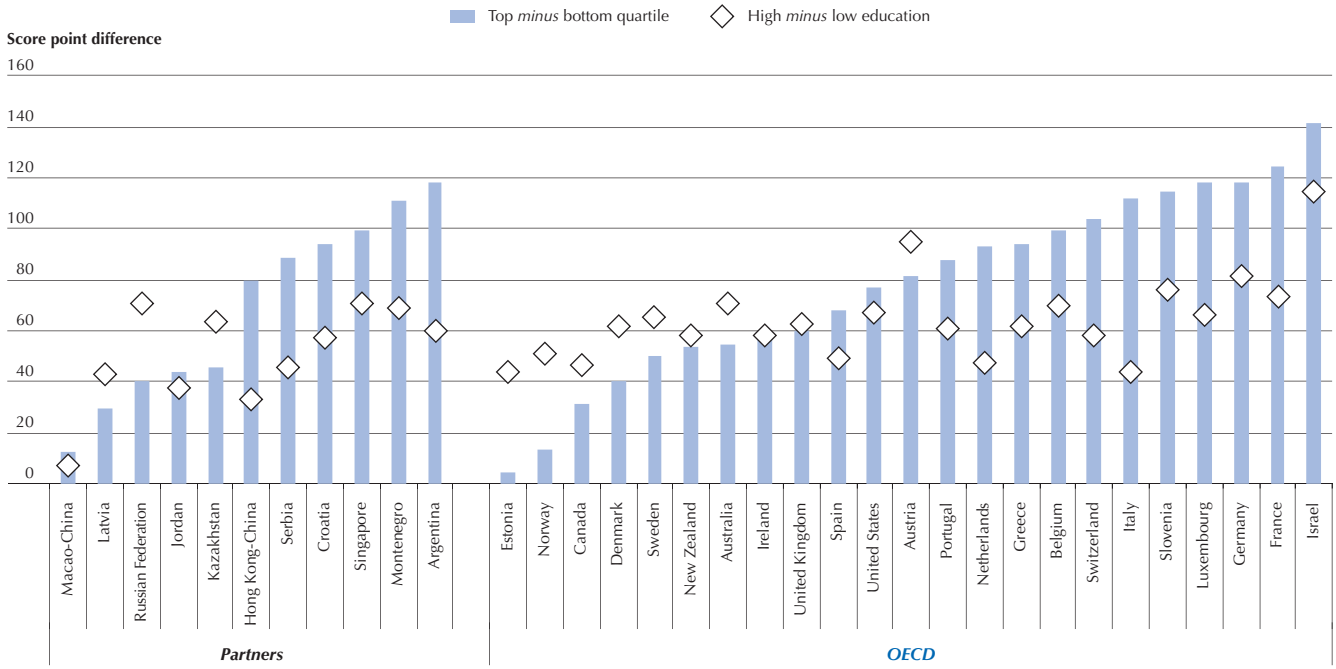
2. Is there an immigrant-specific effect of school disadvantage on outcomes?

For these analyses, individual national samples in PISA are not always equal to the task of examining reading outcomes by both the mother's attainment and the school disadvantage quartile together. This necessitates examining results by the country groupings described earlier, although even here, some cells have had to be suppressed because of insufficient samples.

Figure 5.12 contrasts reading-score differences between students who live in advantaged versus disadvantaged school quartiles and students with high- versus low-educated mothers. The comparison pertains to all students, not only students of immigrant background, to give a general picture of how well national educational systems address educational disadvantage in general. For many countries, the picture is not always a positive one.

▪ Figure 5.12 ▪

Difference in scores between students in the top or bottom school disadvantage quartiles and those with mothers who have high or low education, all students



Countries are ranked in as ascending order of the difference between top and bottom quartile.

Source: Table B5.9.

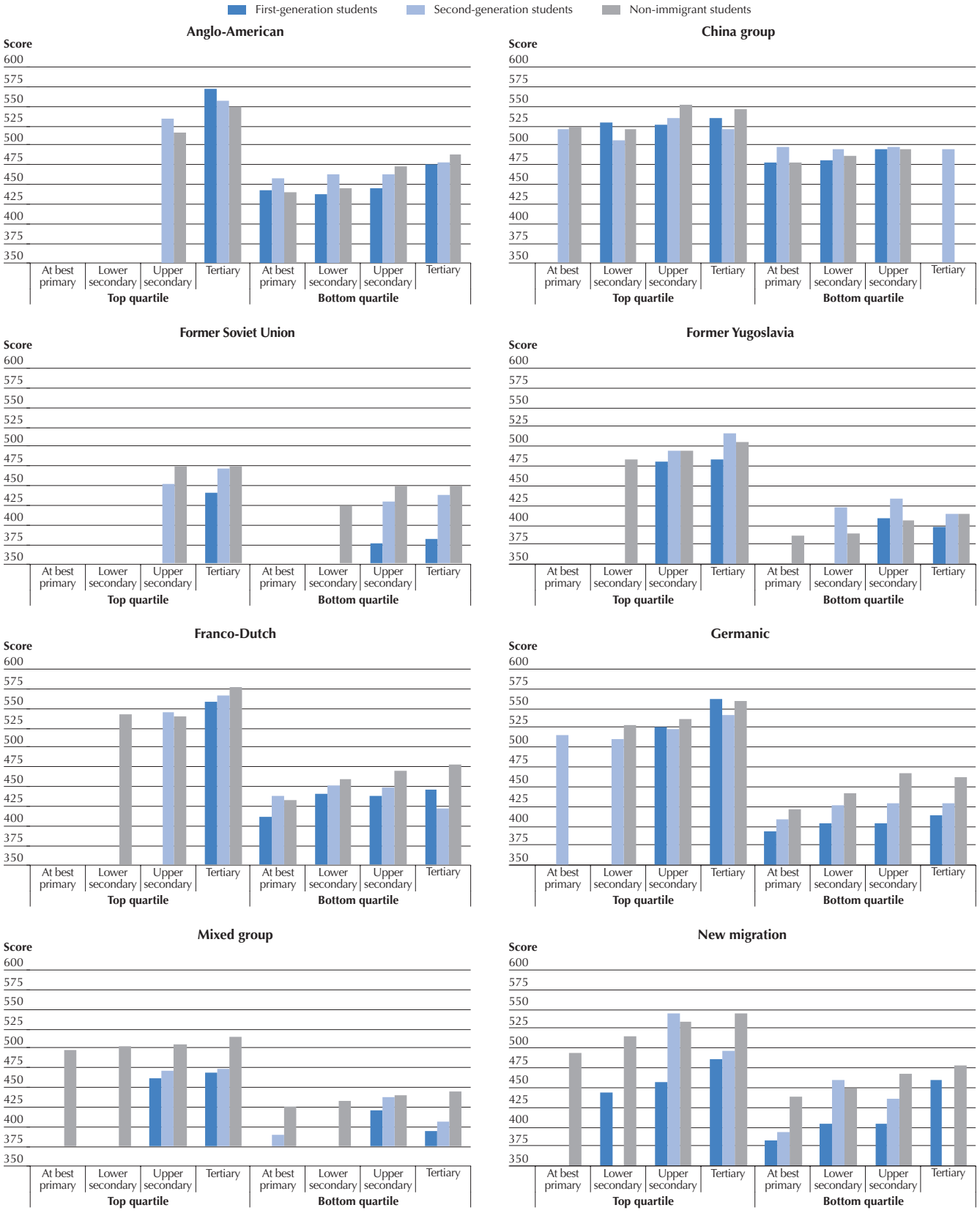
Indeed, for many, whether they are OECD member countries or not, the "penalty" associated with attending a disadvantaged school is much larger than the difference in reading scores between students with high- versus low-educated mothers. The school disadvantage effect is often substantially stronger than the family background effect. In some countries, among them Italy, France, Germany, Slovenia, Luxembourg and Israel, the school disadvantage effect is almost twice as strong. There are very large differences in scores between schools where there are many students of low-educated parents and those where there are very few. In the Nordic countries, the settlement countries (except for the United States, Estonia, the United Kingdom and Ireland) it is generally the reverse situation, that is, the effect of parental educational attainment is more important.

Note that this is not a pattern that is unique to children of immigrants or to certain countries. It appears to hold for both children of non-immigrants as well as children of immigrants, for all country groupings and at all educational levels (Figure 5.13). Note the magnitude of the disadvantage effect (top quartile score minus bottom quartile score) across country groups, for example about 70 points for students of tertiary-educated mothers in the settlement-country group and about 120 points in the Franco-Dutch and Germanic groups (Table B5.9).



▪ Figure 5.13 ▪

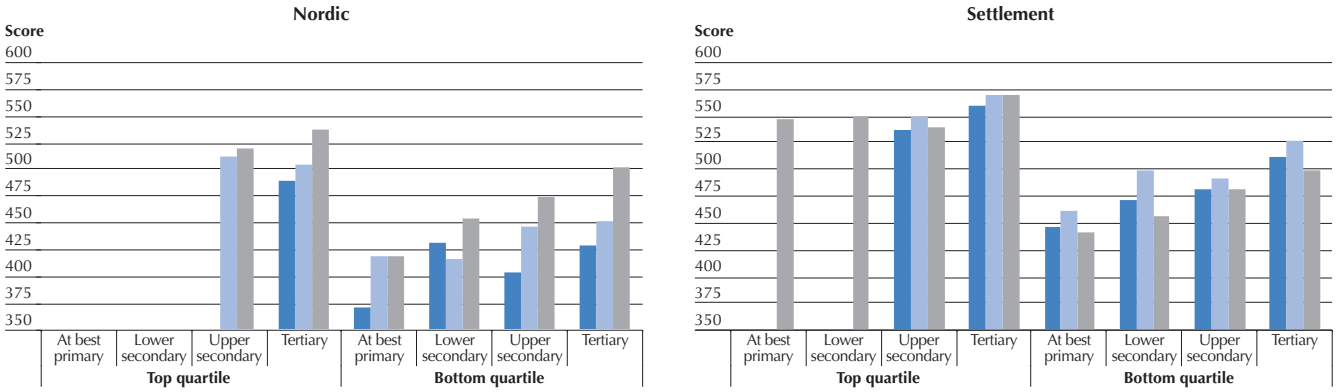
Reading outcomes of students in advantaged and disadvantaged schools, by educational attainment of mother and immigration status





▪ Figure 5.13 ▪

Reading outcomes of students in advantaged and disadvantaged schools, by educational attainment of mother and immigration status *(continued)*



Notes: Estimates for which sample sizes were insufficient to ensure a reliable estimate were suppressed.

Source: Table B5.10b.

There is still an advantage conveyed by having well-educated parents if one attends a disadvantaged school, but it comes in an environment where the average performance of students is far lower. On average, school disadvantage trumps parental advantage every time. School disadvantage appears to effectively lower the outcomes for everyone and perhaps more so for those from a more favourable background. By the same token, in schools where there is less disadvantage, results for students from less favourable backgrounds may improve as well. This may be the explanation behind the flattening of the education gradients cited earlier, in countries where results for children of immigrants are good as well as in those countries where they are lower.

Is there an immigrant-specific effect of concentration, that is, is attendance in a disadvantaged school worse for the children of immigrants than it is for children of non-immigrants? One might expect this to be the case, since lower proficiency in the language of the host country may compound the disadvantage "penalty" and not all immigrant students have spoke the language from an early age, nor is the host-country language necessarily spoken often in the home environment.

Table B5.5 summarises the results of a simple modelling exercise that seeks to estimate this. Since the concentration criterion is based on a measure of educational attainment (of students' mothers), the estimates are provided adjusting for both parental educational attainment as well as for attendance in vocational education, which may also have the effect, in practice if not in intention, of concentrating students from low-educated families in the same schools.[15]

Figure 5.14 summarises the results. All but the new-migration and settlement country groups show the negative effects of the concentration in disadvantaged schools for the children of immigrants. Adjusting for this improves their scores compared to children of non-immigrants by about 9 points, which is somewhat less than the gain attributable to controlling for parental education itself.

But there is also an immigrant-specific effect for these same country groups, that is, the effect of school disadvantage is even more negative for children of immigrants than it is for children of non-immigrants. And removing this effect improves the scores of immigrant students by an additional 10 points on average, compared to non-immigrant students.

If concentration effects seem to have immigrant-specific effects in some educational systems, it is clearly not only the structure of the educational system as it exists for 15-year-olds that is at issue, but much more fundamental issues involving housing policy, school choice and social mix in the classroom, which exert effects at a much earlier stage in the educational system. This makes the question of addressing school disadvantage a particularly difficult one.

The policy choices available to address the issue of disadvantage are diverse. One can attempt to overcome the adverse effects of concentration by investing more in disadvantaged schools. There are a number of ways in which this could be done, such as attempting to attract better teachers, reducing class sizes, and providing additional remedial or tutoring help. Whether these measures would be effective for 15-year-old immigrant students is a point of debate. It is likely that intervention would need to occur much earlier, perhaps even at the pre-primary level. And some attempts to increase funding in disadvantaged schools have not always yielded the expected returns (Bénabou, et al., 2004).

Other policy options would aim to reduce concentration itself, for example through a broader dispersal of subsidised low-cost housing or through school-choice policies. Such polices are broad in scope and would have implications for other, less



disadvantaged neighbourhoods and schools. Again, these would undoubtedly be more effective if implemented early in the school trajectory. School-choice policies could quickly become controversial if, for example, they involved a departure from neighbourhood schools for young children.

The choices here are not simple ones. Increasing funding for disadvantaged schools may be politically the most feasible measure, but perhaps not the most effective. It is clear from Figure 5.11 that attending a disadvantaged school has on average an adverse effect on all students, whatever their origin and whatever the educational attainment of their mothers. If the concentration of disadvantage is not an immigrant-specific phenomenon, immigrant students are still more affected, simply because a higher proportion of them come from disadvantaged families. Addressing the issue of school disadvantage for immigrant students in practice would mean addressing it for all students. This, however, is an objective that goes beyond the immediate goal of successful integration of immigration children.

▪ Figure 5.14 ▪

Differences in reading outcomes between immigrant and non-immigrant students adjusting for concentration of disadvantage at the school level

Figure 5.14a. First-generation and non-immigrant students

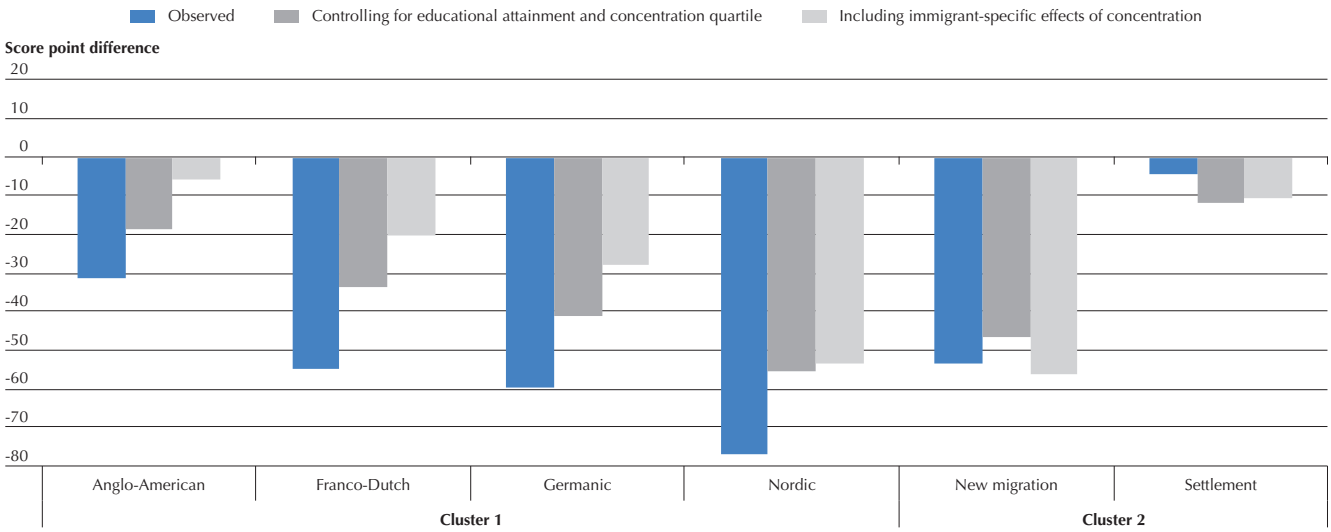
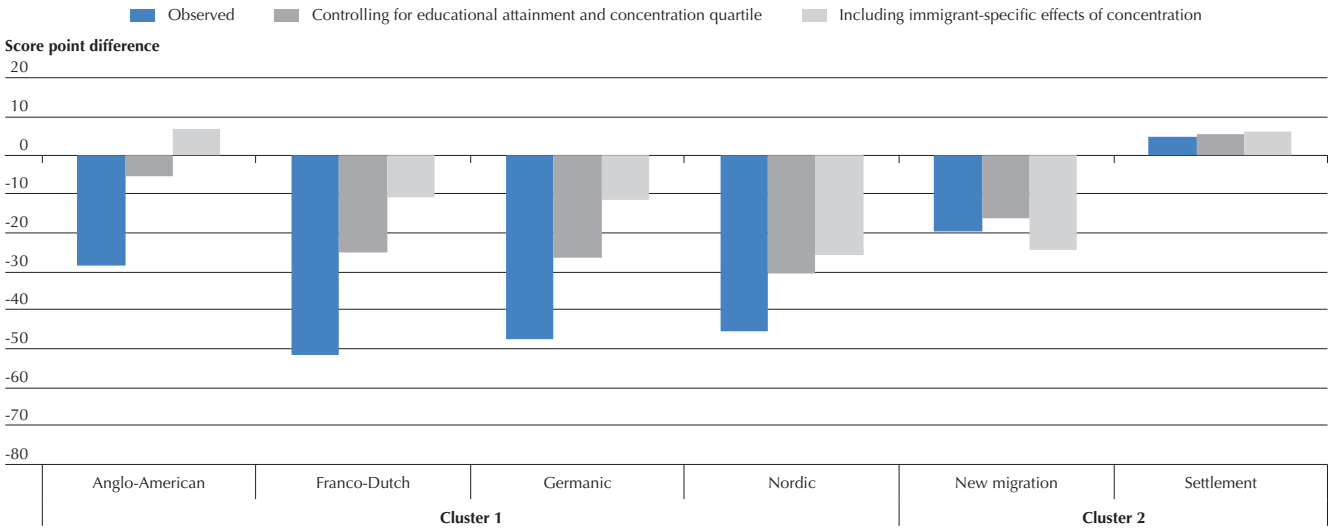


Figure 5.14b. Second-generation and non-immigrant students



Source: Table B5.5



SUMMARY AND CONCLUSIONS

Countries where children of immigrants show less-favourable outcomes tend to have immigrant populations that are poorly educated and tend to show a higher-than-average concentration of these children in disadvantaged schools. This is true regardless of the parents' educational attainment, and seems unlikely to be a consequence of parental choice. It may reflect the fact that parents of students in disadvantaged schools, including those with a tertiary education, tend to have low occupational status, and the lower income this implies may limit their housing and schooling choices.

School disadvantage has a substantial negative effect on reading outcomes, regardless of the parents' level of education; in some countries immigrant children's unfavourable outcomes are as strongly related to the proportion of immigrant children in schools as to low parental attainment levels. This is observed even when attendance in vocational programmes has been accounted for. These results raise much broader questions concerning the mechanisms and processes that tend to concentrate disadvantage in geographically distinct areas. These exist in all societies and are generally income-related, but they appear to have a particularly penalising effect on immigrants in some countries.

One notable observation based on the analyses described in this chapter is that immigrant-specific effects are everywhere. The immigrant condition is characterised precisely by differences compared to the native-born population. The objective of policy is to ensure that over time, these differences are reduced and that social and economic outcomes of immigrants are similar to those observed for the non-immigrant population. Children of immigrants, however, are not necessarily immigrants themselves, and even those born abroad may have arrived at an early age. Still, the immigrant experience clearly has an effect on them, even when they have been fully educated in the host country. The outcomes observed at age 15 would thus appear to reflect the influence of the home and school environments from an early age. If interventions are to address disadvantage effectively, they need to redress early imbalances.

The focus on the convergence of (or inequality in) outcomes for immigrants and their children is important, but so is attention to the processes that "generate" those outcomes. Mainstream structures and institutions do not always seem to have quite the same impact on children of immigrants as they do on children of non-immigrants. Examining the specific impact of policies, socio-economic factors and institutions on immigrants and their children is one avenue of approach that merits a closer look.

Notes

1. Past migration tends to have a significant influence on the composition of future migration, because knowledge of opportunities and of possible impediments is transmitted back to origin countries, which tends to facilitate migration from the same sources. Past migration to the United States has generally been skill-biased, which has undoubtedly contributed to maintaining this, despite the fact that it has been largely family based, rather than skill selected. Much current irregular migration to the United States, on the other hand, tends to be of lower educated migrants, which has resulted in an immigrant population of lower attainment than in the past.
2. Labour force survey estimates suggest lower percentages of immigrants with low levels of education, but the latter had on average more children than those with higher levels.
3. The term "immigrant children" will be used throughout this chapter to mean "children of immigrants"; it may thus include students whose parents were born abroad but who were themselves born in the country. Likewise the term "native" will be used to designate the children of native-born parents.
4. The usual definition of first- and second-generation here is being used, that is, persons born abroad/in the country, respectively, of two immigrant parents.
5. The cut-off rule applied is that an estimate must be based on at least thirty observations from at least five schools in order to be published.
6. If the mother's education was missing or there was no mother in the household, the father's attainment was used.
7. The Cluster procedure in SAS®, using average linkages.
8. Four "outlier" countries were excluded from the exercise, whose immigrant populations are unusual in a number of respects. They are Brazil and Mexico where the immigrant populations are very small and where children of immigrants have very poor PISA results compared to children of the native-born, and Dubai (UAE) and Qatar, where the situation is at the other extreme, with very large immigrant populations (close to or greater than 50% of the total population) and reading outcomes for children of immigrants that are far superior to those of children of the native-born.
9. The attainment differences are measured in terms of the percentage of students with mothers who have at least upper secondary education.
10. Only countries for which the sample size for the immigrant subgroup was at least one hundred were retained for these tables.



11. See note to Figure 5.1.

12. By gradient here, we mean, roughly speaking, the general slope of the maternal education / reading assessment curve.

13. The term district here is used in a very broad sense, recognising that educational policies may be determined at the national, regional or even municipal level.

14. In this context, low occupation status is defined as an HISEI less than 40, which roughly corresponds to service workers (other major groups included are agricultural workers, production and related workers, transport equipment operators and labourers). Occupational data for both the student's father and student's mother were obtained by asking open-ended questions. The response were coded to four-digit ISCO codes (ILO, 1990) and then mapped to the international socio-economic index of occupational status (ISEI) (Ganzeboom, et al., 1992). Three indices were obtained from these scores: father's occupational status (BFMJ); mother's occupational status (BMMJ); and the highest occupational status of parents (HISEI) which corresponds to the higher ISEI score of either parent or to the only available parent's ISEI score. For all three indices, higher ISEI scores indicate higher levels of occupational status. For more info, see: *http://arno.uvt.nl/show.cgi?fid=63721*.

15. Vocational schools are defined by means of the ISCEDO variable, as ISCEDO=2 or 3. PISA 2009 collected data on study programmes available to 15-year-old students in each country. This information was obtained through the student tracking form and the student questionnaire. In the final database, all national programmes will be included in a separate variable (PROGN) where the first three digits are the ISO code for a country, the next two digits are the sub-national category, and the last two digits are the nationally specific programme code. All study programmes were classified using the International Standard Classification of Education (ISCED). The following indices are derived from the data on study programmes: programme level (ISCDL) indicating whether students are on the lower or upper secondary level (ISCED 2 or ISCED 3); programme designation (ISCEDD) indicating the designation of the study programme (A = general programmes designed to give access to the next programme level, B = programmes designed to give access to vocational studies at the next programme level, C = programmes designed to give direct access to the labour market, M = modular programmes that combine any or all of these characteristics; and programme orientation (ISCEDO) indicating whether the programme's curricular content is general, pre-vocational or vocational.

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6

Post-Secondary Attendance of Immigrants in Switzerland and Canada

Is the performance gap between 15-year-old immigrant and non-immigrant students reflected in later outcomes, such as educational attainment? This chapter uses data from Switzerland's and Canada's longitudinal follow-ups to PISA to evaluate the extent to which differences in performance in PISA are associated with enrolment in tertiary education by age 24. These two cases highlight the differences and similarities in educational outcomes between two different educational systems and immigration regimes and the factors associated with these outcomes.



INTRODUCTION

In most countries, immigrant students face a considerable skills and knowledge disadvantage at age 15. A more disadvantaged socio-economic background is only part of the reason for the performance gap between immigrant students and non-immigrant students. In most cases, immigrant students underperform even when compared to those non-immigrant students who share a similarly disadvantaged socio-economic background.

Beyond skills and knowledge at age 15, how persistent is the disadvantage of immigrant students in their educational pathways? Is the future educational and professional career of the children of immigrant related to their performance in PISA? Does the skill and knowledge disadvantage at age 15 translate into a disadvantage in later educational outcomes? In particular, are immigrant students less likely to access a post-secondary educational institution?

There is considerable research on the relationship between immigration status and educational attainment. In particular, in North America, immigrant students on average achieve higher levels of education than their counterparts with domestic backgrounds (Picot and Hou, 2010), while in Europe the opposite is typically observed (Heath, et al., 2008). Few studies have addressed the role of the student's secondary school performance in explaining the difference in educational attainment between immigrant and non-immigrant students. That dimension is the focus of this chapter.

More specifically, the chapter focuses on the association between a performance in PISA and access to tertiary education for immigrant students. The objective ideally is to identify education or migration policies that contribute to the successful integration of immigrant students in host societies. Can immigration or education policy address skill disadvantage at age 15 among children of immigrants? Are there important differences between educational systems that help immigrant students overcome initial disadvantage to achieve high levels of educational attainment?

The chapter first compares and contrasts the factors associated with students' access to tertiary education in Canada and Switzerland. These two countries have very different immigration and education systems. In addition, these two countries were selected for this study because they are two of the few countries that possess the longitudinal data necessary for such a study. The Canadian Youth in Transition (YITS) was launched in 2000 along with PISA 2000 and has asked a follow-up survey every two years since 2000. This study thus far includes data up to participants' 23rd year, cycle 5 of YITS. The Swiss Transition from Education to Employment (TREE) survey followed up PISA 2000 students every year. This study also contains data until students' 23rd year, the seventh round of TREE. Box 6.1 provides more details on these datasets.

A focus on low secondary school performers is this chapter's second unique feature. In addition to conducting the analysis for all students, the educational attainment of students who do relatively poorly on PISA tests in secondary school is examined closely. Box 6.2 provides details on how lowest performers are defined. Are these students necessarily relegated to poor educational attainment outcomes? Or do significant numbers of these students continue to the post-secondary level, and if so, what distinguishes those who continue from those who do not? Does immigration status play a major role? This chapter addresses these questions.

Box 6.1 Longitudinal surveys in Canada and Switzerland: The YITS and TREE data

The analyses for both Canada and Switzerland utilise longitudinal surveys that tracked secondary school students from age 15 in December 1999 to age 23 in December 2007. Both surveys start with the national student sample of 15-year-olds[1] from the PISA 2000 round of assessment. PISA 2000 assessed reading, mathematical and scientific literacy among 15-year-olds, with a primary focus on reading literacy, the measure used in this analysis. PISA 2000 also collected information on social, cultural, economic and educational factors believed to be associated with student performance.

Based on this 15-year-old student sample from PISA 2000, both Canada and Switzerland implemented a longitudinal survey designed to examine the major transitions in young peoples' lives as they move through the educational system into the labour force. The Swiss TREE (Transition from Education to Employment) survey started with an original sample in the first wave of 5 532 15-year-olds. By the 7th wave, 3 900 23-year-olds remained in the sample, for a response rate of 62%.[2] Data from both the first-and 7th wave are used in this paper, and the sample is restricted to those students still in the sample in the 7th wave.

The Canadian YITS (Youth in Transition Survey) started in wave 1 with 29 687 respondents, and by wave 5 at age 23, 14 751 remained, for a response rate of 50%. In both surveys, the data were reweighted to reduce the sample bias introduced by non-response, and to compensate as much as possible for sample attrition.[3]

More details can be found in the research paper on which this chapter is based (Picot and Hou, 2012).



Box 6.2 **Defining low and high performers in secondary school**

Literacy scores in PISA are used to identify low and high secondary school performers. PISA defines reading literacy quite broadly, as the ability to understand, use and reflect upon written texts (OECD, 2001a). This goes well beyond the ability of individuals to simply read a text. It is a combination of the student's level of reading ability, as well as cognitive skills at age 15.

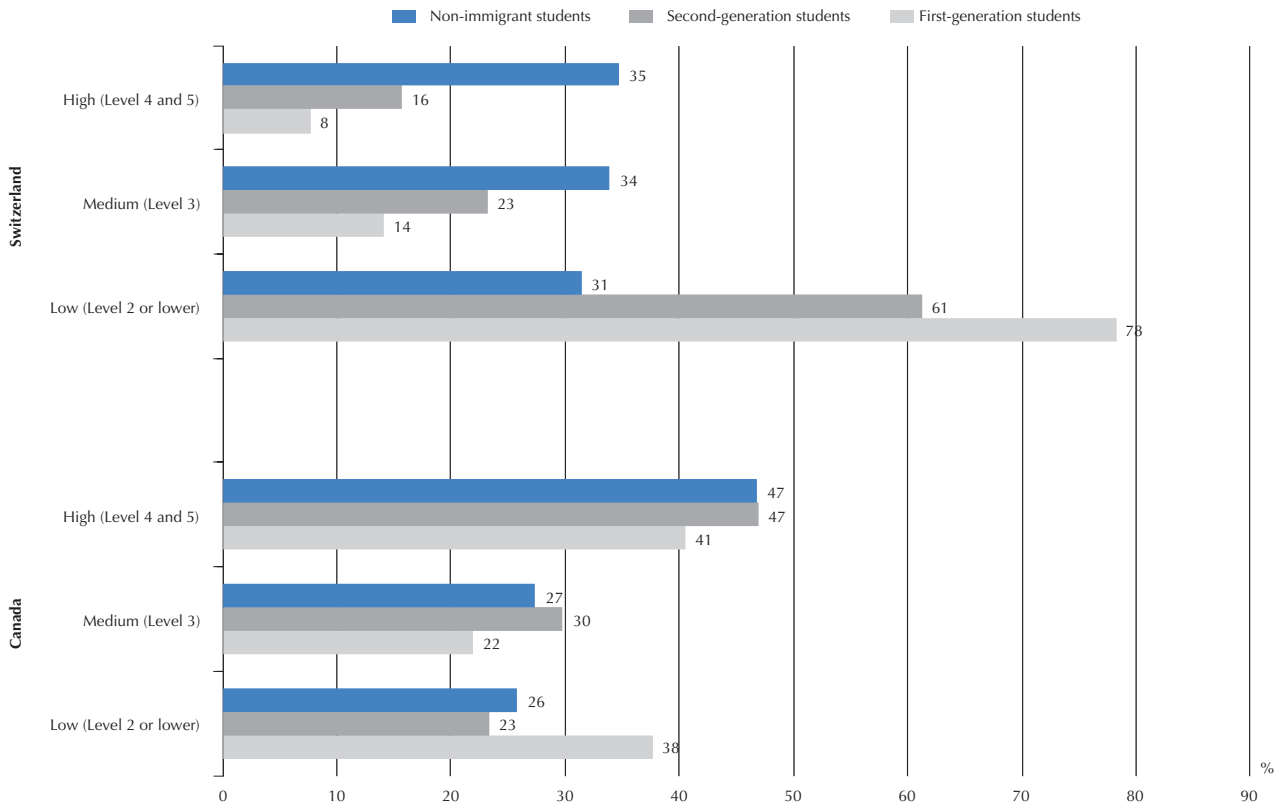
PISA 2000, used here, assesses the extent to which 15-year-old students have mastered reading skills, and have the cognitive literacy abilities to succeed in the future (OECD, 2001a). To do so, it measures ability in three major domains: *i)* the ability to read various types of text, including different types of prose, as well as forms, charts and diagrams; *ii)* the ability to retrieve, understand, interpret and reflect upon text; and *iii)* to be able to relate the text to its intended use, such as private use, public documents, work-related use or for educational purposes. PISA literacy scores provide a reasonable basis for the categorisation of 15-years-olds into low and high performers; those students who have mastered and demonstrated the literacy skills, broadly defined, that are required for future academic advancement and for participation in society, and those who have not.

PISA reading scores are grouped by the OECD into five proficiency levels, with Level 5 being the highest. Students with Level 1 or below fail to display the most basic reading skills. In this paper, lowest performers include those in Levels 1 or 2. These are students who received a score of 480 or less on the PISA test. High performers for our purposes are students who attained Levels 4 or 5, that is, a score of 553 or higher, also referred to as top performers.

For Canada, 26% of students are classified as lowest performers, and 47% as high performers. Switzerland has a higher percentage of lowest performers (44%) and a lower percentage of high performers (27%) (Figure 6.1 and Table B6.1).

▪ Figure 6.1 ▪

Distribution of students by PISA reading level



Source: Table B6.1; Picot and Hou (2012).



SKILLS AND KNOWLEDGE AT AGE 15 AND TERTIARY ATTENDANCE

Outcomes for the entire student population and for low performers

Students' academic and cognitive performance at the end of compulsory schooling is positively correlated with access to tertiary. PISA reading literacy tests, administered at age 15, provide one means of assessing the association between secondary school performance and the enrolment in tertiary education.

In Canada, a recent OECD study found that students who obtained the highest PISA scores (Level 5) were 20 times[4] more likely to attend a university degree than those registering Level 1 PISA scores (the lowest), and twice as likely to attend college[5] (*Pathways to Success*, OECD, 2010a). In Switzerland, researchers found that almost one-half of students age 15 who scored the highest (Levels 4 and 5) of the PISA reading literacy test continued to the tertiary level six years later, as compared to only 8% of those scoring at reading Level 2 (Meyer and Bertschy, 2011).

Few studies focus specifically on the tertiary educational outcomes of lowest performers.[6] Recent research on Australian longitudinal data showed that motivation was a key determinant of student's later educational and labour market outcomes among lowest performers at age 15. The socio-economic background of the student was also important, as was having some form of educational goal or plan (Thompson and Hillman, 2010). Similar studies in Switzerland concluded that a surprisingly large number of low secondary school achievers (those with PISA reading literacy Level 2 or below) complete upper secondary with a VET (vocational) diploma. However, they did not examine the tertiary participation of low secondary school achievers (Stalder, et al., 2011).

An analysis of drop-out-rates using the Canadian YITS showed that parental aspirations are major determinants of the tendency to drop out of school after age 15, above and beyond any effect of the PISA score at age 15, family background and other variables (Foley, et al., 2010). This was particularly true for lowest performers at age 15 (i.e. those with low PISA reading scores). In fact, they conclude that after accounting for PISA reading scores and parental valuation of education, parental educational attainment has no direct effect on the student's probability of dropping out after age 15. Similar results are evident for Switzerland, except that the outcome variable is the likelihood of making the transition to a particular upper secondary school stream, typically a vocational or academic stream. However, after controlling for PISA score, parental background has been shown to have little effect on the outcomes of low and high ability students (Falter, 2009).

Outcomes for immigrant students and for lowest performers

Regarding the educational attainment gap between immigrant students and those with Canadian-born parents, the early Canadian research suggested that the most important determinant was parents' education, as well as age and residential location (Boyd 2002; Hum and Simpson, 2007; Bonikowska, 2008). However, parental education may be a proxy for other effects, such as the aspirations of the parents regarding the child's educational outcomes, the child's high school performance, educational resources made available to the child, and the valuation of education by the parents or the student. But even after accounting for many determinants, earlier research found that perhaps one half of the positive gap in educational attainment between the children of immigrant and domestically-born parents persisted. Ethnic group differences also matter in the likelihood of attending the tertiary level (Abada, Hou, and Ram, 2009).

More recent Canadian research uses the YITS to address issues related to attendance at the tertiary level among immigrant and non-immigrant students (Childs, et al., 2010). They find that parental aspirations regarding university attendance are higher among immigrant students, and in particular among immigrant families from source regions such as China, India, other Asian countries and Africa. Regarding low-achievers, they observe that students from immigrant families who have low PISA scores are more likely to attend tertiary level than their low-scoring counterparts from domestic families.

Recent European research has also shown that there are significant educational attainment gaps between immigrant students and those from non-immigrant families. Heath, et al. (2008) find that second-generation students whose parents came from less economically developed origins tend to have much lower educational attainment (before controlling for social background) than students from non-immigrant groups. However, just as in Canada and the United States, second-generation minorities of Indian and Chinese background often outperform children of non-immigrant families educationally (unconditionally). They find that among second-generation groups of European ancestry, most of the negative gap in educational attainment between immigrant and non-immigrant students can be accounted for by socio-economic background. They also point out that educational aspirations are often much higher among immigrant than domestic-born families.

In Switzerland, in particular, recent research showed that after controlling for socio-economic background variables, PISA literacy scores at age 15 and the student's secondary school stream, immigration background has no effect on the likelihood of attending tertiary level education (Meyer and Bertschy, 2011). However, as they point out, this does not mean that immigration background is not important. Its effect may work through other variables, notably the type of secondary school stream in which immigrant students find themselves, as compared to those with Swiss backgrounds.



DIFFERENCES IN IMMIGRATION AND EDUCATIONAL SYSTEMS OF CANADA AND SWITZERLAND

To understand differences across countries in the role of student immigrant background on participation at the tertiary educational level, and the outcomes of low performers, an overview of the basic elements of the educational and immigration systems of the two countries may be helpful.

Differences in immigration systems

In part as a result of differences in the immigration systems, the socio-economic characteristics of immigrant-background students are very different in Canada and Switzerland. This not surprisingly has an impact on differences in tertiary attendance between immigrant and non-immigrant students. These background differences are accounted for in the statistical models, which assess to what extent socio-economic background accounts for the gap in educational attainment between immigrant and non-immigrant students.

Canada, like Australia and New Zealand, has an immigration system that focuses on highly educated/skilled immigrants. Immigrants have, on average, educational attainment levels above that of the Canadian-born. This process has a positive influence on both the social and economic integration of immigrants, as well as the quite successful educational outcomes of the immigrant students (see Picot and Hou, 2010 for a review).

In contrast, Switzerland, like many European nations, has had an immigration system which in the past was more oriented towards the migration of lower-skilled workers.[7] This approach also has implications for the educational outcomes of the immigrants and their children.

Differences in education systems

The Canadian and Swiss education systems are also structurally very different. The most important difference is found on how schooling is organised and in particular in policies that group or select students across differentiated programmes.

The Swiss system is highly selective. Students are streamed at a very early age, starting at the sixth or seventh grade, into roughly three streams: an upper school track with more intellectually demanding courses, an intermediate track, and a basic track.[8] Only 3% of students from the "basic" track ultimately enter tertiary level education by age 23, compared to 30% of those in the upper level track (Meyer and Bertschy, 2011). Following compulsory school, students move into upper-secondary, which is also heavily segmented. General education is provided in the Gymnasium stream, which typically leads to university.

In Switzerland students with a migrant background are over-represented in the lower level tracks, which affects their tertiary educational opportunities (Meyer, 2009).[9] Furthermore, 24% of students with Swiss parents were in streams that prepared for university entrance, compared to 19% of second-generation students, and 12% of first-generation (Meunier, 2010).

Vocational programmes play an important role in the Swiss educational system. After completing secondary education most students in Switzerland (between 40% and 70% depending upon the region) enter a three- to four-year vocational training (VET) programme, usually through a dual apprenticeship where training is done both at a school and with a firm. The VET programmes ensure that students have a reasonable chance to obtain a qualified job, which may reduce the tendency to continue to the tertiary level. While typical of many European educational systems, such labour-market-oriented programmes in secondary school are not available in Canada, where labour market-oriented education or training is provides after secondary completion.

At the tertiary level in Switzerland, the level beyond upper secondary, there are two major streams (in the international classification: "Tertiary A", and "Tertiary B").[10] The most advanced, Tertiary A, includes longer university programmes leading to a bachelor's, master's or higher degree. Tertiary B includes mostly higher level vocational education programmes in specialised areas. At age 23, roughly 25% of the original 15-year-old PISA cohort are in Tertiary A, 5% in Tertiary B (OPET, 2011).[11]

The Canadian educational system has a simpler structure. There is little or no streaming during elementary and secondary schooling in most provinces, and there is significant freedom in course selection. As a result of this course selection by students, some are eligible to apply to more types of post-secondary options, such as university or college, than others. A very small percentage of students enter secondary vocational schools. Most job-oriented vocational education is conducted in the post-secondary college system. In contrast, in Switzerland students need not attend the post-secondary system to obtain such training. This obviously affects the level of tertiary participation in the two countries. In the province of Quebec, upper secondary school consists of three years, following eight years of primary and lower secondary followed by two or three years in colleges (CEGEPS), before entrance into university programmes.

At the post-secondary (tertiary) level, most provinces have both community colleges and universities (Quebec has the CEGEP system plus universities). Universities are degree granting institutions at the bachelors, master and doctoral (PhD level. Community colleges include both advanced vocational programmes designed for labour market entry, as well as, in some provinces, an academic stream that can lead to university attendance at a level above standard entry level.



Differences in average performance in PISA 2000

PISA literacy scores are, in general, higher in Canada than in Switzerland. This was true in PISA 2000 and PISA 2009, both of which concentrated on reading, rather than math or science (OECD, 2001a; 2010b). In PISA 2000, the beginning of both longitudinal follow-ups analysed in this chapter, the mean literacy performance score in Canada was 534 score points and 494 score points in Switzerland. The average for all OECD countries was 500 score points (the standard deviation across the OECD was set to 100 score points). In PISA 2009, the scores were 524 for Canada and 501 for Switzerland, with an OECD average of 494.

In Switzerland, the reading ability as measured by PISA scores was much lower among immigrant students. Non-immigrant students (the 3rd-and-higher generation) registered a score of 514, second-generation students performed at 460 score points, and first-generation students at 412 score points (OECD, 2001a). For many of these foreign-born students the language of assessment would have been a second language, and some may not have had many years experience in the school system of their host country. Even among students born in Switzerland but with immigrant parents (second-generation students), the language spoken at home may be different from the language of assessment.

In Canada, Canadian-born students with Canadian-born parents and those with immigrant parents have approximately the same average PISA score, at 538. Given their higher educational hopes/aspirations and higher parental educational attainment, one might have expected the second generation in Canada to register higher PISA scores than their 3rd-and-higher generation counterparts. This was not the case. First-generation students, who are immigrants themselves, have slightly lower scores, at 511 (OECD, 2001a). All of these groups have scores above the OECD average score of 500, however.

EDUCATIONAL ATTENDANCE BY IMMIGRANT BACKGROUND: THE LIKELIHOOD OF ATTENDING TERTIARY LEVEL

This section presents the results of an analysis of differences across immigrant background in attendance to a post-secondary education. Box 6.3 describes in detail the analysis. The analysis is conducted in three steps: *i)* an initial analysis of simple differences describes observed differences; *ii)* then the analysis compares only those individuals sharing similar performance levels and individual characteristics; *iii)* the last step adds country specific variables measuring the individual and family attitudes towards higher levels of educational attainment.

Box 6.3 **Definitions and statistical methods**

Linear probability models (i.e. ordinary least squares models) are used in the statistical analysis section of the paper.[12] The dependent (outcome) variable is the probability of attending a post-secondary (tertiary) institution by age 23. The sample for both countries includes all students in the PISA 2000 sample (at age 15) who were still in the sample at age 23.

Three models are run on two populations, students who are low performers in secondary school, and all students. To save space, the regression coefficients are not reported in this chapter, but can be found in Picot and Hou (2012) along with more detail on the methods used.[13]

Model 1: Immigrant background model

Immigrant background is the only independent variable in model 1.

Immigrant background has four levels:

- Immigrant (foreign born) students who immigrated prior to the age of 15, referred to as a first-generation students.
- Students born domestically with two immigrant (foreign born) parents, referred to as a second-generation students.
- Students with parents who are domestically born (the third-plus generation), referred to as non-immigrant students.

The category non-immigrant students is selected as the reference group. Hence, the coefficients on the immigrant background variable give the difference in the raw data in the probability of attending a post-secondary institution between students in a given immigrant group (say second-generation) and non-immigrant students.



Box 6.3 Definitions and statistical methods *(continued)*

Model 2: Student performance, immigrant and socio-economic background

Model 2 utilises the independent variables that are common to both data sets. They include, in addition to the immigrant background variable, gender, parents' highest level of education, family type, number of siblings, language spoken at home, the size of the city of residence, and the PISA reading score.

The coefficient on the immigrant background variable in model 2 reflects the difference in the probability of attending a post-secondary institution after having controlled for the additional independent variable in the model.

Hence the difference in the immigrant background coefficient between model 1 (raw data) and model 2 indicates how much of the post-secondary attendance gap of interest (say between the second and third and higher generations) is "explained" or accounted for by the independent variables included in model 2.

Furthermore, a decomposition is carried out which indicates how much each of the independent variables contributed to this "explained" gap. This is important, since it is of interest to know which variables are important in accounting for the gap.

More detail on the decomposition can be found in Picot and Hou (2012).

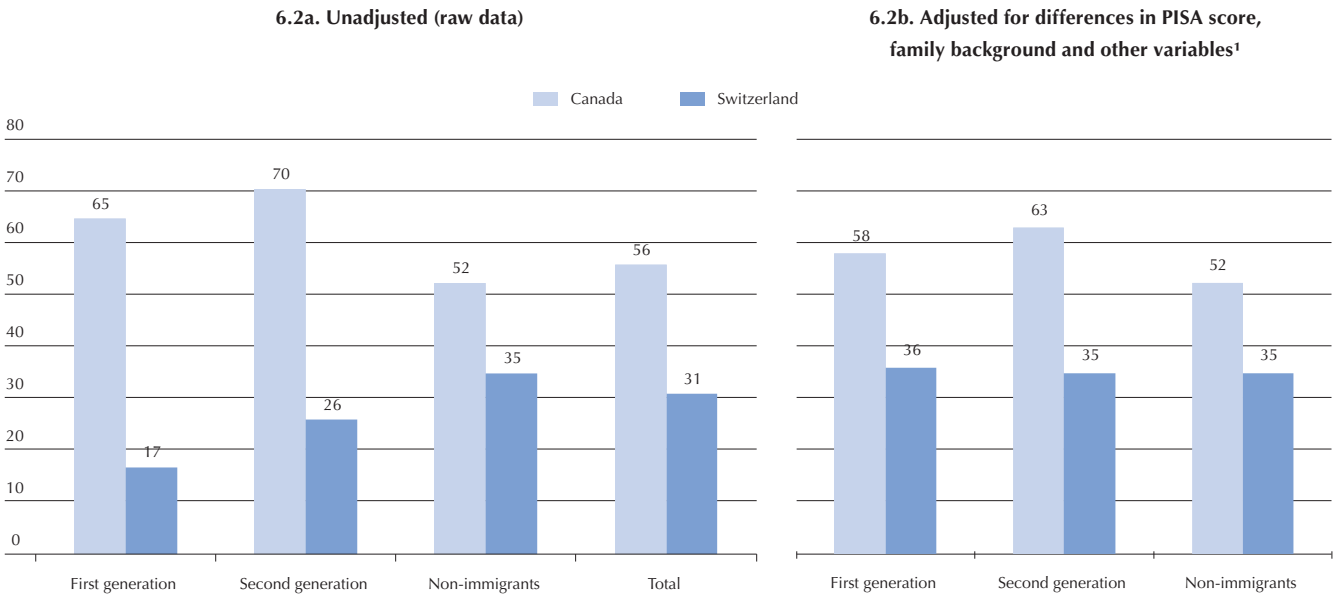
Model 3: Attitudes of students and parents towards post-secondary education

Model 3 includes all the independent variables in model 2, plus variables unique to each country. For Switzerland, this means the student's secondary school stream and the language of the canton of residence. For Canada, the additional variables include whether the parent hopes that the child will get at least one university degree, whether the student hopes to get at least one degree, whether the family has made some financial preparation for post-secondary education, and whether the student expects to have a job that requires a university degree.

The "explained" gap in this case indicates that portion of the original gap (in the raw data) that can be accounted for by the extended list of independent variables included in the model. The same decomposition technique is applied to the results from this model to determine the contribution of each variable to the "explained" gap.

▪ Figure 6.2 ▪

Prevalence of university attendance by age 23, by immigrant background



1. The important other variables include, in Canada, students' and parents' aspirations regarding university, and in Switzerland, the student's secondary school stream.

Source: Picot and Hou (2012).



Canada

In Canada, first-generation students are 12 percentage points more likely to attend a post-secondary institution than non-immigrant students. For the second-generation, the advantage over non-immigrant students is around 18 percentage points (Figure 6.2). These are small relative differences because in Canada more than 50% of non-immigrant students access a post-secondary education by age 23.

Among first-generation students, adjusting for differences in background variables accounts for about 40% to 50% of this gap (Figure 6.3a). A number of variables account for this "explained" portion of the gap, including differences in the students' and parents' aspirations (accounting for almost one-half of the explained gap), as well as differences in parents' education, geographical location, and homework time, each accounting for about one-fifth of the explained gap (Figure 6.3a). Taking into account the PISA scores tended to reduce the likelihood of the first-generation attending post-secondary, but this effect was more than offset by the other positive effects.

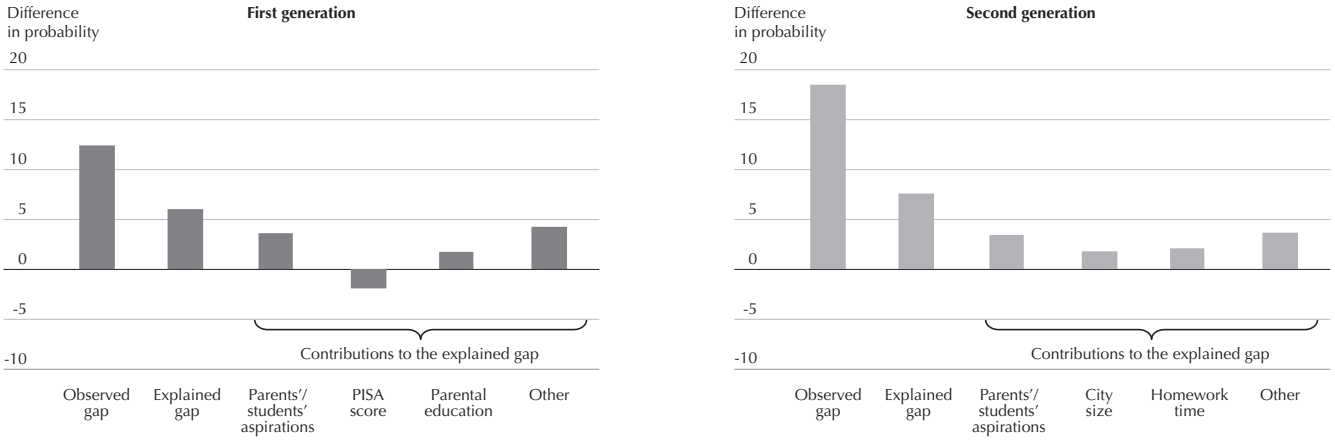
Among the second-generation students, about one-half of the gap can be accounted for by the independent variables related to socio-economic background, performance and attitudes towards tertiary education (Figure 6.3a).

Of this "explained" gap, parents' and students' aspirations accounted for about one-third, geographical location and homework time each about 15%. There were no differences in PISA scores between the second-generation and non-immigrant students, so this variable is not important in this case. Differences in parental education also were not seen to be important in the explanation.

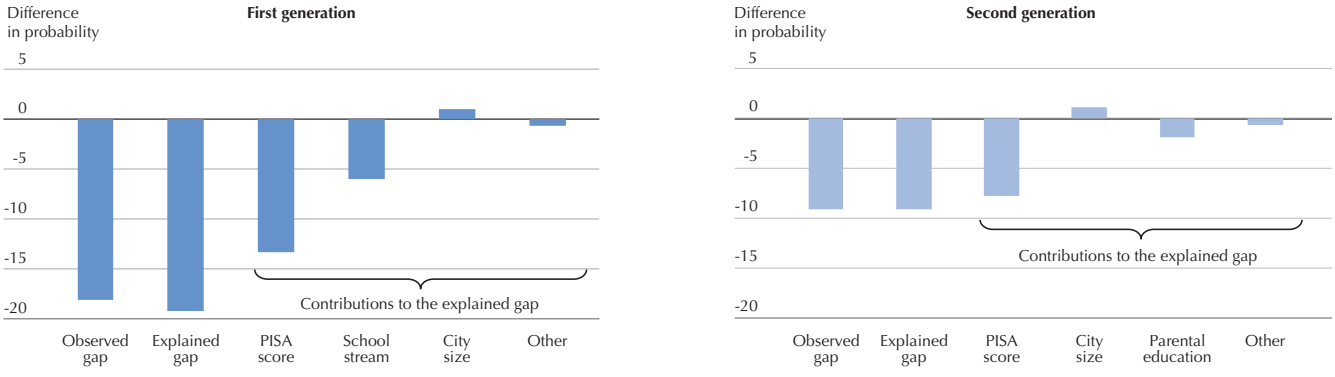
▪ Figure 6.3 ▪

Factors associated with the gap in university attendance across immigrant backgrounds

6.3a. Canada



6.3b. Switzerland



Source: Picot and Hou (2012).



Switzerland

For Switzerland, first-generation students were 18 percentage points less likely to attend the tertiary level by age 23 than their peers without an immigrant background. Second-generation students were 9 percentage points less likely to attend a post-secondary educational institution (Figure 6.2).

In both cases, the entire gap could be accounted for by performance, individual background characteristics and attitudes towards higher education (Figure 6.3b). In fact, the differences in the PISA score between the immigrant and non-immigrant students accounted for the entire observed performance gap (model 2). After considering other variables (model 3), including secondary school stream, the explanatory power of performance in PISA is weakened. However, since a student's secondary school stream is in part a reflection of academic performance, both the PISA and the "stream" variables are reflecting academic performance to some extent. Parents' education and geographical location account for some of the gap, the former in a negative and the latter in a positive sense, but their effects are very small compared to the PISA variable.

DIFFERENCES IN OUTCOMES BY SOURCE COUNTRY BACKGROUND

Earlier research clearly shows that the educational attainment of first- and second-generation varies by ethnic group/source country of the parents. Source country, likely serving as a proxy for a host of variables that it may be difficult to disentangle, is one of the important determinants of the educational attainment of the immigrant students (Picot and Hou, 2010; Heath, 2008).

Source country may reflect differences in the value placed on education by the parents, the expectations of the parents regarding educational attainment, the support available from the ethnic group as a whole ("ethnic capital"), the educational attainment and occupational status of the parents, which varies by ethnic groups, the quality of the school systems to which students are exposed, home language effects, and other cultural differences influencing life-style choices.

In both Canada and Switzerland, origin country plays a role but there is evidence of important similarities across very different regions. The results suggest there is an immigrant effect but that this depends on whether the country of origin is similar or not to the host country. For example, Chinese students in Canada are more likely to go to university than non-immigrant students, but so are students from Africa or from eastern Europe. In Switzerland, the results for immigrant students with a German-Austrian-French-Belgium background are more similar to non-immigrant students than students with immigrant backgrounds from other source countries.

Country of origin profiles in Canada and Switzerland

In Switzerland, a little over one-quarter of the immigrant-background students assessed in PISA 2000 were from, or had parents who were from, developed European economies (Table B6.2). About 40% were born in, or had parents who were born in, the less developed economies of the former Yugoslavia, Albania, Kosovo or Turkey. The remaining roughly one-third had Spanish or Portuguese backgrounds, or were from other countries.

The background of immigrant-background students was very different in Canada (Table B6.2). About 44% were of Asian origin, notably China and India. About 18% had backgrounds associated with the generally high attainment economies of the United States, the United Kingdom or northern and western Europe. The remaining one-third were born in, or had parents who were born in, Central or South America, elsewhere in Europe, or Africa.

To assess differences in outcomes by source region of the parents (or students if they are immigrants), the same analysis exercise (see Box 6.3) is replicated here by source country.[14] Given the smaller number of individuals in each of the origin country groups, it is necessary to combine the first-and second-generation populations into one category, referred to as immigrant students. The host country (Switzerland or Canada) is always the reference group in the "source region" variable. Hence, the results refer to the differences in the likelihood of attending the higher education between the immigrant-background students whose source region is, say, Turkey, and students whose parents were born in Switzerland (non- immigrant students). The same approach is used with the Canadian sample.

Canada

In Canada, students with Chinese backgrounds are 28 percentage points more likely to attend the post-secondary level than those with parents born in Canada. That means that 80% of Chinese background students attend some form of post-secondary institution, the vast majority attending a university. Accounting for background characteristics and aspirations regarding attendance, as well as residential location (model 3), accounts for 45% of this positive gap in the Chinese case (Table B6.3). But there remains an unexplained component even with this relatively rich set of control variables.

Students with many other source region backgrounds also display a significant advantage over the Canadian-background students regarding university and post-secondary participation. The advantage is particularly marked for students with backgrounds from all



other Asian regions, Africa, and "other European" nations. Students with backgrounds from other developed economies such as the United States, the United Kingdom, and northern and western Europe do not look much different from Canadian-background students regarding post-secondary participation. However, immigrant students from all source-regions used in this typology have participation rates equal to or higher than students with strictly Canadian backgrounds. No source region group is seen to lag behind (in model 2).

The proportion of the positive gap with Canadian-background students that can be accounted for by differences in family background, PISA scores, aspirations and other variables (model 3) varies tremendously by source region, from one-quarter to over three-quarters (Table B6.3). However, in many cases the post-secondary attendance advantage cannot be entirely explained, even by the rich set of variables available in the most comprehensive analysis (model 3).

Switzerland

In Switzerland, immigrant-background students with German-Austrian-French-Belgium backgrounds are more likely than non-immigrant students (the 3rd and higher generation) to attend higher education, while those with all other backgrounds are less likely to attend (Table B6.3). The differences are substantial, ranging from 21 percentage points more likely to attend (German etc. backgrounds) to 21 percentage points less likely to attend. Students with families from Yugoslavia-Albania-Kosovo, Spain-Portugal and Turkey are in particular much less likely to attend the tertiary level than their non-immigrant counterparts.

For most regions, the differences in performance, individual characteristics and attitudes, notably PISA score, can account for most of the gap in attendance in higher education between immigrant and non-immigrant students from a particular region (Table B6.3). The German-Austrian-French-Belgium case is an exception. Relatively little of the advantage that students with backgrounds from these countries have relative to non-immigrant students in Switzerland in both attendance to university and other higher education is accounted for either by family background, PISA scores or school stream. Other unmeasured variables are playing a significant role in this case.

ACCESS TO HIGHER EDUCATION AMONG LOW PERFORMERS

This section focuses on lowest performers, as measured by the PISA reading score.

Observed differences: A simple model without adjustments for individual characteristics (model 1)

More than 33% of low performers participated at the post-secondary level in Canada, compared to 11% in Switzerland (Figure 6.4). However, as noted earlier, participation in higher education in Switzerland is low for a number of structural reasons. Enrolment in Tertiary B, mainly vocational post-secondary schools in Switzerland, often occurs at a later age; perhaps as few as one-half of the students who will ultimately attend Tertiary B schools are enrolled by age 23. Furthermore, the capacity of the Tertiary B system in Switzerland is relatively small compared to the college system in Canada. Finally, many low-performing students may opt for vocational training (VET) in upper secondary, rather than continuing to the tertiary level. This route can result in positive labour market outcomes, and is a choice not readily available in Canada.

Being a low secondary school performer in Switzerland has a very large effect on the likelihood of tertiary attendance, more so than in Canada, particularly among immigrant students. And this is significant, since over three quarters of Swiss immigrant students are in fact low secondary school performers as measured by the PISA test[15] (Table B6.1). As noted, differences in the structure of the school systems likely account for part of this difference.

Overall, high secondary school performers (in PISA reading Level 4 or 5) are twice as likely to attend the post-secondary level as their low-performing counterparts in Canada (this result does not account for other factors), but in Switzerland they are over five times more likely to attend. This difference is exacerbated among the immigrant population. In Canada, among the first- and second-generation, high performers are 1.6 times more likely to attend than among low performers. In Switzerland, high performers are 12 times (among the first-generation) and 6 times (second-generation) more likely to attend.

Adjusted differences: Taking into account individual characteristics (models 2 and 3)

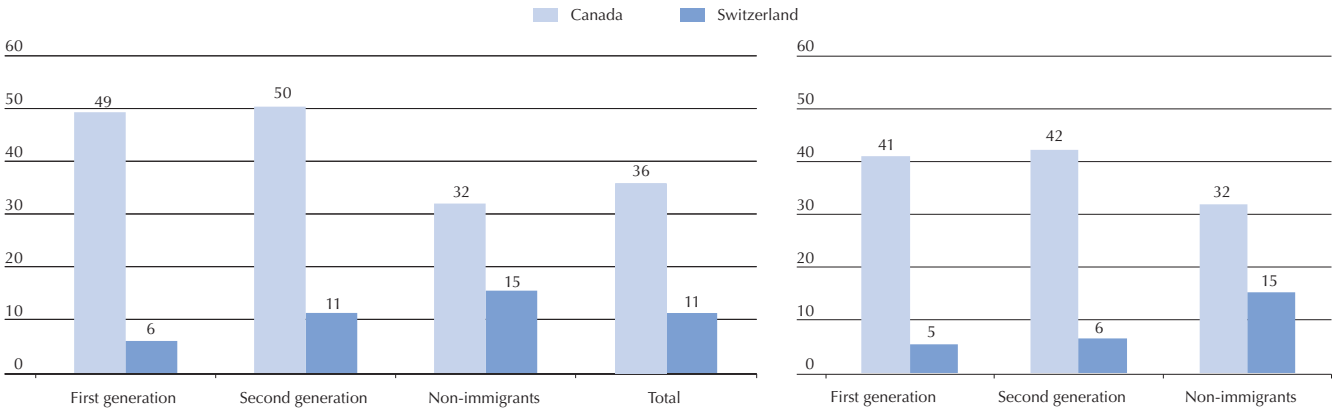
Canada

In Canada, immigrant students seem to find some way of attending the post-secondary level in spite of their low PISA reading scores. Low secondary school performers with immigrant backgrounds are much more likely to continue to the post-secondary level than non-immigrant students who are also lowest performers (Figure 6.5a). About one-half of low secondary school performers in the first-and second-generation continue to the post-secondary level, compared to only one-third of low-performing non-immigrant students (third plus generation).



▪ Figure 6.4 ▪

Prevalence of higher education attendance by age 23 among lowest performers at age 15, by immigrant background



1. The important other variables include, in Canada, students' and parents' aspirations regarding university, and in Switzerland, the student's secondary school stream.

Source: Picot and Hou (2012).

Of the 17 or 18 percentage point gap in attendance in higher education across immigrant background, 40% to 50% is accounted for by performance and/or individual characteristics (Figure 6.5a). Hence, even after controlling for numerous variables related to background, PISA reading literacy scores and aspirations, low-performing immigrant students remain 9 to 12 percentage points more likely to continue to the post-secondary level than non-immigrant students.

Once again differences in parents' and students' aspirations regarding post-secondary attendance accounted for the majority, or roughly 40% to 60%, of the explained gap. Other variables of significance included differences in geographical location, accounting for about one-third of the "explained" gap, and differences in homework time (one-fifth). But more than half of the difference in post-secondary attendance between the generations remains unexplained by the variables we have at our disposal. Differences between generations in PISA reading scores and parental education accounted for little of the post-secondary attendance gaps.

Switzerland

In Switzerland, the tertiary attendance rate of first-generation low-performers is less than one-half that of non-immigrant students, and among the second-generation is it two-thirds of the rate (Figure 6.3). Hence, the very large numbers of immigrant students who find themselves in the low-performing category have relatively low tertiary attendance rates compared to their counterparts with strictly Swiss backgrounds.

Among lowest performers, the variables included in the more comprehensive analyses do not account for the gap (Figure 6.5b). For the first-generation, both models account for virtually none of the 9 percentage-point gap in tertiary attendance between immigrant and non-immigrant students. Among second-generation students, there is no apparent gap in the likelihood of tertiary attendance with non-immigrant students.[16]

Differences by source region among low performers

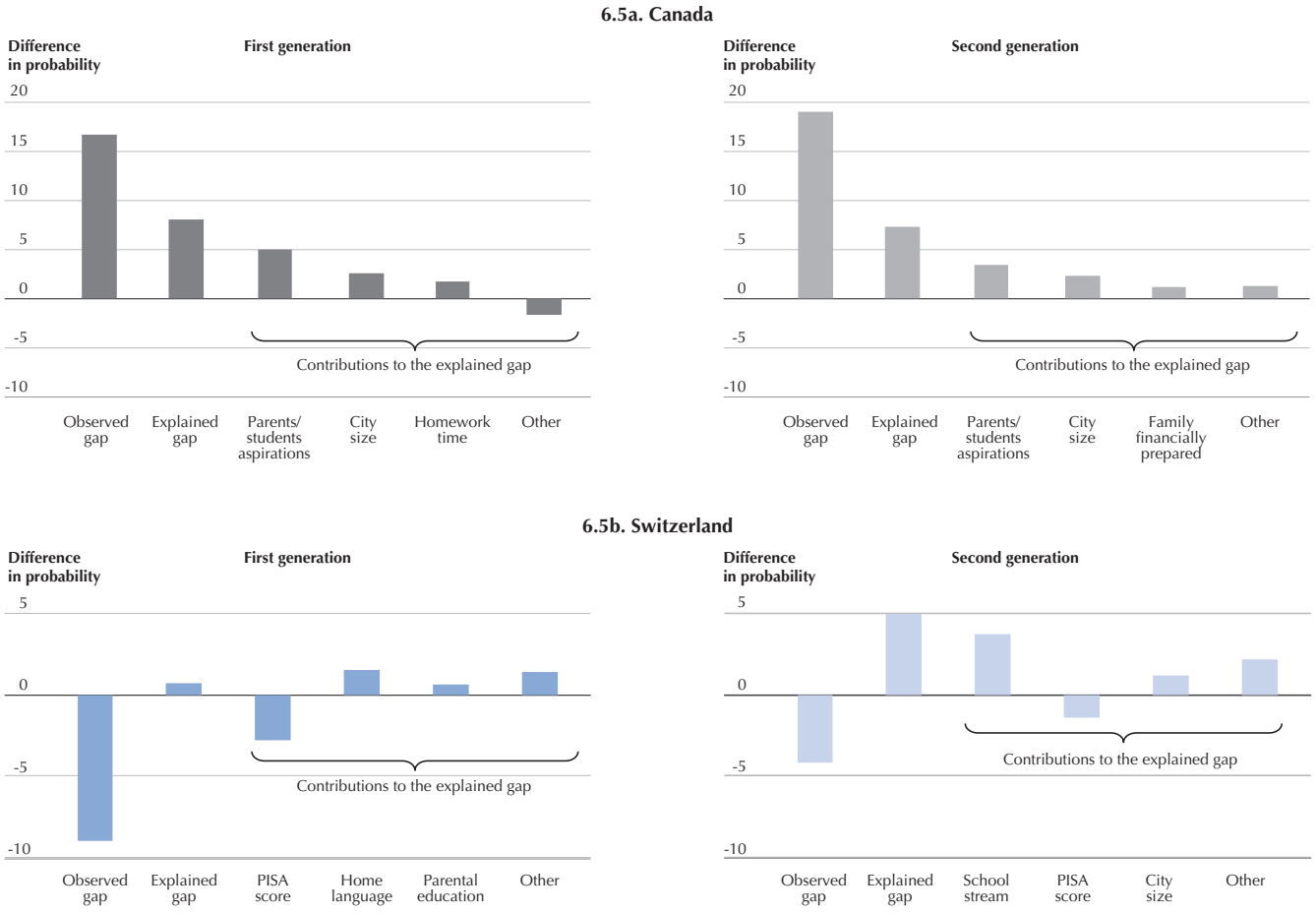
Canada

Among low-performing students, educational outcomes vary tremendously by source region in Canada, less so in Switzerland. In Canada, low-performing students with Chinese background are 34 points more likely to attend the post-secondary level than their counterparts with Canadian-born parents (Table B6.3). Fully two-thirds (66%) of these students attended a college or university (about one-half attend a university). Registering a low-performance in secondary school appears to do little to discourage students with such a background from continuing. Only about one-quarter of this large advantage in post-secondary attendance by students with Chinese backgrounds can be accounted for by differences with the Canadian-background students in family background, PISA score, aspirations and the other variables included in model 3. Conditional on having similar backgrounds, having a Chinese background continues to result in a 24 percentage point advantage in post-secondary attendance compared to lowest performers among non-immigrant students (the 3rd-and-higher generation) (Table B6.3).



▪ Figure 6.5 ▪

Prevalence of university attendance by age 23 among lowest performers at age 15, by immigrant background



Source: Picot and Hou (2012).

Virtually identical results are evident for students with other Asian backgrounds (other than Indian), and like the Chinese background students, these significant advantages are not explained by the background variables included in the models. Other unmeasured factors are at play. Low-performing students with European backgrounds also display a substantial advantage over their counterparts with strictly Canadian backgrounds regarding post-secondary attendance. Little of this advantage can be explained by these models as well.

Switzerland

In Switzerland, there is, in most cases, little difference to explain. Among secondary school low-performers, the unconditional differences (in the raw data) between immigrant-background students and Swiss-background students are much smaller and typically not statistically significant. Only among students with an Italian background is there a statistically significant difference in the likelihood of attending the tertiary level (Table B6.3) In this case, virtually none of this 12 percentage point gap is accounted for by the explanatory variables analysed here (model 3). Overall, there is less to explain in the case of secondary school low-performers in Switzerland.

WHAT DIFFERENTIATES LOW-PERFORMERS WHO ATTEND POST-SECONDARY EDUCATION FROM THOSE WHO DO NOT?

Many other variables besides immigrant background differentiates low-performers who attend the post-secondary level from those who do not. To address this issue, the analysis compares the magnitude of the effect of various explanatory variables on the likelihood of attending a post-secondary institution (regression results reported in Picot and Hou, 2012).

For Canada, among the low-performing secondary school students, in addition to immigrant status, parents' and students' aspirations regarding post-secondary attendance, whether the family made financial preparations for post-secondary attendance



(likely a motivational effect), family status, PISA reading literacy level, and parental educational attainment differentiate low-performing students who attend the post-secondary level from those who do not.[17]

In Switzerland, the results are similar (particularly in model 2). There is no variable related to the aspirations of parents or students, but parental education, family status, and PISA score are all seen to play a role in differentiating those low-performers who continue from those who do not. When secondary school stream and language canton variable are added (in model 3), not surprisingly secondary school stream in particular is seen to play a significant role. Low-performing students living in the Italian language cantons are also more likely to continue to the tertiary level than their counterparts in other cantons, all else being equal.

The results from the two countries suggest that the traditional variables such as parental education and family type play a role in the likelihood of low performers continuing, even after controls for PISA reading scores and other background variables. But the Canadian results also suggest that variables related to motivation, such as parental and student aspirations, and the degree of financial preparedness, play even a greater role in distinguishing those who continue from those who do not.

SUMMARY AND CONCLUSIONS

Consistent with earlier research, this chapter presents evidence that first- and second-generation immigrant students in Canada are more likely to continue to the post-secondary level than their non-immigrant counterparts. Immigrant students in Switzerland are less likely to do so.

In Switzerland, the post-secondary attendance gap in favour of non-immigrant students is due almost entirely to poorer secondary school performance among immigrant students, as measured by the PISA reading scores. After controlling for PISA scores, differences in family background and other variables become less important. When secondary school stream is included, it is strongly associated with a significant part of the gap as well. However, academic performance works in part through this variable, since school stream is determined by academic performance, as well as other variables such as social background.

The story is very different in Canada. Differences in PISA scores account for only a small part of the gap in favour of immigrants in post-secondary education. Parents' and students' aspirations regarding the student's post-secondary school career play a major role in the "explained" gap.

In both countries, there is significant variation in these results by source region. In Canada, Asian students, even if they perform poorly in secondary school, participate at high levels in the post-secondary system, particularly university. Even when parents' and students' aspirations are included, the models explain little of this advantage.

Being a low-performing secondary school student, that is, having a PISA reading score at Level 1 or 2 at age 15, results in a greater reduction in the likelihood of post-secondary participation in Switzerland than Canada, particularly among immigrant-background students. There are a number of reasons for this, many related to the differences in the structure of the educational systems between the two countries. In Canada, a surprisingly high share of low-performers with immigrant backgrounds continue to the post-secondary level, around 50%, compared to one-third of those with strictly Canadian backgrounds. This figure reaches 66% among students with Asian backgrounds. Again there is significant variation by source region background. Even with a rich set of PISA, family background and aspirational variables, the analysis can account for only about one-third to one-half of the post-secondary participation gap between low-performing immigrant and non-immigrant students with and without immigrant backgrounds. Differences in the student's and parent's aspirations regarding post-secondary attendance again play an important role. But other unmeasured factors are also at play. In Switzerland, first-generation low-performing students are less likely to continue than their non-immigrant counterparts without an immigrant background. Little of this gap can be accounted for by family background, the PISA score and other available variables.

But many other variables besides immigrant background influence the decision of poor-performing students to continue to the post-secondary level. The Canadian data suggest that these are related to motivation, such as parents' and student's aspirations, financial capacity, family type, PISA reading score, and parents' educational attainment. In Switzerland, parents' education, family type, PISA score, and the student's secondary school track influence the decision.

Why do immigrant students have better relative educational attainment outcomes in Canada than in Switzerland? Differences in the immigration systems play a significant role. The educational attainment of immigrants exceeds that of the domestically born population by quite a wide margin. Furthermore, much of Canada's immigration over the past thirty years has been from Asian countries, whose cultures place a high value on educational attainment and labour-market success. By including variables influenced by the immigrant selection system, including parental education, source region and home language, only about one-half of the post-secondary attendance advantage of immigrant-background students over others can be accounted for. So there are clearly many other factors at work.



Meanwhile, until recently, Switzerland has not had an immigration system oriented towards highly skilled candidates and has generally received lower skilled immigrants from less developed nations. Other research has shown that differences in individual and family background between students with immigrant backgrounds and others could account for between one-half to all of the differences in PISA reading scores between these groups. And this difference in PISA scores accounts for virtually all of the difference in tertiary participation rates between these two groups.

The inter-country difference in immigration systems, resulting in immigrants with very different backgrounds, plays a role in explaining the differences between countries. However, because of changes in the Swiss system during the early 1990s, and more recently with the 2002/03 treaty on the free movement of labour in the European Union, migration patterns are shifting. Many more highly skilled immigrants are entering Switzerland from nations such as Germany and France, and a smaller share of immigrants are lower-skilled from the Balkans, Turkey or Portugal. This shift could significantly influence the educational attainment of immigrant-background students in the future.

Differences in the educational systems, and their effect on immigrant students of immigrant background may also play a role. The more structured Swiss system allows for less adjustment on the students' part, and research has shown that social background is a factor in the streaming that takes place in secondary school, above and beyond academic performance. This could negatively affect the tertiary educational attendance of immigrant students of immigrant background. And the structure of the Canadian labour market is such that continuation to the post-secondary level is necessary to acquire skills of value in the job market, including vocational skills. This is not the case in Switzerland, with vocational (VET) programmes in upper secondary school.

The results also point to possible policy implications. In Switzerland, after controlling for secondary school performance, parental background variables play little direct role in explaining the negative attendance gap between immigrant and non-immigrant students. Given the earlier research referred to, it seems likely that parental education, for example, acts indirectly through variables such as high school performance and parental aspirations. This distinction is important. It is difficult at best to address the disadvantaged parental backgrounds of current students in immigrant families, but there may be ways of improving their high school performance. And immigration patterns have recently shown an increase in the educational attainment of entering immigrants, and could increasingly do so in the future. Without adequate data, it is difficult to know what role family hopes/aspirations play in the Swiss case. However, assuming that the Canadian results may apply to Switzerland, policies designed to influence the value that immigrant families place on higher education, and hence their aspirations regarding tertiary level attendance for their children, could also positively influence the currently negative post-secondary attendance gap.

In the Canadian case, parental background is also not directly a major explanation of the positive post-secondary attendance advantage immigrant-background students hold over low-performers (and in general) among non-immigrant students. Higher parental education among immigrant families may act indirectly through the hopes and aspirations of parents and students. But since this latter variable appears to have a more direct effect on educational attainment, focusing on the value placed on higher education, and hopefully thereby influencing aspirations, may be helpful. More research on this particular question would assist policy development.

Notes

1. The Canadian sample consisted of a representative sample of 15-year-olds in the secondary school system. The Swiss sample was representative of students in grade nine as of December 1999, and hence includes some students who were slightly younger or older than age 15.
2. Students are « lost » because they refuse to continue participating, because they have left the country, because they can no longer be found or because they were not available to be interviewed.
3. Since the focus is on students with and without immigrant backgrounds, differential response rates in these two groups and their possible effects are a matter of concern. However, the response rates were not that dissimilar.
4. This is an adjusted result, after controlling for other variables such as parent's education, high school marks, gender, etc.
5. The PISA reading scores were much better at discriminating between those who attend university and those who do not than other variables, such as self-reported secondary school marks, or parents' education (OECD, 2010a).
6. The PISA reading, math and science scores themselves have been used as an outcome measure of educational achievement. In Switzerland, both first and second-generation students had significantly lower PISA scores, on average, than their counterparts with Swiss born parents (OECD, 2001a). A Swiss study found that social origin was one of the most important factors accounting for the difference in PISA score outcomes between children with and without immigrant backgrounds (Coradi Vellacott and Wolter, 2002). Meunier (2010) found that for Switzerland, differences in individual characteristics, family background and school characteristics could account for the majority of the PISA reading literacy gap between both first and second-generation students on one hand, and students with Swiss born parents on the other. A



study based on the 2003 PISA reading test scores concluded that controlling only for differences in parental educational and occupational background reduced the PISA performance gap but did not by eliminate it (OECD, 2006). The association between PISA reading scores and family background is important in the discussion section.

7. Because of changes in the Swiss system during the early 1990s, and more recently with a 2002/03 treaty on the free movement of labour in the European Union, the composition of migration to Switzerland is shifting. Many more highly skilled immigrants are entering Switzerland from nations such as Germany and France, and a smaller share of immigrants are lower-skilled from the Balkan countries, Turkey or Portugal. See Cattaneo and Wolter (2012) for an analysis of how these changes have affected student performance in PISA 2009.

8. See Bertschy, et al. (2009) and Meyer (2009) for a description of the school system.

9. The over-representation of students with immigrant backgrounds in the lower academic streams appears to be related to more than marks and school performance. Sacchi, et al. (2011) found that the transition from compulsory to upper secondary school in Switzerland is strongly shaped by the students' social origins and cultural backgrounds, irrespective of their school achievements as measured by PISA reading scores and academic record. Haeberlin, et al. (2004) found similar results. Students with immigrant backgrounds, but with equal school performance, were much less likely to be recommended for "higher level" school streams than were students with strictly Swiss backgrounds. Coradi, Vellacott and Wolter (2004) discuss the degree of equity in the Swiss school system across immigrant and other groups.

10. These designations are those of the International Standard Classification of Education (ISCED).

11. However, many students enter the Tertiary B level at an older age, so that perhaps half of the students who graduate from Tertiary B have not entered the system by age 23. Thus, by focusing on the educational outcomes of 23-year-olds we are under-representing the ultimate participation in Tertiary B level in particular.

12. These are preferred to logit or probit models because the coefficients can be interpreted directly. Also, most of the probabilities are not close to either zero or one, and hence all three types of models (logit, probit and linear probability) give approximately the same result.

13. Five "plausible values" of the PISA reading score were used in the analysis, as opposed to a single value. This approach is necessary because not all students were administered all PISA questions; responses to those not asked are probabilistically imputed five times. See the *PISA Data Analysis Manual*, OECD (2009) for more details. The regressions are run 5 times with the 5 values, and the average value of the coefficients used. Also, bootstap re-sampling methods are used to estimate standard errors incorporating complex survey design effects.

14. The same population of students with PISA scores at age 15, and who remain in the sample in 2007 at age 23, is employed. The dependent variable is the probability of attending a tertiary level institution by age 23. With the exception of the "generational" variables, the independent variables are the same as those used in the earlier described regression models. Rather than employing a binary variable that denotes generational status (1st, 2nd, 2.5 or 3rd-and-higher) as in the earlier regressions, a "source region" variable is used that denotes the country of birth of the student if a 1st or 3rd-plus generation student, and of the parent if a second-generation student. The source country variable has seven levels for Switzerland, and eleven for Canada. For Switzerland, the categories for this variable include Switzerland (i.e. students without an immigrant background or 3rd-and-higher generation), Germany/France/Austria/Belgium, Italy, Spain/Portugal, Yugoslavia/Albania/Kosovo, Turkey, and Other. For Canada, the categories are Canada (i.e. students without an immigrant background or the 3rd-and-higher generation), China, India, Other East or South East Asia, Other Asia, United States, Central/South America, United Kingdom, northern/western Europe, other Europe, Africa and others. Some aggregation of categories was necessary in cases where sample sizes were too small.

15. As noted earlier, the language of the test is often not the immigrant student's home language, and this may affect the test score. This may be true among some second-generation students as well, where the share who are low-performers is also high (61%). However, the PISA reading literacy scores are strongly correlated with post-secondary attendance, and no doubt play a significant role in tertiary attendance patterns.

16. The estimate is smaller, at minus 4.1 percentage points, and not statistically significant. In model 3 (Figure 6.5a), when the secondary school streaming variable is added, the gap becomes marginally significant at – 8.8 percentage points. The gap increases in this model because second-generation students were more likely to be in the pre-gymnasial stream that leads to tertiary schooling than 3rd-plus generation students. (This was observed primarily in the French-speaking Cantons, not the German-speaking ones). The result is that, after one accounts for this difference through the control variable, the likelihood gap increases.

17. If both the parents and student held aspirations to attend the post-secondary level, they were about 20 percentage points more likely to attend than those who did not, after controlling for parental education and PISA score (Table 6.3). This is an important difference. Students in single parent or blended families were about 10 percentage points less likely to attend than their counterparts in two parent families. A 10-percentage-point difference in PISA reading scores resulted in about a 0.8-percentage-point difference in the likelihood of attending. Students whose parents had high school or less education were from 10 to 15 percentage points less likely to continue as compared to families where both parents had a post-secondary education.



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Annex A

TECHNICAL BACKGROUND

This report discusses only statistically significant differences or changes. These are denoted in darker colours in figures and in bold font in tables. See Annex A of OECD (2010), *PISA 2009 Results: What Students Know and Can Do* (Volume I), PISA, OECD Publishing, for further information.

For further technical details please refer to:

OECD (2010), *PISA 2009 Results: Overcoming Social Background: Equity in Learning Opportunities and Outcomes* (Volume II), Annex A, PISA, OECD Publishing.

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Annex B

DATA TABLES ON IMMIGRANT STUDENTS

Table B1.1 The foreign-born population aged 15 and older by country of residence and region of birth, circa 2000

		Total (thousands)	Region of origin (percentages)									Population with birth status unknown (%)	Proportion of foreign-born in the population (%)
			Africa	Asia	Europe	North America	Oceania	South, Central America and the Carribean	Foreign-born but region unspecified	Total	of which: OECD countries		
OECD	Australia	3 860.2	4.3	27.0	54.4	1.8	10.5	1.9	0.0	100.0	58.1	19.3	27.4
	Austria	923.7	2.4	6.4	89.1	0.8	0.2	1.1	m	100.0	50.0	0.1	13.8
	Belgium	1 019.3	22.8	6.1	67.6	1.4	0.1	2.0	m	100.0	66.1	0.1	12.0
	Canada	5 355.2	5.2	35.2	43.1	4.6	0.9	11.0	0.0	100.0	44.3	m	22.4
	Chile	162.6	0.8	4.5	18.7	4.8	0.8	69.0	1.5	100.0	24.8	133.4	1.5
	Czech Republic	437.0	0.4	4.7	92.9	0.5	0.1	0.3	1.1	100.0	77.3	39.3	5.2
	Denmark	319.3	8.2	30.2	55.7	3.0	0.6	2.4	m	100.0	50.1	7.2	7.4
	Estonia	243.0	m	3.5	96.4	0.1	m	0.0	m	100.0	1.3	3.6	21.8
	Finland	112.4	7.2	13.5	74.3	3.2	0.5	1.4	m	100.0	40.6	4.0	2.7
	France	5 600.2	49.0	7.7	40.8	0.9	0.1	1.5	m	100.0	39.7	m	11.7
	Germany	7 832.0	2.3	12.3	68.6	0.5	m	0.7	15.7	100.0	41.8	67.3	12.5
	Greece	999.9	5.1	8.4	80.8	3.1	2.0	0.6	m	100.0	28.2	0.1	10.8
	Hungary	275.5	0.6	3.7	94.3	0.9	0.1	0.4	m	100.0	23.6	m	3.2
	Ireland	333.0	6.5	7.5	77.8	5.4	1.9	0.9	0.1	100.0	80.3	m	11.0
	Israel	1 771.0	17.3	18.5	58.8	2.5	0.1	2.8	m	100.0	14.9	0.1	39.8
	Italy	2 020.9	20.2	9.3	55.4	3.4	0.9	10.9	m	100.0	39.1	m	4.1
	Japan	1 142.4	0.4	76.0	2.4	3.5	0.7	16.9	m	100.0	5.8	1.3	1.1
	Luxembourg	129.8	4.1	2.8	90.4	0.9	0.1	1.1	0.7	100.0	85.0	1.3	36.6
	Mexico	241.5	0.3	4.1	18.5	46.5	0.3	30.3	0.1	100.0	65.2	72.2	0.4
	Netherlands	1 419.9	15.1	22.8	37.3	1.0	0.6	20.5	2.7	100.0	28.9	2.8	11.2
	New Zealand	624.1	4.8	24.6	43.3	2.9	23.8	0.7	m	100.0	54.7	19.2	22.5
	Norway	305.9	9.5	30.5	50.1	4.9	0.4	4.5	0.1	100.0	45.4	m	8.3
	Poland	737.7	0.3	1.3	95.3	0.8	0.0	0.1	2.1	100.0	20.1	70.0	2.4
	Portugal	585.9	56.7	2.7	27.3	1.8	0.1	11.4	m	100.0	25.8	m	6.7
	Slovak Republic	113.2	0.2	1.3	97.5	0.8	m	0.2	m	100.0	85.0	358.3	2.9
	Slovenia	164.4	0.2	0.3	98.9	0.3	0.1	0.2	m	100.0	8.7	m	9.9
	Spain	1 914.9	19.4	4.1	37.3	1.0	0.2	37.9	m	100.0	32.2	0.2	5.5
	Sweden	933.8	6.0	24.1	62.1	1.5	0.3	6.0	m	100.0	47.8	0.0	14.4
	Switzerland	1 454.2	4.2	6.4	77.8	1.7	0.3	3.4	6.1	100.0	62.6	17.2	25.1
	Turkey	1 130.6	0.4	6.4	91.4	1.0	0.2	m	0.7	100.0	34.6	1.1	2.4
	United Kingdom	4 503.5	16.9	32.8	34.5	4.3	3.5	7.2	0.9	100.0	38.6	m	9.4
	United States	31 389.9	2.7	25.0	17.3	2.8	0.8	51.5	0.0	100.0	46.9	m	14.5
	Total OECD	75 715.8	9.1	21.3	38.6	2.5	1.5	25.1	1.9	100.0	44.4	10.2	8.9
	Total non-OECD	16 687.4	0.8	37.9	51.9	0.3	0.1	7.8	1.2	100.0	7.7	4.5	3.0
	Total	92 403.2	7.6	24.3	41.0	2.1	1.2	22.0	1.8	100.0	37.8	9.2	6.6
Partners	Argentina	1 457.5	0.1	1.9	29.2	0.6	0.0	66.5	1.6	100.0	28.8	m	5.6
	Brazil	651.2	2.3	17.7	58.4	1.5	0.1	19.9	0.2	100.0	68.2	m	0.5
	Bulgaria	29.7	1.2	17.4	79.7	0.9	m	0.7	m	100.0	22.8	0.2	0.4
	Colombia	75.6	0.7	4.9	16.6	8.3	0.7	66.1	2.7	100.0	26.6	732.0	0.3
	Croatia	558.1	0.1	0.1	99.4	0.2	0.1	0.1	m	100.0	3.0	3.7	15.2
	Indonesia	18.2	m	29.0	5.1	m	2.7	m	63.2	100.0	18.1	210.6	0.0
	Jordan	291.4	32.6	18.8	2.1	m	m	m	46.4	100.0	m	0.3	9.1
	Kyrgyzstan	354.7	m	49.2	50.0	m	m	m	0.7	100.0	0.5	m	11.6
	Latvia	369.0	0.0	4.2	95.7	0.1	0.0	0.0	m	100.0	1.3	0.0	20.9
	Lithuania	198.2	m	6.0	93.4	0.5	0.0	0.1	m	100.0	3.4	11.0	7.1
	Panama	73.7	0.3	21.1	7.6	5.2	0.1	65.6	m	100.0	15.1	2.3	3.8
	Peru	60.3	0.5	11.3	27.1	11.3	0.9	48.8	m	100.0	42.0	m	0.3
	Romania	117.4	m	11.3	80.6	0.9	m	m	7.3	100.0	15.8	0.6	0.7
	Russian Federation	10 708.5	0.1	48.3	51.4	0.0	0.0	0.1	0.1	100.0	2.1	m	8.9
	Serbia	861.0	0.1	0.1	99.7	0.0	0.0	0.0	m	100.0	2.1	1.1	13.6
	Singapore	512.7	m	98.7	0.7	0.2	m	m	0.4	100.0	m	m	22.5
	Thailand	228.2	m	87.9	7.4	2.3	1.3	m	1.1	100.0	13.3	47.7	0.5
	Trinidad and Tobago	36.6	m	1.6	4.5	2.7	m	76.6	14.6	100.0	7.2	3.6	4.4
	Uruguay	78.9	0.3	2.2	51.2	1.5	0.3	44.4	0.2	100.0	50.6	m	3.3

Source: United Nations (2011), *Trends in International Migrant Stock*.
Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B1.2 Percentage of parents of second-generation students, by age at arrival, 2008

		At least one parent arrived as a young child	Both parents arrived later, but not both as adults	Both parents arrived as adults
OECD	Austria	15	46	39
	Belgium	38	21	41
	Estonia	67	m	m
	France	33	39	28
	Germany	25	40	36
	Greece	m	m	78
	Italy	15	26	59
	Luxembourg	18	26	57
	Netherlands	39	43	18
	Slovenia	29	53	18
	Spain	13	19	68
	United Kingdom	37	35	28
Partners	Latvia	53	m	m

Notes: "As a young child" means 10 years of age at most; adults are defined here as persons 20 years of age or older. Shaded cells need to be treated with caution because of low reliability.
Source: European Union Labour Force Survey, 2008 Immigrant Module.
Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B1.3 Proportion of students, by immigrant status

		Proportion of students							
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	76.8	(1.1)	12.1	(0.7)	11.1	(0.6)	23.2	(1.1)
	Austria	84.8	(1.2)	10.5	(0.9)	4.8	(0.6)	15.2	(1.2)
	Belgium	85.2	(1.1)	7.8	(0.7)	6.9	(0.7)	14.8	(1.1)
	Canada	75.6	(1.3)	13.7	(0.8)	10.7	(0.7)	24.4	(1.3)
	Chile	99.5	(0.1)	0.1	(0.0)	0.4	(0.1)	0.5	(0.1)
	Czech Republic	97.7	(0.2)	1.4	(0.2)	0.8	(0.1)	2.3	(0.2)
	Denmark	91.4	(0.4)	5.9	(0.3)	2.8	(0.2)	8.6	(0.4)
	Estonia	92.0	(0.6)	7.4	(0.6)	0.6	(0.1)	8.0	(0.6)
	Finland	97.4	(0.3)	1.1	(0.2)	1.4	(0.2)	2.6	(0.3)
	France	86.9	(1.4)	10.0	(1.0)	3.2	(0.5)	13.1	(1.4)
	Germany	82.4	(1.0)	11.7	(0.8)	5.9	(0.4)	17.6	(1.0)
	Greece	91.0	(0.8)	2.9	(0.3)	6.1	(0.7)	9.0	(0.8)
	Hungary	97.9	(0.3)	0.9	(0.1)	1.2	(0.2)	2.1	(0.3)
	Iceland	97.6	(0.2)	0.4	(0.1)	1.9	(0.2)	2.4	(0.2)
	Ireland	91.7	(0.6)	1.4	(0.2)	6.8	(0.5)	8.3	(0.6)
	Israel	80.3	(1.1)	12.6	(0.7)	7.1	(0.7)	19.7	(1.1)
	Italy	94.5	(0.3)	1.3	(0.1)	4.2	(0.2)	5.5	(0.3)
	Japan	99.7	(0.1)	0.1	(0.0)	0.1	(0.0)	0.3	(0.1)
	Korea	100.0	(0.0)	c	c	c	c	c	c
	Luxembourg	59.8	(0.7)	24.0	(0.6)	16.1	(0.5)	40.2	(0.7)
	Mexico	98.1	(0.2)	0.7	(0.1)	1.1	(0.1)	1.9	(0.2)
	Netherlands	87.9	(1.4)	8.9	(1.1)	3.2	(0.5)	12.1	(1.4)
	New Zealand	75.3	(1.0)	8.0	(0.6)	16.7	(0.7)	24.7	(1.0)
	Norway	93.2	(0.6)	3.6	(0.4)	3.2	(0.3)	6.8	(0.6)
	Poland	100.0	(0.0)	c	c	c	c	c	c
	Portugal	94.5	(0.5)	2.7	(0.3)	2.8	(0.3)	5.5	(0.5)
	Slovak Republic	99.5	(0.1)	0.3	(0.1)	0.3	(0.1)	0.5	(0.1)
	Slovenia	92.2	(0.4)	6.4	(0.4)	1.4	(0.2)	7.8	(0.4)
	Spain	90.5	(0.5)	1.1	(0.1)	8.4	(0.5)	9.5	(0.5)
	Sweden	88.3	(1.2)	8.0	(0.8)	3.7	(0.5)	11.7	(1.2)
	Switzerland	76.5	(0.9)	15.1	(0.7)	8.4	(0.5)	23.5	(0.9)
	Turkey	99.5	(0.1)	0.4	(0.1)	0.1	(0.1)	0.5	(0.1)
	United Kingdom	89.4	(1.0)	5.8	(0.7)	4.8	(0.4)	10.6	(1.0)
	United States	80.5	(1.3)	13.0	(1.1)	6.4	(0.5)	19.5	(1.3)
	OECD average	89.6	(0.1)	6.2	(0.1)	4.8	(0.1)	11.0	(0.1)
Partners	Albania	99.4	(0.2)	0.5	(0.2)	0.1	(0.1)	0.6	(0.2)
	Argentina	96.4	(0.5)	2.2	(0.3)	1.5	(0.3)	3.6	(0.5)
	Azerbaijan	96.9	(0.6)	2.3	(0.5)	0.8	(0.1)	3.1	(0.6)
	Brazil	99.2	(0.1)	0.5	(0.1)	0.3	(0.1)	0.8	(0.1)
	Bulgaria	99.5	(0.1)	0.2	(0.1)	0.3	(0.1)	0.5	(0.1)
	Colombia	99.7	(0.1)	0.3	(0.1)	0.0	(0.0)	0.3	(0.1)
	Croatia	89.3	(0.6)	7.2	(0.5)	3.5	(0.3)	10.7	(0.6)
	Dubai (UAE)	28.6	(0.4)	26.4	(0.6)	45.0	(0.6)	71.4	(0.4)
	Hong Kong-China	60.6	(1.5)	23.9	(0.8)	15.5	(1.0)	39.4	(1.5)
	Indonesia	99.7	(0.1)	c	c	0.3	(0.1)	0.3	(0.1)
	Jordan	86.2	(0.9)	10.5	(0.7)	3.3	(0.3)	13.8	(0.9)
	Kazakhstan	88.4	(1.1)	7.2	(0.8)	4.4	(0.6)	11.6	(1.1)
	Kyrgyzstan	98.1	(0.3)	1.1	(0.2)	0.8	(0.2)	1.9	(0.3)
	Latvia	95.5	(0.5)	4.1	(0.5)	0.4	(0.1)	4.5	(0.5)
	Liechtenstein	69.7	(2.5)	13.7	(1.8)	16.7	(1.9)	30.3	(2.5)
	Lithuania	98.3	(0.3)	1.6	(0.3)	0.2	(0.1)	1.7	(0.3)
	Macao-China	29.6	(0.6)	54.9	(0.6)	15.5	(0.4)	70.4	(0.6)
	Montenegro	93.4	(0.4)	2.5	(0.3)	4.1	(0.3)	6.6	(0.4)
	Panama	96.1	(0.8)	1.4	(0.3)	2.5	(0.7)	3.9	(0.8)
	Peru	99.6	(0.1)	0.3	(0.1)	0.2	(0.1)	0.4	(0.1)
	Qatar	53.6	(0.4)	20.0	(0.4)	26.4	(0.4)	46.4	(0.4)
	Romania	99.7	(0.1)	0.1	(0.0)	0.2	(0.1)	0.3	(0.1)
	Russian Federation	87.9	(0.7)	7.2	(0.7)	4.9	(0.4)	12.1	(0.7)
	Serbia	90.5	(0.6)	5.2	(0.4)	4.3	(0.4)	9.5	(0.6)
	Shanghai-China	99.5	(0.1)	0.1	(0.0)	0.5	(0.1)	0.5	(0.1)
	Singapore	85.6	(0.7)	4.8	(0.4)	9.6	(0.5)	14.4	(0.7)
	Chinese Taipei	99.6	(0.1)	0.2	(0.1)	0.2	(0.1)	0.4	(0.1)
	Thailand	100.0	(0.0)	c	c	c	c	c	c
	Trinidad and Tobago	97.7	(0.2)	1.2	(0.2)	1.0	(0.1)	2.3	(0.2)
	Tunisia	99.7	(0.1)	0.2	(0.1)	0.1	(0.1)	0.3	(0.1)
	Uruguay	99.4	(0.1)	0.3	(0.1)	0.3	(0.1)	0.6	(0.1)

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Proportion of students, by immigrant status and language spoken at home

Table B1.4 *Results based on students' self-reports*

		Non-immigrant students speaking the language of assessment at home		Non-immigrant students speaking another language at home		Second-generation students speaking the language of assessment at home		Second-generation students speaking another language at home		First-generation students speaking the language of assessment at home		First-generation students speaking another language at home		Immigrant students (first- and second-generation) speaking the language of assessment at home		Immigrant students (first- and second-generation) speaking another language at home	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	76.3	(1.1)	0.8	(0.1)	8.3	(0.4)	3.6	(0.3)	6.3	(0.3)	4.7	(0.5)	14.7	(0.6)	8.3	(0.7)
	Austria	86.2	(1.1)	1.3	(0.2)	2.3	(0.3)	6.3	(0.6)	1.0	(0.3)	2.9	(0.3)	3.3	(0.5)	9.3	(0.8)
	Belgium	71.8	(1.4)	14.4	(0.7)	3.3	(0.3)	3.8	(0.4)	3.4	(0.6)	3.2	(0.4)	6.8	(0.7)	7.0	(0.7)
	Canada	73.7	(1.3)	2.6	(0.2)	8.6	(0.6)	4.7	(0.4)	3.6	(0.3)	6.9	(0.5)	12.1	(0.7)	11.6	(0.8)
	Chile	99.1	(0.1)	0.4	(0.1)	0.1	(0.0)	0.0	(0.0)	0.4	(0.1)	0.0	(0.0)	0.5	(0.1)	0.0	(0.0)
	Czech Republic	97.6	(0.2)	0.5	(0.1)	0.9	(0.2)	0.3	(0.1)	0.1	(0.1)	0.6	(0.1)	1.0	(0.2)	0.9	(0.1)
	Denmark	92.1	(0.4)	0.5	(0.1)	2.8	(0.2)	2.3	(0.2)	0.7	(0.1)	1.6	(0.2)	3.6	(0.2)	3.9	(0.2)
	Estonia	90.2	(0.7)	1.9	(0.3)	6.6	(0.6)	0.8	(0.2)	0.5	(0.1)	0.1	(0.0)	7.1	(0.6)	0.9	(0.2)
	Finland	95.6	(0.4)	1.8	(0.2)	0.4	(0.1)	0.7	(0.1)	0.3	(0.1)	1.2	(0.2)	0.7	(0.1)	1.9	(0.3)
	France	85.7	(1.3)	2.3	(0.4)	6.1	(0.7)	3.0	(0.4)	1.1	(0.2)	1.7	(0.3)	7.2	(0.8)	4.8	(0.6)
	Germany	83.4	(1.0)	1.4	(0.2)	5.1	(0.5)	5.0	(0.5)	1.3	(0.2)	3.8	(0.4)	6.4	(0.5)	8.9	(0.7)
	Greece	90.0	(0.9)	1.3	(0.3)	2.6	(0.3)	0.3	(0.1)	2.7	(0.4)	3.2	(0.5)	5.3	(0.5)	3.5	(0.5)
	Hungary	97.1	(0.4)	0.8	(0.3)	0.9	(0.1)	0.0	(0.0)	1.1	(0.2)	0.1	(0.1)	2.0	(0.2)	0.1	(0.1)
	Iceland	96.4	(0.3)	1.3	(0.2)	0.2	(0.1)	0.2	(0.1)	0.3	(0.1)	1.6	(0.2)	0.5	(0.1)	1.8	(0.2)
	Ireland	89.8	(1.0)	2.2	(0.9)	1.3	(0.2)	0.1	(0.1)	3.1	(0.3)	3.5	(0.4)	4.4	(0.4)	3.6	(0.4)
	Israel	77.4	(1.3)	4.2	(0.7)	9.3	(0.6)	2.6	(0.3)	1.7	(0.2)	4.7	(0.6)	11.1	(0.6)	7.3	(0.8)
	Italy	84.0	(0.4)	10.7	(0.4)	0.8	(0.1)	0.5	(0.1)	1.0	(0.1)	3.1	(0.2)	1.7	(0.1)	3.6	(0.2)
	Japan	99.6	(0.1)	0.1	(0.0)	0.1	(0.0)	0.0	(0.0)	0.1	(0.0)	0.1	(0.0)	0.2	(0.1)	0.1	(0.0)
	Korea	99.9	(0.0)	0.1	(0.0)	c	c	c	c	c	c	c	c	c	c	c	c
	Luxembourg	2.6	(0.3)	60.6	(0.7)	4.2	(0.3)	17.6	(0.6)	4.4	(0.2)	10.7	(0.5)	8.6	(0.4)	28.2	(0.7)
	Mexico	96.1	(0.3)	2.2	(0.2)	0.7	(0.1)	0.1	(0.0)	0.8	(0.1)	0.3	(0.1)	1.5	(0.1)	0.3	(0.1)
	Netherlands	87.6	(1.4)	1.5	(0.5)	5.3	(0.8)	2.5	(0.4)	1.0	(0.2)	2.1	(0.3)	6.3	(0.9)	4.7	(0.6)
	New Zealand	72.5	(1.1)	2.8	(0.2)	5.0	(0.4)	3.0	(0.4)	7.9	(0.5)	8.7	(0.5)	13.0	(0.7)	11.7	(0.6)
	Norway	91.2	(0.6)	2.0	(0.2)	1.2	(0.2)	2.4	(0.4)	0.3	(0.1)	2.9	(0.3)	1.6	(0.2)	5.3	(0.5)
	Poland	99.4	(0.1)	0.6	(0.1)	c	c	c	c	c	c	c	c	c	c	c	c
	Portugal	94.2	(0.5)	0.6	(0.1)	2.5	(0.3)	0.2	(0.1)	1.7	(0.2)	0.8	(0.1)	4.2	(0.4)	1.0	(0.2)
	Slovak Republic	94.3	(0.8)	5.2	(0.8)	0.2	(0.1)	0.1	(0.0)	0.2	(0.1)	0.1	(0.1)	0.4	(0.1)	0.2	(0.1)
	Slovenia	91.6	(0.4)	1.2	(0.2)	2.9	(0.3)	3.0	(0.3)	0.3	(0.1)	1.0	(0.2)	3.2	(0.3)	4.0	(0.3)
	Spain	76.6	(1.0)	13.9	(0.9)	0.6	(0.1)	0.5	(0.1)	4.9	(0.4)	3.5	(0.3)	5.5	(0.4)	4.0	(0.4)
	Sweden	88.6	(1.1)	1.2	(0.2)	2.9	(0.3)	4.0	(0.6)	0.6	(0.1)	2.8	(0.4)	3.5	(0.3)	6.8	(0.8)
	Switzerland	75.6	(0.9)	3.1	(0.3)	6.2	(0.6)	7.4	(0.4)	3.0	(0.5)	4.8	(0.3)	9.2	(0.7)	12.2	(0.6)
	Turkey	95.8	(0.6)	3.7	(0.5)	0.4	(0.1)	0.0	(0.0)	0.1	(0.1)	0.0	(0.0)	0.5	(0.1)	0.1	(0.0)
	United Kingdom	88.4	(1.0)	1.3	(0.2)	4.0	(0.6)	1.8	(0.3)	1.5	(0.2)	3.1	(0.3)	5.5	(0.7)	4.9	(0.5)
	United States	79.3	(1.4)	1.4	(0.2)	6.0	(0.6)	6.9	(0.6)	1.7	(0.2)	4.7	(0.5)	7.8	(0.6)	11.5	(0.9)
	OECD average	85.9	(0.1)	4.4	(0.1)	3.2	(0.1)	2.6	(0.1)	1.8	(0.0)	2.8	(0.1)	5.0	(0.1)	5.4	(0.1)
Partners	Albania	98.4	(0.3)	1.0	(0.2)	0.5	(0.2)	0.0	(0.0)	0.1	(0.1)	0.0	(0.0)	0.6	(0.2)	0.0	(0.0)
	Argentina	95.9	(0.5)	0.7	(0.1)	1.8	(0.3)	0.2	(0.1)	1.0	(0.2)	0.4	(0.1)	2.8	(0.4)	0.6	(0.2)
	Azerbaijan	90.0	(1.2)	6.9	(1.0)	2.0	(0.5)	0.3	(0.1)	0.6	(0.1)	0.2	(0.1)	2.6	(0.6)	0.5	(0.2)
	Brazil	98.6	(0.2)	0.6	(0.1)	0.5	(0.1)	0.0	(0.0)	0.3	(0.1)	0.0	(0.0)	0.8	(0.1)	0.0	(0.0)
	Bulgaria	89.1	(1.8)	10.5	(1.7)	0.1	(0.1)	0.1	(0.0)	0.0	(0.0)	0.2	(0.1)	0.2	(0.1)	0.3	(0.1)
	Colombia	99.3	(0.1)	0.4	(0.1)	0.3	(0.1)	0.0	(0.0)	0.1	(0.0)	0.0	(0.0)	0.3	(0.1)	0.0	(0.0)
	Croatia	88.0	(0.7)	1.3	(0.4)	7.0	(0.5)	0.2	(0.1)	3.3	(0.3)	0.2	(0.1)	10.4	(0.6)	0.3	(0.1)
	Dubai (UAE)	16.1	(0.4)	9.4	(0.4)	12.8	(0.5)	14.4	(0.5)	20.5	(0.6)	26.9	(0.6)	33.3	(0.7)	41.3	(0.7)
	Hong Kong-China	57.8	(1.6)	2.8	(0.8)	22.8	(0.8)	1.2	(0.2)	12.2	(0.8)	3.3	(0.5)	35.0	(1.2)	4.5	(0.6)
	Indonesia	35.5	(2.1)	64.3	(2.1)	c	c	c	c	0.0	(0.0)	0.2	(0.1)	0.0	(0.0)	0.2	(0.1)
	Jordan	84.0	(0.9)	2.3	(0.3)	10.0	(0.7)	0.5	(0.1)	3.0	(0.3)	0.3	(0.1)	12.9	(0.9)	0.9	(0.1)
	Kazakhstan	79.4	(1.3)	9.0	(0.8)	6.7	(0.8)	0.6	(0.2)	3.9	(0.6)	0.5	(0.1)	10.5	(1.1)	1.1	(0.2)
	Kyrgyzstan	79.6	(1.6)	18.6	(1.6)	1.0	(0.1)	0.2	(0.1)	0.6	(0.2)	0.2	(0.1)	1.5	(0.3)	0.3	(0.1)
	Latvia	87.1	(1.3)	8.6	(1.2)	3.3	(0.4)	0.7	(0.2)	0.3	(0.1)	0.1	(0.1)	3.5	(0.5)	0.8	(0.2)
	Liechtenstein	69.5	(3.0)	0.7	(0.5)	8.1	(1.5)	5.7	(1.4)	7.6	(1.6)	8.5	(1.6)	15.8	(2.1)	14.1	(2.1)
	Lithuania	94.7	(0.8)	3.6	(0.7)	1.0	(0.2)	0.6	(0.2)	0.1	(0.1)	0.1	(0.0)	1.1	(0.2)	0.7	(0.2)
	Macao-China	24.1	(0.6)	5.5	(0.2)	50.6	(0.6)	4.3	(0.2)	14.2	(0.4)	1.3	(0.2)	64.9	(0.6)	5.6	(0.2)
	Montenegro	92.4	(0.4)	1.0	(0.2)	2.3	(0.3)	0.2	(0.1)	3.6	(0.3)	0.5	(0.2)	5.9	(0.4)	0.7	(0.2)
	Panama	92.4	(1.4)	3.9	(0.9)	0.8	(0.2)	0.4	(0.1)	1.4	(0.4)	1.2	(0.4)	2.1	(0.4)	1.6	(0.4)
	Peru	94.7	(0.8)	4.9	(0.8)	0.3	(0.1)	0.0	(0.0)	0.1	(0.1)	0.0	(0.0)	0.4	(0.1)	0.0	(0.0)
	Qatar	34.2	(0.4)	19.4	(0.3)	13.1	(0.4)	6.9	(0.3)	14.0	(0.3)	12.5	(0.3)	27.0	(0.4)	19.4	(0.4)
	Romania	96.6	(0.6)	3.1	(0.6)	0.1	(0.1)	0.0	(0.0)	0.1	(0.1)	0.1	(0.0)	0.2	(0.1)	0.1	(0.0)
	Russian Federation	80.9	(1.4)	7.0	(1.1)	5.9	(0.5)	1.3	(0.7)	3.8	(0.4)	1.1	(0.2)	9.8	(0.6)	2.3	(0.8)
	Serbia	89.0	(0.6)	1.6	(0.3)	5.1	(0.4)	0.1	(0.1)	4.1	(0.4)	0.2	(0.1)	9.2	(0.6)	0.3	(0.1)
	Shanghai-China	98.1	(0.3)	1.3	(0.2)	0.1	(0.0)	0.0	(0.0)	0.3	(0.1)	0.1	(0.1)	0.4	(0.1)	0.1	(0.1)
	Singapore	37.8	(0.8)	48.0	(1.0)	1.4	(0.2)	3.4	(0.3)	1.6	(0.2)	7.9	(0.4)	3.0	(0.3)	11.3	(0.5)
	Chinese Taipei	77.9	(1.2)	21.7	(1.2)	0.2	(0.1)	0.0	(0.0)	0.1	(0.1)	0.1	(0.0)	0.3	(0.1)	0.1	(0.0)
	Thailand	51.4	(1.7)	48.6	(1.7)	c	c	c	c	c	c	c	c	c	c	c	c
	Trinidad and Tobago	95.4	(0.3)	2.3	(0.2)	1.2	(0.2)	0.1	(0.1)	0.7	(0.1)	0.4	(0.1)	1.8	(0.2)	0.5	(0.1)
	Tunisia	99.6	(0.1)	0.1	(0.0)	0.2	(0.1)	0.0	(0.0)	0.1	(0.1)	0.0	(0.0)	0.3	(0.1)	0.0	(0.0)
	Uruguay	97.3	(0.2)	2.2	(0.2)	0.2	(0.1)	0.0	(0.0)	0.2	(0.1)	0.1	(0.1)	0.4	(0.1)	0.1	(0.1)

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 1/2]
Table B1.5 Sampled immigrant[1] and non-immigrant students, by test language and language spoken at home

			Percent immigrant students		Percent speaking another language at home			
					Non-immigrant students		Immigrant students	
		Language of test	%	SE	%	SE	%	SE
OECD	Australia	ENGLISH	23.0	(1.1)	1.0	(0.1)	36.2	(1.8)
	Austria	GERMAN	12.5	(1.0)	1.5	(0.2)	73.9	(2.8)
	Belgium	DUTCH	6.8	(0.9)	22.6	(1.4)	54.9	(6.0)
		FRENCH	21.8	(2.2)	8.1	(0.7)	49.7	(3.3)
		GERMAN	20.8	(1.4)	32.6	(1.9)	41.8	(4.5)
	Canada	ENGLISH	26.6	(1.5)	2.2	(0.2)	46.4	(1.5)
		FRENCH	13.8	(1.9)	6.7	(0.5)	66.2	(3.6)
	Chile	SPANISH	0.5	(0.1)	0.4	(0.1)	c	c
	Czech Republic	CZECH	1.9	(0.2)	0.5	(0.1)	45.9	(5.0)
	Denmark	DANISH	7.4	(0.4)	0.5	(0.1)	52.0	(1.9)
	Estonia	ESTONIAN	2.4	(0.3)	2.1	(0.4)	36.3	(6.4)
		RUSSIAN	32.2	(2.6)	1.5	(0.7)	2.6	(1.3)
	Finland	FINNISH	2.7	(0.4)	0.7	(0.2)	73.9	(4.4)
		SWEDISH	1.3	(0.3)	18.7	(1.1)	c	c
	France	FRENCH	11.9	(1.3)	2.6	(0.4)	39.8	(2.4)
	Germany	GERMAN	15.3	(1.0)	1.6	(0.2)	58.0	(2.6)
	Greece	GREEK	8.8	(0.8)	1.4	(0.3)	39.4	(3.4)
	Hungary	HUNGARIAN	2.1	(0.3)	0.8	(0.3)	6.6	(2.9)
	Iceland	ICELANDIC	2.3	(0.3)	1.3	(0.2)	78.7	(4.6)
	Ireland	ENGLISH	8.1	(0.6)	0.6	(0.2)	44.9	(3.9)
		IRISH	c	c	c	c	c	c
	Israel	ARABIC	1.4	(0.6)	5.1	(0.8)	c	c
		HEBREW	22.8	(1.3)	3.7	(1.2)	39.5	(2.6)
	Italy	GERMAN	3.1	(0.7)	97.5	(0.5)	87.3	(12.2)
		ITALIAN	5.3	(0.2)	10.6	(0.4)	67.3	(2.0)
		SLOVENIAN	c	c	c	c	c	c
	Japan	JAPANESE	0.3	(0.1)	0.1	(0.0)	c	c
	Korea	KOREAN	0.0	(0.0)	0.1	(0.0)	c	c
	Luxembourg	ENGLISH	c	c	c	c	c	c
		FRENCH	81.1	(1.5)	59.1	(4.1)	64.1	(1.9)
		GERMAN	23.2	(0.7)	98.6	(0.3)	91.9	(0.9)
	Mexico	SPANISH	1.8	(0.2)	2.2	(0.2)	18.1	(3.2)
	Netherlands	DUTCH	10.9	(1.3)	1.6	(0.5)	42.6	(2.7)
	New Zealand	ENGLISH	24.7	(1.1)	3.7	(0.3)	47.4	(1.5)
	Norway	NORWEGIAN	6.9	(0.6)	2.1	(0.3)	76.9	(2.2)
	Poland	POLISH	0.0	(0.0)	0.6	(0.1)	c	c
	Portugal	PORTUGUESE	5.2	(0.4)	0.6	(0.1)	19.1	(2.7)
	Slovak Republic	HUNGARIAN	0.0	(0.0)	1.7	(0.7)	m	m
		SLOVAK	0.5	(0.1)	5.4	(0.8)	c	c
	Slovenia	ITALIAN	c	c	c	c	c	c
		SLOVENIAN	7.2	(0.4)	1.2	(0.2)	55.4	(3.0)
	Spain	BASQUE	0.5	(0.2)	27.2	(3.2)	c	c
		CATALAN	11.3	(1.2)	45.7	(4.0)	80.2	(5.1)
		GALICIAN	3.8	(0.5)	57.2	(3.5)	91.1	(3.7)
		SPANISH	9.9	(0.6)	2.9	(0.7)	29.5	(3.4)
		VALENCIAN	5.2	(2.9)	54.7	(14.7)	c	c
	Sweden	ENGLISH	c	c	c	c	c	c
		SWEDISH	10.2	(1.0)	1.2	(0.2)	65.8	(2.3)
	Switzerland	FRENCH	30.2	(2.0)	3.5	(0.6)	39.4	(4.0)
		GERMAN	17.0	(0.9)	3.2	(0.4)	71.6	(2.0)
		ITALIAN	36.6	(2.8)	23.8	(4.9)	35.1	(8.1)
	Turkey	TURKISH	0.5	(0.1)	3.7	(0.5)	c	c
	United Kingdom	ENGLISH	10.5	(1.0)	0.9	(0.2)	47.4	(3.2)
		WELSH	0.0	(0.0)	70.7	(5.2)	m	m
	United States	ENGLISH	19.3	(1.3)	1.7	(0.3)	59.8	(1.9)



[Part 2/2]
Table B1.5 Sampled immigrant[1] and non-immigrant students, by test language and language spoken at home *(continued)*

		Language of test	Percent immigrant students		Percent speaking another language at home			
					Non-immigrant students		Immigrant students	
			%	SE	%	SE	%	SE
Partners	Albania	ALBANIAN	0.6	(0.2)	1.0	(0.2)	c	c
	Argentina	SPANISH	3.4	(0.5)	0.8	(0.1)	17.1	(3.7)
	Azerbaijan	AZERBAIJANI	3.1	(0.6)	7.1	(1.1)	17.1	(4.9)
	Brazil	PORTUGUESE	0.8	(0.2)	0.6	(0.1)	4.3	(3.1)
	Bulgaria	BULGARIAN	0.5	(0.1)	10.6	(1.8)	c	c
	Chinese Taipei	CHINESE	0.4	(0.1)	21.8	(1.2)	c	c
	Colombia	SPANISH	0.3	(0.1)	0.4	(0.1)	c	c
	Croatia	CROATIAN	10.7	(0.6)	1.5	(0.4)	3.1	(0.8)
	Dubai (UAE)	ARABIC	39.2	(1.2)	4.6	(0.8)	6.8	(1.5)
		ENGLISH	86.7	(0.4)	87.3	(1.6)	62.9	(0.9)
	Hong Kong-China	CHINESE	39.5	(1.4)	0.8	(0.2)	8.3	(0.8)
		ENGLISH	38.8	(9.3)	90.5	(1.7)	72.7	(7.2)
	Indonesia	INDONESIAN	0.3	(0.1)	64.5	(2.2)	c	c
	Jordan	ARABIC	13.8	(0.9)	2.6	(0.4)	6.2	(0.9)
	Kazakhstan	KAZAKH	10.8	(1.4)	1.9	(0.4)	1.7	(1.0)
		RUSSIAN	13.0	(1.8)	23.0	(1.8)	19.7	(3.6)
	Kyrgyzstan	KYRGYZ	0.5	(0.2)	2.7	(0.4)	c	c
		RUSSIAN	4.2	(0.6)	61.1	(3.3)	23.0	(7.4)
		UZBEK	3.8	(2.7)	3.3	(1.0)	c	c
	Latvia	LATVIAN	1.8	(0.3)	9.9	(1.4)	50.7	(9.8)
		RUSSIAN	14.5	(1.7)	5.0	(2.8)	3.8	(1.8)
	Liechtenstein	GERMAN	29.9	(2.9)	1.0	(0.7)	47.3	(5.1)
	Lithuania	LITHUANIAN	1.2	(0.2)	3.4	(0.7)	48.7	(8.8)
		POLISH	5.7	(2.7)	13.0	(5.3)	c	c
		RUSSIAN	15.5	(3.7)	2.1	(1.6)	c	c
	Macao-China	CHINESE	73.0	(0.6)	0.6	(0.2)	1.2	(0.2)
		ENGLISH	48.9	(2.0)	98.6	(0.7)	94.3	(1.4)
		PORTUGUESE	c	c	c	c	c	c
	Montenegro	ALBANIAN	c	c	c	c	c	c
		MONTENEGRIN	6.8	(0.4)	1.1	(0.2)	9.9	(3.1)
	Panama	SPANISH	3.7	(0.8)	4.0	(0.9)	42.8	(5.1)
	Peru	SPANISH	0.4	(0.1)	4.9	(0.8)	c	c
	Qatar	ARABIC	39.3	(0.6)	4.3	(0.3)	5.7	(0.5)
		ENGLISH	56.1	(0.6)	96.0	(0.5)	76.0	(0.9)
	Romania	HUNGARIAN	0.0	(0.0)	0.4	(0.4)	m	m
		ROMANIAN	0.3	(0.1)	3.2	(0.6)	c	c
	Russian Federation	RUSSIAN	12.1	(0.8)	8.0	(1.3)	19.4	(5.6)
	Serbia	HUNGARIAN	11.1	(3.4)	1.7	(1.3)	c	c
		SERBIAN	9.4	(0.6)	1.8	(0.3)	2.8	(0.8)
	Shanghai-China	CHINESE	0.5	(0.1)	1.3	(0.2)	c	c
	Singapore	ENGLISH	14.3	(0.7)	55.9	(1.0)	78.9	(1.4)
	Thailand	THAI	0.0	(0.0)	48.6	(1.7)	m	m
	Trinidad and Tobago	ENGLISH	2.3	(0.2)	2.3	(0.2)	21.4	(4.2)
	Tunisia	ARABIC	0.3	(0.1)	0.1	(0.0)	c	c
	Uruguay	SPANISH	0.5	(0.1)	2.2	(0.2)	c	c

1. The term "immigrant" is used to designate children of immigrants, some of whom may have been born in the country of residence.

Percentage of immigrant students in PISA 2000 and 2009

Table B1.6 *Results based on students' self-reports*

		Percentage of immigrant students				Change in the percentage of immigrant students	
		PISA 2000		PISA 2009		Change between 2000 and 2009 (PISA 2009 - PISA 2000)	
		%	S.E.	%	S.E.	% dif.	S.E.
OECD	Australia	22.6	(1.8)	23.2	(1.1)	0.6	(2.1)
	Austria	11.0	(0.9)	m	m	m	m
	Belgium	12.0	(1.1)	14.8	(1.1)	2.8	(1.6)
	Canada	20.5	(1.0)	24.4	(1.3)	**3.8**	(1.7)
	Chile	0.3	(0.1)	0.5	(0.1)	0.2	(0.1)
	Czech Republic	1.1	(0.2)	2.3	(0.2)	**1.2**	(0.3)
	Denmark	6.2	(0.6)	8.6	(0.4)	**2.5**	(0.7)
	Finland	1.3	(0.2)	2.6	(0.3)	**1.3**	(0.4)
	France	12.0	(0.9)	13.1	(1.4)	1.1	(1.6)
	Germany	15.2	(0.8)	17.6	(1.0)	2.4	(1.3)
	Greece	4.8	(0.9)	9.0	(0.8)	**4.2**	(1.2)
	Hungary	1.7	(0.2)	2.1	(0.3)	0.4	(0.3)
	Iceland	0.8	(0.2)	2.4	(0.2)	**1.6**	(0.3)
	Ireland	2.3	(0.3)	8.3	(0.6)	**5.9**	(0.7)
	Israel	25.0	(1.7)	19.7	(1.1)	**-5.2**	(2.0)
	Italy	0.9	(0.2)	5.5	(0.3)	**4.6**	(0.3)
	Japan	0.1	(0.1)	0.3	(0.1)	0.1	(0.1)
	Korea	m	m	0.0	(0.0)	m	m
	Luxembourg	m	m	40.2	(0.7)	m	m
	Mexico	3.6	(0.4)	1.9	(0.2)	**-1.7**	(0.4)
	Netherlands	m	m	12.1	(1.4)	m	m
	New Zealand	19.6	(1.1)	24.7	(1.0)	**5.0**	(1.5)
	Norway	4.6	(0.4)	6.8	(0.6)	**2.2**	(0.7)
	Poland	0.3	(0.1)	0.0	(0.0)	**-0.2**	(0.1)
	Portugal	3.1	(0.3)	5.5	(0.5)	**2.3**	(0.5)
	Spain	2.0	(0.4)	9.5	(0.5)	**7.5**	(0.6)
	Sweden	10.5	(0.9)	11.7	(1.2)	1.2	(1.5)
	Switzerland	20.7	(0.9)	23.5	(0.9)	**2.8**	(1.3)
	United Kingdom	m	m	10.6	(1.0)	m	m
	United States	13.6	(2.1)	19.5	(1.3)	**5.9**	(2.5)
	OECD average-26	8.3	(0.2)	11.0	(0.2)	**2.1**	(0.2)
Partners	Albania	0.8	(0.2)	0.6	(0.2)	-0.1	(0.3)
	Argentina	2.3	(0.5)	3.6	(0.5)	1.3	(0.7)
	Brazil	0.4	(0.1)	0.8	(0.1)	**0.4**	(0.2)
	Bulgaria	0.4	(0.1)	0.5	(0.1)	0.1	(0.2)
	Hong Kong-China	43.8	(1.0)	39.4	(1.5)	**-4.4**	(1.8)
	Indonesia	0.4	(0.1)	0.3	(0.1)	-0.1	(0.1)
	Latvia	22.1	(2.4)	4.5	(0.5)	**-17.6**	(2.4)
	Liechtenstein	20.6	(2.1)	30.3	(2.5)	**9.8**	(3.3)
	Peru	0.3	(0.1)	0.4	(0.1)	0.2	(0.1)
	Romania	0.2	(0.1)	0.3	(0.1)	0.2	(0.1)
	Russian Federation	4.6	(0.6)	12.1	(0.7)	**7.5**	(1.0)
	Thailand	0.7	(0.5)	0.0	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Results, Volume V, Table V.4.4.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B2.1a Student performance in reading, by immigrant status

		Average student performance in reading								Difference in reading performance between								Difference in reading performance after accounting for socio-economic background between							
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)		Non-immigrant students and second-generation students		Non-immigrant students and first-generation students		Second- and first-generation students		Non-immigrant students and immigrant students (first- and second-generation)		Non-immigrant students and second-generation students		Non-immigrant students and first-generation students		Second- and first-generation students		Non-immigrant students and immigrant students (first- and second-generation)	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.
OECD	Australia	515	(2.1)	530	(6.3)	518	(6.3)	524	(5.8)	**-15.7**	(6.4)	-3.4	(6.1)	**12.3**	(4.8)	-9.8	(5.8)	**-19.0**	(5.5)	-2.1	(5.2)	**-16.9**	(3.9)	**-10.9**	(5.1)
	Austria	482	(3.0)	427	(6.0)	384	(10.4)	414	(6.2)	**54.7**	(6.7)	**97.7**	(10.6)	**42.9**	(10.7)	**68.2**	(6.7)	**26.4**	(7.0)	**61.0**	(9.5)	**-34.6**	(9.6)	**37.0**	(6.7)
	Belgium	519	(2.2)	454	(7.0)	448	(8.3)	451	(6.4)	**64.6**	(7.2)	**71.0**	(8.0)	6.5	(8.6)	**67.6**	(6.3)	**37.0**	(6.6)	**45.7**	(6.6)	-8.7	(8.0)	**41.1**	(5.3)
	Canada	528	(1.5)	522	(3.6)	520	(4.6)	521	(3.4)	5.5	(3.8)	8.2	(4.7)	2.7	(4.4)	6.7	(3.6)	-1.0	(3.4)	**8.7**	(4.1)	**-9.7**	(4.2)	3.3	(3.1)
	Chile	452	(3.0)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	479	(2.9)	448	(17.9)	472	(17.5)	457	(13.7)	31.3	(17.7)	6.8	(16.8)	-24.4	(23.7)	22.3	(13.2)	20.8	(14.6)	10.7	(17.2)	10.2	(22.2)	17.1	(11.4)
	Denmark	502	(2.2)	446	(4.3)	422	(6.2)	438	(3.8)	**55.5**	(4.3)	**79.4**	(6.5)	**23.9**	(7.0)	**63.2**	(3.9)	**27.4**	(4.1)	**53.6**	(6.0)	**-26.1**	(6.5)	**35.8**	(3.7)
	Estonia	505	(2.7)	470	(6.6)	470	(17.4)	470	(6.5)	**35.1**	(6.5)	**34.7**	(17.1)	-0.4	(17.1)	**35.1**	(6.3)	**33.5**	(5.9)	**35.6**	(16.2)	-2.0	(16.5)	**33.7**	(5.8)
	Finland	538	(2.2)	493	(13.9)	449	(17.7)	468	(12.8)	**45.5**	(13.9)	**89.0**	(17.6)	**43.5**	(21.8)	**69.7**	(12.7)	**42.1**	(14.0)	**74.7**	(15.6)	-32.6	(20.8)	**60.0**	(11.2)
	France	505	(3.8)	449	(8.9)	428	(15.9)	444	(8.5)	**55.3**	(9.6)	**76.9**	(16.2)	21.6	(16.6)	**60.5**	(9.2)	**25.9**	(8.9)	**43.3**	(14.3)	-17.3	(14.6)	**30.1**	(8.4)
	Germany	511	(2.6)	457	(6.1)	450	(5.7)	455	(4.7)	**53.8**	(6.2)	**60.9**	(6.0)	7.1	(7.9)	**56.1**	(4.8)	**23.1**	(5.8)	**34.9**	(5.7)	-11.7	(8.1)	**27.1**	(4.3)
	Greece	489	(4.3)	456	(10.4)	420	(15.5)	432	(11.5)	**33.3**	(10.3)	**69.0**	(15.2)	**35.7**	(18.0)	**57.4**	(11.1)	**21.1**	(9.6)	**41.6**	(15.4)	-20.5	(18.1)	**34.8**	(10.9)
	Hungary	495	(3.1)	527	(12.4)	493	(11.6)	507	(8.3)	**-31.9**	(12.4)	2.3	(11.7)	34.2	(17.5)	-12.3	(8.4)	-20.3	(11.2)	-4.0	(10.1)	-16.3	(15.6)	-10.9	(7.3)
	Iceland	504	(1.4)	c	c	417	(12.4)	423	(11.7)	c	c	**86.5**	(12.4)	c	c	**80.9**	(11.7)	c	c	**64.0**	(12.9)	c	c	**60.7**	(11.9)
	Ireland	502	(3.0)	508	(12.8)	466	(7.6)	473	(7.1)	-6.3	(13.4)	**36.2**	(7.7)	**42.5**	(14.6)	**28.8**	(7.3)	-3.9	(13.0)	**40.8**	(7.0)	**-44.7**	(14.6)	**32.9**	(6.5)
	Israel	480	(3.3)	487	(6.5)	462	(9.2)	478	(6.4)	-7.1	(6.1)	**17.6**	(8.9)	**24.7**	(8.5)	1.9	(6.1)	**-21.1**	(4.7)	-8.9	(7.6)	-12.2	(7.4)	**-16.8**	(4.7)
	Italy	491	(1.6)	446	(9.4)	410	(4.5)	418	(4.2)	**45.3**	(9.4)	**81.0**	(4.7)	**35.7**	(10.3)	**72.5**	(4.4)	**31.0**	(9.6)	**59.5**	(4.6)	**-28.5**	(10.2)	**52.6**	(4.4)
	Japan	521	(3.4)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	540	(3.4)	c	c	m	m	c	c	c	c	m	m	c	c	c	c	c	c	m	m	c	c	c	c
	Luxembourg	495	(1.9)	439	(2.9)	448	(4.5)	442	(2.1)	**55.8**	(3.7)	**46.9**	(4.9)	-8.9	(6.0)	**52.2**	(3.0)	**18.4**	(4.0)	**19.9**	(4.9)	-1.5	(6.3)	**19.0**	(3.1)
	Mexico	430	(1.8)	340	(9.9)	324	(9.9)	331	(7.9)	**89.3**	(9.7)	**105.1**	(9.5)	15.8	(12.3)	**98.9**	(7.5)	**77.1**	(10.1)	**90.9**	(9.4)	-13.8	(12.7)	**85.4**	(7.4)
	Netherlands	515	(5.2)	469	(8.2)	471	(12.5)	470	(7.8)	**46.0**	(9.3)	**44.2**	(10.9)	-1.9	(12.3)	**45.5**	(8.0)	15.7	(9.0)	10.8	(9.5)	4.9	(10.3)	14.4	(8.0)
	New Zealand	526	(2.6)	498	(8.3)	520	(4.6)	513	(4.7)	**27.8**	(9.0)	5.7	(5.0)	**-22.1**	(8.5)	**12.9**	(5.3)	**14.3**	(6.7)	**13.4**	(4.3)	1.0	(6.7)	**13.7**	(4.1)
	Norway	508	(2.6)	463	(8.0)	447	(7.8)	456	(5.9)	**44.9**	(8.1)	**60.4**	(7.5)	15.5	(10.5)	**52.1**	(5.7)	**30.6**	(7.1)	**35.6**	(7.3)	-5.0	(9.3)	**32.9**	(5.5)
	Poland	502	(2.6)	m	m	c	c	c	c	m	m	c	c	c	c	c	c	m	m	c	c	m	m	c	c
	Portugal	492	(3.1)	476	(9.4)	456	(8.8)	466	(6.9)	16.2	(9.4)	**35.9**	(8.9)	19.7	(11.6)	**26.1**	(7.0)	13.2	(8.0)	**35.0**	(8.0)	**-21.7**	(10.6)	**24.1**	(6.0)
	Slovak Republic	478	(2.5)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	488	(1.1)	447	(5.5)	414	(8.7)	441	(4.8)	**40.9**	(5.6)	**74.2**	(8.9)	**33.3**	(10.4)	**46.8**	(4.9)	**19.2**	(5.4)	**44.7**	(9.8)	**-25.5**	(10.6)	**23.7**	(4.9)
	Spain	488	(2.0)	461	(9.3)	426	(4.1)	430	(4.0)	**26.3**	(9.2)	**61.6**	(4.0)	**35.3**	(9.7)	**57.7**	(3.9)	**20.1**	(9.8)	**47.1**	(3.4)	**-26.9**	(9.8)	**44.0**	(3.4)
	Sweden	507	(2.8)	454	(7.5)	416	(11.3)	442	(6.9)	**53.5**	(7.7)	**91.2**	(11.6)	**37.7**	(12.2)	**65.5**	(7.2)	**32.5**	(6.7)	**56.5**	(10.1)	**-24.0**	(10.5)	**40.0**	(6.2)
	Switzerland	513	(2.2)	471	(4.5)	455	(6.7)	465	(4.1)	**42.2**	(3.9)	**58.4**	(6.5)	**16.2**	(7.2)	**48.0**	(3.5)	**20.0**	(3.9)	**40.8**	(5.1)	**-20.8**	(6.6)	**27.5**	(3.0)
	Turkey	466	(3.5)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	499	(2.2)	492	(8.5)	458	(9.5)	476	(7.5)	7.1	(8.6)	**41.2**	(9.7)	**34.1**	(10.7)	**22.6**	(7.6)	3.2	(6.7)	**28.2**	(7.6)	**-25.0**	(9.8)	**14.4**	(5.4)
	United States	506	(3.8)	483	(6.2)	485	(7.9)	484	(5.8)	**22.3**	(6.1)	**20.7**	(7.2)	-1.5	(7.6)	**21.8**	(5.5)	-7.9	(4.8)	-11.5	(6.1)	3.6	(7.0)	**-9.1**	(4.1)
	OECD average	499	(0.5)	467	(1.7)	448	(2.0)	457	(1.4)	**33.0**	(1.7)	**52.1**	(1.9)	**17.8**	(2.4)	**43.5**	(1.4)	**17.8**	(1.6)	**34.6**	(1.8)	**-15.8**	(2.3)	**27.1**	(1.3)
Partners	Albania	389	(4.0)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	401	(4.6)	366	(12.6)	356	(26.5)	362	(15.2)	**35.4**	(13.3)	45.5	(26.6)	10.1	(24.7)	**39.5**	(15.6)	8.4	(14.1)	27.1	(25.3)	-18.7	(24.5)	16.0	(15.3)
	Azerbaijan	363	(3.4)	359	(9.6)	381	(12.6)	365	(8.8)	3.7	(9.7)	-18.3	(13.0)	-22.0	(14.4)	-1.8	(9.0)	3.4	(9.3)	-7.6	(13.5)	11.0	(14.6)	0.6	(8.5)
	Brazil	416	(2.7)	321	(18.7)	310	(18.6)	317	(13.5)	**94.7**	(19.0)	**106.0**	(18.8)	11.3	(27.2)	**98.6**	(13.8)	**92.2**	(17.3)	**97.4**	(22.7)	-5.3	(29.4)	**94.0**	(13.3)
	Bulgaria	433	(6.7)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	415	(3.6)	c	c	c	c	313	(24.8)	c	c	c	c	c	c	**102.2**	(24.7)	c	c	c	c	c	c	**81.2**	(24.0)
	Croatia	479	(2.9)	465	(5.5)	452	(8.4)	461	(5.4)	**13.4**	(5.3)	**26.9**	(8.2)	13.5	(8.1)	**17.8**	(5.1)	7.8	(4.8)	13.7	(8.1)	-5.9	(8.4)	**9.8**	(4.5)
	Dubai (UAE)	395	(2.1)	467	(3.2)	503	(2.0)	490	(1.4)	**-72.7**	(3.9)	**-108.6**	(3.0)	**-35.9**	(4.3)	**-95.3**	(2.6)	**-70.4**	(3.8)	**-92.8**	(3.2)	**22.3**	(4.0)	**-84.0**	(2.8)
	Hong Kong-China	535	(2.7)	543	(3.2)	512	(5.5)	531	(3.4)	**-7.9**	(3.8)	**23.5**	(6.2)	**31.3**	(5.6)	4.5	(4.3)	**-18.7**	(3.4)	7.8	(5.9)	**-26.4**	(5.4)	**-8.8**	(3.8)
	Indonesia	403	(3.7)	m	m	c	c	c	c	m	m	c	c	c	c	c	c	m	m	c	c	m	m	c	c
	Jordan	407	(3.1)	420	(6.5)	412	(8.6)	418	(5.8)	**-13.3**	(5.8)	-5.0	(8.4)	8.3	(9.7)	**-11.3**	(5.1)	-7.2	(5.4)	7.6	(8.3)	-14.8	(9.9)	-3.8	(4.6)
	Kazakhstan	390	(3.2)	415	(12.1)	366	(8.9)	396	(9.7)	**-24.7**	(12.4)	**24.1**	(9.1)	**48.8**	(13.3)	-6.3	(10.1)	**-27.0**	(11.7)	**14.1**	(7.1)	**-41.1**	(12.5)	-11.6	(8.8)
	Kyrgyzstan	317	(3.2)	359	(19.9)	332	(18.7)	348	(14.4)	**-42.0**	(19.6)	-15.6	(18.7)	26.4	(26.6)	**-30.8**	(14.2)	**-37.0**	(18.1)	-15.5	(19.5)	-21.5	(28.7)	**-27.9**	(12.1)
	Latvia	485	(2.9)	472	(9.7)	c	c	474	(9.1)	12.9	(9.2)	c	c	c	c	11.3	(8.4)	13.5	(7.6)	c	c	4.3	(19.2)	13.1	(6.9)
	Liechtenstein	510	(4.3)	486	(10.0)	474	(11.2)	479	(7.4)	**24.3**	(12.0)	**35.7**	(13.5)	11.4	(15.2)	**30.6**	(10.3)	11.2	(12.8)	24.3	(13.5)	-13.2	(14.8)	18.5	(10.9)
	Lithuania	471	(2.4)	447	(11.0)	c	c	448	(10.5)	**23.7**	(11.4)	c	c	c	c	**23.3**	(10.8)	20.2	(11.3)	c	c	-5.6	(43.8)	20.7	(10.9)
	Macao-China	482	(2.0)	489	(1.3)	491	(2.2)	489	(1.0)	**-6.9**	(2.4)	**-8.5**	(3.0)	-1.6	(2.8)	**-7.3**	(2.3)	**-12.0**	(2.7)	**-12.6**	(3.2)	0.6	(2.7)	**-12.1**	(2.6)
	Montenegro	408	(1.7)	433	(10.1)	404	(8.9)	415	(6.8)	**-24.3**	(10.3)	4.0	(8.4)	**28.3**	(13.2)	-6.9	(6.5)	-13.6	(9.4)	4.9	(8.1)	-18.6	(12.7)	-2.2	(6.0)
	Panama	382	(5.6)	398	(28.8)	324	(32.6)	350	(26.8)	-15.3	(27.4)	58.1	(31.4)	73.4	(42.5)	31.9	(25.4)	-4.3	(28.3)	**55.5**	(28.1)	-59.8	(40.1)	34.2	(23.0)
	Peru	374	(3.9)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	331	(1.3)	392	(2.4)	457	(2.1)	429	(1.4)	**-60.6**	(2.7)	**-125.3**	(2.8)	**-64.7**	(3.5)	**-97.4**	(2.2)	**-65.0**	(2.7)	**-121.6**	(2.7)	**56.6**	(3.5)	**-97.2**	(2.2)
	Romania	426	(4.0)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	464	(3.2)	435	(9.4)	444	(7.1)	439	(7.0)	**28.7**	(9.4)	**19.6**	(6.6)	-9.1	(10.1)	**25.0**	(6.8)	**22.8**	(8.7)	**15.5**	(6.1)	7.3	(10.8)	**19.8**	(5.7)
	Serbia	442	(2.4)	466	(6.8)	446	(7.3)	457	(4.8)	**-23.6**	(6.9)	-4.4	(7.5)	19.2	(10.2)	**-14.9**	(5.0)	**-23.6**	(6.6)	-11.3	(7.3)	-12.3	(9.7)	**-18.0**	(5.0)
	Shanghai-China	557	(2.3)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	526	(1.3)	544	(6.4)	521	(4.9)	529	(4.3)	**-17.2**	(6.7)	5.3	(5.5)	**22.6**	(7.1)	-2.2	(4.8)	**-13.2**	(6.6)	**17.7**	(5.3)	**-30.9**	(7.1)	7.4	(4.6)
	Chinese Taipei	497	(2.5)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	421	(2.6)	m	m	m	m	m	m	m	m	m	m	c	c	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	422	(1.3)	418	(19.7)	432	(18.0)	424	(13.3)	4.4	(19.7)	-9.4	(18.3)	-13.8	(27.1)	-1.9	(13.6)	12.4	(19.4)	0.7	(19.6)	11.6	(29.2)	7.3	(13.0)
	Tunisia	404	(2.9)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	427	(2.6)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c

Notes: Values that are statistically significant are indicated in bold (see Annex A). Please refer to the Reader's Guide for information concerning the symbols replacing missing data.
Source: PISA 2009 Database.



Student performance in mathematics, by immigrant status

Table B2.1b *Results based on students' self-reports*

		Average student performance in mathematics								Difference in mathematics performance between															
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)		non-immigrant students and second-generation students		non-immigrant students and first-generation students		second- and first-generation students		non-immigrant students and immigrant students (first- and second-generation)		non-immigrant students and second-generation students, after accounting for socio-economic background		non-immigrant students and first-generation students, after accounting for socio-economic background		second- and first-generation students, after accounting for socio-economic background		non-immigrant students and immigrant students (first- and second-generation), after accounting for socio-economic background	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.
OECD	Australia	513	(2.2)	532	(6.8)	519	(6.4)	526	(6.3)	**-18.9**	(6.8)	-6.2	(6.1)	**12.8**	(4.5)	**-12.8**	(6.1)	**-22.3**	(6.0)	-4.9	(5.3)	**-17.5**	(3.6)	**-14.0**	(5.5)
	Austria	507	(2.7)	450	(6.0)	431	(8.1)	444	(5.4)	**57.1**	(6.5)	**75.7**	(8.4)	**18.6**	(8.7)	**63.0**	(5.9)	**30.1**	(6.5)	**41.0**	(8.5)	-11.0	(8.4)	**33.4**	(6.1)
	Belgium	529	(2.3)	459	(7.3)	454	(7.7)	456	(5.9)	**70.4**	(7.5)	**75.0**	(7.9)	4.6	(9.2)	**72.6**	(6.2)	**42.1**	(6.9)	**49.8**	(7.0)	-7.7	(8.9)	**45.7**	(5.4)
	Canada	531	(1.6)	519	(3.5)	523	(4.6)	521	(3.4)	**12.2**	(3.7)	7.6	(4.6)	-4.6	(4.2)	**10.2**	(3.5)	5.5	(3.3)	**8.2**	(3.9)	-2.7	(4.0)	**6.7**	(3.0)
	Chile	423	(3.0)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	494	(2.8)	452	(17.6)	490	(15.5)	466	(13.5)	**42.2**	(17.7)	4.2	(14.9)	-38.1	(21.6)	**28.2**	(13.4)	**30.0**	(13.8)	8.4	(14.6)	21.7	(18.4)	**22.0**	(11.1)
	Denmark	510	(2.8)	447	(4.3)	426	(5.5)	440	(3.5)	**63.6**	(4.7)	**84.2**	(6.0)	**20.6**	(6.9)	**70.2**	(4.1)	**37.0**	(4.7)	**60.5**	(6.1)	**-23.5**	(6.6)	**44.5**	(4.2)
	Estonia	516	(2.5)	479	(7.5)	475	(19.9)	479	(7.5)	**36.6**	(7.4)	**40.5**	(19.5)	3.9	(19.5)	**36.9**	(7.2)	**34.9**	(6.6)	**41.2**	(18.0)	-6.3	(18.2)	**35.4**	(6.5)
	Finland	542	(2.2)	498	(12.7)	479	(14.2)	487	(9.5)	**44.0**	(12.6)	**63.5**	(14.2)	19.4	(20.1)	**54.9**	(9.4)	**40.8**	(13.0)	**51.0**	(12.6)	-10.2	(20.0)	**46.4**	(8.1)
	France	507	(3.3)	443	(8.6)	430	(14.8)	440	(8.1)	**63.1**	(9.2)	**76.9**	(15.7)	13.7	(15.6)	**66.4**	(8.9)	**33.2**	(8.5)	**42.5**	(12.5)	-9.2	(12.5)	**35.4**	(8.0)
	Germany	527	(2.8)	469	(6.5)	464	(5.9)	468	(5.0)	**57.5**	(6.6)	**62.5**	(5.8)	5.0	(7.9)	**59.1**	(5.1)	**24.1**	(6.2)	**34.0**	(5.5)	-9.9	(7.9)	**27.5**	(4.6)
	Greece	472	(3.9)	446	(9.1)	407	(11.7)	420	(9.2)	**25.9**	(9.0)	**64.8**	(11.8)	**39.0**	(13.8)	**52.2**	(9.2)	14.0	(8.5)	**37.8**	(12.1)	-23.8	(13.8)	**29.9**	(9.0)
	Hungary	491	(3.4)	512	(13.7)	492	(13.1)	501	(9.4)	-21.5	(13.5)	-1.6	(13.0)	20.0	(18.9)	-10.1	(9.4)	-9.3	(12.3)	-8.2	(11.2)	-1.1	(17.4)	-8.7	(7.9)
	Iceland	510	(1.4)	c	c	440	(11.9)	443	(11.3)	c	c	**69.7**	(12.1)	c	c	**67.3**	(11.4)	c	c	**43.6**	(12.6)	c	c	**43.9**	(11.6)
	Ireland	492	(2.7)	496	(12.3)	467	(6.6)	472	(6.1)	-4.5	(12.7)	**25.2**	(7.0)	**29.6**	(14.1)	**20.0**	(6.5)	-2.2	(13.0)	**29.3**	(6.4)	**-31.5**	(14.4)	**23.8**	(6.0)
	Israel	452	(3.0)	455	(7.4)	441	(8.1)	450	(6.4)	-3.1	(7.0)	11.5	(8.0)	14.6	(8.5)	2.2	(6.1)	**-18.1**	(5.4)	**-15.4**	(6.1)	-2.7	(7.0)	**-17.2**	(4.5)
	Italy	487	(1.9)	450	(7.8)	420	(4.4)	427	(3.9)	**37.1**	(8.0)	**67.4**	(4.9)	**30.3**	(9.1)	**60.2**	(4.4)	**24.9**	(7.8)	**48.7**	(5.0)	**-23.8**	(8.9)	**42.9**	(4.5)
	Japan	530	(3.3)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	548	(4.0)	c	c	m	m	c	c	c	c	m	m	c	c	c	c	c	c	m	m	c	c	c	c
	Luxembourg	511	(1.8)	456	(2.9)	466	(4.4)	460	(2.2)	**54.4**	(3.6)	**44.5**	(5.0)	-10.0	(5.8)	**50.4**	(3.1)	**19.1**	(4.0)	**18.6**	(4.9)	0.5	(6.0)	**18.9**	(3.2)
	Mexico	423	(1.7)	330	(11.0)	329	(8.5)	329	(6.8)	**92.3**	(10.9)	**94.2**	(7.9)	1.9	(13.7)	**93.4**	(6.3)	**80.9**	(11.0)	**80.9**	(8.1)	-0.0	(13.8)	**80.9**	(6.5)
	Netherlands	534	(4.6)	477	(8.9)	479	(12.0)	477	(8.2)	**56.9**	(9.1)	**55.1**	(10.8)	-1.8	(12.1)	**56.4**	(7.9)	**25.3**	(8.6)	**20.8**	(9.3)	4.5	(9.5)	**24.2**	(7.8)
	New Zealand	523	(2.5)	494	(7.0)	524	(4.6)	514	(4.4)	**29.6**	(7.4)	-0.4	(4.8)	**-30.0**	(7.5)	9.3	(4.8)	**16.2**	(5.2)	7.3	(4.2)	8.9	(5.8)	**10.1**	(3.7)
	Norway	502	(2.4)	463	(8.7)	445	(9.0)	455	(6.3)	**38.4**	(8.8)	**56.8**	(8.7)	18.4	(12.0)	**47.0**	(6.1)	**23.2**	(7.5)	**30.6**	(8.4)	-7.4	(10.5)	**26.6**	(5.8)
	Poland	496	(2.8)	m	m	c	c	c	c	m	m	c	c	c	c	c	c	m	m	c	c	m	m	c	c
	Portugal	490	(3.0)	450	(10.7)	461	(9.3)	455	(7.7)	**40.2**	(10.7)	**28.8**	(9.5)	-11.3	(12.9)	**34.5**	(7.8)	**36.7**	(9.0)	**27.3**	(8.6)	9.4	(11.6)	**32.0**	(6.7)
	Slovak Republic	498	(3.0)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	507	(1.2)	459	(5.5)	416	(10.3)	452	(5.0)	**47.5**	(5.4)	**90.5**	(10.4)	**43.0**	(11.5)	**55.2**	(4.9)	**23.7**	(5.5)	**58.1**	(11.0)	**-34.4**	(11.5)	**29.8**	(5.2)
	Spain	491	(2.1)	456	(10.8)	425	(4.2)	428	(4.1)	**35.0**	(10.4)	**65.9**	(4.2)	**30.9**	(11.1)	**62.4**	(4.0)	**28.6**	(10.4)	**51.2**	(3.4)	**-22.6**	(10.6)	**48.6**	(3.3)
	Sweden	504	(2.8)	447	(7.5)	428	(11.6)	441	(7.3)	**56.8**	(7.7)	**75.7**	(11.9)	18.9	(11.1)	**62.8**	(7.7)	**36.4**	(6.7)	**42.4**	(9.7)	-5.9	(8.8)	**38.3**	(6.6)
	Switzerland	550	(3.2)	494	(4.8)	475	(6.7)	487	(4.3)	**56.3**	(4.4)	**74.9**	(6.3)	**18.6**	(7.3)	**62.9**	(3.8)	**33.0**	(4.6)	**56.4**	(4.7)	**-23.4**	(6.3)	**41.5**	(3.6)
	Turkey	447	(4.5)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	497	(2.4)	486	(6.7)	460	(8.6)	474	(6.0)	11.9	(6.5)	**37.5**	(8.6)	**25.7**	(9.7)	**23.5**	(5.9)	8.5	(4.7)	**25.0**	(6.5)	-16.5	(8.8)	**15.9**	(3.6)
	United States	494	(3.8)	464	(5.4)	477	(8.2)	468	(5.6)	**30.3**	(5.7)	**17.6**	(7.7)	-12.7	(7.0)	**26.1**	(5.5)	1.5	(4.5)	**-12.9**	(6.4)	**14.4**	(6.6)	-3.2	(4.3)
	OECD average	501	(0.5)	466	(1.7)	455	(1.9)	460	(1.3)	**37.4**	(1.7)	**48.6**	(1.9)	**10.4**	(2.3)	**43.7**	(1.3)	**22.1**	(1.6)	**31.2**	(1.7)	**-8.6**	(2.2)	**27.2**	(1.2)
Partners	Albania	381	(3.9)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	391	(4.1)	363	(11.2)	361	(23.0)	362	(13.0)	**27.9**	(11.2)	29.5	(23.5)	1.6	(22.3)	**28.5**	(13.3)	4.5	(11.3)	12.8	(21.9)	-8.3	(22.1)	7.8	(12.4)
	Azerbaijan	431	(2.9)	437	(8.4)	425	(10.9)	434	(6.7)	-5.5	(8.5)	6.5	(11.0)	12.1	(13.9)	-2.5	(6.9)	-4.7	(8.5)	10.0	(11.1)	-14.6	(13.9)	-1.0	(7.0)
	Brazil	389	(2.4)	311	(13.1)	289	(12.6)	303	(10.7)	**77.8**	(13.5)	**99.7**	(12.9)	21.9	(16.2)	**85.5**	(11.2)	**75.6**	(13.3)	**91.9**	(17.6)	-16.4	(20.1)	**81.2**	(11.5)
	Bulgaria	431	(5.9)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	383	(3.2)	c	c	c	c	297	(17.9)	c	c	c	c	c	c	**86.1**	(18.2)	c	c	c	c	c	c	**66.8**	(18.3)
	Croatia	462	(3.1)	455	(6.1)	447	(7.9)	452	(5.5)	7.0	(5.5)	**15.0**	(7.4)	8.0	(8.2)	**9.6**	(4.8)	1.3	(5.2)	1.7	(7.3)	-0.4	(8.6)	1.4	(4.4)
	Dubai (UAE)	388	(2.1)	463	(3.1)	494	(2.0)	483	(1.3)	**-74.9**	(3.8)	**-106.4**	(2.7)	**-31.5**	(4.4)	**-94.7**	(2.3)	**-72.9**	(3.8)	**-91.9**	(2.8)	**19.0**	(4.1)	**-84.5**	(2.5)
	Hong Kong-China	561	(3.1)	562	(4.0)	521	(5.5)	546	(4.0)	-1.4	(4.4)	**39.6**	(6.1)	**41.0**	(5.6)	**14.7**	(4.6)	**-15.1**	(3.9)	**19.6**	(5.6)	**-34.7**	(5.3)	-2.2	(4.0)
	Indonesia	372	(3.7)	m	m	c	c	c	c	m	m	c	c	c	c	c	c	m	m	c	c	m	m	c	c
	Jordan	387	(3.6)	398	(7.3)	407	(8.4)	400	(6.6)	-10.7	(6.4)	**-19.2**	(8.0)	-8.5	(9.0)	**-12.7**	(5.7)	-4.1	(5.9)	-5.9	(7.3)	1.8	(8.9)	-4.5	(5.0)
	Kazakhstan	403	(3.0)	448	(15.0)	383	(7.5)	423	(11.8)	**-45.5**	(15.1)	**20.2**	(7.7)	**65.6**	(14.0)	-20.8	(11.9)	**-47.3**	(14.3)	12.1	(6.7)	**-59.4**	(13.4)	**-25.0**	(10.9)
	Kyrgyzstan	333	(2.9)	374	(14.9)	362	(15.7)	369	(11.8)	**-40.9**	(14.9)	-29.3	(15.7)	11.6	(19.6)	**-36.0**	(11.9)	**-36.9**	(13.9)	**-29.4**	(14.9)	-7.5	(20.9)	**-33.7**	(9.9)
	Latvia	483	(3.0)	465	(9.1)	c	c	467	(8.6)	**18.5**	(8.9)	c	c	c	c	**16.6**	(8.4)	**19.3**	(7.3)	c	c	7.6	(17.5)	**18.6**	(6.9)
	Liechtenstein	543	(5.1)	526	(11.4)	519	(15.3)	522	(9.9)	16.8	(12.9)	24.2	(17.4)	7.3	(18.7)	20.8	(12.4)	-1.3	(11.9)	8.5	(16.1)	-9.8	(16.9)	4.2	(11.7)
	Lithuania	479	(2.6)	461	(12.4)	c	c	462	(11.2)	17.6	(12.7)	c	c	c	c	16.7	(11.4)	14.7	(11.1)	c	c	-0.0	(44.7)	14.7	(10.1)
	Macao-China	522	(2.1)	529	(1.6)	523	(2.9)	528	(1.2)	**-6.9**	(2.7)	-0.5	(3.9)	6.4	(3.6)	**-5.5**	(2.6)	**-12.4**	(2.8)	-5.0	(3.8)	**-7.4**	(3.5)	**-10.7**	(2.7)
	Montenegro	403	(2.0)	426	(11.0)	408	(10.9)	415	(8.0)	**-23.7**	(11.1)	-5.6	(10.3)	18.1	(15.4)	-12.6	(7.4)	-13.5	(10.0)	-4.8	(9.9)	-8.7	(14.6)	-8.1	(6.9)
	Panama	368	(4.7)	395	(28.8)	330	(34.3)	353	(27.5)	-26.8	(27.7)	38.0	(33.3)	64.8	(43.6)	14.9	(26.3)	-18.4	(28.8)	35.6	(31.1)	-54.0	(42.3)	16.4	(24.7)
	Peru	368	(4.0)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	335	(1.3)	379	(1.9)	442	(2.0)	415	(1.4)	**-44.5**	(2.3)	**-107.7**	(2.8)	**-63.2**	(3.0)	**-80.5**	(2.2)	**-49.6**	(2.2)	**-103.8**	(2.8)	**54.2**	(2.9)	**-80.4**	(2.1)
	Romania	428	(3.4)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	471	(3.3)	446	(5.1)	461	(6.8)	452	(5.0)	**25.3**	(5.3)	10.9	(6.2)	**-14.4**	(6.5)	**19.5**	(4.8)	**19.6**	(4.8)	6.7	(5.4)	12.9	(6.8)	**14.4**	(3.8)
	Serbia	443	(2.8)	466	(9.4)	443	(7.9)	455	(7.0)	**-23.3**	(9.3)	0.0	(7.6)	**23.4**	(10.7)	-12.7	(6.7)	**-23.3**	(8.9)	-8.0	(7.3)	-15.3	(9.9)	**-16.3**	(6.5)
	Shanghai-China	601	(2.7)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	560	(1.7)	577	(5.5)	582	(5.3)	581	(4.1)	**-17.2**	(5.9)	**-22.1**	(6.0)	-4.8	(7.2)	**-20.5**	(4.9)	**-13.4**	(6.0)	-9.3	(5.9)	-4.1	(7.1)	**-10.6**	(4.9)
	Chinese Taipei	545	(3.4)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	419	(3.2)	m	m	m	m	m	m	m	m	m	m	c	c	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	418	(1.3)	394	(18.0)	424	(15.5)	408	(12.3)	24.5	(18.1)	-5.7	(15.9)	-30.3	(23.6)	10.7	(12.6)	32.2	(18.0)	4.0	(17.5)	28.2	(25.7)	19.9	(12.5)
	Tunisia	372	(3.0)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	428	(2.6)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).
Source: PISA 2009 Database.
Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Student performance in science, by immigrant status

Table B2.1c *Results based on students' self-reports*

		Average student performance in science								Difference in science performance between															
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)		non-immigrant students and second-generation students		non-immigrant students and first-generation students		second- and first-generation students		non-immigrant students and immigrant students (first- and second-generation)		non-immigrant students and second-generation students, after accounting for socio-economic background		non-immigrant students and first-generation students, after accounting for socio-economic background		second- and first-generation students, after accounting for socio-economic background		non-immigrant students and immigrant students (first- and second-generation), after accounting for socio-economic background	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.
OECD	Australia	529	(2.2)	537	(7.4)	526	(6.9)	531	(6.7)	-7.7	(7.5)	3.3	(6.6)	**10.9**	(5.0)	-2.4	(6.6)	-11.2	(6.6)	4.8	(5.7)	**-16.0**	(4.2)	-3.5	(5.9)
	Austria	508	(3.0)	434	(6.6)	405	(12.9)	425	(7.1)	**74.2**	(6.9)	**103.5**	(12.9)	**29.3**	(12.9)	**83.4**	(7.2)	**44.8**	(7.0)	**65.8**	(11.4)	-21.0	(11.1)	**51.2**	(7.0)
	Belgium	521	(2.3)	447	(7.0)	441	(8.8)	444	(6.3)	**74.0**	(7.3)	**80.4**	(8.4)	6.3	(9.4)	**77.0**	(6.2)	**46.2**	(6.9)	**55.4**	(7.4)	-9.2	(9.1)	**50.5**	(5.5)
	Canada	535	(1.5)	515	(4.0)	521	(4.9)	518	(3.7)	**19.3**	(4.1)	**13.6**	(4.9)	-5.7	(4.7)	**16.8**	(3.9)	**12.8**	(3.5)	**14.2**	(4.3)	-1.4	(4.2)	**13.4**	(3.3)
	Chile	450	(2.9)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	502	(3.0)	452	(20.4)	498	(16.3)	469	(15.4)	**49.8**	(20.6)	3.7	(15.5)	-46.1	(24.0)	**32.8**	(15.3)	**38.3**	(16.3)	7.8	(15.7)	30.5	(21.2)	**27.1**	(12.6)
	Denmark	508	(2.6)	430	(4.6)	415	(6.7)	426	(4.1)	**77.3**	(4.9)	**92.3**	(6.9)	**15.0**	(7.6)	**82.1**	(4.4)	**47.3**	(4.8)	**64.2**	(6.4)	**-17.0**	(7.1)	**52.7**	(4.2)
	Estonia	532	(2.7)	489	(6.6)	492	(18.1)	489	(6.5)	**43.4**	(6.6)	**40.0**	(17.9)	-3.4	(18.0)	**43.2**	(6.4)	**41.8**	(6.0)	**40.8**	(16.7)	1.0	(17.1)	**41.7**	(5.8)
	Finland	556	(2.3)	494	(16.4)	463	(16.1)	477	(11.8)	**62.2**	(16.2)	**93.6**	(16.0)	31.4	(23.3)	**79.7**	(11.5)	**58.8**	(16.3)	**80.6**	(14.5)	-21.9	(23.2)	**70.8**	(10.3)
	France	508	(3.8)	443	(8.9)	430	(14.2)	440	(8.7)	**64.5**	(9.2)	**77.5**	(14.6)	13.0	(13.6)	**67.6**	(9.1)	**35.3**	(8.1)	**44.0**	(12.7)	-8.7	(12.2)	**37.3**	(7.9)
	Germany	538	(2.5)	462	(6.3)	461	(6.0)	462	(5.2)	**76.3**	(6.3)	**77.0**	(5.9)	0.7	(7.3)	**76.5**	(5.1)	**42.7**	(5.7)	**48.3**	(5.4)	-5.6	(7.2)	**44.6**	(4.5)
	Greece	475	(3.9)	446	(8.6)	417	(15.4)	426	(11.2)	**29.1**	(8.5)	**58.7**	(15.1)	29.6	(17.1)	**49.2**	(10.9)	**17.0**	(7.7)	**31.6**	(15.0)	-14.6	(16.6)	**26.8**	(10.5)
	Hungary	503	(3.1)	530	(12.1)	505	(12.1)	515	(8.5)	**-26.4**	(12.2)	-1.4	(12.3)	25.0	(17.5)	-12.0	(8.7)	-15.6	(11.5)	-7.2	(10.7)	-8.4	(16.4)	-10.8	(7.5)
	Iceland	499	(1.4)	c	c	420	(12.5)	423	(12.0)	c	c	**78.2**	(12.6)	c	c	**75.7**	(12.0)	c	c	**53.0**	(13.3)	c	c	**53.1**	(12.2)
	Ireland	513	(3.4)	522	(13.3)	486	(8.0)	492	(7.4)	-9.4	(13.9)	**27.1**	(8.3)	**36.5**	(15.2)	**20.8**	(7.7)	-7.0	(13.9)	**31.6**	(7.8)	**-38.6**	(15.4)	**24.8**	(7.2)
	Israel	460	(3.0)	467	(6.4)	438	(8.6)	457	(6.0)	-6.9	(6.5)	**21.5**	(8.5)	**28.4**	(8.3)	3.3	(6.0)	**-21.4**	(5.4)	-5.1	(6.8)	**-16.4**	(7.1)	**-15.7**	(4.8)
	Italy	494	(1.8)	451	(8.5)	411	(5.2)	420	(4.8)	**42.7**	(8.7)	**83.0**	(5.5)	**40.3**	(9.8)	**73.4**	(5.1)	**28.9**	(8.9)	**61.9**	(5.1)	**-33.1**	(9.5)	**53.9**	(4.9)
	Japan	540	(3.4)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	539	(3.4)	c	c	m	m	c	c	c	c	m	m	c	c	c	c	c	c	m	m	c	c	c	c
	Luxembourg	509	(1.8)	445	(2.8)	457	(4.2)	450	(2.1)	**64.1**	(3.6)	**52.6**	(4.7)	**-11.5**	(5.4)	**59.5**	(3.0)	**24.6**	(3.8)	**23.9**	(4.6)	0.7	(5.6)	**24.3**	(3.1)
	Mexico	419	(1.7)	363	(10.1)	342	(7.7)	350	(6.4)	**55.7**	(10.2)	**77.1**	(7.3)	21.4	(12.5)	**68.6**	(6.1)	**44.0**	(10.1)	**63.5**	(7.4)	-19.5	(12.4)	**55.8**	(6.1)
	Netherlands	532	(5.2)	466	(12.0)	457	(13.7)	464	(11.0)	**66.0**	(12.4)	**75.1**	(12.5)	9.1	(13.6)	**68.4**	(11.0)	**31.6**	(12.2)	**38.2**	(11.1)	-6.6	(12.0)	**33.3**	(10.8)
	New Zealand	540	(2.8)	498	(8.9)	528	(4.7)	518	(5.1)	**41.5**	(9.5)	**12.2**	(5.2)	**-29.3**	(8.8)	**21.7**	(5.7)	**27.8**	(7.1)	**20.0**	(4.5)	7.7	(6.9)	**22.5**	(4.5)
	Norway	505	(2.6)	443	(8.8)	432	(7.8)	438	(5.8)	**62.1**	(8.8)	**73.2**	(7.5)	11.0	(11.9)	**67.3**	(5.5)	**46.9**	(7.9)	**47.0**	(7.4)	-0.1	(10.6)	**46.9**	(5.5)
	Poland	510	(2.4)	m	m	c	c	c	c	m	m	c	c	c	c	c	c	m	m	c	c	m	m	c	c
	Portugal	496	(2.9)	474	(9.2)	464	(8.7)	469	(6.5)	**21.4**	(9.0)	**31.4**	(8.8)	10.0	(12.3)	**26.5**	(6.4)	**18.4**	(7.6)	**30.8**	(7.9)	-12.4	(11.2)	**24.6**	(5.4)
	Slovak Republic	491	(2.9)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	518	(1.3)	458	(5.9)	435	(9.2)	454	(5.0)	**60.1**	(6.1)	**83.0**	(9.4)	**22.9**	(11.4)	**64.2**	(5.2)	**39.7**	(5.8)	**55.5**	(10.2)	-15.7	(11.5)	**42.5**	(5.2)
	Spain	495	(2.0)	467	(8.5)	431	(4.1)	435	(3.9)	**27.9**	(8.2)	**63.8**	(4.1)	**36.0**	(9.2)	**59.8**	(3.8)	**21.9**	(8.4)	**49.8**	(3.5)	**-27.9**	(9.1)	**46.6**	(3.2)
	Sweden	506	(2.6)	440	(8.6)	408	(11.7)	430	(7.9)	**65.7**	(8.9)	**97.8**	(11.9)	**32.1**	(12.1)	**76.0**	(8.2)	**45.1**	(8.1)	**64.1**	(9.9)	-19.0	(9.9)	**51.0**	(7.4)
	Switzerland	533	(2.7)	471	(4.4)	465	(6.7)	469	(3.8)	**62.1**	(3.8)	**68.1**	(6.7)	6.0	(7.7)	**64.2**	(3.4)	**39.4**	(4.1)	**50.0**	(5.1)	-10.6	(6.8)	**43.3**	(3.0)
	Turkey	455	(3.5)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	519	(2.5)	508	(9.1)	483	(10.5)	497	(8.5)	**11.0**	(9.4)	**36.1**	(10.7)	**25.1**	(9.8)	**22.4**	(8.9)	7.3	(5.7)	**21.5**	(8.1)	-14.2	(8.6)	**13.7**	(5.4)
	United States	510	(3.9)	475	(5.0)	481	(8.1)	477	(5.2)	**35.6**	(5.3)	**28.8**	(7.4)	-6.8	(7.4)	**33.3**	(5.0)	5.4	(4.3)	-3.1	(6.3)	8.5	(6.9)	2.6	(3.9)
	OECD average	507	(0.5)	468	(1.8)	454	(2.0)	459	(1.4)	**42.1**	(1.8)	**55.4**	(1.9)	**12.5**	(2.4)	**50.0**	(1.4)	**26.3**	(1.7)	**37.6**	(1.8)	**-10.7**	(2.3)	**33.0**	(1.3)
Partners	Albania	394	(3.8)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	404	(4.6)	366	(12.5)	359	(25.9)	363	(15.3)	**37.5**	(12.9)	45.4	(25.9)	7.9	(23.6)	**40.7**	(15.5)	12.0	(13.8)	27.2	(24.9)	-15.2	(24.2)	18.2	(15.1)
	Azerbaijan	374	(3.1)	380	(11.5)	397	(14.8)	384	(9.5)	-5.9	(11.6)	-23.2	(14.8)	-17.3	(19.7)	-10.2	(9.6)	-5.9	(10.1)	-14.9	(15.0)	9.0	(19.2)	-8.2	(8.2)
	Brazil	408	(2.4)	338	(12.8)	313	(17.4)	330	(9.8)	**70.0**	(13.2)	**94.9**	(17.2)	24.9	(23.3)	**78.7**	(10.0)	**67.6**	(13.8)	**86.3**	(24.5)	-18.6	(29.0)	**74.1**	(11.8)
	Bulgaria	443	(5.8)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	404	(3.6)	c	c	c	c	327	(21.0)	c	c	c	c	c	c	**76.8**	(21.3)	c	c	c	c	c	c	**57.4**	(22.1)
	Croatia	489	(2.8)	470	(5.5)	460	(7.7)	467	(5.1)	**19.0**	(5.1)	**29.0**	(7.3)	10.0	(8.0)	**22.3**	(4.5)	**13.6**	(4.7)	**16.3**	(7.2)	-2.7	(8.4)	**14.5**	(4.1)
	Dubai (UAE)	402	(2.2)	472	(3.3)	512	(1.9)	497	(1.5)	**-70.0**	(3.9)	**-110.4**	(2.9)	**-40.4**	(4.2)	**-95.4**	(2.6)	**-67.8**	(3.9)	**-95.5**	(3.0)	**27.8**	(4.0)	**-84.7**	(2.8)
	Hong Kong-China	552	(3.2)	558	(3.6)	527	(5.7)	546	(3.8)	-6.5	(3.9)	**24.6**	(6.1)	**31.1**	(5.7)	5.8	(4.2)	**-18.1**	(3.5)	7.9	(5.9)	**-26.0**	(5.6)	**-8.3**	(3.7)
	Indonesia	383	(3.8)	m	m	c	c	c	c	m	m	c	c	c	c	c	c	m	m	c	c	m	m	c	c
	Jordan	416	(3.4)	436	(6.8)	436	(9.5)	436	(6.0)	**-19.6**	(6.2)	**-19.9**	(9.1)	-0.3	(10.5)	**-19.6**	(5.3)	**-13.6**	(5.7)	-7.6	(8.5)	-6.0	(10.5)	**-12.2**	(4.7)
	Kazakhstan	400	(3.1)	431	(12.4)	371	(8.9)	409	(10.3)	**-31.8**	(12.4)	**28.5**	(8.7)	**60.3**	(12.9)	-9.1	(10.3)	**-33.6**	(11.8)	**20.6**	(7.6)	**-54.2**	(12.2)	-13.3	(9.3)
	Kyrgyzstan	332	(2.9)	387	(16.8)	361	(21.5)	376	(13.3)	**-55.7**	(16.6)	-29.0	(21.6)	26.7	(27.5)	**-44.4**	(13.1)	**-51.6**	(16.2)	-28.9	(22.3)	-22.8	(28.5)	**-42.0**	(12.6)
	Latvia	495	(3.0)	471	(8.6)	c	c	474	(8.0)	**24.1**	(8.3)	c	c	c	c	**21.5**	(7.7)	**24.8**	(7.2)	c	c	16.2	(16.5)	**23.4**	(6.5)
	Liechtenstein	534	(4.8)	502	(11.2)	482	(11.7)	491	(7.9)	**31.1**	(13.3)	**51.8**	(14.1)	20.7	(16.5)	**42.5**	(10.9)	15.1	(13.2)	**37.9**	(14.0)	-22.8	(15.5)	**27.8**	(11.2)
	Lithuania	493	(3.0)	468	(10.1)	c	c	471	(9.1)	**25.3**	(10.4)	c	c	c	c	**22.2**	(9.2)	**23.5**	(9.7)	c	c	25.7	(39.9)	**21.1**	(8.7)
	Macao-China	506	(1.9)	515	(1.8)	511	(2.5)	514	(1.4)	**-8.9**	(2.7)	-5.4	(3.3)	3.5	(3.5)	**-8.1**	(2.4)	**-13.3**	(2.9)	**-8.9**	(3.4)	-4.4	(3.5)	**-12.3**	(2.6)
	Montenegro	402	(2.1)	416	(10.5)	404	(7.9)	409	(6.4)	-13.6	(10.7)	-2.3	(7.5)	11.3	(12.8)	-6.6	(6.2)	-4.2	(10.1)	-1.5	(7.5)	-2.7	(12.5)	-2.5	(6.0)
	Panama	387	(4.8)	390	(27.4)	331	(22.8)	352	(20.6)	-3.1	(26.3)	**56.3**	(22.0)	59.4	(34.0)	35.1	(19.5)	6.4	(27.0)	**54.1**	(19.9)	-47.7	(32.9)	**37.1**	(17.8)
	Peru	372	(3.5)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	342	(1.5)	395	(2.3)	458	(2.3)	431	(1.6)	**-52.5**	(2.8)	**-116.0**	(2.9)	**-63.5**	(3.4)	**-88.7**	(2.4)	**-56.8**	(2.8)	**-112.4**	(2.9)	**55.6**	(3.4)	**-88.5**	(2.4)
	Romania	429	(3.3)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	483	(3.2)	461	(5.4)	451	(7.0)	457	(5.0)	**21.3**	(5.3)	**32.1**	(6.1)	10.8	(7.2)	**25.7**	(4.4)	**16.0**	(4.7)	**28.3**	(5.6)	-12.3	(7.4)	**21.0**	(3.6)
	Serbia	443	(2.3)	468	(8.1)	449	(7.3)	459	(5.6)	**-25.0**	(8.2)	-6.1	(7.4)	18.9	(10.8)	**-16.4**	(5.6)	**-25.0**	(8.1)	-13.0	(7.1)	-12.0	(10.3)	**-19.5**	(5.6)
	Shanghai-China	576	(2.2)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	540	(1.6)	554	(6.5)	554	(5.3)	554	(4.4)	**-13.8**	(6.5)	**-13.7**	(5.9)	0.1	(7.7)	**-13.7**	(4.9)	-9.5	(6.2)	-0.2	(5.7)	-9.3	(7.3)	-3.3	(4.7)
	Chinese Taipei	522	(2.6)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	425	(3.0)	m	m	m	m	m	m	m	m	m	m	c	c	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	415	(1.2)	405	(20.9)	425	(18.8)	414	(13.5)	9.5	(20.9)	-10.6	(19.0)	-20.1	(29.7)	0.3	(13.6)	17.6	(20.4)	3.5	(20.1)	14.0	(31.1)	11.4	(13.2)
	Tunisia	401	(2.7)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	428	(2.5)	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).
Source: PISA 2009 Database.
Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Proportion of immigrant students below the 25th. 50th and 75th percentile of performance among non-immigrant students

Table B2.1d *Results based on students' self-reports*

		Proportion of students among children of immigrants below the…					
		25th percentile of performance among non-immigrant students		50th percentile of performance among non-immigrant students		75th percentile of performance among non-immigrant students	
		%	S.E.	%	S.E.	%	S.E.
OECD	Australia	23.4	(1.6)	45.7	(2.3)	70.9	(2.5)
	Austria	51.6	(3.6)	76.8	(2.4)	91.8	(1.3)
	Belgium	51.0	(2.6)	76.0	(2.4)	90.8	(1.6)
	Canada	28.4	(1.5)	53.2	(1.7)	75.7	(1.5)
	Chile	c	c	c	c	c	c
	Czech Republic	35.5	(6.6)	56.3	(5.7)	74.0	(6.1)
	Denmark	54.7	(2.4)	78.3	(2.1)	91.9	(1.7)
	Estonia	38.0	(3.7)	65.6	(3.6)	88.4	(2.0)
	Finland	56.1	(5.8)	75.3	(4.7)	88.3	(3.4)
	France	48.5	(3.9)	72.6	(3.3)	88.9	(2.0)
	Germany	48.3	(2.4)	73.7	(2.6)	90.7	(1.5)
	Greece	47.6	(4.5)	74.3	(3.7)	89.5	(2.3)
	Hungary	19.6	(5.7)	45.2	(5.5)	73.4	(5.7)
	Iceland	56.6	(7.1)	79.8	(5.0)	93.8	(3.5)
	Ireland	39.5	(3.5)	61.8	(3.3)	81.2	(2.8)
	Israel	24.7	(2.2)	52.9	(3.0)	76.2	(2.3)
	Italy	54.9	(1.9)	77.9	(1.8)	92.5	(1.3)
	Japan	c	c	c	c	c	c
	Korea	c	c	c	c	c	c
	Luxembourg	46.7	(1.1)	69.1	(1.0)	86.2	(0.9)
	Mexico	72.2	(3.6)	88.7	(2.4)	96.1	(1.5)
	Netherlands	42.4	(5.2)	74.0	(3.5)	89.9	(2.2)
	New Zealand	32.1	(2.0)	55.6	(2.0)	75.7	(1.7)
	Norway	48.3	(3.1)	73.3	(2.8)	88.4	(2.5)
	Poland	c	c	c	c	c	c
	Portugal	36.1	(4.2)	65.1	(4.0)	84.8	(2.9)
	Slovak Republic	c	c	c	c	c	c
	Slovenia	40.9	(3.4)	72.2	(3.1)	90.9	(1.7)
	Spain	50.5	(2.4)	78.6	(1.8)	92.0	(1.2)
	Sweden	50.7	(3.6)	74.7	(3.0)	90.1	(2.0)
	Switzerland	45.9	(2.0)	69.5	(2.2)	85.9	(1.5)
	Turkey	c	c	c	c	c	c
	United Kingdom	33.9	(3.8)	57.4	(3.6)	81.7	(2.2)
	United States	32.8	(2.5)	60.9	(3.0)	82.8	(2.2)
	OECD average	43.2	(0.7)	68.0	(0.6)	85.8	(0.5)
Partners	Albania	c	c	c	c	c	c
	Argentina	36.2	(6.5)	65.6	(6.1)	84.4	(4.3)
	Azerbaijan	20.6	(4.3)	48.8	(7.1)	75.2	(7.2)
	Brazil	73.1	(7.8)	89.5	(5.3)	95.1	(3.8)
	Bulgaria	c	c	c	c	c	c
	Colombia	71.8	(11.1)	92.6	(5.3)	98.1	(3.7)
	Croatia	31.2	(2.9)	61.1	(2.9)	80.3	(2.3)
	Dubai (UAE)	6.3	(0.6)	17.3	(0.6)	37.2	(1.2)
	Hong Kong-China	26.5	(1.6)	54.0	(1.9)	77.2	(1.6)
	Indonesia	c	c	c	c	c	c
	Jordan	22.4	(2.3)	44.8	(3.1)	69.4	(2.8)
	Kazakhstan	26.0	(3.5)	49.4	(4.0)	70.8	(4.0)
	Kyrgyzstan	22.0	(5.0)	39.4	(5.9)	57.0	(7.8)
	Latvia	33.0	(5.9)	54.2	(4.9)	78.1	(4.0)
	Liechtenstein	39.6	(5.9)	62.7	(5.5)	86.5	(5.5)
	Lithuania	35.9	(7.2)	60.4	(6.2)	81.6	(5.2)
	Macao-China	21.2	(0.9)	45.8	(1.1)	73.6	(0.8)
	Montenegro	21.5	(3.4)	47.7	(4.0)	74.5	(3.0)
	Panama	45.1	(9.9)	62.0	(8.3)	73.8	(6.5)
	Peru	c	c	c	c	c	c
	Qatar	7.7	(0.5)	18.3	(0.7)	37.5	(0.8)
	Romania	c	c	c	c	c	c
	Russian Federation	34.8	(3.7)	61.1	(3.3)	82.8	(2.2)
	Serbia	20.5	(2.3)	43.1	(2.7)	70.0	(3.2)
	Shanghai-China	c	c	c	c	c	c
	Singapore	25.2	(1.7)	48.5	(2.7)	73.4	(1.9)
	Chinese Taipei	c	c	c	c	c	c
	Thailand	m	m	m	m	m	m
	Trinidad and Tobago	32.9	(5.2)	50.6	(5.5)	67.7	(4.8)
	Tunisia	c	c	c	c	c	c
	Uruguay	c	c	c	c	c	c

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B2.1e Proportion of top performers in reading, by immigrant status

		% of top performing students (Levels 5 and 6) among...								Difference between non-immigrant students and second-generation students		Difference between non-immigrant students and first-generation students		Difference between non-immigrant students and immigrant students (first- and second-generation)	
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)							
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.
OECD	Australia	12.1	(0.6)	16.5	(2.8)	14.9	(2.2)	15.7	(2.3)	-4.4	(2.7)	-2.7	(2.2)	-3.6	(2.2)
	Austria	5.7	(0.6)	0.9	(0.5)	1.1	(0.8)	1.0	(0.4)	**4.8**	(0.7)	**4.6**	(0.9)	**4.7**	(0.6)
	Belgium	12.6	(0.7)	4.0	(1.1)	4.9	(1.1)	4.4	(0.9)	**8.7**	(1.3)	7.7	(1.3)	**8.2**	(1.1)
	Canada	13.0	(0.5)	12.0	(1.2)	14.7	(1.6)	13.2	(1.1)	1.0	(1.3)	-1.7	(1.6)	-0.2	(1.2)
	Chile	1.3	(0.3)	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	5.1	(0.4)	4.0	(3.3)	7.2	(4.5)	5.2	(2.7)	1.2	(3.1)	-2.1	(4.5)	-0.0	(2.6)
	Denmark	5.2	(0.5)	0.9	(0.4)	0.7	(0.7)	0.9	(0.3)	**4.2**	(0.7)	**4.4**	(0.8)	**4.3**	(0.6)
	Estonia	6.5	(0.7)	1.9	(1.2)	4.0	(3.7)	2.0	(1.1)	**4.6**	(1.3)	2.5	(3.7)	**4.4**	(1.2)
	Finland	14.8	(0.8)	7.8	(4.6)	6.6	(3.6)	7.1	(2.8)	7.0	(4.6)	**8.2**	(3.6)	**7.7**	(2.9)
	France	10.5	(1.1)	3.8	(1.3)	5.2	(2.5)	4.1	(1.2)	**6.7**	(1.6)	5.4	(2.9)	**6.4**	(1.6)
	Germany	9.4	(0.8)	2.6	(0.8)	2.5	(1.5)	2.6	(0.8)	**6.7**	(1.1)	**6.9**	(1.9)	**6.8**	(1.1)
	Greece	6.1	(0.6)	4.0	(1.8)	0.5	(0.4)	1.6	(0.7)	2.1	(2.0)	**5.6**	(0.7)	**4.4**	(0.9)
	Hungary	6.1	(0.7)	11.3	(4.7)	2.3	(2.7)	6.1	(2.7)	-5.1	(4.7)	3.8	(2.7)	-0.0	(2.7)
	Iceland	8.8	(0.6)	c	c	2.6	(2.7)	2.8	(2.6)	c	c	**6.2**	(3.0)	c	(2.9)
	Ireland	7.4	(0.6)	10.5	(5.6)	4.4	(1.5)	5.5	(1.6)	-3.1	(5.6)	3.0	(1.5)	1.9	(1.7)
	Israel	7.8	(0.7)	8.5	(1.7)	4.9	(1.6)	7.2	(1.1)	-0.7	(1.8)	2.9	(1.6)	0.6	(1.3)
	Italy	6.1	(0.3)	2.4	(1.5)	0.9	(0.6)	1.3	(0.5)	**3.7**	(1.6)	**5.2**	(0.6)	**4.9**	(0.6)
	Japan	13.5	(0.9)	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	13.0	(1.1)	c	c	m	m	c	c	c	c	m	m	c	c
	Luxembourg	6.7	(0.7)	2.3	(0.5)	7.4	(1.0)	4.3	(0.5)	**4.4**	(0.7)	-0.7	(1.2)	**2.4**	(0.8)
	Mexico	0.4	(0.1)	0.0	(0.1)	0.0	(0.0)	0.0	(0.0)	**0.4**	(0.1)	**0.4**	(0.1)	**0.4**	(0.1)
	Netherlands	10.8	(1.2)	3.1	(1.3)	5.7	(3.8)	3.8	(1.3)	**7.6**	(1.7)	5.1	(3.5)	**7.0**	(1.4)
	New Zealand	16.0	(1.0)	12.2	(2.3)	17.7	(1.7)	15.9	(1.3)	3.9	(2.6)	-1.6	(1.8)	0.1	(1.6)
	Norway	8.8	(0.9)	4.5	(1.9)	2.8	(1.8)	3.7	(1.4)	**4.3**	(2.2)	**6.0**	(1.8)	**5.1**	(1.6)
	Poland	7.3	(0.6)	m	m	c	c	c	c	m	m	c	c	m	c
	Portugal	5.0	(0.5)	4.2	(2.6)	1.6	(1.0)	2.9	(1.4)	0.8	(2.4)	**3.4**	(1.1)	2.1	(1.2)
	Slovak Republic	4.5	(0.5)	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	4.9	(0.6)	1.7	(0.9)	0.0	(0.0)	1.4	(0.7)	**3.2**	(1.0)	**4.9**	(0.6)	**3.5**	(0.9)
	Spain	3.6	(0.3)	2.2	(1.5)	0.9	(0.5)	1.1	(0.5)	1.4	(1.5)	**2.7**	(0.7)	**2.6**	(0.6)
	Sweden	10.0	(0.7)	3.1	(1.3)	2.8	(1.9)	3.0	(1.1)	**6.9**	(1.3)	**7.2**	(1.9)	**7.0**	(1.2)
	Switzerland	9.3	(0.8)	4.6	(1.0)	4.8	(1.5)	4.7	(0.9)	**4.7**	(1.0)	**4.5**	(1.4)	**4.6**	(0.8)
	Turkey	1.9	(0.4)	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	8.5	(0.5)	6.1	(2.0)	4.5	(1.7)	5.4	(1.4)	2.4	(2.0)	**4.0**	(1.8)	**3.1**	(1.4)
	United States	10.6	(1.0)	7.0	(1.5)	9.5	(2.1)	7.9	(1.4)	**3.5**	(1.8)	1.0	(1.9)	2.7	(1.5)
	OECD average	8.0	(0.1)	5.3	(0.4)	4.8	(0.4)	4.8	(0.3)	**3.0**	(0.4)	**3.5**	(0.4)	**3.4**	(0.3)
Partners	Albania	0.2	(0.1)	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	1.0	(0.2)	0.2	(0.6)	0.4	(1.4)	0.3	(0.8)	0.8	(0.7)	0.6	(1.4)	0.7	(0.9)
	Azerbaijan	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	(0.0)
	Brazil	1.4	(0.2)	0.1	(0.2)	0.0	(0.0)	0.0	(0.1)	**1.3**	(0.3)	**1.4**	(0.2)	**1.3**	(0.3)
	Bulgaria	2.9	(0.5)	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	0.6	(0.2)	c	c	c	c	0.0	(0.0)	c	c	c	c	c	(0.2)
	Croatia	3.3	(0.5)	2.1	(1.0)	2.7	(1.7)	2.3	(0.9)	1.3	(1.1)	0.7	(1.6)	1.1	(0.9)
	Dubai (UAE)	0.4	(0.1)	4.3	(0.8)	9.5	(0.9)	7.6	(0.7)	**-4.0**	(0.8)	**-9.1**	(0.9)	**-7.2**	(0.7)
	Hong Kong-China	12.7	(0.9)	14.8	(1.4)	8.0	(1.2)	12.1	(1.0)	-2.1	(1.4)	**4.7**	(1.3)	0.6	(1.1)
	Indonesia	0.0	(0.0)	m	m	c	c	c	c	m	m	c	c	m	c
	Jordan	0.2	(0.1)	0.3	(0.3)	0.6	(0.9)	0.4	(0.3)	-0.1	(0.2)	-0.4	(1.0)	-0.1	(0.3)
	Kazakhstan	0.3	(0.1)	0.8	(0.9)	0.4	(0.7)	0.6	(0.6)	-0.5	(0.9)	-0.0	(0.7)	-0.3	(0.7)
	Kyrgyzstan	0.1	(0.1)	0.3	(1.0)	0.0	(0.0)	0.2	(0.6)	-0.2	(0.9)	0.1	(0.1)	-0.1	(0.5)
	Latvia	2.9	(0.5)	3.4	(1.2)	c	c	3.5	(1.3)	-0.5	(1.2)	c	c	-0.6	(1.3)
	Liechtenstein	6.0	(2.0)	1.5	(3.0)	2.0	(2.5)	1.8	(1.8)	4.5	(3.6)	4.0	(3.5)	4.2	(2.8)
	Lithuania	3.1	(0.4)	0.9	(1.4)	c	c	1.5	(1.5)	2.2	(1.4)	c	c	1.6	(1.5)
	Macao-China	2.7	(0.5)	2.9	(0.3)	3.4	(0.7)	3.0	(0.3)	-0.1	(0.6)	-0.7	(0.8)	-0.3	(0.5)
	Montenegro	0.6	(0.2)	0.5	(1.2)	0.9	(0.7)	0.7	(0.6)	0.1	(1.1)	-0.2	(0.8)	-0.1	(0.6)
	Panama	0.6	(0.3)	0.6	(1.1)	1.7	(2.2)	1.3	(1.5)	0.0	(1.1)	-1.1	(2.2)	-0.7	(1.5)
	Peru	0.5	(0.2)	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	0.3	(0.1)	1.0	(0.3)	5.6	(0.6)	3.6	(0.4)	**-0.7**	(0.4)	**-5.3**	(0.6)	**-3.3**	(0.4)
	Romania	0.7	(0.2)	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	3.4	(0.5)	1.3	(0.9)	2.1	(1.1)	1.7	(0.7)	2.1	(1.2)	1.3	(1.2)	1.8	(0.9)
	Serbia	0.8	(0.2)	2.4	(1.7)	0.3	(0.8)	1.5	(0.8)	-1.7	(1.7)	0.4	(0.8)	-0.7	(0.9)
	Shanghai-China	19.7	(1.1)	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	15.4	(0.6)	22.8	(4.2)	15.1	(2.2)	17.6	(1.7)	-7.4	(4.2)	0.4	(2.4)	-2.2	(1.8)
	Chinese Taipei	5.3	(0.9)	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	0.3	(0.2)	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	2.3	(0.3)	6.6	(4.5)	6.9	(2.8)	6.7	(2.5)	-4.3	(4.5)	-4.6	(2.8)	-4.4	(2.5)
	Tunisia	0.2	(0.1)	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	1.8	(0.3)	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.

Table B2.1f Proportion of lowest performers in reading, by immigrant status

		% of lowest performing students (below Level 2) among…								Difference between non-immigrant students and second-generation students		Difference between non-immigrant students and first-generation students		Difference between non-immigrant students and immigrant students (first- and second-generation)	
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)							
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.
OECD	Australia	13.8	(0.6)	10.9	(1.2)	15.0	(1.5)	12.9	(1.1)	**2.9**	(1.2)	-1.2	(1.6)	0.9	(1.2)
	Austria	23.0	(1.2)	43.1	(3.8)	64.1	(6.0)	49.7	(3.6)	**-20.1**	(3.9)	**-41.1**	(6.1)	**-26.7**	(3.8)
	Belgium	13.6	(0.8)	32.5	(2.7)	36.2	(3.8)	34.2	(2.6)	**-18.9**	(2.7)	**-22.6**	(3.7)	**-20.6**	(2.5)
	Canada	9.1	(0.5)	9.9	(1.3)	13.4	(1.4)	11.4	(1.0)	-0.7	(1.3)	**-4.2**	(1.5)	**-2.3**	(1.1)
	Chile	29.5	(1.5)	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	22.6	(1.3)	34.0	(7.6)	29.3	(8.2)	32.3	(6.1)	-11.4	(7.6)	-6.8	(8.2)	-9.7	(6.2)
	Denmark	12.8	(0.9)	31.7	(2.1)	42.8	(3.9)	35.3	(2.0)	**-18.9**	(2.2)	**-30.1**	(3.8)	**-22.5**	(2.1)
	Estonia	12.2	(0.9)	22.0	(3.5)	24.8	(8.5)	22.2	(3.3)	**-9.8**	(3.3)	-12.6	(8.5)	**-10.0**	(3.1)
	Finland	7.5	(0.5)	17.6	(5.8)	38.7	(7.9)	29.3	(5.7)	-10.1	(5.8)	**-31.2**	(7.8)	**-21.9**	(5.7)
	France	16.8	(1.3)	35.2	(4.0)	42.2	(7.1)	36.8	(3.9)	**-18.3**	(4.2)	**-25.3**	(7.2)	**-20.0**	(4.1)
	Germany	14.0	(1.0)	29.8	(2.8)	34.5	(2.9)	31.4	(2.2)	**-15.8**	(2.8)	**-20.5**	(2.8)	**-17.4**	(2.2)
	Greece	19.1	(1.8)	31.1	(4.9)	43.0	(6.8)	39.2	(4.8)	**-12.0**	(4.8)	**-23.9**	(6.6)	**-20.1**	(4.5)
	Hungary	17.3	(1.4)	7.3	(5.3)	15.4	(5.4)	12.0	(4.0)	10.0	(5.3)	1.9	(5.3)	5.3	(3.9)
	Iceland	15.6	(0.6)	c	c	44.1	(6.9)	42.8	(6.0)	c	c	**-28.6**	(6.9)	-27.2	c
	Ireland	14.7	(1.1)	11.4	(6.4)	30.8	(3.7)	27.4	(3.4)	3.3	(6.4)	**-16.1**	(3.6)	**-12.7**	(3.4)
	Israel	24.7	(1.1)	21.3	(2.2)	30.1	(3.6)	24.5	(2.2)	3.5	(2.1)	-5.4	(3.5)	0.3	(2.1)
	Italy	19.2	(0.6)	34.1	(4.1)	50.5	(2.4)	46.6	(2.1)	**-14.9**	(4.1)	**-31.3**	(2.5)	**-27.4**	(2.2)
	Japan	13.3	(1.1)	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	5.5	(0.8)	c	c	m	m	c	c	c	c	m	m	c	c
	Luxembourg	17.4	(0.9)	37.2	(1.7)	38.1	(1.7)	37.6	(1.2)	**-19.8**	(2.0)	**-20.7**	(2.0)	**-20.2**	(1.5)
	Mexico	38.2	(0.9)	76.9	(6.4)	85.7	(3.0)	82.2	(3.5)	**-38.6**	(6.3)	**-47.5**	(2.9)	**-44.0**	(3.4)
	Netherlands	12.7	(1.5)	20.0	(3.8)	28.6	(5.7)	22.3	(3.8)	-7.4	(4.0)	**-16.0**	(5.5)	**-9.7**	(3.9)
	New Zealand	12.5	(0.8)	21.5	(3.4)	15.3	(1.5)	17.3	(1.7)	**-9.0**	(3.5)	-2.8	(1.6)	**-4.8**	(1.8)
	Norway	13.5	(0.8)	25.8	(5.0)	35.8	(5.2)	30.5	(4.0)	**-12.3**	(4.9)	**-22.3**	(5.1)	**-17.0**	(3.9)
	Poland	14.3	(0.8)	m	m	c	c	c	c	m	m	c	c	c	m
	Portugal	16.7	(1.2)	18.0	(4.4)	31.6	(4.4)	24.8	(3.6)	-1.3	(4.4)	**-14.9**	(4.4)	**-8.2**	(3.5)
	Slovak Republic	21.7	(1.2)	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	19.5	(0.6)	32.7	(3.5)	45.0	(6.5)	34.9	(3.3)	**-13.3**	(3.5)	**-25.5**	(6.6)	**-15.4**	(3.3)
	Spain	17.1	(0.8)	25.6	(5.3)	40.2	(2.7)	38.6	(2.6)	-8.5	(5.3)	**-23.1**	(2.4)	**-21.5**	(2.4)
	Sweden	14.3	(0.9)	30.4	(3.0)	47.7	(5.2)	35.9	(2.9)	**-16.1**	(3.1)	**-33.4**	(5.3)	**-21.6**	(3.0)
	Switzerland	12.6	(0.7)	26.3	(1.9)	33.9	(2.7)	29.0	(1.8)	**-13.7**	(1.9)	**-21.3**	(2.7)	**-16.4**	(1.8)
	Turkey	23.8	(1.4)	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	16.7	(0.7)	19.7	(3.5)	28.8	(5.0)	23.8	(3.0)	-3.0	(3.6)	**-12.0**	(5.1)	**-7.1**	(3.1)
	United States	16.0	(1.0)	19.5	(2.3)	23.2	(3.1)	20.7	(2.1)	-3.5	(2.2)	**-7.2**	(3.1)	**-4.7**	(2.0)
	OECD average	16.8	(0.2)	26.9	(0.8)	36.0	(0.9)	31.6	(0.6)	**-10.3**	(0.8)	**-19.5**	(0.9)	**-15.1**	(0.6)
Partners	Albania	55.6	(1.9)	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	50.5	(2.0)	66.8	(5.8)	65.4	(8.2)	66.2	(5.9)	**-16.3**	(6.1)	-14.9	(8.3)	**-15.7**	(6.1)
	Azerbaijan	72.3	(1.7)	75.5	(6.3)	63.3	(11.0)	72.4	(6.3)	-3.1	(6.2)	9.0	(11.1)	-0.1	(6.2)
	Brazil	48.0	(1.3)	87.9	(6.9)	91.5	(8.8)	89.2	(5.3)	**-40.0**	(7.0)	**-43.5**	(9.0)	**-41.2**	(5.5)
	Bulgaria	39.6	(2.6)	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	46.1	(1.9)	c	c	c	c	89.8	(7.7)	c	c	c	c	-43.7	c
	Croatia	21.5	(1.3)	24.7	(3.1)	31.5	(4.8)	26.9	(2.7)	-3.1	(3.0)	**-9.9**	(4.7)	**-5.4**	(2.6)
	Dubai (UAE)	54.4	(1.3)	26.4	(1.4)	16.2	(0.7)	20.0	(0.6)	**28.0**	(2.0)	**38.1**	(1.6)	**34.4**	(1.5)
	Hong Kong-China	8.1	(0.9)	6.1	(0.8)	11.7	(2.0)	8.3	(1.0)	2.0	(1.1)	-3.6	(2.2)	-0.2	(1.3)
	Indonesia	53.0	(2.3)	m	m	c	c	c	c	m	m	c	c	c	m
	Jordan	47.6	(1.6)	41.5	(3.2)	44.3	(4.8)	42.2	(2.9)	6.1	(2.8)	3.3	(4.9)	**5.4**	(2.7)
	Kazakhstan	58.9	(1.6)	49.1	(5.2)	68.7	(4.7)	56.5	(4.0)	9.8	(5.3)	**-9.8**	(4.8)	2.4	(4.2)
	Kyrgyzstan	83.1	(1.2)	60.2	(7.8)	76.8	(10.2)	67.2	(7.1)	**22.8**	(7.6)	6.3	(10.2)	**15.8**	(7.0)
	Latvia	17.0	(1.2)	24.1	(5.9)	c	c	23.8	(5.3)	-7.1	(5.7)	c	c	-6.8	(5.1)
	Liechtenstein	12.5	(1.9)	17.6	(6.9)	24.6	(6.9)	21.5	(4.9)	-5.2	(7.2)	-12.1	(7.6)	-9.0	(5.7)
	Lithuania	23.3	(1.2)	32.8	(6.9)	c	c	32.3	(6.4)	-9.5	(7.0)	c	c	-9.0	(6.6)
	Macao-China	16.9	(1.1)	13.6	(0.6)	13.3	(1.2)	13.6	(0.6)	**3.3**	(1.3)	**3.6**	(1.7)	**3.4**	(1.3)
	Montenegro	49.2	(1.0)	40.3	(6.2)	51.0	(5.0)	46.9	(3.9)	8.9	(6.3)	-1.7	(4.8)	2.3	(3.8)
	Panama	61.7	(2.5)	52.5	(12.0)	74.0	(8.2)	66.3	(7.6)	9.2	(11.3)	-12.3	(8.2)	-4.6	(7.3)
	Peru	63.4	(1.7)	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	79.2	(0.6)	55.9	(1.2)	32.3	(0.9)	42.5	(0.7)	**23.3**	(1.3)	**46.9**	(1.1)	**36.7**	(1.0)
	Romania	40.1	(2.0)	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	25.5	(1.3)	36.5	(5.0)	33.8	(4.1)	35.4	(3.6)	**-11.0**	(5.2)	**-8.3**	(4.0)	**-9.9**	(3.7)
	Serbia	32.8	(1.3)	25.3	(3.8)	29.8	(4.2)	27.3	(3.1)	7.5	(4.0)	3.0	(4.3)	5.5	(3.2)
	Shanghai-China	3.8	(0.5)	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	12.1	(0.5)	9.6	(1.8)	13.5	(1.7)	12.2	(1.4)	2.5	(1.9)	-1.4	(1.8)	-0.1	(1.5)
	Chinese Taipei	15.0	(0.9)	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	42.8	(1.5)	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	42.9	(0.7)	47.0	(8.3)	41.9	(6.7)	44.7	(5.1)	-4.1	(8.3)	1.0	(6.7)	-1.8	(5.1)
	Tunisia	50.0	(1.6)	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	41.4	(1.2)	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Socio-economic background, by immigrant status

Table B2.2a *Results based on students' self-reports*

		PISA index of social, economic and cultural status															
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)		Difference between non-immigrant students and second-generation students		Difference between non-immigrant students and first-generation students		Difference between second- and first-generation students		Difference between non-immigrant students and immigrant students (first- and second-generation)	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.
OECD	Australia	0.35	(0.01)	0.28	(0.04)	0.41	(0.03)	0.34	(0.03)	0.07	(0.04)	**-0.06**	(0.03)	**-0.13**	(0.04)	0.01	(0.03)
	Austria	0.17	(0.02)	-0.50	(0.04)	-0.68	(0.11)	-0.55	(0.04)	**0.67**	(0.04)	**0.85**	(0.11)	0.18	(0.12)	**0.73**	(0.05)
	Belgium	0.28	(0.02)	-0.32	(0.07)	-0.23	(0.07)	-0.27	(0.06)	**0.60**	(0.07)	**0.51**	(0.07)	-0.09	(0.08)	**0.56**	(0.06)
	Canada	0.53	(0.01)	0.34	(0.04)	0.57	(0.04)	0.44	(0.04)	**0.18**	(0.04)	-0.04	(0.04)	**-0.23**	(0.05)	**0.08**	(0.04)
	Chile	-0.57	(0.04)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	-0.08	(0.01)	-0.32	(0.13)	-0.01	(0.13)	-0.21	(0.10)	0.24	(0.13)	-0.07	(0.13)	-0.31	(0.19)	0.13	(0.10)
	Denmark	0.36	(0.03)	-0.42	(0.05)	-0.33	(0.07)	-0.39	(0.04)	**0.78**	(0.05)	**0.69**	(0.07)	-0.09	(0.08)	**0.75**	(0.04)
	Estonia	0.16	(0.02)	0.10	(0.06)	0.19	(0.20)	0.10	(0.06)	0.06	(0.06)	-0.02	(0.20)	-0.09	(0.21)	0.06	(0.06)
	Finland	0.38	(0.02)	0.26	(0.13)	-0.10	(0.18)	0.06	(0.12)	0.12	(0.13)	**0.48**	(0.18)	0.35	(0.21)	**0.32**	(0.12)
	France	-0.05	(0.03)	-0.65	(0.06)	-0.68	(0.15)	-0.66	(0.06)	**0.60**	(0.06)	**0.63**	(0.15)	0.03	(0.16)	**0.60**	(0.05)
	Germany	0.32	(0.02)	-0.46	(0.04)	-0.30	(0.06)	-0.40	(0.04)	**0.78**	(0.05)	**0.62**	(0.06)	**-0.15**	(0.07)	**0.72**	(0.04)
	Greece	0.04	(0.03)	-0.35	(0.09)	-0.78	(0.06)	-0.64	(0.05)	**0.39**	(0.09)	**0.82**	(0.07)	**0.43**	(0.11)	**0.68**	(0.06)
	Hungary	-0.19	(0.03)	0.05	(0.16)	-0.33	(0.12)	-0.17	(0.10)	-0.24	(0.16)	0.14	(0.13)	0.38	(0.20)	-0.03	(0.11)
	Iceland	0.74	(0.02)	c	c	-0.17	(0.11)	-0.08	(0.10)	c	c	**0.91**	(0.11)	c	c	**0.81**	(0.11)
	Ireland	0.04	(0.03)	0.10	(0.15)	0.14	(0.06)	0.13	(0.06)	-0.05	(0.15)	-0.10	(0.06)	-0.05	(0.15)	-0.09	(0.06)
	Israel	0.04	(0.02)	-0.21	(0.07)	-0.41	(0.07)	-0.28	(0.06)	**0.25**	(0.07)	**0.45**	(0.07)	**0.20**	(0.08)	**0.32**	(0.06)
	Italy	-0.09	(0.01)	-0.56	(0.09)	-0.77	(0.06)	-0.72	(0.05)	**0.47**	(0.09)	**0.68**	(0.06)	**0.21**	(0.10)	**0.63**	(0.05)
	Japan	-0.01	(0.01)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	-0.15	(0.03)	c	c	m	m	c	c	c	c	m	m	c	c	c	c
	Luxembourg	0.55	(0.01)	-0.46	(0.03)	-0.18	(0.04)	-0.35	(0.02)	**1.02**	(0.04)	**0.74**	(0.05)	**-0.28**	(0.06)	**0.91**	(0.03)
	Mexico	-1.19	(0.03)	-1.71	(0.13)	-1.80	(0.11)	-1.77	(0.09)	**0.52**	(0.13)	**0.61**	(0.10)	0.09	(0.16)	**0.57**	(0.08)
	Netherlands	0.38	(0.02)	-0.47	(0.06)	-0.43	(0.14)	-0.46	(0.07)	**0.84**	(0.06)	**0.80**	(0.14)	-0.04	(0.13)	**0.83**	(0.07)
	New Zealand	0.08	(0.02)	-0.15	(0.06)	0.23	(0.03)	0.11	(0.03)	**0.23**	(0.06)	**-0.15**	(0.03)	**-0.37**	(0.06)	-0.03	(0.03)
	Norway	0.51	(0.02)	0.08	(0.08)	-0.17	(0.08)	-0.03	(0.06)	**0.43**	(0.08)	**0.68**	(0.08)	**0.25**	(0.12)	**0.54**	(0.06)
	Poland	-0.28	(0.02)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Portugal	-0.31	(0.04)	-0.42	(0.11)	-0.33	(0.08)	-0.37	(0.07)	0.10	(0.11)	0.02	(0.09)	-0.08	(0.12)	0.06	(0.08)
	Slovak Republic	-0.09	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	0.12	(0.01)	-0.46	(0.05)	-0.65	(0.11)	-0.50	(0.04)	**0.59**	(0.05)	**0.77**	(0.11)	0.18	(0.12)	**0.62**	(0.05)
	Spain	-0.27	(0.03)	-0.49	(0.11)	-0.77	(0.05)	-0.74	(0.05)	**0.22**	(0.10)	**0.50**	(0.06)	**0.28**	(0.12)	**0.47**	(0.05)
	Sweden	0.40	(0.02)	-0.05	(0.05)	-0.39	(0.12)	-0.16	(0.05)	**0.44**	(0.05)	**0.78**	(0.12)	**0.34**	(0.12)	**0.55**	(0.05)
	Switzerland	0.21	(0.02)	-0.39	(0.05)	-0.27	(0.08)	-0.35	(0.05)	**0.61**	(0.04)	**0.49**	(0.08)	-0.12	(0.08)	**0.56**	(0.04)
	Turkey	-1.16	(0.05)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	0.23	(0.02)	0.14	(0.12)	-0.07	(0.09)	0.04	(0.09)	0.09	(0.12)	**0.30**	(0.09)	**0.21**	(0.11)	**0.18**	(0.09)
	United States	0.31	(0.04)	-0.38	(0.08)	-0.41	(0.10)	-0.39	(0.08)	**0.69**	(0.07)	**0.72**	(0.10)	0.03	(0.08)	**0.70**	(0.07)
	OECD average	0.05	(0.00)	-0.27	(0.02)	-0.31	(0.02)	-0.30	(0.01)	**0.40**	(0.02)	**0.45**	(0.02)	0.04	(0.02)	**0.44**	(0.01)
Partners	Albania	-0.95	(0.04)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	-0.60	(0.05)	-1.23	(0.10)	-1.09	(0.15)	-1.17	(0.10)	**0.64**	(0.11)	**0.49**	(0.14)	-0.15	(0.15)	**0.58**	(0.10)
	Azerbaijan	-0.64	(0.03)	-0.70	(0.19)	-0.14	(0.14)	-0.56	(0.16)	0.06	(0.19)	**-0.50**	(0.14)	**-0.56**	(0.23)	-0.08	(0.16)
	Brazil	-1.15	(0.03)	-1.25	(0.26)	-1.50	(0.40)	-1.34	(0.23)	0.10	(0.26)	0.35	(0.40)	0.25	(0.46)	0.18	(0.24)
	Bulgaria	-0.10	(0.04)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	-1.14	(0.05)	c	c	c	c	-1.91	(0.26)	c	c	c	c	c	c	**0.77**	(0.26)
	Croatia	-0.15	(0.02)	-0.33	(0.07)	-0.57	(0.06)	-0.40	(0.05)	**0.18**	(0.07)	**0.42**	(0.06)	**0.24**	(0.08)	**0.26**	(0.05)
	Dubai (UAE)	0.25	(0.02)	0.30	(0.02)	0.61	(0.01)	0.50	(0.01)	-0.04	(0.03)	**-0.36**	(0.03)	**-0.32**	(0.03)	**-0.24**	(0.03)
	Hong Kong-China	-0.53	(0.05)	-1.11	(0.03)	-1.38	(0.04)	-1.22	(0.03)	**0.58**	(0.04)	**0.85**	(0.06)	**0.27**	(0.05)	**0.69**	(0.05)
	Indonesia	-1.55	(0.06)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Jordan	-0.60	(0.03)	-0.37	(0.07)	-0.10	(0.09)	-0.31	(0.07)	**-0.23**	(0.07)	**-0.51**	(0.08)	**-0.28**	(0.10)	**-0.30**	(0.06)
	Kazakhstan	-0.49	(0.03)	-0.56	(0.08)	-0.76	(0.09)	-0.63	(0.07)	0.06	(0.08)	**0.27**	(0.09)	**0.20**	(0.09)	0.14	(0.07)
	Kyrgyzstan	-0.65	(0.02)	-0.53	(0.18)	-0.66	(0.27)	-0.59	(0.18)	-0.11	(0.18)	0.01	(0.26)	0.12	(0.27)	-0.06	(0.18)
	Latvia	-0.13	(0.03)	-0.11	(0.11)	c	c	-0.07	(0.10)	-0.02	(0.11)	c	c	c	c	-0.06	(0.10)
	Liechtenstein	0.25	(0.05)	-0.33	(0.14)	-0.25	(0.14)	-0.28	(0.10)	**0.57**	(0.15)	**0.50**	(0.14)	-0.08	(0.21)	**0.53**	(0.10)
	Lithuania	-0.04	(0.02)	-0.13	(0.14)	c	c	-0.11	(0.12)	0.09	(0.14)	c	c	c	c	0.07	(0.12)
	Macao-China	-0.44	(0.02)	-0.83	(0.02)	-0.75	(0.03)	-0.81	(0.01)	**0.39**	(0.03)	**0.31**	(0.04)	**-0.08**	(0.03)	**0.38**	(0.03)
	Montenegro	-0.25	(0.02)	0.09	(0.10)	-0.23	(0.08)	-0.11	(0.07)	**-0.34**	(0.10)	-0.02	(0.08)	**0.32**	(0.11)	**-0.14**	(0.07)
	Panama	-0.81	(0.08)	-0.39	(0.14)	-0.91	(0.22)	-0.72	(0.17)	**-0.41**	(0.15)	0.10	(0.23)	0.51	(0.26)	-0.08	(0.18)
	Peru	-1.30	(0.05)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	0.51	(0.01)	0.31	(0.02)	0.66	(0.01)	0.51	(0.01)	**0.20**	(0.03)	**-0.15**	(0.02)	**-0.36**	(0.03)	0.00	(0.02)
	Romania	-0.36	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	-0.19	(0.02)	-0.34	(0.05)	-0.31	(0.07)	-0.33	(0.04)	0.15	(0.05)	0.11	(0.07)	-0.03	(0.08)	0.13	(0.04)
	Serbia	0.08	(0.02)	0.08	(0.07)	-0.15	(0.07)	-0.03	(0.05)	0.00	(0.07)	0.24	(0.06)	0.23	(0.09)	0.11	(0.05)
	Shanghai-China	-0.49	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	-0.46	(0.01)	-0.38	(0.06)	-0.19	(0.03)	-0.25	(0.03)	-0.07	(0.06)	-0.27	(0.04)	-0.20	(0.07)	-0.20	(0.03)
	Chinese Taipei	-0.32	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	-1.31	(0.04)	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	-0.58	(0.02)	-0.40	(0.14)	0.05	(0.15)	-0.20	(0.11)	-0.18	(0.14)	-0.64	(0.16)	-0.46	(0.20)	-0.38	(0.11)
	Tunisia	-1.20	(0.05)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	-0.70	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Highest parental education, by immigrant status

Table B2.2b *Results based on students' self-reports*

		Highest parental education (years)															
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)		Difference between non-immigrant students and second-generation students		Difference between non-immigrant students and first-generation students		Difference between second- and first-generation students		Difference between non-immigrant students and immigrant students (first- and second-generation)	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.
OECD	Australia	13.3	(0.0)	13.3	(0.1)	13.8	(0.1)	13.5	(0.1)	-0.0	(0.1)	**0.5**	(0.1)	**0.6**	(0.1)	**0.3**	(0.1)
	Austria	13.9	(0.0)	12.7	(0.1)	12.0	(0.3)	12.5	(0.1)	**-1.2**	(0.1)	**-1.9**	(0.3)	-0.6	(0.4)	**-1.4**	(0.1)
	Belgium	14.4	(0.0)	12.9	(0.3)	13.4	(0.2)	13.1	(0.2)	**-1.5**	(0.3)	**-1.1**	(0.2)	0.5	(0.3)	**-1.3**	(0.2)
	Canada	14.9	(0.0)	14.5	(0.1)	15.6	(0.1)	15.0	(0.1)	**-0.4**	(0.1)	**0.6**	(0.1)	**1.1**	(0.1)	0.0	(0.1)
	Chile	12.5	(0.1)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	13.5	(0.0)	13.2	(0.4)	13.9	(0.3)	13.4	(0.3)	-0.3	(0.4)	0.4	(0.3)	0.7	(0.5)	-0.1	(0.3)
	Denmark	14.3	(0.1)	12.5	(0.2)	13.5	(0.2)	12.8	(0.1)	**-1.8**	(0.2)	**-0.8**	(0.2)	**1.0**	(0.3)	**-1.5**	(0.1)
	Estonia	13.9	(0.0)	14.3	(0.1)	14.4	(0.5)	14.3	(0.1)	**0.4**	(0.1)	0.4	(0.5)	0.0	(0.6)	**0.4**	(0.1)
	Finland	14.9	(0.0)	14.8	(0.4)	13.9	(0.5)	14.3	(0.4)	-0.0	(0.4)	-0.9	(0.5)	-0.9	(0.6)	-0.5	(0.4)
	France	13.1	(0.1)	11.3	(0.2)	11.6	(0.4)	11.4	(0.2)	**-1.8**	(0.2)	**-1.4**	(0.4)	0.4	(0.5)	**-1.7**	(0.2)
	Germany	14.5	(0.1)	12.6	(0.2)	13.9	(0.3)	13.0	(0.2)	**-2.0**	(0.3)	**-0.7**	(0.3)	**1.3**	(0.4)	**-1.6**	(0.2)
	Greece	13.7	(0.1)	13.9	(0.3)	13.1	(0.3)	13.3	(0.2)	0.2	(0.3)	-0.6	(0.3)	-0.8	(0.4)	-0.3	(0.2)
	Hungary	12.9	(0.1)	13.7	(0.4)	13.0	(0.4)	13.3	(0.3)	0.8	(0.4)	0.1	(0.4)	-0.7	(0.5)	0.4	(0.3)
	Iceland	15.6	(0.0)	c	c	14.8	(0.4)	14.9	(0.4)	c	c	-0.8	(0.4)	c	c	-0.7	(0.4)
	Ireland	13.2	(0.1)	13.0	(0.4)	14.1	(0.2)	13.9	(0.2)	-0.2	(0.4)	**0.9**	(0.2)	**1.1**	(0.4)	**0.7**	(0.2)
	Israel	13.4	(0.1)	13.1	(0.2)	13.1	(0.2)	13.1	(0.2)	-0.4	(0.2)	-0.3	(0.2)	0.1	(0.3)	-0.3	(0.2)
	Italy	12.9	(0.0)	12.7	(0.3)	12.9	(0.3)	12.8	(0.2)	-0.2	(0.3)	-0.0	(0.2)	0.2	(0.4)	-0.1	(0.2)
	Japan	14.1	(0.0)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	13.7	(0.1)	c	c	m	m	c	c	c	c	m	m	c	c	c	c
	Luxembourg	14.7	(0.1)	11.3	(0.1)	12.7	(0.2)	11.8	(0.1)	**-3.4**	(0.1)	**-2.0**	(0.2)	**1.4**	(0.2)	**-2.8**	(0.1)
	Mexico	10.9	(0.1)	9.5	(0.5)	9.3	(0.4)	9.4	(0.3)	**-1.3**	(0.5)	**-1.6**	(0.3)	-0.2	(0.6)	**-1.5**	(0.3)
	Netherlands	14.2	(0.1)	11.8	(0.3)	11.9	(0.5)	11.9	(0.3)	**-2.4**	(0.2)	**-2.3**	(0.5)	0.1	(0.5)	**-2.4**	(0.2)
	New Zealand	12.9	(0.0)	13.0	(0.1)	13.7	(0.1)	13.5	(0.1)	0.1	(0.1)	**0.8**	(0.1)	**0.7**	(0.1)	**0.6**	(0.1)
	Norway	14.0	(0.0)	13.3	(0.2)	13.1	(0.3)	13.2	(0.2)	**-0.7**	(0.2)	**-0.9**	(0.3)	-0.2	(0.4)	**-0.8**	(0.2)
	Poland	12.2	(0.1)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Portugal	10.8	(0.1)	11.8	(0.3)	13.0	(0.4)	12.4	(0.2)	**1.1**	(0.3)	**2.2**	(0.3)	**1.1**	(0.5)	**1.6**	(0.2)
	Slovak Republic	13.3	(0.1)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	13.0	(0.0)	11.8	(0.1)	12.0	(0.3)	11.8	(0.1)	**-1.2**	(0.1)	**-1.0**	(0.3)	0.2	(0.4)	**-1.1**	(0.1)
	Spain	12.1	(0.1)	12.0	(0.4)	12.0	(0.2)	12.0	(0.2)	-0.1	(0.4)	-0.0	(0.2)	0.0	(0.4)	-0.0	(0.2)
	Sweden	13.9	(0.0)	13.3	(0.2)	12.2	(0.4)	12.9	(0.2)	**-0.7**	(0.2)	**-1.8**	(0.4)	**-1.1**	(0.4)	**-1.0**	(0.2)
	Switzerland	14.3	(0.1)	12.6	(0.2)	13.4	(0.3)	12.9	(0.2)	**-1.7**	(0.2)	**-0.9**	(0.3)	**0.7**	(0.3)	**-1.4**	(0.2)
	Turkey	8.8	(0.1)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	14.2	(0.0)	13.9	(0.3)	13.9	(0.3)	13.9	(0.3)	-0.3	(0.3)	-0.3	(0.3)	-0.0	(0.3)	-0.3	(0.3)
	United States	14.1	(0.1)	11.9	(0.3)	12.2	(0.3)	12.0	(0.3)	**-2.1**	(0.3)	**-1.9**	(0.3)	0.3	(0.3)	**-2.0**	(0.2)
	OECD average	13.4	(0.0)	12.8	(0.1)	13.1	(0.1)	12.9	(0.0)	**-0.8**	(0.1)	**-0.5**	(0.1)	**0.3**	(0.1)	**-0.7**	(0.0)
Partners	Albania	12.2	(0.1)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	12.5	(0.2)	10.7	(0.5)	11.4	(0.6)	11.0	(0.4)	**-1.8**	(0.5)	-1.1	(0.6)	0.8	(0.8)	**-1.5**	(0.4)
	Azerbaijan	13.9	(0.1)	13.9	(0.4)	14.9	(0.4)	14.1	(0.3)	-0.0	(0.4)	**1.0**	(0.4)	1.0	(0.5)	0.2	(0.3)
	Brazil	10.2	(0.1)	10.4	(1.4)	11.0	(1.9)	10.6	(1.2)	0.2	(1.5)	0.8	(2.0)	0.6	(2.3)	0.4	(1.2)
	Bulgaria	13.8	(0.1)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	10.7	(0.1)	c	c	c	c	9.3	(0.8)	c	c	c	c	c	c	-1.4	(0.8)
	Croatia	13.6	(0.1)	13.1	(0.2)	12.8	(0.2)	13.0	(0.1)	**-0.5**	(0.2)	**-0.8**	(0.2)	-0.4	(0.3)	**-0.6**	(0.2)
	Dubai (UAE)	12.5	(0.1)	14.4	(0.1)	15.3	(0.0)	15.0	(0.0)	**1.9**	(0.1)	**2.8**	(0.1)	**0.9**	(0.1)	**2.5**	(0.1)
	Hong Kong-China	11.5	(0.1)	10.0	(0.1)	9.7	(0.1)	9.9	(0.1)	**-1.5**	(0.1)	**-1.9**	(0.2)	**-0.4**	(0.2)	**-1.7**	(0.1)
	Indonesia	9.9	(0.2)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Jordan	12.9	(0.1)	13.6	(0.2)	14.3	(0.2)	13.8	(0.2)	**0.7**	(0.2)	**1.4**	(0.2)	**0.7**	(0.3)	**0.9**	(0.1)
	Kazakhstan	14.2	(0.0)	14.0	(0.1)	13.9	(0.2)	14.0	(0.1)	**-0.2**	(0.1)	**-0.3**	(0.2)	-0.1	(0.2)	**-0.3**	(0.1)
	Kyrgyzstan	13.2	(0.0)	12.9	(0.3)	13.3	(0.4)	13.1	(0.3)	-0.4	(0.3)	0.1	(0.4)	0.5	(0.5)	-0.2	(0.3)
	Latvia	13.7	(0.1)	13.9	(0.3)	c	c	14.0	(0.2)	0.1	(0.3)	c	c	**1.3**	(0.5)	0.3	(0.2)
	Liechtenstein	13.5	(0.2)	12.1	(0.5)	12.4	(0.6)	12.2	(0.4)	**-1.5**	(0.5)	**-1.2**	(0.6)	0.3	(0.8)	**-1.3**	(0.4)
	Lithuania	13.5	(0.0)	13.5	(0.3)	c	c	13.6	(0.3)	-0.0	(0.3)	c	c	1.1	(1.0)	0.1	(0.3)
	Macao-China	10.7	(0.1)	9.9	(0.1)	10.3	(0.1)	10.0	(0.1)	**-0.8**	(0.1)	**-0.4**	(0.1)	**0.4**	(0.1)	**-0.7**	(0.1)
	Montenegro	12.7	(0.0)	13.2	(0.3)	13.2	(0.3)	13.2	(0.2)	0.5	(0.3)	0.5	(0.3)	0.0	(0.4)	**0.5**	(0.2)
	Panama	12.7	(0.2)	12.1	(0.5)	13.6	(0.5)	13.1	(0.3)	-0.6	(0.5)	0.9	(0.5)	**1.5**	(0.7)	0.4	(0.4)
	Peru	11.5	(0.1)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	13.5	(0.0)	13.7	(0.1)	15.1	(0.0)	14.5	(0.0)	**0.2**	(0.1)	**1.6**	(0.1)	**1.4**	(0.1)	**1.0**	(0.1)
	Romania	13.2	(0.1)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	13.3	(0.0)	13.1	(0.1)	13.1	(0.2)	13.1	(0.1)	-0.1	(0.1)	-0.1	(0.2)	0.0	(0.2)	-0.1	(0.1)
	Serbia	13.3	(0.1)	13.7	(0.2)	13.1	(0.2)	13.4	(0.2)	0.4	(0.2)	-0.2	(0.2)	**-0.5**	(0.3)	0.1	(0.2)
	Shanghai-China	12.6	(0.1)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	10.9	(0.0)	10.9	(0.1)	11.7	(0.1)	11.4	(0.1)	0.1	(0.1)	**0.8**	(0.1)	**0.7**	(0.2)	**0.6**	(0.1)
	Chinese Taipei	12.7	(0.1)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	9.7	(0.1)	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	12.4	(0.1)	12.8	(0.5)	14.0	(0.5)	13.3	(0.4)	0.4	(0.5)	**1.6**	(0.5)	1.1	(0.6)	**0.9**	(0.4)
	Tunisia	10.6	(0.2)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	11.0	(0.1)	c	c	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Number of books in the home, by immigrant status

Table B2.2c *Results based on students' self-reports*

		Number of books in the home															
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)		Difference between non-immigrant students and second-generation students		Difference between non-immigrant students and first-generation students		Difference between second- and first-generation students		Difference between non-immigrant students and immigrant students (first- and second-generation)	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.
OECD	Australia	180.0	(2.4)	154.8	(6.6)	144.8	(5.9)	150.0	(5.4)	**-25.2**	(6.7)	**-35.2**	(5.9)	-10.0	(6.4)	**-30.0**	(5.5)
	Austria	158.1	(3.5)	62.1	(4.7)	72.4	(10.4)	65.3	(4.8)	**-96.0**	(5.7)	**-85.7**	(11.3)	10.3	(10.9)	**-92.8**	(6.0)
	Belgium	141.4	(2.4)	95.3	(7.5)	91.9	(7.3)	93.7	(5.7)	**-46.0**	(7.3)	**-49.5**	(7.3)	-3.4	(9.4)	**-47.6**	(5.7)
	Canada	167.8	(2.1)	127.7	(4.5)	124.1	(6.7)	126.1	(4.3)	**-40.1**	(5.0)	**-43.8**	(6.8)	-3.6	(7.1)	**-41.7**	(4.7)
	Chile	73.2	(2.2)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	142.7	(2.6)	109.6	(20.7)	66.8	(12.2)	93.9	(14.1)	-33.1	(21.4)	**-75.9**	(12.3)	-42.8	(24.0)	**-48.8**	(14.8)
	Denmark	141.8	(3.4)	79.4	(5.8)	76.2	(9.4)	78.4	(5.0)	**-62.4**	(5.9)	**-65.6**	(10.3)	-3.2	(11.0)	**-63.4**	(5.6)
	Estonia	168.4	(3.2)	162.0	(9.6)	160.3	(32.4)	161.9	(8.7)	-6.4	(9.4)	-8.2	(32.3)	-1.7	(35.6)	-6.6	(8.4)
	Finland	162.2	(3.0)	132.3	(21.0)	115.8	(19.5)	123.1	(15.5)	-29.9	(21.0)	**-46.4**	(19.9)	-16.5	(26.6)	**-39.1**	(15.7)
	France	140.6	(5.4)	75.1	(6.3)	65.7	(11.1)	72.8	(5.9)	**-65.5**	(6.4)	**-74.9**	(11.9)	-9.4	(11.8)	**-67.8**	(6.3)
	Germany	172.7	(3.6)	87.8	(6.5)	89.3	(8.6)	88.3	(5.6)	**-84.8**	(6.7)	**-83.4**	(9.4)	1.5	(9.8)	**-84.3**	(6.2)
	Greece	136.7	(3.9)	99.7	(15.3)	50.2	(4.9)	66.4	(6.7)	**-37.0**	(15.5)	**-86.5**	(6.6)	**-49.5**	(16.1)	**-70.3**	(7.7)
	Hungary	184.6	(4.6)	180.6	(29.0)	160.2	(25.1)	168.9	(18.9)	-4.0	(29.3)	-24.4	(24.5)	-20.4	(38.3)	-15.7	(18.6)
	Iceland	188.2	(3.1)	c	c	79.5	(13.1)	96.9	(13.9)	c	c	**-108.7**	(13.2)	c	c	**-91.3**	(14.3)
	Ireland	142.9	(4.1)	160.0	(26.4)	116.5	(10.3)	124.2	(9.8)	17.2	(26.5)	**-26.4**	(10.3)	-43.5	(28.7)	-18.7	(9.8)
	Israel	156.0	(5.5)	131.7	(9.1)	95.3	(9.0)	118.4	(7.9)	**-24.4**	(7.9)	**-60.7**	(9.1)	**-36.4**	(9.4)	**-37.6**	(7.0)
	Italy	139.7	(1.9)	92.4	(8.1)	51.8	(3.7)	61.4	(3.7)	**-47.3**	(8.1)	**-87.9**	(3.9)	**-40.6**	(8.8)	**-78.3**	(3.7)
	Japan	149.4	(2.9)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	180.4	(4.5)	c	c	m	m	c	c	c	c	m	m	c	c	c	c
	Luxembourg	229.1	(3.3)	117.3	(4.2)	128.3	(4.9)	121.7	(2.9)	**-111.8**	(5.4)	**-100.8**	(6.4)	11.0	(7.0)	**-107.4**	(4.7)
	Mexico	49.9	(1.4)	48.5	(7.5)	32.0	(6.9)	38.5	(5.2)	-1.4	(7.3)	**-18.0**	(6.1)	-16.6	(9.9)	**-11.4**	(4.5)
	Netherlands	142.2	(4.9)	56.4	(5.0)	74.0	(15.4)	61.1	(5.5)	**-85.8**	(6.9)	**-68.2**	(14.2)	17.6	(16.1)	**-81.1**	(6.2)
	New Zealand	167.0	(3.2)	124.9	(8.7)	152.0	(5.8)	143.2	(5.3)	**-42.1**	(8.7)	**-15.0**	(7.0)	**27.1**	(9.7)	**-23.9**	(6.2)
	Norway	183.1	(3.2)	108.3	(14.1)	90.5	(10.7)	100.0	(9.3)	**-74.8**	(14.4)	**-92.6**	(11.1)	-17.8	(16.9)	**-83.1**	(9.7)
	Poland	125.9	(3.4)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Portugal	111.6	(3.4)	96.4	(11.7)	76.5	(9.9)	86.4	(7.7)	-15.1	(11.9)	**-35.1**	(10.7)	-19.9	(14.6)	**-25.2**	(8.3)
	Slovak Republic	115.8	(3.0)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	121.7	(2.0)	56.2	(6.0)	49.4	(12.8)	55.0	(5.5)	**-65.5**	(6.1)	**-72.3**	(12.8)	-6.8	(14.0)	**-66.7**	(5.6)
	Spain	168.0	(3.2)	107.2	(12.8)	55.4	(3.1)	61.2	(3.1)	**-60.8**	(12.8)	**-112.6**	(4.2)	**-51.8**	(13.4)	**-106.7**	(4.0)
	Sweden	197.7	(3.2)	102.8	(6.7)	81.6	(12.2)	96.0	(5.6)	**-94.9**	(7.2)	**-116.1**	(11.9)	-21.2	(14.6)	**-101.7**	(5.8)
	Switzerland	155.8	(3.4)	83.4	(4.7)	97.8	(8.0)	88.6	(3.5)	**-72.4**	(5.3)	**-58.0**	(9.1)	14.4	(10.5)	**-67.2**	(4.8)
	Turkey	79.7	(3.5)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	145.0	(2.9)	122.0	(10.8)	100.5	(10.7)	112.3	(8.0)	**-23.1**	(10.3)	**-44.5**	(11.0)	-21.4	(15.0)	**-32.7**	(7.7)
	United States	133.3	(5.0)	68.0	(5.2)	68.4	(7.7)	68.1	(5.1)	**-65.3**	(6.7)	**-65.0**	(9.2)	0.4	(7.4)	**-65.2**	(6.8)
	OECD average	148.6	(0.6)	105.3	(2.4)	91.7	(2.3)	97.2	(1.5)	**-48.1**	(2.4)	**-62.9**	(2.4)	**-13.1**	(3.3)	**-57.4**	(1.6)
Partners	Albania	51.9	(2.9)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	73.6	(3.8)	53.2	(9.3)	52.8	(18.9)	53.1	(10.6)	**-20.4**	(10.2)	-20.9	(19.4)	-0.5	(18.7)	-20.6	(11.4)
	Azerbaijan	62.5	(2.4)	42.5	(8.6)	69.5	(21.8)	49.0	(9.6)	**-20.1**	(8.4)	6.9	(22.4)	27.0	(21.0)	-13.5	(9.7)
	Brazil	40.8	(1.2)	34.1	(14.9)	19.7	(4.5)	29.1	(10.0)	-6.7	(15.0)	**-21.1**	(4.4)	-14.4	(15.6)	-11.7	(10.1)
	Bulgaria	121.2	(4.7)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	44.3	(1.7)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Croatia	85.0	(2.5)	74.1	(6.0)	43.4	(5.5)	64.1	(4.5)	-10.9	(6.4)	**-41.7**	(5.5)	**-30.8**	(8.0)	**-21.0**	(4.8)
	Dubai (UAE)	105.9	(4.2)	101.0	(4.5)	124.4	(2.9)	115.8	(2.2)	-4.8	(6.6)	**18.5**	(4.6)	**23.4**	(5.8)	**9.9**	(4.6)
	Hong Kong-China	110.3	(5.2)	71.3	(3.3)	48.7	(2.7)	62.4	(2.6)	**-39.0**	(5.3)	**-61.6**	(4.9)	**-22.6**	(3.7)	**-47.9**	(4.8)
	Indonesia	54.6	(2.1)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Jordan	66.6	(2.1)	75.7	(5.5)	80.6	(11.8)	76.8	(5.0)	9.1	(5.5)	14.0	(12.2)	4.9	(13.2)	**10.3**	(5.2)
	Kazakhstan	92.0	(4.2)	102.5	(9.5)	63.0	(10.2)	87.6	(8.8)	10.4	(9.2)	**-29.1**	(10.4)	**-39.5**	(10.7)	-4.4	(8.7)
	Kyrgyzstan	55.2	(2.5)	124.4	(21.5)	54.2	(14.6)	94.3	(13.8)	**69.2**	(20.9)	-1.0	(14.5)	**-70.2**	(26.7)	**39.1**	(13.1)
	Latvia	141.8	(3.4)	160.0	(17.4)	c	c	161.9	(16.5)	18.2	(17.2)	c	c	21.2	(35.5)	20.1	(16.3)
	Liechtenstein	176.7	(9.8)	125.9	(19.6)	169.7	(22.6)	150.2	(15.0)	**-50.9**	(21.8)	-7.0	(24.4)	43.9	(30.9)	-26.5	(17.6)
	Lithuania	112.3	(2.6)	123.5	(18.5)	c	c	122.8	(18.4)	11.2	(18.8)	c	c	-7.7	(77.0)	10.5	(18.6)
	Macao-China	71.5	(2.4)	59.3	(1.6)	59.8	(3.1)	59.4	(1.2)	**-12.2**	(3.0)	**-11.7**	(3.6)	0.5	(3.9)	**-12.1**	(2.7)
	Montenegro	115.1	(2.4)	159.6	(15.8)	88.6	(9.8)	115.8	(8.3)	**44.5**	(16.4)	**-26.6**	(10.0)	**-71.0**	(20.1)	0.6	(8.8)
	Panama	51.6	(3.9)	47.0	(8.6)	64.0	(12.3)	57.9	(8.9)	-4.6	(8.9)	12.4	(13.1)	17.0	(14.7)	6.3	(9.4)
	Peru	49.5	(2.0)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	132.0	(2.3)	130.2	(3.8)	123.3	(2.9)	126.3	(2.3)	-1.8	(4.1)	**-8.7**	(4.0)	-6.8	(4.8)	-5.7	(3.3)
	Romania	100.1	(4.2)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	143.4	(3.3)	113.6	(10.7)	105.8	(8.6)	110.5	(7.2)	**-29.8**	(10.9)	**-37.6**	(8.6)	-7.9	(14.0)	**-32.9**	(7.3)
	Serbia	89.1	(2.1)	88.6	(7.0)	63.4	(7.8)	77.2	(5.5)	-0.5	(7.5)	**-25.8**	(8.0)	**-25.2**	(10.4)	**-11.9**	(5.8)
	Shanghai-China	113.7	(3.1)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	121.9	(2.0)	119.7	(9.3)	123.7	(6.0)	122.3	(5.4)	-2.2	(10.1)	1.7	(6.6)	3.9	(10.5)	0.4	(6.2)
	Chinese Taipei	134.8	(3.3)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	65.4	(2.0)	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	141.3	(2.6)	189.0	(25.5)	144.8	(20.3)	169.1	(17.5)	47.7	(25.9)	3.5	(20.2)	-44.2	(30.5)	27.8	(17.8)
	Tunisia	40.4	(2.1)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	74.5	(2.0)	c	c	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B2.2d Highest parental occupational status. by immigrant status

Results based on students' self-reports

		Highest parental occupational status															
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)		Difference between non-immigrant students and second-generation students		Difference between non-immigrant students and first-generation students		Difference between second- and first-generation students		Difference between non-immigrant students and immigrant students (first- and second-generation)	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.
OECD	Australia	53.3	(0.2)	51.7	(0.8)	55.3	(0.7)	53.4	(0.6)	**-1.6**	(0.8)	**2.1**	(0.7)	**3.6**	(0.9)	0.2	(0.6)
	Austria	49.7	(0.4)	40.1	(0.7)	41.2	(1.6)	40.4	(0.7)	**-9.7**	(0.8)	**-8.6**	(1.6)	1.1	(1.7)	**-9.4**	(0.8)
	Belgium	51.3	(0.3)	42.4	(1.1)	44.1	(1.2)	43.2	(1.0)	**-8.9**	(1.1)	**-7.3**	(1.2)	1.7	(1.2)	**-8.1**	(1.0)
	Canada	53.8	(0.2)	49.2	(0.6)	55.2	(0.8)	51.8	(0.6)	**-4.6**	(0.6)	1.4	(0.8)	**6.0**	(0.9)	**-2.0**	(0.6)
	Chile	43.1	(0.5)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	48.1	(0.3)	44.5	(1.9)	51.8	(2.6)	47.3	(1.6)	-3.6	(1.9)	3.7	(2.6)	**7.3**	(3.1)	-0.8	(1.6)
	Denmark	51.7	(0.5)	42.4	(0.8)	42.4	(1.4)	42.4	(0.8)	**-9.2**	(0.8)	**-9.3**	(1.5)	-0.0	(1.4)	**-9.2**	(0.8)
	Estonia	50.4	(0.4)	47.3	(1.3)	c	c	47.8	(1.3)	**-3.1**	(1.3)	c	c	5.6	(3.7)	**-2.7**	(1.3)
	Finland	53.1	(0.4)	52.3	(2.5)	48.1	(2.0)	50.0	(1.6)	-0.8	(2.5)	**-5.0**	(2.1)	-4.2	(3.2)	-3.1	(1.6)
	France	48.0	(0.6)	39.2	(1.1)	40.3	(2.3)	39.5	(1.0)	**-8.8**	(1.0)	**-7.7**	(2.2)	1.1	(2.4)	**-8.5**	(0.9)
	Germany	50.7	(0.4)	40.6	(0.7)	41.8	(1.1)	41.0	(0.6)	**-10.2**	(0.8)	**-8.9**	(1.0)	1.2	(1.2)	**-9.7**	(0.6)
	Greece	50.1	(0.6)	41.7	(1.6)	33.5	(1.0)	36.2	(1.0)	**-8.3**	(1.6)	**-16.5**	(1.2)	**-8.2**	(1.9)	**-13.8**	(1.1)
	Hungary	47.7	(0.4)	51.9	(2.9)	42.6	(2.0)	46.7	(1.7)	4.1	(2.8)	**-5.1**	(2.0)	**-9.2**	(3.4)	-1.1	(1.7)
	Iceland	56.3	(0.3)	c	c	39.5	(1.9)	41.6	(1.7)	c	c	**-16.7**	(1.9)	c	c	**-14.7**	(1.7)
	Ireland	49.8	(0.5)	53.0	(3.1)	52.1	(1.3)	52.2	(1.2)	3.2	(3.1)	2.3	(1.3)	-1.0	(3.2)	**2.5**	(1.2)
	Israel	53.8	(0.4)	51.3	(1.1)	46.8	(1.1)	49.7	(0.9)	**-2.6**	(1.0)	**-7.0**	(1.2)	**-4.5**	(1.4)	**-4.1**	(0.8)
	Italy	47.5	(0.2)	40.8	(1.4)	35.1	(0.6)	36.4	(0.6)	**-6.7**	(1.4)	**-12.4**	(0.6)	**-5.7**	(1.5)	**-11.1**	(0.6)
	Japan	51.5	(0.3)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	50.1	(0.4)	c	c	m	m	c	c	c	c	m	m	c	c	c	c
	Luxembourg	52.1	(0.3)	39.7	(0.5)	45.6	(0.7)	42.0	(0.4)	**-12.5**	(0.6)	**-6.6**	(0.8)	**5.9**	(0.9)	**-10.1**	(0.5)
	Mexico	41.6	(0.4)	34.1	(1.2)	35.9	(1.2)	35.2	(0.9)	**-7.4**	(1.2)	**-5.7**	(1.1)	1.8	(1.6)	**-6.4**	(0.9)
	Netherlands	52.6	(0.4)	42.3	(1.1)	43.2	(2.2)	42.5	(1.1)	**-10.3**	(1.1)	**-9.4**	(2.2)	0.9	(2.2)	**-10.1**	(1.1)
	New Zealand	52.0	(0.3)	48.0	(1.2)	55.1	(0.6)	52.8	(0.7)	**-4.0**	(1.2)	**3.1**	(0.7)	**7.1**	(1.1)	0.9	(0.7)
	Norway	55.8	(0.4)	49.9	(1.4)	48.9	(1.7)	49.4	(1.1)	**-5.9**	(1.4)	**-6.9**	(1.6)	-1.0	(2.2)	**-6.4**	(1.1)
	Poland	44.7	(0.4)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Portugal	44.4	(0.5)	41.0	(1.5)	40.9	(1.2)	41.0	(0.9)	**-3.3**	(1.5)	**-3.4**	(1.3)	-0.1	(2.0)	**-3.4**	(1.0)
	Slovak Republic	45.7	(0.4)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	51.0	(0.3)	43.0	(1.0)	37.6	(2.1)	42.0	(0.9)	**-8.0**	(1.0)	**-13.5**	(2.1)	**-5.5**	(2.2)	**-9.0**	(1.0)
	Spain	46.6	(0.5)	44.1	(2.0)	38.5	(0.8)	39.1	(0.7)	-2.5	(1.8)	**-8.1**	(0.9)	**-5.6**	(2.1)	**-7.5**	(0.8)
	Sweden	52.9	(0.4)	46.7	(1.0)	47.8	(2.0)	47.0	(0.9)	**-6.2**	(1.1)	**-5.1**	(2.0)	1.1	(2.1)	**-5.9**	(1.0)
	Switzerland	52.7	(0.4)	43.2	(0.7)	45.1	(1.2)	43.9	(0.7)	**-9.5**	(0.6)	**-7.6**	(1.2)	2.0	(1.2)	**-8.8**	(0.6)
	Turkey	41.3	(0.5)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	49.9	(0.3)	50.0	(2.0)	48.9	(1.4)	49.5	(1.6)	0.1	(2.0)	-1.0	(1.4)	-1.1	(1.7)	-0.4	(1.5)
	United States	53.9	(0.5)	44.8	(1.0)	43.7	(1.5)	44.5	(1.0)	**-9.1**	(1.0)	**-10.2**	(1.4)	-1.1	(1.3)	**-9.4**	(1.0)
	OECD average	49.9	(0.1)	45.0	(0.3)	44.5	(0.3)	44.6	(0.2)	**-5.5**	(0.3)	**-6.3**	(0.3)	-0.0	(0.4)	**-6.2**	(0.2)
Partners	Albania	43.6	(0.5)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	44.8	(0.7)	35.1	(1.6)	35.3	(2.2)	35.2	(1.4)	**-9.7**	(1.7)	**-9.5**	(2.3)	0.2	(2.5)	**-9.7**	(1.6)
	Azerbaijan	46.8	(0.5)	47.6	(2.5)	54.3	(3.0)	49.3	(2.1)	0.7	(2.5)	**7.4**	(3.1)	6.7	(4.1)	2.5	(2.1)
	Brazil	42.7	(0.4)	38.0	(2.6)	32.9	(4.2)	36.5	(2.5)	-4.7	(2.6)	**-9.9**	(4.1)	-5.1	(4.2)	**-6.3**	(2.5)
	Bulgaria	48.4	(0.6)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	41.7	(0.6)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Croatia	47.7	(0.4)	44.8	(1.0)	40.7	(1.1)	43.5	(0.8)	**-2.9**	(1.0)	**-7.0**	(1.1)	**-4.1**	(1.2)	**-4.2**	(0.9)
	Dubai (UAE)	62.7	(0.4)	61.1	(0.4)	64.3	(0.3)	63.1	(0.2)	**-1.6**	(0.6)	**1.6**	(0.5)	**3.2**	(0.5)	0.4	(0.5)
	Hong Kong-China	48.8	(0.6)	40.4	(0.4)	39.0	(0.6)	39.8	(0.4)	**-8.5**	(0.6)	**-9.8**	(0.8)	-1.3	(0.7)	**-9.0**	(0.6)
	Indonesia	37.1	(0.6)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Jordan	48.1	(0.4)	49.8	(1.2)	52.7	(1.6)	50.5	(1.1)	1.7	(1.2)	**4.6**	(1.6)	2.9	(1.8)	**2.4**	(1.0)
	Kazakhstan	48.0	(0.5)	45.7	(1.2)	45.4	(1.7)	45.6	(1.1)	-2.3	(1.2)	-2.6	(1.6)	-0.4	(1.7)	**-2.4**	(1.1)
	Kyrgyzstan	47.4	(0.5)	44.3	(2.8)	c	c	45.3	(3.1)	-3.1	(2.7)	c	c	2.4	(4.4)	-2.1	(3.0)
	Latvia	47.5	(0.5)	46.4	(1.5)	c	c	47.0	(1.6)	-1.1	(1.5)	c	c	7.4	(6.0)	-0.5	(1.5)
	Liechtenstein	53.4	(1.0)	45.5	(2.9)	47.6	(2.4)	46.7	(1.9)	**-7.9**	(2.8)	**-5.8**	(2.5)	2.1	(3.7)	**-6.7**	(1.9)
	Lithuania	49.6	(0.4)	48.2	(2.5)	c	c	48.3	(2.4)	-1.5	(2.5)	c	c	1.3	(8.3)	-1.4	(2.4)
	Macao-China	48.3	(0.3)	42.6	(0.2)	44.6	(0.5)	43.0	(0.2)	**-5.7**	(0.4)	**-3.6**	(0.6)	**2.0**	(0.5)	**-5.2**	(0.4)
	Montenegro	47.3	(0.3)	52.8	(1.7)	48.0	(1.3)	49.8	(1.2)	**5.5**	(1.7)	0.7	(1.4)	**-4.8**	(1.8)	**2.5**	(1.2)
	Panama	46.5	(1.1)	51.7	(1.5)	42.1	(3.4)	45.9	(2.7)	**5.3**	(2.0)	-4.4	(3.5)	**-9.6**	(3.6)	-0.6	(3.0)
	Peru	40.8	(0.6)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	59.4	(0.2)	58.5	(0.4)	64.3	(0.3)	61.9	(0.2)	**-0.9**	(0.4)	**5.0**	(0.3)	**5.9**	(0.5)	**2.6**	(0.3)
	Romania	44.0	(0.6)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	50.4	(0.4)	47.4	(1.0)	47.3	(1.3)	47.4	(0.7)	**-3.0**	(1.0)	**-3.1**	(1.3)	-0.1	(1.7)	**-3.0**	(0.7)
	Serbia	48.3	(0.4)	47.5	(0.9)	44.6	(0.9)	46.2	(0.6)	-0.8	(0.9)	**-3.7**	(0.9)	**-2.8**	(1.3)	**-2.1**	(0.6)
	Shanghai-China	49.6	(0.4)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	53.6	(0.2)	54.4	(1.0)	59.3	(0.7)	57.7	(0.6)	0.8	(1.0)	**5.7**	(0.8)	**4.9**	(1.3)	**4.0**	(0.6)
	Chinese Taipei	47.2	(0.3)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	37.2	(0.5)	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	45.5	(0.3)	46.5	(2.4)	56.0	(2.7)	50.5	(1.9)	1.0	(2.4)	**10.5**	(2.8)	**9.5**	(3.3)	**5.0**	(1.9)
	Tunisia	37.0	(0.6)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	44.4	(0.4)	c	c	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B2.2e Cultural possessions, by immigrant status

Results based on students' self-reports

		Cultural possessions															
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)		Difference between non-immigrant students and second-generation students		Difference between non-immigrant students and first-generation students		Difference between second- and first-generation students		Difference between non-immigrant students and immigrant students (first- and second-generation)	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.
OECD	Australia	-0.10	(0.02)	-0.13	(0.04)	-0.11	(0.03)	-0.12	(0.03)	-0.02	(0.04)	-0.00	(0.03)	0.02	(0.05)	-0.01	(0.03)
	Austria	-0.12	(0.02)	-0.54	(0.04)	-0.39	(0.06)	-0.50	(0.03)	**-0.43**	(0.04)	**-0.27**	(0.07)	**0.16**	(0.07)	**-0.38**	(0.04)
	Belgium	-0.24	(0.02)	-0.53	(0.05)	-0.45	(0.06)	-0.49	(0.04)	**-0.29**	(0.06)	**-0.21**	(0.06)	0.08	(0.06)	**-0.25**	(0.05)
	Canada	-0.13	(0.01)	-0.11	(0.04)	-0.05	(0.03)	-0.09	(0.03)	0.02	(0.04)	**0.07**	(0.03)	0.06	(0.05)	0.04	(0.03)
	Chile	0.01	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	-0.40	(0.02)	-0.68	(0.10)	-0.58	(0.13)	-0.64	(0.08)	**-0.28**	(0.11)	-0.18	(0.14)	0.10	(0.17)	**-0.24**	(0.09)
	Denmark	-0.32	(0.03)	-0.92	(0.04)	-0.99	(0.07)	-0.94	(0.04)	**-0.60**	(0.05)	**-0.67**	(0.07)	-0.07	(0.08)	**-0.62**	(0.04)
	Estonia	0.31	(0.02)	0.41	(0.04)	0.27	(0.15)	0.40	(0.04)	**0.10**	(0.04)	-0.05	(0.15)	-0.14	(0.15)	**0.08**	(0.04)
	Finland	0.17	(0.02)	-0.06	(0.14)	-0.06	(0.14)	-0.06	(0.09)	-0.22	(0.14)	-0.23	(0.14)	-0.01	(0.21)	**-0.23**	(0.10)
	France	-0.23	(0.03)	-0.42	(0.06)	-0.40	(0.10)	-0.41	(0.06)	**-0.19**	(0.07)	-0.17	(0.10)	0.02	(0.11)	**-0.19**	(0.06)
	Germany	-0.04	(0.02)	-0.38	(0.04)	-0.32	(0.06)	-0.36	(0.03)	**-0.34**	(0.05)	**-0.28**	(0.06)	0.06	(0.07)	**-0.32**	(0.04)
	Greece	0.44	(0.02)	0.16	(0.08)	-0.01	(0.07)	0.05	(0.06)	**-0.28**	(0.08)	**-0.45**	(0.08)	-0.17	(0.11)	**-0.39**	(0.06)
	Hungary	0.22	(0.03)	0.37	(0.15)	0.32	(0.18)	0.34	(0.11)	0.14	(0.15)	0.09	(0.18)	-0.05	(0.26)	0.12	(0.12)
	Iceland	0.40	(0.01)	c	c	-0.38	(0.11)	-0.38	(0.10)	c	c	**-0.78**	(0.11)	c	c	**-0.78**	(0.10)
	Ireland	-0.43	(0.02)	-0.30	(0.13)	-0.37	(0.05)	-0.36	(0.05)	0.13	(0.13)	0.06	(0.05)	-0.07	(0.13)	0.07	(0.05)
	Israel	-0.03	(0.02)	-0.24	(0.06)	-0.44	(0.07)	-0.31	(0.05)	**-0.22**	(0.05)	**-0.41**	(0.07)	**-0.20**	(0.08)	**-0.29**	(0.05)
	Italy	-0.01	(0.01)	-0.38	(0.06)	-0.53	(0.04)	-0.49	(0.03)	**-0.37**	(0.06)	**-0.52**	(0.04)	-0.14	(0.08)	**-0.48**	(0.03)
	Japan	-0.35	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	0.52	(0.02)	c	c	m	m	c	c	c	c	m	m	c	c	c	c
	Luxembourg	0.37	(0.02)	-0.13	(0.03)	-0.02	(0.04)	-0.09	(0.02)	**-0.50**	(0.04)	**-0.39**	(0.04)	**0.11**	(0.05)	**-0.45**	(0.03)
	Mexico	-0.21	(0.01)	-0.31	(0.09)	-0.39	(0.06)	-0.36	(0.05)	-0.10	(0.09)	**-0.19**	(0.06)	-0.09	(0.10)	**-0.16**	(0.05)
	Netherlands	-0.26	(0.03)	-0.70	(0.05)	-0.61	(0.09)	-0.67	(0.04)	**-0.43**	(0.05)	**-0.35**	(0.09)	0.09	(0.12)	**-0.41**	(0.04)
	New Zealand	-0.34	(0.02)	-0.63	(0.06)	-0.37	(0.04)	-0.45	(0.03)	**-0.28**	(0.07)	-0.02	(0.05)	**0.26**	(0.08)	**-0.10**	(0.04)
	Norway	0.25	(0.02)	-0.18	(0.08)	-0.34	(0.07)	-0.25	(0.05)	**-0.43**	(0.09)	**-0.59**	(0.07)	-0.16	(0.12)	**-0.50**	(0.06)
	Poland	0.14	(0.02)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Portugal	0.18	(0.02)	0.15	(0.12)	-0.22	(0.08)	-0.03	(0.07)	-0.03	(0.12)	**-0.40**	(0.09)	**-0.37**	(0.13)	**-0.21**	(0.07)
	Slovak Republic	0.41	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	0.33	(0.01)	-0.29	(0.06)	-0.37	(0.10)	-0.30	(0.05)	**-0.61**	(0.06)	**-0.69**	(0.09)	-0.08	(0.11)	**-0.63**	(0.05)
	Spain	0.24	(0.02)	-0.21	(0.10)	-0.27	(0.03)	-0.26	(0.03)	**-0.45**	(0.09)	**-0.51**	(0.04)	-0.06	(0.10)	**-0.50**	(0.03)
	Sweden	0.33	(0.02)	-0.13	(0.06)	-0.21	(0.09)	-0.16	(0.05)	**-0.46**	(0.06)	**-0.53**	(0.09)	-0.07	(0.11)	**-0.48**	(0.05)
	Switzerland	-0.28	(0.02)	-0.45	(0.03)	-0.35	(0.08)	-0.41	(0.04)	**-0.17**	(0.03)	-0.07	(0.08)	0.10	(0.08)	**-0.14**	(0.04)
	Turkey	0.52	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	-0.20	(0.02)	-0.17	(0.10)	-0.27	(0.05)	-0.21	(0.06)	0.04	(0.09)	-0.07	(0.05)	-0.10	(0.10)	-0.01	(0.06)
	United States	-0.25	(0.03)	-0.48	(0.05)	-0.47	(0.06)	-0.48	(0.04)	**-0.23**	(0.05)	**-0.22**	(0.07)	0.01	(0.07)	**-0.22**	(0.05)
	OECD average	0.03	(0.00)	-0.27	(0.02)	-0.30	(0.02)	-0.29	(0.01)	**-0.24**	(0.02)	**-0.29**	(0.02)	-0.03	(0.02)	**-0.27**	(0.01)
Partners	Albania	0.12	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	0.03	(0.03)	-0.21	(0.09)	-0.17	(0.12)	-0.19	(0.08)	**-0.24**	(0.10)	-0.20	(0.12)	0.04	(0.15)	**-0.22**	(0.08)
	Azerbaijan	-0.62	(0.02)	-0.73	(0.12)	-0.65	(0.10)	-0.71	(0.09)	-0.10	(0.12)	-0.03	(0.10)	0.07	(0.15)	-0.08	(0.09)
	Brazil	-0.35	(0.01)	-0.46	(0.14)	-0.16	(0.21)	-0.36	(0.13)	-0.11	(0.14)	0.19	(0.21)	0.30	(0.24)	-0.01	(0.13)
	Bulgaria	0.24	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	0.07	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Croatia	-0.36	(0.02)	-0.51	(0.06)	-0.76	(0.06)	-0.59	(0.05)	**-0.15**	(0.06)	**-0.41**	(0.07)	**-0.25**	(0.07)	**-0.24**	(0.05)
	Dubai (UAE)	-0.19	(0.02)	-0.03	(0.03)	0.16	(0.02)	0.09	(0.02)	**0.16**	(0.04)	**0.35**	(0.03)	**0.19**	(0.03)	**0.28**	(0.03)
	Hong Kong-China	0.02	(0.03)	-0.14	(0.03)	-0.32	(0.05)	-0.21	(0.03)	**-0.16**	(0.04)	**-0.34**	(0.06)	**-0.18**	(0.06)	**-0.23**	(0.04)
	Indonesia	-0.10	(0.02)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Jordan	-0.45	(0.02)	-0.48	(0.05)	-0.33	(0.06)	-0.45	(0.04)	-0.03	(0.05)	**0.12**	(0.06)	0.15	(0.08)	0.00	(0.04)
	Kazakhstan	0.55	(0.02)	0.51	(0.06)	0.51	(0.09)	0.51	(0.06)	-0.04	(0.05)	-0.05	(0.09)	-0.01	(0.08)	-0.04	(0.06)
	Kyrgyzstan	0.29	(0.02)	0.28	(0.12)	-0.04	(0.22)	0.14	(0.13)	-0.01	(0.12)	-0.33	(0.22)	-0.32	(0.22)	-0.15	(0.13)
	Latvia	-0.19	(0.02)	0.02	(0.09)	c	c	0.01	(0.08)	**0.20**	(0.09)	c	c	-0.08	(0.22)	**0.20**	(0.09)
	Liechtenstein	0.04	(0.07)	-0.20	(0.15)	-0.04	(0.14)	-0.11	(0.10)	-0.24	(0.16)	-0.07	(0.16)	0.16	(0.20)	-0.14	(0.13)
	Lithuania	0.01	(0.02)	-0.27	(0.15)	c	c	-0.30	(0.14)	-0.28	(0.15)	c	c	-0.33	(0.34)	**-0.31**	(0.14)
	Macao-China	0.39	(0.02)	0.33	(0.02)	0.42	(0.03)	0.35	(0.01)	**-0.06**	(0.03)	0.03	(0.03)	**0.09**	(0.03)	-0.04	(0.02)
	Montenegro	0.30	(0.02)	0.27	(0.11)	0.18	(0.08)	0.21	(0.07)	-0.04	(0.11)	-0.12	(0.09)	-0.09	(0.12)	-0.09	(0.08)
	Panama	-0.01	(0.04)	-0.29	(0.10)	0.07	(0.13)	-0.06	(0.09)	**-0.28**	(0.10)	0.08	(0.13)	**0.36**	(0.17)	-0.06	(0.09)
	Peru	0.12	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	-0.01	(0.01)	-0.13	(0.02)	-0.10	(0.02)	-0.11	(0.01)	**-0.12**	(0.03)	**-0.08**	(0.02)	0.04	(0.03)	**-0.10**	(0.02)
	Romania	0.28	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	0.17	(0.02)	-0.07	(0.06)	0.06	(0.08)	-0.02	(0.05)	**-0.23**	(0.06)	-0.11	(0.09)	0.12	(0.09)	**-0.18**	(0.06)
	Serbia	0.87	(0.02)	0.83	(0.06)	0.65	(0.07)	0.75	(0.05)	-0.04	(0.06)	**-0.22**	(0.07)	**-0.18**	(0.09)	**-0.12**	(0.05)
	Shanghai-China	0.33	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	-0.46	(0.01)	-0.32	(0.07)	-0.17	(0.05)	-0.22	(0.04)	**0.15**	(0.07)	**0.30**	(0.06)	0.15	(0.08)	**0.25**	(0.05)
	Chinese Taipei	-0.25	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	0.48	(0.02)	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	0.20	(0.01)	0.17	(0.10)	0.03	(0.10)	0.10	(0.08)	-0.03	(0.10)	-0.17	(0.11)	-0.14	(0.14)	-0.10	(0.08)
	Tunisia	0.40	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	-0.04	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Home possessions, by immigrant status

Table B2.2f *Results based on students' self-reports*

		Home possessions															
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)		Difference between non-immigrant students and second-generation students		Difference between non-immigrant students and first-generation students		Difference between second- and first-generation students		Difference between non-immigrant students and immigrant students (first- and second-generation)	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.
OECD	Australia	0.62	(0.01)	0.57	(0.03)	0.47	(0.03)	0.52	(0.02)	-0.05	(0.03)	**-0.16**	(0.03)	**-0.11**	(0.04)	**-0.10**	(0.02)
	Austria	0.18	(0.02)	-0.42	(0.03)	-0.64	(0.09)	-0.49	(0.04)	**-0.60**	(0.03)	**-0.82**	(0.09)	**-0.22**	(0.10)	**-0.67**	(0.04)
	Belgium	0.18	(0.01)	-0.18	(0.04)	-0.23	(0.06)	-0.20	(0.04)	**-0.35**	(0.05)	**-0.40**	(0.06)	-0.05	(0.06)	**-0.37**	(0.04)
	Canada	0.43	(0.01)	0.43	(0.04)	0.23	(0.04)	0.34	(0.03)	-0.01	(0.04)	**-0.21**	(0.04)	**-0.20**	(0.05)	**-0.10**	(0.03)
	Chile	-0.71	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	-0.21	(0.01)	-0.45	(0.15)	-0.45	(0.13)	-0.45	(0.10)	-0.23	(0.14)	-0.23	(0.13)	-0.00	(0.20)	**-0.23**	(0.10)
	Denmark	0.38	(0.02)	-0.29	(0.04)	-0.53	(0.07)	-0.37	(0.03)	**-0.67**	(0.04)	**-0.90**	(0.07)	**-0.23**	(0.08)	**-0.75**	(0.04)
	Estonia	0.09	(0.02)	-0.05	(0.04)	-0.13	(0.19)	-0.06	(0.04)	**-0.14**	(0.04)	-0.22	(0.19)	-0.08	(0.20)	**-0.15**	(0.04)
	Finland	0.12	(0.01)	-0.11	(0.11)	-0.33	(0.17)	-0.23	(0.10)	**-0.23**	(0.11)	**-0.45**	(0.17)	-0.22	(0.21)	**-0.35**	(0.11)
	France	0.05	(0.02)	-0.24	(0.05)	-0.49	(0.14)	-0.30	(0.06)	**-0.29**	(0.05)	**-0.54**	(0.14)	-0.25	(0.14)	**-0.35**	(0.06)
	Germany	0.25	(0.02)	-0.34	(0.03)	-0.44	(0.05)	-0.37	(0.03)	**-0.59**	(0.03)	**-0.68**	(0.05)	-0.10	(0.05)	**-0.62**	(0.03)
	Greece	-0.10	(0.02)	-0.59	(0.09)	-0.85	(0.05)	-0.77	(0.05)	**-0.49**	(0.09)	**-0.76**	(0.05)	**-0.27**	(0.10)	**-0.67**	(0.05)
	Hungary	-0.20	(0.03)	-0.18	(0.14)	-0.39	(0.12)	-0.30	(0.09)	0.02	(0.13)	-0.19	(0.12)	-0.21	(0.18)	-0.10	(0.09)
	Iceland	0.55	(0.01)	c	c	-0.34	(0.15)	-0.28	(0.14)	c	c	**-0.89**	(0.15)	c	c	**-0.83**	(0.14)
	Ireland	0.10	(0.02)	0.07	(0.14)	-0.10	(0.05)	-0.07	(0.05)	-0.03	(0.15)	**-0.19**	(0.05)	-0.17	(0.15)	**-0.16**	(0.05)
	Israel	-0.23	(0.02)	-0.55	(0.05)	-0.82	(0.06)	-0.65	(0.05)	**-0.32**	(0.05)	**-0.59**	(0.06)	**-0.27**	(0.06)	**-0.42**	(0.04)
	Italy	0.04	(0.01)	-0.61	(0.06)	-0.83	(0.05)	-0.78	(0.04)	**-0.65**	(0.07)	**-0.87**	(0.05)	**-0.22**	(0.08)	**-0.82**	(0.04)
	Japan	-0.47	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	-0.60	(0.03)	c	c	m	m	c	c	c	c	m	m	c	c	c	c
	Luxembourg	0.72	(0.01)	0.19	(0.02)	0.06	(0.03)	0.14	(0.02)	**-0.53**	(0.03)	**-0.66**	(0.03)	**-0.13**	(0.04)	**-0.58**	(0.02)
	Mexico	-1.61	(0.03)	-1.96	(0.13)	-2.21	(0.10)	-2.11	(0.08)	**-0.35**	(0.13)	**-0.60**	(0.09)	-0.25	(0.17)	**-0.50**	(0.07)
	Netherlands	0.39	(0.02)	-0.16	(0.04)	-0.18	(0.09)	-0.17	(0.04)	**-0.55**	(0.04)	**-0.57**	(0.08)	-0.02	(0.08)	**-0.55**	(0.04)
	New Zealand	0.18	(0.02)	-0.12	(0.06)	0.07	(0.03)	0.01	(0.03)	**-0.29**	(0.06)	**-0.11**	(0.04)	**0.18**	(0.07)	**-0.17**	(0.03)
	Norway	0.59	(0.02)	0.15	(0.10)	-0.26	(0.08)	-0.04	(0.06)	**-0.44**	(0.10)	**-0.85**	(0.08)	**-0.41**	(0.12)	**-0.63**	(0.07)
	Poland	0.00	(0.02)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Portugal	0.47	(0.02)	0.05	(0.09)	-0.16	(0.08)	-0.05	(0.07)	**-0.41**	(0.09)	**-0.62**	(0.08)	**-0.21**	(0.09)	**-0.52**	(0.07)
	Slovak Republic	0.04	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	0.31	(0.02)	-0.22	(0.06)	-0.43	(0.08)	-0.25	(0.05)	**-0.52**	(0.06)	**-0.74**	(0.09)	**-0.22**	(0.11)	**-0.56**	(0.05)
	Spain	-0.05	(0.02)	-0.44	(0.07)	-0.77	(0.04)	-0.74	(0.03)	**-0.39**	(0.06)	**-0.73**	(0.04)	**-0.34**	(0.07)	**-0.69**	(0.04)
	Sweden	0.52	(0.02)	0.02	(0.04)	-0.35	(0.10)	-0.10	(0.04)	**-0.50**	(0.04)	**-0.87**	(0.10)	**-0.37**	(0.11)	**-0.61**	(0.04)
	Switzerland	-0.06	(0.01)	-0.36	(0.03)	-0.43	(0.06)	-0.39	(0.03)	**-0.30**	(0.02)	**-0.37**	(0.06)	-0.07	(0.06)	**-0.33**	(0.03)
	Turkey	-0.73	(0.05)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	0.21	(0.02)	0.08	(0.09)	-0.31	(0.05)	-0.09	(0.06)	-0.13	(0.09)	**-0.52**	(0.05)	**-0.39**	(0.10)	**-0.31**	(0.06)
	United States	0.20	(0.04)	-0.17	(0.06)	-0.28	(0.07)	-0.21	(0.06)	**-0.37**	(0.06)	**-0.49**	(0.07)	-0.11	(0.07)	**-0.41**	(0.06)
	OECD average	0.05	(0.00)	-0.22	(0.01)	-0.40	(0.02)	-0.30	(0.01)	**-0.35**	(0.01)	**-0.54**	(0.02)	**-0.18**	(0.02)	**-0.45**	(0.01)
Partners	Albania	-1.62	(0.04)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	-0.91	(0.04)	-1.25	(0.09)	-1.12	(0.12)	-1.20	(0.08)	**-0.35**	(0.09)	-0.21	(0.13)	0.14	(0.14)	**-0.29**	(0.08)
	Azerbaijan	-1.66	(0.04)	-1.83	(0.31)	-1.24	(0.16)	-1.68	(0.25)	-0.16	(0.31)	**0.42**	(0.16)	0.58	(0.35)	-0.02	(0.25)
	Brazil	-1.36	(0.02)	-1.39	(0.13)	-1.78	(0.18)	-1.53	(0.12)	-0.03	(0.13)	**-0.42**	(0.18)	-0.39	(0.22)	-0.17	(0.12)
	Bulgaria	-0.39	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	-1.45	(0.05)	c	c	c	c	-2.23	(0.29)	c	c	c	c	c	c	**-0.78**	(0.28)
	Croatia	-0.37	(0.02)	-0.45	(0.07)	-0.66	(0.06)	-0.52	(0.05)	-0.08	(0.07)	**-0.28**	(0.06)	**-0.21**	(0.08)	**-0.14**	(0.05)
	Dubai (UAE)	0.06	(0.02)	-0.46	(0.03)	-0.19	(0.02)	-0.29	(0.01)	**-0.52**	(0.04)	**-0.25**	(0.03)	**0.27**	(0.04)	**-0.35**	(0.03)
	Hong Kong-China	-0.66	(0.04)	-1.05	(0.03)	-1.49	(0.05)	-1.22	(0.03)	**-0.39**	(0.04)	**-0.83**	(0.06)	**-0.44**	(0.06)	**-0.56**	(0.04)
	Indonesia	-1.88	(0.05)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Jordan	-1.28	(0.03)	-1.10	(0.06)	-0.84	(0.10)	-1.04	(0.06)	**0.18**	(0.06)	**0.44**	(0.09)	**0.27**	(0.09)	**0.24**	(0.06)
	Kazakhstan	-1.50	(0.05)	-1.44	(0.11)	-1.83	(0.13)	-1.58	(0.11)	0.06	(0.11)	**-0.33**	(0.13)	**-0.39**	(0.13)	-0.09	(0.11)
	Kyrgyzstan	-1.47	(0.03)	-0.89	(0.24)	-1.47	(0.28)	-1.14	(0.22)	**0.58**	(0.23)	-0.00	(0.28)	-0.58	(0.31)	0.33	(0.22)
	Latvia	-0.37	(0.03)	-0.28	(0.11)	c	c	-0.27	(0.11)	0.09	(0.11)	c	c	0.10	(0.36)	0.10	(0.11)
	Liechtenstein	0.23	(0.05)	-0.07	(0.09)	-0.16	(0.09)	-0.12	(0.06)	**-0.31**	(0.10)	**-0.39**	(0.11)	-0.09	(0.13)	**-0.35**	(0.08)
	Lithuania	-0.20	(0.02)	-0.36	(0.12)	c	c	-0.36	(0.11)	-0.16	(0.12)	c	c	0.06	(0.17)	-0.16	(0.10)
	Macao-China	-0.08	(0.02)	-0.41	(0.01)	-0.51	(0.03)	-0.43	(0.01)	**-0.33**	(0.03)	**-0.42**	(0.04)	**-0.10**	(0.03)	**-0.35**	(0.03)
	Montenegro	-0.28	(0.02)	0.01	(0.10)	-0.51	(0.09)	-0.31	(0.07)	**0.29**	(0.10)	**-0.23**	(0.09)	**-0.52**	(0.13)	-0.03	(0.07)
	Panama	-1.61	(0.08)	-1.02	(0.16)	-1.96	(0.27)	-1.62	(0.23)	**0.59**	(0.16)	-0.34	(0.27)	**-0.93**	(0.32)	-0.01	(0.23)
	Peru	-2.09	(0.05)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	0.57	(0.02)	0.01	(0.02)	0.04	(0.02)	0.03	(0.01)	**-0.56**	(0.03)	**-0.53**	(0.02)	0.03	(0.03)	**-0.55**	(0.02)
	Romania	-0.48	(0.04)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	-0.57	(0.03)	-0.69	(0.07)	-0.60	(0.06)	-0.65	(0.06)	-0.13	(0.07)	-0.04	(0.06)	0.09	(0.07)	-0.09	(0.06)
	Serbia	0.28	(0.02)	0.18	(0.07)	-0.05	(0.08)	0.08	(0.06)	-0.09	(0.07)	**-0.33**	(0.08)	**-0.23**	(0.10)	**-0.20**	(0.06)
	Shanghai-China	-1.01	(0.04)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	-0.56	(0.01)	-0.47	(0.07)	-0.55	(0.04)	-0.52	(0.04)	0.10	(0.07)	0.01	(0.04)	-0.09	(0.08)	0.04	(0.04)
	Chinese Taipei	-0.49	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	-1.20	(0.03)	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	-0.91	(0.01)	-0.59	(0.15)	-0.75	(0.16)	-0.66	(0.10)	**0.32**	(0.15)	0.16	(0.16)	-0.16	(0.23)	**0.25**	(0.10)
	Tunisia	-1.24	(0.04)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	-0.61	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Home educational resources, by immigrant status

Table B2.2g *Results based on students' self-reports*

		Home educational resources															
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)		Difference between non-immigrant students and second-generation students		Difference between non-immigrant students and first-generation students		Difference between second- and first-generation students		Difference between non-immigrant students and immigrant students (first- and second-generation)	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.
OECD	Australia	-0.08	(0.01)	0.01	(0.03)	-0.03	(0.04)	-0.01	(0.03)	**0.09**	(0.03)	0.04	(0.04)	-0.04	(0.04)	**0.07**	(0.03)
	Austria	-0.09	(0.02)	-0.39	(0.05)	-0.59	(0.10)	-0.45	(0.06)	**-0.30**	(0.05)	**-0.50**	(0.10)	**-0.20**	(0.10)	**-0.36**	(0.06)
	Belgium	0.09	(0.01)	-0.13	(0.04)	-0.27	(0.06)	-0.19	(0.04)	**-0.22**	(0.05)	**-0.36**	(0.06)	-0.14	(0.07)	**-0.29**	(0.04)
	Canada	0.06	(0.01)	0.20	(0.03)	0.23	(0.03)	0.22	(0.03)	**0.14**	(0.03)	**0.17**	(0.03)	0.03	(0.04)	**0.16**	(0.03)
	Chile	-0.17	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	0.09	(0.01)	-0.23	(0.19)	0.00	(0.15)	-0.15	(0.13)	-0.32	(0.19)	-0.09	(0.15)	0.23	(0.25)	-0.24	(0.13)
	Denmark	0.16	(0.02)	0.09	(0.03)	-0.18	(0.06)	0.00	(0.03)	**-0.07**	(0.03)	**-0.34**	(0.06)	**-0.27**	(0.07)	**-0.16**	(0.03)
	Estonia	0.30	(0.01)	0.26	(0.04)	0.16	(0.14)	0.26	(0.04)	-0.03	(0.04)	-0.14	(0.14)	-0.11	(0.16)	-0.04	(0.04)
	Finland	-0.31	(0.01)	-0.25	(0.10)	-0.21	(0.17)	-0.23	(0.11)	0.06	(0.10)	0.10	(0.17)	0.05	(0.19)	0.08	(0.10)
	France	-0.29	(0.02)	-0.37	(0.06)	-0.42	(0.16)	-0.38	(0.05)	-0.08	(0.06)	-0.13	(0.16)	-0.05	(0.18)	-0.09	(0.06)
	Germany	0.22	(0.02)	-0.04	(0.05)	-0.19	(0.07)	-0.09	(0.04)	**-0.26**	(0.05)	**-0.42**	(0.07)	**-0.16**	(0.08)	**-0.31**	(0.04)
	Greece	0.20	(0.03)	-0.16	(0.11)	-0.25	(0.07)	-0.22	(0.08)	**-0.35**	(0.11)	**-0.44**	(0.08)	-0.09	(0.10)	**-0.41**	(0.08)
	Hungary	0.04	(0.03)	0.01	(0.16)	-0.17	(0.16)	-0.09	(0.12)	-0.03	(0.16)	-0.21	(0.17)	-0.18	(0.23)	-0.13	(0.12)
	Iceland	0.32	(0.01)	c	c	-0.18	(0.14)	-0.21	(0.13)	c	c	**-0.51**	(0.15)	c	c	**-0.53**	(0.14)
	Ireland	-0.36	(0.02)	-0.35	(0.11)	-0.37	(0.06)	-0.37	(0.05)	0.00	(0.12)	-0.01	(0.06)	-0.01	(0.12)	-0.01	(0.05)
	Israel	-1.05	(0.02)	-1.25	(0.05)	-1.35	(0.05)	-1.29	(0.04)	**-0.20**	(0.05)	**-0.30**	(0.05)	-0.10	(0.06)	**-0.24**	(0.04)
	Italy	0.10	(0.01)	-0.28	(0.07)	-0.40	(0.05)	-0.37	(0.04)	**-0.38**	(0.07)	**-0.50**	(0.05)	-0.12	(0.09)	**-0.47**	(0.04)
	Japan	-0.46	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	-0.14	(0.02)	c	c	m	m	c	c	c	c	m	m	c	c	c	c
	Luxembourg	0.27	(0.01)	0.07	(0.03)	-0.04	(0.04)	0.03	(0.02)	**-0.20**	(0.04)	**-0.31**	(0.04)	**-0.11**	(0.05)	**-0.25**	(0.03)
	Mexico	-0.95	(0.02)	-1.38	(0.12)	-1.43	(0.07)	-1.41	(0.06)	**-0.44**	(0.12)	**-0.49**	(0.07)	-0.05	(0.15)	**-0.47**	(0.06)
	Netherlands	0.07	(0.02)	-0.12	(0.05)	-0.19	(0.09)	-0.14	(0.05)	**-0.20**	(0.06)	**-0.27**	(0.09)	-0.07	(0.10)	**-0.21**	(0.05)
	New Zealand	-0.31	(0.02)	-0.37	(0.05)	-0.19	(0.03)	-0.25	(0.03)	-0.06	(0.05)	**0.12**	(0.03)	**0.18**	(0.06)	**0.06**	(0.03)
	Norway	0.33	(0.01)	0.34	(0.08)	-0.10	(0.09)	0.14	(0.06)	0.01	(0.08)	**-0.43**	(0.08)	**-0.44**	(0.11)	**-0.20**	(0.06)
	Poland	0.49	(0.01)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Portugal	0.20	(0.02)	0.00	(0.12)	-0.14	(0.08)	-0.07	(0.08)	-0.20	(0.12)	**-0.34**	(0.09)	-0.14	(0.13)	**-0.27**	(0.08)
	Slovak Republic	1.12	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	0.55	(0.01)	0.40	(0.05)	0.32	(0.10)	0.39	(0.04)	**-0.15**	(0.05)	**-0.23**	(0.10)	-0.08	(0.11)	**-0.17**	(0.04)
	Spain	-0.09	(0.01)	-0.35	(0.11)	-0.57	(0.04)	-0.54	(0.04)	**-0.26**	(0.11)	**-0.48**	(0.04)	**-0.22**	(0.11)	**-0.45**	(0.04)
	Sweden	0.10	(0.02)	-0.04	(0.05)	-0.21	(0.08)	-0.10	(0.04)	**-0.15**	(0.05)	**-0.31**	(0.07)	**-0.16**	(0.08)	**-0.20**	(0.04)
	Switzerland	0.05	(0.02)	-0.12	(0.03)	-0.22	(0.04)	-0.15	(0.02)	**-0.17**	(0.03)	**-0.27**	(0.04)	-0.10	(0.05)	**-0.21**	(0.02)
	Turkey	0.48	(0.04)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	-0.08	(0.02)	0.16	(0.05)	-0.04	(0.05)	0.07	(0.04)	**0.24**	(0.05)	0.04	(0.06)	**-0.21**	(0.08)	**0.15**	(0.04)
	United States	-0.23	(0.03)	-0.34	(0.06)	-0.31	(0.07)	-0.33	(0.05)	-0.11	(0.06)	-0.08	(0.07)	0.03	(0.07)	**-0.10**	(0.05)
	OECD average	0.02	(0.00)	-0.17	(0.02)	-0.26	(0.02)	-0.21	(0.01)	**-0.13**	(0.02)	**-0.24**	(0.02)	**-0.09**	(0.02)	**-0.19**	(0.01)
Partners	Albania	-0.76	(0.04)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	-0.39	(0.03)	-0.59	(0.10)	-0.48	(0.17)	-0.55	(0.10)	-0.20	(0.10)	-0.09	(0.17)	0.11	(0.17)	-0.15	(0.10)
	Azerbaijan	-0.61	(0.03)	-0.81	(0.22)	-0.13	(0.14)	-0.64	(0.19)	-0.20	(0.22)	**0.48**	(0.15)	**0.68**	(0.27)	-0.03	(0.19)
	Brazil	-0.58	(0.02)	-0.87	(0.09)	-0.66	(0.14)	-0.80	(0.07)	**-0.29**	(0.09)	-0.07	(0.13)	0.22	(0.16)	**-0.22**	(0.08)
	Bulgaria	-0.06	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	-0.52	(0.04)	c	c	c	c	-0.95	(0.22)	c	c	c	c	c	c	**-0.43**	(0.22)
	Croatia	0.12	(0.02)	0.11	(0.05)	-0.14	(0.07)	0.03	(0.04)	-0.00	(0.05)	**-0.26**	(0.07)	**-0.25**	(0.09)	**-0.09**	(0.04)
	Dubai (UAE)	-0.26	(0.02)	-0.03	(0.02)	0.16	(0.02)	0.09	(0.01)	**0.24**	(0.03)	**0.42**	(0.03)	**0.18**	(0.03)	**0.35**	(0.02)
	Hong Kong-China	-0.03	(0.03)	-0.12	(0.03)	-0.45	(0.04)	-0.25	(0.02)	**-0.09**	(0.04)	**-0.42**	(0.06)	**-0.33**	(0.05)	**-0.22**	(0.04)
	Indonesia	-1.07	(0.04)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Jordan	-0.52	(0.03)	-0.44	(0.07)	-0.30	(0.10)	-0.41	(0.06)	0.09	(0.06)	**0.23**	(0.09)	0.14	(0.10)	**0.12**	(0.06)
	Kazakhstan	-0.43	(0.04)	-0.32	(0.09)	-0.71	(0.12)	-0.47	(0.10)	0.10	(0.09)	**-0.28**	(0.12)	**-0.38**	(0.11)	-0.04	(0.09)
	Kyrgyzstan	-0.98	(0.03)	-0.44	(0.33)	-0.97	(0.30)	-0.66	(0.25)	0.54	(0.32)	0.01	(0.30)	-0.53	(0.41)	0.31	(0.25)
	Latvia	0.29	(0.02)	0.29	(0.10)	c	c	0.30	(0.09)	0.01	(0.10)	c	c	0.10	(0.16)	0.01	(0.09)
	Liechtenstein	-0.01	(0.06)	-0.30	(0.11)	-0.36	(0.15)	-0.34	(0.10)	**-0.29**	(0.13)	**-0.35**	(0.16)	-0.06	(0.18)	**-0.33**	(0.12)
	Lithuania	0.21	(0.02)	0.01	(0.11)	c	c	0.04	(0.10)	-0.20	(0.11)	c	c	0.28	(0.30)	-0.17	(0.10)
	Macao-China	0.24	(0.02)	0.14	(0.02)	0.15	(0.03)	0.14	(0.02)	**-0.10**	(0.03)	**-0.09**	(0.03)	0.01	(0.03)	**-0.10**	(0.02)
	Montenegro	0.02	(0.02)	0.09	(0.11)	-0.13	(0.10)	-0.05	(0.07)	0.06	(0.12)	-0.16	(0.10)	-0.22	(0.14)	-0.07	(0.08)
	Panama	-0.66	(0.06)	-0.43	(0.10)	-0.85	(0.19)	-0.70	(0.15)	**0.23**	(0.11)	-0.19	(0.20)	**-0.42**	(0.21)	-0.04	(0.16)
	Peru	-0.73	(0.04)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	-0.13	(0.01)	-0.02	(0.02)	0.20	(0.02)	0.11	(0.01)	**0.12**	(0.03)	**0.33**	(0.02)	**0.22**	(0.03)	**0.24**	(0.02)
	Romania	0.40	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	0.33	(0.02)	0.10	(0.15)	0.29	(0.08)	0.18	(0.11)	-0.23	(0.14)	-0.04	(0.08)	0.19	(0.12)	-0.15	(0.11)
	Serbia	1.48	(0.02)	1.56	(0.08)	1.41	(0.07)	1.49	(0.06)	0.08	(0.08)	-0.07	(0.07)	-0.15	(0.10)	0.01	(0.05)
	Shanghai-China	-0.19	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	-0.05	(0.01)	0.04	(0.06)	0.11	(0.04)	0.09	(0.03)	0.09	(0.06)	**0.17**	(0.04)	0.07	(0.07)	**0.14**	(0.03)
	Chinese Taipei	-0.03	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	-0.31	(0.03)	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	-0.30	(0.01)	-0.19	(0.12)	-0.36	(0.12)	-0.27	(0.08)	0.11	(0.12)	-0.06	(0.12)	-0.17	(0.16)	0.03	(0.09)
	Tunisia	0.09	(0.04)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	0.44	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Wealth, by immigrant status

Table B2.2h *Results based on students' self-reports*

		Wealth index															
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)		Difference between non-immigrant students and second-generation students		Difference between non-immigrant students and first-generation students		Difference between second- and first-generation students		Difference between non-immigrant students and immigrant students (first- and second-generation)	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.	Dif.	S.E.
OECD	Australia	0.77	(0.01)	0.69	(0.03)	0.59	(0.03)	0.64	(0.03)	**-0.07**	(0.03)	**-0.18**	(0.03)	**-0.11**	(0.04)	**-0.13**	(0.02)
	Austria	0.21	(0.02)	-0.26	(0.04)	-0.55	(0.08)	-0.35	(0.03)	**-0.47**	(0.04)	**-0.75**	(0.08)	**-0.28**	(0.09)	**-0.56**	(0.04)
	Belgium	-0.06	(0.01)	-0.35	(0.05)	-0.40	(0.07)	-0.38	(0.04)	**-0.29**	(0.05)	**-0.34**	(0.07)	-0.05	(0.07)	**-0.31**	(0.05)
	Canada	0.52	(0.01)	0.51	(0.04)	0.21	(0.04)	0.38	(0.04)	-0.01	(0.04)	**-0.31**	(0.04)	**-0.29**	(0.04)	**-0.14**	(0.03)
	Chile	-0.67	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	-0.22	(0.01)	-0.30	(0.11)	-0.32	(0.12)	-0.31	(0.08)	-0.09	(0.11)	-0.10	(0.12)	-0.02	(0.17)	-0.09	(0.08)
	Denmark	0.41	(0.02)	-0.37	(0.04)	-0.56	(0.09)	-0.43	(0.04)	**-0.78**	(0.05)	**-0.97**	(0.09)	**-0.19**	(0.10)	**-0.84**	(0.04)
	Estonia	-0.01	(0.02)	-0.23	(0.07)	-0.25	(0.18)	-0.23	(0.06)	**-0.22**	(0.07)	-0.23	(0.18)	-0.02	(0.19)	**-0.22**	(0.06)
	Finland	0.23	(0.02)	0.03	(0.12)	-0.16	(0.13)	-0.07	(0.09)	-0.19	(0.12)	**-0.38**	(0.13)	-0.19	(0.18)	**-0.30**	(0.09)
	France	0.12	(0.02)	-0.09	(0.04)	-0.39	(0.12)	-0.17	(0.06)	**-0.21**	(0.04)	**-0.51**	(0.12)	**-0.30**	(0.11)	**-0.28**	(0.05)
	Germany	0.21	(0.02)	-0.28	(0.03)	-0.37	(0.05)	-0.31	(0.03)	**-0.49**	(0.04)	**-0.58**	(0.05)	-0.08	(0.06)	**-0.52**	(0.03)
	Greece	-0.25	(0.02)	-0.69	(0.07)	-0.90	(0.05)	-0.83	(0.04)	**-0.44**	(0.07)	**-0.65**	(0.05)	**-0.21**	(0.09)	**-0.58**	(0.04)
	Hungary	-0.35	(0.02)	-0.37	(0.12)	-0.46	(0.11)	-0.43	(0.08)	-0.02	(0.11)	-0.11	(0.11)	-0.09	(0.16)	-0.07	(0.08)
	Iceland	0.56	(0.01)	c	c	-0.03	(0.15)	0.05	(0.14)	c	c	**-0.59**	(0.15)	c	c	**-0.51**	(0.14)
	Ireland	0.29	(0.02)	0.20	(0.14)	0.04	(0.05)	0.07	(0.05)	-0.09	(0.14)	**-0.25**	(0.05)	-0.16	(0.15)	**-0.23**	(0.05)
	Israel	-0.20	(0.03)	-0.49	(0.05)	-0.74	(0.06)	-0.58	(0.04)	**-0.29**	(0.05)	**-0.54**	(0.06)	**-0.25**	(0.06)	**-0.38**	(0.04)
	Italy	0.12	(0.01)	-0.41	(0.06)	-0.56	(0.04)	-0.53	(0.04)	**-0.53**	(0.06)	**-0.68**	(0.04)	**-0.15**	(0.07)	**-0.64**	(0.04)
	Japan	-0.48	(0.01)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Korea		(0.02)	c	c	m	m	c	c	c	c	m	m	c	c	c	c
	Luxembourg	0.59	(0.02)	0.25	(0.02)	0.05	(0.03)	0.17	(0.02)	**-0.34**	(0.03)	**-0.53**	(0.03)	**-0.20**	(0.04)	**-0.42**	(0.02)
	Mexico	-1.59	(0.03)	-1.89	(0.13)	-2.16	(0.11)	-2.05	(0.08)	**-0.30**	(0.13)	**-0.56**	(0.11)	-0.26	(0.18)	**-0.46**	(0.08)
	Netherlands	0.50	(0.02)	0.02	(0.05)	-0.05	(0.08)	0.00	(0.05)	**-0.49**	(0.05)	**-0.55**	(0.08)	-0.06	(0.08)	**-0.50**	(0.04)
	New Zealand	0.27	(0.02)	0.03	(0.06)	0.10	(0.03)	0.08	(0.03)	**-0.24**	(0.06)	**-0.16**	(0.03)	0.08	(0.07)	**-0.19**	(0.03)
	Norway	0.67	(0.01)	0.33	(0.09)	-0.02	(0.09)	0.17	(0.07)	**-0.34**	(0.10)	**-0.69**	(0.09)	**-0.35**	(0.12)	**-0.50**	(0.07)
	Poland	-0.18	(0.02)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Portugal	0.52	(0.02)	0.07	(0.06)	-0.03	(0.07)	0.02	(0.05)	**-0.45**	(0.06)	**-0.55**	(0.07)	-0.10	(0.08)	**-0.50**	(0.05)
	Slovak Republic	0.13	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	0.27	(0.02)	0.01	(0.05)	-0.16	(0.08)	-0.02	(0.04)	**-0.26**	(0.05)	**-0.43**	(0.08)	-0.17	(0.10)	**-0.29**	(0.05)
	Spain	-0.16	(0.01)	-0.38	(0.06)	-0.67	(0.04)	-0.64	(0.04)	**-0.22**	(0.06)	**-0.51**	(0.04)	**-0.29**	(0.07)	**-0.48**	(0.04)
	Sweden	0.54	(0.02)	0.16	(0.05)	-0.27	(0.09)	0.02	(0.04)	**-0.38**	(0.04)	**-0.81**	(0.09)	**-0.44**	(0.10)	**-0.52**	(0.04)
	Switzerland	-0.12	(0.01)	-0.33	(0.03)	-0.42	(0.05)	-0.36	(0.03)	**-0.21**	(0.03)	**-0.30**	(0.05)	-0.09	(0.05)	**-0.24**	(0.03)
	Turkey	-1.02	(0.04)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	0.30	(0.01)	0.09	(0.09)	-0.34	(0.05)	-0.11	(0.05)	**-0.22**	(0.08)	**-0.64**	(0.05)	**-0.42**	(0.10)	**-0.41**	(0.05)
	United States	0.50	(0.04)	0.20	(0.05)	0.04	(0.06)	0.15	(0.05)	**-0.30**	(0.05)	**-0.46**	(0.06)	**-0.16**	(0.06)	**-0.35**	(0.05)
	OECD average	0.04	(0.00)	-0.14	(0.01)	-0.31	(0.02)	-0.22	(0.01)	**-0.29**	(0.01)	**-0.48**	(0.02)	**-0.18**	(0.02)	**-0.38**	(0.01)
Partners	Albania	-1.67	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	-0.94	(0.04)	-1.23	(0.08)	-1.12	(0.13)	-1.19	(0.07)	**-0.29**	(0.08)	-0.17	(0.13)	0.12	(0.15)	**-0.24**	(0.07)
	Azerbaijan	-1.58	(0.03)	-1.69	(0.32)	-1.13	(0.16)	-1.55	(0.25)	-0.11	(0.32)	**0.46**	(0.16)	0.57	(0.36)	0.03	(0.25)
	Brazil	-1.25	(0.02)	-1.17	(0.14)	-1.71	(0.18)	-1.35	(0.14)	0.08	(0.14)	**-0.46**	(0.18)	**-0.54**	(0.20)	-0.11	(0.14)
	Bulgaria	-0.34	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	-1.44	(0.05)	c	c	c	c	-2.16	(0.25)	c	c	c	c	c	c	**-0.71**	(0.25)
	Croatia	-0.42	(0.02)	-0.43	(0.06)	-0.47	(0.06)	-0.44	(0.05)	-0.01	(0.06)	-0.05	(0.06)	-0.04	(0.08)	-0.03	(0.05)
	Dubai (UAE)	0.40	(0.02)	-0.45	(0.03)	-0.25	(0.02)	-0.32	(0.01)	**-0.85**	(0.03)	**-0.64**	(0.03)	**0.21**	(0.03)	**-0.72**	(0.02)
	Hong Kong-China	-0.85	(0.03)	-1.24	(0.02)	-1.57	(0.04)	-1.37	(0.03)	**-0.38**	(0.03)	**-0.72**	(0.05)	**-0.33**	(0.04)	**-0.51**	(0.03)
	Indonesia	-1.79	(0.06)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Jordan	-1.25	(0.03)	-1.06	(0.05)	-0.80	(0.09)		(0.05)	**0.18**	(0.05)	**0.44**	(0.09)	**0.26**	(0.09)	**0.25**	(0.05)
	Kazakhstan	-1.76	(0.04)	-1.70	(0.10)	-2.01	(0.09)	-1.82	(0.08)	0.05	(0.10)	**-0.25**	(0.09)	**-0.31**	(0.12)	-0.06	(0.08)
	Kyrgyzstan	-1.34	(0.02)	-0.85	(0.17)	-1.27	(0.23)	-1.03	(0.17)	**0.50**	(0.17)	0.07	(0.23)	-0.43	(0.25)	0.32	(0.17)
	Latvia	-0.50	(0.02)	-0.45	(0.10)	c	c	-0.45	(0.10)	0.05	(0.10)	c	c	0.07	(0.34)	0.06	(0.10)
	Liechtenstein	0.23	(0.05)	0.05	(0.12)	-0.17	(0.08)	-0.07	(0.07)	-0.18	(0.12)	**-0.40**	(0.09)	-0.22	(0.14)	**-0.30**	(0.08)
	Lithuania	-0.23	(0.02)	-0.28	(0.08)	c	c	-0.27	(0.08)	-0.04	(0.08)	c	c	0.11	(0.21)	-0.03	(0.08)
	Macao-China	-0.28	(0.02)	-0.64	(0.01)	-0.81	(0.02)	-0.68	(0.01)	**-0.36**	(0.03)	**-0.54**	(0.03)	**-0.17**	(0.03)	**-0.40**	(0.03)
	Montenegro	-0.28	(0.02)	0.04	(0.11)	-0.44	(0.09)	-0.25	(0.08)	**0.31**	(0.12)	-0.16	(0.09)	**-0.47**	(0.15)	0.02	(0.08)
	Panama	-1.73	(0.08)	-0.98	(0.18)	-2.22	(0.32)	-1.78	(0.28)	**0.75**	(0.17)	-0.49	(0.30)	**-1.24**	(0.37)	-0.05	(0.27)
	Peru	-2.26	(0.04)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	1.02	(0.01)	0.22	(0.02)	0.18	(0.02)	0.20	(0.01)	**-0.80**	(0.02)	**-0.84**	(0.02)	-0.04	(0.03)	**-0.82**	(0.02)
	Romania	-0.54	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	-0.79	(0.02)	-0.80	(0.05)	-0.74	(0.05)	-0.78	(0.04)	-0.00	(0.05)	0.05	(0.05)	0.05	(0.07)	0.02	(0.04)
	Serbia	-0.10	(0.02)	-0.23	(0.06)	-0.37	(0.07)	-0.29	(0.05)	**-0.13**	(0.06)	**-0.28**	(0.07)	-0.15	(0.09)	**-0.20**	(0.05)
	Shanghai-China	-1.26	(0.03)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	-0.73	(0.01)	-0.69	(0.06)	-0.86	(0.04)	-0.80	(0.03)	0.03	(0.06)	**-0.13**	(0.04)	**-0.17**	(0.07)	**-0.08**	(0.04)
	Chinese Taipei	-0.58	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	-1.29	(0.03)	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	-1.12	(0.01)	-0.82	(0.12)	-0.89	(0.15)	-0.85	(0.09)	**0.29**	(0.12)	0.23	(0.15)	-0.06	(0.21)	**0.27**	(0.09)
	Tunisia	-1.66	(0.04)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	-0.66	(0.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Low maternal education, by immigrant status

Table B2.2i *Results based on students' self-reports*

		Proportion of students whose mother has educational attainment of lower secondary education at best															
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)		Difference between non-immigrant students and second-generation students		Difference between non-immigrant students and first-generation students		Difference between second- and first-generation students		Difference between non-immigrant students and immigrant students (first- and second-generation)	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.
OECD	Australia	4.77	(0.29)	10.02	(1.2)	5.95	(1.1)	8.06	(1.0)	**-5.25**	(-1.2)	-1.18	(1.1)	**4.07**	(1.1)	**-3.29**	(1.0)
	Austria	5.36	(0.43)	31.73	(2.4)	34.10	(3.4)	32.48	(1.9)	**-26.37**	(-2.3)	**-28.74**	(3.4)	-2.37	(4.3)	**-27.12**	(1.9)
	Belgium	7.12	(0.37)	33.23	(2.9)	21.99	(2.4)	27.93	(2.0)	**-26.11**	(-3.0)	**-14.87**	(2.5)	**11.24**	(3.6)	**-20.81**	(2.1)
	Canada	5.39	(0.26)	12.53	(1.4)	7.80	(1.1)	10.44	(1.0)	**-7.14**	(-1.4)	**-2.41**	(1.1)	**4.72**	(1.6)	**-5.05**	(1.0)
	Chile	34.00	(1.36)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	3.09	(0.30)	14.61	(6.9)	10.04	(5.6)	12.90	(4.5)	-11.51	(-6.8)	-6.94	(5.6)	4.57	(9.5)	**-9.81**	(4.4)
	Denmark	9.82	(0.67)	41.09	(2.2)	30.84	(3.4)	37.80	(2.0)	**-31.26**	(-2.2)	**-21.02**	(3.5)	**10.25**	(3.7)	**-27.98**	(2.1)
	Estonia	5.08	(0.34)	5.87	(1.8)	6.05	(3.8)	5.88	(1.6)	-0.79	(-1.7)	-0.97	(3.9)	-0.18	(4.4)	-0.80	(1.6)
	Finland	8.12	(0.41)	17.05	(5.5)	23.88	(6.2)	20.83	(4.6)	-8.94	(-5.4)	**-15.76**	(6.1)	-6.83	(7.5)	**-12.72**	(4.5)
	France	15.00	(0.73)	49.37	(2.2)	42.54	(5.8)	47.67	(2.3)	**-34.37**	(-2.2)	**-27.55**	(5.7)	6.83	(6.0)	**-32.67**	(2.2)
	Germany	16.13	(0.91)	38.81	(2.6)	32.61	(3.8)	36.61	(2.3)	**-22.68**	(-2.8)	**-16.48**	(4.1)	6.20	(4.3)	**-20.48**	(2.6)
	Greece	21.79	(1.13)	9.57	(2.3)	23.35	(3.4)	18.77	(2.4)	**12.22**	(-2.7)	-1.56	(3.7)	**-13.78**	(4.0)	3.02	(2.8)
	Hungary	16.00	(1.01)	9.29	(5.5)	12.52	(5.6)	11.14	(4.0)	6.70	(-5.3)	3.48	(5.6)	-3.23	(7.7)	4.85	(4.0)
	Iceland	23.28	(0.74)	c	c	25.29	(6.6)	23.26	(6.0)	c	c	-2.01	(6.6)	c	c	0.02	(6.1)
	Ireland	17.62	(0.93)	23.78	(5.9)	9.91	(1.9)	12.32	(2.1)	-6.16	(-5.9)	**7.71**	(2.3)	**13.87**	(5.7)	**5.30**	(2.5)
	Israel	10.93	(0.61)	13.84	(2.1)	10.33	(2.2)	12.61	(1.7)	-2.91	(-2.1)	0.60	(2.3)	3.51	(2.7)	-1.68	(1.7)
	Italy	35.47	(0.52)	39.54	(3.4)	30.82	(2.2)	32.97	(2.0)	-4.07	(-3.3)	**4.65**	(2.3)	**8.72**	(3.7)	2.50	(2.0)
	Japan	3.20	(0.21)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	10.86	(0.65)	c	c	m	m	c	c	c	c	m	m	c	c	c	c
	Luxembourg	17.26	(0.75)	52.92	(1.6)	41.31	(1.8)	48.27	(1.2)	**-35.66**	(-1.7)	**-24.05**	(1.9)	**11.61**	(2.4)	**-31.01**	(1.4)
	Mexico	61.32	(0.88)	73.17	(5.7)	74.37	(3.7)	73.88	(3.5)	**-11.84**	(-5.6)	**-13.04**	(3.5)	-1.20	(6.1)	**-12.56**	(3.4)
	Netherlands	9.87	(0.60)	46.74	(2.6)	42.08	(5.4)	45.62	(2.4)	**-36.87**	(-2.5)	**-32.21**	(5.6)	4.65	(5.9)	**-35.75**	(2.5)
	New Zealand	14.05	(0.63)	17.25	(2.1)	8.49	(1.0)	11.06	(1.0)	-3.20	(-2.2)	**5.57**	(1.1)	**8.76**	(2.3)	**2.99**	(1.1)
	Norway	3.79	(0.30)	16.39	(3.1)	21.08	(3.8)	18.55	(2.3)	**-12.60**	(-3.1)	**-17.29**	(3.8)	-4.69	(5.1)	**-14.76**	(2.3)
	Poland	8.04	(0.58)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Portugal	58.90	(1.30)	54.45	(4.3)	38.81	(5.1)	46.56	(3.0)	4.45	(-4.2)	**20.09**	(5.1)	**15.64**	(7.3)	**12.34**	(3.0)
	Slovak Republic	3.20	(0.38)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	9.32	(0.48)	27.12	(2.6)	47.31	(5.8)	30.79	(2.5)	**-17.79**	(-2.6)	**-37.99**	(5.8)	**-20.19**	(6.4)	**-21.47**	(2.5)
	Spain	40.57	(1.19)	37.74	(4.8)	38.02	(2.1)	37.99	(2.0)	2.83	(-4.8)	2.55	(2.5)	-0.28	(5.2)	2.59	(2.3)
	Sweden	8.23	(0.47)	22.93	(2.8)	28.52	(3.9)	24.76	(2.2)	**-14.69**	(-2.9)	**-20.28**	(3.8)	-5.59	(4.9)	**-16.53**	(2.2)
	Switzerland	15.59	(0.61)	47.36	(2.2)	43.76	(3.1)	46.08	(1.9)	**-31.77**	(-2.2)	**-28.17**	(3.1)	3.60	(3.6)	**-30.49**	(1.9)
	Turkey	80.11	(1.22)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	5.55	(0.37)	20.05	(4.3)	21.40	(4.2)	20.67	(3.8)	**-14.51**	(-4.3)	**-15.85**	(4.2)	-1.35	(4.0)	**-15.12**	(3.7)
	United States	5.51	(0.44)	34.65	(3.1)	32.21	(3.3)	33.84	(2.8)	**-29.14**	(-3.1)	**-26.71**	(3.3)	2.44	(3.2)	**-28.33**	(2.7)
	OECD average	17.48	(0.12)	29.67	(0.7)	27.34	(0.7)	28.21	(0.5)	**-13.68**	(0.7)	**-11.09**	(0.8)	**2.26**	(1.0)	**-11.96**	(0.5)
Partners	Albania	39.06	(1.56)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	39.28	(1.45)	54.14	(5.1)	42.87	(5.6)	49.40	(3.7)	**-14.86**	(-5.0)	-3.59	(-5.5)	11.27	(7.7)	**-10.12**	(3.6)
	Azerbaijan	7.57	(0.61)	10.52	(3.4)	8.29	(5.0)	9.98	(2.5)	-2.95	(-3.5)	-0.72	(-4.9)	2.23	(6.9)	-2.41	(2.6)
	Brazil	54.76	(1.04)	58.80	(9.6)	54.84	(16.6)	57.41	(9.4)	-4.04	(-9.7)	-0.09	(-16.7)	3.95	(17.1)	-2.65	(9.6)
	Bulgaria	10.47	(1.09)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	51.82	(1.45)	c	c	c	c	70.14	(10.1)	c	c	c	c	c	c	-18.32	(10.1)
	Croatia	13.24	(0.67)	24.83	(2.6)	27.91	(3.6)	25.85	(2.2)	**-11.59**	(-2.5)	**-14.67**	(-3.6)	-3.08	(4.1)	**-12.61**	(2.2)
	Dubai (UAE)	34.54	(1.19)	15.66	(1.0)	7.02	(0.6)	10.22	(0.5)	**18.88**	(-1.6)	**27.52**	(-1.3)	**8.64**	(1.3)	**24.32**	(1.3)
	Hong Kong-China	37.96	(1.66)	61.20	(1.6)	69.05	(1.8)	64.28	(1.3)	**-23.24**	(-2.1)	**-31.09**	(-2.5)	**-7.85**	(2.2)	**-26.32**	(2.0)
	Indonesia	64.48	(2.02)	m	m	c	c	c	c	m	m	c	c	m	m	c	c
	Jordan	32.02	(1.02)	25.32	(2.1)	18.60	(3.9)	23.75	(1.9)	**6.70**	(-2.2)	**13.42**	(-3.9)	6.72	(4.2)	**8.27**	(2.0)
	Kazakhstan	2.40	(0.31)	3.80	(1.2)	9.86	(3.1)	6.09	(1.6)	-1.40	(-1.2)	**-7.46**	(-3.1)	**-6.06**	(3.1)	**-3.69**	(1.6)
	Kyrgyzstan	2.37	(0.26)	7.85	(4.4)	3.11	(3.6)	5.85	(3.4)	-5.48	(-4.4)	-0.74	(-3.6)	4.74	(4.5)	-3.48	(3.4)
	Latvia	3.80	(0.47)	1.35	(0.8)	c	c	1.24	(0.7)	**2.45**	(-0.9)	c	c	c	c	**2.57**	(0.9)
	Liechtenstein	20.04	(2.46)	43.84	(7.4)	45.02	(6.4)	44.49	(4.7)	**-23.80**	(-7.8)	**-24.99**	(-6.8)	-1.18	(10.0)	**-24.46**	(5.3)
	Lithuania	2.55	(0.25)	3.33	(1.8)	c	c	3.01	(1.7)	-0.79	(-1.8)	c	c	c	c	-0.47	(1.6)
	Macao-China	59.82	(1.15)	75.19	(0.8)	64.65	(1.6)	72.87	(0.8)	**-15.37**	(-1.4)	**-4.83**	(-2.2)	**10.55**	(1.7)	**-13.06**	(1.4)
	Montenegro	12.63	(0.91)	9.08	(4.6)	11.71	(4.1)	10.68	(3.2)	3.56	(-4.8)	0.93	(-3.6)	-2.63	(5.9)	1.95	(2.9)
	Panama	33.35	(2.20)	32.19	(7.5)	39.14	(6.8)	36.74	(5.4)	1.16	(-8.4)	-5.79	(-7.0)	-6.95	(10.1)	-3.39	(6.0)
	Peru	43.41	(1.60)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	23.94	(0.55)	24.69	(1.0)	10.72	(0.7)	16.77	(0.6)	-0.75	(-1.2)	**13.21**	(-0.9)	**13.96**	(1.3)	**7.17**	(0.8)
	Romania	11.88	(0.71)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	2.65	(0.34)	7.86	(4.9)	5.79	(2.1)	7.01	(3.4)	-5.21	(-5.0)	-3.14	(-2.1)	2.07	(4.5)	-4.37	(3.4)
	Serbia	11.40	(0.70)	11.21	(3.4)	8.72	(1.7)	10.08	(2.2)	0.20	(-3.4)	2.68	(-1.8)	2.49	(3.5)	1.33	(2.3)
	Shanghai-China	37.68	(1.40)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	22.86	(0.61)	26.26	(2.6)	12.91	(1.4)	17.36	(1.3)	-3.40	(-2.6)	9.95	(-1.6)	13.35	(2.9)	5.50	(1.5)
	Chinese Taipei	26.39	(0.90)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	68.11	(1.36)	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	23.32	(0.80)	29.27	(7.4)	18.01	(5.4)	24.10	(4.9)	-5.95	(-7.5)	5.31	(-5.5)	11.26	(8.8)	-0.78	(5.0)
	Tunisia	66.85	(1.69)	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	59.88	(1.02)	c	c	c	c	c	c	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B2.3a Standard deviation in reading performance. by immigrant status

Results based on students' self-reports

		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)	
		S.D.	S.E.	S.D.	S.E.	S.D.	S.E.	S.D.	S.E.
OECD	Australia	96.2	(1.1)	98.0	(4.0)	104.2	(3.8)	101.2	(3.4)
	Austria	96.9	(2.1)	89.4	(3.5)	100.2	(6.6)	95.0	(3.0)
	Belgium	95.7	(1.5)	102.3	(4.4)	103.6	(4.6)	102.9	(3.5)
	Canada	87.9	(0.9)	88.6	(2.2)	99.4	(2.6)	93.5	(1.8)
	Chile	81.8	(1.7)	c	c	c	c	c	c
	Czech Republic	91.6	(1.6)	114.2	(9.2)	102.7	(9.1)	110.5	(7.3)
	Denmark	80.9	(1.3)	83.2	(2.5)	83.5	(3.7)	84.0	(2.2)
	Estonia	82.1	(1.6)	82.6	(5.9)	90.8	(10.0)	83.2	(5.3)
	Finland	85.0	(1.0)	88.3	(8.3)	115.4	(10.5)	106.2	(7.8)
	France	102.3	(3.1)	105.1	(4.4)	114.9	(8.9)	107.9	(4.6)
	Germany	91.3	(2.0)	94.2	(3.9)	91.1	(4.8)	93.2	(3.3)
	Greece	92.6	(2.4)	98.3	(5.8)	95.4	(8.6)	97.7	(6.6)
	Hungary	89.6	(2.2)	80.4	(9.9)	77.2	(6.1)	80.0	(5.5)
	Iceland	94.0	(1.2)	c	c	102.6	(11.7)	103.3	(10.3)
	Ireland	92.1	(2.2)	88.3	(8.3)	100.3	(5.1)	99.5	(4.6)
	Israel	108.7	(2.4)	101.1	(3.6)	108.0	(4.7)	104.3	(3.3)
	Italy	93.6	(1.5)	102.4	(6.8)	93.5	(4.1)	96.9	(3.4)
	Japan	99.6	(2.9)	c	c	c	c	c	c
	Korea	78.1	(2.1)	c	c	m	m	c	c
	Luxembourg	92.9	(1.3)	99.8	(2.3)	121.2	(3.1)	109.0	(1.8)
	Mexico	81.9	(1.0)	84.3	(8.8)	88.9	(10.1)	87.5	(7.5)
	Netherlands	87.7	(1.9)	76.9	(3.5)	89.9	(7.3)	80.5	(3.5)
	New Zealand	99.4	(1.9)	105.7	(4.6)	106.2	(2.8)	106.5	(2.5)
	Norway	89.3	(1.2)	92.5	(7.6)	92.0	(6.6)	92.5	(5.4)
	Poland	88.2	(1.2)	m	m	c	c	c	c
	Portugal	85.8	(1.6)	82.4	(6.3)	82.0	(4.9)	82.7	(4.1)
	Slovak Republic	89.4	(1.9)	c	c	c	c	c	c
	Slovenia	89.2	(0.9)	85.7	(3.2)	85.7	(6.2)	86.6	(2.6)
	Spain	85.0	(1.2)	85.1	(5.5)	86.0	(2.5)	86.6	(2.4)
	Sweden	93.7	(1.5)	97.5	(4.6)	106.1	(6.8)	101.7	(4.3)
	Switzerland	88.2	(1.4)	94.6	(2.1)	104.2	(4.5)	98.4	(2.1)
	Turkey	81.4	(1.7)	c	c	c	c	c	c
	United Kingdom	93.1	(1.1)	93.8	(4.1)	96.9	(4.5)	96.7	(3.1)
	United States	95.5	(1.7)	92.1	(3.0)	101.4	(3.7)	95.3	(2.6)
	OECD average	90.6	(0.3)	92.9	(1.1)	98.0	(1.2)	95.8	(0.9)
Partners	Albania	97.0	(1.8)	c	c	c	c	c	c
	Argentina	106.8	(3.1)	99.1	(7.4)	121.0	(17.2)	108.2	(9.7)
	Azerbaijan	75.3	(1.9)	71.7	(6.8)	61.8	(8.9)	69.8	(5.6)
	Brazil	92.4	(1.4)	77.1	(13.8)	69.9	(12.7)	74.8	(9.5)
	Bulgaria	110.9	(2.5)	c	c	c	c	c	c
	Colombia	85.7	(1.9)	c	c	c	c	73.8	(22.4)
	Croatia	86.6	(1.6)	86.4	(3.6)	88.6	(5.3)	87.3	(3.1)
	Dubai (UAE)	92.0	(1.7)	96.6	(2.2)	96.6	(1.5)	98.1	(1.2)
	Hong Kong-China	83.5	(1.9)	81.0	(2.0)	84.7	(3.1)	83.9	(2.1)
	Indonesia	66.1	(2.0)	m	m	c	c	c	c
	Jordan	87.2	(1.8)	90.7	(4.7)	93.6	(5.8)	91.4	(3.6)
	Kazakhstan	89.8	(1.6)	97.0	(5.8)	90.4	(5.0)	97.5	(5.0)
	Kyrgyzstan	96.5	(2.1)	126.0	(10.8)	92.2	(15.1)	113.4	(9.3)
	Latvia	79.4	(1.5)	83.8	(4.8)	c	c	84.3	(4.5)
	Liechtenstein	82.2	(4.1)	77.5	(7.9)	82.8	(9.0)	80.3	(5.9)
	Lithuania	85.8	(1.6)	83.5	(7.5)	c	c	85.2	(7.3)
	Macao-China	78.0	(1.4)	74.5	(1.1)	74.7	(1.9)	74.5	(0.9)
	Montenegro	92.4	(1.2)	90.6	(7.2)	89.0	(7.1)	90.6	(4.9)
	Panama	94.5	(3.2)	116.7	(9.9)	137.4	(13.9)	134.7	(10.9)
	Peru	97.2	(2.4)	c	c	c	c	c	c
	Qatar	94.7	(1.0)	104.0	(1.6)	109.7	(1.7)	112.0	(1.2)
	Romania	89.4	(2.3)	c	c	c	c	c	c
	Russian Federation	88.2	(1.8)	89.7	(7.1)	90.1	(4.9)	90.0	(4.6)
	Serbia	82.5	(1.5)	84.3	(3.7)	76.6	(4.7)	81.4	(2.8)
	Shanghai-China	79.3	(1.6)	c	c	c	c	c	c
	Singapore	96.2	(1.0)	98.9	(5.3)	98.4	(3.6)	99.1	(3.5)
	Chinese Taipei	85.1	(1.9)	c	c	c	c	c	c
	Thailand	71.8	(1.9)	m	m	m	m	m	m
	Trinidad and Tobago	109.8	(1.4)	126.9	(11.4)	144.4	(14.9)	134.9	(8.8)
	Tunisia	84.9	(1.8)	c	c	c	c	c	c
	Uruguay	98.1	(1.7)	c	c	c	c	c	c

Source: PISA 2009 Database.
Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Standard deviation in mathematics performance. by immigrant status

Table B2.3b *Results based on students' self-reports*

		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)	
		S.D.	S.E.	S.D.	S.E.	S.D.	S.E.	S.D.	S.E.
OECD	Australia	90.9	(0.9)	97.1	(4.4)	100.6	(3.6)	99.0	(3.7)
	Austria	93.8	(2.1)	85.5	(3.7)	91.1	(6.9)	87.7	(3.4)
	Belgium	99.3	(1.6)	96.1	(3.7)	98.1	(4.9)	97.0	(3.4)
	Canada	85.7	(1.0)	85.9	(2.0)	95.7	(2.9)	90.4	(1.9)
	Chile	79.4	(1.7)	c	c	c	c	c	c
	Czech Republic	92.5	(1.7)	107.3	(9.0)	94.9	(12.8)	104.3	(8.2)
	Denmark	84.3	(1.4)	84.2	(2.4)	85.6	(4.4)	85.2	(2.3)
	Estonia	79.8	(1.3)	84.3	(7.7)	93.5	(11.4)	85.0	(7.1)
	Finland	81.5	(1.1)	82.3	(8.1)	108.9	(13.2)	98.1	(9.3)
	France	97.8	(2.3)	94.6	(4.6)	107.8	(8.6)	98.0	(4.8)
	Germany	95.6	(1.8)	95.9	(3.5)	91.9	(4.3)	94.6	(2.9)
	Greece	87.7	(1.9)	89.8	(6.5)	83.9	(8.7)	87.7	(6.6)
	Hungary	91.8	(2.8)	82.5	(12.0)	85.2	(9.1)	84.3	(7.8)
	Iceland	89.1	(1.2)	c	c	98.9	(12.6)	98.4	(11.0)
	Ireland	83.8	(1.6)	79.0	(10.3)	87.7	(4.1)	86.8	(4.0)
	Israel	102.4	(2.2)	97.2	(4.4)	101.5	(5.3)	99.0	(3.9)
	Italy	91.7	(1.8)	93.2	(6.0)	86.6	(3.6)	89.1	(3.0)
	Japan	93.3	(2.2)	c	c	c	c	c	c
	Korea	87.8	(2.5)	c	c	m	m	c	c
	Luxembourg	89.8	(1.4)	91.8	(2.6)	110.0	(2.7)	99.6	(1.9)
	Mexico	76.3	(1.0)	88.2	(9.0)	77.2	(8.4)	81.8	(6.3)
	Netherlands	87.2	(1.7)	78.4	(4.0)	91.6	(6.2)	82.1	(3.6)
	New Zealand	92.7	(2.1)	101.7	(3.9)	101.0	(2.9)	102.2	(2.3)
	Norway	83.4	(1.2)	94.0	(6.5)	95.8	(6.1)	95.2	(4.7)
	Poland	87.7	(1.3)	m	m	c	c	c	c
	Portugal	90.7	(1.5)	96.6	(6.6)	81.4	(4.8)	89.4	(3.7)
	Slovak Republic	95.1	(2.3)	c	c	c	c	c	c
	Slovenia	94.3	(0.9)	85.0	(3.9)	87.5	(6.1)	87.0	(3.3)
	Spain	88.2	(1.1)	94.6	(7.0)	87.0	(2.6)	88.4	(2.4)
	Sweden	89.4	(1.3)	89.1	(3.5)	102.9	(8.1)	94.1	(3.8)
	Switzerland	92.6	(1.5)	98.4	(2.8)	108.9	(4.8)	102.6	(2.6)
	Turkey	93.1	(3.0)	c	c	c	c	c	c
	United Kingdom	85.1	(1.3)	83.7	(4.1)	87.4	(3.7)	86.3	(3.1)
	United States	90.1	(1.8)	85.6	(2.9)	90.4	(3.7)	87.4	(2.7)
	OECD average	89.5	(0.3)	90.5	(1.1)	94.0	(1.3)	92.2	(0.9)
Partners	Albania	88.6	(2.1)	c	c	c	c	c	c
	Argentina	92.6	(2.7)	87.2	(7.5)	103.3	(17.1)	93.8	(9.3)
	Azerbaijan	64.4	(2.3)	52.9	(4.2)	51.8	(13.1)	52.9	(4.8)
	Brazil	80.3	(1.7)	58.8	(10.4)	43.4	(9.7)	54.9	(8.4)
	Bulgaria	97.7	(2.9)	c	c	c	c	c	c
	Colombia	74.6	(1.7)	c	c	c	c	57.0	(11.0)
	Croatia	88.1	(1.8)	86.7	(4.0)	86.1	(5.1)	86.5	(3.4)
	Dubai (UAE)	76.6	(1.5)	90.3	(2.0)	91.3	(1.4)	92.2	(1.0)
	Hong Kong-China	94.2	(2.0)	92.1	(2.5)	94.5	(3.1)	95.2	(2.4)
	Indonesia	69.9	(2.3)	m	m	c	c	c	c
	Jordan	80.4	(2.3)	85.8	(5.6)	83.8	(5.1)	85.4	(4.6)
	Kazakhstan	80.7	(1.7)	99.7	(11.2)	83.3	(6.8)	99.1	(10.0)
	Kyrgyzstan	79.6	(2.1)	92.3	(8.5)	83.3	(12.0)	88.4	(7.4)
	Latvia	78.5	(1.4)	86.6	(5.3)	c	c	86.6	(5.2)
	Liechtenstein	83.0	(4.2)	76.1	(8.5)	109.0	(14.0)	95.2	(9.4)
	Lithuania	87.3	(1.7)	83.1	(8.2)	c	c	84.5	(7.5)
	Macao-China	84.5	(1.9)	84.7	(1.1)	85.0	(2.6)	84.8	(1.1)
	Montenegro	84.0	(1.6)	85.7	(7.2)	86.5	(8.1)	86.5	(5.6)
	Panama	77.8	(2.9)	105.6	(9.5)	118.7	(14.3)	118.1	(13.3)
	Peru	89.4	(2.5)	c	c	c	c	c	c
	Qatar	76.5	(1.1)	87.1	(1.8)	101.5	(1.6)	100.5	(1.1)
	Romania	79.1	(2.2)	c	c	c	c	c	c
	Russian Federation	84.4	(2.2)	78.3	(3.9)	84.6	(4.4)	81.2	(2.8)
	Serbia	89.5	(1.7)	98.0	(7.1)	84.2	(6.3)	92.7	(5.8)
	Shanghai-China	102.5	(2.0)	c	c	c	c	c	c
	Singapore	103.6	(1.2)	98.1	(4.3)	105.1	(3.8)	102.8	(3.2)
	Chinese Taipei	103.9	(2.3)	c	c	c	c	c	c
	Thailand	79.1	(2.5)	m	m	m	m	m	m
	Trinidad and Tobago	97.8	(1.2)	113.0	(11.4)	116.7	(8.4)	115.3	(7.1)
	Tunisia	77.2	(2.3)	c	c	c	c	c	c
	Uruguay	90.7	(1.6)	c	c	c	c	c	c

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B2.3c Standard deviation in science performance, by immigrant status

Results based on students' self-reports

		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)	
		S.D.	S.E.	S.D.	S.E.	S.D.	S.E.	S.D.	S.E.
OECD	Australia	98.0	(1.1)	103.5	(5.5)	109.8	(4.4)	106.7	(4.6)
	Austria	96.8	(2.2)	89.9	(3.6)	105.4	(6.0)	95.9	(3.0)
	Belgium	98.5	(1.9)	101.9	(4.4)	104.0	(5.3)	102.9	(3.8)
	Canada	86.8	(1.0)	90.2	(2.3)	99.3	(2.6)	94.3	(1.8)
	Chile	80.7	(1.4)	c	c	c	c	c	c
	Czech Republic	96.4	(1.9)	122.8	(11.1)	98.5	(11.1)	116.3	(9.6)
	Denmark	88.2	(1.4)	88.5	(2.9)	89.4	(5.0)	89.1	(2.7)
	Estonia	82.6	(1.4)	83.0	(6.4)	87.8	(12.0)	83.3	(6.0)
	Finland	87.8	(1.2)	99.3	(11.3)	112.2	(9.4)	107.5	(7.9)
	France	99.7	(3.0)	98.5	(4.7)	103.8	(8.3)	99.9	(4.6)
	Germany	95.2	(1.9)	96.5	(3.5)	95.3	(4.0)	96.1	(2.7)
	Greece	89.5	(1.8)	89.8	(5.2)	92.9	(12.6)	92.9	(9.4)
	Hungary	86.1	(2.9)	79.0	(8.2)	81.4	(8.6)	81.0	(6.3)
	Iceland	93.7	(1.2)	c	c	101.5	(11.1)	102.9	(9.6)
	Ireland	94.9	(2.1)	89.9	(10.3)	101.1	(5.0)	100.1	(4.8)
	Israel	104.0	(2.1)	103.0	(4.6)	110.9	(5.3)	106.8	(4.3)
	Italy	94.3	(1.6)	97.0	(4.9)	101.0	(4.2)	101.5	(3.6)
	Japan	98.8	(2.5)	c	c	c	c	c	c
	Korea	80.8	(2.2)	c	c	m	m	c	c
	Luxembourg	92.6	(1.5)	98.6	(2.3)	123.6	(3.3)	109.4	(1.9)
	Mexico	75.8	(0.9)	85.1	(7.2)	73.4	(7.3)	78.9	(5.3)
	Netherlands	92.7	(1.9)	88.9	(5.8)	97.9	(8.0)	91.4	(5.1)
	New Zealand	103.0	(2.6)	112.5	(5.0)	110.2	(2.8)	111.7	(2.9)
	Norway	86.9	(1.1)	97.6	(6.9)	92.0	(5.4)	95.1	(4.3)
	Poland	86.1	(1.2)	m	m	c	c	c	c
	Portugal	82.5	(1.4)	83.6	(6.3)	76.8	(4.8)	80.3	(3.9)
	Slovak Republic	94.4	(2.3)	c	c	c	c	c	c
	Slovenia	92.0	(1.0)	89.0	(3.9)	87.1	(7.4)	89.1	(3.4)
	Spain	85.0	(1.1)	81.8	(5.4)	85.4	(2.5)	85.8	(2.6)
	Sweden	94.7	(1.4)	97.5	(4.5)	107.5	(8.6)	101.8	(4.5)
	Switzerland	89.1	(1.5)	94.0	(2.3)	107.5	(3.9)	99.1	(2.1)
	Turkey	80.1	(2.0)	c	c	c	c	c	c
	United Kingdom	96.5	(1.3)	95.9	(5.3)	98.8	(4.2)	98.0	(3.9)
	United States	96.5	(1.9)	91.3	(2.8)	99.5	(3.6)	94.1	(2.3)
	OECD average	91.2	(0.3)	94.4	(1.1)	98.4	(1.3)	96.8	(1.0)
Partners	Albania	86.6	(1.6)	c	c	c	c	c	c
	Argentina	100.8	(3.2)	94.7	(9.0)	108.7	(21.4)	100.5	(12.2)
	Azerbaijan	74.1	(1.6)	68.5	(6.2)	51.1	(7.6)	65.1	(5.3)
	Brazil	83.2	(1.3)	56.3	(10.1)	66.1	(12.8)	61.2	(6.9)
	Bulgaria	103.4	(2.5)	c	c	c	c	c	c
	Colombia	80.3	(1.8)	c	c	c	c	61.8	(9.8)
	Croatia	84.1	(1.7)	84.6	(4.2)	84.9	(5.3)	84.7	(3.4)
	Dubai (UAE)	86.2	(1.7)	95.5	(2.4)	97.9	(1.6)	98.9	(1.3)
	Hong Kong-China	87.1	(2.2)	83.5	(2.5)	89.0	(3.3)	87.0	(2.4)
	Indonesia	68.7	(2.1)	m	m	c	c	c	c
	Jordan	86.0	(1.9)	88.4	(4.9)	92.9	(5.7)	89.5	(3.8)
	Kazakhstan	85.1	(1.7)	94.0	(6.0)	87.2	(5.4)	96.0	(5.3)
	Kyrgyzstan	88.7	(2.1)	111.2	(13.4)	98.3	(12.2)	106.4	(10.0)
	Latvia	77.3	(1.7)	81.3	(5.2)	c	c	82.7	(5.4)
	Liechtenstein	84.9	(3.8)	81.0	(6.7)	87.3	(8.9)	84.8	(5.9)
	Lithuania	84.4	(2.1)	84.0	(8.5)	c	c	85.2	(8.1)
	Macao-China	76.4	(1.5)	75.0	(1.1)	76.2	(2.2)	75.3	(1.0)
	Montenegro	86.8	(1.4)	87.1	(7.0)	83.1	(5.6)	84.7	(4.3)
	Panama	85.9	(2.6)	110.7	(12.0)	116.6	(10.1)	117.8	(8.1)
	Peru	88.7	(2.1)	c	c	c	c	c	c
	Qatar	81.5	(1.1)	93.0	(1.7)	104.2	(1.7)	104.4	(1.1)
	Romania	78.7	(1.9)	c	c	c	c	c	c
	Russian Federation	89.3	(1.9)	85.3	(4.4)	88.5	(5.0)	86.7	(3.1)
	Serbia	82.6	(1.6)	87.1	(3.9)	79.1	(4.2)	84.0	(3.2)
	Shanghai-China	81.1	(1.6)	c	c	c	c	c	c
	Singapore	103.0	(1.1)	103.6	(5.0)	107.6	(3.3)	106.3	(3.0)
	Chinese Taipei	85.6	(1.6)	c	c	c	c	c	c
	Thailand	79.5	(2.0)	m	m	m	m	m	m
	Trinidad and Tobago	106.2	(1.1)	129.8	(12.5)	135.3	(13.9)	132.3	(8.1)
	Tunisia	81.3	(1.9)	c	c	c	c	c	c
	Uruguay	95.6	(1.6)	c	c	c	c	c	c

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Interquartile range of performance, by immigrant status

Table B2.4 *Results based on students' self-reports*

		Performance in reading												Interquartile range of performance: Performance difference between 75th and 25th percentile			
		Non-immigrant students				Second-generation students				First-generation students				Immigrant students (first- and second-generation)							
		25th percentile		75th percentile		25th percentile		75th percentile		25th percentile		75th percentile		25th percentile		75th percentile		Non-immigrant students	Second-generation students	First-generation students	Immigrant students (first- and second-generation)
		Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score dif.	Score dif.	Score dif.	Score dif.
OECD	Australia	452	(3.0)	583	(2.1)	465	(6.6)	599	(8.8)	450	(7.2)	589	(8.0)	458	(5.5)	594	(7.2)	131	134	140	137
	Austria	414	(4.5)	554	(3.5)	358	(10.2)	491	(7.0)	312	(15.0)	451	(19.0)	343	(7.4)	482	(8.3)	140	133	139	139
	Belgium	454	(3.1)	590	(2.2)	384	(8.6)	529	(10.2)	375	(12.7)	521	(10.5)	379	(7.0)	524	(9.1)	137	145	146	144
	Canada	469	(2.0)	590	(1.8)	465	(5.3)	583	(4.5)	448	(6.0)	594	(5.8)	458	(4.6)	588	(4.4)	121	118	146	130
	Chile	396	(3.9)	508	(3.3)	c	c	c	c	c	c	c	c	c	c	c	c	111	c	c	c
	Czech Republic	415	(4.4)	545	(3.4)	352	(40.8)	539	(24.9)	397	(33.1)	555	(18.0)	370	(29.7)	548	(15.2)	130	187	158	178
	Denmark	448	(3.1)	559	(2.6)	391	(4.6)	504	(9.1)	365	(10.8)	479	(10.7)	382	(4.9)	496	(6.5)	111	112	115	114
	Estonia	450	(3.3)	562	(2.6)	416	(10.6)	530	(7.6)	401	(36.0)	535	(21.9)	416	(10.0)	531	(7.7)	112	114	134	115
	Finland	484	(2.8)	598	(2.3)	435	(21.9)	561	(40.0)	363	(22.6)	540	(25.7)	390	(21.0)	546	(23.0)	115	126	176	156
	France	442	(5.2)	578	(4.0)	378	(12.2)	527	(10.6)	345	(28.9)	503	(17.9)	372	(11.2)	521	(10.2)	137	148	158	149
	Germany	451	(4.0)	578	(3.3)	396	(8.3)	527	(8.5)	385	(8.1)	519	(9.6)	392	(6.6)	524	(7.3)	127	131	134	132
	Greece	428	(6.5)	554	(3.4)	390	(14.8)	520	(15.2)	359	(19.0)	485	(12.3)	368	(14.8)	496	(11.8)	126	130	126	128
	Hungary	435	(4.3)	560	(3.6)	477	(18.9)	585	(28.8)	434	(19.7)	552	(20.1)	453	(21.4)	562	(15.1)	124	108	118	109
	Iceland	443	(2.3)	569	(2.2)	c	c	c	c	349	(24.1)	476	(20.1)	353	(21.2)	491	(24.5)	126	c	127	139
	Ireland	444	(3.8)	566	(3.1)	448	(25.0)	561	(34.1)	392	(11.4)	544	(12.2)	400	(10.7)	547	(9.2)	122	113	152	147
	Israel	409	(4.6)	558	(3.1)	419	(7.9)	559	(9.4)	387	(14.7)	541	(10.4)	409	(7.3)	554	(8.8)	149	140	155	144
	Italy	429	(2.2)	559	(1.7)	378	(14.3)	521	(8.4)	346	(8.5)	473	(7.7)	353	(7.0)	488	(6.9)	130	144	127	136
	Japan	460	(4.8)	591	(3.0)	c	c	c	c	c	c	c	c	c	c	c	c	131	c	c	c
	Korea	491	(3.9)	596	(3.3)	c	c	c	c	m	m	m	m	c	c	c	c	104	c	m	c
	Luxembourg	435	(3.3)	562	(2.1)	371	(5.2)	512	(5.9)	360	(10.9)	536	(6.3)	367	(4.4)	519	(3.3)	126	140	177	152
	Mexico	375	(2.2)	487	(1.9)	286	(16.0)	400	(19.8)	275	(12.3)	374	(11.8)	280	(10.2)	381	(10.3)	112	114	99	102
	Netherlands	449	(7.4)	581	(5.4)	417	(9.5)	518	(10.5)	398	(14.3)	531	(21.0)	414	(9.3)	521	(9.8)	132	101	133	107
	New Zealand	460	(3.3)	597	(3.0)	418	(14.2)	581	(9.0)	446	(7.0)	601	(6.5)	438	(7.0)	594	(6.0)	136	162	154	156
	Norway	449	(3.5)	571	(3.0)	407	(12.4)	524	(13.7)	382	(13.8)	510	(11.6)	394	(8.8)	517	(8.8)	122	117	128	124
	Poland	444	(3.2)	565	(3.1)	m	m	m	m	c	c	c	c	c	c	c	c	122	m	c	c
	Portugal	436	(4.6)	553	(3.2)	425	(12.5)	529	(15.5)	391	(15.1)	516	(14.7)	408	(7.6)	523	(10.6)	118	105	125	115
	Slovak Republic	417	(3.8)	543	(2.8)	c	c	c	c	c	c	c	c	c	c	c	c	125	c	c	c
	Slovenia	427	(2.2)	554	(1.9)	385	(10.4)	504	(7.3)	354	(14.9)	477	(18.8)	379	(9.1)	499	(6.6)	128	119	123	121
	Spain	435	(2.8)	547	(2.1)	406	(18.3)	516	(17.9)	368	(7.0)	483	(4.4)	372	(7.9)	487	(3.9)	113	109	115	115
	Sweden	447	(3.7)	571	(3.3)	388	(11.9)	522	(11.1)	348	(15.4)	489	(20.0)	372	(10.3)	512	(11.1)	124	133	142	140
	Switzerland	455	(2.9)	576	(2.8)	403	(6.0)	539	(6.7)	379	(9.4)	531	(13.7)	395	(5.1)	537	(6.6)	121	136	153	141
	Turkey	411	(3.8)	523	(4.5)	c	c	c	c	c	c	c	c	c	c	c	c	112	c	c	c
	United Kingdom	436	(2.6)	565	(3.2)	426	(16.1)	556	(10.9)	399	(13.2)	521	(9.3)	410	(8.7)	544	(7.8)	129	130	122	133
	United States	440	(4.2)	574	(4.4)	423	(6.4)	542	(8.9)	411	(9.1)	554	(12.0)	419	(6.0)	546	(9.0)	135	119	143	127
	OECD average	439	(0.7)	564	(0.5)	404	(2.9)	533	(3.1)	379	(3.2)	517	(2.8)	391	(2.2)	524	(2.0)	125	129	138	133
Partners	Albania	323	(4.9)	459	(4.8)	c	c	c	c	c	c	c	c	c	c	c	c	136	c	c	c
	Argentina	333	(5.8)	475	(6.3)	299	(19.2)	441	(28.2)	293	(53.6)	441	(29.1)	299	(20.8)	440	(25.2)	143	142	148	142
	Azerbaijan	312	(4.3)	414	(4.0)	319	(16.5)	408	(19.2)	343	(22.7)	428	(22.8)	325	(10.5)	414	(14.2)	101	89	85	89
	Brazil	352	(2.6)	477	(3.9)	272	(31.2)	357	(27.8)	264	(40.4)	365	(41.6)	270	(23.8)	360	(20.2)	125	85	101	90
	Bulgaria	357	(8.2)	514	(6.2)	c	c	c	c	c	c	c	c	c	c	c	c	157	c	c	c
	Colombia	358	(4.4)	474	(3.8)	c	c	c	c	c	c	c	c	270	(65.5)	364	(26.5)	116	c	c	94
	Croatia	419	(4.5)	541	(3.2)	408	(8.8)	529	(8.3)	392	(14.7)	511	(13.7)	403	(7.9)	524	(7.9)	121	121	118	122
	Dubai (UAE)	332	(2.9)	461	(4.0)	403	(4.7)	536	(4.4)	440	(3.5)	574	(3.4)	426	(2.6)	560	(2.4)	129	133	134	134
	Hong Kong-China	484	(3.8)	594	(3.1)	493	(4.5)	599	(4.0)	459	(7.9)	570	(5.4)	480	(4.7)	589	(3.8)	110	105	111	109
	Indonesia	358	(4.0)	447	(4.7)	m	m	m	m	c	c	c	c	c	c	c	c	89	m	c	c
	Jordan	354	(3.9)	467	(3.4)	364	(9.3)	484	(7.5)	356	(16.3)	472	(10.9)	362	(8.4)	481	(7.0)	113	119	117	119
	Kazakhstan	328	(3.2)	451	(4.0)	343	(11.4)	490	(15.0)	304	(9.1)	424	(11.0)	325	(10.2)	469	(16.1)	123	148	120	143
	Kyrgyzstan	252	(3.3)	378	(4.1)	256	(32.1)	457	(31.7)	281	(34.8)	407	(32.4)	270	(26.5)	432	(23.8)	126	201	126	161
	Latvia	430	(3.8)	541	(3.4)	410	(15.9)	534	(11.5)	c	c	c	c	411	(14.3)	535	(9.7)	111	123	c	124
	Liechtenstein	455	(7.5)	568	(7.9)	434	(23.0)	549	(16.5)	406	(20.5)	537	(18.5)	416	(20.7)	541	(9.0)	114	115	132	125
	Lithuania	413	(3.4)	532	(3.0)	389	(16.3)	517	(17.4)	c	c	c	c	388	(14.8)	516	(16.6)	119	127	c	129
	Macao-China	431	(3.4)	538	(2.7)	440	(2.2)	541	(1.9)	439	(3.3)	544	(4.1)	440	(1.8)	541	(1.6)	108	101	104	101
	Montenegro	346	(2.4)	474	(2.3)	373	(21.5)	500	(18.0)	347	(14.9)	462	(11.6)	354	(10.0)	475	(10.2)	128	126	115	122
	Panama	319	(5.9)	444	(7.1)	313	(35.2)	491	(37.1)	214	(24.4)	415	(66.0)	236	(40.0)	453	(42.2)	125	178	201	217
	Peru	308	(4.2)	441	(5.1)	c	c	c	c	c	c	c	c	c	c	c	c	133	c	c	c
	Qatar	265	(1.7)	392	(2.3)	321	(3.7)	464	(3.4)	383	(3.7)	535	(3.6)	351	(2.7)	507	(2.0)	127	143	153	156
	Romania	366	(5.7)	488	(4.7)	c	c	c	c	c	c	c	c	c	c	c	c	122	c	c	c
	Russian Federation	406	(4.0)	522	(3.5)	377	(15.5)	494	(10.1)	387	(10.4)	504	(11.1)	382	(10.5)	498	(7.7)	117	116	117	115
	Serbia	388	(3.2)	500	(2.6)	407	(10.1)	521	(9.0)	391	(12.4)	500	(9.8)	401	(7.6)	512	(7.4)	112	113	109	110
	Shanghai-China	505	(3.4)	613	(2.8)	c	c	c	c	c	c	c	c	c	c	c	c	108	c	c	c
	Singapore	461	(2.2)	596	(2.2)	479	(13.7)	619	(13.9)	452	(6.6)	592	(9.1)	460	(6.6)	602	(6.1)	135	140	141	141
	Chinese Taipei	441	(3.0)	556	(2.9)	c	c	c	c	c	c	c	c	c	c	c	c	115	c	c	c
	Thailand	373	(3.2)	469	(2.6)	m	m	m	m	m	m	m	m	m	m	m	m	96	m	m	m
	Trinidad and Tobago	348	(2.5)	500	(2.2)	316	(36.7)	507	(46.5)	313	(28.5)	556	(24.8)	319	(24.5)	533	(23.4)	151	191	243	214
	Tunisia	349	(3.4)	463	(3.4)	c	c	c	c	c	c	c	c	c	c	c	c	114	c	c	c
	Uruguay	361	(3.3)	495	(3.1)	c	c	c	c	c	c	c	c	c	c	c	c	134	c	c	c

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B2.5 Standard deviation in socio-economic background, by immigrant status

Results based on students' self-reports

		Non-immigrant students		Second-generation students		First-generation students		Immigrant students (first- and second-generation)	
		S.D.	S.E.	S.D.	S.E.	S.D.	S.E.	S.D.	S.E.
OECD	Australia	0.73	(0.00)	0.82	(0.02)	0.80	(0.02)	0.81	(0.02)
	Austria	0.77	(0.01)	0.77	(0.03)	1.22	(0.09)	0.94	(0.05)
	Belgium	0.88	(0.01)	1.04	(0.04)	1.10	(0.05)	1.07	(0.04)
	Canada	0.80	(0.01)	0.91	(0.03)	0.88	(0.03)	0.91	(0.02)
	Chile	1.14	(0.02)	c	c	c	c	c	c
	Czech Republic	0.70	(0.01)	0.84	(0.06)	0.75	(0.07)	0.82	(0.06)
	Denmark	0.83	(0.01)	0.99	(0.03)	0.97	(0.04)	0.98	(0.03)
	Estonia	0.80	(0.01)	0.80	(0.04)	0.94	(0.07)	0.81	(0.04)
	Finland	0.77	(0.01)	0.95	(0.11)	1.11	(0.11)	1.05	(0.09)
	France	0.79	(0.01)	0.93	(0.04)	1.15	(0.09)	0.98	(0.04)
	Germany	0.83	(0.01)	0.94	(0.04)	0.99	(0.06)	0.96	(0.03)
	Greece	0.99	(0.01)	0.87	(0.06)	0.79	(0.05)	0.84	(0.05)
	Hungary	0.97	(0.02)	0.92	(0.07)	0.75	(0.10)	0.85	(0.06)
	Iceland	0.88	(0.01)	c	c	0.85	(0.08)	0.87	(0.07)
	Ireland	0.84	(0.01)	0.83	(0.13)	0.89	(0.05)	0.88	(0.05)
	Israel	0.83	(0.01)	1.06	(0.06)	1.00	(0.05)	1.04	(0.05)
	Italy	1.01	(0.01)	1.12	(0.06)	0.89	(0.05)	0.95	(0.04)
	Japan	0.72	(0.01)	c	c	c	c	c	c
	Korea	0.82	(0.01)	c	c	m	m	c	c
	Luxembourg	0.84	(0.01)	1.11	(0.02)	1.31	(0.03)	1.20	(0.02)
	Mexico	1.30	(0.01)	1.10	(0.07)	1.26	(0.07)	1.20	(0.05)
	Netherlands	0.77	(0.01)	0.97	(0.04)	1.16	(0.07)	1.02	(0.03)
	New Zealand	0.77	(0.01)	0.84	(0.03)	0.79	(0.02)	0.82	(0.02)
	Norway	0.71	(0.01)	0.90	(0.06)	0.98	(0.06)	0.94	(0.04)
	Poland	0.88	(0.01)	m	m	c	c	c	c
	Portugal	1.18	(0.02)	1.19	(0.06)	0.99	(0.06)	1.09	(0.04)
	Slovak Republic	0.84	(0.01)	c	c	c	c	c	c
	Slovenia	0.87	(0.01)	0.80	(0.04)	0.89	(0.08)	0.82	(0.04)
	Spain	1.09	(0.02)	1.04	(0.06)	0.95	(0.03)	0.97	(0.03)
	Sweden	0.76	(0.01)	0.85	(0.03)	1.26	(0.10)	1.01	(0.05)
	Switzerland	0.79	(0.01)	0.91	(0.02)	1.11	(0.03)	0.99	(0.02)
	Turkey	1.22	(0.02)	c	c	c	c	c	c
	United Kingdom	0.76	(0.01)	0.92	(0.05)	0.99	(0.05)	0.96	(0.04)
	United States	0.85	(0.02)	1.01	(0.03)	1.09	(0.03)	1.03	(0.03)
	OECD average	0.87	(0.00)	0.94	(0.01)	1.00	(0.01)	0.96	(0.01)
Partners	Albania	1.04	(0.02)	c	c	c	c	c	c
	Argentina	1.20	(0.03)	0.88	(0.08)	1.14	(0.10)	1.00	(0.07)
	Azerbaijan	0.99	(0.02)	1.01	(0.09)	1.01	(0.09)	1.04	(0.08)
	Brazil	1.21	(0.01)	1.01	(0.07)	1.09	(0.17)	1.04	(0.09)
	Bulgaria	0.97	(0.02)	c	c	c	c	c	c
	Colombia	1.27	(0.02)	c	c	c	c	1.21	(0.18)
	Croatia	0.90	(0.01)	1.01	(0.04)	0.83	(0.04)	0.96	(0.04)
	Dubai (UAE)	0.97	(0.02)	0.76	(0.02)	0.62	(0.01)	0.69	(0.01)
	Hong Kong-China	1.01	(0.02)	0.86	(0.02)	0.93	(0.03)	0.90	(0.02)
	Indonesia	1.10	(0.02)	m	m	c	c	c	c
	Jordan	1.05	(0.02)	1.01	(0.04)	0.95	(0.06)	1.01	(0.04)
	Kazakhstan	0.82	(0.01)	0.84	(0.04)	0.85	(0.06)	0.85	(0.04)
	Kyrgyzstan	0.93	(0.01)	0.96	(0.10)	1.15	(0.14)	1.04	(0.08)
	Latvia	0.87	(0.01)	0.95	(0.05)	c	c	0.96	(0.05)
	Liechtenstein	0.84	(0.04)	0.97	(0.08)	1.12	(0.06)	1.05	(0.05)
	Lithuania	0.97	(0.01)	0.98	(0.06)	c	c	0.95	(0.05)
	Macao-China	0.93	(0.02)	0.79	(0.01)	0.90	(0.02)	0.81	(0.01)
	Montenegro	0.95	(0.01)	0.93	(0.06)	0.96	(0.05)	0.96	(0.03)
	Panama	1.35	(0.04)	0.90	(0.10)	1.22	(0.10)	1.14	(0.07)
	Peru	1.26	(0.03)	c	c	c	c	c	c
	Qatar	1.00	(0.01)	0.88	(0.02)	0.69	(0.02)	0.80	(0.01)
	Romania	0.91	(0.03)	c	c	c	c	c	c
	Russian Federation	0.80	(0.01)	0.77	(0.02)	0.76	(0.04)	0.77	(0.02)
	Serbia	0.98	(0.01)	0.96	(0.04)	0.84	(0.04)	0.92	(0.03)
	Shanghai-China	1.04	(0.02)	c	c	c	c	c	c
	Singapore	0.80	(0.01)	0.92	(0.04)	0.70	(0.03)	0.79	(0.02)
	Chinese Taipei	0.82	(0.01)	c	c	c	c	c	c
	Thailand	1.19	(0.02)	m	m	m	m	m	m
	Trinidad and Tobago	0.92	(0.01)	1.18	(0.11)	1.03	(0.08)	1.14	(0.07)
	Tunisia	1.31	(0.02)	c	c	c	c	c	c
	Uruguay	1.22	(0.02)	c	c	c	c	c	c

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B2.6a Reading performance in PISA 2000 and 2009, by immigrant background

		Reading performance in PISA 2000				Reading performance in PISA 2009				Change between 2000 and 2009 (PISA 2009 - PISA 2000)			
		Non-immigrant students		Immigrant students		Non-immigrant students		Immigrant students		Non-immigrant students		Immigrant students	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Score dif.	S.E.	Score dif.	S.E.
OECD	Australia	532	(3.6)	520	(6.7)	515	(2.1)	524	(5.8)	**-18**	(4.2)	4	(8.9)
	Austria	502	(2.8)	409	(7.2)	482	(3.0)	414	(6.2)	**-21**	(4.1)	5	(9.5)
	Belgium	522	(3.8)	417	(7.6)	519	(2.2)	451	(6.4)	-3	(4.4)	**35**	(9.9)
	Canada	538	(1.5)	526	(3.2)	528	(1.5)	521	(3.4)	**-10**	(2.2)	-5	(4.7)
	Chile	411	(3.6)	c	c	452	(3.0)	c	c	**41**	(4.7)	c	c
	Czech Republic	501	(2.1)	463	(15.1)	479	(2.9)	457	(13.7)	**-22**	(3.6)	-7	(20.3)
	Denmark	504	(2.2)	424	(7.6)	502	(2.2)	438	(3.8)	-2	(3.1)	15	(8.5)
	Estonia	m	m	m	m	m	m	m	m	m	m	m	m
	Finland	548	(2.6)	476	(12.8)	538	(2.2)	468	(12.8)	**-9**	(3.4)	-8	(18.1)
	France	512	(2.8)	464	(6.2)	505	(3.8)	444	(8.5)	-7	(4.7)	-20	(10.5)
	Germany	507	(2.3)	423	(6.1)	511	(2.6)	455	(4.7)	4	(3.5)	**32**	(7.7)
	Greece	478	(4.7)	413	(16.3)	489	(4.3)	432	(11.5)	11	(6.3)	18	(19.9)
	Hungary	482	(4.0)	489	(11.2)	495	(3.1)	507	(8.3)	**13**	(5.0)	19	(13.9)
	Iceland	509	(1.5)	c	c	504	(1.4)	423	(11.7)	**-5**	(2.1)	c	c
	Ireland	528	(3.2)	552	(11.0)	502	(3.0)	473	(7.1)	**-26**	(4.4)	**-79**	(13.1)
	Israel	456	(9.6)	459	(9.9)	480	(3.3)	478	(6.4)	**23**	(10.1)	19	(11.8)
	Italy	489	(2.9)	450	(13.3)	491	(1.6)	418	(4.2)	2	(3.3)	**-31**	(13.9)
	Japan	525	(5.1)	c	c	521	(3.4)	c	c	-4	(6.2)	c	c
	Korea	m	m	m	m	540	(3.4)	c	c	m	m	c	c
	Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m
	Mexico	427	(3.3)	345	(8.1)	430	(1.8)	331	(7.9)	3	(3.8)	-14	(11.3)
	Netherlands	m	m	m	m	m	m	m	m	m	m	m	m
	New Zealand	538	(2.7)	507	(7.1)	526	(2.6)	513	(4.7)	**-12**	(3.7)	6	(8.5)
	Norway	510	(2.7)	454	(6.7)	508	(2.6)	456	(5.9)	-2	(3.8)	1	(8.9)
	Poland	482	(4.4)	c	c	502	(2.6)	c	c	**20**	(5.1)	c	c
	Portugal	472	(4.5)	457	(12.1)	492	(3.1)	466	(6.9)	**20**	(5.5)	9	(13.9)
	Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m
	Slovenia	m	m	m	m	m	m	m	m	m	m	m	m
	Spain	494	(2.6)	457	(13.1)	488	(2.0)	430	(4.0)	**-7**	(3.3)	**-27**	(13.7)
	Sweden	523	(2.1)	465	(5.4)	507	(2.8)	442	(6.9)	**-16**	(3.5)	**-24**	(8.7)
	Switzerland	514	(4.0)	428	(4.8)	513	(2.2)	465	(4.1)	-1	(4.5)	**37**	(6.3)
	Turkey	m	m	m	m	m	m	m	m	m	m	m	m
	United Kingdom	m	m	m	m	m	m	m	m	m	m	m	m
	United States	511	(6.5)	472	(14.1)	506	(3.8)	484	(5.8)	-5	(7.5)	12	(15.2)
	OECD average	501	(0.8)	458	(2.1)	501	(0.5)	456	(1.6)	-1	(0.9)	-0	(2.6)
Partners	Albania	351	(3.3)	296	(18.0)	389	(4.0)	c	c	**38**	(5.2)	c	c
	Argentina	422	(9.2)	364	(22.7)	401	(4.6)	362	(15.2)	**-21**	(10.3)	-3	(27.3)
	Azerbaijan	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil	398	(3.0)	c	c	416	(2.7)	317	(13.5)	**17**	(4.0)	c	c
	Bulgaria	434	(4.9)	c	c	433	(6.7)	c	c	-0	(8.3)	c	c
	Colombia	m	m	m	m	m	m	m	m	m	m	m	m
	Croatia	m	m	m	m	m	m	m	m	m	m	m	m
	Dubai (UAE)	m	m	m	m	m	m	m	m	m	m	m	m
	Hong Kong-China	531	(3.3)	521	(3.2)	535	(2.7)	531	(3.4)	4	(4.2)	**10**	(4.7)
	Indonesia	372	(3.7)	294	(16.4)	403	(3.7)	c	c	**31**	(5.2)	c	c
	Jordan	m	m	m	m	m	m	m	m	m	m	m	m
	Kazakhstan	m	m	m	m	m	m	m	m	m	m	m	m
	Kyrgyzstan	m	m	m	m	m	m	m	m	m	m	m	m
	Latvia	462	(6.0)	452	(6.9)	485	(2.9)	474	(9.1)	**23**	(6.7)	22	(11.4)
	Liechtenstein	500	(5.0)	419	(13.7)	510	(4.3)	479	(7.4)	10	(6.6)	**61**	(15.6)
	Lithuania	m	m	m	m	m	m	m	m	m	m	m	m
	Macao-China	m	m	m	m	m	m	m	m	m	m	m	m
	Montenegro	m	m	m	m	m	m	m	m	m	m	m	m
	Panama	m	m	m	m	m	m	m	m	m	m	m	m
	Peru	331	(4.3)	c	c	374	(3.9)	c	c	**43**	(5.8)	c	c
	Qatar	m	m	m	m	m	m	m	m	m	m	m	m
	Romania	428	(3.5)	c	c	426	(4.0)	c	c	-3	(5.3)	c	c
	Russian Federation	463	(4.3)	456	(6.1)	464	(3.2)	439	(7.0)	1	(5.4)	-17	(9.3)
	Serbia	m	m	m	m	m	m	m	m	m	m	m	m
	Shanghai-China	m	m	m	m	m	m	m	m	m	m	m	m
	Singapore	m	m	m	m	m	m	m	m	m	m	m	m
	Chinese Taipei	m	m	m	m	m	m	m	m	m	m	m	m
	Thailand	432	(3.2)	c	c	421	(2.6)	m	m	**-10**	(4.2)	c	c
	Trinidad and Tobago	m	m	m	m	m	m	m	m	m	m	m	m
	Tunisia	m	m	m	m	m	m	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m	m	m	m	m	m	m

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.

Table B2.6b Reading performance dispersion in PISA 2000 and 2009, by immigrant background

		Performance dispersion in reading PISA 2000				Performance dispersion in reading PISA 2009				Change between 2000 and 2009 (PISA 2009 - PISA 2000)			
		Non-immigrant students		Immigrant students		Non-immigrant students		Immigrant students		Non-immigrant students		Immigrant students	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.	Dif.	S.E.
OECD	Australia	100.0	(1.6)	105.5	(3.3)	96.3	(1.1)	101.2	(3.4)	**-3.77**	(1.9)	-4.3	(4.7)
	Austria	92.4	(2.0)	106.2	(4.9)	96.9	(2.1)	95.0	(3.0)	4.5	(2.9)	-11.19	(5.7)
	Belgium	99.4	(3.0)	105.1	(3.6)	95.7	(1.5)	102.9	(3.5)	-3.71	(3.3)	-2.2	(5.0)
	Canada	92.8	(1.2)	98.1	(1.9)	87.9	(0.9)	93.5	(1.8)	**-4.93**	(1.5)	-4.59	(2.6)
	Chile	89.4	(1.7)	c	c	81.8	(1.7)	c	c	**-7.64**	(2.4)	c	c
	Czech Republic	85.7	(1.3)	95.3	(10.6)	91.6	(1.6)	110.5	(7.3)	**5.88**	(2.1)	15.19	(12.9)
	Denmark	94.2	(1.6)	99.0	(5.6)	80.9	(1.3)	84.0	(2.2)	**-13.28**	(2.1)	**-15**	(6.0)
	Estonia	m	m	m	m	m	m	m	m	m	m	m	m
	Finland	88.7	(2.6)	109.9	(11.0)	85.0	(1.0)	106.2	(7.9)	-3.65	(2.8)	-3.72	(13.5)
	France	89.6	(1.9)	90.4	(3.0)	102.4	(3.1)	107.9	(4.6)	**12.73**	(3.6)	**17.52**	(5.5)
	Germany	93.7	(1.6)	103.6	(4.0)	91.3	(2.0)	93.2	(3.3)	-2.41	(2.5)	**-10.41**	(5.2)
	Greece	95.3	(2.5)	104.5	(11.6)	92.6	(2.4)	97.7	(6.6)	-2.73	(3.4)	-6.83	(13.4)
	Hungary	92.7	(2.0)	92.0	(6.0)	89.6	(2.2)	80.0	(5.5)	-3.08	(3.0)	-11.98	(8.1)
	Iceland	91.1	(1.4)	c	c	94.0	(1.2)	103.4	(10.3)	2.85	(1.9)	c	c
	Ireland	93.2	(1.7)	77.8	(8.7)	92.1	(2.2)	99.5	(4.7)	-1.13	(2.8)	**21.72**	(9.8)
	Israel	106.8	(4.8)	106.4	(6.1)	108.7	(2.4)	104.3	(3.3)	1.83	(5.3)	-2.17	(6.9)
	Italy	90.5	(2.6)	81.3	(8.1)	93.6	(1.5)	96.9	(3.4)	3.1	(3.0)	15.58	(8.8)
	Japan	84.5	(3.1)	c	c	99.6	(2.9)	c	c	**15.06**	(4.2)	c	c
	Korea	m	m	m	m	78.1	(2.1)	c	c	m	m	c	c
	Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m
	Mexico	84.2	(2.1)	76.6	(6.1)	81.9	(1.0)	87.5	(7.5)	-2.37	(2.3)	10.89	(9.7)
	Netherlands	m	m	m	m	m	m	m	m	m	m	m	m
	New Zealand	102.8	(2.0)	117.5	(3.8)	99.4	(1.9)	106.5	(2.5)	-3.37	(2.7)	**-10.96**	(4.5)
	Norway	101.5	(1.8)	106.4	(5.2)	89.3	(1.2)	92.5	(5.4)	**-12.26**	(2.2)	-13.87	(7.5)
	Poland	97.6	(2.9)	c	c	88.2	(1.2)	c	c	**-9.4**	(3.1)	c	c
	Portugal	96.2	(1.9)	103.9	(6.3)	85.8	(1.6)	82.7	(4.2)	**-10.37**	(2.4)	**-21.14**	(7.5)
	Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m
	Slovenia	m	m	m	m	m	m	m	m	m	m	m	m
	Spain	84.1	(1.2)	91.1	(6.4)	85.0	(1.2)	86.6	(2.4)	0.94	(1.7)	-4.48	(6.8)
	Sweden	89.0	(1.2)	97.2	(2.9)	93.7	(1.5)	101.7	(4.3)	**4.7**	(1.9)	4.52	(5.1)
	Switzerland	92.4	(2.0)	105.9	(2.8)	88.2	(1.5)	98.4	(2.1)	-4.14	(2.5)	**-7.44**	(3.5)
	Turkey	m	m	m	m	m	m	m	m	m	m	m	m
	United Kingdom	m	m	m	m	m	m	m	m	m	m	m	m
	United States	102.4	(2.7)	114.5	(5.9)	95.5	(1.7)	95.3	(2.6)	**-6.87**	(3.2)	**-19.21**	(6.4)
	OECD average	93.5	(0.4)	99.5	(1.4)	91.3	(0.3)	96.8	(1.0)	**-1.67**	(0.6)	-2.91	(1.7)
Partners	Albania	98.8	(1.9)	88.5	(11.7)	97.0	(1.8)	c	c	-1.8	(2.6)	c	c
	Argentina	106.8	(3.4)	110.1	(12.3)	106.8	(3.1)	108.2	(9.7)	0.1	(4.6)	-1.8	(15.7)
	Azerbaijan	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil	85.3	(1.9)	c	c	92.4	(1.4)	74.8	(9.6)	**7.1**	(2.4)	c	c
	Bulgaria	100.4	(3.1)	c	c	110.9	(2.5)	c	c	**10.5**	(4.0)	c	c
	Colombia	m	m	m	m	m	m	m	m	m	m	m	m
	Croatia	m	m	m	m	m	m	m	m	m	m	m	m
	Dubai (UAE)	m	m	m	m	m	m	m	m	m	m	m	m
	Hong Kong-China	81.9	(2.6)	83.8	(2.3)	83.5	(1.9)	83.9	(2.1)	1.5	(3.2)	0.1	(3.1)
	Indonesia	71.4	(2.5)	50.6	(14.2)	66.1	(2.0)	c	c	-5.3	(3.2)	c	c
	Jordan	m	m	m	m	m	m	m	m	m	m	m	m
	Kazakhstan	m	m	m	m	m	m	m	m	m	m	m	m
	Kyrgyzstan	m	m	m	m	m	m	m	m	m	m	m	m
	Latvia	102.3	(2.3)	98.4	(5.0)	79.4	(1.6)	84.3	(4.5)	**-22.9**	(2.8)	**-14.1**	(6.7)
	Liechtenstein	88.2	(3.7)	101.7	(8.6)	82.2	(4.1)	80.3	(5.9)	-6.0	(5.5)	**-21.4**	(10.4)
	Lithuania	m	m	m	m	m	m	m	m	m	m	m	m
	Macao-China	m	m	m	m	m	m	m	m	m	m	m	m
	Montenegro	m	m	m	m	m	m	m	m	m	m	m	m
	Panama	m	m	m	m	m	m	m	m	m	m	m	m
	Peru	94.9	(2.1)	c	c	97.2	(2.4)	c	c	2.3	(3.2)	c	c
	Qatar	m	m	m	m	m	m	m	m	m	m	m	m
	Romania	102.3	(2.5)	c	c	89.4	(2.3)	c	c	**-13.0**	(3.4)	c	c
	Russian Federation	91.6	(1.8)	92.1	(4.2)	88.2	(1.8)	90.0	(4.6)	-3.4	(2.6)	-2.2	(6.3)
	Serbia	m	m	m	m	m	m	m	m	m	m	m	m
	Shanghai-China	m	m	m	m	m	m	m	m	m	m	m	m
	Singapore	m	m	m	m	m	m	m	m	m	m	m	m
	Chinese Taipei	m	m	m	m	m	m	m	m	m	m	m	m
	Thailand	76.4	(1.7)	c	c	71.8	(1.9)	m	m	-4.5	(2.5)	c	c
	Trinidad and Tobago	m	m	m	m	m	m	m	m	m	m	m	m
	Tunisia	m	m	m	m	m	m	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m	m	m	m	m	m	m

Note: Values that are statistically significant are indicated in bold (see Annex A).
Source: PISA 2009 Database.
Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B2.6c Socio-economic background in PISA 2000 and 2009, by immigrant background

		Socio-economic background in PISA 2000				Socio-economic background in PISA 2009				Change between 2000 and 2009 (PISA 2009 - PISA 2000)			
		Non-immigrant students		Immigrant students		Non-immigrant students		Immigrant students		Non-immigrant students		Immigrant students	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.	Dif.	S.E.
OECD	Australia	0.29	(0.03)	0.26	(0.06)	0.35	(0.01)	0.34	(0.03)	0.06	(0.0)	0.08	(0.1)
	Austria	0.07	(0.02)	-0.64	(0.06)	0.17	(0.02)	-0.55	(0.04)	**0.1**	(0.0)	0.09	(0.1)
	Belgium	0.24	(0.02)	-0.49	(0.06)	0.28	(0.02)	-0.27	(0.06)	0.04	(0.0)	**0.22**	(0.1)
	Canada	0.64	(0.01)	0.58	(0.03)	0.53	(0.01)	0.44	(0.04)	**-0.11**	(0.0)	**-0.14**	(0.1)
	Chile	-0.62	(0.04)	c	c	-0.57	(0.04)	c	c	0.05	(0.1)	c	c
	Czech Republic	-0.03	(0.02)	-0.41	(0.11)	-0.08	(0.01)	-0.21	(0.10)	**-0.05**	(0.0)	0.2	(0.1)
	Denmark	0.33	(0.03)	-0.43	(0.10)	0.36	(0.03)	-0.39	(0.04)	0.03	(0.0)	0.04	(0.1)
	Estonia	m	m	m	m	m	m	m	m	m	m	m	m
	Finland	0.05	(0.02)	-0.14	(0.15)	0.38	(0.02)	0.06	(0.12)	**0.33**	(0.0)	0.2	(0.2)
	France	-0.06	(0.02)	-0.74	(0.07)	-0.05	(0.03)	-0.66	(0.06)	0.01	(0.0)	0.08	(0.1)
	Germany	0.35	(0.02)	-0.37	(0.06)	0.32	(0.02)	-0.40	(0.04)	-0.03	(0.0)	-0.03	(0.1)
	Greece	-0.10	(0.04)	-0.32	(0.08)	0.04	(0.03)	-0.64	(0.05)	**0.14**	(0.1)	**-0.32**	(0.1)
	Hungary	-0.27	(0.03)	0.01	(0.10)	-0.19	(0.03)	-0.17	(0.10)	0.08	(0.0)	-0.18	(0.1)
	Iceland	0.53	(0.01)	c	c	0.74	(0.02)	-0.08	(0.10)	**0.21**	(0.0)	c	c
	Ireland	-0.04	(0.03)	0.23	(0.13)	0.04	(0.03)	0.13	(0.06)	0.08	(0.0)	-0.1	(0.1)
	Israel	0.16	(0.05)	0.13	(0.06)	0.04	(0.02)	-0.28	(0.06)	**-0.12**	(0.1)	**-0.41**	(0.1)
	Italy	0.04	(0.02)	-0.52	(0.19)	-0.09	(0.01)	-0.72	(0.05)	**-0.13**	(0.0)	-0.2	(0.2)
	Japan	m	m	m	m	-0.01	(0.01)	c	c	m	m	c	c
	Korea	m	m	m	m	-0.15	(0.03)	c	c	m	m	c	c
	Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m
	Mexico	-1.19	(0.06)	-1.81	(0.10)	-1.19	(0.03)	-1.77	(0.09)	0	(0.1)	0.04	(0.1)
	Netherlands	m	m	m	m	m	m	m	m	m	m	m	m
	New Zealand	0.10	(0.02)	0.14	(0.04)	0.08	(0.02)	0.11	(0.03)	-0.02	(0.0)	-0.03	(0.1)
	Norway	0.40	(0.02)	-0.16	(0.06)	0.51	(0.02)	-0.03	(0.06)	**0.11**	(0.0)	0.13	(0.1)
	Poland	-0.22	(0.03)	c	c	-0.28	(0.02)	c	c	-0.06	(0.0)	c	c
	Portugal	-0.39	(0.05)	-0.10	(0.14)	-0.31	(0.04)	-0.37	(0.07)	0.08	(0.1)	-0.27	(0.2)
	Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m
	Slovenia	m	m	m	m	m	m	m	m	m	m	m	m
	Spain	-0.55	(0.05)	-0.87	(0.18)	-0.27	(0.03)	-0.74	(0.05)	**0.28**	(0.1)	0.13	(0.2)
	Sweden	0.41	(0.02)	-0.14	(0.05)	0.40	(0.02)	-0.16	(0.05)	-0.01	(0.0)	-0.02	(0.1)
	Switzerland	0.19	(0.03)	-0.43	(0.04)	0.21	(0.02)	-0.35	(0.05)	0.02	(0.0)	0.08	(0.1)
	Turkey	m	m	m	m	m	m	m	m	m	m	m	m
	United Kingdom	m	m	m	m	m	m	m	m	m	m	m	m
	United States	0.42	(0.04)	-0.14	(0.16)	0.31	(0.04)	-0.39	(0.08)	-0.11	(0.1)	-0.25	(0.2)
	OECD average	0.03	(0.01)	-0.29	(0.02)	0.06	(0.00)	-0.31	(0.01)	**0.04**	(0.0)	-0.03	(0.0)
Partners	Albania	-0.64	(0.02)	-0.64	(0.18)	-0.95	(0.04)	c	c	**-0.31**	(0.04)	c	c
	Argentina	-0.58	(0.08)	-1.00	(0.11)	-0.60	(0.05)	-1.17	(0.10)	-0.02	(0.09)	-0.17	(0.15)
	Azerbaijan	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil	-1.09	(0.04)	c	c	-1.15	(0.03)	-1.34	(0.23)	-0.06	(0.05)	c	c
	Bulgaria	0.13	(0.04)	c	c	-0.10	(0.04)	c	c	**-0.23**	(0.06)	c	c
	Colombia	m	m	m	m	m	m	m	m	m	m	m	m
	Croatia	m	m	m	m	m	m	m	m	m	m	m	m
	Dubai (UAE)	m	m	m	m	m	m	m	m	m	m	m	m
	Hong Kong-China	-0.62	(0.03)	-1.08	(0.03)	-0.53	(0.05)	-1.22	(0.03)	0.09	(0.06)	**-0.14**	(0.04)
	Indonesia	-1.57	(0.04)	-1.56	(0.23)	-1.55	(0.06)	c	c	0.02	(0.07)	c	c
	Jordan	m	m	m	m	m	m	m	m	m	m	m	m
	Kazakhstan	m	m	m	m	m	m	m	m	m	m	m	m
	Kyrgyzstan	m	m	m	m	m	m	m	m	m	m	m	m
	Latvia	0.01	(0.03)	-0.15	(0.04)	-0.13	(0.03)	-0.07	(0.10)	**-0.14**	(0.04)	0.08	(0.11)
	Liechtenstein	0.06	(0.05)	-0.58	(0.14)	0.25	(0.05)	-0.28	(0.10)	**0.19**	(0.07)	0.30	(0.17)
	Lithuania	m	m	m	m	m	m	m	m	m	m	m	m
	Macao-China	m	m	m	m	m	m	m	m	m	m	m	m
	Montenegro	m	m	m	m	m	m	m	m	m	m	m	m
	Panama	m	m	m	m	m	m	m	m	m	m	m	m
	Peru	-1.21	(0.04)	c	c	-1.30	(0.05)	c	c	-0.09	(0.06)	c	c
	Qatar	m	m	m	m	m	m	m	m	m	m	m	m
	Romania	-0.66	(0.04)	c	c	-0.36	(0.03)	c	c	**0.30**	(0.05)	c	c
	Russian Federation	-0.53	(0.03)	-0.49	(0.06)	-0.19	(0.02)	-0.33	(0.04)	**0.34**	(0.04)	**0.16**	(0.07)
	Serbia	m	m	m	m	m	m	m	m	m	m	m	m
	Shanghai-China	m	m	m	m	m	m	m	m	m	m	m	m
	Singapore	m	m	m	m	m	m	m	m	m	m	m	m
	Chinese Taipei	m	m	m	m	m	m	m	m	m	m	m	m
	Thailand	-1.58	(0.04)	c	c	-1.31	(0.04)	m	m	**0.27**	(0.06)	c	c
	Trinidad and Tobago	m	m	m	m	m	m	m	m	m	m	m	m
	Tunisia	m	m	m	m	m	m	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m	m	m	m	m	m	m

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B2.6d Socio-economic dispersion in PISA 2000 and 2009, by immigrant background

		Socio-economic dispersion in PISA 2000				Socio-economic dispersion in PISA 2009				Change between 2000 and 2009 (PISA 2009 - PISA 2000)			
		Non-immigrant students		Immigrant students		Non-immigrant students		Immigrant students		Non-immigrant students		Immigrant students	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Dif.	S.E.	Dif.	S.E.
OECD	Australia	0.79	(0.02)	0.84	(0.03)	0.73	(0.00)	0.81	(0.02)	**-0.06**	(0.0)	-0.03	(0.0)
	Austria	0.80	(0.01)	1.00	(0.05)	0.77	(0.01)	0.94	(0.05)	**-0.03**	(0.0)	-0.06	(0.1)
	Belgium	0.82	(0.01)	1.00	(0.03)	0.88	(0.01)	1.07	(0.04)	**0.06**	(0.0)	0.07	(0.1)
	Canada	0.76	(0.01)	0.88	(0.02)	0.80	(0.01)	0.91	(0.02)	**0.04**	(0.0)	0.03	(0.0)
	Chile	1.11	(0.02)	c	c	1.14	(0.02)	c	c	0.03	(0.0)	c	c
	Czech Republic	0.71	(0.01)	0.86	(0.08)	0.70	(0.01)	0.82	(0.06)	-0.01	(0.0)	-0.04	(0.1)
	Denmark	0.89	(0.01)	1.12	(0.04)	0.83	(0.01)	0.98	(0.03)	**-0.06**	(0.0)	**-0.14**	(0.1)
	Estonia	m	m	m	m	m	m	m	m	m	m	m	m
	Finland	0.93	(0.01)	1.16	(0.08)	0.77	(0.01)	1.05	(0.09)	**-0.16**	(0.0)	-0.11	(0.1)
	France	0.78	(0.01)	1.01	(0.03)	0.79	(0.01)	0.98	(0.04)	0.01	(0.0)	-0.03	(0.1)
	Germany	0.85	(0.01)	0.98	(0.05)	0.83	(0.01)	0.96	(0.03)	-0.02	(0.0)	-0.02	(0.1)
	Greece	1.05	(0.02)	0.82	(0.06)	0.99	(0.01)	0.84	(0.05)	**-0.06**	(0.0)	0.02	(0.1)
	Hungary	0.89	(0.02)	0.88	(0.08)	0.97	(0.02)	0.85	(0.06)	**0.08**	(0.0)	-0.03	(0.1)
	Iceland	0.90	(0.01)	c	c	0.88	(0.01)	0.87	(0.07)	-0.02	(0.0)	c	c
	Ireland	0.86	(0.01)	0.93	(0.07)	0.84	(0.01)	0.88	(0.05)	-0.02	(0.0)	-0.05	(0.1)
	Israel	0.83	(0.02)	0.89	(0.04)	0.83	(0.01)	1.04	(0.05)	0	(0.0)	**0.15**	(0.1)
	Italy	0.95	(0.01)	0.93	(0.09)	1.01	(0.01)	0.95	(0.04)	**0.06**	(0.0)	0.02	(0.1)
	Japan	m	m	m	m	0.72	(0.01)	c	c	m	m	c	c
	Korea	m	m	m	m	0.82	(0.01)	c	c	m	m	c	c
	Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m
	Mexico	1.21	(0.04)	1.07	(0.07)	1.30	(0.01)	1.20	(0.05)	**0.09**	(0.0)	0.13	(0.1)
	Netherlands	m	m	m	m	m	m	m	m	m	m	m	m
	New Zealand	0.77	(0.01)	0.92	(0.03)	0.77	(0.01)	0.82	(0.02)	0	(0.0)	**-0.1**	(0.0)
	Norway	0.81	(0.01)	1.02	(0.06)	0.71	(0.01)	0.94	(0.04)	**-0.1**	(0.0)	-0.08	(0.1)
	Poland	0.87	(0.01)	c	c	0.88	(0.01)	c	c	0.01	(0.0)	c	c
	Portugal	1.13	(0.02)	1.22	(0.05)	1.18	(0.02)	1.09	(0.04)	0.05	(0.0)	**-0.13**	(0.1)
	Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m
	Slovenia	m	m	m	m	m	m	m	m	m	m	m	m
	Spain	1.12	(0.02)	1.17	(0.07)	1.09	(0.02)	0.97	(0.03)	-0.03	(0.0)	**-0.2**	(0.1)
	Sweden	0.76	(0.01)	0.89	(0.03)	0.76	(0.01)	1.01	(0.05)	0	(0.0)	**0.12**	(0.1)
	Switzerland	0.86	(0.02)	1.01	(0.02)	0.79	(0.01)	0.99	(0.02)	**-0.07**	(0.0)	-0.02	(0.0)
	Turkey	m	m	m	m	m	m	m	m	m	m	m	m
	United Kingdom	m	m	m	m	m	m	m	m	m	m	m	m
	United States	0.77	(0.01)	1.08	(0.04)	0.85	(0.02)	1.03	(0.03)	**0.08**	(0.0)	-0.05	(0.1)
	OECD average	0.89	(0.00)	0.99	(0.01)	0.88	(0.00)	0.96	(0.01)	-0.01	(0.0)	-0.03	(0.0)
Partners	Albania	0.91	(0.01)	0.91	(0.10)	1.04	(0.02)	c	c	**0.13**	(0.02)	c	c
	Argentina	1.14	(0.03)	0.85	(0.05)	1.20	(0.03)	1.00	(0.07)	0.06	(0.04)	0.15	(0.09)
	Azerbaijan	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil	1.17	(0.02)	c	c	1.21	(0.01)	1.04	(0.09)	0.04	(0.02)	c	c
	Bulgaria	0.81	(0.02)	c	c	0.97	(0.02)	c	c	**0.16**	(0.03)	c	c
	Colombia	m	m	m	m	m	m	m	m	m	m	m	m
	Croatia	m	m	m	m	m	m	m	m	m	m	m	m
	Dubai (UAE)	m	m	m	m	m	m	m	m	m	m	m	m
	Hong Kong-China	0.90	(0.02)	0.77	(0.03)	1.01	(0.02)	0.90	(0.02)	**0.11**	(0.03)	**0.13**	(0.04)
	Indonesia	0.96	(0.02)	0.87	(0.07)	1.10	(0.02)	c	c	**0.14**	(0.03)	c	c
	Jordan	m	m	m	m	m	m	m	m	m	m	m	m
	Kazakhstan	m	m	m	m	m	m	m	m	m	m	m	m
	Kyrgyzstan	m	m	m	m	m	m	m	m	m	m	m	m
	Latvia	0.75	(0.02)	0.75	(0.02)	0.87	(0.01)	0.96	(0.05)	**0.12**	(0.02)	**0.21**	(0.05)
	Liechtenstein	0.80	(0.03)	1.06	(0.12)	0.84	(0.04)	1.05	(0.05)	0.04	(0.05)	-0.01	(0.13)
	Lithuania	m	m	m	m	m	m	m	m	m	m	m	m
	Macao-China	m	m	m	m	m	m	m	m	m	m	m	m
	Montenegro	m	m	m	m	m	m	m	m	m	m	m	m
	Panama	m	m	m	m	m	m	m	m	m	m	m	m
	Peru	1.10	(0.02)	c	c	1.26	(0.03)	c	c	**0.16**	(0.04)	c	c
	Qatar	m	m	m	m	m	m	m	m	m	m	m	m
	Romania	1.11	(0.02)	c	c	0.91	(0.03)	c	c	**-0.20**	(0.04)	c	c
	Russian Federation	0.78	(0.01)	0.80	(0.03)	0.80	(0.01)	0.77	(0.02)	0.02	(0.01)	-0.03	(0.04)
	Serbia	m	m	m	m	m	m	m	m	m	m	m	m
	Shanghai-China	m	m	m	m	m	m	m	m	m	m	m	m
	Singapore	m	m	m	m	m	m	m	m	m	m	m	m
	Chinese Taipei	m	m	m	m	m	m	m	m	m	m	m	m
	Thailand	0.99	(0.03)	c	c	1.19	(0.02)	m	m	**0.20**	(0.04)	c	c
	Trinidad and Tobago	m	m	m	m	m	m	m	m	m	m	m	m
	Tunisia	m	m	m	m	m	m	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m	m	m	m	m	m	m

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B2.6e Performance in reading and socio-economic background in PISA 2000 and 2009, second-generation students

		Mean performance				Standard deviation of performance				Change between 2000 and 2009 (PISA 2009-PISA 2000)				Mean socio-economic background				Standard deviation of socio-economic background				Change between 2000 and 2009 (PISA 2009-PISA 2000)			
		2000		2009		2000		2009		Mean performance		Standard deviation of performance		2000		2009		2000		2009		Mean socio-economic background		Standard deviation of socio-economic background	
		Mean score	S.E.	Mean score	S.E.	S.D.	S.E.	S.D.	S.E.	Score dif.	S.E.	S.D. dif.	S.E.	Mean	S.E.	Mean	S.E.	S.D.	S.E.	S.D	S.E.	Mean dif.	S.E.	S.D. dif.	S.E.
OECD	Australia	528	(7.1)	530	(6.3)	100	(4.3)	98	(4.0)	2	(9.4)	-2	(5.9)	0.21	(0.06)	0.28	(0.04)	0.82	(0.03)	0.82	(0.02)	0.07	(0.07)	0.00	(0.04)
	Austria	429	(10.6)	427	(6.0)	107	(6.4)	89	(3.5)	-2	(12.2)	**-17**	(7.3)	-0.70	(0.10)	-0.50	(0.04)	1.07	(0.08)	0.77	(0.03)	0.20	(0.11)	**-0.30**	(0.09)
	Belgium	411	(8.7)	454	(7.0)	102	(3.8)	102	(4.4)	**44**	(11.1)	0	(5.8)	-0.66	(0.06)	-0.32	(0.07)	0.95	(0.03)	1.04	(0.04)	**0.34**	(0.09)	0.09	(0.05)
	Canada	539	(3.1)	522	(3.6)	95	(2.4)	89	(2.2)	**-17**	(4.8)	-6	(3.3)	0.58	(0.03)	0.34	(0.04)	0.88	(0.02)	0.91	(0.03)	**-0.24**	(0.05)	0.03	(0.04)
	Chile	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	c	c	448	(17.9)	c	c	114	(9.2)	c	c	c	c	c	c	-0.32	(0.13)	c	c	0.84	(0.06)	c	c	c	c
	Denmark	409	(13.9)	446	(4.3)	106	(11.4)	83	(2.5)	**37**	(14.6)	**-23**	(11.7)	-0.61	(0.20)	-0.42	(0.05)	1.29	(0.09)	0.99	(0.03)	0.19	(0.21)	**-0.30**	(0.09)
	Estonia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Finland	c	c	493	(13.9)	c	c	88	(8.3)	c	c	c	c	c	c	0.26	(0.13)	c	c	0.95	(0.11)	c	c	c	c
	France	471	(6.2)	449	(8.9)	88	(3.4)	105	(4.4)	-21	(10.8)	**17**	(5.6)	-0.73	(0.07)	-0.65	(0.06)	1.00	(0.04)	0.93	(0.04)	0.08	(0.09)	-0.07	(0.06)
	Germany	432	(9.0)	457	(6.1)	103	(5.4)	94	(3.9)	**25**	(10.8)	-9	(6.6)	-0.28	(0.08)	-0.46	(0.04)	1.03	(0.06)	0.94	(0.04)	**-0.18**	(0.09)	-0.09	(0.07)
	Greece	c	c	456	(10.4)	c	c	98	(5.8)	c	c	c	c	c	c	-0.35	(0.09)	c	c	0.87	(0.06)	c	c	c	c
	Hungary	c	c	527	(12.4)	c	c	80	(9.9)	c	c	c	c	c	c	0.05	(0.16)	c	c	0.92	(0.07)	c	c	c	c
	Iceland	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Ireland	519	(20.2)	508	(12.8)	89	(11.2)	88	(8.3)	-11	(23.9)	-1	(14.0)	-0.08	(0.17)	0.10	(0.15)	0.99	(0.12)	0.83	(0.13)	0.18	(0.23)	-0.16	(0.18)
	Israel	461	(9.1)	487	(6.5)	99	(6.1)	101	(3.6)	**26**	(11.2)	2	(7.0)	0.12	(0.06)	-0.21	(0.07)	0.90	(0.06)	1.06	(0.06)	**-0.33**	(0.09)	0.16	(0.08)
	Italy	c	c	446	(9.4)	c	c	102	(6.8)	c	c	c	c	c	c	-0.56	(0.09)	c	c	1.12	(0.06)	c	c	c	c
	Japan	c	c	c	c	c	c	c	c	c	c	c	c	m	m	c	c	m	m	c	c	c	c	c	c
	Korea	m	m	c	c	m	m	c	c	c	c	c	c	m	m	c	c	m	m	c	c	c	c	c	c
	Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Mexico	378	(15.3)	340	(9.9)	85	(11.5)	84	(8.8)	**-38**	(18.2)	-1	(14.5)	-1.64	(0.22)	-1.71	(0.13)	1.21	(0.14)	1.10	(0.07)	-0.07	(0.26)	-0.11	(0.16)
	Netherlands	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	New Zealand	507	(10.3)	498	(8.3)	119	(6.6)	106	(4.6)	-9	(13.2)	-13	(8.0)	-0.20	(0.06)	-0.15	(0.06)	0.93	(0.03)	0.84	(0.03)	0.05	(0.08)	**-0.09**	(0.04)
	Norway	464	(10.6)	463	(8.0)	95	(7.4)	93	(7.7)	-1	(13.3)	-2	(10.6)	-0.04	(0.12)	0.08	(0.08)	0.88	(0.06)	0.90	(0.06)	0.12	(0.14)	0.02	(0.08)
	Poland	c	c	m	m	c	c	m	m	c	c	c	c	c	c	m	m	c	c	m	m	c	c	c	c
	Portugal	463	(14.3)	476	(9.4)	106	(7.9)	82	(6.3)	13	(17.1)	**-24**	(10.1)	-0.23	(0.18)	-0.42	(0.11)	1.30	(0.07)	1.19	(0.06)	-0.19	(0.21)	-0.11	(0.09)
	Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Slovenia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Spain	450	(15.9)	461	(9.3)	82	(15.4)	85	(5.5)	11	(18.4)	3	(16.4)	-1.37	(0.19)	-0.49	(0.11)	0.93	(0.17)	1.04	(0.06)	**0.88**	(0.22)	0.11	(0.18)
	Sweden	485	(7.3)	454	(7.5)	93	(5.5)	97	(4.6)	**-31**	(10.5)	5	(7.1)	-0.02	(0.07)	-0.05	(0.05)	0.84	(0.03)	0.85	(0.03)	-0.03	(0.09)	0.01	(0.04)
	Switzerland	460	(6.8)	471	(4.5)	98	(3.8)	95	(2.1)	11	(8.1)	-4	(4.4)	-0.23	(0.06)	-0.39	(0.05)	1.03	(0.03)	0.91	(0.02)	**-0.16**	(0.08)	**-0.12**	(0.04)
	Turkey	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	United Kingdom	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	United States	478	(19.4)	483	(6.2)	122	(8.8)	92	(3.0)	6	(20.4)	**-30**	(9.3)	-0.11	(0.18)	-0.38	(0.08)	1.08	(0.05)	1.01	(0.03)	-0.27	(0.20)	-0.07	(0.06)
	OECD average	464	(2.9)	468	(2.0)	99	(1.9)	94	(1.3)	3	(3.4)	**-6**	(2.3)	-0.35	(0.03)	-0.29	(0.02)	1.01	(0.02)	0.95	(0.01)	0.04	(0.04)	**-0.06**	(0.02)
Partners	Albania	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	360	(26.2)	366	(12.6)	110.1	(14.1)	99	(7.4)	5	(29.0)	-10.97	(15.9)	-0.95	(0.13)	-1.23	(0.10)	0.87	(0.06)	0.88	(0.08)	-0.28	(0.16)	0.01	(0.10)
	Azerbaijan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil	c	c	321	(18.7)	c	c	77	(13.8)	c	c	c	c	c	c	-1.25	(0.26)	c	c	1.01	(0.07)	c	c	c	c
	Bulgaria	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Croatia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Dubai (UAE)	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Hong Kong-China	532	(3.2)	543	(3.2)	81.8	(2.5)	81	(2.0)	**11**	(4.5)	-0.79	(3.2)	-0.97	(0.03)	-1.11	(0.03)	0.73	(0.02)	0.86	(0.02)	**-0.14**	(0.04)	**0.13**	(0.03)
	Indonesia	c	c	m	m	c	c	m	m	c	c	c	c	c	c	m	m	c	c	m	m	c	c	c	c
	Jordan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Kazakhstan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Kyrgyzstan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Latvia	423	(15.1)	472	(9.7)	95.6	(9.0)	84	(4.8)	**49**	(18.0)	-11.8	(10.2)	-0.20	(0.18)	-0.11	(0.11)	0.85	(0.07)	0.95	(0.05)	0.09	(0.21)	0.10	(0.09)
	Liechtenstein	446	(14.8)	486	(10.0)	85.5	(11.2)	78	(7.9)	**39**	(17.9)	-7.99	(13.8)	c	c	-0.33	(0.14)	c	c	0.97	(0.08)	c	c	c	c
	Lithuania	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Macao-China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Montenegro	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Panama	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Peru	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Romania	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	452	(9.9)	435	(9.4)	96.8	(8.3)	90	(7.1)	-17	(13.7)	-7.06	(10.9)	-0.48	(0.06)	-0.34	(0.05)	0.77	(0.04)	0.77	(0.02)	0.14	(0.08)	0.00	(0.04)
	Serbia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Shanghai-China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Singapore	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Chinese Taipei	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Thailand	c	c	m	m	c	c	m	m	c	c	c	c	c	c	m	m	c	c	m	m	c	c	c	c
	Trinidad and Tobago	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Tunisia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B2.6f Performance in reading and socio-economic background in PISA 2000 and 2009, first-generation students

		Mean performance				Standard deviation of performance				Change between 2000 and 2009 (PISA 2009-PISA 2000)				Mean socio-economic background				Standard deviation of socio-economic background				Change between 2000 and 2009 (PISA 2009-PISA 2000)			
		2000		2009		2000		2009		Mean performance		Standard deviation of performance		2000		2009		2000		2009		Mean socio-economic background		Standard deviation of socio-economic background	
		Mean score	S.E.	Mean score	S.E.	S.D.	S.E.	S.D.	S.E.	Score dif.	S.E.	S.D. dif.	S.E.	Mean	S.E.	Mean	S.E.	S.D.	S.E.	S.D	S.E.	Mean dif.	S.E.	S.D. dif.	S.E.
OECD	Australia	513	(9.3)	518	(6.3)	109	(4.4)	104	(3.8)	5	(11.2)	-5	(5.7)	0.30	(0.08)	0.41	(0.03)	0.86	(0.05)	0.80	(0.02)	0.11	(0.09)	-0.06	(0.05)
	Austria	398	(8.9)	384	(10.4)	104	(6.1)	100	(6.6)	-13	(13.7)	-4	(9.0)	-0.61	(0.07)	-0.68	(0.11)	0.95	(0.05)	1.22	(0.09)	-0.07	(0.13)	**0.27**	(0.10)
	Belgium	431	(9.5)	448	(8.3)	112	(6.1)	104	(4.6)	16	(12.6)	-8	(7.6)	-0.06	(0.09)	-0.23	(0.07)	1.01	(0.05)	1.10	(0.05)	-0.17	(0.11)	0.09	(0.07)
	Canada	511	(4.9)	520	(4.6)	100	(2.3)	99	(2.6)	9	(6.7)	-0	(3.5)	0.57	(0.04)	0.57	(0.04)	0.89	(0.04)	0.88	(0.03)	0.00	(0.06)	-0.01	(0.05)
	Chile	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	c	c	472	(17.5)	c	c	103	(9.1)	c	c	c	c	c	c	-0.01	(0.13)	c	c	0.75	(0.07)	c	c	c	c
	Denmark	433	(7.6)	422	(6.2)	93	(5.0)	83	(3.7)	-11	(9.8)	-10	(6.2)	-0.31	(0.08)	-0.33	(0.07)	0.99	(0.05)	0.97	(0.04)	-0.02	(0.11)	-0.02	(0.06)
	Estonia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Finland	468	(12.9)	449	(17.7)	103	(10.5)	115	(10.5)	-18	(21.9)	13	(14.8)	-0.24	(0.15)	-0.10	(0.18)	1.07	(0.07)	1.11	(0.11)	0.14	(0.23)	0.04	(0.13)
	France	434	(11.5)	428	(15.9)	96	(6.4)	115	(8.9)	-6	(19.7)	19	(10.9)	-0.75	(0.11)	-0.68	(0.15)	1.04	(0.07)	1.15	(0.09)	0.07	(0.19)	0.11	(0.11)
	Germany	419	(7.5)	450	(5.7)	104	(5.1)	91	(4.8)	**32**	(9.4)	-13	(7.0)	-0.41	(0.08)	-0.30	(0.06)	0.95	(0.06)	0.99	(0.06)	0.11	(0.10)	0.04	(0.08)
	Greece	403	(17.5)	420	(15.5)	100	(11.9)	95	(8.6)	17	(23.4)	-5	(14.6)	-0.33	(0.09)	-0.78	(0.06)	0.79	(0.06)	0.79	(0.05)	**-0.45**	(0.11)	0.00	(0.08)
	Hungary	486	(11.6)	493	(11.6)	89	(6.7)	77	(6.1)	7	(16.4)	-12	(9.1)	-0.02	(0.11)	-0.33	(0.12)	0.87	(0.08)	0.75	(0.10)	-0.31	(0.16)	-0.12	(0.13)
	Iceland	c	c	417	(12.4)	c	c	103	(11.8)	c	c	c	c	c	c	-0.17	(0.11)	c	c	0.85	(0.08)	c	c	c	c
	Ireland	573	(9.2)	466	(7.6)	62	(7.8)	100	(5.1)	**-107**	(11.9)	**38**	(9.3)	0.41	(0.15)	0.14	(0.06)	0.85	(0.07)	0.89	(0.05)	-0.27	(0.16)	0.04	(0.09)
	Israel	456	(15.2)	462	(9.2)	119	(8.0)	108	(4.7)	6	(17.7)	-11	(9.3)	0.15	(0.09)	-0.41	(0.07)	0.87	(0.06)	1.00	(0.05)	**-0.56**	(0.11)	0.13	(0.08)
	Italy	c	c	410	(4.5)	c	c	94	(4.1)	c	c	c	c	c	c	-0.77	(0.06)	c	c	0.89	(0.04)	c	c	c	c
	Japan	c	c	c	c	c	c	c	c	c	c	c	c	m	m	c	c	m	m	c	c	c	c	c	c
	Korea	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Mexico	329	(8.2)	324	(9.9)	67	(6.7)	89	(10.1)	-5	(12.8)	22	(12.1)	-1.89	(0.12)	-1.80	(0.11)	1.00	(0.07)	1.26	(0.07)	0.09	(0.16)	**0.26**	(0.10)
	Netherlands	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	New Zealand	507	(7.6)	520	(4.6)	117	(5.3)	106	(2.8)	13	(8.9)	-11	(5.9)	0.29	(0.05)	0.23	(0.03)	0.88	(0.04)	0.79	(0.02)	-0.06	(0.06)	**-0.09**	(0.04)
	Norway	449	(8.5)	447	(7.8)	112	(6.3)	92	(6.6)	-2	(11.6)	**-19**	(9.1)	-0.21	(0.08)	-0.17	(0.08)	1.07	(0.08)	0.98	(0.06)	0.04	(0.11)	-0.09	(0.10)
	Poland	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Portugal	450	(15.8)	456	(8.8)	101	(11.4)	82	(4.9)	6	(18.1)	-19	(12.4)	0.07	(0.14)	-0.33	(0.08)	1.10	(0.07)	0.99	(0.06)	**-0.40**	(0.16)	-0.11	(0.09)
	Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Slovenia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Spain	460	(17.8)	426	(4.1)	95	(8.0)	86	(2.5)	-34	(18.3)	-9	(8.3)	-0.67	(0.21)	-0.77	(0.05)	1.20	(0.06)	0.95	(0.03)	-0.10	(0.22)	**-0.25**	(0.07)
	Sweden	450	(7.2)	416	(11.3)	98	(4.6)	106	(6.8)	**-34**	(13.4)	8	(8.2)	-0.23	(0.06)	-0.39	(0.12)	0.91	(0.04)	1.26	(0.10)	-0.16	(0.13)	**0.35**	(0.11)
	Switzerland	402	(6.1)	455	(6.7)	105	(3.4)	104	(4.5)	**53**	(9.1)	-0	(5.7)	-0.59	(0.05)	-0.27	(0.08)	0.96	(0.03)	1.11	(0.03)	**0.32**	(0.09)	**0.15**	(0.04)
	Turkey	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	United Kingdom	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	United States	466	(10.0)	485	(7.9)	105	(5.8)	101	(3.7)	20	(12.7)	-3	(6.9)	-0.19	(0.14)	-0.41	(0.10)	1.09	(0.06)	1.09	(0.03)	-0.22	(0.17)	0.00	(0.07)
	OECD average	452	(2.5)	447	(2.1)	100	(1.6)	98	(1.4)	-2	(3.3)	-2	(2.1)	-0.24	(0.02)	-0.33	(0.02)	0.97	(0.01)	0.98	(0.01)	**-0.10**	(0.03)	0.04	(0.02)
Partners	Albania	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	c	c	356	(26.5)	c	c	121.0	(17.2)	c	c	c	c	c	c	-1.09	(0.15)	c	c	1.14	(0.10)	c	c	c	c
	Azerbaijan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil	c	c	310	(18.6)	c	c	69.9	(12.7)	c	c	c	c	c	c	-1.50	(0.40)	c	c	1.09	(0.17)	c	c	c	c
	Bulgaria	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Croatia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Dubai (UAE)	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Hong Kong-China	504	(4.8)	512	(5.5)	84.0	(3.4)	84.7	(3.1)	7	(7.3)	0.74	(4.6)	-1.24	(0.06)	-1.38	(0.04)	0.80	(0.07)	0.93	(0.03)	-0.14	(0.07)	0.13	(0.08)
	Indonesia	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Jordan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Kazakhstan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Kyrgyzstan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Latvia	454	(7.3)	c	c	98.3	(5.3)	c	c	c	c	c	c	-0.15	(0.04)	c	c	0.74	(0.02)	c	c	c	c	c	c
	Liechtenstein	392	(21.4)	474	(11.2)	109.8	(13.0)	82.8	(9.0)	**82**	(24.1)	-27.04	(15.8)	-0.59	(0.24)	-0.25	(0.14)	1.22	(0.18)	1.12	(0.06)	0.34	(0.28)	-0.10	(0.19)
	Lithuania	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Macao-China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Montenegro	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Panama	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Peru	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Romania	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	458	(9.6)	444	(7.1)	89.3	(4.7)	90.1	(4.9)	-13	(12.0)	0.82	(6.8)	-0.49	(0.08)	-0.31	(0.07)	0.82	(0.04)	0.76	(0.04)	0.18	(0.11)	-0.06	(0.06)
	Serbia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Shanghai-China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Singapore	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Chinese Taipei	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Thailand	c	c	m	m	c	c	m	m	c	c	c	c	c	c	m	m	c	c	m	m	c	c	c	c
	Trinidad and Tobago	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Tunisia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 1/3]

Percentage of students and reading performance, by immigrant status and language spoken at home

Table B3.1 *Results based on students' self-reports*

		Percentage of students											
		Non-immigrant students speaking the language of assessment at home		Non-immigrant students speaking another language at home		Second-generation students speaking the language of assessment at home		Second-generation students speaking another language at home		First-generation students speaking the language of assessment at home		First-generation students speaking another language at home	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	76.3	(1.1)	0.8	(0.1)	8.3	(0.4)	3.6	(0.3)	6.3	(0.3)	4.7	(0.5)
	Austria	86.2	(1.1)	1.3	(0.2)	2.3	(0.3)	6.3	(0.6)	1.0	(0.3)	2.9	(0.3)
	Belgium	71.8	(1.4)	14.4	(0.7)	3.3	(0.3)	3.8	(0.4)	3.4	(0.6)	3.2	(0.4)
	Canada	73.7	(1.3)	2.6	(0.2)	8.6	(0.6)	4.7	(0.4)	3.6	(0.3)	6.9	(0.5)
	Chile	99.1	(0.1)	0.4	(0.1)	0.1	(0.0)	0.0	(0.0)	0.4	(0.1)	0.0	(0.0)
	Czech Republic	97.6	(0.2)	0.5	(0.1)	0.9	(0.2)	0.3	(0.1)	0.1	(0.1)	0.6	(0.1)
	Denmark	92.1	(0.4)	0.5	(0.1)	2.8	(0.2)	2.3	(0.2)	0.7	(0.1)	1.6	(0.2)
	Estonia	90.2	(0.7)	1.9	(0.3)	6.6	(0.6)	0.8	(0.2)	0.5	(0.1)	0.1	(0.0)
	Finland	95.6	(0.4)	1.8	(0.2)	0.4	(0.1)	0.7	(0.1)	0.3	(0.1)	1.2	(0.2)
	France	85.7	(1.3)	2.3	(0.4)	6.1	(0.7)	3.0	(0.4)	1.1	(0.2)	1.7	(0.3)
	Germany	83.4	(1.0)	1.4	(0.2)	5.1	(0.5)	5.0	(0.5)	1.3	(0.2)	3.8	(0.4)
	Greece	90.0	(0.9)	1.3	(0.3)	2.6	(0.3)	0.3	(0.1)	2.7	(0.4)	3.2	(0.5)
	Hungary	97.1	(0.4)	0.8	(0.3)	0.9	(0.1)	0.0	(0.0)	1.1	(0.2)	0.1	(0.1)
	Iceland	96.4	(0.3)	1.3	(0.2)	0.2	(0.1)	0.2	(0.1)	0.3	(0.1)	1.6	(0.2)
	Ireland	89.8	(1.0)	2.2	(0.9)	1.3	(0.2)	0.1	(0.1)	3.1	(0.3)	3.5	(0.4)
	Israel	77.4	(1.3)	4.2	(0.7)	9.3	(0.6)	2.6	(0.3)	1.7	(0.2)	4.7	(0.6)
	Italy	84.0	(0.4)	10.7	(0.4)	0.8	(0.1)	0.5	(0.1)	1.0	(0.1)	3.1	(0.2)
	Japan	99.6	(0.1)	0.1	(0.0)	0.1	(0.0)	0.0	(0.0)	0.1	(0.0)	0.1	(0.0)
	Korea	99.9	(0.0)	0.1	(0.0)	c	c	c	c	c	c	c	c
	Luxembourg	2.6	(0.3)	60.6	(0.7)	4.2	(0.3)	17.6	(0.6)	4.4	(0.2)	10.7	(0.5)
	Mexico	96.1	(0.3)	2.2	(0.2)	0.7	(0.1)	0.1	(0.0)	0.8	(0.1)	0.3	(0.1)
	Netherlands	87.6	(1.4)	1.5	(0.5)	5.3	(0.8)	2.5	(0.4)	1.0	(0.2)	2.1	(0.3)
	New Zealand	72.5	(1.1)	2.8	(0.2)	5.0	(0.4)	3.0	(0.4)	7.9	(0.5)	8.7	(0.5)
	Norway	91.2	(0.6)	2.0	(0.2)	1.2	(0.2)	2.4	(0.4)	0.3	(0.1)	2.9	(0.3)
	Poland	99.4	(0.1)	0.6	(0.1)	c	c	c	c	c	c	c	c
	Portugal	94.2	(0.5)	0.6	(0.1)	2.5	(0.3)	0.2	(0.1)	1.7	(0.2)	0.8	(0.1)
	Slovak Republic	94.3	(0.8)	5.2	(0.8)	0.2	(0.1)	0.1	(0.0)	0.2	(0.1)	0.1	(0.1)
	Slovenia	91.6	(0.4)	1.2	(0.2)	2.9	(0.3)	3.0	(0.3)	0.3	(0.1)	1.0	(0.2)
	Spain	76.6	(1.0)	13.9	(0.9)	0.6	(0.1)	0.5	(0.1)	4.9	(0.4)	3.5	(0.3)
	Sweden	88.6	(1.1)	1.2	(0.2)	2.9	(0.3)	4.0	(0.6)	0.6	(0.1)	2.8	(0.4)
	Switzerland	75.6	(0.9)	3.1	(0.3)	6.2	(0.6)	7.4	(0.4)	3.0	(0.5)	4.8	(0.3)
	Turkey	95.8	(0.6)	3.7	(0.5)	0.4	(0.1)	0.0	(0.0)	0.1	(0.1)	0.0	(0.0)
	United Kingdom	88.4	(1.0)	1.3	(0.2)	4.0	(0.6)	1.8	(0.3)	1.5	(0.2)	3.1	(0.3)
	United States	79.3	(1.4)	1.4	(0.2)	6.0	(0.6)	6.9	(0.6)	1.7	(0.2)	4.7	(0.5)
	OECD average	85.9	(0.1)	4.4	(0.1)	3.2	(0.1)	2.6	(0.1)	1.8	(0.0)	2.8	(0.1)
Partners	Albania	98.4	(0.3)	1.0	(0.2)	0.5	(0.2)	0.0	(0.0)	0.1	(0.1)	0.0	(0.0)
	Argentina	95.9	(0.5)	0.7	(0.1)	1.8	(0.3)	0.2	(0.1)	1.0	(0.2)	0.4	(0.1)
	Azerbaijan	90.0	(1.2)	6.9	(1.0)	2.0	(0.5)	0.3	(0.1)	0.6	(0.1)	0.2	(0.1)
	Brazil	98.6	(0.2)	0.6	(0.1)	0.5	(0.1)	0.0	(0.0)	0.3	(0.1)	0.0	(0.0)
	Bulgaria	89.1	(1.8)	10.5	(1.7)	0.1	(0.1)	0.1	(0.0)	0.0	(0.0)	0.2	(0.1)
	Colombia	99.3	(0.1)	0.4	(0.1)	0.3	(0.1)	0.0	(0.0)	0.1	(0.0)	0.0	(0.0)
	Croatia	88.0	(0.7)	1.3	(0.4)	7.0	(0.5)	0.2	(0.1)	3.3	(0.3)	0.2	(0.1)
	Dubai (UAE)	16.1	(0.4)	9.4	(0.4)	12.8	(0.5)	14.4	(0.5)	20.5	(0.6)	26.9	(0.6)
	Hong Kong-China	57.8	(1.6)	2.8	(0.8)	22.8	(0.8)	1.2	(0.2)	12.2	(0.8)	3.3	(0.5)
	Indonesia	35.5	(2.1)	64.3	(2.1)	c	c	c	c	0.0	(0.0)	0.2	(0.1)
	Jordan	84.0	(0.9)	2.3	(0.3)	10.0	(0.7)	0.5	(0.1)	3.0	(0.3)	0.3	(0.1)
	Kazakhstan	79.4	(1.3)	9.0	(0.8)	6.7	(0.8)	0.6	(0.2)	3.9	(0.6)	0.5	(0.1)
	Kyrgyzstan	79.6	(1.6)	18.6	(1.6)	1.0	(0.1)	0.2	(0.1)	0.6	(0.2)	0.2	(0.1)
	Latvia	87.1	(1.3)	8.6	(1.2)	3.3	(0.4)	0.7	(0.2)	0.3	(0.1)	0.1	(0.1)
	Liechtenstein	69.5	(3.0)	0.7	(0.5)	8.1	(1.5)	5.7	(1.4)	7.6	(1.6)	8.5	(1.6)
	Lithuania	94.7	(0.8)	3.6	(0.7)	1.0	(0.2)	0.6	(0.2)	0.1	(0.1)	0.1	(0.0)
	Macao-China	24.1	(0.6)	5.5	(0.2)	50.6	(0.6)	4.3	(0.2)	14.2	(0.4)	1.3	(0.2)
	Montenegro	92.4	(0.4)	1.0	(0.2)	2.3	(0.3)	0.2	(0.1)	3.6	(0.3)	0.5	(0.2)
	Panama	92.4	(1.4)	3.9	(0.9)	0.8	(0.2)	0.4	(0.1)	1.4	(0.4)	1.2	(0.4)
	Peru	94.7	(0.8)	4.9	(0.8)	0.3	(0.1)	0.0	(0.0)	0.1	(0.1)	0.0	(0.0)
	Qatar	34.2	(0.4)	19.4	(0.3)	13.1	(0.4)	6.9	(0.3)	14.0	(0.3)	12.5	(0.3)
	Romania	96.6	(0.6)	3.1	(0.6)	0.1	(0.1)	0.0	(0.0)	0.1	(0.1)	0.1	(0.0)
	Russian Federation	80.9	(1.4)	7.0	(1.1)	5.9	(0.5)	1.3	(0.7)	3.8	(0.4)	1.1	(0.2)
	Serbia	89.0	(0.6)	1.6	(0.3)	5.1	(0.4)	0.1	(0.1)	4.1	(0.4)	0.2	(0.1)
	Shanghai-China	98.1	(0.3)	1.3	(0.2)	0.1	(0.0)	0.0	(0.0)	0.3	(0.1)	0.1	(0.1)
	Singapore	37.8	(0.8)	48.0	(1.0)	1.4	(0.2)	3.4	(0.3)	1.6	(0.2)	7.9	(0.4)
	Chinese Taipei	77.9	(1.2)	21.7	(1.2)	0.2	(0.1)	0.0	(0.0)	0.1	(0.1)	0.1	(0.0)
	Thailand	51.4	(1.7)	48.6	(1.7)	c	c	c	c	c	c	c	c
	Trinidad and Tobago	95.4	(0.3)	2.3	(0.2)	1.2	(0.2)	0.1	(0.1)	0.7	(0.1)	0.4	(0.1)
	Tunisia	99.6	(0.1)	0.1	(0.0)	0.2	(0.1)	0.0	(0.0)	0.1	(0.1)	0.0	(0.0)
	Uruguay	97.3	(0.2)	2.2	(0.2)	0.2	(0.1)	0.0	(0.0)	0.2	(0.1)	0.1	(0.1)

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: *PISA 2009 Database*.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 2/3] **Percentage of students and reading performance, by immigrant status and language spoken at home** *(continued)*

Table B3.1 *Results based on students' self-reports*

		Reading performance											
		Non-immigrant students speaking another language at home		Non-immigrant students speaking the language of assessment at home		Second-generation students speaking another language at home		Second-generation students speaking the language of assessment at home		First-generation students speaking another language at home		First-generation students speaking the language of assessment at home	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
OECD	Australia	461	(12.2)	516	(2.0)	527	(9.2)	534	(6.0)	505	(11.8)	530	(4.8)
	Austria	431	(19.1)	485	(3.0)	429	(7.3)	441	(11.6)	387	(11.1)	416	(28.5)
	Belgium	505	(5.2)	524	(2.4)	442	(10.7)	480	(8.3)	435	(10.5)	463	(12.9)
	Canada	495	(5.3)	530	(1.5)	517	(5.7)	530	(3.9)	516	(5.5)	535	(6.3)
	Chile	c	c	452	(3.0)	c	c	c	c	m	m	c	c
	Czech Republic	c	c	481	(2.8)	c	c	459	(17.1)	485	(21.5)	c	c
	Denmark	456	(20.7)	503	(2.2)	440	(5.6)	464	(6.3)	420	(8.3)	442	(10.5)
	Estonia	470	(9.2)	506	(2.7)	454	(14.5)	472	(6.9)	c	c	c	c
	Finland	499	(8.0)	539	(2.2)	476	(16.7)	c	c	446	(19.7)	c	c
	France	436	(14.9)	509	(3.8)	433	(13.3)	470	(9.6)	431	(18.6)	451	(21.3)
	Germany	493	(13.4)	513	(2.6)	448	(8.3)	483	(8.0)	450	(8.1)	480	(11.2)
	Greece	412	(16.7)	490	(4.4)	c	c	457	(10.0)	404	(20.3)	441	(16.6)
	Hungary	c	c	496	(3.1)	c	c	527	(12.8)	c	c	494	(11.6)
	Iceland	451	(16.0)	505	(1.4)	c	c	c	c	425	(14.6)	c	c
	Ireland	507	(14.2)	503	(3.0)	c	c	511	(13.3)	444	(11.4)	494	(9.5)
	Israel	444	(20.0)	484	(3.4)	523	(9.2)	486	(6.6)	476	(8.9)	464	(12.6)
	Italy	452	(3.7)	504	(1.4)	443	(12.1)	471	(10.3)	410	(4.9)	431	(9.9)
	Japan	c	c	522	(3.4)	c	c	c	c	c	c	c	c
	Korea	c	c	541	(3.4)	m	m	c	c	m	m	m	m
	Luxembourg	500	(2.0)	517	(11.7)	439	(3.5)	501	(6.9)	433	(6.0)	540	(8.3)
	Mexico	354	(7.4)	432	(1.8)	c	c	347	(10.2)	284	(14.9)	350	(8.8)
	Netherlands	510	(23.1)	517	(5.2)	463	(10.8)	477	(10.6)	471	(15.1)	483	(20.8)
	New Zealand	432	(9.4)	530	(2.5)	469	(13.3)	516	(8.9)	491	(6.0)	553	(5.9)
	Norway	466	(10.9)	509	(2.5)	453	(9.4)	484	(13.4)	440	(7.8)	c	c
	Poland	c	c	503	(2.6)	m	m	m	m	m	m	c	c
	Portugal	493	(14.9)	493	(3.1)	c	c	486	(9.1)	455	(10.5)	463	(11.5)
	Slovak Republic	413	(12.3)	483	(2.6)	c	c	c	c	c	c	c	c
	Slovenia	464	(14.4)	489	(1.1)	439	(6.7)	466	(8.6)	412	(11.3)	c	c
	Spain	489	(4.1)	488	(2.0)	458	(14.1)	466	(11.9)	414	(6.1)	436	(4.5)
	Sweden	454	(19.4)	509	(2.7)	445	(8.2)	473	(10.2)	415	(13.2)	c	c
	Switzerland	490	(7.9)	517	(2.2)	465	(5.2)	498	(5.6)	436	(6.0)	507	(10.9)
	Turkey	409	(11.1)	468	(3.6)	c	c	c	c	c	c	c	c
	United Kingdom	433	(11.5)	501	(2.3)	471	(10.1)	504	(8.9)	457	(10.3)	470	(11.8)
	United States	453	(14.5)	507	(3.8)	473	(7.2)	496	(8.1)	476	(8.4)	513	(12.8)
	OECD average	460	(2.5)	502	(0.6)	462	(2.2)	481	(1.9)	439	(2.4)	474	(2.9)
Partners	Albania	367	(19.9)	389	(4.0)	m	m	c	c	c	c	c	c
	Argentina	c	c	404	(4.6)	c	c	376	(13.1)	c	c	377	(26.7)
	Azerbaijan	386	(10.7)	361	(3.4)	c	c	359	(10.3)	c	c	c	c
	Brazil	362	(12.4)	416	(2.7)	c	c	322	(18.9)	c	c	305	(20.9)
	Bulgaria	343	(10.0)	446	(6.5)	c	c	c	c	c	c	c	c
	Colombia	371	(25.8)	416	(3.6)	m	m	c	c	m	m	c	c
	Croatia	470	(21.5)	479	(2.9)	c	c	466	(5.4)	c	c	454	(8.5)
	Dubai (UAE)	415	(4.4)	386	(2.9)	463	(3.8)	480	(5.0)	488	(3.0)	528	(3.4)
	Hong Kong-China	466	(8.8)	540	(2.8)	497	(14.8)	546	(3.2)	484	(12.3)	520	(5.0)
	Indonesia	400	(3.6)	409	(6.4)	m	m	m	m	c	c	c	c
	Jordan	388	(12.9)	408	(3.1)	389	(19.2)	423	(6.6)	c	c	420	(9.2)
	Kazakhstan	405	(8.3)	389	(3.2)	381	(18.4)	418	(12.9)	411	(18.6)	360	(9.4)
	Kyrgyzstan	359	(6.7)	308	(3.3)	c	c	373	(24.1)	c	c	c	c
	Latvia	472	(9.2)	488	(3.0)	c	c	484	(9.6)	c	c	c	c
	Liechtenstein	c	c	513	(4.5)	c	c	c	c	c	c	c	c
	Lithuania	433	(7.5)	473	(2.5)	c	c	435	(13.3)	c	c	c	c
	Macao-China	450	(3.6)	492	(2.3)	451	(4.5)	494	(1.4)	447	(8.7)	496	(2.5)
	Montenegro	362	(14.5)	411	(1.7)	c	c	439	(10.0)	c	c	415	(7.7)
	Panama	317	(20.3)	385	(5.5)	c	c	413	(35.5)	c	c	371	(42.6)
	Peru	272	(7.6)	381	(4.0)	m	m	c	c	c	c	c	c
	Qatar	326	(2.3)	336	(1.6)	390	(5.4)	394	(2.7)	470	(3.7)	449	(3.0)
	Romania	361	(13.1)	428	(4.0)	m	m	c	c	c	c	c	c
	Russian Federation	421	(9.1)	468	(3.3)	389	(26.1)	446	(6.0)	392	(14.4)	459	(7.7)
	Serbia	406	(12.4)	443	(2.4)	c	c	466	(6.9)	c	c	446	(7.2)
	Shanghai-China	493	(12.1)	558	(2.3)	m	m	c	c	c	c	c	c
	Singapore	503	(1.9)	561	(2.0)	526	(7.5)	591	(13.4)	516	(5.4)	559	(9.4)
	Chinese Taipei	472	(4.1)	510	(2.6)	c	c	c	c	c	c	c	c
	Thailand	413	(3.5)	431	(3.3)	m	m	m	m	m	m	m	m
	Trinidad and Tobago	351	(14.6)	425	(1.3)	c	c	418	(19.8)	c	c	423	(26.4)
	Tunisia	c	c	404	(2.9)	m	m	c	c	c	c	c	c
	Uruguay	383	(9.0)	430	(2.5)	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: *PISA 2009 Database.*

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 3/3] **Percentage of students and reading performance, by immigrant status and language spoken at home** *(continued)*

Table B3.1 *Results based on students' self-reports*

		Difference in reading performance between non-immigrant students speaking the language of assessment at home and…																			
		Non-immigrant students speaking another language at home		Second-generation students speaking another language at home		Second-generation students speaking the language of assessment at home		First-generation students speaking another language at home		First-generation students speaking the language of assessment at home		Non-immigrant students speaking another language at home, *after* adjusting for socio-economic background		Second-generation students speaking another language at home, *after* adjusting for socio-economic background		Second-generation students speaking the language of assessment at home, *after* adjusting for socio-economic background		First-generation students speaking another language at home, *after* adjusting for socio-economic background		First-generation students speaking the language of assessment at home, *after* adjusting for socio-economic background	
		Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.
OECD	Australia	**55**	(12.2)	-11	(9.1)	**-18**	(6.2)	11	(11.7)	**-14**	(4.5)	**45**	(12.1)	**-24**	(8.2)	**-17**	(5.4)	5	(10.0)	-7	(4.0)
	Austria	**54**	(18.9)	**56**	(8.0)	**44**	(11.9)	**98**	(11.4)	**69**	(28.5)	**38**	(15.7)	**22**	(7.9)	22	(13.0)	**54**	(11.4)	**58**	(20.7)
	Belgium	**19**	(5.5)	**82**	(10.9)	**45**	(8.3)	**89**	(10.5)	**61**	(12.7)	7	(5.0)	**46**	(10.0)	**26**	(8.0)	**54**	(8.1)	**43**	(10.3)
	Canada	**35**	(5.3)	**13**	(5.9)	-0	(4.0)	**14**	(5.8)	-5	(6.1)	**33**	(4.8)	2	(5.5)	-3	(3.6)	**13**	(5.3)	-1	(5.5)
	Chile	c	c	c	c	c	c	m	m	c	c	c	c	c	c	c	c	m	m	c	c
	Czech Republic	c	c	c	c	22	(16.9)	-3	(21.0)	c	c	c	c	c	c	9	(16.1)	-0	(19.9)	c	c
	Denmark	**47**	(20.5)	**62**	(5.7)	**39**	(6.2)	**83**	(8.4)	**61**	(11.0)	36	(19.8)	**30**	(5.1)	**15**	(5.8)	**53**	(7.8)	**41**	(11.3)
	Estonia	**36**	(9.5)	**52**	(14.9)	**34**	(6.8)	c	c	c	c	**31**	(9.5)	**44**	(14.8)	**33**	(6.2)	c	c	c	c
	Finland	**40**	(8.0)	**63**	(16.9)	c	c	**93**	(19.5)	c	c	**47**	(7.8)	**58**	(17.3)	c	c	**76**	(17.6)	c	c
	France	**73**	(15.4)	**76**	(14.0)	**39**	(9.9)	**78**	(18.7)	**58**	(21.8)	**56**	(12.5)	**31**	(14.2)	17	(9.0)	35	(18.7)	**41**	(17.9)
	Germany	21	(13.3)	**66**	(8.3)	**30**	(7.9)	**63**	(8.2)	**34**	(11.4)	17	(12.6)	**30**	(8.2)	6	(7.5)	**39**	(7.8)	10	(11.0)
	Greece	**78**	(17.4)	c	c	**34**	(9.9)	**87**	(20.1)	**50**	(16.3)	**61**	(15.4)	c	c	**22**	(9.5)	**57**	(21.8)	25	(15.3)
	Hungary	c	c	c	c	**-31**	(12.8)	c	c	2	(11.8)	c	c	c	c	-22	(11.2)	c	c	-4	(10.5)
	Iceland	**54**	(16.1)	c	c	c	c	**80**	(14.7)	c	c	**57**	(15.8)	c	c	c	c	**55**	(15.3)	c	c
	Ireland	-5	(14.1)	c	c	-9	(13.9)	**59**	(11.4)	8	(10.0)	-0	(12.0)	c	c	-7	(13.5)	**57**	(10.9)	**20**	(9.0)
	Israel	**40**	(20.3)	**-39**	(9.5)	-2	(6.5)	8	(9.5)	20	(12.2)	**37**	(17.4)	**-48**	(10.3)	**-16**	(5.5)	-16	(8.6)	-16	(13.4)
	Italy	**53**	(3.8)	**62**	(12.4)	**34**	(10.3)	**95**	(5.3)	**73**	(9.9)	**34**	(3.4)	**43**	(12.9)	**21**	(8.9)	**71**	(5.1)	**59**	(9.2)
	Japan	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	c	c	m	m	c	c	m	m	m	m	c	c	m	m	c	c	m	m	m	m
	Luxembourg	17	(11.6)	**77**	(12.6)	15	(14.1)	**83**	(13.8)	-23	(13.6)	9	(11.9)	**30**	(13.2)	5	(13.9)	**40**	(14.0)	-23	(13.3)
	Mexico	**79**	(7.6)	c	c	**85**	(10.2)	**148**	(14.7)	**82**	(8.4)	**54**	(7.4)	c	c	**72**	(10.4)	**122**	(13.8)	**71**	(7.8)
	Netherlands	6	(23.7)	**54**	(11.7)	**40**	(11.7)	**46**	(12.8)	34	(21.1)	1	(22.1)	14	(12.2)	15	(11.0)	12	(12.0)	0	(16.8)
	New Zealand	**98**	(9.4)	**60**	(13.7)	14	(9.4)	**38**	(6.5)	**-23**	(6.0)	**75**	(9.9)	**40**	(11.9)	4	(6.4)	**36**	(5.9)	-7	(5.6)
	Norway	**44**	(10.0)	**56**	(9.8)	25	(12.9)	**69**	(7.6)	c	c	**44**	(9.0)	**39**	(8.9)	17	(10.8)	**43**	(7.5)	c	c
	Poland	c	c	m	m	m	m	m	m	c	c	c	c	m	m	m	m	m	m	c	c
	Portugal	-1	(14.6)	c	c	7	(9.2)	**38**	(10.7)	**30**	(11.5)	6	(13.3)	c	c	7	(8.0)	**39**	(9.9)	**30**	(10.5)
	Slovak Republic	**71**	(12.3)	c	c	c	c	c	c	c	c	**49**	(9.5)	c	c	c	c	c	c	c	c
	Slovenia	24	(14.7)	**50**	(6.9)	**23**	(8.4)	**77**	(11.5)	c	c	18	(14.4)	**24**	(7.0)	7	(8.7)	**41**	(12.0)	c	c
	Spain	-0	(4.0)	**30**	(13.9)	23	(11.9)	**74**	(5.8)	**52**	(4.8)	-0	(4.6)	23	(14.4)	16	(12.6)	**59**	(5.6)	**38**	(4.3)
	Sweden	**55**	(19.1)	**64**	(8.4)	**36**	(10.3)	**94**	(13.4)	c	c	**43**	(16.9)	**37**	(7.8)	**23**	(9.9)	**60**	(11.4)	c	c
	Switzerland	**26**	(7.7)	**51**	(4.8)	**19**	(5.2)	**81**	(6.0)	9	(10.7)	**25**	(6.7)	**24**	(5.0)	5	(7.1)	**52**	(5.7)	14	(8.4)
	Turkey	**59**	(12.1)	c	c	c	c	c	c	c	c	**30**	(12.1)	c	c	c	c	c	c	c	c
	United Kingdom	**68**	(11.5)	**30**	(10.2)	-3	(9.2)	**43**	(10.6)	**31**	(11.7)	**62**	(11.0)	**16**	(7.8)	-1	(8.2)	**26**	(8.4)	**27**	(11.4)
	United States	**55**	(14.5)	**34**	(7.6)	11	(7.8)	**31**	(8.4)	-6	(11.7)	**28**	(13.0)	-10	(6.6)	-5	(6.1)	-8	(6.4)	-19	(10.5)
	OECD average	**43**	(2.6)	**47**	(2.3)	**21**	(2.0)	**65**	(2.4)	**29**	(2.9)	**34**	(2.4)	**23**	(2.3)	**10**	(1.9)	**41**	(2.3)	**19**	(2.5)
Partners	Albania	22	(19.9)	m	m	c	c	c	c	c	c	22	(15.2)	m	m	c	c	c	c	c	c
	Argentina	c	c	c	c	**28**	(13.7)	c	c	27	(26.9)	c	c	c	c	-1	(12.9)	c	c	9	(26.7)
	Azerbaijan	**-24**	(11.0)	c	c	2	(10.6)	c	c	c	c	-15	(8.5)	c	c	3	(10.1)	c	c	c	c
	Brazil	**54**	(12.4)	c	c	**94**	(19.2)	c	c	**112**	(21.0)	**65**	(12.7)	c	c	**91**	(17.4)	c	c	**97**	(25.0)
	Bulgaria	**103**	(10.5)	c	c	c	c	c	c	c	c	**61**	(10.4)	c	c	c	c	c	c	c	c
	Colombia	45	(25.8)	m	m	c	c	m	m	c	c	**67**	(23.7)	m	m	c	c	m	m	c	c
	Croatia	9	(21.6)	c	c	**13**	(5.3)	c	c	**26**	(8.3)	6	(17.5)	c	c	7	(4.8)	c	c	12	(8.1)
	Dubai (UAE)	**-29**	(5.5)	**-78**	(5.2)	**-94**	(6.0)	**-102**	(4.2)	**-143**	(4.7)	3	(5.3)	**-64**	(5.1)	**-81**	(5.9)	**-80**	(4.1)	**-110**	(4.9)
	Hong Kong-China	**73**	(9.2)	**43**	(15.2)	-6	(3.7)	**55**	(12.7)	**20**	(6.0)	**89**	(8.1)	**43**	(14.8)	**-18**	(3.3)	**37**	(12.4)	3	(5.7)
	Indonesia	9	(6.4)	m	m	m	m	c	c	c	c	-6	(4.7)	m	m	m	m	c	c	c	c
	Jordan	20	(12.7)	19	(19.4)	**-15**	(5.7)	c	c	-12	(9.0)	25	(14.3)	28	(20.9)	-9	(5.1)	c	c	-0	(8.7)
	Kazakhstan	**-17**	(8.0)	8	(18.8)	**-29**	(13.2)	-23	(18.9)	**28**	(9.6)	-9	(6.6)	-0	(19.5)	**-30**	(12.1)	-21	(17.1)	**18**	(7.5)
	Kyrgyzstan	**-52**	(6.5)	c	c	**-65**	(23.9)	c	c	c	c	**-30**	(5.4)	c	c	**-56**	(20.3)	c	c	c	c
	Latvia	16	(9.6)	c	c	4	(9.4)	c	c	c	c	7	(8.1)	c	c	7	(7.3)	c	c	c	c
	Liechtenstein	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Lithuania	**41**	(7.9)	c	c	**38**	(13.9)	c	c	c	c	**32**	(7.2)	c	c	**30**	(13.9)	c	c	c	c
	Macao-China	**42**	(4.3)	**41**	(4.7)	-2	(2.7)	**45**	(9.2)	-5	(3.4)	**54**	(4.3)	**47**	(4.7)	**-8**	(2.9)	**50**	(9.3)	-9	(3.5)
	Montenegro	**48**	(14.6)	c	c	**-29**	(10.2)	c	c	-4	(8.0)	**36**	(15.4)	c	c	-17	(10.0)	c	c	-2	(8.0)
	Panama	**68**	(21.1)	c	c	-27	(34.9)	c	c	14	(42.0)	**56**	(12.6)	c	c	-12	(37.1)	c	c	25	(36.9)
	Peru	**109**	(8.3)	m	m	c	c	c	c	c	c	**61**	(8.7)	m	m	c	c	c	c	c	c
	Qatar	**10**	(2.8)	**-54**	(5.4)	**-58**	(3.0)	**-134**	(4.3)	**-113**	(3.5)	**22**	(2.8)	**-52**	(5.4)	**-60**	(3.1)	**-125**	(4.4)	**-104**	(3.6)
	Romania	**67**	(13.2)	m	m	c	c	c	c	c	c	**48**	(10.9)	m	m	c	c	c	c	c	c
	Russian Federation	**47**	(9.6)	**79**	(26.1)	**22**	(6.1)	**76**	(14.4)	9	(7.4)	**32**	(7.7)	**63**	(27.3)	**18**	(6.0)	**61**	(13.6)	6	(6.9)
	Serbia	**37**	(12.3)	c	c	**-23**	(7.0)	c	c	-3	(7.3)	20	(12.1)	c	c	**-23**	(6.7)	c	c	-11	(7.1)
	Shanghai-China	**65**	(12.1)	m	m	c	c	c	c	c	c	**41**	(10.4)	m	m	c	c	c	c	c	c
	Singapore	**58**	(3.0)	**35**	(7.5)	**-30**	(13.3)	**46**	(5.7)	2	(9.5)	**28**	(3.2)	10	(7.2)	-20	(12.8)	**37**	(5.6)	7	(9.2)
	Chinese Taipei	**38**	(4.5)	c	c	c	c	c	c	c	c	**22**	(4.3)	c	c	c	c	c	c	c	c
	Thailand	**18**	(4.4)	m	m	m	m	m	m	m	m	-2	(3.6)	m	m	m	m	m	m	m	m
	Trinidad and Tobago	**74**	(14.9)	c	c	7	(19.8)	c	c	2	(26.8)	**70**	(15.0)	c	c	13	(19.3)	c	c	-0	(18.7)
	Tunisia	c	c	m	m	c	c	c	c	c	c	c	c	m	m	c	c	c	c	c	c
	Uruguay	**47**	(9.0)	c	c	c	c	c	c	c	c	**25**	(8.4)	c	c	c	c	c	c	c	c

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: *PISA 2009 Database.*

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B3.2 Performance difference in reading with non-immigrant students adjusting for mother's educational attainment

		Second-generation students		First-generation students		Mother's education: Lower secondary (ISCED 2)		Mother's education: Upper secondary (ISCED 3-4)		Mother's education: Tertiary (ISCED 5-6)	
		Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
OECD	Australia	**17.4**	(6.4)	1.5	(5.6)	5.3	(10.3)	**39.9**	(9.8)	**75.5**	(10.1)
	Austria	**-38.7**	(7.5)	**-78.4**	(12.4)	**29.2**	(14.5)	**69.5**	(14.8)	**98.3**	(15.2)
	Belgium	**-46.4**	(7.5)	**-56.1**	(7.9)	**39.3**	(8.2)	**33.2**	(6.9)	**75.5**	(7.3)
	Canada	0.3	(3.6)	-7.3	(4.5)	17.7	(9.5)	**33.9**	(8.7)	**57.6**	(8.8)
	Chile	c	c	c	c	c	c	c	c	c	c
	Czech Republic	-21.4	(14.9)	-5.0	(17.2)	c	c	c	c	c	c
	Denmark	**-36.7**	(5.1)	**-65.2**	(7.3)	4.0	(7.4)	**35.9**	(7.4)	**56.7**	(7.2)
	Estonia	**-35.3**	(6.8)	**-36.7**	(17.3)	c	c	c	c	c	c
	Finland	**-40.5**	(13.1)	**-82.4**	(16.4)	**22.9**	(9.4)	**31.0**	(7.8)	**60.4**	(7.3)
	France	**-29.3**	(9.1)	**-56.9**	(14.0)	**24.0**	(11.8)	**53.8**	(12.4)	**83.6**	(12.8)
	Germany	**-37.4**	(6.6)	**-56.3**	(7.3)	2.3	(10.4)	**55.6**	(9.9)	**77.8**	(10.6)
	Greece	**-39.5**	(12.5)	**-64.1**	(13.3)	6.5	(8.5)	**43.5**	(8.4)	**63.8**	(9.0)
	Hungary	m	m	m	m	m	m	m	m	m	m
	Iceland	c	c	**-85.2**	(14.8)	30.9	(19.4)	**48.4**	(19.8)	**71.6**	(19.1)
	Ireland	6.6	(13.8)	**-44.8**	(7.5)	15.3	(9.7)	**46.5**	(8.6)	**70.6**	(9.3)
	Israel	**12.1**	(5.9)	-11.9	(7.5)	**17.0**	(8.4)	**67.8**	(8.8)	**123.9**	(9.1)
	Italy	**-39.6**	(8.1)	**-77.0**	(5.2)	**32.3**	(5.3)	**71.3**	(6.1)	**72.1**	(6.4)
	Japan	c	c	c	c	c	c	c	c	c	c
	Korea	c	c	m	m	c	c	c	c	c	c
	Luxembourg	**-31.6**	(7.6)	-28.9	(17.5)	**28.6**	(7.1)	**52.6**	(9.1)	**72.2**	(13.9)
	Mexico	**-80.7**	(12.3)	**-93.6**	(11.1)	**28.8**	(2.4)	**54.8**	(3.4)	**57.7**	(3.1)
	Netherlands	**-34.7**	(9.1)	**-24.5**	(11.5)	**20.4**	(7.9)	**28.5**	(8.1)	**46.0**	(8.5)
	New Zealand	**-19.3**	(8.3)	**-17.1**	(4.9)	**49.4**	(12.0)	**64.4**	(10.9)	**98.2**	(11.3)
	Norway	**-36.7**	(8.9)	**-46.3**	(8.1)	**62.4**	(12.6)	**66.1**	(11.1)	**88.0**	(11.1)
	Poland	m	m	c	c	c	c	c	c	c	c
	Portugal	**-17.5**	(8.8)	**-49.4**	(8.6)	**18.4**	(3.7)	**46.3**	(4.3)	**69.7**	(5.7)
	Slovak Republic	c	c	c	c	c	c	c	c	c	c
	Slovenia	**-26.7**	(6.7)	**-57.1**	(12.2)	10.5	(39.6)	40.5	(38.9)	**79.7**	(38.6)
	Spain	**-28.0**	(10.4)	**-62.1**	(4.0)	**16.3**	(3.7)	**36.9**	(3.8)	**59.7**	(4.4)
	Sweden	**-36.2**	(6.7)	**-71.0**	(10.7)	**37.9**	(11.6)	**70.3**	(10.7)	**84.9**	(11.0)
	Switzerland	**-28.2**	(4.5)	**-46.2**	(6.7)	12.6	(8.2)	**43.8**	(9.0)	**60.6**	(9.9)
	Turkey	c	c	c	c	c	c	c	c	c	c
	United Kingdom	-2.3	(8.4)	**-33.9**	(8.2)	**29.3**	(11.2)	**56.5**	(11.0)	**80.8**	(11.3)
	United States	-4.6	(5.6)	-6.6	(7.0)	-4.6	(7.0)	**23.5**	(6.8)	**61.5**	(8.0)
	OECD average	**-26.0**	(1.7)	**-46.8**	(2.1)	**22.3**	(2.5)	**48.6**	(2.5)	**73.8**	(2.5)
Partners	Albania	c	c	c	c	c	c	c	c	c	c
	Argentina	-22.9	(12.9)	-44.5	(25.6)	**36.1**	(6.9)	**49.4**	(6.5)	**69.6**	(7.0)
	Azerbaijan	-4.4	(9.4)	15.1	(13.2)	19.4	(11.0)	17.7	(10.3)	**42.8**	(10.6)
	Brazil	**-94.1**	(19.5)	**-106.3**	(22.5)	**25.0**	(3.2)	**49.6**	(3.7)	**56.7**	(7.4)
	Bulgaria	c	c	c	c	c	c	c	c	c	c
	Colombia	c	c	c	c	c	c	c	c	c	c
	Croatia	-8.0	(5.9)	**-20.4**	(8.4)	0.1	(13.2)	**44.4**	(13.6)	**55.7**	(14.3)
	Dubai (UAE)	**56.6**	(8.9)	**83.5**	(8.9)	**22.7**	(7.4)	**47.5**	(8.1)	**81.4**	(9.4)
	Hong Kong-China	**13.5**	(3.6)	**-15.7**	(5.6)	5.3	(3.5)	**20.8**	(3.8)	**36.6**	(8.6)
	Indonesia	m	m	c	c	c	c	c	c	c	c
	Jordan	**11.6**	(5.8)	1.9	(8.9)	**18.5**	(4.2)	**31.2**	(4.5)	**51.6**	(5.6)
	Kazakhstan	**27.7**	(13.1)	**-19.2**	(7.9)	c	c	c	c	c	c
	Kyrgyzstan	**41.8**	(19.5)	13.5	(18.8)	c	c	c	c	c	c
	Latvia	-14.5	(8.5)	c	c	c	c	c	c	c	c
	Liechtenstein	-8.3	(17.2)	**-24.6**	(12.0)	c	c	c	c	c	c
	Lithuania	**-25.5**	(12.3)	c	c	c	c	c	c	c	c
	Macao-China	7.8	(4.7)	8.3	(6.9)	**5.8**	(2.8)	**10.0**	(4.6)	13.2	(9.5)
	Montenegro	19.8	(10.9)	-5.4	(9.7)	20.4	(12.1)	**66.5**	(15.0)	**86.1**	(17.5)
	Panama	22.2	(27.2)	-57.3	(29.4)	12.7	(7.4)	**35.0**	(8.3)	**59.5**	(10.7)
	Peru	c	c	c	c	c	c	c	c	c	c
	Qatar	**61.1**	(8.2)	**119.3**	(10.9)	13.1	(7.5)	**20.3**	(7.6)	**42.2**	(9.7)
	Romania	c	c	c	c	c	c	c	c	c	c
	Russian Federation	**-23.7**	(6.3)	**-14.7**	(6.8)	c	c	c	c	c	c
	Serbia	**21.4**	(7.3)	4.8	(6.9)	13.6	(15.7)	**50.3**	(17.1)	**56.5**	(17.6)
	Shanghai-China	c	c	c	c	c	c	c	c	c	c
	Singapore	**15.9**	(7.0)	**-18.9**	(5.5)	10.0	(7.2)	**49.4**	(4.7)	**76.2**	(6.5)
	Chinese Taipei	c	c	c	c	c	c	c	c	c	c
	Thailand	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	-8.5	(25.4)	10.5	(29.5)	18.6	(10.2)	**29.0**	(6.8)	**51.2**	(10.5)
	Tunisia	c	c	c	c	c	c	c	c	c	c
	Uruguay	c	c	c	c	c	c	c	c	c	c

Note: Coefficient of OLS regression with dummies. Values that are statistically significant are indicated in bold (see Annex A). Note reference category for mothers' education is primary education or less.

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B3.3 Performance difference in reading with non-immigrant students adjusting for mother's educational attainment and language spoken at home

		Second-generation students		First-generation students		Does not speak the assessment language at home		Mother's education: Lower secondary (ISCED 2)		Mother's education: Upper secondary (ISCED 3-4)		Mother's education: Tertiary (ISCED 5-6)	
		Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
OECD	Australia	**22.5**	(5.4)	7.6	(4.6)	**-14.6**	(7.1)	0.1	(10.6)	**34.3**	(10.4)	**70.7**	(10.7)
	Austria	**-24.8**	(10.8)	**-58.8**	(14.7)	-14.8	(10.0)	**34.5**	(15.1)	**76.3**	(15.4)	**105.1**	(15.8)
	Belgium	**-38.9**	(8.3)	**-50.6**	(9.1)	**-15.3**	(5.3)	**38.5**	(8.5)	**33.4**	(7.3)	**74.7**	(7.7)
	Canada	**7.8**	(3.6)	6.0	(4.7)	**-18.3**	(3.5)	18.3	(9.4)	**33.6**	(8.6)	**57.2**	(8.7)
	Chile	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	-5.2	(16.1)	12.8	(22.6)	-7.3	(21.0)	c	c	c	c	c	c
	Denmark	**-22.0**	(5.8)	**-49.2**	(8.8)	**-19.5**	(7.0)	3.2	(7.7)	**34.7**	(7.6)	**55.7**	(7.5)
	Estonia	**-33.0**	(6.8)	-28.7	(18.0)	**-33.3**	(7.9)	c	c	c	c	c	c
	Finland	-18.0	(14.4)	**-53.5**	(17.7)	**-36.7**	(7.5)	**22.4**	(9.4)	**30.4**	(7.7)	**59.9**	(7.3)
	France	-13.4	(9.1)	**-28.0**	(13.6)	**-38.1**	(10.6)	19.0	(11.9)	**47.4**	(12.4)	**77.9**	(13.1)
	Germany	**-19.9**	(6.9)	**-33.2**	(9.6)	**-22.9**	(8.0)	-6.3	(11.7)	**47.1**	(10.6)	**71.3**	(11.3)
	Greece	**-33.4**	(12.4)	**-39.7**	(13.3)	**-42.6**	(13.1)	4.8	(8.5)	**40.7**	(8.2)	**61.9**	(8.8)
	Hungary	m	m	m	m	m	m	m	m	m	m	m	m
	Iceland	c	c	**-47.7**	(18.0)	**-44.7**	(16.4)	29.9	(19.3)	**48.4**	(19.8)	**72.2**	(19.0)
	Ireland	7.5	(13.7)	**-32.6**	(9.1)	-20.6	(11.5)	17.1	(9.8)	**47.9**	(8.7)	**72.4**	(9.4)
	Israel	**18.3**	(6.6)	6.4	(11.8)	-15.9	(12.0)	17.0	(8.8)	**70.6**	(9.2)	**127.2**	(9.6)
	Italy	**-22.1**	(7.6)	**-54.3**	(5.4)	**-40.5**	(3.6)	**27.2**	(4.8)	**62.7**	(5.0)	**64.0**	(5.3)
	Japan	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	c	c	m	m	c	c	c	c	c	c	c	c
	Luxembourg	**-36.4**	(5.1)	**-32.3**	(13.3)	**-46.5**	(12.0)	**25.3**	(6.8)	**48.2**	(8.0)	**63.8**	(10.3)
	Mexico	**-78.4**	(10.9)	**-70.4**	(6.8)	**-62.9**	(7.5)	**26.1**	(2.3)	**52.3**	(3.4)	**56.3**	(3.0)
	Netherlands	**-31.2**	(10.5)	-17.6	(14.1)	-6.2	(11.1)	**22.5**	(8.5)	**29.0**	(8.8)	**47.0**	(9.1)
	New Zealand	1.2	(7.6)	**13.8**	(5.2)	**-63.3**	(6.5)	**41.8**	(11.8)	**55.6**	(10.8)	**90.4**	(11.3)
	Norway	-12.0	(11.6)	-13.4	(11.7)	**-39.0**	(9.1)	**60.9**	(12.7)	**64.1**	(11.2)	**85.6**	(11.2)
	Poland	m	m	c	c	c	c	c	c	c	c	c	c
	Portugal	-14.0	(9.4)	**-42.5**	(10.3)	-12.3	(11.8)	**19.0**	(3.8)	**46.6**	(4.3)	**70.1**	(5.7)
	Slovak Republic	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	-12.8	(7.7)	**-42.8**	(13.4)	**-19.2**	(9.0)	9.3	(40.2)	38.9	(39.4)	**78.7**	(39.0)
	Spain	**-26.3**	(10.5)	**-60.8**	(4.1)	-4.2	(4.4)	**16.0**	(3.8)	**36.9**	(3.9)	**59.0**	(4.4)
	Sweden	-16.4	(9.4)	**-41.9**	(13.1)	**-34.4**	(10.0)	**33.4**	(12.2)	**65.8**	(11.5)	**80.5**	(11.8)
	Switzerland	-6.2	(5.2)	**-23.4**	(6.7)	**-32.4**	(4.8)	7.5	(7.9)	**36.9**	(8.6)	**53.6**	(9.4)
	Turkey	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	4.8	(8.7)	-15.0	(9.0)	**-26.0**	(7.9)	**25.0**	(11.2)	**50.7**	(10.8)	**75.1**	(11.3)
	United States	3.3	(6.3)	5.5	(8.5)	**-18.2**	(6.5)	-8.0	(6.9)	**17.8**	(6.8)	**55.0**	(7.9)
	OECD average	**-15.3**	(1.8)	**-29.0**	(2.3)	**-27.8**	(1.9)	**20.2**	(2.5)	**46.0**	(2.5)	**71.4**	(2.5)
Partners	Albania	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	-3.6	(14.4)	-21.4	(26.5)	**-75.1**	(18.7)	**35.3**	(6.9)	**50.2**	(6.4)	**71.4**	(6.9)
	Azerbaijan	-5.9	(9.4)	14.3	(12.9)	**20.0**	(9.4)	19.5	(10.8)	17.5	(10.3)	**42.1**	(10.5)
	Brazil	**-93.0**	(19.8)	**-100.5**	(23.1)	**-54.1**	(11.5)	**24.8**	(3.3)	**50.1**	(3.7)	**57.6**	(7.4)
	Bulgaria	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	c	c	c	c	c	c	c	c	c	c	c	c
	Croatia	-7.7	(5.9)	**-19.4**	(8.5)	-12.1	(19.4)	1.1	(13.4)	**45.4**	(13.8)	**57.2**	(14.4)
	Dubai (UAE)	**60.0**	(8.7)	**86.1**	(8.4)	**-26.0**	(7.3)	**31.5**	(8.2)	**60.9**	(8.9)	**96.1**	(9.8)
	Hong Kong-China	**13.6**	(3.6)	-5.9	(4.9)	**-59.2**	(9.9)	3.7	(3.4)	**20.0**	(3.6)	**43.2**	(6.0)
	Indonesia	m	m	c	c	c	c	c	c	c	c	c	c
	Jordan	**12.2**	(5.7)	5.9	(8.6)	**-24.8**	(11.4)	**17.8**	(4.2)	**31.0**	(4.6)	**52.6**	(5.4)
	Kazakhstan	**28.0**	(13.1)	**-19.1**	(7.8)	**16.8**	(6.4)	c	c	c	c	c	c
	Kyrgyzstan	**45.6**	(20.3)	16.2	(19.6)	**41.2**	(6.5)	c	c	c	c	c	c
	Latvia	-11.4	(8.4)	c	c	-15.2	(8.9)	c	c	c	c	c	c
	Liechtenstein	-0.8	(18.7)	-9.4	(14.8)	**-37.5**	(17.0)	c	c	c	c	c	c
	Lithuania	-14.0	(12.9)	c	c	**-31.9**	(7.7)	c	c	c	c	c	c
	Macao-China	3.8	(4.3)	3.6	(6.1)	**-48.5**	(14.2)	**6.9**	(2.8)	**16.0**	(4.4)	**25.3**	(8.2)
	Montenegro	**20.9**	(10.4)	-0.3	(9.1)	**-41.7**	(13.3)	18.0	(12.3)	**63.7**	(13.9)	**82.6**	(16.4)
	Panama	53.6	(30.1)	-32.6	(27.1)	**-58.5**	(12.0)	11.6	(7.9)	**33.5**	(7.8)	**57.7**	(10.2)
	Peru	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	**60.9**	(8.3)	**120.7**	(11.2)	-5.5	(12.1)	14.0	(7.5)	**21.2**	(7.7)	**44.8**	(10.0)
	Romania	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	**-20.9**	(6.2)	-9.6	(7.0)	**-40.7**	(9.5)	c	c	c	c	c	c
	Serbia	**21.7**	(7.3)	5.3	(7.1)	-20.1	(10.3)	10.8	(16.0)	**47.2**	(17.4)	**53.3**	(17.8)
	Shanghai-China	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	**21.9**	(7.1)	-2.9	(5.8)	**-43.1**	(4.0)	6.9	(7.6)	**35.9**	(4.6)	**51.4**	(6.2)
	Chinese Taipei	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	-7.2	(26.2)	34.8	(29.9)	**-68.8**	(14.3)	18.7	(10.3)	**29.4**	(6.9)	**53.0**	(10.5)
	Tunisia	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	c	c	c	c	c	c	c	c	c	c	c	c

Note: Coefficient of OLS regression with dummies. Values that are statistically significant are indicated in bold (see Annex A). Note reference category for mothers' education is primary education or less. Does not speak the language of assessment at home is defined for both immigrant and non-immigrant students, i.e. it is possible to have a value of 1 on this dummy variable and not be an immigrant student.

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Differential score if attending pre-primary school for at least one year, non-immigrants and second-generation immigrants

Table B3.4a *Results based on students' self-reports*

		Non-immigrant students, reading score				Second-generation students, reading score				Difference in reading score, between those attending and not attending pre-primary education			
		Not attending pre-primary		Attending pre-primary		Not attending pre-primary		Attending pre-primary		Non-immigrant students		Second-generation students	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean dif.	S.E.	Mean dif.	S.E.
OECD	Australia	506	(2.7)	523	(3.0)	521	(7.0)	545	(8.9)	**17**	(2.7)	**24**	(8.6)
	Austria	459	(7.5)	488	(5.6)	410	(11.5)	433	(7.5)	**29**	(5.4)	**23**	(11.4)
	Belgium	445	(6.9)	528	(4.0)	c	c	468	(7.9)	**83**	(6.3)	c	c
	Canada	517	(1.8)	542	(2.1)	511	(4.4)	534	(4.5)	**24**	(2.3)	**24**	(5.3)
	Chile	m	m	m	m	m	m	m	m	m	m	m	m
	Czech Republic	474	(6.4)	485	(4.4)	c	c	466	(16.1)	**10**	(4.9)	c	c
	Denmark	483	(3.2)	510	(2.4)	432	(5.8)	455	(5.2)	**27**	(3.1)	**23**	(6.5)
	Estonia	497	(4.3)	507	(3.4)	462	(12.5)	471	(6.7)	**10**	(3.4)	9	(14.1)
	Finland	527	(2.7)	544	(2.3)	c	c	491	(14.1)	**17**	(2.9)	c	c
	France	451	(9.9)	511	(6.0)	c	c	455	(9.9)	**59**	(9.2)	c	c
	Germany	474	(6.1)	521	(4.3)	437	(11.9)	469	(7.1)	**47**	(4.7)	**32**	(11.3)
	Greece	472	(5.7)	497	(4.4)	432	(17.9)	479	(11.8)	**25**	(4.5)	47	(24.2)
	Hungary	m	m	m	m	m	m	m	m	m	m	m	m
	Iceland	479	(7.5)	506	(3.2)	m	m	c	c	**27**	(8.2)	c	c
	Ireland	503	(4.0)	502	(4.6)	506	(17.5)	c	c	-0	(3.7)	5	(24.6)
	Israel	429	(7.3)	501	(4.8)	470	(13.9)	494	(7.1)	**72**	(5.9)	**24**	(11.9)
	Italy	454	(4.2)	497	(2.8)	412	(17.9)	461	(7.6)	**43**	(3.6)	**49**	(21.4)
	Japan	m	m	m	m	m	m	m	m	m	m	m	m
	Korea	m	m	m	m	m	m	m	m	m	m	m	m
	Luxembourg	464	(13.9)	498	(9.1)	432	(15.8)	440	(10.5)	**34**	(7.8)	8	(8.9)
	Mexico	414	(2.6)	437	(2.2)	338	(11.1)	342	(16.4)	**23**	(2.0)	4	(16.8)
	Netherlands	523	(11.2)	518	(6.2)	461	(19.0)	473	(8.4)	-6	(10.3)	12	(20.6)
	New Zealand	510	(4.9)	533	(3.9)	484	(13.9)	511	(9.6)	**23**	(4.6)	**27**	(13.1)
	Norway	491	(4.3)	511	(2.6)	c	c	470	(7.9)	**20**	(4.5)	c	c
	Poland	m	m	m	m	m	m	m	m	m	m	m	m
	Portugal	475	(4.1)	504	(3.9)	455	(12.0)	492	(12.3)	**29**	(3.5)	**37**	(11.4)
	Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m
	Slovenia	471	(5.8)	499	(5.7)	447	(12.7)	451	(7.5)	**28**	(3.7)	4	(14.6)
	Spain	459	(3.8)	493	(2.3)	441	(15.4)	468	(8.7)	**34**	(3.6)	27	(16.4)
	Sweden	495	(3.4)	514	(3.0)	442	(8.9)	468	(8.0)	**19**	(3.4)	**26**	(11.8)
	Switzerland	513	(6.2)	514	(3.9)	456	(8.5)	477	(6.7)	1	(5.5)	**21**	(10.0)
	Turkey	m	m	m	m	m	m	m	m	m	m	m	m
	United Kingdom	482	(3.2)	509	(3.3)	475	(11.0)	502	(9.6)	**27**	(2.9)	**27**	(12.0)
	United States	496	(5.3)	509	(4.7)	470	(6.1)	491	(6.6)	**13**	(3.9)	**21**	(6.5)
	OECD average	480	(1.2)	507	(0.8)	452	(2.8)	472	(1.9)	**27**	(1.0)	**23**	(3.2)
Partners	Albania	m	m	m	m	m	m	m	m	m	m	m	m
	Argentina	374	(6.4)	418	(6.5)	340	(14.3)	382	(17.2)	**44**	(6.0)	42	(23.6)
	Azerbaijan	360	(4.1)	384	(5.6)	354	(8.6)	c	c	**25**	(5.3)	32	(22.2)
	Brazil	404	(3.0)	441	(4.5)	324	(22.1)	c	c	**38**	(3.1)	-5	(39.3)
	Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	m	m	m	m	m
	Croatia	465	(5.0)	491	(5.0)	456	(7.3)	481	(9.6)	**26**	(4.2)	**24**	(9.6)
	Dubai (UAE)	378	(8.8)	414	(6.7)	440	(7.8)	488	(7.7)	**36**	(4.4)	**48**	(6.3)
	Hong Kong-China	473	(9.9)	538	(4.7)	515	(11.6)	544	(4.6)	**66**	(7.8)	**29**	(12.8)
	Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
	Jordan	407	(3.7)	426	(5.1)	416	(7.0)	442	(11.8)	**19**	(4.0)	**25**	(12.3)
	Kazakhstan	380	(4.1)	420	(6.9)	403	(13.1)	447	(15.6)	**40**	(5.8)	**44**	(11.7)
	Kyrgyzstan	307	(3.9)	373	(8.3)	338	(20.9)	c	c	**65**	(6.0)	**78**	(36.1)
	Latvia	478	(3.6)	490	(3.1)	475	(12.9)	471	(10.6)	**12**	(3.4)	-4	(16.7)
	Liechtenstein	c	c	509	(26.2)	c	c	496	(19.1)	c	c	c	c
	Lithuania	458	(3.7)	485	(4.2)	c	c	459	(12.5)	**28**	(3.1)	c	c
	Macao-China	446	(7.5)	488	(8.1)	455	(7.5)	493	(6.0)	**42**	(6.0)	**38**	(4.5)
	Montenegro	401	(8.9)	425	(11.5)	424	(19.3)	441	(18.2)	**24**	(3.6)	17	(19.7)
	Panama	378	(6.5)	408	(9.9)	412	(25.9)	c	c	**30**	(6.4)	-22	(45.3)
	Peru	m	m	m	m	m	m	m	m	m	m	m	m
	Qatar	330	(7.4)	355	(11.2)	380	(7.8)	448	(12.4)	**25**	(3.9)	**68**	(6.3)
	Romania	m	m	m	m	m	m	m	m	m	m	m	m
	Russian Federation	449	(4.7)	471	(3.6)	424	(9.9)	448	(6.2)	**22**	(3.9)	**24**	(11.8)
	Serbia	438	(4.3)	451	(5.1)	465	(10.2)	469	(9.3)	**12**	(4.0)	5	(10.7)
	Shanghai-China	m	m	m	m	m	m	m	m	m	m	m	m
	Singapore	462	(6.8)	532	(4.6)	c	c	548	(8.1)	**70**	(6.7)	c	c
	Chinese Taipei	m	m	m	m	m	m	m	m	m	m	m	m
	Thailand	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	414	(8.3)	432	(7.3)	c	c	c	c	**18**	(4.0)	c	c
	Tunisia	m	m	m	m	m	m	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m	m	m	m	m	m	m

Note: Attending pre-primary is defined as those attending pre-primary school for at least one year. Values that are statistically significant are indicated in bold.

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B3.4b Performance difference in reading with non-immigrant students adjusting for mother's educational attainment, language spoken at home and attendance to pre-primary with second-generation specific effects

		Second-generation students		First-generation students		Does not speak the assessment language at home		Attendance to pre-primary schooling for at least a year		Second-generation student that attended pre-primary schooling for at least a year		Mother's education: Lower secondary (ISCED 2)		Mother's education: Upper secondary (ISCED 3-4)		Mother's education: Tertiary (ISCED 5-6)	
		Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
OECD	Australia	**22.1**	(5.8)	8.9	(4.6)	-13.5	(7.0)	**13.0**	(2.4)	3.5	(8.6)	-2.1	(10.8)	**30.5**	(10.3)	**66.0**	(10.6)
	Austria	-22.9	(16.7)	**-39.8**	(14.4)	-19.0	(10.1)	**25.1**	(6.0)	-0.1	(14.6)	14.9	(13.2)	**51.8**	(13.3)	**80.2**	(13.8)
	Belgium	**-62.9**	(25.2)	**-24.3**	(8.2)	**-13.2**	(4.8)	**69.9**	(6.0)	25.6	(25.7)	**38.8**	(8.6)	**31.2**	(7.7)	**70.0**	(8.1)
	Canada	6.5	(4.8)	5.7	(4.8)	**-18.3**	(3.5)	**21.1**	(2.1)	-2.1	(5.4)	17.8	(9.5)	**28.4**	(8.9)	**49.8**	(9.0)
	Chile	c	c	c	c	c	c	m	m	m	m	m	m	m	m	m	m
	Czech Republic	38.4	(33.1)	2.2	(20.6)	3.2	(17.8)	8.7	(5.0)	-42.8	(35.1)	c	c	c	c	c	c
	Denmark	-15.4	(8.6)	**-43.8**	(9.1)	**-16.4**	(6.9)	**23.6**	(2.9)	-10.3	(9.1)	3.2	(7.7)	**33.9**	(7.7)	**53.7**	(7.5)
	Estonia	**-33.5**	(14.4)	-29.1	(18.0)	**-34.4**	(8.0)	**8.4**	(4.1)	0.4	(15.2)	c	c	c	c	c	c
	Finland	0.3	(29.6)	**-51.3**	(17.9)	**-37.6**	(7.5)	**13.2**	(3.0)	-25.9	(32.4)	**20.4**	(9.1)	**27.1**	(7.6)	**55.5**	(7.1)
	France	-12.4	(23.5)	-18.3	(13.6)	**-32.5**	(9.1)	**43.4**	(8.4)	-6.3	(23.1)	12.6	(12.5)	**38.9**	(13.3)	**69.8**	(13.9)
	Germany	-15.6	(13.2)	**-26.1**	(9.4)	**-24.4**	(8.0)	**34.1**	(5.1)	-2.8	(14.3)	-9.1	(11.8)	**37.5**	(10.8)	**61.1**	(11.4)
	Greece	**-42.5**	(18.8)	**-36.7**	(13.6)	**-39.1**	(13.0)	**19.9**	(3.9)	23.7	(21.3)	2.5	(8.5)	**38.0**	(8.1)	**58.3**	(8.6)
	Hungary	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Iceland	c	c	**-42.6**	(18.0)	**-43.9**	(16.6)	**14.6**	(7.2)	c	c	29.5	(19.1)	**47.5**	(19.6)	**70.9**	(18.8)
	Ireland	2.2	(19.5)	**-30.0**	(9.4)	-21.9	(11.9)	-2.1	(3.4)	c	c	16.3	(9.9)	**47.8**	(8.8)	**72.1**	(9.5)
	Israel	**40.6**	(15.0)	7.7	(10.9)	-13.9	(10.3)	**50.1**	(5.7)	**-33.2**	(15.1)	**17.5**	(8.7)	**56.0**	(9.1)	**107.2**	(9.4)
	Italy	-5.6	(18.3)	**-44.5**	(5.6)	**-38.9**	(3.5)	**34.5**	(3.2)	-14.6	(19.9)	**23.6**	(4.6)	**58.3**	(4.8)	**60.5**	(5.1)
	Japan	c	c	c	c	c	c	m	m	m	m	m	m	m	m	m	m
	Korea	c	c	m	m	c	c	m	m	m	m	m	m	m	m	m	m
	Luxembourg	**-34.0**	(12.6)	**-25.7**	(12.6)	**-45.8**	(11.8)	**19.6**	(6.8)	-0.7	(11.9)	**24.6**	(6.9)	**47.5**	(8.0)	**63.4**	(10.4)
	Mexico	**-75.1**	(13.8)	**-68.1**	(7.0)	**-60.8**	(7.1)	**12.5**	(1.8)	-4.9	(20.1)	**24.8**	(2.3)	**49.9**	(3.3)	**53.9**	(3.0)
	Netherlands	-31.7	(24.3)	-16.8	(13.9)	-5.5	(11.2)	2.0	(9.5)	-1.0	(25.0)	**17.7**	(8.5)	**21.0**	(7.7)	**38.7**	(7.9)
	New Zealand	11.0	(12.0)	**18.0**	(5.2)	**-63.1**	(6.5)	**18.9**	(3.9)	-11.4	(14.1)	**40.6**	(11.8)	**53.8**	(10.9)	**87.3**	(11.3)
	Norway	-34.1	(24.3)	-8.1	(11.9)	**-38.1**	(9.2)	**16.7**	(4.4)	24.0	(20.9)	**57.6**	(12.7)	**60.5**	(11.2)	**80.7**	(11.2)
	Poland	m	m	c	c	c	c	m	m	m	m	c	c	c	c	c	c
	Portugal	-15.1	(12.4)	**-41.0**	(9.5)	-10.1	(10.9)	**16.7**	(3.0)	2.6	(14.0)	**17.7**	(3.8)	**43.3**	(4.2)	**65.0**	(5.4)
	Slovak Republic	c	c	c	c	m	m	m	m	m	m	c	c	c	c	c	c
	Slovenia	-2.8	(13.1)	**-38.5**	(13.9)	-15.9	(9.2)	**19.7**	(4.1)	-17.7	(14.1)	-3.1	(40.8)	21.3	(40.0)	58.8	(39.5)
	Spain	-8.3	(17.0)	**-53.8**	(4.0)	-4.1	(4.4)	**28.6**	(3.4)	-18.0	(16.4)	**14.3**	(3.6)	**34.1**	(3.4)	**56.0**	(4.1)
	Sweden	-16.4	(11.6)	**-38.0**	(12.3)	**-34.3**	(9.4)	**15.0**	(3.3)	5.0	(12.6)	**26.0**	(11.9)	**59.0**	(11.3)	**73.3**	(11.6)
	Switzerland	**-21.3**	(8.6)	**-23.7**	(6.8)	**-31.7**	(5.1)	2.7	(5.3)	**19.4**	(9.1)	5.4	(8.9)	**34.9**	(9.7)	**51.7**	(10.4)
	Turkey	c	c	c	c	m	m	m	m	m	m	m	m	m	m	m	m
	United Kingdom	6.6	(12.9)	-12.2	(9.0)	**-20.4**	(7.4)	**23.0**	(2.8)	-4.0	(14.8)	**25.1**	(10.9)	**50.4**	(10.5)	**74.2**	(11.0)
	United States	-2.6	(7.6)	5.9	(8.6)	**-17.9**	(6.6)	4.7	(3.8)	9.1	(8.4)	-8.3	(6.8)	**16.7**	(6.6)	**53.4**	(7.7)
	OECD average	**-12.5**	(3.4)	**-24.6**	(2.3)	**-26.3**	(1.8)	**20.6**	(0.9)	-3.3	(3.7)	**17.1**	(2.5)	**40.8**	(2.5)	**65.2**	(2.5)
Partners	Albania	c	c	c	c	m	m	m	m	m	m	m	m	m	m	m	m
	Argentina	-7.2	(15.8)	-21.4	(26.0)	**-68.8**	(17.6)	**33.0**	(6.2)	1.1	(23.1)	**30.3**	(6.7)	**44.2**	(6.0)	**63.9**	(6.5)
	Azerbaijan	-7.7	(10.4)	13.0	(12.9)	17.6	(9.1)	**18.0**	(4.9)	c	c	19.6	(10.9)	18.1	(10.3)	**40.8**	(10.5)
	Brazil	**-81.1**	(26.7)	**-106.9**	(29.5)	**-51.6**	(11.8)	**29.3**	(3.1)	c	c	**21.9**	(3.0)	**44.1**	(3.5)	**54.4**	(6.7)
	Bulgaria	c	c	c	c	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	c	c	c	c	m	m	m	m	m	m	m	m	m	m	m	m
	Croatia	-2.9	(7.1)	-14.5	(8.5)	-10.3	(19.8)	**16.7**	(4.0)	-5.2	(9.8)	-0.1	(13.6)	**39.7**	(14.0)	**49.6**	(14.4)
	Dubai (UAE)	**49.8**	(8.5)	**85.9**	(8.2)	**-29.7**	(7.0)	**25.7**	(4.4)	13.7	(7.0)	**29.8**	(8.0)	**56.2**	(8.8)	**87.7**	(9.7)
	Hong Kong-China	**33.3**	(12.2)	2.4	(4.9)	**-52.4**	(9.8)	**47.0**	(6.0)	-21.5	(12.1)	2.7	(3.3)	**18.2**	(3.5)	**40.0**	(6.2)
	Indonesia	m	m	c	c	m	m	m	m	m	m	m	m	m	m	m	m
	Jordan	8.9	(6.6)	3.8	(8.2)	**-26.1**	(12.2)	**15.0**	(4.0)	6.4	(9.9)	**19.6**	(4.3)	**30.4**	(4.5)	**53.5**	(5.2)
	Kazakhstan	**26.6**	(12.9)	**-21.6**	(7.4)	**13.9**	(6.6)	**34.1**	(5.5)	0.6	(12.4)	c	c	c	c	c	c
	Kyrgyzstan	34.3	(23.3)	8.7	(18.6)	**32.8**	(5.8)	**50.7**	(6.7)	c	c	c	c	c	c	c	c
	Latvia	1.7	(12.3)	c	c	-13.4	(8.4)	6.3	(3.2)	-20.6	(15.1)	c	c	c	c	c	c
	Liechtenstein	**-121.1**	(35.1)	-10.4	(14.4)	**-35.5**	(15.2)	c	c	**132.7**	(27.1)	c	c	c	c	c	c
	Lithuania	-34.6	(19.9)	c	c	**-32.4**	(7.6)	**20.4**	(3.6)	23.1	(25.4)	c	c	c	c	c	c
	Macao-China	0.9	(6.8)	6.1	(5.9)	**-43.3**	(14.1)	**30.0**	(4.8)	2.4	(6.9)	**6.2**	(2.7)	**15.2**	(4.3)	**25.1**	(8.1)
	Montenegro	22.6	(15.8)	-1.6	(8.9)	**-41.0**	(14.0)	**14.5**	(6.1)	-8.1	(21.4)	20.9	(12.6)	**59.1**	(14.0)	**75.0**	(15.5)
	Panama	**86.3**	(24.7)	-38.2	(27.9)	**-62.9**	(12.8)	**24.9**	(7.8)	c	c	8.1	(8.5)	**34.8**	(8.2)	**54.7**	(9.5)
	Peru	c	c	c	c	m	m	m	m	m	m	m	m	m	m	m	m
	Qatar	**52.6**	(6.9)	**115.6**	(11.3)	-9.8	(11.8)	**28.7**	(4.9)	**33.0**	(10.5)	10.8	(7.1)	**16.4**	(7.3)	**37.7**	(9.3)
	Romania	c	c	c	c	m	m	m	m	m	m	m	m	m	m	m	m
	Russian Federation	-13.1	(11.2)	-7.7	(6.9)	**-37.9**	(9.2)	**16.8**	(3.6)	-8.0	(12.5)	c	c	c	c	c	c
	Serbia	**24.0**	(9.4)	4.8	(7.1)	**-21.7**	(10.2)	**9.2**	(3.2)	-6.6	(12.8)	14.0	(15.2)	**47.9**	(16.2)	**52.8**	(16.7)
	Shanghai-China	c	c	c	c	m	m	m	m	m	m	m	m	m	m	m	m
	Singapore	20.1	(22.5)	5.5	(5.5)	**-42.2**	(4.0)	**49.0**	(5.4)	2.2	(23.0)	5.5	(7.4)	**33.7**	(4.6)	**50.3**	(6.2)
	Chinese Taipei	c	c	c	c	m	m	m	m	m	m	m	m	m	m	m	m
	Thailand	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	37.6	(41.0)	47.1	(29.8)	**-63.8**	(14.0)	**13.0**	(4.7)	c	c	18.3	(10.2)	**29.9**	(6.8)	**53.4**	(10.3)
	Tunisia	c	c	c	c	c	c	m	m	m	m	m	m	m	m	m	m
	Uruguay	c	c	c	c	m	m	m	m	m	m	m	m	m	m	m	m

Note: Coefficient of OLS regression with dummies. Values that are statistically significant are indicated in bold (see Annex A). Note reference category for mothers' education is primary education or less. Does not speak the language of assessment at home is defined for both immigrant and non-immigrant students, i.e. it is possible to have a value of 1 on this dummy variable and not be an immigrant student. Attending pre-primary is defined as those attending pre-primary school for at least one year.
Source: PISA 2009 Database.
Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 1/3]

Table B3.5 Performance difference in reading among students by immigrant background adjusting for mother's educational attainment, language spoken at home and number of books at home, separate regressions

		Second-generation students									
		Over 100 books at home		Does not speak the assessment language at home		Mother's education: Lower secondary (ISCED 2)		Mother's education: Upper secondary (ISCED 3-4)		Mother's education: Tertiary (ISCED 5-6)	
		Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
OECD	Australia	**41.7**	(6.5)	1.4	(7.7)	10.2	(14.4)	15.9	(16.1)	**43.6**	(16.2)
	Austria	**39.1**	(14.8)	-0.4	(12.0)	**38.1**	(15.8)	**60.1**	(14.9)	**73.7**	(19.9)
	Belgium	**62.2**	(12.7)	**-25.6**	(10.6)	**44.8**	(19.9)	15.2	(16.1)	**38.1**	(16.3)
	Canada	**41.5**	(5.7)	-7.1	(5.3)	8.4	(15.4)	8.1	(11.8)	15.0	(12.4)
	Chile	c	c	c	c	c	c	c	c	c	c
	Czech Republic	70.6	(39.0)	c	c	c	c	c	c	c	c
	Denmark	**40.2**	(11.5)	-13.8	(8.6)	10.4	(10.3)	**33.9**	(10.1)	**28.7**	(12.7)
	Estonia	**23.9**	(11.8)	-15.7	(16.6)	c	c	c	c	c	c
	Finland	c	c	c	c	c	c	c	c	c	c
	France	**67.8**	(13.5)	-19.5	(12.3)	6.9	(16.1)	25.0	(17.1)	18.1	(17.3)
	Germany	**63.9**	(11.1)	**-32.2**	(10.6)	-15.7	(15.8)	13.2	(14.3)	22.4	(16.9)
	Greece	14.1	(17.7)	c	c	c	c	c	c	c	c
	Hungary	c	c	c	c	c	c	c	c	c	c
	Iceland	c	c	c	c	c	c	c	c	c	c
	Ireland	c	c	c	c	c	c	c	c	c	c
	Israel	**30.2**	(8.8)	**24.8**	(9.0)	29.1	(24.0)	**45.0**	(19.1)	**84.7**	(19.1)
	Italy	**34.8**	(14.3)	-27.1	(16.1)	c	c	c	c	c	c
	Japan	c	c	c	c	c	c	c	c	c	c
	Korea	c	c	c	c	m	m	m	m	c	c
	Luxembourg	**41.6**	(8.0)	**-34.9**	(11.1)	-3.1	(10.9)	11.6	(11.5)	24.5	(12.8)
	Mexico	c	c	c	c	4.0	(22.5)	c	c	-9.7	(33.1)
	Netherlands	**54.1**	(11.5)	-10.2	(11.1)	**28.2**	(13.5)	24.4	(13.8)	21.7	(18.9)
	New Zealand	**60.2**	(11.9)	**-36.5**	(13.2)	c	c	c	c	c	c
	Norway	40.0	(26.0)	-25.9	(15.3)	c	c	c	c	c	c
	Poland	m	m	m	m	m	m	m	m	m	m
	Portugal	**37.8**	(14.7)	c	c	23.8	(23.4)	29.5	(25.5)	**65.9**	(21.6)
	Slovak Republic	c	c	c	c	c	c	c	c	c	c
	Slovenia	23.3	(17.6)	-21.5	(12.7)	c	c	c	c	c	c
	Spain	**59.1**	(21.5)	-11.6	(20.0)	13.8	(25.5)	23.9	(21.1)	3.7	(26.3)
	Sweden	18.3	(13.3)	**-28.4**	(11.5)	c	c	c	c	c	c
	Switzerland	**59.4**	(8.1)	**-20.5**	(7.5)	17.7	(11.7)	12.4	(13.3)	**28.4**	(13.4)
	Turkey	c	c	c	c	c	c	c	c	c	c
	United Kingdom	**52.7**	(13.2)	-19.5	(11.5)	43.2	(23.5)	44.6	(23.9)	42.8	(25.5)
	United States	**51.7**	(11.0)	-8.2	(8.9)	5.4	(10.8)	13.5	(9.4)	**37.9**	(10.0)
	OECD average	**44.7**	(3.3)	**-16.6**	(2.7)	**16.6**	(4.5)	**25.1**	(4.3)	**33.7**	(4.8)
Partners	Albania	c	c	c	c	c	c	c	c	c	c
	Argentina	c	c	c	c	c	c	c	c	c	c
	Azerbaijan	c	c	c	c	c	c	c	c	c	c
	Brazil	c	c	c	c	c	c	c	c	c	c
	Bulgaria	c	c	c	c	c	c	c	c	c	c
	Colombia	c	c	c	c	c	c	c	c	c	c
	Croatia	**39.2**	(12.7)	c	c	c	c	c	c	c	c
	Dubai (UAE)	**36.4**	(9.2)	**-19.9**	(8.6)	27.4	(17.6)	**59.8**	(17.7)	**95.4**	(15.3)
	Hong Kong-China	**16.9**	(7.1)	**-58.5**	(14.8)	2.3	(6.1)	**15.4**	(6.2)	23.0	(12.9)
	Indonesia	m	m	m	m	m	m	m	m	m	m
	Jordan	16.3	(11.1)	-27.4	(18.1)	14.4	(15.0)	**26.5**	(13.2)	**36.7**	(15.0)
	Kazakhstan	**59.8**	(12.9)	-29.9	(16.3)	c	c	c	c	c	c
	Kyrgyzstan	c	c	c	c	c	c	c	c	m	m
	Latvia	**38.2**	(15.4)	c	c	c	c	m	m	m	m
	Liechtenstein	c	c	c	c	c	c	c	c	c	c
	Lithuania	c	c	c	c	c	c	c	c	c	c
	Macao-China	**12.7**	(4.1)	**-46.8**	(17.2)	6.2	(3.8)	7.2	(5.0)	16.5	(10.8)
	Montenegro	9.9	(23.5)	c	c	c	c	m	m	c	c
	Panama	c	c	c	c	c	c	c	c	c	c
	Peru	c	c	c	c	c	c	c	c	c	c
	Qatar	9.3	(5.8)	-7.7	(15.1)	20.7	(13.8)	**42.8**	(11.3)	**78.6**	(14.5)
	Romania	c	c	c	c	m	m	c	c	c	c
	Russian Federation	**51.1**	(9.8)	-20.6	(15.8)	c	c	c	c	c	c
	Serbia	**42.0**	(14.0)	c	c	c	c	c	c	c	c
	Shanghai-China	c	c	c	c	c	c	c	c	c	c
	Singapore	**35.7**	(14.3)	**-36.5**	(15.6)	c	c	6.6	(14.7)	34.4	(22.5)
	Chinese Taipei	c	c	c	c	c	c	c	c	c	c
	Thailand	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	c	c	c	c	c	c	c	c	c	c
	Tunisia	c	c	c	c	c	c	c	c	c	c
	Uruguay	c	c	c	c	c	c	c	c	c	c

Note: Coefficient of OLS regression with dummies. for each group of students: first-. second- and non-immigrants. Values that are statistically significant are indicated in bold (see Annex A). Note reference category for mothers' education is primary education or less. Does not speak the language of assessment at home is defined for both immigrant and non-immigrant students, i.e. it is possible to have a value of 1 on this dummy variable and not be an immigrant student.

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 2/3]

Table B3.5 **Performance difference in reading among students by immigrant background adjusting for mother's educational attainment, language spoken at home and number of books at home, separate regressions** *(continued)*

		First-generation students									
		Over 100 books at home		Does not speak the assessment language at home		Mother's education: Lower secondary (ISCED 2)		Mother's education: Upper secondary (ISCED 3-4)		Mother's education: Tertiary (ISCED 5-6)	
		Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
OECD	Australia	**55.6**	(9.1)	-10.4	(10.9)	-7.4	(23.6)	**41.7**	(19.4)	**67.9**	(18.9)
	Austria	**87.9**	(24.7)	-1.7	(23.7)	2.9	(24.4)	**55.7**	(24.5)	46.7	(24.9)
	Belgium	**75.2**	(13.9)	-12.7	(13.6)	29.8	(23.2)	**35.5**	(15.7)	**55.5**	(15.6)
	Canada	**53.8**	(6.3)	-10.7	(6.7)	26.0	(24.4)	**38.3**	(17.6)	**64.9**	(17.6)
	Chile	c	c	c	c	c	c	c	c	c	c
	Czech Republic	c	c	c	c	c	c	c	c	c	c
	Denmark	25.1	(20.3)	-15.0	(12.5)	27.1	(21.7)	35.3	(19.6)	**44.6**	(14.7)
	Estonia	c	c	c	c	c	c	c	c	c	c
	Finland	c	c	c	c	c	c	c	c	c	c
	France	c	c	4.5	(23.8)	c	c	c	c	c	c
	Germany	**70.3**	(17.7)	-13.0	(15.3)	c	c	c	c	c	c
	Greece	c	c	**-33.5**	(16.6)	c	c	c	c	c	c
	Hungary	c	c	c	c	c	c	c	c	c	c
	Iceland	c	c	c	c	c	c	c	c	c	c
	Ireland	**62.9**	(15.6)	**-39.4**	(13.7)	c	c	c	c	c	c
	Israel	24.6	(13.4)	-0.4	(15.0)	c	c	c	c	c	c
	Italy	**82.1**	(11.5)	-12.0	(9.9)	34.4	(19.8)	**63.7**	(17.1)	**43.8**	(15.6)
	Japan	c	c	c	c	c	c	c	c	c	c
	Korea	m	m	m	m	m	m	m	m	m	m
	Luxembourg	**84.2**	(12.6)	**-48.8**	(12.2)	**27.1**	(12.3)	28.2	(15.3)	**56.5**	(22.3)
	Mexico	c	c	**-67.0**	(15.2)	-9.7	(16.1)	c	c	**36.0**	(17.0)
	Netherlands	c	c	-5.6	(20.2)	c	c	c	c	49.3	(27.6)
	New Zealand	**58.5**	(7.9)	**-47.2**	(8.3)	c	c	c	c	c	c
	Norway	38.0	(20.0)	c	c	c	c	c	c	c	c
	Poland	c	m	c	c	c	c	m	m	m	m
	Portugal	c	c	-12.9	(15.6)	c	c	c	c	c	c
	Slovak Republic	c	m	c	c	c	c	c	c	m	m
	Slovenia	c	c	c	c	c	c	c	c	c	c
	Spain	**57.2**	(8.9)	**-23.4**	(7.5)	**25.3**	(8.7)	**37.8**	(8.5)	**52.7**	(9.7)
	Sweden	**108.1**	(19.9)	c	c	c	c	**57.1**	(27.5)	**68.0**	(29.5)
	Switzerland	**69.0**	(12.2)	**-44.4**	(9.8)	10.4	(12.0)	4.9	(13.9)	**44.8**	(13.8)
	Turkey	c	c	c	c	c	c	c	c	c	c
	United Kingdom	**47.9**	(14.5)	-3.5	(13.2)	22.8	(29.4)	13.6	(21.2)	44.2	(24.1)
	United States	**45.3**	(18.5)	-18.0	(13.3)	15.3	(16.6)	25.2	(17.1)	**74.7**	(17.6)
	OECD average	**61.5**	(3.7)	**-20.7**	(3.3)	**17.0**	(5.8)	**36.4**	(5.4)	**53.5**	(5.3)
Partners	Albania	c	c	c	c	c	c	c	c	c	c
	Argentina	c	c	c	c	c	c	c	c	c	c
	Azerbaijan	c	c	c	c	c	c	c	c	c	c
	Brazil	c	c	c	c	c	c	c	c	c	c
	Bulgaria	c	c	c	c	c	c	c	c	c	c
	Colombia	c	m	c	c	c	c	c	c	c	c
	Croatia	c	c	c	c	c	c	c	c	c	c
	Dubai (UAE)	**46.7**	(6.2)	**-33.5**	(7.6)	**53.7**	(16.5)	**92.4**	(14.8)	**120.7**	(15.5)
	Hong Kong-China	**23.9**	(11.4)	**-34.9**	(12.1)	8.0	(8.5)	**18.8**	(8.4)	**37.8**	(16.9)
	Indonesia	c	c	c	c	c	c	c	c	c	c
	Jordan	23.6	(19.8)	c	c	c	c	c	c	c	c
	Kazakhstan	**84.9**	(17.8)	**49.4**	(17.4)	c	c	c	c	c	c
	Kyrgyzstan	c	c	c	c	c	c	c	c	c	c
	Latvia	c	c	c	c	m	m	c	c	c	c
	Liechtenstein	c	c	c	c	c	c	c	c	c	c
	Lithuania	c	c	c	c	m	m	c	c	c	c
	Macao-China	17.5	(9.1)	**-58.7**	(13.3)	**14.5**	(5.7)	**30.4**	(6.7)	**37.6**	(12.7)
	Montenegro	**52.6**	(17.5)	c	c	c	c	c	c	c	c
	Panama	c	c	c	c	c	c	c	c	c	c
	Peru	c	c	c	c	c	c	c	c	c	c
	Qatar	**25.6**	(7.7)	**19.7**	(10.0)	**50.7**	(16.9)	**89.0**	(13.1)	**117.2**	(14.3)
	Romania	c	c	c	c	c	c	c	c	c	c
	Russian Federation	21.0	(14.3)	**-53.2**	(16.3)	c	c	c	c	c	c
	Serbia	22.1	(18.2)	c	c	c	c	c	c	c	c
	Shanghai-China	c	c	c	c	c	c	c	c	c	c
	Singapore	**54.4**	(9.0)	**-35.3**	(10.1)	c	c	**44.3**	(17.4)	**52.5**	(16.0)
	Chinese Taipei	c	c	c	c	c	c	c	c	c	c
	Thailand	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	44.2	(45.0)	c	c	c	c	c	c	c	c
	Tunisia	c	c	c	c	c	c	c	c	c	c
	Uruguay	c	c	c	c	c	c	c	c	c	c

Note: Coefficient of OLS regression with dummies. for each group of students: first-. second- and non-immigrants. Values that are statistically significant are indicated in bold (see Annex A). Note reference category for mothers' education is primary education or less. Does not speak the language of assessment at home is defined for both immigrant and non-immigrant students, i.e. it is possible to have a value of 1 on this dummy variable and not be an immigrant student.

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 3/3]

Table B3.5 Performance difference in reading among students by immigrant background adjusting for mother's educational attainment, language spoken at home and number of books at home, separate regressions *(continued)*

		Non-immigrant students									
		Over 100 books at home		Does not speak the assessment language at home		Mother's education: Lower secondary (ISCED 2)		Mother's education: Upper secondary (ISCED 3-4)		Mother's education: Tertiary (ISCED 5-6)	
		Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
OECD	Australia	**51.4**	(2.4)	**-40.1**	(12.2)	15.0	(18.0)	**46.7**	(17.7)	**73.2**	(17.6)
	Austria	**74.3**	(4.7)	-27.8	(16.2)	c	c	c	c	c	c
	Belgium	**49.3**	(3.1)	-9.2	(5.5)	**35.6**	(10.4)	**30.0**	(9.5)	**61.0**	(9.8)
	Canada	**46.9**	(2.1)	**-31.8**	(5.2)	**43.9**	(13.3)	**56.0**	(12.2)	**72.7**	(12.1)
	Chile	m	m	c	c	m	m	m	m	m	m
	Czech Republic	**64.0**	(4.1)	c	c	c	c	c	c	c	c
	Denmark	**41.9**	(3.1)	-37.2	(20.6)	c	c	c	c	c	c
	Estonia	**37.0**	(3.8)	**-30.7**	(9.5)	c	c	c	c	c	c
	Finland	**47.1**	(2.4)	**-38.4**	(7.6)	**18.0**	(9.1)	**23.0**	(7.8)	**45.4**	(7.4)
	France	**65.8**	(4.6)	**-63.4**	(14.2)	28.5	(20.9)	**50.2**	(20.4)	**64.5**	(20.4)
	Germany	**57.4**	(3.8)	-9.9	(13.8)	0.0	(15.3)	**48.8**	(14.4)	**61.0**	(14.7)
	Greece	**39.2**	(4.4)	**-61.7**	(15.8)	-0.1	(8.7)	**32.7**	(8.5)	**48.9**	(9.0)
	Hungary	m	m	c	c	m	m	m	m	m	m
	Iceland	**43.5**	(3.9)	**-65.0**	(19.0)	c	c	c	c	c	c
	Ireland	**57.5**	(3.5)	-0.2	(11.6)	13.4	(10.7)	**35.0**	(9.3)	**45.8**	(10.0)
	Israel	**38.1**	(4.4)	**-35.2**	(15.2)	18.9	(9.9)	**73.9**	(10.3)	**121.7**	(10.6)
	Italy	**48.0**	(2.4)	**-37.1**	(3.5)	**25.0**	(5.2)	**51.0**	(5.3)	**42.9**	(5.4)
	Japan	m	m	c	c	m	m	m	m	m	m
	Korea	m	m	c	c	m	m	m	m	m	m
	Luxembourg	**56.1**	(5.7)	-10.7	(11.6)	**43.3**	(12.1)	**59.0**	(13.6)	**59.2**	(13.3)
	Mexico	**31.3**	(2.6)	**-63.1**	(7.1)	**25.6**	(2.3)	**49.9**	(3.3)	**49.9**	(2.7)
	Netherlands	**52.8**	(4.9)	-4.9	(21.4)	17.4	(10.5)	21.5	(11.3)	**29.8**	(11.2)
	New Zealand	**53.3**	(4.1)	**-83.2**	(10.2)	**46.4**	(13.5)	**53.6**	(12.4)	**78.7**	(12.8)
	Norway	**51.7**	(2.7)	**-44.0**	(11.0)	c	c	c	c	c	c
	Poland	m	m	c	c	c	c	c	c	c	c
	Portugal	**33.7**	(3.3)	-2.3	(16.9)	**15.4**	(3.9)	**38.9**	(4.3)	**52.2**	(5.3)
	Slovak Republic	m	m	m	m	c	c	c	c	c	c
	Slovenia	**51.3**	(4.0)	-17.0	(14.7)	c	c	c	c	c	c
	Spain	**45.6**	(2.3)	-1.1	(5.0)	**9.4**	(4.1)	**24.7**	(4.1)	**37.9**	(4.4)
	Sweden	**57.7**	(3.3)	**-36.9**	(17.8)	35.1	(18.8)	**55.9**	(18.3)	**63.4**	(18.5)
	Switzerland	**52.1**	(3.0)	**-23.4**	(6.8)	3.6	(16.0)	**32.0**	(15.3)	**34.9**	(16.1)
	Turkey	m	m	m	m	m	m	m	m	m	m
	United Kingdom	**68.3**	(2.9)	**-58.5**	(11.7)	**30.9**	(12.0)	**51.1**	(10.9)	**64.1**	(11.1)
	United States	**62.9**	(4.2)	**-30.2**	(12.6)	**-39.9**	(14.7)	-15.9	(14.1)	8.0	(14.6)
	OECD average	**51.0**	(0.7)	**-33.2**	(2.6)	**19.3**	(2.8)	**40.9**	(2.7)	**55.7**	(2.7)
Partners	Albania	m	m	m	m	m	m	m	m	m	m
	Argentina	**59.3**	(6.3)	c	c	**36.1**	(6.8)	**43.8**	(6.2)	**57.4**	(6.2)
	Azerbaijan	**34.8**	(4.8)	15.8	(9.2)	17.1	(10.7)	14.8	(10.6)	**34.4**	(10.8)
	Brazil	**32.8**	(6.7)	**-57.3**	(11.3)	**22.3**	(3.2)	**47.4**	(3.8)	**54.1**	(6.7)
	Bulgaria	m	m	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	m	m	m
	Croatia	**41.3**	(4.3)	-6.8	(19.2)	7.9	(17.0)	**45.3**	(16.3)	**49.3**	(16.8)
	Dubai (UAE)	**16.3**	(6.7)	10.2	(10.8)	**28.4**	(7.8)	**33.1**	(8.0)	**51.6**	(10.7)
	Hong Kong-China	**41.3**	(4.0)	**-82.6**	(10.2)	3.8	(4.8)	**15.1**	(4.8)	**28.5**	(6.2)
	Indonesia	m	m	m	m	m	m	m	m	m	m
	Jordan	**16.8**	(4.5)	-16.7	(14.5)	**20.9**	(4.6)	**32.3**	(4.8)	**56.6**	(5.3)
	Kazakhstan	**48.4**	(6.3)	**18.0**	(6.4)	c	c	c	c	c	c
	Kyrgyzstan	**65.4**	(7.1)	**38.9**	(6.1)	c	c	c	c	c	c
	Latvia	**36.9**	(3.6)	-7.9	(8.5)	c	c	c	c	c	c
	Liechtenstein	**57.6**	(15.3)	c	c	c	c	c	c	c	c
	Lithuania	**43.2**	(3.6)	**-36.3**	(6.9)	c	c	c	c	c	c
	Macao-China	**29.1**	(6.3)	**-50.0**	(15.2)	2.5	(4.6)	**17.9**	(6.2)	**17.8**	(8.0)
	Montenegro	**42.7**	(8.2)	**-37.9**	(15.4)	16.6	(12.0)	**52.4**	(11.8)	**62.5**	(13.6)
	Panama	**53.4**	(10.2)	**-62.0**	(15.0)	12.0	(8.0)	**31.9**	(8.3)	**52.1**	(9.6)
	Peru	m	m	m	m	m	m	m	m	m	m
	Qatar	**21.0**	(4.6)	-17.0	(16.0)	5.6	(7.6)	-2.2	(6.7)	10.9	(9.3)
	Romania	m	m	m	m	m	m	m	m	m	m
	Russian Federation	**46.5**	(4.0)	**-32.1**	(10.6)	c	c	c	c	c	c
	Serbia	**44.4**	(4.0)	**-29.6**	(11.4)	3.0	(15.9)	**36.1**	(17.7)	34.9	(17.9)
	Shanghai-China	m	m	m	m	m	m	m	m	m	m
	Singapore	**41.0**	(4.0)	**-37.6**	(3.9)	9.3	(8.0)	**32.5**	(4.9)	**39.1**	(6.2)
	Chinese Taipei	m	m	m	m	m	m	m	m	m	m
	Thailand	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	**27.9**	(4.7)	**-80.7**	(14.3)	13.5	(10.5)	**23.7**	(6.8)	**43.3**	(9.9)
	Tunisia	m	m	c	c	m	m	m	m	m	m
	Uruguay	c	c	m	m	m	m	m	m	m	m

Note: Coefficient of OLS regression with dummies. for each group of students: first-. second- and non-immigrants. Values that are statistically significant are indicated in bold (see Annex A). Note reference category for mothers' education is primary education or less. Does not speak the language of assessment at home is defined for both immigrant and non-immigrant students, i.e. it is possible to have a value of 1 on this dummy variable and not be an immigrant student.

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 1/3]
Table B3.6 Share of individuals in a school by percentage of students who speak a language different from the test language as main language, by migration status

		Non-immigrant students							
		0 to 10%		10 to 20%		20 to 40%		40% or more	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
OECD	Australia	0.79	(0.02)	0.13	(0.02)	0.07	(0.01)	0.01	(0.00)
	Austria	0.76	(0.03)	0.13	(0.03)	0.09	(0.02)	0.03	(0.01)
	Belgium	0.28	(0.03)	0.31	(0.03)	0.3	(0.03)	0.11	(0.02)
	Canada	0.7	(0.02)	0.13	(0.02)	0.13	(0.02)	0.05	(0.01)
	Chile	m	m	m	m	m	m	m	m
	Czech Republic	0.99	(0.01)	0.01	(0.01)	0	(0.00)	0	(0.00)
	Denmark	0.78	(0.03)	0.16	(0.03)	0.05	(0.01)	0.01	(0.00)
	Estonia	0.92	(0.02)	0.05	(0.02)	0.03	(0.01)	0	(0.00)
	Finland	0.93	(0.02)	0.05	(0.02)	0.01	(0.00)	0.01	(0.00)
	France	0.78	(0.03)	0.16	(0.03)	0.05	(0.02)	0.01	(0.01)
	Germany	0.72	(0.03)	0.17	(0.03)	0.09	(0.02)	0.02	(0.01)
	Greece	0.95	(0.02)	0.03	(0.01)	0.01	(0.00)	0.01	(0.01)
	Hungary	m	m	m	m	m	m	m	m
	Iceland	0.95	(0.02)	0.04	(0.02)	0.01	(0.01)	0	(0.00)
	Ireland	0.89	(0.03)	0.07	(0.02)	0.01	(0.01)	0.02	(0.01)
	Israel	0.65	(0.04)	0.24	(0.03)	0.08	(0.02)	0.03	(0.01)
	Italy	0.53	(0.02)	0.23	(0.02)	0.16	(0.02)	0.07	(0.01)
	Japan	m	m	m	m	m	m	m	m
	Korea	m	m	m	m	m	m	m	m
	Luxembourg	0	(0.00)	0	(0.00)	0.01	(0.01)	0.99	(0.01)
	Mexico	0.95	(0.01)	0.02	(0.01)	0.01	(0.00)	0.01	(0.00)
	Netherlands	0.89	(0.02)	0.06	(0.02)	0.03	(0.01)	0.02	(0.01)
	New Zealand	0.55	(0.04)	0.28	(0.04)	0.14	(0.03)	0.03	(0.01)
	Norway	0.75	(0.03)	0.2	(0.03)	0.04	(0.01)	0.01	(0.00)
	Poland	m	m	m	m	m	m	m	m
	Portugal	0.99	(0.00)	0.01	(0.00)	0	(0.00)	0	(0.00)
	Slovak Republic	m	m	m	m	m	m	m	m
	Slovenia	0.89	(0.02)	0.07	(0.02)	0.04	(0.01)	0	(0.00)
	Spain	0.63	(0.03)	0.11	(0.02)	0.08	(0.02)	0.18	(0.02)
	Sweden	0.77	(0.03)	0.17	(0.03)	0.04	(0.01)	0.02	(0.01)
	Switzerland	0.41	(0.04)	0.35	(0.04)	0.2	(0.03)	0.04	(0.01)
	Turkey	m	m	m	m	m	m	m	m
	United Kingdom	0.88	(0.02)	0.08	(0.02)	0.03	(0.01)	0.01	(0.00)
	United States	0.72	(0.04)	0.09	(0.02)	0.16	(0.03)	0.04	(0.01)
	OECD average	0.74	(0.01)	0.12	(0.00)	0.07	(0.00)	0.06	(0.00)
Partners	Albania	m	m	m	m	m	m	m	m
	Argentina	0.98	(0.01)	0.02	(0.01)	0	(0.00)	0	(0.00)
	Azerbaijan	0.8	(0.04)	0.1	(0.03)	0.05	(0.02)	0.05	(0.02)
	Brazil	1	(0.00)	0	(0.00)	0	(0.00)	0	(0.00)
	Bulgaria	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	m
	Croatia	0.96	(0.01)	0.02	(0.01)	0.01	(0.01)	0.01	(0.01)
	Dubai (UAE)	0.52	(0.08)	0.12	(0.04)	0.04	(0.03)	0.33	(0.06)
	Hong Kong-China	0.9	(0.03)	0.05	(0.02)	0.01	(0.01)	0.04	(0.02)
	Indonesia	m	m	m	m	m	m	m	m
	Jordan	0.95	(0.02)	0.04	(0.01)	0.01	(0.01)	0.01	(0.01)
	Kazakhstan	0.62	(0.04)	0.21	(0.03)	0.14	(0.03)	0.04	(0.02)
	Kyrgyzstan	0.58	(0.04)	0.04	(0.02)	0.19	(0.03)	0.2	(0.03)
	Latvia	0.77	(0.04)	0.13	(0.03)	0.07	(0.02)	0.03	(0.01)
	Liechtenstein	0.36	(0.27)	0.38	(0.22)	0.26	(0.17)	0	(0.00)
	Lithuania	0.9	(0.02)	0.05	(0.02)	0.01	(0.01)	0.04	(0.01)
	Macao-China	0.77	(0.09)	0	(0.00)	0.03	(0.02)	0.2	(0.09)
	Montenegro	1	(0.00)	0	(0.00)	0	(0.00)	0	(0.00)
	Panama	0.95	(0.02)	0.03	(0.01)	0	(0.00)	0.02	(0.02)
	Peru	m	m	m	m	m	m	m	m
	Qatar	0.6	(0.07)	0.03	(0.02)	0.02	(0.01)	0.35	(0.07)
	Romania	m	m	m	m	m	m	m	m
	Russian Federation	0.83	(0.03)	0.05	(0.02)	0.07	(0.02)	0.05	(0.02)
	Serbia	0.97	(0.01)	0.02	(0.01)	0.01	(0.01)	0	(0.00)
	Shanghai-China	m	m	m	m	m	m	m	m
	Singapore	0.01	(0.01)	0.04	(0.02)	0.11	(0.02)	0.85	(0.03)
	Chinese Taipei	m	m	m	m	m	m	m	m
	Thailand	m	m	m	m	m	m	m	m
	Trinidad and Tobago	0.95	(0.02)	0.04	(0.02)	0	(0.00)	0	(0.00)
	Tunisia	m	m	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m	m	m

Source: PISA 2009 Database.
Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 2/3]
Table B3.6 Share of individuals in a school by percentage of students who speak a language different from the test language as main language, by migration status *(continued)*

		Second-generation students							
		0 to 10%		10 to 20%		20 to 40%		40% or more	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
OECD	Australia	0.41	(0.04)	0.24	(0.04)	0.21	(0.04)	0.15	(0.05)
	Austria	0.28	(0.05)	0.18	(0.05)	0.29	(0.06)	0.25	(0.07)
	Belgium	0.14	(0.03)	0.19	(0.03)	0.32	(0.05)	0.35	(0.06)
	Canada	0.22	(0.03)	0.2	(0.04)	0.36	(0.05)	0.22	(0.04)
	Chile	m	m	m	m	m	m	m	m
	Czech Republic	0.89	(0.05)	0.08	(0.05)	0.02	(0.02)	0	(0.00)
	Denmark	0.36	(0.05)	0.26	(0.04)	0.29	(0.05)	0.1	(0.03)
	Estonia	0.92	(0.03)	0.05	(0.03)	0.03	(0.01)	0	(0.00)
	Finland	0.76	(0.08)	0.22	(0.08)	0.01	(0.01)	0.01	(0.01)
	France	0.37	(0.06)	0.3	(0.06)	0.27	(0.07)	0.06	(0.04)
	Germany	0.37	(0.05)	0.21	(0.04)	0.23	(0.05)	0.19	(0.06)
	Greece	0.83	(0.09)	0.09	(0.08)	0.09	(0.06)	0.0	(0.00)
	Hungary	m	m	m	m	m	m	m	m
	Iceland	c	c	c	c	c	c	c	c
	Ireland	0.88	(0.05)	0.04	(0.03)	0.04	(0.03)	0.05	(0.04)
	Israel	0.42	(0.05)	0.28	(0.05)	0.23	(0.05)	0.07	(0.03)
	Italy	0.4	(0.04)	0.27	(0.04)	0.24	(0.04)	0.09	(0.03)
	Japan	m	m	m	m	m	m	m	m
	Korea	m	m	m	m	m	m	m	m
	Luxembourg	0.02	(0.02)	0	(0.00)	0.03	(0.03)	0.94	(0.04)
	Mexico	0.86	(0.05)	0.04	(0.02)	0.01	(0.01)	0.1	(0.05)
	Netherlands	0.5	(0.08)	0.12	(0.04)	0.3	(0.09)	0.08	(0.05)
	New Zealand	0.22	(0.04)	0.21	(0.04)	0.42	(0.07)	0.16	(0.06)
	Norway	0.33	(0.06)	0.29	(0.07)	0.18	(0.07)	0.19	(0.10)
	Poland	m	m	m	m	m	m	m	m
	Portugal	0.98	(0.01)	0.02	(0.01)	0	(0.00)	0	(0.00)
	Slovak Republic	m	m	m	m	m	m	m	m
	Slovenia	0.55	(0.08)	0.13	(0.04)	0.32	(0.08)	0	(0.00)
	Spain	0.48	(0.07)	0.18	(0.04)	0.05	(0.02)	0.29	(0.07)
	Sweden	0.33	(0.05)	0.28	(0.06)	0.2	(0.06)	0.19	(0.07)
	Switzerland	0.19	(0.03)	0.35	(0.04)	0.32	(0.04)	0.14	(0.03)
	Turkey	m	m	m	m	m	m	m	m
	United Kingdom	0.38	(0.07)	0.19	(0.07)	0.24	(0.09)	0.18	(0.07)
	United States	0.13	(0.03)	0.08	(0.03)	0.52	(0.07)	0.27	(0.07)
	OECD average	0.47	(0.01)	0.17	(0.01)	0.20	(0.01)	0.16	(0.01)
Partners	Albania	m	m	m	m	m	m	m	m
	Argentina	0.92	(0.05)	0.08	(0.05)	0	(0.00)	0	(0.00)
	Azerbaijan	0.67	(0.10)	0.11	(0.06)	0.1	(0.06)	0.12	(0.07)
	Brazil	1	(0.00)	0	(0.00)	0	(0.00)	0	(0.00)
	Bulgaria	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	m
	Croatia	0.97	(0.02)	0.02	(0.01)	0.01	(0.01)	0.01	(0.01)
	Dubai (UAE)	0.18	(0.05)	0.1	(0.04)	0.06	(0.02)	0.66	(0.06)
	Hong Kong-China	0.87	(0.03)	0.08	(0.03)	0.02	(0.01)	0.02	(0.01)
	Indonesia	m	m	m	m	m	m	m	m
	Jordan	0.94	(0.03)	0.04	(0.02)	0.02	(0.02)	0	(0.00)
	Kazakhstan	0.62	(0.08)	0.26	(0.07)	0.09	(0.03)	0.04	(0.02)
	Kyrgyzstan	0.15	(0.05)	0.11	(0.07)	0.47	(0.10)	0.28	(0.09)
	Latvia	0.86	(0.05)	0.05	(0.02)	0.05	(0.04)	0.04	(0.02)
	Liechtenstein	0.22	(0.21)	0.53	(0.24)	0.25	(0.19)	0	(0.00)
	Lithuania	0.63	(0.10)	0.12	(0.05)	0	(0.00)	0.25	(0.10)
	Macao-China	0.89	(0.05)	0	(0.00)	0.03	(0.03)	0.08	(0.04)
	Montenegro	1	(0.00)	0	(0.00)	0	(0.00)	0	(0.00)
	Panama	0.53	(0.12)	0.22	(0.10)	0.19	(0.12)	0.07	(0.07)
	Peru	m	m	m	m	m	m	m	m
	Qatar	0.56	(0.06)	0.06	(0.02)	0.02	(0.01)	0.36	(0.06)
	Romania	m	m	m	m	m	m	m	m
	Russian Federation	0.75	(0.08)	0.07	(0.03)	0.08	(0.03)	0.11	(0.08)
	Serbia	0.97	(0.01)	0.02	(0.01)	0.01	(0.01)	0	(0.00)
	Shanghai-China	m	m	m	m	m	m	m	m
	Singapore	0.02	(0.02)	0.05	(0.03)	0.11	(0.03)	0.82	(0.04)
	Chinese Taipei	m	m	m	m	m	m	m	m
	Thailand	m	m	m	m	m	m	m	m
	Trinidad and Tobago	0.89	(0.05)	0.1	(0.05)	0.01	(0.01)	0	(0.00)
	Tunisia	m	m	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m	m	m

Source: PISA 2009 Database.
Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 3/3]
Table B3.6 **Share of individuals in a school by percentage of students who speak a language different from the test language as main language, by migration status** *(continued)*

		First-generation students							
		0 to 10%		10 to 20%		20 to 40%		40% or more	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
OECD	Australia	0.38	(0.04)	0.26	(0.04)	0.26	(0.05)	0.1	(0.04)
	Austria	0.28	(0.06)	0.17	(0.05)	0.28	(0.07)	0.27	(0.09)
	Belgium	0.24	(0.06)	0.24	(0.06)	0.28	(0.05)	0.25	(0.05)
	Canada	0.15	(0.02)	0.16	(0.03)	0.39	(0.05)	0.3	(0.05)
	Chile	m	m	m	m	m	m	m	m
	Czech Republic	0.86	(0.08)	0.07	(0.06)	0.07	(0.05)	0	(0.00)
	Denmark	0.47	(0.06)	0.28	(0.05)	0.17	(0.04)	0.08	(0.03)
	Estonia	0.94	(0.04)	0.06	(0.04)	0	(0.00)	0	(0.00)
	Finland	0.72	(0.10)	0.28	(0.10)	0	(0.00)	0.01	(0.00)
	France	0.26	(0.06)	0.29	(0.08)	0.29	(0.09)	0.16	(0.09)
	Germany	0.38	(0.05)	0.21	(0.04)	0.24	(0.05)	0.17	(0.06)
	Greece	0.68	(0.10)	0.12	(0.06)	0.1	(0.07)	0.1	(0.09)
	Hungary	m	m	m	m	m	m	m	m
	Iceland	0.65	(0.12)	0.18	(0.10)	0.17	(0.11)	0	(0.00)
	Ireland	0.71	(0.06)	0.22	(0.06)	0.06	(0.04)	0.01	(0.01)
	Israel	0.22	(0.04)	0.27	(0.06)	0.32	(0.07)	0.19	(0.08)
	Italy	0.28	(0.03)	0.31	(0.04)	0.31	(0.04)	0.11	(0.02)
	Japan	m	m	m	m	m	m	m	m
	Korea	m	m	m	m	m	m	m	m
	Luxembourg	0.06	(0.06)	0	(0.00)	0.09	(0.08)	0.85	(0.10)
	Mexico	0.75	(0.07)	0.03	(0.01)	0.01	(0.01)	0.21	(0.07)
	Netherlands	0.5	(0.09)	0.16	(0.06)	0.27	(0.11)	0.07	(0.04)
	New Zealand	0.25	(0.04)	0.23	(0.04)	0.37	(0.06)	0.15	(0.05)
	Norway	0.46	(0.06)	0.36	(0.06)	0.14	(0.06)	0.04	(0.02)
	Poland	m	m	m	m	m	m	m	m
	Portugal	0.97	(0.01)	0.03	(0.01)	0	(0.00)	0	(0.00)
	Slovak Republic	m	m	m	m	m	m	m	m
	Slovenia	0.47	(0.10)	0.14	(0.06)	0.39	(0.10)	0	(0.00)
	Spain	0.48	(0.04)	0.24	(0.04)	0.08	(0.03)	0.21	(0.04)
	Sweden	0.31	(0.06)	0.31	(0.06)	0.18	(0.06)	0.21	(0.08)
	Switzerland	0.17	(0.03)	0.33	(0.05)	0.36	(0.05)	0.14	(0.04)
	Turkey	m	m	m	m	m	m	m	m
	United Kingdom	0.35	(0.06)	0.26	(0.06)	0.21	(0.07)	0.19	(0.07)
	United States	0.19	(0.04)	0.08	(0.03)	0.45	(0.07)	0.29	(0.07)
	OECD average	0.45	(0.01)	0.20	(0.01)	0.20	(0.01)	0.15	(0.01)
Partners	Albania	m	m	m	m	m	m	m	m
	Argentina	0.83	(0.10)	0.17	(0.10)	0	(0.00)	0	(0.00)
	Azerbaijan	0.5	(0.13)	0.28	(0.13)	0.16	(0.11)	0.06	(0.05)
	Brazil	1	(0.00)	0	(0.00)	0	(0.00)	0	(0.00)
	Bulgaria	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	m
	Croatia	0.97	(0.02)	0.02	(0.02)	0	(0.00)	0.01	(0.01)
	Dubai (UAE)	0.06	(0.02)	0.12	(0.04)	0.12	(0.05)	0.69	(0.06)
	Hong Kong-China	0.76	(0.05)	0.14	(0.04)	0.05	(0.03)	0.06	(0.03)
	Indonesia	m	m	m	m	m	m	m	m
	Jordan	0.88	(0.04)	0.05	(0.02)	0.05	(0.03)	0.02	(0.02)
	Kazakhstan	0.65	(0.08)	0.2	(0.06)	0.11	(0.05)	0.04	(0.02)
	Kyrgyzstan	0.24	(0.12)	0.03	(0.03)	0.41	(0.13)	0.32	(0.13)
	Latvia	c	c	c	c	c	c	c	c
	Liechtenstein	0.24	(0.21)	0.31	(0.19)	0.46	(0.22)	0	(0.00)
	Lithuania	c	c	c	c	c	c	c	c
	Macao-China	0.91	(0.04)	0	(0.00)	0.02	(0.02)	0.07	(0.03)
	Montenegro	1	(0.00)	0	(0.00)	0	(0.00)	0	(0.00)
	Panama	0.56	(0.17)	0.09	(0.07)	0.02	(0.01)	0.34	(0.18)
	Peru	m	m	m	m	m	m	m	m
	Qatar	0.33	(0.06)	0.04	(0.02)	0.1	(0.06)	0.53	(0.07)
	Romania	m	m	m	m	m	m	m	m
	Russian Federation	0.84	(0.04)	0.08	(0.03)	0.02	(0.01)	0.05	(0.03)
	Serbia	0.99	(0.01)	0.01	(0.01)	0	(0.00)	0	(0.00)
	Shanghai-China	m	m	m	m	m	m	m	m
	Singapore	0.01	(0.01)	0.04	(0.02)	0.1	(0.03)	0.85	(0.03)
	Chinese Taipei	m	m	m	m	m	m	m	m
	Thailand	m	m	m	m	m	m	m	m
	Trinidad and Tobago	0.74	(0.15)	0.07	(0.05)	0.19	(0.16)	0	(0.00)
	Tunisia	m	m	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m	m	m

Source: PISA 2009 Database.
Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 1/3]
Table B3.7 Reading scores by percentage of students in school who do not speak the test language, by migration status

		Non-immigrant students							
		0 to 10%		10 to 20%		20 to 40%		40% or more	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
OECD	Australia	511	(2.8)	530	(9.1)	525	(9.7)	534	(48.9)
	Austria	492	(6.9)	518	(16.2)	483	(14.7)	440	(26.6)
	Belgium	550	(7.1)	506	(7.9)	521	(7.6)	504	(13.0)
	Canada	526	(2.2)	540	(5.2)	548	(6.2)	524	(8.8)
	Chile	m	m	m	m	m	m	m	m
	Czech Republic	487	(5.4)	c	c	c	c	m	m
	Denmark	503	(3.4)	503	(5.8)	494	(7.8)	482	(9.3)
	Estonia	511	(3.5)	503	(10.8)	c	c	m	m
	Finland	539	(2.3)	530	(10.9)	520	(8.3)	527	(7.4)
	France	520	(7.4)	477	(16.7)	452	(18.6)	c	c
	Germany	530	(5.2)	511	(11.2)	473	(12.8)	466	(17.7)
	Greece	495	(4.8)	457	(34.4)	c	c	c	c
	Hungary	m	m	m	m	m	m	m	m
	Iceland	503	(3.5)	c	c	c	c	m	m
	Ireland	505	(4.3)	477	(15.1)	c	c	c	c
	Israel	486	(7.3)	484	(12.2)	478	(15.2)	435	(49.0)
	Italy	524	(3.3)	492	(4.7)	434	(5.6)	431	(8.8)
	Japan	m	m	m	m	m	m	m	m
	Korea	m	m	m	m	m	m	m	m
	Luxembourg	c	c	m	m	c	c	494	(9.7)
	Mexico	440	(2.4)	385	(14.6)	378	(9.4)	305	(10.1)
	Netherlands	518	(6.7)	513	(27.5)	448	(9.2)	c	c
	New Zealand	532	(4.0)	525	(10.0)	534	(9.1)	479	(19.9)
	Norway	505	(3.1)	514	(5.4)	521	(9.8)	c	c
	Poland	m	m	m	m	m	m	m	m
	Portugal	494	(4.0)	c	c	m	m	m	m
	Slovak Republic	m	m	m	m	m	m	m	m
	Slovenia	503	(6.3)	464	(12.3)	437	(20.8)	c	c
	Spain	488	(3.1)	478	(6.2)	492	(8.8)	494	(4.8)
	Sweden	506	(3.3)	507	(7.4)	505	(11.2)	c	c
	Switzerland	525	(5.9)	526	(7.8)	491	(6.0)	456	(7.3)
	Turkey	m	m	m	m	m	m	m	m
	United Kingdom	502	(3.2)	494	(12.9)	446	(26.5)	444	(9.6)
	United States	512	(5.9)	486	(12.9)	491	(8.8)	478	(9.9)
	OECD average	508	(0.9)	497	(2.9)	484	(2.8)	468	(5.3)
Partners	Albania	m	m	m	m	m	m	m	m
	Argentina	414	(6.2)	c	c	m	m	m	m
	Azerbaijan	354	(4.7)	378	(7.5)	c	c	410	(16.7)
	Brazil	425	(3.9)	c	c	c	c	m	m
	Bulgaria	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	m
	Croatia	480	(4.8)	c	c	c	c	c	c
	Dubai (UAE)	395	(13.7)	334	(23.6)	c	c	423	(9.1)
	Hong Kong-China	542	(4.7)	491	(19.1)	c	c	c	c
	Indonesia	m	m	m	m	m	m	m	m
	Jordan	410	(4.1)	401	(13.5)	c	c	c	c
	Kazakhstan	380	(6.0)	414	(12.0)	415	(12.7)	371	(23.4)
	Kyrgyzstan	289	(4.1)	321	(22.4)	367	(12.6)	362	(11.8)
	Latvia	496	(3.6)	503	(9.2)	484	(7.0)	c	c
	Liechtenstein	c	c	c	c	c	c	m	m
	Lithuania	479	(4.4)	480	(18.0)	c	c	449	(14.3)
	Macao-China	489	(9.4)	m	m	c	c	461	(13.3)
	Montenegro	410	(10.2)	m	m	m	m	m	m
	Panama	397	(7.5)	473	(22.7)	c	c	c	c
	Peru	m	m	m	m	m	m	m	m
	Qatar	335	(9.0)	268	(15.5)	c	c	330	(17.6)
	Romania	m	m	m	m	m	m	m	m
	Russian Federation	473	(4.4)	462	(9.4)	447	(9.2)	382	(23.3)
	Serbia	445	(4.5)	c	c	c	c	m	m
	Shanghai-China	m	m	m	m	m	m	m	m
	Singapore	c	c	588	(15.1)	593	(12.7)	515	(4.6)
	Chinese Taipei	m	m	m	m	m	m	m	m
	Thailand	m	m	m	m	m	m	m	m
	Trinidad and Tobago	429	(8.0)	326	(12.3)	c	c	m	m
	Tunisia	m	m	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m	m	m

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 2/3]
Table B3.7 **Reading scores by percentage of students in school who do not speak the test language, by migration status** *(continued)*

		Second-generation students							
		0 to 10%		10 to 20%		20 to 40%		40% or more	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
OECD	Australia	524	(5.4)	526	(10.4)	520	(11.7)	563	(35.5)
	Austria	465	(11.0)	469	(14.9)	437	(14.2)	408	(21.1)
	Belgium	509	(13.5)	471	(13.4)	477	(13.6)	419	(16.3)
	Canada	525	(6.7)	528	(6.0)	524	(7.1)	516	(12.0)
	Chile	m	m	m	m	m	m	m	m
	Czech Republic	488	(12.9)	c	c	c	c	m	m
	Denmark	471	(8.2)	451	(7.3)	419	(5.6)	410	(13.7)
	Estonia	473	(6.2)	c	c	c	c	m	m
	Finland	502	(14.6)	c	c	c	c	c	c
	France	476	(14.9)	442	(17.2)	437	(25.3)	c	c
	Germany	501	(7.7)	480	(16.8)	435	(12.8)	422	(15.8)
	Greece	479	(12.3)	c	c	c	c	m	m
	Hungary	m	m	m	m	m	m	m	m
	Iceland	c	c	c	c	m	m	m	m
	Ireland	509	(13.9)	c	c	c	c	c	c
	Israel	489	(10.5)	493	(15.5)	468	(18.7)	c	c
	Italy	494	(11.3)	458	(17.5)	411	(10.1)	374	(30.2)
	Japan	m	m	m	m	m	m	m	m
	Korea	m	m	m	m	m	m	m	m
	Luxembourg	c	c	m	m	c	c	432	(10.2)
	Mexico	363	(9.2)	c	c	c	c	c	c
	Netherlands	490	(9.8)	458	(21.2)	449	(19.4)	c	c
	New Zealand	550	(11.0)	499	(11.7)	495	(18.3)	462	(20.2)
	Norway	476	(12.5)	454	(11.2)	c	c	c	c
	Poland	m	m	m	m	m	m	m	m
	Portugal	480	(12.7)	c	c	m	m	m	m
	Slovak Republic	m	m	m	m	m	m	m	m
	Slovenia	483	(8.9)	432	(17.7)	420	(14.0)	m	m
	Spain	476	(11.6)	433	(14.2)	442	(27.2)	457	(21.3)
	Sweden	474	(10.0)	470	(10.1)	434	(11.2)	402	(13.6)
	Switzerland	500	(12.5)	494	(10.9)	451	(7.8)	413	(7.6)
	Turkey	m	m	m	m	m	m	m	m
	United Kingdom	517	(9.5)	502	(23.0)	479	(15.7)	c	c
	United States	527	(14.4)	497	(10.9)	474	(8.4)	470	(6.5)
	OECD average	490	(2.2)	475	(3.4)	457	(3.7)	442	(5.3)
Partners	Albania	m	m	m	m	m	m	m	m
	Argentina	376	(12.7)	c	c	m	m	m	m
	Azerbaijan	353	(8.8)	c	c	c	c	c	c
	Brazil	326	(20.3)	m	m	m	m	m	m
	Bulgaria	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	m
	Croatia	467	(7.3)	c	c	c	c	c	c
	Dubai (UAE)	408	(12.3)	479	(30.3)	544	(13.4)	481	(7.9)
	Hong Kong-China	550	(4.7)	508	(16.0)	c	c	c	c
	Indonesia	m	m	m	m	m	m	m	m
	Jordan	425	(6.8)	382	(30.1)	c	c	c	c
	Kazakhstan	402	(24.4)	447	(16.8)	430	(19.2)	c	c
	Kyrgyzstan	c	c	c	c	c	c	c	c
	Latvia	492	(9.6)	c	c	c	c	c	c
	Liechtenstein	c	c	c	c	c	c	m	m
	Lithuania	439	(15.2)	c	c	m	m	c	c
	Macao-China	492	(6.5)	m	m	c	c	471	(21.5)
	Montenegro	441	(14.2)	m	m	m	m	m	m
	Panama	413	(25.1)	c	c	c	c	c	c
	Peru	m	m	m	m	m	m	m	m
	Qatar	383	(8.3)	374	(35.9)	c	c	408	(20.0)
	Romania	m	m	m	m	m	m	m	m
	Russian Federation	453	(5.2)	c	c	c	c	c	c
	Serbia	469	(8.3)	c	c	c	c	m	m
	Shanghai-China	m	m	m	m	m	m	m	m
	Singapore	c	c	c	c	c	c	529	(7.9)
	Chinese Taipei	m	m	m	m	m	m	m	m
	Thailand	m	m	m	m	m	m	m	m
	Trinidad and Tobago	436	(29.7)	c	c	c	c	m	m
	Tunisia	m	m	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m	m	m

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 3/3]
Table B3.7 **Reading scores by percentage of students in school who do not speak the test language, by migration status** *(continued)*

		First-generation students							
		0 to 10%		10 to 20%		20 to 40%		40% or more	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
OECD	Australia	519	(6.4)	523	(9.8)	494	(9.3)	570	(36.5)
	Austria	451	(21.1)	418	(34.7)	431	(21.3)	365	(31.8)
	Belgium	477	(15.3)	446	(25.5)	472	(13.3)	430	(13.0)
	Canada	539	(9.1)	536	(10.4)	522	(8.2)	517	(12.2)
	Chile	m	m	m	m	m	m	m	m
	Czech Republic	461	(21.1)	c	c	c	c	m	m
	Denmark	426	(11.8)	424	(7.7)	401	(7.5)	409	(21.7)
	Estonia	c	c	c	c	m	m	m	m
	Finland	466	(16.4)	c	c	m	m	c	c
	France	487	(18.7)	404	(21.3)	435	(34.9)	c	c
	Germany	486	(10.0)	470	(17.4)	429	(13.1)	421	(19.2)
	Greece	456	(10.1)	c	c	c	c	c	c
	Hungary	m	m	m	m	m	m	m	m
	Iceland	435	(14.4)	c	c	c	c	m	m
	Ireland	485	(8.2)	449	(22.5)	c	c	c	c
	Israel	465	(13.9)	445	(19.4)	464	(18.6)	475	(13.9)
	Italy	477	(7.7)	432	(8.3)	396	(6.1)	368	(19.0)
	Japan	m	m	m	m	m	m	m	m
	Korea	m	m	m	m	m	m	m	m
	Luxembourg	c	c	m	m	c	c	424	(16.9)
	Mexico	352	(7.5)	c	c	c	c	265	(14.0)
	Netherlands	508	(14.2)	c	c	430	(11.2)	c	c
	New Zealand	544	(9.2)	504	(10.1)	526	(8.3)	495	(21.4)
	Norway	454	(12.0)	445	(8.2)	c	c	c	c
	Poland	m	m	m	m	m	m	m	m
	Portugal	458	(8.3)	c	c	m	m	m	m
	Slovak Republic	m	m	m	m	m	m	m	m
	Slovenia	c	c	c	c	c	c	m	m
	Spain	437	(4.5)	414	(11.2)	427	(18.6)	418	(6.7)
	Sweden	418	(17.4)	406	(9.3)	c	c	c	c
	Switzerland	490	(19.6)	478	(17.3)	432	(7.3)	398	(7.8)
	Turkey	m	m	m	m	m	m	m	m
	United Kingdom	474	(11.2)	473	(15.4)	449	(21.2)	c	c
	United States	514	(18.0)	c	c	481	(11.9)	463	(17.2)
	OECD average	470	(2.8)	454	(4.3)	453	(4.1)	430	(5.2)
Partners	Albania	m	m	m	m	m	m	m	m
	Argentina	394	(15.4)	c	c	m	m	m	m
	Azerbaijan	c	c	c	c	c	c	c	c
	Brazil	310	(16.3)	m	m	m	m	m	m
	Bulgaria	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	m
	Croatia	454	(9.0)	c	c	m	m	c	c
	Dubai (UAE)	442	(18.6)	542	(21.9)	572	(8.5)	495	(8.0)
	Hong Kong-China	529	(5.1)	481	(11.7)	c	c	c	c
	Indonesia	m	m	m	m	m	m	m	m
	Jordan	420	(11.3)	c	c	c	c	c	c
	Kazakhstan	361	(10.7)	363	(18.5)	c	c	c	c
	Kyrgyzstan	c	c	c	c	c	c	c	c
	Latvia	c	c	c	c	c	c	c	c
	Liechtenstein	c	c	c	c	c	c	m	m
	Lithuania	c	c	c	c	m	m	m	m
	Macao-China	492	(7.0)	m	m	c	c	469	(24.7)
	Montenegro	409	(9.3)	m	m	m	m	m	m
	Panama	413	(35.7)	c	c	c	c	c	c
	Peru	m	m	m	m	m	m	m	m
	Qatar	406	(8.5)	385	(34.5)	c	c	478	(11.7)
	Romania	m	m	m	m	m	m	m	m
	Russian Federation	456	(8.3)	c	c	c	c	c	c
	Serbia	449	(7.2)	c	c	m	m	m	m
	Shanghai-China	m	m	m	m	m	m	m	m
	Singapore	c	c	c	c	590	(13.5)	510	(7.8)
	Chinese Taipei	m	m	m	m	m	m	m	m
	Thailand	m	m	m	m	m	m	m	m
	Trinidad and Tobago	413	(29.6)	c	c	c	c	m	m
	Tunisia	m	m	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m	m	m

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B3.8 Performance difference in reading of non-immigrant students adjusting for mother's educational attainment, language spoken at home and percentage that do not speak the test language

		10 to 20% students do not speak the test language as first language		20 to 40% students do not speak the test language as first language		40% or more students do not speak the test language as first language		Second-generation students		First-generation students		Does not speak the assessment language at home		Mother's education: Lower secondary (ISCED 2)		Mother's education: Upper secondary (ISCED 3-4)		Mother's education: Tertiary (ISCED 5-6)	
		Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
OECD	Australia	**17.0**	(7.5)	7.2	(8.6)	**61.2**	(29.7)	**13.5**	(3.7)	2.7	(4.2)	**-22.8**	(4.9)	4.3	(10.7)	**39.9**	(10.6)	**75.5**	(10.8)
	Austria	20.2	(15.7)	-9.8	(15.2)	**-50.1**	(21.4)	-11.9	(8.6)	**-33.8**	(13.4)	**-16.4**	(8.0)	20.7	(15.5)	**49.5**	(15.8)	**75.7**	(16.6)
	Belgium	**-34.6**	(9.5)	**-19.6**	(9.3)	**-37.1**	(12.2)	**-38.7**	(8.2)	**-49.5**	(9.2)	-3.6	(3.8)	**39.5**	(8.4)	**33.9**	(7.1)	**69.7**	(7.7)
	Canada	**12.2**	(5.4)	**16.9**	(6.1)	8.5	(7.7)	1.0	(4.0)	2.1	(4.9)	**-20.0**	(3.8)	19.7	(11.3)	**31.7**	(10.6)	**53.5**	(10.7)
	Chile	m	m	m	m	m	m	c	c	c	c	c	c	m	m	m	m	m	m
	Czech Republic	c	c	c	c	m	m	m	m	m	m	m	m	m	c	m	m	m	m
	Denmark	1.0	(5.9)	-7.8	(6.8)	-12.7	(8.3)	**-24.2**	(6.8)	**-57.2**	(9.0)	-10.8	(7.6)	-1.9	(8.5)	**30.9**	(8.7)	**53.7**	(8.5)
	Estonia	m	m	c	c	m	m	m	m	m	m	m	m	m	c	m	m	m	m
	Finland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	France	**-37.5**	(15.4)	**-42.0**	(18.4)	c	c	-6.6	(7.9)	-16.6	(12.4)	**-18.4**	(8.5)	c	(10.6)	**32.1**	(11.8)	**61.0**	(12.5)
	Germany	-17.5	(11.0)	**-47.9**	(11.0)	**-59.7**	(15.9)	**-15.2**	(6.0)	**-29.6**	(8.7)	-4.7	(7.0)	-9.5	(11.6)	**38.0**	(10.6)	**60.1**	(11.2)
	Greece	m	m	c	c	c	c	m	m	m	m	m	m	c	m	m	m	m	m
	Hungary	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Iceland	c	c	c	c	m	m	c	c	m	m	m	m	m	m	m	m	m	m
	Ireland	-20.4	(13.7)	c	c	c	c	8.9	(14.1)	**-22.1**	(9.4)	**-27.2**	(12.2)	c	(10.1)	**47.6**	(9.2)	**72.0**	(9.9)
	Israel	-1.6	(10.1)	-10.1	(13.7)	-22.4	(24.4)	**15.9**	(6.3)	8.6	(11.9)	-11.2	(8.5)	**21.6**	(8.3)	**72.3**	(9.2)	**129.6**	(9.5)
	Italy	**-28.0**	(5.2)	**-79.5**	(6.2)	**-81.0**	(9.5)	**-21.3**	(6.5)	**-48.9**	(4.5)	-4.0	(2.6)	**26.2**	(4.7)	**52.2**	(4.9)	**50.1**	(5.2)
	Japan	m	m	m	m	m	m	c	c	c	c	c	c	m	m	m	m	m	m
	Korea	m	m	m	m	m	m	c	c	m	m	c	c	m	m	m	m	m	m
	Luxembourg	m	m	c	c	c	c	m	m	m	m	m	m	c	m	m	m	m	m
	Mexico	**-40.5**	(11.7)	**-41.9**	(9.8)	**-101.2**	(12.4)	**-68.4**	(9.2)	**-66.3**	(7.0)	**-17.6**	(6.9)	**19.3**	(2.3)	**44.8**	(3.5)	**49.1**	(3.2)
	Netherlands	-7.1	(25.0)	**-54.5**	(14.8)	c	c	**-18.2**	(9.0)	-9.1	(11.7)	-1.2	(8.0)	c	(8.6)	**23.0**	(8.9)	**42.3**	(9.3)
	New Zealand	-8.6	(8.5)	0.4	(8.6)	-22.0	(14.2)	2.1	(7.0)	**12.1**	(5.3)	**-59.2**	(6.0)	**44.7**	(12.4)	**59.4**	(11.4)	**92.8**	(12.1)
	Norway	8.2	(5.7)	14.3	(11.3)	c	c	-19.0	(11.9)	-17.7	(11.8)	**-37.7**	(9.4)	c	(12.2)	**64.2**	(11.0)	**84.5**	(11.0)
	Poland	m	m	m	m	m	m	m	m	c	c	c	c	m	c	m	m	m	m
	Portugal	c	c	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Slovak Republic	m	m	m	m	m	m	c	c	c	c	m	m	m	c	m	m	m	m
	Slovenia	m	m	m	m	c	c	m	m	m	m	m	m	c	m	m	m	m	m
	Spain	-9.8	(5.7)	1.0	(8.2)	7.9	(5.6)	**-25.6**	(10.8)	**-58.6**	(4.0)	**-10.5**	(3.8)	**15.3**	(3.8)	**36.2**	(3.8)	**58.1**	(4.4)
	Sweden	1.8	(7.8)	-6.6	(10.4)	**-45.0**	(9.8)	-10.7	(9.7)	**-43.2**	(13.1)	**-31.8**	(10.0)	**30.2**	(11.9)	**61.9**	(11.2)	**75.2**	(11.5)
	Switzerland	2.5	(9.3)	**-31.0**	(8.2)	**-63.5**	(9.3)	-6.0	(5.1)	**-22.4**	(6.3)	**-19.6**	(4.4)	11.6	(7.6)	**39.3**	(7.8)	**57.7**	(8.3)
	Turkey	m	m	m	m	m	m	c	c	c	c	m	m	m	m	m	m	m	m
	United Kingdom	-4.7	(10.3)	**-39.3**	(20.0)	**-48.9**	(9.4)	16.1	(8.4)	-9.0	(10.1)	-11.8	(7.8)	15.7	(10.9)	**40.8**	(10.1)	**65.2**	(10.4)
	United States	-21.9	(11.9)	**-19.9**	(9.1)	**-26.2**	(9.1)	11.1	(6.2)	11.3	(8.5)	**-13.5**	(6.5)	-8.0	(7.0)	**14.3**	(6.9)	**49.4**	(7.9)
	OECD average	**-8.9**	(2.6)	**-20.6**	(2.7)	**-32.8**	(3.8)	**-10.4**	(1.9)	**-23.5**	(2.1)	**-18.0**	(1.7)	**16.6**	(2.3)	**42.7**	(2.2)	**67.1**	(2.3)
Partners	Albania	m	m	m	m	m	m	c	c	c	c	m	m	m	m	m	m	m	m
	Argentina	c	c	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Azerbaijan	**17.5**	(8.5)	c	c	**43.7**	(13.6)	-0.6	(10.0)	10.0	(12.1)	8.9	(5.4)	**27.0**	(10.5)	**25.7**	(10.7)	**49.2**	(10.7)
	Brazil	c	c	c	c	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Bulgaria	m	m	m	m	m	m	c	c	c	c	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	c	c	c	c	m	m	m	m	m	m	m	m
	Croatia	c	c	c	c	c	c	m	m	m	m	m	m	c	m	m	m	m	m
	Dubai (UAE)	39.0	(25.9)	**93.3**	(16.1)	**43.3**	(14.0)	**49.2**	(9.3)	**69.8**	(9.5)	**-33.9**	(5.1)	**26.8**	(9.1)	**47.3**	(10.1)	**75.6**	(11.2)
	Hong Kong-China	**-42.1**	(15.0)	c	c	c	c	**14.2**	(3.5)	-3.6	(4.4)	**-24.2**	(7.6)	c	(3.4)	**18.5**	(3.8)	**44.7**	(6.2)
	Indonesia	m	m	m	m	m	m	m	m	c	c	m	m	m	m	m	m	m	m
	Jordan	-17.3	(18.8)	c	c	c	c	10.5	(5.6)	6.6	(9.1)	-15.0	(8.4)	c	(4.2)	**29.6**	(4.4)	**52.4**	(5.2)
	Kazakhstan	**30.2**	(12.0)	**29.8**	(13.2)	-9.0	(21.1)	25.7	(15.6)	**-19.8**	(7.9)	**12.5**	(5.0)	78.4	c	**96.0**	(29.0)	**139.8**	(29.3)
	Kyrgyzstan	25.6	(19.1)	**75.8**	(12.8)	**67.7**	(13.6)	18.7	(18.4)	0.7	(23.0)	-4.2	(6.5)	-5.8	c	20.4	(21.5)	**53.1**	(21.9)
	Latvia	m	m	m	m	c	c	m	m	c	c	m	m	c	c	m	m	m	m
	Liechtenstein	c	c	c	c	m	m	m	m	m	m	m	m	m	c	m	m	m	m
	Lithuania	m	m	c	c	m	m	m	m	c	c	m	m	m	c	m	m	m	m
	Macao-China	m	m	c	c	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Montenegro	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Panama	m	m	c	c	c	c	m	m	m	m	m	m	c	m	m	m	m	m
	Peru	m	m	m	m	m	m	c	c	c	c	m	m	m	m	m	m	m	m
	Qatar	-40.2	(20.8)	c	c	**56.7**	(16.2)	**60.3**	(8.1)	**109.9**	(10.7)	**-51.5**	(7.9)	12.2	(8.2)	**17.4**	(8.1)	**37.9**	(10.4)
	Romania	m	m	m	m	m	m	c	c	c	c	m	m	m	m	m	m	m	m
	Russian Federation	-9.9	(10.6)	**-22.3**	(11.0)	**-67.8**	(22.2)	**-18.8**	(6.3)	-14.9	(7.8)	**-18.6**	(8.6)	29.9	c	38.7	(39.2)	71.8	(38.4)
	Serbia	c	c	c	c	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Shanghai-China	m	m	m	m	m	m	c	c	c	c	m	m	m	m	m	m	m	m
	Singapore	c	c	c	c	c	c	**20.4**	(6.8)	-3.0	(5.6)	**-33.6**	(3.3)	c	(7.5)	**33.5**	(4.6)	**43.8**	(6.1)
	Chinese Taipei	m	m	m	m	m	m	c	c	c	c	m	m	m	m	m	m	m	m
	Thailand	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	m	m	c	c	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Tunisia	m	m	m	m	m	m	c	c	c	c	c	c	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m	c	c	c	c	m	m	m	m	m	m	m	m

Note: Coefficient of OLS regression with dummies. Values that are statistically significant are indicated in bold (see Annex A). Note reference category for mothers' education is primary education or less. Does not speak the language of assessment at home is defined for both immigrant and non-immigrant students, i.e. it is possible to have a value of 1 on this dummy variable and not be an immigrant student.

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.

Table B3.9 Share of students attending test language remedial classes, by migration background

		Non-immigrant students		Second-generation students		First-generation students	
		%	S.E.	%	S.E.	%	S.E.
OECD	Australia	4.1	(0.3)	5.7	(0.8)	9.7	(0.9)
	Austria	3.9	(0.4)	11.9	(2.1)	19.8	(3.0)
	Belgium	1.8	(0.2)	4.3	(0.9)	5.6	(1.4)
	Canada	3.7	(0.2)	5.0	(0.7)	9.0	(0.9)
	Chile	m	m	m	m	m	m
	Czech Republic	4.5	(0.4)	1.4	(0.8)	22.6	(6.7)
	Denmark	2.4	(0.3)	11.6	(1.5)	20.4	(2.4)
	Estonia	11.3	(0.7)	6.6	(1.6)	9.5	(5.2)
	Finland	1.9	(0.2)	4.0	(2.5)	18.6	(4.2)
	France	15.4	(0.9)	21.2	(2.4)	22.3	(3.8)
	Germany	5.7	(0.4)	10.8	(1.4)	10.1	(2.1)
	Greece	18.3	(0.7)	11.4	(2.9)	9.9	(2.7)
	Hungary	m	m	m	m	m	m
	Iceland	8.2	(0.4)	c	c	31.8	(6.4)
	Ireland	2.8	(0.3)	0.0	(0.0)	12.8	(2.7)
	Israel	12.3	(0.6)	9.5	(1.7)	14.8	(1.9)
	Italy	6.5	(0.3)	10.5	(2.6)	16.5	(1.7)
	Japan	m	m	m	m	m	m
	Korea	m	m	m	m	m	m
	Luxembourg	2.7	(0.3)	5.8	(0.8)	6.5	(0.9)
	Mexico	16.5	(0.5)	35.6	(4.9)	39.1	(3.8)
	Netherlands	3.4	(0.4)	9.0	(2.4)	8.7	(2.9)
	New Zealand	3.8	(0.3)	6.9	(1.8)	11.6	(1.1)
	Norway	3.2	(0.3)	5.9	(1.5)	15.2	(3.1)
	Poland	m	m	m	m	m	m
	Portugal	11.3	(1.0)	11.7	(3.6)	10.2	(2.4)
	Slovak Republic	m	m	m	m	m	m
	Slovenia	5.9	(0.4)	10.1	(2.2)	20.2	(5.2)
	Spain	12.1	(0.9)	11.3	(2.5)	22.2	(1.3)
	Sweden	4.0	(0.4)	9.1	(1.6)	16.7	(2.7)
	Switzerland	4.0	(0.5)	8.3	(0.9)	10.3	(1.3)
	Turkey	m	m	m	m	m	m
	United Kingdom	15.8	(0.8)	21.5	(2.7)	30.4	(3.9)
	United States	5.5	(0.4)	8.2	(1.4)	11.7	(2.0)
	OECD average	7.1	(0.1)	9.9	(0.4)	16.2	(0.6)
Partners	Albania	m	m	m	m	m	m
	Argentina	8.8	(0.6)	10.3	(3.7)	8.2	(3.9)
	Azerbaijan	41.8	(1.3)	38.1	(5.4)	15.6	(7.8)
	Brazil	10.0	(0.4)	13.4	(5.0)	32.1	(9.7)
	Bulgaria	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m
	Croatia	5.2	(0.4)	7.7	(1.7)	8.0	(2.4)
	Dubai (UAE)	14.6	(0.9)	12.9	(0.9)	11.5	(0.6)
	Hong Kong-China	12.6	(0.7)	11.4	(1.1)	10.8	(1.1)
	Indonesia	m	m	m	m	m	m
	Jordan	26.0	(0.9)	20.2	(2.0)	20.4	(3.6)
	Kazakhstan	54.3	(1.5)	54.1	(3.5)	56.7	(3.5)
	Kyrgyzstan	23.4	(0.9)	7.6	(3.1)	20.6	(8.2)
	Latvia	4.8	(0.4)	4.1	(2.2)	c	c
	Liechtenstein	4.0	(1.1)	10.6	(4.4)	13.6	(4.6)
	Lithuania	8.7	(0.5)	7.5	(2.9)	c	c
	Macao-China	6.2	(0.6)	3.6	(0.4)	4.0	(0.6)
	Montenegro	5.6	(0.6)	3.5	(1.7)	7.5	(4.2)
	Panama	25.3	(1.6)	23.9	(10.0)	39.6	(7.8)
	Peru	m	m	m	m	m	m
	Qatar	26.8	(0.6)	19.1	(0.9)	15.1	(0.9)
	Romania	m	m	m	m	m	m
	Russian Federation	41.5	(1.3)	50.3	(2.5)	46.1	(3.9)
	Serbia	5.2	(0.6)	4.5	(1.4)	7.2	(2.6)
	Shanghai-China	m	m	m	m	m	m
	Singapore	30.0	(0.6)	32.9	(3.2)	33.0	(1.8)
	Chinese Taipei	m	m	m	m	m	m
	Thailand	m	m	m	m	m	m
	Trinidad and Tobago	10.5	(0.5)	11.0	(5.6)	12.3	(5.8)
	Tunisia	m	m	m	m	m	m
	Uruguay	m	m	m	m	m	m

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B4.1a Age-at-arrival profiles of young people from different countries of origin

	Country of residence	Country of origin: Africa	Britain	China	France	Germany	Portugal	Turkey	Former USSR	Former Yugoslavia	All immigrants
OECD	Australia	25.9	-5.7	48.5							12.9
	Austria					**-22.1**		18.0		22.0	7.5
	Belgium	26.2			9.7	24.0		**-2.5**			9.9
	Denmark									**-9.1**	23.7
	Estonia								**8.4**		**9.0**
	Finland								**52.6**		22.2
	Germany							**48.9**	32.5	**36.5**	36.0
	Greece								6.4	14.7	9.9
	Ireland		3.7								21.4
	Israel	**70.9**							41.1		53.4
	Luxembourg	**54.2**			4.3		18.4			60.2	6.9
	New Zealand	41.5	15.1	35.0							16.5
	Portugal	**36.2**									16.4
	Switzerland				**19.9**	5.8	27.9	**-7.4**		34.7	1.9
Partners	Croatia									6.2	4.2
	Hong Kong-China			-1.3							-1.5
	Kazakhstan								22.6		23.7
	Macao-China			-7.9							-7.4
	Montenegro								4.4		6.0
	Russian Federation								9.1		9.6
	Serbia									17.9	17.4
	Former Yugoslavia									-4.3	-1.7

Notes: in 2003 Serbia and Montenegro constituted the Republic of Yugoslavia whereas by 2006 they had separated.

Minimum sample size: 40, estimates based on samples less than 100 are in bold; all estimates control for PISA year (2009 as reference), gender (male as reference) and student's grade (10th as reference). All immigrants refers to immigrant students of all origins.

Source: PISA pooled data 2003, 2006, 2009. See Heath and Kilpi-Jakonen (2012).

Table B4.1b Age-at-arrival profiles of young people from different countries of origin in linguistically similar countries of destination

Country of residence	China (Shanghai 557)	New Zealand (526)	Germany (511)	France (505)	Britain (499)	Former USSR (Russia 464)	Former Yugoslavia (Serbia 442)	Brazil (416)	Jordan* (HDI 0.681)	Egypt* (HDI 0.620)	South Africa* (HDI 0.597)	Yemen* (HDI 0.439)	All immigrants
	Country of origin												
Hong Kong (535)	-1.3												-1.5
New Zealand (526)					15.1						**36.9**		16.5
Belgium (519)				9.7									9.9
Australia (515)		15.6			-5.7						11.3		12.9
Switzerland (513)			5.8	**19.9**									1.9
Estonia (505)						**8.4**							**9.0**
Ireland (502)					3.7								21.4
Luxembourg (495)				4.3									6.9
Portugal (492)								9.7					16.4
Greece (489)							14.7						9.9
Austria (482)			**-22.1**										7.5
Macao-China (482)	-7.9												-7.4

Notes: *non-test language speakers specifically excluded.

Minimum sample size: 40, estimates based on samples less than 100 are in bold; all estimates control for PISA year (2009 as reference), gender (male as reference) and student's grade (10th as reference). All immigrants refers to immigrant students of all origins.

Source: PISA pooled data 2003, 2006, 2009, OECD (2010) for country scores, and UNDP's Human Development Index (HDI) for 2009. See Heath and Kilpi-Jakonen (2012).



Table B4.2 Age at arrival effects for different types of immigrants in western countries

	Model 1			Model 2			Model 3			Model 4		
	No interactions			Interaction with immigrant category			Interaction with country			Both interactions		
	Coef.	S.E.	Sign.	Coef.	S.E.	Sign.	Coef.	S.E.	Sign.	Coef.	S.E.	Sign.
Age at arrival (log transformed)	**18.5**	(5.3)	***	**7.6**	(4.5)	*	**20.9**	(4.3)	***	11.8	(7.1)	
Sending country (linguistically-similar western country as reference)												
Linguistically-dissimilar western country	**-30.4**	(9.9)	**	**-41.4**	(22.7)	*	**-29.3**	(11.7)	**	-41.5	(62.0)	
Linguistically-similar non-western country	-23.7	(17.7)		-15.7	(18.5)		-23.1	(15.7)		-10.7	(24.0)	
Linguistically-dissimilar non-western country	**-51.4**	(12.2)	***	**-92.5**	(12.0)	***	**-50.5**	(12.9)	***	-89.6	(110.2)	
Age at arrival interaction with immigrant category												
x different, western				7.5	(13.0)					8.0	(14.1)	
x similar, non-western				-4.2	(10.1)					-6.9	(11.6)	
x different, non-western				**21.7**	(8.3)	**				**20.8**	(9.9)	**
Country of destination (Australia as reference)												
Austria	**-40.8**	(18.1)	**	**-44.5**	(19.3)	**	-39.9	(28.6)		-25.1	(25.9)	
Belgium	**-31.4**	(10.5)	**	**-33.3**	(10.6)	**	**-29.4**	(15.0)	*	**-36.7**	(15.9)	**
Czech Republic	-31.2	(23.5)		-34.2	(22.6)		-51.1	(61.3)		-54.8	(66.6)	
Denmark	-13.6	(21.0)		-18.1	(22.4)		-44.5	(46.7)		-21.8	(46.2)	
Estonia	-9.3	(22.0)		-15.7	(23.3)		16.7	(78.6)		39.5	(79.4)	
Finland	**67.0**	(26.6)	**	**64.5**	(27.2)	**	4.3	(49.1)		23.8	(46.5)	
Germany	-1.7	(21.8)		-5.0	(23.1)		-42.4	(30.5)		-25.7	(29.1)	
Greece	**-45.8**	(14.5)	**	**-49.0**	(15.7)	**	-32.1	(33.8)		-10.9	(30.3)	
Ireland	11.8	(13.3)		12.6	(12.7)		40.1	(27.0)		31.2	(28.5)	
Israel	**-24.7**	(12.3)	**	**-28.2**	(13.4)	**	**-113.0**	(37.1)	**	**-94.5**	(35.9)	**
Italy	**-51.2**	(13.3)	***	**-54.0**	(12.5)	***	-26.9	(27.0)		-31.0	(27.7)	
Luxembourg	**-48.9**	(15.8)	**	**-50.6**	(16.4)	**	**-36.6**	(18.1)	**	**-38.5**	(17.8)	**
Netherlands	-9.8	(16.7)		-11.8	(17.2)		6.5	(49.1)		14.0	(49.9)	
New Zealand	**-16.8**	(7.2)	**	**-16.4**	(7.3)	**	-11.1	(12.5)		-13.1	(12.5)	
Portugal	-24.6	(19.0)		-26.0	(20.0)		-6.9	(22.0)		-22.0	(23.0)	
Switzerland	-25.2	(17.4)		-29.2	(18.5)		13.0	(16.5)		15.0	(16.0)	
United Kingdom	**-29.1**	(13.7)	**	**-27.9**	(13.8)	**	**-59.5**	(32.0)	*	**-58.3**	(32.9)	*
Age at arrival interaction with country of destination												
x Austria							-1.3	(10.0)		-9.6	(10.2)	
x Belgium							-1.5	(6.8)		1.9	(6.7)	
x Czech Republic							10.0	(26.2)		10.7	(30.0)	
x Denmark							12.2	(20.5)		0.5	(21.4)	
x Estonia							-11.4	(32.7)		-23.1	(33.6)	
x Finland							28.8	(20.2)		18.4	(20.3)	
x Germany							17.0	(11.7)		8.1	(13.4)	
x Greece							-6.9	(12.2)		-18.0	(11.1)	
x Ireland							-15.6	(11.6)		-10.1	(12.1)	
x Israel							**37.5**	(15.2)	**	**27.6**	(15.2)	*
x Italy							-14.0	(12.7)		-12.8	(14.5)	
x Luxembourg							-6.5	(7.0)		-6.4	(10.0)	
x Netherlands							-8.1	(21.0)		-12.3	(22.5)	
x New Zealand							-3.2	(7.7)		-1.6	(7.9)	
x Portugal							-11.0	(9.8)		-2.2	(14.2)	
x Switzerland							**-17.8**	(7.9)	**	**-20.4**	(9.6)	**
x United Kingdom							16.8	(13.8)		17.0	(14.3)	

Notes: *p<0.10, **p<0.05, ***p<0.001

All countries have equal weight in these analyses; all estimates control for PISA year (2009 as reference), gender (male as reference) and student's grade (10th as reference).

Source: PISA pooled data 2003, 2006, 2009. See Heath and Kilpi-Jakonen (2012).



Table B4.3 Estimated PISA scores of immigrants who arrived at or before age 5 and other groups' score differences compared to early arrivals by country of destination

		PISA reading score of first-generation students who arrived at or before age 5			Performance difference between first-generation students who arrived at or before age 5 and…											
					First-generation students who arrived at ages 6-11			First-generation students who arrived at ages 12 and above			Second-generation students			Non-immigrant students		
		Mean score	S.E.	Sign.	Coef.	S.E.	Sign.	Coef.	S.E.	Sign.	Coef.	S.E.	Sign.	Coef.	S.E.	Sign.
OECD	Australia	**507**	(5.3)	***	-6.7	(5.0)		**-24.1**	(5.0)	***	-4.1	(3.8)		**-7.4**	(4.5)	*
	Austria	**430**	(6.4)	***	4.0	(10.5)		-20.6	(13.0)		-8.0	(7.9)		**46.2**	(5.0)	***
	Belgium	**526**	(6.0)	***	0.1	(7.7)		**-20.1**	(7.8)	**	**-26.9**	(5.7)	***	**19.4**	(5.5)	***
	Canada	**516**	(3.8)	***	-2.5	(4.8)		**-27.4**	(5.7)	***	1.7	(3.7)		5.5	(3.7)	
	Chile	m	m		m	m		m	m		m	m		m	m	
	Czech Republic	**492**	(15.5)	***	11.2	(18.3)		**-78.8**	(30.7)	**	**-50.8**	(19.2)	**	-10.4	(14.7)	
	Denmark	**504**	(10.2)	***	**-19.5**	(9.3)	**	-33.0	(21.9)		**-18.2**	(7.6)	**	**41.3**	(6.3)	***
	Estonia	m	m		m	m		m	m		m	m		m	m	
	Finland	**486**	(22.9)	***	-13.0	(16.7)		-20.2	(14.5)		8.0	(14.5)		**50.5**	(9.7)	***
	France	**500**	(9.0)	***	-2.5	(13.3)		-5.9	(13.6)		-6.3	(8.6)		**30.7**	(8.1)	***
	Germany	**501**	(6.1)	***	6.4	(8.0)		**-65.8**	(17.1)	***	**-17.6**	(6.1)	**	**43.1**	(5.6)	***
	Greece	**456**	(6.2)	***	**28.3**	(9.8)	**	**-35.4**	(16.1)	**	-2.4	(9.3)		**13.1**	(5.4)	**
	Hungary	**525**	(8.6)	***	-11.8	(17.8)		-13.9	(14.7)		-3.8	(12.1)		-10.9	(8.1)	
	Iceland	**414**	(15.6)	***	-5.6	(18.4)		**-103.0**	(24.2)	***	**52.2**	(25.3)	**	**63.7**	(15.3)	***
	Ireland	**515**	(11.2)	***	3.5	(12.1)		**-32.5**	(10.5)	**	-9.9	(12.2)		2.5	(11.1)	
	Israel	**487**	(7.9)	***	**-21.1**	(9.8)	**	**-91.7**	(18.6)	***	**-16.8**	(7.2)	**	**-18.9**	(7.0)	**
	Italy	**464**	(6.8)	***	**18.9**	(9.0)	**	-4.1	(9.5)		7.3	(9.5)		**21.4**	(6.3)	**
	Japan	m	m		m	m		m	m		m	m		m	m	
	Korea	m	m		m	m		m	m		m	m		m	m	
	Luxembourg	**486**	(3.4)	***	-3.6	(5.5)		**-13.2**	(6.6)	**	-2.4	(3.7)		**45.2**	(3.6)	***
	Mexico	**363**	(11.6)	***	32.9	(21.0)		38.4	(33.1)		20.9	(16.7)		**82.6**	(11.0)	***
	Netherlands	**510**	(9.4)	***	**-21.8**	(10.8)	**	-9.5	(22.4)		**-19.5**	(7.8)	**	**22.3**	(7.2)	**
	New Zealand	**449**	(7.1)	***	1.7	(6.9)		**-21.8**	(8.0)	**	**-16.1**	(7.2)	**	4.1	(6.5)	
	Norway	**440**	(9.3)	***	-19.9	(12.9)		**-40.8**	(16.7)	**	-1.9	(11.1)		**45.2**	(9.2)	***
	Poland	m	m		m	m		m	m		m	m		m	m	
	Portugal	**509**	(9.7)	***	**18.6**	(10.3)	*	-17.7	(11.2)		14.8	(9.7)		**17.7**	(9.1)	*
	Slovak Republic	m	m		m	m		m	m		m	m		m	m	
	Slovenia	**443**	(6.7)	***	-24.8	(16.4)		**-75.2**	(18.1)	***	**-16.3**	(7.4)	**	**18.9**	(6.6)	**
	Spain	**478**	(7.0)	***	**15.0**	(6.9)	**	-6.4	(7.6)		15.1	(10.3)		**30.3**	(6.7)	***
	Sweden	**482**	(12.1)	***	-6.5	(11.2)		**-47.3**	(16.6)	**	**23.5**	(6.3)	***	**62.1**	(6.3)	***
	Switzerland	**471**	(6.5)	***	-6.8	(5.8)		-2.4	(10.6)		**22.3**	(4.2)	***	**67.4**	(4.0)	***
	Turkey	m	m		m	m		m	m		m	m		m	m	
	United Kingdom	**426**	(12.1)	***	17.5	(12.1)		-18.4	(12.3)		**32.8**	(11.4)	**	**37.7**	(11.4)	**
	United States	**473**	(8.0)	***	-7.8	(9.9)		**-33.6**	(13.9)	**	-1.7	(7.1)		**23.8**	(6.5)	***
	OECD average	**468**	(1.7)	***	1.1	(1.9)		**-20.3**	(2.2)	***	1.7	(1.4)		**25.1**	(1.4)	***
Partners	Croatia	**459**	(6.2)	***	7.4	(7.7)		-10.6	(15.2)		3.9	(6.3)		**19.7**	(5.2)	***
	Dubai (UAE)	**487**	(4.0)	***	7.4	(4.9)		**18.7**	(5.8)	**	**-39.5**	(4.7)	***	**-105.4**	(4.0)	***
	Hong Kong-China	**547**	(4.7)	***	**12.1**	(4.8)	**	1.5	(5.9)		**-6.8**	(3.8)	*	**-14.5**	(3.9)	***
	Kazakhstan	**355**	(23.3)	***	1.2	(21.3)		-28.5	(24.1)		33.9	(23.5)		7.5	(22.1)	
	Jordan	**417**	(6.6)	***	5.7	(10.8)		0.0	(9.5)		**-12.0**	(6.3)	*	**-30.3**	(5.5)	***
	Macao-China	**528**	(5.8)	***	**13.4**	(6.5)	**	**14.7**	(6.5)	**	**-14.2**	(5.6)	**	**-18.3**	(5.6)	**
	Montenegro	**426**	(9.0)	***	-7.0	(12.2)		-10.1	(16.5)		0.7	(11.5)		**-18.8**	(8.1)	**
	Qatar	**406**	(3.3)	***	**29.3**	(5.2)	***	**52.0**	(4.7)	***	**-46.9**	(3.5)	***	**-97.9**	(3.4)	***
	Russian Federation	**466**	(6.8)	***	-6.8	(9.8)		-18.1	(11.0)		-4.4	(7.7)		8.7	(5.7)	
	Serbia	**483**	(9.2)	***	-8.1	(14.0)		**-33.7**	(19.2)	*	7.2	(7.2)		**-11.2**	(5.3)	**
	Singapore	**544**	(8.4)	***	13.7	(12.3)		0.8	(10.7)		-3.8	(9.7)		**-23.7**	(8.3)	**
	Former Yugoslavia	**460**	(14.6)	***	-5.1	(13.2)		-1.1	(33.1)		**-24.5**	(11.8)	**	**-22.9**	(10.4)	**

Notes: Significance*p<0.10, **p<0.05, ***p<0.001.

Only countries with a sample of at least 100 immigrant students included; all estimates control for PISA year (2009 as reference), gender (male as reference) and student's grade (10th as reference).

Source: PISA pooled data 2003, 2006, 2009. See Heath and Kilpi-Jakonen (2012).



Table B4.4 Estimated PISA scores of immigrants who arrived at or before age 5 and other groups' score differences compared to early arrivals by country of destination before and after controls for parental education and socio-economic status

		PISA reading score of those who arrived at or before age 5						Difference compared to early arrivals											
								Arrival ages 6-11						Arrival ages 12 and above					
		Before controls			After controls			Before controls			After controls			Before controls			After controls		
		Mean score	S.E.	Sign.	Mean score	S.E.	Sign.	Score dif.	S.E.	Sign.	Score dif.	S.E.	Sign.	Score dif.	S.E.	Sign.	Score dif.	S.E.	Sign.
OECD	Australia	**515**	(5.1)	***	**518**	(5.0)	***	-4.6	(5.0)		-7.1	(4.5)		**-24.1**	(4.7)	***	**-29.2**	(4.4)	***
	Austria	**434**	(6.3)	***	**468**	(6.4)	***	2.1	(11.2)		-1.9	(10.4)		-17.0	(13.7)		**-23.0**	(11.0)	**
	Belgium	**533**	(6.8)	***	**534**	(6.5)	***	2.3	(8.6)		-1.8	(8.1)		**-23.2**	(7.5)	**	**-26.9**	(7.2)	***
	Canada	**522**	(3.8)	***	**520**	(3.8)	***	-3.7	(4.9)		-7.5	(4.9)		**-29.6**	(6.2)	***	**-35.6**	(6.0)	***
	Czech Republic	**496**	(14.8)	***	**506**	(12.3)	***	9.5	(18.0)		0.2	(15.6)		**-77.7**	(32.1)	**	**-72.1**	(25.5)	**
	Denmark	**506**	(11.1)	***	**508**	(11.1)	***	-15.5	(11.0)		-15.8	(10.2)		-32.1	(21.5)		**-38.1**	(20.9)	*
	Finland	**487**	(24.2)	***	**478**	(23.7)	***	-11.2	(17.5)		-19.4	(16.5)		-19.2	(16.7)		**-40.8**	(16.5)	**
	France	**507**	(9.8)	***	**521**	(8.7)	***	-4.2	(13.6)		-11.7	(13.0)		2.5	(14.3)		-12.9	(12.9)	
	Germany	**507**	(6.7)	***	**522**	(6.4)	***	7.6	(9.2)		2.3	(9.5)		**-50.9**	(15.4)	***	**-69.5**	(14.1)	***
	Greece	**458**	(6.2)	***	**475**	(6.0)	***	**26.7**	(9.9)	**	**18.7**	(9.7)	*	**-32.4**	(16.5)	**	**-46.0**	(16.0)	**
	Hungary	**524**	(8.8)	***	**541**	(10.2)	***	-12.1	(18.1)		-8.0	(17.9)		-13.7	(15.3)		-10.4	(15.6)	
	Iceland	**417**	(16.2)	***	**433**	(17.4)	***	-7.8	(18.8)		-8.1	(19.7)		**-104.6**	(24.0)	***	**-102.7**	(25.2)	***
	Ireland	**515**	(11.4)	***	**507**	(10.0)	***	5.8	(12.6)		3.6	(11.1)		-20.4	(12.9)		-20.1	(12.5)	
	Israel	**502**	(7.9)	***	**508**	(7.5)	***	**-24.8**	(10.6)	**	**-18.8**	(10.6)	*	**-97.6**	(20.0)	***	**-87.1**	(18.6)	***
	Italy	**467**	(7.1)	***	**481**	(6.7)	***	**16.8**	(9.4)	*	13.3	(9.7)		-6.9	(9.9)		**-15.7**	(9.3)	*
	Luxembourg	**491**	(3.6)	***	**495**	(3.9)	***	-3.3	(5.4)		-6.7	(4.7)		**-11.2**	(6.8)	*	**-19.7**	(6.3)	**
	Mexico	**366**	(12.3)	***	**383**	(12.6)	***	**49.1**	(17.8)	**	**45.1**	(16.6)	**	36.8	(36.3)		16.7	(32.7)	
	Netherlands	**516**	(10.4)	***	**522**	(10.0)	***	-17.8	(13.0)		-15.2	(13.3)		-2.6	(26.5)		-15.6	(24.7)	
	New Zealand	**464**	(7.2)	***	**464**	(6.4)	***	-3.1	(6.8)		-4.3	(6.1)		**-30.3**	(7.4)	***	**-29.4**	(6.9)	***
	Norway	**456**	(8.5)	***	**456**	(8.7)	***	**-25.6**	(11.8)	**	**-31.3**	(10.6)	**	**-44.8**	(16.5)	**	**-56.0**	(16.1)	***
	Portugal	**511**	(9.5)	***	**511**	(10.1)	***	**19.3**	(9.9)	*	**18.2**	(9.8)	*	-14.2	(10.9)		-14.0	(10.8)	
	Slovenia	**447**	(6.8)	***	**467**	(7.6)	***	-20.0	(16.8)		-10.9	(14.6)		**-74.6**	(19.3)	***	**-53.4**	(19.2)	**
	Spain	**486**	(6.8)	***	**489**	(7.2)	***	7.9	(7.2)		8.3	(7.5)		-10.4	(7.4)		-10.6	(7.5)	
	Sweden	**485**	(12.0)	***	**481**	(9.4)	***	12.0	(11.6)		3.6	(10.9)		-20.3	(17.5)		**-29.2**	(15.9)	*
	Switzerland	**473**	(6.7)	***	**491**	(6.3)	***	-4.5	(5.9)		**-10.0**	(5.3)	*	0.6	(11.1)		-14.6	(10.4)	
	United Kingdom	**456**	(12.3)	***	**461**	(10.4)	***	3.9	(13.5)		6.6	(12.4)		**-27.2**	(13.6)	**	**-25.5**	(13.0)	*
	United States	**478**	(7.6)	***	**501**	(7.7)	***	-9.3	(9.9)		-6.6	(9.0)		**-31.6**	(15.7)	**	**-44.0**	(14.2)	**
	OECD average	**474**	(1.7)	***	**488**	(1.4)	***	1.5	(2.0)		**-4.4**	(1.8)	**	**-18.5**	(2.2)	***	**-28.8**	(2.0)	***
Partners	Croatia	**459**	(6.2)	***	**483**	(6.4)	***	9.9	(7.7)		4.3	(7.1)		-7.6	(16.6)		-18.8	(16.5)	
	Dubai (UAE)	**487**	(4.1)	***	**479**	(4.3)	***	7.9	(4.9)		6.8	(4.8)		**18.5**	(5.9)	**	**16.3**	(5.7)	**
	Hong Kong-China	**548**	(4.7)	***	**564**	(4.9)	***	**10.8**	(4.6)	**	**12.8**	(4.5)	**	3.0	(5.6)		2.2	(5.6)	
	Jordan	**421**	(6.5)	***	**427**	(6.4)	***	7.8	(11.0)		-1.2	(10.0)		-2.5	(9.9)		-14.0	(10.1)	
	Kazakhstan	**353**	(24.5)	***	**356**	(22.6)	***	2.1	(22.9)		-0.1	(20.8)		-19.2	(24.9)		-20.4	(24.1)	
	Macao-China	**528**	(6.0)	***	**525**	(7.2)	***	**13.3**	(6.8)	**	**13.7**	(6.8)	**	**15.2**	(6.3)	**	**15.8**	(6.3)	**
	Montenegro	**430**	(9.4)	***	**421**	(9.1)	***	1.4	(12.3)		5.6	(12.3)		-15.1	(16.3)		-2.8	(16.9)	
	Qatar	**417**	(3.5)	***	**411**	(3.6)	***	**29.1**	(5.4)	***	**25.3**	(5.4)	***	**53.6**	(4.7)	***	**47.8**	(4.7)	***
	Russian Federation	**466**	(6.9)	***	**465**	(7.2)	***	-6.1	(9.9)		-8.7	(10.0)		**-19.7**	(11.0)	*	**-25.5**	(11.5)	**
	Serbia	**484**	(9.4)	***	**478**	(8.5)	***	-2.5	(13.7)		-0.6	(12.6)		**-34.9**	(19.2)	*	**-43.6**	(18.1)	**
	Singapore	**547**	(8.5)	***	**551**	(8.5)	***	10.3	(12.5)		6.3	(12.6)		0.7	(10.4)		-7.5	(10.7)	
	Former Yugoslavia	**460**	(14.9)	***	**449**	(14.3)	***	-4.2	(13.9)		12.3	(13.4)		-7.9	(32.6)		-13.6	(32.6)	

Notes: *p<0.10, **p<0.05, ***p<0.001.

Only countries with a sample of at least 100 immigrant students included; all estimates control for PISA year (2009 as reference), gender (male as reference) and student's grade (10th as reference); after controls models also include parental education (highest education, ISCED Levels 5A and 6 as reference) and highest parental ISEI score (standardised); number of observations is constant within countries, those with missing data for parents' education and socio-economic status excluded from all models.

Source: PISA pooled data 2003, 2006, 2009. See Heath and Kilpi-Jakonen (2012).



Table B4.4 Estimated PISA scores of immigrants who arrived at or before age 5 and other groups' score differences compared to early arrivals by country of destination before and after controls for parental education and socio-economic status *(continued)*

		Difference compared to early arrivals											
		Second-generation						Non-immigrant					
		Before controls			After controls			Before controls			After controls		
		Score dif.	S.E.	Sign.	Score dif.	S.E.	Sign.	Score dif.	S.E.	Sign.	Score dif.	S.E.	Sign.
OECD	Australia	-6.3	(3.9)		2.6	(3.7)		**-9.6**	(4.4)	**	-2.8	(4.1)	
	Austria	-9.8	(8.0)		-8.8	(7.5)		**44.1**	(5.3)	***	**25.4**	(5.2)	***
	Belgium	**-28.7**	(6.8)	***	**-22.0**	(6.4)	***	**13.6**	(6.5)	**	5.7	(6.1)	
	Canada	-0.4	(3.8)		5.5	(3.6)		2.0	(3.8)		2.8	(3.5)	
	Czech Republic	**-43.5**	(18.5)	**	**-36.6**	(16.2)	**	-10.8	(14.1)		-12.6	(11.6)	
	Denmark	**-16.7**	(8.7)	*	-9.3	(8.6)		**37.7**	(7.3)	***	**24.4**	(7.2)	***
	Finland	11.3	(15.9)		0.0	(14.8)		**49.7**	(10.6)	***	**38.7**	(9.4)	***
	France	-4.4	(9.4)		-4.1	(8.5)		**28.0**	(8.8)	**	**14.8**	(7.9)	*
	Germany	**-21.6**	(6.8)	**	**-17.3**	(6.2)	**	**38.6**	(5.8)	***	**21.2**	(5.4)	***
	Greece	-1.3	(9.5)		-9.1	(9.1)		**13.4**	(5.3)	**	2.3	(5.1)	
	Hungary	-3.3	(12.6)		-7.4	(13.3)		-7.8	(8.5)		-5.6	(9.9)	
	Iceland	**58.6**	(26.0)	**	**48.1**	(25.8)	*	**63.4**	(15.8)	***	**55.6**	(16.9)	***
	Ireland	-9.9	(12.3)		-2.8	(10.9)		4.0	(11.5)		13.4	(10.1)	
	Israel	**-18.4**	(7.7)	**	**-16.3**	(7.2)	**	**-22.6**	(7.3)	**	**-22.3**	(7.1)	**
	Italy	10.3	(9.9)		3.4	(10.0)		**19.5**	(6.7)	**	11.0	(6.8)	
	Luxembourg	-2.6	(4.0)		-0.7	(3.8)		**44.5**	(3.8)	***	**24.5**	(3.7)	***
	Mexico	18.1	(18.1)		15.6	(18.1)		**81.7**	(11.9)	***	**72.9**	(11.6)	***
	Netherlands	**-20.2**	(9.5)	**	-13.1	(9.5)		**17.9**	(8.6)	**	8.8	(8.6)	
	New Zealand	**-15.6**	(6.8)	**	4.8	(6.0)		-1.5	(5.9)		**10.5**	(5.1)	**
	Norway	-11.3	(10.2)		**-17.3**	(9.8)	*	**33.1**	(8.0)	***	**13.1**	(7.6)	*
	Portugal	14.3	(9.3)		14.3	(9.3)		**16.4**	(8.6)	*	**20.0**	(8.7)	**
	Slovenia	**-16.1**	(7.4)	**	-10.0	(8.0)		**18.9**	(6.6)	**	6.6	(7.1)	
	Spain	9.7	(9.7)		9.0	(9.4)		**23.2**	(6.6)	***	**22.6**	(6.8)	***
	Sweden	**25.9**	(6.9)	***	**23.6**	(6.2)	***	**59.2**	(6.7)	***	**44.8**	(5.9)	***
	Switzerland	**22.0**	(4.3)	***	**19.1**	(3.8)	***	**65.6**	(4.0)	***	**47.4**	(3.6)	***
	United Kingdom	13.5	(11.0)		**22.6**	(10.0)	**	19.0	(11.9)		**23.0**	(10.1)	**
	United States	-1.6	(7.5)		-1.5	(6.9)		**21.2**	(6.2)	***	2.7	(6.0)	
	OECD average	2.3	(1.5)		**4.5**	(1.3)	***	**22.4**	(1.4)	***	**15.4**	(1.2)	***
Partners	Croatia	5.2	(6.7)		-4.8	(6.3)		**21.7**	(5.3)	***	4.9	(5.2)	
	Dubai (UAE)	**-37.7**	(4.6)	***	**-30.5**	(4.6)	***	**-102.0**	(4.1)	***	**-90.1**	(4.5)	***
	Hong Kong-China	-5.7	(3.9)		-4.6	(3.9)		**-13.6**	(3.9)	***	**-18.8**	(4.0)	***
	Jordan	-8.0	(6.3)		-4.9	(6.3)		**-25.4**	(5.6)	***	**-18.7**	(5.4)	***
	Kazakhstan	37.2	(24.2)		36.8	(22.6)		11.0	(23.3)		6.6	(21.6)	
	Macao-China	**-14.3**	(5.8)	**	**-13.9**	(5.7)	**	**-17.9**	(5.6)	**	**-18.1**	(5.5)	**
	Montenegro	-0.3	(11.6)		-2.1	(11.2)		**-18.4**	(8.4)	**	-10.6	(8.1)	
	Qatar	**-42.7**	(3.9)	***	**-37.8**	(3.8)	***	**-95.9**	(3.7)	***	**-91.8**	(3.6)	***
	Russian Federation	-2.0	(7.4)		-0.3	(7.5)		**9.9**	(5.8)	*	**9.8**	(5.8)	*
	Serbia	6.0	(7.4)		2.5	(7.0)		**-10.3**	(5.4)	*	**-13.8**	(5.2)	**
	Singapore	-4.8	(10.0)		7.5	(9.8)		**-23.6**	(8.5)	**	-4.9	(8.5)	
	Former Yugoslavia	**-24.8**	(12.3)	**	-17.4	(11.5)		**-21.9**	(10.4)	**	-14.6	(10.1)	

Notes: *p<0.10, **p<0.05, ***p<0.001.

Only countries with a sample of at least 100 immigrant students included; all estimates control for PISA year (2009 as reference), gender (male as reference) and student's grade (10th as reference); after controls models also include parental education (highest education, ISCED Levels 5A and 6 as reference) and highest parental ISEI score (standardised); number of observations is constant within countries, those with missing data for parents' education and socio-economic status excluded from all models.

Source: PISA pooled data 2003, 2006, 2009. See Heath and Kilpi-Jakonen (2012).



[Part 1/4]
Table B5.1a **Prevalence and average reading performance across mother's education, by immigrant status**
Results based on students' self-reports

		Percentage of students in each category											
		Distribution of educational attainment of mother											
		At best primary						Lower secondary					
		Non-immigrant students		Second-generation students		First-generation students		Non-immigrant students		Second-generation students		First-generation students	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	0.3	(0.1)	4.4	(0.8)	2.7	(0.6)	4.4	(0.3)	5.7	(0.8)	3.3	(0.7)
	Austria	0.6	(0.2)	9.2	(1.5)	17.8	(3.2)	4.8	(0.4)	22.5	(1.9)	16.3	(3.5)
	Belgium	2.5	(0.2)	22.7	(2.4)	13.9	(2.1)	4.6	(0.3)	10.6	(1.5)	8.1	(1.5)
	Canada	0.5	(0.1)	6.1	(1.0)	4.4	(0.8)	4.9	(0.2)	6.4	(0.8)	3.4	(0.6)
	Chile	11.2	(0.7)	c	c	c	c	22.8	(1.0)	c	c	c	c
	Czech Republic	0.3	(0.1)	3.8	(3.2)	1.3	(1.0)	2.8	(0.3)	10.8	(4.2)	8.7	(5.6)
	Denmark	0.3	(0.1)	19.9	(1.9)	16.2	(2.6)	9.6	(0.7)	21.2	(1.8)	14.6	(2.7)
	Estonia	0.2	(0.1)	0.0	(0.0)	0.0	(0.0)	4.8	(0.4)	5.9	(1.8)	6.1	(3.8)
	Finland	3.2	(0.3)	4.3	(2.6)	17.4	(4.7)	4.9	(0.4)	12.8	(4.5)	6.5	(3.4)
	France	0.9	(0.2)	18.1	(2.0)	11.6	(3.6)	14.1	(0.7)	31.2	(2.7)	31.0	(4.4)
	Germany	1.2	(0.2)	20.7	(2.1)	8.9	(2.1)	15.0	(0.9)	18.2	(1.6)	23.8	(3.6)
	Greece	8.1	(0.5)	2.4	(1.2)	5.8	(2.6)	13.7	(0.9)	7.2	(1.8)	17.6	(2.4)
	Hungary	1.0	(0.2)	0.0	(0.0)	0.0	(0.0)	15.0	(0.9)	9.3	(5.5)	12.5	(5.6)
	Iceland	0.9	(0.2)	c	c	0.0	(0.0)	22.4	(0.7)	c	c	25.3	(6.6)
	Ireland	3.8	(0.4)	3.6	(2.6)	4.6	(1.4)	13.8	(0.8)	20.2	(5.9)	5.3	(1.4)
	Israel	4.8	(0.4)	8.7	(2.0)	7.8	(1.8)	6.1	(0.5)	5.2	(0.9)	2.5	(1.0)
	Italy	4.4	(0.2)	10.4	(2.7)	10.9	(1.8)	31.1	(0.4)	29.1	(3.0)	20.0	(1.5)
	Japan	0.0	(0.0)	c	c	c	c	3.2	(0.2)	c	c	c	c
	Korea	2.9	(0.3)	c	c	m	m	8.0	(0.6)	c	c	m	m
	Luxembourg	2.7	(0.3)	35.0	(1.6)	26.9	(1.7)	14.6	(0.8)	17.9	(1.3)	14.4	(1.3)
	Mexico	35.5	(0.8)	57.0	(5.5)	57.9	(3.9)	25.8	(0.4)	16.2	(3.6)	16.5	(2.5)
	Netherlands	2.3	(0.3)	34.8	(2.7)	34.2	(4.8)	7.6	(0.5)	12.0	(2.3)	7.9	(2.5)
	New Zealand	2.4	(0.2)	4.5	(1.1)	3.6	(0.7)	11.7	(0.6)	12.8	(2.0)	4.9	(0.8)
	Norway	0.4	(0.1)	11.3	(2.3)	13.6	(3.4)	3.4	(0.3)	5.1	(1.9)	7.4	(2.0)
	Poland	0.2	(0.1)	m	m	c	c	7.9	(0.6)	m	m	c	c
	Portugal	36.6	(1.2)	30.7	(3.9)	14.5	(2.8)	22.3	(0.7)	23.8	(2.8)	24.4	(4.0)
	Slovak Republic	0.5	(0.1)	c	c	c	c	2.7	(0.3)	c	c	c	c
	Slovenia	0.3	(0.1)	0.7	(0.3)	3.2	(2.1)	9.1	(0.5)	26.4	(2.5)	44.1	(6.1)
	Spain	15.6	(0.9)	18.4	(3.5)	16.4	(1.9)	25.0	(0.8)	19.4	(3.6)	21.7	(1.8)
	Sweden	0.9	(0.1)	10.2	(1.9)	19.8	(3.3)	7.3	(0.5)	12.7	(2.0)	8.7	(2.5)
	Switzerland	0.8	(0.1)	15.3	(2.2)	15.1	(1.6)	14.8	(0.6)	32.1	(1.4)	28.7	(2.1)
	Turkey	62.8	(1.4)	c	c	c	c	17.3	(0.6)	c	c	c	c
	United Kingdom	0.9	(0.1)	9.1	(2.7)	12.1	(3.2)	4.7	(0.3)	11.0	(2.4)	9.3	(1.7)
	United States	0.7	(0.2)	21.6	(2.5)	18.3	(2.5)	4.8	(0.4)	13.1	(1.4)	13.9	(1.6)
	OECD average	6.2	(0.1)	14.2	(0.5)	12.8	(0.5)	11.3	(0.1)	15.5	(0.5)	14.5	(0.6)
Partners	Albania	13.4	(1.1)	c	c	c	c	25.7	(1.1)	c	c	c	c
	Argentina	28.0	(1.4)	45.3	(5.0)	35.3	(4.8)	11.3	(0.6)	8.9	(3.3)	7.6	(3.5)
	Azerbaijan	1.8	(0.3)	0.5	(0.5)	3.5	(3.5)	5.8	(0.5)	10.1	(3.5)	4.8	(3.7)
	Brazil	33.7	(1.1)	42.4	(13.2)	40.4	(17.8)	21.1	(0.6)	16.4	(12.1)	14.4	(8.8)
	Bulgaria	1.8	(0.3)	c	c	c	c	8.7	(1.0)	c	c	c	c
	Colombia	34.9	(1.5)	c	c	c	c	16.9	(0.6)	c	c	c	c
	Croatia	0.8	(0.2)	2.3	(0.9)	5.0	(1.7)	12.4	(0.6)	22.6	(2.5)	23.0	(3.6)
	Dubai (UAE)	20.7	(1.1)	8.2	(0.7)	2.4	(0.3)	13.8	(1.0)	7.4	(0.7)	4.7	(0.4)
	Hong Kong-China	20.6	(1.2)	35.1	(1.3)	40.5	(2.0)	17.4	(0.9)	26.1	(1.4)	28.5	(2.1)
	Indonesia	45.1	(2.0)	m	m	c	c	19.4	(0.8)	m	m	c	c
	Jordan	13.1	(0.7)	10.1	(1.4)	7.4	(2.3)	18.9	(0.7)	15.2	(1.7)	11.3	(2.8)
	Kazakhstan	0.1	(0.1)	0.7	(0.5)	1.2	(1.0)	2.3	(0.3)	3.1	(1.1)	8.7	(2.7)
	Kyrgyzstan	0.5	(0.1)	0.0	(0.0)	0.0	(0.0)	1.9	(0.2)	7.9	(4.4)	3.1	(3.6)
	Latvia	0.2	(0.1)	0.0	(0.0)	c	c	3.6	(0.5)	1.4	(0.8)	c	c
	Liechtenstein	1.0	(0.7)	16.3	(5.8)	21.1	(5.7)	19.1	(2.6)	27.5	(6.9)	23.9	(6.4)
	Lithuania	0.4	(0.1)	3.3	(1.8)	c	c	2.1	(0.2)	0.0	(0.0)	c	c
	Macao-China	32.2	(1.1)	37.1	(0.8)	27.5	(1.5)	27.7	(1.1)	38.1	(0.8)	37.1	(1.8)
	Montenegro	1.5	(0.2)	0.0	(0.0)	5.4	(4.3)	11.2	(0.9)	9.1	(4.6)	6.3	(1.8)
	Panama	24.6	(1.9)	17.3	(4.9)	25.0	(5.0)	8.8	(0.6)	14.9	(4.6)	14.2	(6.6)
	Peru	33.1	(1.5)	c	c	c	c	10.4	(0.5)	c	c	c	c
	Qatar	17.6	(0.4)	18.8	(0.9)	6.5	(0.5)	6.3	(0.4)	5.9	(0.6)	4.2	(0.5)
	Romania	4.1	(0.5)	c	c	c	c	7.8	(0.5)	c	c	c	c
	Russian Federation	0.1	(0.1)	1.9	(1.4)	0.4	(0.5)	2.6	(0.3)	6.0	(3.6)	5.4	(1.9)
	Serbia	1.3	(0.3)	0.5	(0.6)	1.1	(0.8)	10.1	(0.6)	10.8	(2.9)	7.6	(1.7)
	Shanghai-China	8.6	(0.7)	c	c	c	c	29.1	(1.2)	c	c	c	c
	Singapore	17.0	(0.6)	17.9	(2.3)	8.0	(1.2)	5.9	(0.4)	8.3	(1.9)	5.0	(1.0)
	Chinese Taipei	7.7	(0.4)	c	c	c	c	18.7	(0.7)	c	c	c	c
	Thailand	56.8	(1.2)	m	m	m	m	11.3	(0.6)	m	m	m	m
	Trinidad and Tobago	15.5	(0.7)	22.4	(6.1)	6.9	(3.8)	7.8	(0.4)	6.9	(3.9)	11.1	(4.1)
	Tunisia	51.8	(1.7)	c	c	c	c	15.0	(0.7)	c	c	c	c
	Uruguay	31.5	(0.9)	c	c	c	c	28.3	(0.8)	c	c	c	c

Note: At best primary is defined as MISCED = 0 or 1; Lower secondary is defined as MISCED = 2 , Upper secondary is defined as MISCED = 3 or 4 and Tertiary is defined as MISCED = 5 or 6.

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 2/4]
Table B5.1a **Prevalence and average reading performance across mother's education, by immigrant status** *(cont.)*
Results based on students' self-reports

		Percentage of students in each category											
		Distribution of educational attainment of mother											
		Upper secondary						Tertiary					
		Non-immigrant students		Second-generation students		First-generation students		Non-immigrant students		Second-generation students		First-generation students	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	53.7	(0.7)	48.1	(2.0)	40.6	(1.4)	41.5	(0.7)	41.9	(2.2)	53.5	(1.3)
	Austria	69.1	(0.8)	49.9	(2.8)	43.9	(3.9)	25.5	(0.8)	18.4	(2.0)	22.0	(3.3)
	Belgium	38.3	(0.8)	30.2	(2.3)	32.8	(2.4)	54.6	(0.8)	36.6	(3.1)	45.2	(2.5)
	Canada	33.5	(0.5)	32.0	(1.5)	22.2	(1.5)	61.1	(0.5)	55.5	(2.0)	70.0	(1.9)
	Chile	42.7	(1.0)	c	c	c	c	23.3	(0.9)	c	c	c	c
	Czech Republic	75.8	(0.6)	63.5	(6.3)	58.7	(8.8)	21.1	(0.6)	22.0	(4.9)	31.2	(7.9)
	Denmark	33.0	(0.8)	23.4	(1.8)	27.9	(3.1)	57.2	(1.0)	35.5	(2.5)	41.3	(3.6)
	Estonia	48.6	(1.0)	43.5	(3.4)	37.9	(10.0)	46.4	(1.0)	50.6	(3.7)	56.0	(11.5)
	Finland	19.8	(0.7)	20.9	(6.1)	11.7	(4.1)	72.1	(0.8)	62.0	(8.3)	64.4	(5.9)
	France	42.0	(1.1)	25.3	(2.1)	23.3	(3.7)	43.0	(1.4)	25.3	(2.3)	34.1	(6.2)
	Germany	58.4	(1.1)	36.9	(2.4)	32.0	(3.4)	25.4	(1.1)	24.3	(2.2)	35.4	(2.9)
	Greece	41.4	(0.8)	51.2	(5.1)	49.6	(4.0)	36.8	(1.2)	39.2	(5.0)	27.0	(3.9)
	Hungary	52.8	(1.1)	59.2	(7.7)	54.1	(7.9)	31.2	(1.1)	31.5	(7.5)	33.4	(7.6)
	Iceland	33.0	(0.7)	c	c	38.8	(6.0)	43.8	(0.9)	c	c	35.9	(5.9)
	Ireland	44.5	(1.0)	45.1	(7.1)	29.7	(2.3)	37.9	(1.0)	31.1	(6.0)	60.4	(2.8)
	Israel	44.3	(1.1)	36.2	(2.0)	34.8	(3.2)	44.8	(1.1)	50.0	(2.4)	54.9	(4.0)
	Italy	40.1	(0.4)	30.8	(3.0)	42.8	(2.1)	24.4	(0.4)	29.6	(3.8)	26.4	(2.1)
	Japan	49.1	(0.9)	c	c	c	c	47.7	(0.9)	c	c	c	c
	Korea	56.0	(1.1)	c	c	m	m	33.1	(1.3)	c	c	m	m
	Luxembourg	40.1	(1.0)	25.4	(1.5)	20.3	(1.7)	42.7	(1.0)	21.7	(1.2)	38.4	(1.6)
	Mexico	12.6	(0.4)	7.9	(2.8)	4.6	(1.0)	26.1	(0.7)	18.9	(5.1)	21.1	(3.4)
	Netherlands	48.9	(1.1)	29.7	(2.3)	21.7	(3.4)	41.3	(1.2)	23.6	(3.4)	36.2	(4.7)
	New Zealand	48.8	(1.0)	43.9	(3.2)	32.1	(2.0)	37.2	(1.0)	38.9	(2.6)	59.5	(2.1)
	Norway	35.9	(0.8)	36.5	(3.4)	32.2	(3.9)	60.3	(0.9)	47.1	(4.2)	46.7	(4.2)
	Poland	73.4	(1.0)	m	m	c	c	18.5	(1.0)	m	m	c	c
	Portugal	20.7	(0.7)	20.9	(3.2)	25.2	(3.5)	20.5	(1.1)	24.7	(3.1)	36.0	(4.3)
	Slovak Republic	76.3	(0.8)	c	c	c	c	20.5	(0.8)	c	c	c	c
	Slovenia	57.1	(0.7)	58.9	(2.9)	30.5	(5.3)	33.6	(0.8)	14.0	(2.2)	22.2	(4.9)
	Spain	27.1	(0.6)	31.1	(4.7)	29.5	(1.5)	32.3	(1.2)	31.2	(5.5)	32.5	(2.2)
	Sweden	28.4	(0.8)	21.9	(2.7)	23.0	(3.6)	63.4	(0.9)	55.1	(3.1)	48.5	(3.9)
	Switzerland	47.0	(1.1)	23.4	(1.5)	20.5	(1.9)	37.4	(0.9)	29.2	(1.9)	35.7	(3.5)
	Turkey	12.7	(0.7)	c	c	c	c	7.2	(0.8)	c	c	c	c
	United Kingdom	48.4	(0.8)	36.6	(3.2)	27.9	(2.9)	46.1	(0.8)	43.3	(3.0)	50.7	(4.5)
	United States	42.3	(1.3)	36.7	(2.1)	32.8	(2.9)	52.2	(1.5)	28.7	(2.6)	35.0	(3.6)
	OECD average	44.0	(0.2)	35.9	(0.7)	31.5	(0.8)	38.5	(0.2)	34.4	(0.8)	41.2	(0.9)
Partners	Albania	38.6	(1.3)	c	c	c	c	22.4	(1.2)	c	c	c	c
	Argentina	18.1	(0.7)	26.0	(4.4)	12.0	(3.6)	42.6	(1.4)	19.8	(4.6)	45.1	(5.1)
	Azerbaijan	43.5	(1.5)	47.0	(8.2)	34.8	(10.0)	49.0	(1.5)	42.5	(9.2)	56.9	(10.2)
	Brazil	23.9	(0.8)	9.5	(5.6)	14.1	(9.4)	21.3	(0.6)	31.7	(9.3)	31.0	(16.8)
	Bulgaria	54.7	(1.5)	c	c	c	c	34.8	(1.6)	c	c	c	c
	Colombia	14.4	(0.7)	c	c	c	c	33.8	(1.3)	c	c	c	c
	Croatia	53.0	(1.0)	48.4	(3.2)	49.8	(3.5)	33.8	(1.1)	26.8	(2.6)	22.3	(2.9)
	Dubai (UAE)	33.0	(1.3)	30.6	(1.5)	24.0	(1.1)	32.5	(1.1)	53.8	(1.5)	69.0	(1.2)
	Hong Kong-China	49.2	(1.2)	34.3	(1.4)	25.4	(1.6)	12.9	(1.1)	4.5	(0.6)	5.5	(1.1)
	Indonesia	24.5	(1.4)	m	m	c	c	11.0	(1.1)	m	m	c	c
	Jordan	33.6	(0.9)	34.7	(2.5)	21.4	(3.0)	34.4	(1.1)	39.9	(2.6)	60.0	(4.3)
	Kazakhstan	20.9	(0.9)	21.8	(2.3)	19.8	(2.3)	76.8	(1.0)	74.4	(3.1)	70.4	(3.7)
	Kyrgyzstan	34.8	(0.9)	30.0	(7.4)	32.7	(8.5)	62.9	(1.0)	62.2	(8.7)	64.2	(9.4)
	Latvia	48.1	(1.2)	49.2	(5.4)	c	c	48.1	(1.3)	49.4	(5.4)	c	c
	Liechtenstein	46.1	(3.2)	33.0	(7.6)	27.4	(7.7)	33.9	(3.0)	23.2	(6.1)	27.6	(7.1)
	Lithuania	48.2	(0.8)	47.9	(6.7)	c	c	49.2	(0.9)	48.8	(6.2)	c	c
	Macao-China	25.9	(1.1)	19.9	(0.8)	24.9	(1.5)	14.3	(0.9)	4.9	(0.4)	10.5	(1.0)
	Montenegro	67.4	(1.2)	63.4	(6.2)	61.1	(4.0)	19.9	(0.6)	27.5	(5.4)	27.2	(3.8)
	Panama	15.4	(1.0)	29.0	(10.4)	9.4	(5.0)	51.3	(2.0)	38.8	(10.6)	51.4	(5.2)
	Peru	37.8	(1.1)	c	c	c	c	18.8	(1.1)	c	c	c	c
	Qatar	29.6	(0.7)	31.8	(1.2)	27.0	(0.9)	46.5	(0.7)	43.5	(1.4)	62.3	(1.0)
	Romania	55.4	(1.0)	c	c	c	c	32.7	(1.2)	c	c	c	c
	Russian Federation	13.8	(0.6)	15.5	(2.1)	20.9	(2.9)	83.6	(0.7)	76.7	(5.4)	73.3	(3.7)
	Serbia	48.1	(0.9)	42.2	(3.9)	52.9	(3.4)	40.5	(0.8)	46.6	(3.8)	38.4	(3.4)
	Shanghai-China	30.4	(0.8)	c	c	c	c	32.0	(1.1)	c	c	c	c
	Singapore	51.4	(0.8)	42.6	(3.1)	30.0	(2.1)	25.7	(0.7)	31.1	(3.2)	57.1	(2.2)
	Chinese Taipei	32.3	(0.7)	c	c	c	c	41.3	(0.9)	c	c	c	c
	Thailand	19.6	(0.7)	m	m	m	m	12.3	(1.1)	m	m	m	m
	Trinidad and Tobago	52.8	(1.0)	38.5	(7.9)	34.7	(6.5)	23.8	(0.8)	32.2	(7.4)	47.3	(6.8)
	Tunisia	22.4	(1.1)	c	c	c	c	10.7	(0.9)	c	c	c	c
	Uruguay	17.0	(0.6)	c	c	c	c	23.1	(0.7)	c	c	c	c

Note: At best primary is defined as MISCED = 0 or 1; Lower secondary is defined as MISCED = 2 , Upper secondary is defined as MISCED = 3 or 4 and Tertiary is defined as MISCED = 5 or 6.

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.

[Part 3/4]
Table B5.1a **Prevalence and average reading performance across mother's education, by immigrant status** *(cont.)*
Results based on students' self-reports

		Student performance on the reading scale											
		Distribution of educational attainment of mother											
		At best primary						Lower secondary					
		Non-immigrant students		Second-generation students		First-generation students		Non-immigrant students		Second-generation students		First-generation students	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
OECD	Australia	453	(15.5)	497	(15.3)	450	(16.8)	468	(5.0)	511	(11.7)	450	(14.5)
	Austria	c	c	382	(11.3)	347	(16.4)	431	(9.1)	414	(11.1)	358	(15.5)
	Belgium	461	(9.0)	432	(12.9)	413	(11.4)	505	(5.9)	482	(13.7)	441	(25.4)
	Canada	455	(12.6)	506	(12.4)	456	(17.9)	496	(6.0)	515	(12.8)	483	(18.8)
	Chile	410	(4.5)	c	c	c	c	422	(3.8)	c	c	c	c
	Czech Republic	c	c	c	c	c	c	444	(9.0)	c	c	c	c
	Denmark	c	c	426	(6.6)	401	(9.7)	461	(4.5)	437	(6.0)	418	(16.1)
	Estonia	c	c	m	m	m	m	470	(7.9)	c	c	c	c
	Finland	491	(7.1)	c	c	c	c	511	(5.6)	c	c	c	c
	France	427	(20.1)	437	(15.4)	c	c	468	(6.1)	459	(9.7)	451	(21.1)
	Germany	444	(12.4)	439	(10.7)	c	c	463	(5.0)	437	(11.0)	424	(12.8)
	Greece	446	(8.3)	c	c	c	c	452	(6.9)	c	c	412	(41.3)
	Hungary	367	(18.2)	m	m	m	m	426	(5.6)	c	c	c	c
	Iceland	c	c	c	c	m	m	482	(3.2)	c	c	c	c
	Ireland	456	(9.9)	c	c	c	c	470	(4.3)	c	c	c	c
	Israel	388	(10.0)	429	(14.4)	c	c	407	(7.4)	461	(12.7)	c	c
	Italy	433	(6.4)	c	c	372	(11.2)	468	(2.6)	430	(14.7)	400	(10.2)
	Japan	m	m	m	m	m	m	488	(7.4)	c	c	c	c
	Korea	492	(10.7)	m	m	m	m	515	(6.0)	m	m	m	m
	Luxembourg	424	(11.1)	426	(5.2)	393	(8.7)	480	(5.4)	434	(7.8)	424	(9.1)
	Mexico	401	(2.2)	344	(10.9)	322	(9.5)	430	(1.7)	354	(18.3)	325	(12.7)
	Netherlands	485	(8.5)	451	(9.7)	449	(11.2)	504	(8.2)	472	(9.5)	c	c
	New Zealand	455	(12.5)	c	c	c	c	509	(4.8)	487	(17.4)	517	(15.4)
	Norway	c	c	c	c	c	c	493	(7.1)	c	c	c	c
	Poland	c	c	m	m	m	m	446	(5.2)	m	m	c	c
	Portugal	465	(4.2)	441	(13.6)	c	c	483	(3.6)	474	(14.0)	452	(15.5)
	Slovak Republic	c	c	m	m	m	m	396	(13.2)	c	c	c	c
	Slovenia	c	c	c	c	c	c	444	(4.1)	434	(10.8)	420	(16.2)
	Spain	456	(3.3)	439	(20.5)	388	(6.3)	471	(2.6)	454	(19.8)	420	(6.4)
	Sweden	432	(17.0)	c	c	c	c	474	(6.6)	423	(15.4)	c	c
	Switzerland	456	(22.5)	451	(15.8)	417	(7.8)	481	(3.9)	466	(6.3)	427	(7.2)
	Turkey	455	(3.3)	c	c	c	c	462	(4.8)	c	c	c	c
	United Kingdom	428	(9.7)	c	c	429	(16.9)	465	(6.2)	487	(12.5)	452	(23.6)
	United States	c	c	462	(6.1)	443	(11.7)	455	(6.4)	469	(10.5)	454	(12.9)
	OECD average	443	(2.4)	438	(3.3)	406	(3.5)	466	(1.1)	455	(2.9)	429	(4.3)
Partners	Albania	361	(6.7)	c	c	c	c	369	(5.4)	c	c	m	m
	Argentina	360	(4.8)	362	(18.9)	c	c	397	(7.3)	c	c	c	c
	Azerbaijan	335	(11.2)	c	c	c	c	354	(6.4)	c	c	c	c
	Brazil	387	(2.5)	310	(33.1)	c	c	412	(3.4)	c	c	c	c
	Bulgaria	301	(16.7)	m	m	c	c	356	(8.7)	c	c	c	c
	Colombia	385	(4.4)	c	c	c	c	407	(4.4)	c	c	c	c
	Croatia	430	(16.9)	c	c	c	c	436	(4.9)	435	(9.9)	418	(14.9)
	Dubai (UAE)	366	(4.6)	396	(9.7)	382	(12.7)	387	(5.3)	419	(12.5)	445	(8.4)
	Hong Kong-China	520	(4.6)	536	(4.6)	502	(7.7)	523	(4.4)	540	(5.0)	512	(7.1)
	Indonesia	389	(3.2)	m	m	c	c	396	(4.3)	m	m	c	c
	Jordan	377	(4.5)	403	(11.2)	c	c	397	(4.0)	416	(10.0)	c	c
	Kazakhstan	c	c	c	c	c	c	345	(12.9)	c	c	c	c
	Kyrgyzstan	c	c	m	m	m	m	270	(12.7)	c	c	c	c
	Latvia	c	c	m	m	m	m	459	(9.7)	c	c	m	m
	Liechtenstein	c	c	c	c	c	c	477	(13.1)	c	c	c	c
	Lithuania	c	c	c	c	m	m	432	(8.1)	m	m	m	m
	Macao-China	479	(3.7)	486	(2.1)	476	(4.3)	479	(3.9)	492	(2.4)	492	(4.2)
	Montenegro	353	(11.7)	m	m	c	c	366	(4.9)	c	c	c	c
	Panama	347	(6.5)	c	c	c	c	359	(7.1)	c	c	c	c
	Peru	326	(3.5)	c	c	c	c	356	(4.7)	c	c	c	c
	Qatar	329	(2.8)	342	(4.4)	354	(7.7)	332	(5.5)	365	(11.1)	413	(9.6)
	Romania	348	(7.7)	m	m	c	c	414	(6.3)	m	m	m	m
	Russian Federation	c	c	c	c	c	c	405	(10.7)	c	c	c	c
	Serbia	394	(18.5)	c	c	c	c	407	(5.8)	c	c	c	c
	Shanghai-China	514	(6.2)	c	c	c	c	539	(2.9)	c	c	c	c
	Singapore	480	(3.4)	519	(12.5)	464	(16.0)	493	(6.7)	c	c	c	c
	Chinese Taipei	465	(4.5)	c	c	c	c	475	(3.3)	c	c	c	c
	Thailand	410	(2.6)	m	m	m	m	413	(4.2)	m	m	m	m
	Trinidad and Tobago	400	(4.1)	c	c	c	c	416	(6.6)	c	c	c	c
	Tunisia	393	(2.6)	c	c	c	c	407	(3.9)	c	c	c	c
	Uruguay	388	(3.2)	c	c	c	c	413	(3.4)	c	c	c	c

Note: At best primary is defined as MISCED = 0 or 1; Lower secondary is defined as MISCED = 2 , Upper secondary is defined as MISCED = 3 or 4 and Tertiary is defined as MISCED = 5 or 6.

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 4/4]
Table B5.1a **Prevalence and average reading performance across mother's education, by immigrant status** *(cont.)*
Results based on students' self-reports

		Student performance on the reading scale											
		Distribution of educational attainment of mother											
		Upper secondary						Tertiary					
		Non-immigrant students		Second-generation students		First-generation students		Non-immigrant students		Second-generation students		First-generation students	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
OECD	Australia	505	(2.0)	520	(5.8)	509	(7.6)	541	(2.6)	555	(8.1)	541	(6.4)
	Austria	479	(3.1)	436	(8.4)	394	(16.9)	509	(4.0)	457	(11.7)	431	(17.0)
	Belgium	502	(2.8)	451	(9.4)	452	(11.2)	545	(2.3)	489	(10.6)	485	(9.5)
	Canada	516	(1.8)	520	(4.8)	500	(6.9)	540	(1.9)	533	(4.1)	536	(4.6)
	Chile	461	(3.2)	c	c	c	c	491	(3.4)	c	c	c	c
	Czech Republic	479	(2.8)	442	(18.9)	472	(17.1)	498	(4.8)	c	c	c	c
	Denmark	495	(2.8)	461	(7.1)	429	(13.0)	516	(2.5)	470	(9.5)	441	(12.9)
	Estonia	500	(2.7)	458	(7.2)	c	c	516	(3.5)	480	(9.1)	c	c
	Finland	520	(3.4)	c	c	c	c	549	(2.4)	506	(18.1)	480	(19.6)
	France	504	(3.9)	472	(15.8)	c	c	535	(4.6)	477	(13.8)	469	(16.9)
	Germany	519	(2.5)	481	(8.4)	454	(11.1)	543	(4.1)	487	(13.6)	486	(11.9)
	Greece	490	(4.7)	451	(12.1)	436	(12.3)	513	(3.7)	466	(15.9)	412	(20.8)
	Hungary	495	(2.8)	c	c	c	c	536	(4.5)	c	c	c	c
	Iceland	499	(2.9)	c	c	c	c	523	(2.3)	c	c	c	c
	Ireland	503	(3.5)	c	c	444	(11.1)	526	(3.3)	c	c	488	(8.8)
	Israel	464	(3.6)	473	(8.2)	459	(9.5)	522	(3.9)	527	(6.7)	499	(10.2)
	Italy	507	(1.6)	468	(9.3)	430	(6.7)	508	(2.4)	458	(21.0)	419	(7.3)
	Japan	508	(3.9)	c	c	c	c	543	(3.5)	c	c	c	c
	Korea	539	(2.9)	m	m	m	m	557	(4.8)	c	c	m	m
	Luxembourg	502	(3.0)	451	(6.0)	446	(10.8)	508	(3.3)	480	(7.3)	519	(7.1)
	Mexico	456	(2.8)	c	c	c	c	459	(2.4)	345	(34.3)	338	(33.5)
	Netherlands	512	(5.8)	480	(11.1)	c	c	530	(5.4)	487	(16.8)	510	(20.6)
	New Zealand	526	(3.0)	504	(8.5)	506	(7.4)	560	(3.4)	537	(12.7)	543	(5.9)
	Norway	497	(2.8)	462	(10.0)	443	(17.5)	519	(2.9)	479	(11.2)	473	(12.1)
	Poland	497	(2.3)	m	m	m	m	554	(3.9)	m	m	m	m
	Portugal	512	(3.3)	488	(15.4)	436	(15.9)	535	(4.5)	522	(11.5)	485	(13.5)
	Slovak Republic	477	(2.5)	c	c	c	c	503	(4.2)	c	c	m	m
	Slovenia	479	(1.8)	459	(6.2)	391	(14.9)	520	(2.5)	444	(18.2)	c	c
	Spain	493	(2.4)	480	(12.8)	428	(6.2)	516	(2.8)	460	(17.0)	452	(6.7)
	Sweden	504	(3.7)	471	(11.6)	424	(16.4)	519	(3.2)	482	(8.3)	456	(16.6)
	Switzerland	517	(2.5)	474	(6.6)	452	(11.2)	530	(3.4)	498	(7.5)	507	(10.2)
	Turkey	504	(4.9)	c	c	c	c	530	(7.1)	c	c	c	c
	United Kingdom	497	(2.6)	502	(10.8)	449	(13.0)	522	(2.9)	509	(11.0)	487	(12.0)
	United States	489	(3.4)	482	(8.3)	477	(9.4)	526	(4.8)	517	(10.1)	533	(10.4)
	OECD average	498	(0.5)	473	(2.1)	449	(2.7)	525	(0.6)	486	(2.9)	478	(3.0)
Partners	Albania	406	(4.1)	c	c	c	c	409	(6.9)	c	c	c	c
	Argentina	411	(5.5)	c	c	c	c	432	(5.6)	c	c	c	c
	Azerbaijan	353	(4.1)	335	(13.8)	c	c	378	(3.9)	386	(12.5)	c	c
	Brazil	437	(3.5)	c	c	c	c	445	(4.8)	c	c	c	c
	Bulgaria	429	(6.5)	c	c	c	c	474	(7.6)	c	c	c	c
	Colombia	429	(5.0)	c	c	m	m	446	(4.9)	c	c	c	c
	Croatia	482	(3.0)	470	(7.6)	460	(12.1)	493	(4.3)	483	(9.0)	473	(17.7)
	Dubai (UAE)	397	(4.2)	455	(5.2)	485	(4.5)	420	(4.7)	494	(3.8)	518	(2.3)
	Hong Kong-China	541	(3.1)	553	(4.5)	525	(6.4)	558	(5.6)	555	(12.8)	544	(21.6)
	Indonesia	417	(4.8)	m	m	c	c	438	(7.9)	m	m	c	c
	Jordan	410	(3.2)	427	(6.7)	419	(14.3)	433	(4.0)	432	(10.1)	426	(9.1)
	Kazakhstan	357	(4.1)	371	(13.6)	347	(14.6)	401	(3.3)	432	(12.8)	381	(9.5)
	Kyrgyzstan	291	(3.9)	c	c	c	c	336	(3.8)	378	(23.2)	c	c
	Latvia	474	(2.9)	450	(11.5)	c	c	501	(3.6)	497	(10.2)	c	c
	Liechtenstein	518	(8.1)	c	c	c	c	526	(7.8)	c	c	c	c
	Lithuania	454	(3.1)	436	(15.2)	c	c	493	(2.8)	457	(17.2)	c	c
	Macao-China	489	(3.3)	491	(3.0)	502	(4.3)	489	(5.5)	497	(7.7)	504	(9.0)
	Montenegro	412	(1.7)	421	(12.5)	422	(9.3)	432	(3.5)	c	c	402	(13.5)
	Panama	382	(6.2)	c	c	c	c	407	(8.1)	369	(37.3)	359	(51.3)
	Peru	399	(3.9)	c	c	c	c	432	(8.0)	c	c	c	c
	Qatar	325	(2.6)	387	(4.7)	448	(4.1)	338	(2.0)	422	(3.8)	475	(2.8)
	Romania	428	(4.1)	c	c	c	c	437	(5.6)	c	c	c	c
	Russian Federation	434	(5.1)	417	(19.2)	404	(15.3)	471	(3.2)	448	(6.0)	458	(9.9)
	Serbia	445	(2.5)	460	(6.6)	452	(9.5)	451	(3.1)	477	(11.1)	448	(8.4)
	Shanghai-China	558	(2.6)	c	c	c	c	584	(3.1)	m	m	c	c
	Singapore	532	(2.2)	534	(9.3)	512	(9.1)	557	(2.7)	584	(14.7)	539	(6.6)
	Chinese Taipei	491	(2.8)	c	c	c	c	521	(3.3)	c	c	c	c
	Thailand	430	(3.1)	m	m	m	m	474	(6.0)	m	m	m	m
	Trinidad and Tobago	429	(2.0)	c	c	c	c	450	(4.1)	c	c	460	(28.7)
	Tunisia	423	(4.3)	c	c	c	c	433	(8.1)	m	m	c	c
	Uruguay	457	(3.9)	c	c	c	c	484	(4.0)	c	c	c	c

Note: At best primary is defined as MISCED = 0 or 1; Lower secondary is defined as MISCED = 2 , Upper secondary is defined as MISCED = 3 or 4 and Tertiary is defined as MISCED = 5 or 6.

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Average reading performance across mother's education, by immigrant status

Table B5.1b *Results based on students' self-reports*

		Average reading performance																							
		Distribution of educational attainment of mother																							
		Less than upper-secondary								Upper secondary								Tertiary							
		Non-immigrant students		Second-generation students		First-generation students		Immigrant students		Non-immigrant students		Second-generation students		First-generation students		Immigrant students		Non-immigrant students		Second-generation students		First-generation students		Immigrant students	
		Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
OECD	Australia	465.6	(4.8)	505.4	(11.6)	448.9	(10.0)	485.0	(8.6)	503.8	(2.0)	520.0	(5.7)	508.3	(7.5)	514.8	(5.8)	540.1	(2.6)	554.8	(8.0)	540.8	(6.4)	547.2	(6.3)
	Austria	423.1	(9.5)	404.5	(9.8)	348.4	(12.0)	385.8	(7.8)	478.7	(3.1)	435.6	(8.3)	390.8	(16.4)	422.5	(8.4)	507.6	(4.0)	453.3	(11.9)	430.6	(17.0)	445.4	(10.8)
	Belgium	485.6	(5.2)	447.5	(8.8)	421.6	(12.4)	437.9	(7.0)	500.0	(2.8)	449.9	(9.2)	449.4	(11.3)	449.7	(8.8)	543.9	(2.3)	483.8	(10.3)	480.3	(11.0)	482.0	(8.1)
	Canada	491.4	(5.5)	508.0	(9.3)	466.9	(13.1)	494.5	(8.3)	515.0	(1.8)	519.3	(4.7)	498.5	(7.0)	512.0	(4.0)	539.4	(1.8)	531.8	(4.1)	534.8	(4.8)	533.3	(3.6)
	Chile	417.2	(3.4)	c	c	c	c	c	c	460.5	(3.2)	c	c	c	c	c	c	489.1	(3.5)	c	c	c	c	c	c
	Czech Republic	435.8	(8.1)	c	c	c	c	c	c	478.6	(2.8)	436.9	(20.2)	471.8	(17.1)	449.1	(14.7)	497.1	(4.8)	c	c	c	c	519.5	(23.6)
	Denmark	460.0	(4.5)	430.1	(3.8)	407.3	(9.1)	424.4	(4.0)	493.7	(2.9)	459.1	(6.8)	427.5	(12.8)	447.8	(6.3)	515.9	(2.5)	467.6	(9.5)	441.2	(12.4)	458.3	(8.2)
	Estonia	467.4	(7.5)	c	c	c	c	c	c	499.5	(2.7)	458.3	(7.2)	c	c	460.9	(6.8)	515.2	(3.5)	480.4	(9.1)	c	c	478.3	(9.0)
	Finland	500.8	(4.6)	c	c	c	c	c	c	519.3	(3.3)	c	c	c	c	c	c	548.3	(2.4)	505.6	(18.1)	480.3	(19.6)	491.4	(13.6)
	France	462.6	(5.5)	448.2	(9.3)	421.8	(22.0)	442.2	(8.5)	502.0	(3.9)	464.0	(14.7)	c	c	453.2	(14.5)	534.9	(4.7)	469.2	(13.7)	468.5	(16.4)	469.0	(11.5)
	Germany	459.9	(4.8)	430.7	(8.2)	412.2	(10.4)	425.2	(6.7)	518.7	(2.5)	473.0	(8.0)	457.5	(10.8)	468.4	(6.8)	541.1	(4.0)	480.1	(13.7)	482.8	(11.6)	481.2	(10.5)
	Greece	448.5	(6.3)	c	c	410.3	(30.6)	414.5	(26.3)	490.1	(4.6)	451.3	(12.1)	435.7	(12.2)	441.0	(8.9)	512.7	(3.7)	466.4	(15.9)	412.0	(20.8)	434.8	(15.7)
	Hungary	422.5	(5.8)	c	c	c	c	c	c	494.9	(2.7)	c	c	c	c	511.4	(9.7)	535.7	(4.5)	c	c	c	c	c	c
	Iceland	479.6	(3.2)	c	c	c	c	c	c	498.4	(2.9)	c	c	c	c	427.4	(19.4)	522.4	(2.3)	c	c	c	c	433.4	(21.1)
	Ireland	464.1	(4.4)	c	c	c	c	453.2	(17.4)	501.6	(3.5)	c	c	441.4	(11.3)	460.1	(10.3)	525.1	(3.4)	c	c	487.6	(8.8)	488.8	(8.7)
	Israel	398.8	(6.9)	439.6	(10.4)	408.0	(27.1)	430.1	(11.3)	463.7	(3.6)	472.7	(8.0)	457.6	(9.5)	467.6	(6.7)	521.4	(3.9)	526.3	(6.5)	497.6	(9.7)	515.6	(6.1)
	Italy	462.9	(2.6)	426.1	(12.0)	389.2	(7.7)	400.0	(6.0)	506.4	(1.6)	463.8	(9.8)	427.3	(6.6)	434.3	(5.8)	508.0	(2.3)	458.3	(21.0)	418.2	(7.2)	428.9	(8.0)
	Japan	485.7	(7.4)	c	c	c	c	c	c	507.0	(3.9)	c	c	c	c	c	c	542.3	(3.5)	c	c	c	c	c	c
	Korea	506.8	(6.8)	m	m	m	m	m	m	538.7	(2.9)	m	m	m	m	m	m	556.1	(4.8)	c	c	m	m	c	c
	Luxembourg	470.6	(4.8)	428.0	(4.1)	402.6	(6.7)	419.4	(3.4)	500.8	(3.0)	449.8	(6.0)	440.6	(11.2)	446.6	(5.5)	506.7	(3.3)	480.4	(7.2)	517.8	(7.0)	500.7	(4.6)
	Mexico	412.5	(1.7)	346.1	(9.7)	320.7	(7.6)	330.7	(6.6)	456.3	(2.8)	c	c	c	c	307.2	(29.4)	459.0	(2.4)	344.6	(34.2)	335.5	(32.7)	338.9	(24.2)
	Netherlands	495.1	(7.4)	456.4	(8.3)	448.6	(9.7)	454.6	(7.0)	511.3	(5.8)	479.8	(11.0)	c	c	483.6	(9.4)	529.5	(5.3)	487.4	(16.8)	505.2	(19.8)	493.6	(14.3)
	New Zealand	496.6	(4.8)	489.2	(13.8)	472.9	(12.4)	480.3	(8.9)	523.4	(3.0)	497.9	(8.6)	506.2	(6.9)	503.2	(5.8)	557.5	(3.4)	536.4	(12.4)	542.1	(5.9)	540.9	(5.5)
	Norway	480.1	(6.9)	c	c	c	c	420.2	(9.6)	496.5	(2.8)	463.3	(10.4)	441.3	(16.9)	454.0	(9.5)	519.0	(2.9)	477.1	(11.3)	473.2	(12.1)	475.3	(8.4)
	Poland	446.0	(5.0)	m	m	c	c	c	c	496.8	(2.3)	m	m	m	m	m	m	554.0	(3.9)	m	m	m	m	m	m
	Portugal	471.4	(3.3)	455.0	(11.1)	446.1	(11.9)	451.3	(8.7)	511.5	(3.4)	486.7	(15.0)	436.2	(15.9)	459.4	(10.8)	533.9	(4.5)	521.9	(11.5)	485.1	(13.5)	499.9	(8.5)
	Slovak Republic	386.0	(11.5)	c	c	c	c	c	c	476.4	(2.5)	c	c	c	c	c	c	502.8	(4.2)	c	c	m	m	c	c
	Slovenia	444.2	(4.2)	431.1	(10.5)	415.7	(15.2)	426.8	(8.8)	478.3	(1.8)	457.0	(6.3)	390.9	(14.9)	450.4	(6.0)	519.2	(2.5)	443.6	(18.2)	c	c	445.5	(14.0)
	Spain	465.1	(2.6)	446.3	(14.6)	406.4	(4.7)	410.7	(5.1)	492.2	(2.5)	479.1	(12.6)	428.1	(6.1)	434.2	(5.7)	515.8	(2.8)	459.9	(16.8)	452.5	(6.6)	453.3	(6.0)
	Sweden	466.9	(6.5)	417.5	(13.9)	370.6	(14.7)	399.1	(10.2)	502.7	(3.7)	469.6	(10.9)	424.4	(16.4)	454.5	(9.7)	518.1	(3.2)	481.0	(8.4)	456.0	(15.9)	473.6	(7.4)
	Switzerland	479.2	(3.9)	460.2	(7.7)	423.7	(5.4)	447.8	(5.9)	515.8	(2.6)	472.3	(6.6)	450.7	(10.0)	465.0	(5.8)	528.4	(3.4)	496.7	(7.4)	502.2	(10.8)	498.9	(5.9)
	Turkey	455.4	(3.3)	c	c	c	c	c	c	502.5	(5.0)	c	c	c	c	c	c	526.6	(7.1)	c	c	c	c	c	c
	United Kingdom	456.3	(5.8)	461.6	(11.3)	438.4	(16.2)	450.8	(11.3)	495.9	(2.5)	500.0	(11.1)	447.5	(12.7)	480.2	(9.2)	520.9	(2.9)	505.5	(11.4)	481.5	(9.9)	493.7	(8.1)
	United States	457.9	(6.8)	464.5	(5.8)	447.2	(10.0)	459.0	(5.2)	488.6	(3.4)	480.8	(8.1)	475.4	(9.3)	479.1	(7.1)	526.1	(4.8)	516.4	(10.1)	533.2	(10.2)	522.8	(8.3)
	OECD average	459.4	(1.0)	444.8	(2.3)	415.6	(3.1)	432.3	(2.1)	497.6	(0.5)	471.3	(2.1)	447.9	(2.6)	456.9	(2.0)	523.9	(0.6)	484.5	(2.9)	476.5	(2.9)	479.4	(2.2)
Partners	Albania	365.9	(4.9)	c	c	c	c	c	c	404.1	(4.1)	c	c	c	c	c	c	407.2	(6.8)	c	c	c	c	c	c
	Argentina	370.1	(4.7)	363.4	(18.0)	c	c	360.2	(16.8)	409.0	(5.5)	c	c	c	c	c	c	431.5	(5.6)	c	c	c	c	353.3	(24.4)
	Azerbaijan	348.2	(6.1)	c	c	c	c	c	c	351.8	(4.1)	334.9	(13.8)	c	c	343.2	(12.2)	377.1	(3.9)	386.4	(12.5)	c	c	385.9	(10.9)
	Brazil	396.1	(2.6)	329.5	(29.6)	309.8	(16.4)	322.9	(20.6)	436.7	(3.5)	c	c	c	c	c	c	443.7	(4.8)	c	c	c	c	289.5	(11.9)
	Bulgaria	345.7	(8.3)	c	c	c	c	c	c	427.7	(6.4)	c	c	c	c	c	c	473.5	(7.6)	c	c	c	c	c	c
	Colombia	392.2	(3.9)	c	c	c	c	c	c	428.8	(5.0)	c	c	m	m	c	c	445.9	(4.9)	c	c	c	c	c	c
	Croatia	435.1	(5.0)	436.3	(10.3)	418.3	(12.9)	430.0	(8.1)	481.0	(3.0)	470.3	(7.6)	459.8	(12.1)	466.7	(7.1)	492.4	(4.3)	482.9	(9.0)	472.7	(17.7)	480.0	(8.4)
	Dubai (UAE)	374.0	(3.4)	406.1	(7.8)	425.4	(6.7)	414.5	(5.4)	397.1	(4.1)	454.0	(5.2)	484.4	(4.4)	471.4	(3.3)	418.3	(4.7)	493.6	(3.8)	518.0	(2.3)	510.4	(1.8)
	Hong Kong-China	520.9	(3.6)	537.7	(3.8)	505.4	(5.9)	524.0	(3.8)	541.2	(3.1)	553.3	(4.5)	525.3	(6.4)	544.3	(3.8)	558.3	(5.6)	552.6	(12.7)	543.8	(21.6)	548.8	(13.4)
	Indonesia	391.2	(3.2)	m	m	c	c	c	c	417.1	(4.8)	m	m	c	c	c	c	438.2	(7.9)	m	m	c	c	c	c
	Jordan	387.6	(3.5)	408.6	(8.0)	405.7	(17.1)	408.1	(6.9)	407.6	(3.3)	425.4	(6.5)	419.3	(14.3)	424.4	(6.2)	431.3	(4.0)	429.4	(11.1)	420.2	(10.6)	426.5	(8.4)
	Kazakhstan	341.9	(12.4)	c	c	c	c	329.3	(16.0)	357.4	(4.1)	371.3	(13.6)	346.3	(14.6)	362.3	(11.2)	400.7	(3.3)	429.6	(12.8)	380.3	(9.5)	411.7	(10.3)
	Kyrgyzstan	269.4	(10.8)	c	c	c	c	c	c	290.4	(3.9)	c	c	c	c	c	c	334.4	(3.8)	377.7	(23.2)	c	c	362.8	(15.4)
	Latvia	457.5	(8.6)	c	c	m	m	c	c	473.2	(3.0)	449.7	(11.5)	c	c	453.2	(11.3)	500.4	(3.6)	497.1	(10.2)	c	c	496.0	(9.4)
	Liechtenstein	473.5	(12.5)	c	c	c	c	453.7	(10.7)	518.5	(7.9)	c	c	c	c	c	c	525.8	(7.8)	c	c	c	c	c	c
	Lithuania	425.8	(7.4)	c	c	m	m	c	c	453.4	(3.1)	440.4	(15.5)	c	c	440.5	(16.0)	492.7	(2.8)	457.2	(17.2)	c	c	457.3	(15.4)
	Macao-China	479.2	(2.9)	488.5	(1.6)	484.4	(3.0)	487.7	(1.3)	488.9	(3.3)	490.6	(3.0)	502.1	(4.3)	493.5	(2.5)	486.9	(5.5)	496.9	(7.7)	503.2	(8.9)	499.3	(6.2)
	Montenegro	363.6	(4.3)	c	c	c	c	c	c	410.8	(1.7)	421.1	(12.5)	422.3	(9.2)	421.8	(7.3)	431.3	(3.5)	c	c	397.8	(13.6)	428.5	(12.8)
	Panama	349.2	(5.8)	c	c	c	c	328.4	(26.2)	381.7	(6.1)	c	c	c	c	c	c	406.2	(8.2)	365.7	(38.1)	358.9	(51.3)	360.8	(38.0)
	Peru	332.5	(2.9)	c	c	c	c	c	c	398.0	(3.9)	c	c	c	c	c	c	427.3	(8.0)	c	c	c	c	c	c
	Qatar	328.8	(2.6)	347.1	(3.9)	377.5	(6.7)	358.1	(3.4)	324.6	(2.5)	387.3	(4.7)	447.5	(4.0)	419.2	(3.0)	337.3	(2.0)	421.6	(3.8)	474.6	(2.8)	456.2	(2.2)
	Romania	390.1	(6.3)	m	m	c	c	c	c	427.6	(4.1)	c	c	c	c	c	c	436.0	(5.6)	c	c	c	c	c	c
	Russian Federation	407.4	(10.6)	c	c	c	c	384.8	(26.2)	434.0	(5.0)	414.9	(18.4)	404.3	(15.3)	409.9	(11.3)	470.9	(3.2)	447.7	(6.0)	457.0	(9.5)	451.4	(5.6)
	Serbia	404.3	(6.4)	434.8	(17.2)	c	c	433.9	(12.1)	444.9	(2.5)	460.2	(6.6)	449.7	(9.5)	454.9	(6.5)	450.5	(3.1)	477.4	(10.9)	446.2	(8.4)	464.6	(7.0)
	Shanghai-China	533.5	(3.4)	c	c	c	c	c	c	558.2	(2.6)	c	c	c	c	c	c	583.3	(3.2)	m	m	c	c	c	c
	Singapore	483.6	(3.1)	508.7	(10.2)	470.4	(12.5)	489.6	(8.1)	531.4	(2.2)	534.3	(9.3)	512.2	(9.1)	521.4	(6.3)	557.1	(2.7)	584.5	(14.6)	538.7	(6.6)	548.6	(6.4)
	Chinese Taipei	471.4	(2.8)	c	c	c	c	c	c	490.3	(2.8)	c	c	c	c	c	c	520.9	(3.3)	c	c	c	c	c	c
	Thailand	410.3	(2.6)	m	m	m	m	m	m	429.5	(3.1)	m	m	m	m	m	m	473.4	(6.0)	m	m	m	m	m	m
	Trinidad and Tobago	404.3	(3.6)	c	c	c	c	c	c	426.8	(1.9)	c	c	c	c	401.3	(23.5)	447.2	(4.3)	c	c	459.6	(28.7)	469.8	(24.6)
	Tunisia	394.8	(2.6)	c	c	c	c	c	c	421.3	(4.3)	c	c	c	c	c	c	431.7	(8.0)	m	m	c	c	c	c
	Uruguay	399.3	(2.5)	c	c	c	c	c	c	456.5	(3.9)	c	c	c	c	c	c	483.1	(4.0)	c	c	c	c	c	c

Note:Less than upper secondary is defined as MISCED = 0, 1 or 2 , Upper secondary is defined as MISCED = 3 or 4 and Tertiary is defined as MISCED = 5 or 6.

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B5.2 Sample sizes and estimated number of students in schools having less than 20 responding students

Results based on students' self-reports

		Proportion of students excluded when considering each category											
		Weighted sample						Unweighted sample					
		Immigrants		Does not speak the assessment language at home		Mothers having less than upper secondary		Immigrants		Does not speak the assessment language at home		Mothers having less than upper secondary	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	2.1	(0.6)	2.1	(0.6)	2.5	(0.7)	1.7	(0.1)	1.7	(0.1)	2.1	(0.1)
	Austria	16.2	(2.3)	18.5	(2.5)	19.3	(2.2)	12.2	(0.4)	13.9	(0.4)	15.1	(0.4)
	Belgium	6.0	(1.1)	8.2	(1.4)	6.8	(1.1)	5.4	(0.2)	7.7	(0.3)	6.2	(0.3)
	Canada	20.3	(1.7)	22.9	(1.9)	20.9	(1.6)	17.0	(0.2)	18.7	(0.3)	17.1	(0.2)
	Chile	5.0	(0.9)	5.0	(0.9)	4.6	(0.8)	4.1	(0.3)	4.1	(0.3)	3.6	(0.2)
	Czech Republic	25.0	(2.2)	26.7	(2.3)	26.6	(2.4)	19.6	(0.5)	21.3	(0.5)	21.0	(0.5)
	Denmark	29.2	(2.7)	37.0	(2.8)	31.4	(2.3)	31.9	(0.6)	45.4	(0.6)	35.9	(0.6)
	Estonia	17.3	(2.1)	17.7	(2.1)	16.9	(2.1)	9.2	(0.4)	9.6	(0.4)	8.8	(0.4)
	Finland	0.8	(0.3)	0.8	(0.3)	0.8	(0.3)	2.0	(0.2)	2.0	(0.2)	2.0	(0.2)
	France	8.8	(1.6)	14.5	(2.4)	14.3	(2.6)	7.3	(0.4)	12.5	(0.5)	12.4	(0.5)
	Germany	26.7	(2.7)	38.2	(2.7)	32.3	(2.9)	26.2	(0.6)	38.0	(0.7)	32.1	(0.7)
	Greece	10.2	(1.5)	10.9	(1.7)	10.2	(1.5)	5.4	(0.3)	5.8	(0.3)	5.4	(0.3)
	Hungary	13.1	(1.8)	13.1	(1.8)	13.1	(1.8)	6.9	(0.4)	6.9	(0.4)	6.9	(0.4)
	Iceland	16.5	(0.2)	17.0	(0.2)	15.9	(0.2)	16.0	(0.6)	16.6	(0.6)	15.5	(0.6)
	Ireland	7.6	(1.9)	7.6	(1.9)	6.0	(1.4)	7.3	(0.4)	7.3	(0.4)	5.9	(0.4)
	Israel	6.5	(1.6)	7.2	(1.6)	7.0	(1.7)	3.6	(0.2)	4.4	(0.3)	4.0	(0.3)
	Italy	6.1	(0.6)	13.2	(1.0)	6.4	(0.6)	5.2	(0.1)	11.2	(0.2)	5.1	(0.1)
	Japan	0.8	(0.4)	0.8	(0.4)	1.3	(0.7)	0.7	(0.1)	0.7	(0.1)	1.1	(0.1)
	Korea	3.4	(1.0)	3.4	(1.0)	3.4	(1.0)	3.9	(0.3)	3.9	(0.3)	3.9	(0.3)
	Luxembourg	0.9	(0.0)	0.9	(0.0)	0.9	(0.0)	1.0	(0.1)	1.0	(0.1)	1.0	(0.1)
	Mexico	18.2	(1.1)	19.4	(1.1)	17.3	(1.0)	9.4	(0.1)	10.0	(0.2)	8.7	(0.1)
	Netherlands	3.7	(1.3)	4.9	(1.6)	4.3	(1.5)	3.8	(0.3)	4.8	(0.3)	3.8	(0.3)
	New Zealand	6.0	(1.4)	6.0	(1.4)	17.1	(2.5)	4.8	(0.3)	4.8	(0.3)	14.9	(0.5)
	Norway	7.2	(1.2)	7.6	(1.2)	9.9	(1.6)	5.8	(0.3)	6.3	(0.4)	8.5	(0.4)
	Poland	6.0	(1.0)	6.0	(1.0)	5.6	(1.0)	6.2	(0.3)	6.2	(0.3)	5.8	(0.3)
	Portugal	6.4	(1.6)	6.7	(1.6)	6.4	(1.6)	5.4	(0.3)	5.8	(0.3)	5.4	(0.3)
	Slovak Republic	19.2	(1.7)	19.2	(1.7)	18.8	(1.7)	15.0	(0.5)	15.0	(0.5)	14.6	(0.5)
	Slovenia	15.2	(0.7)	16.9	(0.6)	15.2	(0.7)	21.5	(0.5)	23.9	(0.5)	21.1	(0.5)
	Spain	2.7	(0.6)	3.1	(0.7)	2.7	(0.6)	4.3	(0.1)	4.5	(0.1)	4.4	(0.1)
	Sweden	4.4	(1.0)	6.1	(1.3)	6.0	(1.3)	4.7	(0.3)	6.2	(0.4)	6.1	(0.4)
	Switzerland	10.4	(1.9)	12.9	(2.1)	11.2	(1.9)	10.1	(0.3)	12.4	(0.3)	11.5	(0.3)
	Turkey	4.8	(1.1)	4.8	(1.1)	4.8	(1.1)	3.2	(0.2)	3.2	(0.2)	3.2	(0.2)
	United Kingdom	6.2	(1.6)	7.8	(1.7)	15.1	(2.4)	5.6	(0.2)	6.5	(0.2)	12.5	(0.3)
	United States	4.8	(1.7)	4.8	(1.7)	4.8	(1.7)	3.7	(0.3)	3.7	(0.3)	3.7	(0.3)
	OECD average	9.9	(0.3)	11.5	(0.3)	11.2	(0.3)	8.5	(0.1)	10.2	(0.1)	9.7	(0.1)
Partners	Albania	24.4	(2.7)	24.4	(2.7)	24.4	(2.7)	12.7	(0.5)	12.7	(0.5)	12.7	(0.5)
	Argentina	18.1	(2.2)	20.7	(2.4)	18.6	(2.6)	12.9	(0.5)	15.1	(0.5)	13.2	(0.5)
	Azerbaijan	10.3	(1.9)	10.3	(1.9)	9.7	(1.9)	8.3	(0.4)	8.3	(0.4)	7.8	(0.4)
	Brazil	19.1	(1.4)	21.5	(1.6)	18.7	(1.4)	17.8	(0.3)	19.9	(0.3)	17.0	(0.3)
	Bulgaria	12.4	(2.1)	12.4	(2.1)	11.6	(2.0)	11.0	(0.5)	11.0	(0.5)	10.6	(0.5)
	Colombia	6.4	(1.8)	6.7	(1.8)	6.4	(1.8)	5.8	(0.3)	6.4	(0.3)	5.8	(0.3)
	Croatia	1.2	(0.7)	1.2	(0.7)	0.8	(0.6)	0.8	(0.1)	0.8	(0.1)	0.4	(0.1)
	Dubai (UAE)	9.5	(0.1)	12.4	(0.1)	8.8	(0.1)	13.8	(0.5)	18.1	(0.5)	12.7	(0.4)
	Hong Kong-China	0.4	(0.7)	0.4	(0.7)	0.4	(0.7)	0.4	(0.1)	0.4	(0.1)	0.4	(0.1)
	Indonesia	8.8	(1.7)	9.3	(1.6)	8.4	(1.6)	9.2	(0.4)	9.6	(0.4)	8.8	(0.4)
	Jordan	4.4	(0.7)	4.4	(0.7)	4.0	(0.8)	2.7	(0.2)	2.7	(0.2)	2.4	(0.2)
	Kazakhstan	14.3	(2.5)	14.7	(2.5)	13.9	(2.5)	8.8	(0.4)	9.2	(0.4)	8.4	(0.4)
	Kyrgyzstan	8.8	(1.7)	9.7	(1.7)	8.8	(1.7)	6.1	(0.3)	6.5	(0.3)	6.1	(0.3)
	Latvia	27.1	(2.5)	29.1	(2.6)	27.1	(2.5)	14.4	(0.5)	16.7	(0.6)	14.4	(0.5)
	Liechtenstein	26.1	(0.3)	26.1	(0.3)	20.0	(0.3)	26.1	(2.4)	26.1	(2.4)	20.1	(2.2)
	Lithuania	13.9	(1.1)	14.5	(1.2)	13.4	(1.1)	12.3	(0.5)	12.9	(0.5)	11.9	(0.5)
	Macao-China	0.4	(0.0)	0.8	(0.0)	0.4	(0.0)	0.4	(0.1)	0.8	(0.1)	0.4	(0.1)
	Montenegro	3.3	(1.7)	3.3	(1.7)	3.0	(1.7)	1.7	(0.2)	1.7	(0.2)	1.3	(0.2)
	Panama	34.8	(4.6)	38.0	(4.8)	29.3	(4.7)	28.7	(0.7)	30.9	(0.7)	25.4	(0.7)
	Peru	17.4	(2.2)	18.2	(2.3)	15.2	(2.0)	12.7	(0.4)	13.7	(0.4)	10.8	(0.4)
	Qatar	5.5	(0.1)	6.5	(0.1)	5.3	(0.1)	5.2	(0.2)	6.1	(0.3)	5.0	(0.2)
	Romania	11.0	(1.3)	11.0	(1.3)	11.0	(1.3)	5.8	(0.3)	5.8	(0.3)	5.8	(0.3)
	Russian Federation	18.1	(2.0)	18.1	(2.0)	18.1	(2.0)	11.9	(0.4)	11.9	(0.4)	11.9	(0.4)
	Serbia	3.0	(0.8)	3.0	(0.8)	2.9	(0.8)	3.0	(0.2)	3.0	(0.2)	2.7	(0.2)
	Shanghai-China	1.0	(0.7)	1.0	(0.7)	1.0	(0.7)	0.7	(0.1)	0.7	(0.1)	0.7	(0.1)
	Singapore	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)
	Chinese Taipei	0.1	(0.1)	1.1	(0.6)	0.1	(0.1)	0.1	(0.0)	0.9	(0.1)	0.1	(0.0)
	Thailand	8.9	(0.9)	8.9	(0.9)	8.9	(0.9)	8.5	(0.4)	8.5	(0.4)	8.5	(0.4)
	Trinidad and Tobago	7.1	(0.2)	9.7	(0.3)	7.2	(0.3)	8.9	(0.4)	10.9	(0.5)	8.4	(0.4)
	Tunisia	2.0	(0.5)	2.0	(0.5)	2.4	(0.7)	2.6	(0.2)	2.6	(0.2)	3.0	(0.2)
	Uruguay	12.9	(1.3)	13.4	(1.3)	12.1	(1.5)	11.0	(0.4)	11.7	(0.4)	10.4	(0.4)

Source: PISA 2009 Database.



[Part 1/2]

Differences between reading outcomes of immigrant and non-immigrant students before and after adjusting for mother's education and immigrant-specific interaction effects

Table B5.3 *Results based on students' self-reports*

		Distribution of educational attainment of mother											
		First-generation students						Second generation students					
		Observed difference		After adjusting for mother's educational attainment		Including immigrant-specific effects of educational attainment		Observed difference		After adjusting for mother's educational attainment		Including immigrant-specific effects of educational attainment	
		Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
OECD	Australia	3.4	(6.1)	1.3	(5.7)	-4.5	(21.3)	**15.7**	(6.4)	**18.0**	(5.9)	**48.8**	(21.3)
	Austria	**-97.7**	(10.6)	**-80.2**	(11.6)	c	c	**-54.7**	(6.7)	**-39.0**	(7.4)	c	c
	Belgium	**-71.0**	(8.0)	**-58.1**	(8.9)	**-44.2**	(15.0)	**-64.6**	(7.2)	**-47.6**	(6.5)	-23.2	(13.4)
	Canada	-8.2	(4.7)	-8.3	(4.4)	-2.4	(21.8)	-5.5	(3.8)	-0.2	(3.6)	**42.0**	(17.4)
	Chile	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	-6.8	(16.8)	-4.0	(16.1)	c	c	-31.3	(17.7)	-23.8	(15.7)	c	c
	Denmark	**-79.4**	(6.5)	**-65.5**	(6.6)	c	c	**-55.5**	(4.3)	**-37.5**	(4.9)	c	c
	Estonia	**-34.7**	(17.1)	**-36.5**	(17.0)	c	c	**-35.1**	(6.5)	**-35.1**	(6.4)	c	c
	Finland	**-89.0**	(17.6)	**-81.5**	(16.3)	c	c	**-45.5**	(13.9)	**-39.9**	(13.6)	c	c
	France	**-76.9**	(16.2)	**-59.4**	(14.5)	c	c	**-55.3**	(9.6)	**-32.7**	(9.1)	18.2	(32.5)
	Germany	**-60.9**	(6.0)	**-56.0**	(6.3)	c	c	**-53.8**	(6.2)	**-43.4**	(6.8)	-11.5	(14.5)
	Greece	**-69.0**	(15.2)	**-63.4**	(15.2)	c	c	**-33.3**	(10.3)	**-39.0**	(10.1)	c	c
	Hungary	-2.3	(11.7)	-7.2	(12.7)	c	c	**31.9**	(12.4)	**25.6**	(10.2)	c	c
	Iceland	**-86.5**	(12.4)	**-84.9**	(13.0)	c	c	c	c	c	c	c	c
	Ireland	**-36.2**	(7.7)	**-43.5**	(7.4)	c	c	6.3	(13.4)	8.9	(13.3)	c	c
	Israel	**-17.6**	(8.9)	-13.3	(7.4)	c	c	7.1	(6.1)	**11.8**	(4.8)	**38.8**	(16.1)
	Italy	**-81.0**	(4.7)	**-78.0**	(4.7)	**-61.8**	(13.5)	**-45.3**	(9.4)	**-40.6**	(9.5)	c	c
	Japan	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	m	m	m	m	m	m	c	c	c	c	c	c
	Luxembourg	**-46.9**	(4.9)	**-30.7**	(5.2)	**-35.8**	(14.1)	**-55.8**	(3.7)	**-31.8**	(4.1)	-3.0	(11.9)
	Mexico	**-105.1**	(9.5)	**-95.7**	(9.8)	**-78.7**	(9.2)	**-89.3**	(9.7)	**-80.0**	(10.5)	**-56.3**	(10.5)
	Netherlands	**-44.2**	(10.9)	**-25.6**	(10.9)	**-27.7**	(12.9)	**-46.0**	(9.3)	**-32.4**	(9.5)	**-23.9**	(11.6)
	New Zealand	-5.7	(5.0)	**-15.6**	(4.8)	c	c	**-27.8**	(9.0)	**-20.2**	(8.3)	c	c
	Norway	**-60.4**	(7.5)	**-46.0**	(8.3)	c	c	**-44.9**	(8.1)	**-36.3**	(8.2)	c	c
	Poland	c	c	c	c	c	c	m	m	m	m	m	m
	Portugal	**-35.9**	(8.9)	**-47.9**	(8.6)	c	c	-16.2	(9.4)	**-17.8**	(8.2)	-23.1	(14.3)
	Slovak Republic	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	**-74.2**	(8.9)	**-56.6**	(9.5)	c	c	**-40.9**	(5.6)	**-27.5**	(5.7)	c	c
	Spain	**-61.6**	(4.0)	**-61.5**	(3.6)	**-67.5**	(6.7)	**-26.3**	(9.2)	**-27.8**	(10.3)	-17.3	(20.2)
	Sweden	**-91.2**	(11.6)	**-69.2**	(10.9)	c	c	**-53.5**	(7.7)	**-36.2**	(7.2)	c	c
	Switzerland	**-58.4**	(6.5)	**-46.9**	(6.1)	-38.8	(22.5)	**-42.2**	(3.9)	**-28.2**	(3.8)	-5.3	(24.7)
	Turkey	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	**-41.2**	(9.7)	**-35.7**	(8.4)	5.7	(19.1)	-7.1	(8.6)	-3.1	(8.2)	c	c
	United States	**-20.7**	(7.2)	-6.6	(6.8)	c	c	**-22.3**	(6.1)	-4.8	(6.0)	c	c
	OECD average	**-52.1**	(1.9)	**-45.6**	(1.9)	**-35.6**	(5.2)	**-33.0**	(1.7)	**-24.5**	(1.7)	-1.3	(5.3)
Partners	Albania	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	-45.5	(26.6)	-44.6	(27.0)	c	c	**-35.4**	(13.3)	-22.4	(12.8)	-0.6	(18.9)
	Azerbaijan	18.3	(13.0)	14.7	(13.6)	c	c	-3.7	(9.7)	-3.7	(9.2)	c	c
	Brazil	**-106.0**	(18.8)	**-106.0**	(22.9)	c	c	**-94.7**	(19.0)	**-93.6**	(19.4)	**-76.9**	(33.1)
	Bulgaria	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	c	c	c	c	c	c	c	c	c	c	c	c
	Croatia	**-26.9**	(8.2)	**-19.9**	(8.1)	c	c	**-13.4**	(5.3)	-7.6	(5.1)	c	c
	Dubai (UAE)	**108.6**	(3.0)	**84.3**	(3.8)	19.8	(12.1)	**72.7**	(3.9)	**57.2**	(4.0)	**29.0**	(11.0)
	Hong Kong-China	**-23.5**	(6.2)	**-16.0**	(6.1)	**-17.0**	(8.7)	**7.9**	(3.8)	**13.8**	(3.6)	**17.4**	(6.1)
	Indonesia	c	c	c	c	c	c	m	m	m	m	m	m
	Jordan	5.0	(8.4)	-0.2	(8.0)	c	c	**13.3**	(5.8)	10.9	(5.7)	23.9	(12.2)
	Kazakhstan	**-24.1**	(9.1)	**-19.8**	(8.4)	c	c	**24.7**	(12.4)	**25.9**	(12.0)	c	c
	Kyrgyzstan	15.6	(18.7)	14.5	(18.3)	c	c	**42.0**	(19.6)	**42.8**	(18.6)	c	c
	Latvia	c	c	c	c	c	c	-12.9	(9.2)	-13.9	(8.3)	c	c
	Liechtenstein	**-35.7**	(13.5)	-25.8	(15.1)	c	c	**-24.3**	(12.0)	-13.3	(12.5)	c	c
	Lithuania	c	c	c	c	c	c	**-23.7**	(11.4)	-23.1	(12.2)	c	c
	Macao-China	**8.5**	(3.0)	**8.0**	(3.1)	-4.3	(6.1)	**6.9**	(2.4)	**7.7**	(2.6)	6.7	(4.4)
	Montenegro	-4.0	(8.4)	-5.6	(7.9)	c	c	**24.3**	(10.3)	**20.6**	(9.5)	c	c
	Panama	-58.1	(31.4)	-57.1	(31.3)	c	c	15.3	(27.4)	19.1	(31.0)	c	c
	Peru	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	**125.3**	(2.8)	**119.5**	(2.8)	**25.9**	(8.0)	**60.6**	(2.7)	**61.6**	(2.6)	**13.6**	(5.0)
	Romania	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	**-19.6**	(6.6)	**-15.2**	(6.6)	c	c	**-28.7**	(9.4)	**-23.7**	(6.7)	c	c
	Serbia	4.4	(7.5)	3.3	(7.3)	c	c	**23.6**	(6.9)	**22.2**	(6.8)	c	c
	Shanghai-China	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	-5.3	(5.5)	**-18.3**	(5.4)	-16.9	(16.5)	**17.2**	(6.7)	**16.1**	(6.7)	**38.3**	(13.2)
	Chinese Taipei	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	9.4	(18.3)	12.7	(18.4)	c	c	-4.4	(19.7)	-5.2	(21.5)	c	c
	Tunisia	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	c	c	c	c	c	c	c	c	c	c	c	c

Note: At best primary is defined as MISCED = 0 or 1; Lower secondary is defined as MISCED = 2 , Upper secondary defined as MISCED = 3 or 4 and Tertiary defined as MISCED = 5 or 6. Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 2/2]

Differences between reading outcomes of immigrant and non-immigrant students before and after adjusting for mother's education and immigrant-specific interaction effects *(continued)*

Table B5.3 *Results based on students' self-reports*

		Interaction terms with mother's education											
		First-generation students						Second-generation students					
		Lower secondary		Upper secondary		Tertiary		Lower secondary		Upper secondary		Tertiary	
		Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
OECD	Australia	-10.4	(26.3)	8.9	(23.1)	5.2	(21.7)	-5.0	(20.9)	-32.7	(20.7)	-34.2	(20.6)
	Austria	c	c	c	c	c	c	c	c	c	c	c	c
	Belgium	-21.3	(25.8)	-6.5	(16.0)	-19.5	(17.9)	-1.9	(20.6)	-27.0	(15.1)	**-36.9**	(16.4)
	Canada	-12.9	(29.8)	-14.1	(22.4)	-2.2	(21.5)	-22.2	(21.0)	**-37.6**	(17.8)	**-49.5**	(17.6)
	Chile	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	c	c	c	c	c	c	c	c	c	c	c	c
	Denmark	c	c	c	c	c	c	c	c	c	c	c	c
	Estonia	c	c	c	c	c	c	c	c	c	c	c	c
	Finland	c	c	c	c	61.6	(34.6)	c	c	c	c	-58.7	(52.5)
	France	40.6	(33.9)	c	c	-10.8	(32.5)	-27.2	(34.2)	-56.2	(31.1)	**-83.9**	(36.2)
	Germany	4.8	(27.2)	-14.1	(25.7)	-11.2	(27.3)	-17.9	(18.3)	**-34.3**	(14.9)	**-49.4**	(19.0)
	Greece	-2.0	(45.9)	-16.8	(21.3)	**-63.2**	(30.0)	c	c	-30.4	(28.3)	-37.9	(31.1)
	Hungary	c	c	c	c	c	c	c	c	c	c	c	c
	Iceland	c	c	c	c	c	c	c	c	c	c	c	c
	Ireland	c	c	-21.5	(39.8)	1.3	(40.1)	c	c	c	c	c	c
	Israel	c	c	-10.6	(32.5)	-28.3	(30.9)	15.8	(21.6)	-29.8	(17.1)	**-33.9**	(17.0)
	Italy	-6.6	(16.1)	-17.3	(15.6)	**-28.0**	(13.9)	-18.8	(28.7)	-24.4	(24.9)	-31.6	(31.2)
	Japan	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	m	m	m	m	m	m	c	c	c	c	c	c
	Luxembourg	-21.0	(18.2)	-24.3	(16.9)	**47.0**	(15.4)	**-41.9**	(16.5)	**-47.9**	(14.6)	-23.2	(15.0)
	Mexico	-32.2	(17.5)	c	c	-44.7	(32.7)	-19.5	(20.5)	c	c	-58.2	(37.1)
	Netherlands	c	c	c	c	3.4	(20.9)	-5.7	(14.4)	-7.7	(14.3)	-18.2	(17.7)
	New Zealand	34.2	(27.8)	12.0	(24.1)	13.8	(23.8)	**-80.4**	(33.2)	**-82.6**	(29.3)	**-78.1**	(31.1)
	Norway	c	c	c	c	c	c	c	c	c	c	c	c
	Poland	c	c	c	c	c	c	m	m	m	m	m	m
	Portugal	3.5	(16.8)	**-43.2**	(20.7)	-16.8	(19.1)	12.1	(17.9)	-1.7	(20.9)	11.1	(17.0)
	Slovak Republic	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	c	c	c	c	c	c	c	c	c	c	c	c
	Spain	16.6	(9.1)	3.4	(8.5)	4.2	(9.0)	0.1	(28.2)	4.3	(22.2)	-38.6	(25.2)
	Sweden	c	c	-6.2	(29.5)	10.1	(29.2)	-23.5	(26.9)	-10.5	(24.4)	-14.5	(23.6)
	Switzerland	-14.4	(25.1)	-26.3	(25.4)	12.6	(23.5)	-10.3	(24.8)	-38.2	(26.5)	-26.4	(25.7)
	Turkey	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	-17.0	(27.0)	**-54.2**	(19.0)	**-45.1**	(19.0)	13.2	(21.8)	-7.0	(21.7)	-26.4	(21.0)
	United States	c	c	c	c	c	c	c	c	c	c	c	c
	OECD average	-2.7	(7.0)	**-15.4**	(6.2)	-5.8	(5.9)	**-14.6**	(5.9)	**-29.0**	(5.5)	**-38.3**	(6.4)
Partners	Albania	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	c	c	c	c	c	c	c	c	c	c	c	c
	Azerbaijan	c	c	c	c	c	c	c	c	16.3	(31.0)	42.5	(30.3)
	Brazil	c	c	c	c	c	c	c	c	c	c	c	c
	Bulgaria	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	c	c	c	c	c	c	c	c	c	c	c	c
	Croatia	-4.8	(26.5)	-8.7	(26.2)	-7.2	(27.9)	-23.8	(41.5)	-33.6	(42.8)	-32.4	(41.8)
	Dubai (UAE)	**40.9**	(16.8)	**67.6**	(12.9)	**80.0**	(12.4)	3.5	(17.3)	**28.0**	(13.2)	**46.3**	(11.8)
	Hong Kong-China	4.2	(11.3)	1.1	(10.0)	2.6	(21.2)	-1.0	(8.4)	-5.3	(7.7)	-23.1	(14.1)
	Indonesia	c	c	c	c	c	c	m	m	m	m	m	m
	Jordan	c	c	-29.8	(25.7)	**-52.6**	(23.4)	-5.1	(16.0)	-6.1	(13.8)	-25.8	(14.5)
	Kazakhstan	c	c	c	c	c	c	c	c	c	c	c	c
	Kyrgyzstan	c	c	c	c	c	c	c	c	c	c	c	c
	Latvia	c	c	c	c	c	c	c	c	c	c	c	c
	Liechtenstein	c	c	c	c	c	c	c	c	c	c	c	c
	Lithuania	c	c	c	c	c	c	c	c	c	c	c	c
	Macao-China	**16.4**	(8.0)	**17.5**	(8.5)	20.6	(13.2)	5.2	(6.3)	-5.0	(6.6)	3.4	(11.2)
	Montenegro	c	c	70.3	(50.6)	25.4	(52.7)	c	c	10.2	(12.4)	c	c
	Panama	c	c	c	c	29.7	(48.5)	c	c	c	c	**-123.7**	(45.6)
	Peru	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	**56.8**	(12.8)	**97.1**	(9.3)	**111.4**	(8.7)	20.0	(14.8)	**49.2**	(7.1)	**70.7**	(6.9)
	Romania	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	c	c	c	c	c	c	c	c	c	c	c	c
	Serbia	c	c	25.4	(51.7)	16.2	(51.1)	c	c	**-72.6**	(32.9)	-61.1	(34.2)
	Shanghai-China	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	c	c	-2.3	(18.6)	-1.5	(17.6)	c	c	**-35.4**	(16.3)	-10.9	(19.2)
	Chinese Taipei	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	c	c	c	c	80.9	(61.2)	c	c	c	c	c	c
	Tunisia	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	c	c	c	c	c	c	c	c	c	c	c	c

Note: At best primary is defined as MISCED = 0 or 1; Lower secondary is defined as MISCED = 2 , Upper secondary defined as MISCED = 3 or 4 and Tertiary defined as MISCED = 5 or 6. Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Concentration of children of immigrants in schools according to various characteristics, PISA 2009

Table B5.4 *Results based on students' self-reports*

		Percent of all children of immigrants who are in the top quartile (4th)						Children of immigrants as a percentage of all students in the top quartile (4th)					
		Quartiles defined by						Quartiles defined by					
		Percentage of children of immigrants in schools		Percentage of children of immigrants speaking another language at home		Percentage of students with mothers having less than upper secondary education		Percentage of children of immigrants in schools		Percentage of children of immigrants speaking another language at home		Percentage of students with mothers having less than upper secondary education	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	55.9	(3.7)	53.4	(4.3)	30.0	(4.2)	51.6	(2.0)	44.0	(3.5)	20.1	(3.7)
	Austria	68.3	(4.4)	65.8	(5.3)	46.5	(5.9)	36.1	(2.3)	32.2	(3.0)	20.5	(3.4)
	Belgium	69.6	(3.4)	58.4	(5.1)	48.6	(4.4)	39.0	(2.6)	29.0	(3.2)	23.7	(3.2)
	Canada	64.0	(4.1)	60.4	(4.5)	29.8	(4.4)	65.4	(2.0)	54.4	(4.1)	23.7	(3.9)
	Chile	c	c	c	c	c	c	1.7	(0.3)	0.5	(0.2)	0.2	(0.1)
	Czech Republic	76.0	(5.8)	59.8	(7.4)	32.1	(8.8)	6.5	(0.5)	3.9	(0.7)	2.3	(0.8)
	Denmark	66.3	(3.5)	58.0	(4.8)	51.0	(4.0)	20.6	(1.7)	14.9	(1.9)	13.9	(1.9)
	Estonia	82.4	(2.6)	29.7	(7.1)	18.5	(6.1)	29.5	(2.3)	7.3	(2.3)	4.9	(2.0)
	Finland	81.2	(4.2)	78.0	(5.4)	34.3	(8.4)	8.5	(0.7)	7.5	(0.9)	2.9	(1.0)
	France	70.3	(4.8)	63.3	(5.8)	53.0	(6.7)	39.0	(3.0)	29.2	(4.0)	24.7	(4.8)
	Germany	59.7	(4.7)	47.7	(5.4)	43.9	(4.9)	40.9	(2.9)	21.8	(2.8)	21.1	(3.2)
	Greece	72.0	(4.0)	61.3	(5.7)	42.1	(5.8)	19.9	(1.7)	15.0	(2.2)	10.3	(2.0)
	Hungary	68.3	(6.5)	35.7	(6.6)	20.8	(4.9)	5.5	(0.5)	2.7	(0.6)	1.4	(0.5)
	Iceland	76.2	(5.7)	73.1	(6.0)	35.1	(6.1)	6.3	(0.9)	5.3	(0.9)	2.4	(0.6)
	Ireland	55.0	(5.9)	47.8	(5.7)	25.6	(5.0)	17.3	(1.0)	12.1	(1.8)	3.7	(1.3)
	Israel	59.4	(4.7)	55.4	(5.2)	17.5	(4.2)	45.9	(2.6)	37.9	(4.2)	11.2	(3.5)
	Italy	71.9	(2.3)	64.8	(2.7)	28.4	(3.2)	13.3	(0.5)	10.9	(0.7)	4.3	(0.7)
	Japan	c	c	c	c	c	c	1.1	(0.2)	0.4	(0.1)	0.4	(0.2)
	Korea	c	c	c	c	c	c	0.1	(0.1)	0.1	(0.1)	0.0	(0.0)
	Luxembourg	41.7	(0.8)	37.5	(0.8)	35.9	(0.8)	67.6	(1.2)	52.4	(1.1)	44.2	(1.1)
	Mexico	95.8	(1.2)	36.0	(3.6)	47.1	(5.5)	6.0	(0.4)	2.0	(0.3)	2.7	(0.4)
	Netherlands	70.2	(4.8)	62.4	(6.8)	57.5	(6.6)	33.7	(4.2)	25.2	(5.2)	25.6	(4.9)
	New Zealand	53.3	(3.3)	52.6	(3.3)	25.2	(3.5)	52.7	(1.4)	48.9	(2.0)	16.5	(2.9)
	Norway	63.8	(5.1)	60.5	(5.1)	31.4	(5.5)	17.2	(1.6)	14.3	(2.0)	5.9	(1.8)
	Poland	c	c	c	c	c	c	0.1	(0.1)	0.0	(0.0)	0.0	(0.0)
	Portugal	72.3	(3.4)	52.3	(6.8)	10.5	(2.7)	15.3	(1.0)	8.8	(1.7)	1.0	(0.5)
	Slovak Republic	c	c	c	c	c	c	2.0	(0.4)	0.9	(0.3)	0.9	(0.4)
	Slovenia	71.9	(2.5)	66.6	(3.1)	43.2	(2.7)	20.1	(1.2)	17.0	(1.2)	10.4	(0.9)
	Spain	66.2	(3.3)	54.1	(4.4)	22.3	(3.7)	25.2	(1.1)	17.4	(1.7)	6.2	(1.3)
	Sweden	66.0	(5.0)	62.9	(4.8)	41.6	(6.6)	30.6	(2.8)	26.7	(2.9)	14.8	(3.5)
	Switzerland	47.5	(4.0)	42.9	(4.0)	37.0	(3.8)	44.7	(1.5)	33.4	(3.7)	25.3	(3.1)
	Turkey	c	c	c	c	c	c	2.1	(0.5)	0.6	(0.2)	0.2	(0.1)
	United Kingdom	80.0	(2.7)	75.0	(4.2)	50.1	(6.7)	34.3	(2.8)	31.2	(3.4)	20.9	(3.8)
	United States	68.7	(4.2)	67.5	(4.8)	53.5	(6.4)	54.8	(2.2)	51.2	(3.5)	36.4	(4.8)
	OECD average	67.6	(0.8)	56.5	(1.0)	36.2	(1.0)	25.1	(0.3)	19.4	(0.4)	11.8	(0.4)
Partners	Albania	c	c	c	c	c	c	1.3	(0.2)	0.5	(0.2)	0.2	(0.1)
	Argentina	79.0	(5.0)	51.5	(9.7)	45.5	(9.3)	11.8	(1.5)	6.7	(2.0)	5.4	(1.5)
	Azerbaijan	83.9	(5.5)	37.0	(9.1)	28.1	(9.2)	8.6	(1.0)	3.4	(0.9)	2.7	(1.1)
	Brazil	100.0	(0.0)	21.2	(8.5)	26.4	(9.8)	3.0	(0.4)	0.6	(0.3)	0.8	(0.3)
	Bulgaria	c	c	c	c	c	c	2.0	(0.4)	1.6	(0.4)	0.5	(0.4)
	Colombia	c	c	c	c	c	c	1.3	(0.3)	0.3	(0.1)	0.5	(0.2)
	Croatia	55.1	(4.4)	28.7	(3.7)	23.6	(3.4)	23.8	(1.2)	7.5	(1.5)	5.1	(1.2)
	Dubai (UAE)	34.7	(0.4)	32.9	(0.3)	11.9	(0.4)	99.9	(0.1)	32.1	(0.6)	2.7	(0.1)
	Hong Kong-China	39.1	(4.6)	33.7	(4.2)	33.7	(3.8)	61.6	(1.7)	36.8	(5.3)	35.4	(5.0)
	Indonesia	c	c	c	c	c	c	1.2	(0.4)	1.1	(0.4)	0.3	(0.2)
	Jordan	57.6	(4.7)	35.0	(4.2)	13.3	(4.6)	32.8	(1.4)	12.1	(2.4)	3.7	(2.5)
	Kazakhstan	71.9	(4.7)	50.4	(6.7)	32.8	(7.0)	31.9	(3.2)	18.8	(3.8)	11.3	(3.0)
	Kyrgyzstan	95.3	(2.2)	48.4	(6.5)	41.0	(8.3)	6.8	(0.6)	3.4	(0.6)	2.9	(0.7)
	Latvia	83.8	(3.6)	43.3	(10.7)	39.5	(10.1)	16.2	(1.5)	7.2	(2.2)	6.6	(2.1)
	Liechtenstein	36.0	(5.3)	35.1	(4.9)	28.5	(4.4)	c	c	c	c	c	c
	Lithuania	95.6	(1.8)	65.9	(7.4)	37.5	(10.4)	6.9	(0.9)	4.5	(0.8)	2.6	(0.9)
	Macao-China	30.1	(0.4)	23.2	(0.4)	28.1	(0.4)	84.9	(1.0)	13.7	(0.3)	47.5	(1.0)
	Montenegro	60.5	(3.1)	43.3	(2.8)	18.7	(2.1)	15.4	(1.2)	9.2	(0.9)	3.2	(0.5)
	Panama	90.9	(3.9)	65.0	(9.9)	17.0	(10.8)	11.3	(1.7)	8.1	(2.0)	0.3	(0.2)
	Peru	c	c	c	c	c	c	1.8	(0.3)	0.5	(0.2)	0.7	(0.3)
	Qatar	50.2	(0.5)	45.2	(0.5)	17.0	(0.5)	90.3	(0.6)	66.5	(0.6)	0.0	(0.0)
	Romania	c	c	c	c	c	c	1.4	(0.2)	0.6	(0.2)	0.5	(0.2)
	Russian Federation	51.3	(6.6)	38.3	(7.7)	29.7	(8.2)	25.0	(2.9)	13.7	(4.1)	10.0	(4.6)
	Serbia	58.5	(4.4)	28.3	(4.6)	19.9	(4.1)	22.0	(1.0)	7.5	(1.5)	4.6	(1.4)
	Shanghai-China	c	c	c	c	c	c	2.1	(0.3)	0.8	(0.2)	1.1	(0.3)
	Singapore	45.0	(1.9)	43.0	(1.6)	23.1	(1.3)	25.9	(1.3)	20.5	(1.1)	4.1	(0.4)
	Chinese Taipei	c	c	c	c	c	c	1.6	(0.3)	0.7	(0.3)	0.7	(0.3)
	Thailand	m	m	m	m	m	m	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)
	Trinidad and Tobago	84.8	(3.7)	56.3	(5.4)	24.9	(5.0)	7.3	(0.8)	4.5	(0.6)	1.9	(0.5)
	Tunisia	c	c	c	c	c	c	1.3	(0.3)	0.6	(0.3)	0.3	(0.1)
	Uruguay	c	c	c	c	c	c	2.1	(0.3)	0.9	(0.3)	0.2	(0.1)

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Differences in reading outcomes between immigrant and non-immigrant students, adjusting for mother's education and concentration of disadvantage quartiles

Table B5.5 *Results based on students' self-reports*

		Distribution of educational attainment of mother												Interaction terms with mother's education					
		First-generation students						Second-generation students						Immigrant student interacted with…					
		Observed difference		After adjusting for educational attainment and concentration quartile		Including immigrant-specific effects on concentration		Observed difference		After adjusting for educational attainment and concentration quartile		Including immigrant-specific effects on concentration		Second quartile of disadvantage concentration		Third quartile of disadvantage concentration		Fourth quartile of disadvantage concentrattion	
		Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
OECD	Australia	5.7	(6.3)	2.7	(5.6)	10.6	(8.0)	**14.9**	(6.5)	**18.1**	(5.9)	**25.8**	(7.5)	-16.9	(9.2)	-14.0	(9.9)	-1.9	(18.2)
	Austria	**-74.5**	(10.3)	**-62.5**	(9.9)	**-50.5**	(14.8)	**-48.2**	(7.7)	**-29.7**	(6.8)	-17.1	(13.1)	-20.1	(18.2)	7.4	(15.9)	-26.0	(18.7)
	Belgium	**-55.0**	(7.2)	**-42.9**	(5.9)	**-27.4**	(8.4)	**-57.3**	(7.4)	**-45.3**	(5.5)	**-28.7**	(8.2)	-19.1	(13.0)	-7.5	(11.8)	-26.1	(13.5)
	Canada	-3.6	(4.8)	-3.5	(4.5)	-4.2	(6.8)	-3.9	(4.0)	1.1	(4.0)	0.5	(7.1)	2.7	(9.1)	2.9	(9.1)	-3.0	(10.0)
	Chile	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Czech Republic	-8.7	(19.8)	-6.7	(17.9)	-5.3	(32.9)	3.2	(13.3)	4.5	(12.6)	13.3	(34.4)	-1.4	(40.1)	-33.0	(38.1)	3.7	(43.0)
	Denmark	**-76.6**	(8.1)	**-63.3**	(7.7)	**-57.6**	(17.2)	**-49.9**	(5.8)	**-33.4**	(6.3)	-22.9	(16.4)	11.2	(20.8)	1.0	(18.8)	-24.0	(16.6)
	Estonia	**-40.8**	(16.9)	**-42.2**	(16.8)	-30.2	(16.1)	**-39.0**	(5.9)	**-40.3**	(6.0)	**-29.3**	(9.1)	-19.5	(12.9)	**-34.9**	(13.4)	1.9	(13.5)
	Finland	**-88.4**	(17.7)	**-80.2**	(16.2)	**-77.6**	(21.6)	**-43.7**	(13.9)	**-40.0**	(13.7)	-37.7	(20.2)	1.4	(28.8)	-6.7	(41.9)	-5.2	(24.2)
	France	**-73.9**	(18.3)	**-44.8**	(16.6)	-38.0	(25.2)	**-51.4**	(9.5)	**-18.4**	(7.6)	-11.5	(18.8)	-16.2	(21.1)	0.9	(21.8)	-7.2	(25.3)
	Germany	**-52.8**	(7.5)	**-26.2**	(6.4)	-25.3	(13.4)	**-45.8**	(7.7)	**-23.2**	(5.7)	-23.1	(12.2)	6.0	(15.1)	8.2	(14.5)	-9.0	(13.7)
	Greece	**-53.3**	(8.6)	**-25.8**	(8.5)	**-57.1**	(15.2)	**-29.5**	(11.9)	-8.1	(10.6)	**-35.2**	(14.8)	33.2	(18.1)	35.9	(19.3)	**35.9**	(17.4)
	Hungary	-3.0	(12.2)	-8.8	(8.5)	-11.9	(14.6)	**25.4**	(9.5)	8.8	(9.0)	2.6	(13.5)	9.5	(18.5)	19.1	(22.8)	-6.0	(19.3)
	Iceland	**-84.9**	(12.5)	**-81.3**	(13.1)	**-95.4**	(20.1)	c	c	c	c	c	c	c	c	c	c	c	c
	Ireland	**-30.3**	(7.9)	**-34.4**	(7.6)	**-60.7**	(17.0)	9.4	(14.5)	8.5	(14.4)	-14.3	(18.7)	25.0	(21.2)	37.0	(22.9)	37.1	(21.4)
	Israel	-10.4	(8.3)	**-21.5**	(8.5)	**-30.8**	(8.8)	10.8	(6.9)	3.8	(4.8)	-6.4	(8.4)	-1.6	(11.5)	8.2	(11.7)	**48.7**	(19.4)
	Italy	**-67.0**	(4.6)	**-45.4**	(3.5)	**-40.3**	(8.2)	**-41.3**	(10.0)	**-31.9**	(7.8)	**-27.6**	(9.2)	4.5	(10.7)	-15.5	(11.2)	-6.8	(11.5)
	Japan	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Korea	m	m	m	m	m	m	c	c	c	c	c	c	c	c	c	c	c	c
	Luxembourg	**-44.8**	(5.0)	**-32.1**	(4.7)	-3.2	(5.9)	**-53.6**	(3.7)	**-28.4**	(3.7)	3.5	(5.5)	**-40.7**	(8.0)	**-54.5**	(8.3)	**-37.2**	(8.6)
	Mexico	**-103.7**	(9.9)	**-79.2**	(8.5)	-30.5	(24.5)	**-86.8**	(9.9)	**-60.5**	(8.4)	-13.0	(22.7)	**-61.2**	(25.7)	**-68.4**	(24.9)	-40.1	(23.9)
	Netherlands	**-32.4**	(10.8)	-13.4	(8.4)	5.4	(16.8)	**-47.7**	(9.9)	-12.2	(8.4)	7.5	(16.5)	-22.5	(18.6)	-29.8	(19.0)	-18.6	(19.6)
	New Zealand	-9.2	(4.9)	**-16.9**	(4.6)	-8.5	(8.4)	-15.3	(8.4)	-12.6	(7.3)	-4.2	(10.2)	-14.4	(11.6)	-9.2	(12.8)	-9.8	(13.6)
	Norway	**-56.8**	(8.1)	**-43.9**	(8.5)	**-38.7**	(17.5)	**-49.5**	(8.7)	**-40.0**	(8.9)	**-33.7**	(14.7)	-13.7	(19.9)	12.9	(17.6)	-15.3	(20.3)
	Poland	c	c	c	c	c	c	m	m	m	m	m	m	c	c	c	c	c	c
	Portugal	**-35.0**	(9.4)	**-48.0**	(8.8)	**-47.1**	(13.1)	-11.8	(10.3)	**-22.8**	(8.3)	-18.0	(11.2)	-6.9	(13.9)	-11.7	(16.6)	24.4	(15.7)
	Slovak Republic	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Slovenia	**-78.9**	(11.5)	**-42.7**	(10.6)	**-51.3**	(18.6)	**-42.5**	(6.5)	**-18.4**	(6.1)	**-27.4**	(13.4)	13.9	(19.1)	1.4	(18.8)	15.0	(16.9)
	Spain	**-61.3**	(4.0)	**-60.2**	(3.4)	**-64.8**	(8.2)	**-29.0**	(9.7)	**-26.5**	(10.1)	**-31.4**	(12.0)	12.4	(9.4)	-1.1	(10.7)	5.0	(12.1)
	Sweden	**-90.8**	(10.7)	**-71.4**	(10.0)	**-62.3**	(13.9)	**-42.1**	(7.0)	**-30.8**	(6.5)	-20.9	(12.5)	-21.2	(16.6)	3.1	(14.5)	-14.8	(14.6)
	Switzerland	**-62.3**	(6.9)	**-44.1**	(5.3)	**-30.5**	(9.5)	**-43.9**	(4.1)	**-25.5**	(3.5)	-11.8	(6.4)	-13.7	(12.5)	**-17.9**	(8.4)	**-20.9**	(8.9)
	Turkey	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	United Kingdom	**-40.1**	(12.2)	**-26.3**	(9.7)	-9.3	(13.2)	-12.6	(9.9)	1.1	(8.3)	17.3	(12.6)	-13.5	(15.6)	-29.0	(18.1)	-18.8	(16.9)
	United States	**-21.2**	(7.0)	4.1	(6.6)	11.3	(12.7)	**-22.2**	(6.0)	6.9	(5.4)	14.1	(12.8)	-10.1	(15.3)	-3.0	(14.1)	-11.7	(13.2)
	OECD average	**-48.4**	(2.0)	**-37.9**	(1.8)	**-33.3**	(3.0)	**-29.8**	(1.7)	**-18.3**	(1.6)	**-12.2**	(2.8)	**-7.1**	(3.5)	**-7.3**	(3.7)	-4.8	(3.6)
Partners	Albania	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Argentina	-51.0	(29.6)	-37.6	(26.6)	-37.6	(42.2)	**-37.4**	(12.4)	-8.8	(12.7)	-7.3	(37.4)	0.4	(47.9)	-12.1	(40.2)	2.1	(47.7)
	Azerbaijan	20.4	(13.3)	14.2	(14.3)	-3.7	(21.9)	8.0	(10.4)	2.0	(9.6)	-7.2	(16.2)	36.5	(26.2)	28.5	(24.4)	7.2	(20.5)
	Brazil	**-117.4**	(20.8)	**-99.5**	(20.4)	**-132.9**	(48.7)	**-99.7**	(21.7)	**-90.1**	(22.7)	**-137.7**	(34.1)	57.2	(43.5)	24.0	(48.7)	57.9	(52.4)
	Bulgaria	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Colombia	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Croatia	**-27.7**	(8.4)	-13.4	(7.0)	**-18.4**	(9.3)	**-13.3**	(5.3)	**-9.2**	(4.4)	**-14.0**	(6.1)	9.5	(10.0)	0.2	(11.5)	10.6	(9.6)
	Dubai (UAE)	**106.0**	(3.2)	**54.4**	(4.1)	**89.2**	(12.3)	**70.5**	(4.0)	**37.6**	(4.1)	**75.7**	(12.4)	-9.6	(14.0)	**-31.6**	(14.4)	**-64.9**	(12.6)
	Hong Kong-China	**-22.8**	(6.3)	-3.2	(5.9)	-3.6	(7.7)	**7.9**	(3.8)	**18.3**	(3.4)	**18.9**	(6.0)	-8.9	(8.5)	0.8	(9.4)	6.8	(7.9)
	Indonesia	c	c	c	c	c	c	m	m	m	m	m	m	c	c	c	c	c	c
	Jordan	7.9	(8.0)	-6.9	(8.4)	-6.2	(8.4)	**11.3**	(5.6)	5.9	(5.6)	6.8	(11.2)	0.8	(12.8)	3.0	(15.3)	-11.0	(17.8)
	Kazakhstan	**-26.9**	(9.0)	-15.5	(8.6)	-2.9	(17.6)	21.9	(16.4)	24.1	(15.8)	35.0	(23.3)	-14.7	(12.2)	-13.2	(21.6)	-16.9	(21.3)
	Kyrgyzstan	16.2	(22.5)	18.0	(22.5)	27.1	(39.8)	**48.4**	(19.1)	**44.7**	(18.2)	54.0	(27.6)	9.7	(36.6)	-90.2	(55.6)	-13.3	(43.2)
	Latvia	c	c	c	c	c	c	-5.3	(8.0)	-2.8	(8.4)	-5.4	(12.1)	c	c	c	c	c	c
	Liechtenstein	**-45.5**	(17.6)	-15.5	(15.4)	-25.7	(23.2)	-19.2	(14.2)	-0.8	(12.4)	-12.7	(21.2)	16.8	(25.3)	12.1	(25.8)	13.2	(26.9)
	Lithuania	c	c	c	c	c	c	**-25.2**	(12.3)	-18.8	(13.4)	-17.1	(26.0)	c	c	c	c	c	c
	Macao-China	**8.0**	(3.0)	**11.9**	(3.3)	1.0	(5.2)	**6.8**	(2.4)	**10.9**	(2.7)	0.4	(4.5)	**21.8**	(5.9)	12.4	(7.2)	11.5	(7.1)
	Montenegro	-2.0	(7.7)	3.3	(7.0)	-11.7	(11.8)	**30.4**	(10.5)	11.0	(8.9)	2.0	(11.9)	7.8	(12.9)	16.0	(16.1)	**37.3**	(17.1)
	Panama	-31.2	(31.7)	-33.7	(20.8)	26.2	(21.4)	37.1	(22.2)	12.4	(16.0)	**48.5**	(18.0)	-30.1	(30.5)	**-123.0**	(26.0)	**-126.8**	(30.6)
	Peru	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Qatar	**126.4**	(2.8)	**104.0**	(2.9)	**129.6**	(5.7)	**62.0**	(2.7)	**61.2**	(2.5)	**97.2**	(6.4)	-2.5	(6.4)	**-47.7**	(7.4)	**-77.5**	(7.6)
	Romania	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Russian Federation	**-21.2**	(7.4)	**-16.7**	(6.6)	**-29.6**	(9.0)	**-28.2**	(11.4)	**-21.3**	(6.2)	**-33.9**	(8.3)	**26.3**	(11.8)	**25.7**	(11.1)	2.1	(11.9)
	Serbia	4.8	(7.5)	4.9	(6.4)	2.6	(9.0)	**23.5**	(7.0)	**17.3**	(6.6)	14.4	(9.2)	9.2	(12.3)	-0.2	(9.8)	1.9	(13.7)
	Shanghai-China	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Singapore	-5.2	(5.4)	**-19.1**	(5.7)	-18.0	(9.5)	**16.2**	(6.7)	**14.0**	(6.6)	15.1	(10.8)	-2.8	(11.3)	-7.5	(12.0)	5.4	(12.2)
	Chinese Taipei	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Thailand	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Trinidad and Tobago	24.4	(20.0)	0.6	(13.8)	26.2	(16.6)	-1.4	(22.7)	-12.7	(17.0)	20.8	(21.5)	-18.2	(31.6)	-39.1	(48.6)	**-79.5**	(27.6)
	Tunisia	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
	Uruguay	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c

Note: The observed difference refers to the same sample as the other models, i.e. those observations where the school concentration measure was not availble, have not been included in this model. Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Correlations between reading outcomes and various measures of student concentration in schools

Table B5.6 *Results based on students' self-reports*

		Correlation between student performance in reading and concentration measures											
		Immigrant students						Non-immigrant students					
		Proportion of immigrant students at the school		Proportion of children of immigrants not speaking the test language at home		Proportion of students with low educated mothers		Proportion of immigrant students at the school		Proportion of children of immigrants not speaking the test language at home		Proportion of students with low educated mothers	
		Corr.	S.E.	Corr.	S.E.	Corr.	S.E.	Corr.	S.E.	Corr.	S.E.	Corr.	S.E.
OECD	Australia	0.15	(0.10)	0.13	(0.12)	**-0.24**	(0.05)	**0.11**	(0.03)	**0.09**	(0.04)	**-0.20**	(0.02)
	Austria	**-0.29**	(0.08)	**-0.25**	(0.08)	**-0.46**	(0.06)	-0.05	(0.04)	-0.04	(0.05)	**-0.26**	(0.05)
	Belgium	**-0.26**	(0.07)	**-0.26**	(0.07)	**-0.35**	(0.05)	**-0.17**	(0.03)	**-0.17**	(0.03)	**-0.34**	(0.03)
	Canada	-0.03	(0.04)	0.01	(0.04)	**-0.15**	(0.05)	**0.12**	(0.02)	**0.11**	(0.02)	**-0.12**	(0.02)
	Chile	c	c	c	c	c	c	c	c	c	c	**-0.49**	(0.02)
	Czech Republic	0.16	(0.08)	**0.14**	(0.07)	**-0.28**	(0.10)	0.07	(0.05)	0.09	(0.05)	**-0.22**	(0.04)
	Denmark	**-0.23**	(0.04)	**-0.15**	(0.05)	**-0.23**	(0.04)	-0.03	(0.03)	-0.02	(0.03)	**-0.15**	(0.03)
	Estonia	0.06	(0.08)	-0.06	(0.09)	-0.02	(0.06)	**-0.16**	(0.03)	**-0.07**	(0.03)	**-0.06**	(0.03)
	Finland	**-0.30**	(0.11)	**-0.29**	(0.10)	-0.13	(0.11)	0.03	(0.03)	0.02	(0.03)	**-0.09**	(0.03)
	France	**-0.26**	(0.10)	-0.14	(0.13)	**-0.45**	(0.07)	**-0.21**	(0.05)	**-0.17**	(0.06)	**-0.47**	(0.06)
	Germany	**-0.35**	(0.05)	**-0.22**	(0.05)	**-0.58**	(0.05)	**-0.23**	(0.04)	**-0.21**	(0.05)	**-0.52**	(0.04)
	Greece	**-0.25**	(0.05)	**-0.19**	(0.04)	**-0.40**	(0.09)	**-0.16**	(0.04)	**-0.17**	(0.03)	**-0.37**	(0.04)
	Hungary	0.01	(0.17)	-0.03	(0.09)	**-0.58**	(0.08)	**0.14**	(0.06)	**0.07**	(0.03)	**-0.57**	(0.02)
	Iceland	-0.24	(0.14)	0.16	(0.11)	-0.09	(0.10)	-0.01	(0.02)	-0.00	(0.02)	**-0.12**	(0.02)
	Ireland	**-0.14**	(0.07)	**-0.21**	(0.07)	-0.10	(0.08)	0.06	(0.04)	0.00	(0.04)	**-0.28**	(0.03)
	Israel	-0.11	(0.06)	0.00	(0.06)	**-0.38**	(0.06)	**0.10**	(0.04)	**0.10**	(0.04)	**-0.49**	(0.03)
	Italy	**-0.32**	(0.03)	**-0.32**	(0.04)	**-0.49**	(0.03)	**-0.12**	(0.03)	**-0.13**	(0.02)	**-0.47**	(0.02)
	Japan	c	c	c	c	c	c	c	c	c	c	**-0.41**	(0.04)
	Korea	c	c	c	c	c	c	c	c	c	c	**-0.40**	(0.04)
	Luxembourg	0.02	(0.02)	**-0.36**	(0.02)	**-0.52**	(0.01)	**-0.31**	(0.02)	**-0.36**	(0.02)	**-0.40**	(0.02)
	Mexico	**-0.38**	(0.10)	**-0.15**	(0.05)	**-0.43**	(0.11)	**-0.24**	(0.03)	-0.06	(0.04)	**-0.45**	(0.02)
	Netherlands	**-0.27**	(0.11)	**-0.22**	(0.10)	**-0.34**	(0.09)	**-0.17**	(0.05)	**-0.12**	(0.05)	**-0.35**	(0.05)
	New Zealand	**-0.13**	(0.04)	**-0.14**	(0.04)	**-0.24**	(0.05)	**0.07**	(0.03)	0.04	(0.03)	**-0.23**	(0.04)
	Norway	-0.14	(0.08)	-0.13	(0.07)	**-0.19**	(0.06)	0.03	(0.03)	0.02	(0.03)	**-0.06**	(0.03)
	Poland	c	c	c	c	c	c	c	c	c	c	**-0.17**	(0.03)
	Portugal	**-0.32**	(0.08)	**-0.28**	(0.06)	**-0.33**	(0.07)	-0.01	(0.03)	**-0.10**	(0.04)	**-0.39**	(0.03)
	Slovak Republic	c	c	c	c	c	c	c	c	c	c	**-0.33**	(0.04)
	Slovenia	**-0.34**	(0.06)	**-0.34**	(0.07)	**-0.40**	(0.05)	**-0.24**	(0.01)	**-0.24**	(0.01)	**-0.51**	(0.01)
	Spain	-0.05	(0.05)	**-0.18**	(0.04)	**-0.23**	(0.04)	-0.03	(0.02)	**-0.06**	(0.02)	**-0.31**	(0.03)
	Sweden	**-0.23**	(0.07)	**-0.18**	(0.05)	**-0.22**	(0.04)	-0.03	(0.03)	-0.04	(0.03)	**-0.15**	(0.03)
	Switzerland	**-0.18**	(0.07)	**-0.29**	(0.03)	**-0.44**	(0.03)	**-0.15**	(0.03)	**-0.18**	(0.04)	**-0.38**	(0.03)
	Turkey	c	c	c	c	c	c	c	c	c	c	**-0.47**	(0.03)
	United Kingdom	-0.13	(0.09)	**-0.26**	(0.08)	**-0.29**	(0.06)	**-0.07**	(0.03)	**-0.08**	(0.04)	**-0.21**	(0.03)
	United States	**-0.10**	(0.04)	**-0.11**	(0.04)	**-0.25**	(0.05)	**-0.08**	(0.03)	**-0.08**	(0.04)	**-0.26**	(0.03)
	OECD average	**-0.17**	(0.02)	**-0.15**	(0.01)	**-0.31**	(0.01)	**-0.06**	(0.01)	**-0.06**	(0.01)	**-0.32**	(0.01)
Partners	Albania	c	c	c	c	c	c	c	c	c	c	**-0.33**	(0.04)
	Argentina	0.16	(0.17)	0.10	(0.14)	**-0.29**	(0.13)	-0.05	(0.04)	0.01	(0.08)	**-0.47**	(0.03)
	Azerbaijan	-0.13	(0.11)	0.18	(0.17)	**-0.24**	(0.07)	**0.17**	(0.05)	**0.16**	(0.05)	**-0.19**	(0.05)
	Brazil	0.02	(0.15)	0.07	(0.19)	-0.15	(0.22)	**-0.15**	(0.03)	0.01	(0.05)	**-0.43**	(0.02)
	Bulgaria	c	c	c	c	c	c	c	c	c	c	**-0.39**	(0.05)
	Colombia	c	c	c	c	c	c	c	c	c	c	**-0.44**	(0.03)
	Croatia	0.03	(0.07)	-0.04	(0.11)	**-0.34**	(0.05)	**-0.09**	(0.04)	-0.06	(0.08)	**-0.37**	(0.03)
	Dubai (UAE)	**0.30**	(0.02)	**-0.06**	(0.02)	**-0.45**	(0.01)	**0.08**	(0.03)	**0.18**	(0.03)	**-0.31**	(0.02)
	Hong Kong-China	**-0.21**	(0.05)	**-0.31**	(0.06)	**-0.33**	(0.04)	**-0.13**	(0.06)	**-0.21**	(0.05)	**-0.34**	(0.04)
	Indonesia	c	c	c	c	c	c	c	c	c	c	**-0.40**	(0.05)
	Jordan	0.00	(0.09)	**-0.19**	(0.08)	**-0.19**	(0.07)	**0.13**	(0.04)	-0.04	(0.03)	**-0.17**	(0.03)
	Kazakhstan	0.04	(0.21)	0.10	(0.09)	**-0.30**	(0.08)	0.07	(0.04)	0.08	(0.07)	**-0.18**	(0.05)
	Kyrgyzstan	0.09	(0.15)	-0.17	(0.17)	**-0.32**	(0.12)	**0.27**	(0.04)	0.08	(0.07)	**-0.14**	(0.04)
	Latvia	0.07	(0.10)	-0.09	(0.09)	**-0.20**	(0.07)	-0.05	(0.04)	-0.04	(0.04)	**-0.15**	(0.03)
	Liechtenstein	**-0.37**	(0.10)	**-0.59**	(0.08)	**-0.65**	(0.07)	**-0.47**	(0.04)	**-0.70**	(0.03)	**-0.73**	(0.03)
	Lithuania	**0.21**	(0.09)	**0.29**	(0.09)	0.19	(0.10)	**-0.07**	(0.04)	-0.03	(0.04)	**-0.17**	(0.03)
	Macao-China	**0.05**	(0.02)	**-0.13**	(0.02)	**-0.07**	(0.02)	**-0.11**	(0.02)	**-0.20**	(0.02)	**-0.16**	(0.02)
	Montenegro	0.03	(0.07)	**-0.19**	(0.07)	**-0.36**	(0.06)	**0.10**	(0.01)	**-0.14**	(0.01)	**-0.45**	(0.01)
	Panama	-0.15	(0.25)	-0.38	(0.23)	**-0.71**	(0.05)	0.14	(0.08)	0.02	(0.08)	**-0.48**	(0.06)
	Peru	c	c	c	c	c	c	c	c	c	c	**-0.58**	(0.03)
	Qatar	**0.44**	(0.01)	**0.33**	(0.01)	**-0.43**	(0.01)	**0.21**	(0.02)	**0.10**	(0.02)	**-0.10**	(0.01)
	Romania	c	c	c	c	c	c	c	c	c	c	**-0.38**	(0.06)
	Russian Federation	-0.25	(0.13)	**-0.30**	(0.10)	**-0.29**	(0.09)	-0.08	(0.05)	**-0.13**	(0.05)	**-0.16**	(0.03)
	Serbia	0.09	(0.09)	0.19	(0.10)	**-0.39**	(0.05)	**0.11**	(0.04)	0.09	(0.07)	**-0.35**	(0.04)
	Shanghai-China	c	c	c	c	c	c	c	c	c	c	**-0.46**	(0.04)
	Singapore	-0.03	(0.08)	**-0.12**	(0.06)	**-0.38**	(0.04)	**0.16**	(0.01)	**0.08**	(0.01)	**-0.41**	(0.01)
	Chinese Taipei	c	c	c	c	c	c	c	c	c	c	**-0.38**	(0.03)
	Thailand	c	c	c	c	c	c	c	c	c	c	**-0.41**	(0.04)
	Trinidad and Tobago	**0.24**	(0.07)	**0.32**	(0.06)	**-0.59**	(0.08)	-0.00	(0.02)	**0.08**	(0.01)	**-0.44**	(0.01)
	Tunisia	c	c	c	c	c	c	c	c	c	c	**-0.38**	(0.04)
	Uruguay	c	c	c	c	c	c	c	c	c	c	**-0.52**	(0.02)

Note: Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Students by mother's education in disadvantaged schools

Table B5.7 *Results based on students' self-reports*

		Students of low educated mothers in disadvantaged schools as a percentage of all students with low educated mothers				Students with highly educated mothers in disadvantaged schools as a percentage of all students with highly educated mothers			
		Immigrant students		Non-immigrant students		Immigrant students		Non-immigrant students	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	66.0	(6.3)	52.6	(4.3)	22.7	(4.0)	16.6	(2.3)
	Austria	64.2	(5.7)	51.7	(6.4)	39.1	(7.3)	14.5	(2.8)
	Belgium	76.5	(3.7)	47.0	(4.3)	30.6	(4.5)	16.0	(2.2)
	Canada	66.4	(6.3)	58.3	(4.4)	23.8	(3.9)	18.6	(2.0)
	Chile	c	c	46.7	(5.2)	c	c	7.3	(1.4)
	Czech Republic	c	c	72.2	(4.7)	25.5	(9.5)	21.6	(3.5)
	Denmark	68.3	(5.0)	44.4	(5.1)	36.4	(4.6)	18.6	(3.0)
	Estonia	c	c	56.1	(5.0)	13.4	(5.4)	21.5	(2.8)
	Finland	c	c	46.6	(5.2)	28.6	(8.0)	21.7	(3.3)
	France	62.8	(6.4)	43.8	(5.3)	36.5	(7.4)	13.1	(2.4)
	Germany	58.5	(6.4)	45.8	(4.9)	31.3	(5.3)	13.0	(2.5)
	Greece	56.8	(10.7)	49.6	(4.6)	30.6	(4.3)	14.1	(2.7)
	Hungary	c	c	60.8	(4.6)	c	c	9.1	(1.3)
	Iceland	c	c	43.2	(1.9)	c	c	17.6	(0.8)
	Ireland	26.2	(8.8)	47.2	(5.6)	28.6	(6.0)	15.6	(3.2)
	Israel	47.2	(7.1)	80.6	(2.7)	7.3	(3.0)	12.3	(1.6)
	Italy	40.1	(5.4)	43.7	(2.1)	18.7	(4.2)	11.0	(1.0)
	Japan	c	c	66.0	(4.4)	c	c	14.9	(1.6)
	Korea	m	m	54.7	(5.0)	c	c	14.7	(2.8)
	Luxembourg	48.7	(1.8)	27.4	(2.2)	15.7	(1.8)	11.1	(0.9)
	Mexico	52.5	(5.9)	35.7	(2.2)	25.8	(7.3)	7.5	(0.7)
	Netherlands	71.4	(6.0)	40.6	(5.2)	41.7	(9.1)	15.3	(2.7)
	New Zealand	40.1	(6.0)	47.3	(4.7)	18.0	(3.0)	17.3	(2.7)
	Norway	57.8	(8.0)	53.6	(5.6)	18.1	(4.8)	21.4	(3.0)
	Poland	c	c	55.3	(5.3)	m	m	14.9	(3.1)
	Portugal	12.4	(3.8)	37.0	(4.2)	10.8	(3.3)	6.7	(1.2)
	Slovak Republic	c	c	83.1	(3.7)	c	c	18.4	(3.0)
	Slovenia	71.1	(4.5)	56.0	(2.6)	29.4	(6.6)	11.0	(0.8)
	Spain	30.8	(5.0)	42.3	(4.1)	15.3	(3.6)	10.7	(1.5)
	Sweden	59.7	(8.1)	45.0	(5.1)	37.5	(6.7)	19.6	(2.8)
	Switzerland	49.3	(4.3)	39.7	(4.5)	25.1	(3.9)	14.2	(2.2)
	Turkey	c	c	30.0	(3.8)	c	c	2.7	(0.9)
	United Kingdom	79.8	(8.1)	57.1	(4.6)	42.5	(7.0)	17.7	(2.3)
	United States	79.0	(4.2)	42.3	(6.4)	25.4	(5.7)	12.8	(2.5)
	OECD average	55.9	(1.3)	50.1	(0.8)	26.1	(1.1)	14.5	(0.4)
Partners	Albania	c	c	42.1	(5.2)	c	c	12.5	(2.9)
	Argentina	59.1	(10.1)	40.2	(5.3)	32.2	(9.8)	12.7	(2.1)
	Azerbaijan	c	c	58.5	(5.0)	16.9	(6.7)	19.9	(3.3)
	Brazil	49.1	(15.1)	37.6	(3.5)	0.9	(1.0)	9.6	(1.4)
	Bulgaria	c	c	70.8	(6.9)	c	c	12.1	(2.7)
	Colombia	c	c	37.9	(5.2)	c	c	10.5	(1.9)
	Croatia	44.7	(5.2)	57.0	(4.1)	16.0	(4.1)	16.8	(1.9)
	Dubai (UAE)	51.4	(2.5)	86.4	(1.5)	4.5	(0.4)	28.4	(2.1)
	Hong Kong-China	41.4	(4.3)	32.1	(4.4)	9.4	(3.5)	2.6	(1.0)
	Indonesia	c	c	35.5	(4.6)	c	c	4.6	(1.4)
	Jordan	24.1	(6.2)	45.3	(4.3)	7.5	(3.4)	14.7	(2.7)
	Kazakhstan	76.8	(10.1)	73.1	(6.0)	26.1	(6.5)	20.4	(3.2)
	Kyrgyzstan	c	c	68.9	(6.2)	31.0	(9.9)	21.8	(3.5)
	Latvia	c	c	75.3	(6.2)	32.1	(10.8)	19.0	(3.4)
	Liechtenstein	39.4	(6.7)	39.6	(7.2)	c	c	19.9	(4.7)
	Lithuania	c	c	74.9	(4.5)	43.2	(11.8)	17.1	(2.3)
	Macao-China	31.3	(0.6)	23.7	(1.2)	15.1	(2.3)	6.4	(1.5)
	Montenegro	c	c	57.5	(1.9)	12.7	(3.4)	16.3	(1.2)
	Panama	28.4	(17.6)	49.1	(7.8)	10.5	(8.4)	12.8	(3.4)
	Peru	c	c	44.6	(4.7)	c	c	7.0	(1.3)
	Qatar	49.6	(2.0)	64.3	(1.3)	7.0	(0.6)	14.8	(0.7)
	Romania	c	c	52.2	(5.0)	c	c	18.1	(3.3)
	Russian Federation	c	c	75.9	(6.1)	23.0	(5.6)	21.9	(3.6)
	Serbia	44.0	(12.9)	58.4	(5.2)	18.7	(4.1)	18.3	(2.6)
	Shanghai-China	c	c	44.7	(4.8)	c	c	8.6	(1.6)
	Singapore	46.2	(4.3)	42.8	(1.5)	18.4	(1.7)	15.1	(1.0)
	Chinese Taipei	c	c	42.9	(4.3)	c	c	16.3	(2.6)
	Thailand	m	m	34.4	(3.9)	m	m	2.7	(0.8)
	Trinidad and Tobago	c	c	43.9	(1.5)	14.3	(7.4)	13.3	(1.2)
	Tunisia	c	c	33.8	(4.3)	c	c	5.3	(1.3)
	Uruguay	c	c	35.8	(3.4)	c	c	6.2	(1.0)

Note: Disadvantaged schools are those in the country-specific fourth quartile of the concentration measure of students with low educated mothers at the school level (these are the 25% of school with the highest proportion of students with low educated mothers). Students with low educated mothers are those whose mother's educational attainment is lower than upper secondary education. Students with highly educated mothers are those whose mother's educational attainment is tertiary education.

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Students in disadvantaged schools from low occupation status families

Table B5.8 *Results based on students' self-reports*

		Students in disadvantaged schools from low occupation status families				Students in disadvantaged schools with tertiary-educated mothers from low occupation status families			
		Immigrant students		Non-immigrant students		Immigrant students		Non-immigrant students	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	34.8	(3.6)	28.4	(1.6)	15.5	(2.7)	15.1	(1.6)
	Austria	58.9	(4.0)	32.9	(3.6)	46.2	(7.9)	23.6	(4.3)
	Belgium	60.3	(3.1)	37.8	(2.3)	38.2	(5.5)	22.7	(2.2)
	Canada	39.8	(2.4)	25.5	(1.6)	25.1	(2.6)	16.4	(1.6)
	Chile	c	c	68.8	(1.6)	m	m	29.9	(4.3)
	Czech Republic	c	c	35.2	(2.6)	c	c	16.6	(3.5)
	Denmark	56.7	(2.7)	36.3	(2.8)	38.2	(5.7)	24.4	(2.8)
	Estonia	44.1	(7.9)	31.4	(1.8)	c	c	17.9	(2.3)
	Finland	35.9	(7.7)	30.3	(2.0)	c	c	21.8	(1.9)
	France	72.6	(3.1)	51.0	(3.1)	56.9	(8.2)	39.4	(4.9)
	Germany	63.0	(3.4)	35.2	(2.8)	36.6	(6.8)	29.1	(5.6)
	Greece	74.2	(3.8)	43.0	(3.7)	c	c	15.5	(4.6)
	Hungary	c	c	54.1	(2.1)	c	c	25.0	(3.9)
	Iceland	c	c	24.5	(1.6)	c	c	6.4	(1.6)
	Ireland	26.8	(6.6)	43.0	(2.1)	18.1	(8.2)	26.9	(3.1)
	Israel	58.2	(5.0)	43.8	(2.3)	8.3	(4.1)	20.5	(3.6)
	Italy	77.7	(3.3)	54.3	(1.0)	80.4	(6.5)	26.0	(2.6)
	Japan	c	c	39.7	(1.7)	c	c	28.7	(2.6)
	Korea	m	m	32.7	(2.2)	m	m	16.1	(3.8)
	Luxembourg	71.5	(2.0)	33.0	(2.4)	43.0	(6.6)	19.9	(4.2)
	Mexico	74.7	(3.7)	72.7	(1.0)	c	c	34.2	(2.6)
	Netherlands	69.7	(4.2)	30.7	(2.2)	61.2	(8.4)	20.8	(2.9)
	New Zealand	34.0	(2.7)	27.7	(2.1)	20.9	(4.9)	15.6	(3.1)
	Norway	40.9	(6.0)	15.3	(1.4)	c	c	10.4	(1.4)
	Poland	m	m	51.0	(2.8)	m	m	5.1	(2.1)
	Portugal	50.1	(6.7)	61.3	(2.1)	c	c	24.1	(4.6)
	Slovak Republic	c	c	44.5	(3.1)	m	m	22.5	(2.6)
	Slovenia	61.3	(5.1)	36.8	(1.5)	c	c	11.6	(2.4)
	Spain	67.7	(5.0)	59.9	(1.5)	48.1	(9.9)	26.4	(3.9)
	Sweden	52.5	(4.6)	33.7	(2.1)	42.1	(4.9)	26.3	(2.3)
	Switzerland	63.3	(2.6)	31.7	(2.1)	42.2	(5.9)	25.7	(4.5)
	Turkey	c	c	59.1	(2.2)	m	m	c	c
	United Kingdom	35.6	(7.4)	36.4	(2.5)	17.5	(3.5)	25.7	(2.6)
	United States	64.1	(2.8)	30.0	(1.9)	28.5	(4.9)	18.0	(2.2)
	OECD average	55.5	(0.9)	40.3	(0.4)	37.0	(1.5)	21.5	(0.6)
Partners	Albania	c	c	58.5	(2.9)	m	m	37.0	(6.2)
	Argentina	80.4	(4.8)	60.9	(2.3)	c	c	45.0	(3.9)
	Azerbaijan	44.8	(17.5)	42.2	(2.9)	c	c	31.1	(2.7)
	Brazil	c	c	68.4	(1.6)	c	c	41.5	(3.6)
	Bulgaria	c	c	55.5	(4.0)	m	m	29.8	(6.9)
	Colombia	c	c	69.3	(1.5)	c	c	39.1	(5.2)
	Croatia	60.9	(3.6)	45.3	(1.8)	c	c	25.5	(2.9)
	Dubai (UAE)	6.7	(1.5)	2.8	(0.7)	3.3	(1.4)	0.0	(0.0)
	Hong Kong-China	62.4	(2.5)	43.2	(2.2)	c	c	c	c
	Indonesia	c	c	85.4	(1.5)	m	m	c	c
	Jordan	58.6	(7.6)	44.6	(2.7)	c	c	11.0	(2.7)
	Kazakhstan	46.9	(3.4)	41.8	(2.1)	34.9	(4.4)	32.7	(1.7)
	Kyrgyzstan	c	c	51.1	(3.3)	c	c	40.4	(3.1)
	Latvia	42.3	(10.5)	34.6	(2.1)	26.2	(12.3)	22.9	(2.9)
	Liechtenstein	c	c	c	c	c	c	c	c
	Lithuania	c	c	39.8	(2.3)	c	c	20.5	(2.4)
	Macao-China	37.4	(1.4)	31.0	(2.3)	16.3	(6.0)	c	c
	Montenegro	49.0	(7.0)	45.9	(1.4)	c	c	19.1	(3.4)
	Panama	c	c	64.7	(3.4)	c	c	43.4	(4.0)
	Peru	c	c	81.9	(1.8)	c	c	71.3	(5.9)
	Qatar	10.2	(1.2)	7.3	(0.9)	7.6	(2.7)	1.3	(0.7)
	Romania	c	c	56.6	(2.5)	c	c	42.2	(4.3)
	Russian Federation	37.1	(6.5)	34.7	(2.7)	35.9	(7.2)	28.9	(2.3)
	Serbia	47.5	(4.6)	37.8	(1.7)	28.2	(8.3)	22.2	(2.6)
	Shanghai-China	c	c	46.0	(1.7)	c	c	27.0	(4.1)
	Singapore	25.4	(3.4)	30.1	(1.4)	3.3	(1.9)	9.0	(2.1)
	Chinese Taipei	c	c	48.7	(2.4)	c	c	28.3	(2.6)
	Thailand	m	m	86.3	(1.4)	m	m	c	c
	Trinidad and Tobago	c	c	50.3	(2.1)	c	c	28.5	(5.0)
	Tunisia	c	c	78.3	(2.3)	m	m	c	c
	Uruguay	c	c	65.3	(1.8)	c	c	27.0	(4.8)

Note: Disadvantaged schools are those in the country-specific fourth quartile of the concentration measure of students with low educated mothers at the school level (these are the 25% of school with the highest proportion of students with low educated mothers). Students with low occupational status families are those with a HISEI lower than 40. HISEI is the highest international social and economic index.

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Performance among students in the top or bottom school disadvantage quartiles and those with mothers with high or low education levels, all students

Table B5.9 *Results based on students' self-reports*

		Mean performance												Difference in scores between			
		Students in the bottom quartile of school disadvantage (25% lowest % of students with low educated mothers)		Students in the second quartile of school disadvantage		Students in the third quartile of school disadvantage		Students in the top quartile of school disadvantage (25% highest % of students with low educated mothers)		Students with low educated mothers		Students with highly educated mothers		Students in the bottom and top school disadvantage quartiles		Students with mothers having high or low education	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Score dif.	S.E.	Score dif.	S.E.
OECD	Australia	544	(5.3)	523	(4.5)	506	(4.8)	489	(6.0)	471	(4.3)	541	(2.8)	**55**	(7.9)	**70**	(4.3)
	Austria	520	(7.3)	493	(9.5)	499	(8.8)	438	(10.3)	404	(6.6)	499	(4.0)	**82**	(13.6)	**95**	(7.1)
	Belgium	563	(7.9)	534	(6.1)	499	(6.3)	463	(6.4)	465	(3.9)	535	(2.5)	**100**	(10.8)	**70**	(4.5)
	Canada	544	(3.5)	530	(3.0)	527	(4.5)	512	(3.7)	491	(4.7)	537	(1.7)	**31**	(5.0)	**46**	(4.8)
	Chile	511	(5.5)	462	(5.7)	432	(5.1)	409	(5.6)	416	(3.4)	487	(3.6)	**102**	(7.6)	**71**	(4.4)
	Czech Republic	503	(6.4)	502	(5.7)	491	(8.7)	454	(7.3)	432	(7.4)	496	(4.9)	**49**	(9.7)	**65**	(7.9)
	Denmark	525	(5.1)	496	(6.0)	487	(4.8)	484	(4.5)	451	(3.7)	512	(2.5)	**40**	(6.7)	**62**	(4.1)
	Estonia	506	(5.1)	510	(7.1)	507	(5.4)	502	(3.9)	467	(6.6)	511	(3.4)	4	(6.7)	**44**	(7.0)
	Finland	546	(4.2)	537	(4.5)	536	(4.5)	523	(4.3)	496	(4.7)	547	(2.4)	**23**	(5.9)	**50**	(4.5)
	France	565	(11.7)	539	(8.1)	477	(9.2)	441	(11.0)	456	(4.6)	529	(4.4)	**125**	(17.7)	**73**	(6.4)
	Germany	571	(5.6)	543	(5.6)	518	(7.4)	453	(7.8)	448	(4.2)	529	(4.2)	**118**	(10.0)	**81**	(5.7)
	Greece	527	(4.4)	503	(7.4)	494	(6.5)	433	(11.7)	444	(6.2)	506	(3.9)	**94**	(12.4)	**62**	(5.5)
	Hungary	566	(5.2)	533	(6.2)	501	(6.1)	440	(6.6)	421	(6.0)	534	(4.6)	**125**	(8.3)	**113**	(7.4)
	Iceland	518	(3.0)	504	(2.9)	492	(3.3)	488	(3.2)	477	(3.2)	520	(2.2)	**30**	(4.4)	**43**	(4.1)
	Ireland	533	(5.5)	506	(6.1)	488	(8.5)	474	(6.8)	461	(4.0)	519	(3.3)	**60**	(8.7)	**58**	(4.2)
	Israel	536	(5.7)	514	(5.3)	474	(8.1)	395	(7.1)	401	(6.3)	516	(3.8)	**141**	(9.1)	**115**	(6.7)
	Italy	544	(3.3)	514	(3.7)	478	(4.5)	432	(4.5)	459	(2.6)	503	(2.4)	**112**	(5.6)	**44**	(3.2)
	Japan	561	(7.6)	553	(5.6)	519	(6.4)	456	(8.4)	483	(7.3)	542	(3.6)	**106**	(11.2)	**59**	(7.6)
	Korea	572	(5.0)	559	(4.7)	540	(6.4)	492	(7.7)	504	(7.2)	555	(4.9)	**80**	(9.3)	**51**	(7.2)
	Luxembourg	539	(2.0)	503	(2.1)	425	(2.7)	421	(2.3)	436	(2.6)	503	(2.7)	**118**	(3.1)	**67**	(3.6)
	Mexico	485	(3.6)	440	(3.9)	418	(3.1)	388	(4.3)	408	(1.9)	455	(2.4)	**97**	(5.5)	**47**	(2.3)
	Netherlands	551	(7.8)	535	(17.1)	498	(10.3)	458	(7.4)	479	(5.8)	526	(5.5)	**93**	(11.1)	**47**	(5.3)
	New Zealand	553	(5.5)	542	(6.7)	529	(4.7)	499	(6.9)	493	(4.0)	551	(3.2)	**54**	(9.1)	**58**	(4.5)
	Norway	508	(5.0)	511	(5.3)	502	(5.4)	495	(3.9)	465	(6.0)	516	(2.8)	**13**	(6.3)	**51**	(5.7)
	Poland	519	(5.4)	503	(6.1)	501	(4.7)	476	(4.2)	444	(5.1)	553	(3.9)	**43**	(7.1)	**109**	(6.4)
	Portugal	538	(5.7)	499	(3.7)	478	(6.7)	450	(6.1)	470	(3.2)	531	(4.5)	**88**	(8.7)	**61**	(4.8)
	Slovak Republic	514	(5.7)	510	(4.7)	474	(7.8)	447	(8.4)	384	(11.3)	503	(4.2)	**66**	(10.5)	**119**	(11.9)
	Slovenia	548	(1.9)	532	(2.5)	464	(1.9)	433	(2.0)	440	(3.8)	516	(2.7)	**115**	(2.8)	**76**	(4.7)
	Spain	518	(3.9)	490	(3.4)	471	(4.0)	450	(4.2)	460	(2.5)	509	(2.8)	**68**	(5.6)	**49**	(3.4)
	Sweden	526	(6.0)	497	(5.8)	486	(5.4)	476	(5.6)	447	(6.1)	513	(3.2)	**50**	(8.5)	**66**	(6.5)
	Switzerland	555	(8.0)	525	(7.5)	483	(4.8)	451	(3.8)	463	(3.9)	522	(3.5)	**104**	(9.2)	**58**	(4.7)
	Turkey	527	(7.3)	471	(8.1)	447	(5.7)	434	(4.7)	454	(3.2)	523	(7.5)	**94**	(8.5)	**68**	(7.3)
	United Kingdom	531	(5.5)	511	(4.4)	490	(6.4)	471	(6.5)	454	(5.4)	516	(2.7)	**60**	(9.2)	**63**	(6.3)
	United States	538	(8.5)	514	(5.4)	483	(7.0)	461	(4.7)	458	(4.3)	525	(4.8)	**77**	(9.7)	**67**	(5.8)
	OECD average	535	(1.0)	513	(1.1)	489	(1.1)	458	(1.1)	453	(0.9)	520	(0.6)	**77**	(1.5)	**67**	(1.0)
Partners	Albania	431	(8.8)	410	(10.6)	375	(8.0)	355	(7.7)	363	(4.8)	400	(7.3)	**76**	(11.5)	**37**	(7.7)
	Argentina	481	(8.4)	415	(10.5)	386	(7.7)	362	(9.6)	369	(4.8)	429	(5.6)	**119**	(12.3)	**60**	(6.4)
	Azerbaijan	392	(7.5)	366	(5.6)	343	(8.4)	342	(6.5)	348	(6.0)	377	(3.8)	**50**	(10.6)	**29**	(6.2)
	Brazil	486	(5.7)	412	(8.3)	402	(4.9)	389	(3.8)	393	(2.6)	437	(4.9)	**97**	(6.8)	**44**	(4.9)
	Bulgaria	489	(11.7)	480	(13.2)	420	(16.3)	374	(10.4)	342	(8.1)	469	(7.6)	**116**	(16.9)	**126**	(9.6)
	Colombia	469	(6.4)	425	(6.3)	381	(7.9)	387	(5.0)	390	(4.1)	444	(5.1)	**82**	(8.1)	**54**	(5.4)
	Croatia	529	(6.7)	475	(7.5)	463	(7.2)	435	(4.7)	433	(4.3)	491	(4.1)	**94**	(8.0)	**57**	(5.2)
	Dubai (UAE)	530	(2.4)	499	(2.6)	440	(2.0)	390	(2.1)	389	(3.2)	492	(1.8)	**140**	(3.0)	**103**	(3.8)
	Hong Kong-China	577	(5.4)	544	(8.4)	516	(6.8)	497	(6.2)	523	(2.8)	556	(5.7)	**80**	(8.4)	**33**	(6.3)
	Indonesia	442	(8.5)	408	(7.4)	389	(6.2)	374	(5.6)	390	(3.2)	437	(8.3)	**68**	(9.9)	**46**	(8.1)
	Jordan	432	(7.3)	408	(5.8)	402	(6.4)	388	(7.1)	388	(3.2)	425	(4.5)	**44**	(10.3)	**37**	(4.4)
	Kazakhstan	413	(6.9)	405	(6.5)	382	(7.6)	367	(6.5)	338	(9.2)	402	(3.2)	**46**	(10.4)	**63**	(9.6)
	Kyrgyzstan	329	(6.4)	333	(5.9)	306	(8.9)	298	(8.6)	270	(10.1)	331	(3.8)	**31**	(11.6)	**61**	(10.8)
	Latvia	504	(4.6)	504	(4.4)	498	(5.2)	475	(4.1)	457	(8.6)	499	(3.5)	**29**	(6.7)	**43**	(8.6)
	Liechtenstein	c	c	c	c	c	c	c	c	463	(8.3)	515	(7.5)	c	c	**53**	(11.4)
	Lithuania	485	(4.2)	485	(4.3)	486	(5.2)	443	(6.4)	424	(7.5)	491	(2.8)	**42**	(7.3)	**66**	(8.2)
	Macao-China	494	(1.7)	494	(1.7)	478	(1.8)	481	(1.6)	485	(1.2)	492	(3.8)	**13**	(2.0)	7	(4.1)
	Montenegro	471	(2.4)	427	(2.2)	379	(2.0)	360	(2.1)	361	(4.8)	430	(3.1)	**111**	(3.4)	**69**	(5.6)
	Panama	479	(10.2)	386	(9.0)	356	(6.8)	353	(12.2)	345	(5.8)	397	(9.2)	**126**	(14.2)	**52**	(9.6)
	Peru	456	(8.3)	399	(5.9)	358	(4.6)	315	(5.8)	330	(2.8)	419	(8.4)	**141**	(9.6)	**89**	(8.7)
	Qatar	442	(1.7)	378	(2.0)	335	(1.7)	333	(1.4)	339	(2.0)	390	(1.5)	**108**	(2.2)	**52**	(2.5)
	Romania	466	(8.1)	455	(10.5)	406	(10.5)	386	(11.2)	389	(6.4)	435	(5.6)	**80**	(14.9)	**46**	(7.5)
	Russian Federation	472	(5.4)	470	(4.7)	472	(5.9)	432	(7.1)	397	(12.3)	468	(3.2)	**40**	(7.7)	**71**	(12.0)
	Serbia	495	(5.3)	448	(8.2)	427	(5.5)	406	(6.9)	405	(6.3)	450	(3.0)	**89**	(8.4)	**46**	(6.1)
	Shanghai-China	608	(4.9)	568	(5.2)	541	(6.5)	510	(7.2)	532	(3.5)	582	(3.2)	**98**	(9.0)	**50**	(4.8)
	Singapore	587	(3.4)	530	(2.3)	498	(2.0)	488	(2.1)	484	(2.7)	555	(2.4)	**99**	(4.5)	**71**	(3.8)
	Chinese Taipei	543	(7.4)	510	(6.1)	474	(6.0)	454	(4.8)	470	(2.8)	519	(3.4)	**88**	(9.0)	**50**	(3.6)
	Thailand	473	(5.7)	422	(4.4)	409	(5.6)	399	(5.3)	410	(2.6)	473	(6.0)	**75**	(7.6)	**63**	(6.3)
	Trinidad and Tobago	501	(2.5)	429	(2.5)	390	(2.4)	369	(2.3)	401	(3.6)	436	(3.9)	**132**	(3.3)	**35**	(5.2)
	Tunisia	450	(7.0)	409	(9.9)	389	(7.6)	371	(6.3)	394	(2.6)	431	(8.0)	**79**	(10.1)	**37**	(7.8)
	Uruguay	500	(4.2)	450	(3.7)	410	(6.8)	365	(4.1)	398	(2.6)	483	(4.0)	**134**	(6.3)	**85**	(4.4)

Note: Disadvantage quartiles are defined at the country level ranking schools according to the proportion of students with low educated mothers. The highest disadvantage quartile is the one with the 25% of schools where the proportion of students with low educated mothers is highest. The opposite is true for the lowest disadvantage quartile. Low educated mothers are those with educational attainment lower than an upper-secondary education. Highly educated mothers are those with an tertiary level education (a university education). Values that are statistically significant are indicated in bold (see Annex A).

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 1/4]

Table B5.10a Mean performance across mother's educational attainment by quartile of most disadvantaged schools measured as the proportion of students with low educated mothers

Results based on students' self-reports

		Least disadvantaged quartile (25% of schools with the lowest % of students with low educated mothers) in the country/economy											
		At best primary						Lower secondary					
		Non-immigrant students		Second-generation students		First-generation students		Non-immigrant students		Second-generation students		First-generation students	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
OECD	Australia	m	m	c	c	c	c	c	c	c	c	c	c
	Austria	c	c	c	c	m	m	c	c	c	c	c	c
	Belgium	c	c	c	c	m	m	c	c	c	c	m	m
	Canada	m	m	m	m	m	m	m	m	m	m	m	m
	Chile	c	c	m	m	m	m	480	(14.5)	c	c	m	m
	Czech Republic	m	m	m	m	m	m	m	m	m	m	m	m
	Denmark	c	c	m	m	c	c	c	c	c	c	c	c
	Estonia	m	m	m	m	m	m	m	m	m	m	m	m
	Finland	c	c	c	c	c	c	c	c	c	c	m	m
	France	c	c	c	c	m	m	c	c	c	c	c	c
	Germany	m	m	c	c	m	m	c	c	c	c	c	c
	Greece	c	c	m	m	c	c	515	(14.8)	m	m	m	m
	Hungary	m	m	m	m	m	m	c	c	m	m	m	m
	Iceland	c	c	m	m	m	m	489	(17.0)	m	m	m	m
	Ireland	c	c	c	c	c	c	492	(13.0)	c	c	c	c
	Israel	m	m	m	m	m	m	m	m	m	m	m	m
	Italy	510	(13.4)	c	c	c	c	533	(5.2)	c	c	c	c
	Japan	m	m	m	m	m	m	m	m	m	m	m	m
	Korea	c	c	m	m	m	m	c	c	m	m	m	m
	Luxembourg	c	c	c	c	c	c	516	(13.0)	c	c	c	c
	Mexico	464	(4.6)	c	c	c	c	476	(4.1)	c	c	c	c
	Netherlands	c	c	c	c	c	c	c	c	c	c	c	c
	New Zealand	c	c	m	m	c	c	c	c	c	c	c	c
	Norway	m	m	m	m	m	m	m	m	m	m	m	m
	Poland	m	m	m	m	m	m	c	c	m	m	m	m
	Portugal	518	(7.1)	c	c	c	c	517	(7.2)	c	c	c	c
	Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m
	Slovenia	m	m	m	m	m	m	c	c	m	m	m	m
	Spain	479	(7.2)	c	c	c	c	504	(5.6)	c	c	424	(15.8)
	Sweden	c	c	m	m	m	m	c	c	c	c	m	m
	Switzerland	c	c	c	c	c	c	543	(13.9)	535	(21.2)	c	c
	Turkey	521	(8.0)	c	c	m	m	513	(10.4)	c	c	c	c
	United Kingdom	m	m	m	m	m	m	m	m	m	m	m	m
	United States	m	m	c	c	c	c	c	c	m	m	m	m
	OECD average	498	(3.8)	c	c	c	c	507	(3.5)	535	(21.2)	424	(15.8)
Partners	Albania	c	c	m	m	m	m	403	(9.8)	m	m	m	m
	Argentina	455	(17.3)	m	m	m	m	474	(13.6)	m	m	m	m
	Azerbaijan	c	c	m	m	m	m	c	c	m	m	m	m
	Brazil	444	(6.7)	c	c	c	c	456	(6.9)	m	m	c	c
	Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	438	(8.9)	c	c	m	m	450	(7.9)	m	m	m	m
	Croatia	m	m	m	m	m	m	c	c	c	c	c	c
	Dubai (UAE)	m	m	m	m	m	m	m	m	c	c	c	c
	Hong Kong-China	590	(9.1)	595	(13.0)	c	c	580	(9.9)	c	c	c	c
	Indonesia	428	(8.7)	m	m	c	c	431	(9.6)	m	m	m	m
	Jordan	385	(12.9)	c	c	c	c	421	(11.3)	c	c	c	c
	Kazakhstan	m	m	m	m	m	m	m	m	m	m	m	m
	Kyrgyzstan	m	m	m	m	m	m	m	m	m	m	m	m
	Latvia	m	m	m	m	m	m	m	m	m	m	m	m
	Liechtenstein	m	m	m	m	m	m	c	c	m	m	c	c
	Lithuania	m	m	m	m	m	m	m	m	m	m	m	m
	Macao-China	493	(7.5)	492	(7.2)	c	c	490	(6.4)	493	(5.9)	c	c
	Montenegro	c	c	m	m	m	m	c	c	m	m	c	c
	Panama	c	c	c	c	m	m	c	c	c	c	c	c
	Peru	413	(12.0)	m	m	m	m	413	(12.2)	m	m	m	m
	Qatar	c	c	c	c	c	c	c	c	c	c	c	c
	Romania	c	c	m	m	m	m	c	c	m	m	m	m
	Russian Federation	m	m	m	m	m	m	m	m	m	m	m	m
	Serbia	c	c	m	m	m	m	c	c	c	c	c	c
	Shanghai-China	c	c	m	m	c	c	597	(9.0)	c	c	m	m
	Singapore	546	(19.7)	c	c	c	c	c	c	c	c	c	c
	Chinese Taipei	509	(21.3)	m	m	c	c	527	(8.7)	c	c	c	c
	Thailand	455	(7.9)	m	m	m	m	458	(10.3)	m	m	m	m
	Trinidad and Tobago	500	(12.4)	c	c	c	c	c	c	c	c	c	c
	Tunisia	438	(8.6)	c	c	m	m	448	(6.6)	m	m	m	m
	Uruguay	460	(6.6)	m	m	m	m	477	(6.9)	c	c	c	c

Note: At best primary is defined as MISCED = 0 or 1; Lower secondary is defined as MISCED = 2 , Upper secondary defined as MISCED = 3 or 4 and Tertiary defined as MISCED = 5 or 6.
Source: PISA 2009 Database.
Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 2/4]

Mean performance across mother's educational attainment by quartile of most disadvantaged schools measured as the proportion of students with low educated mothers *(continued)*

Table B5.10a *Results based on students' self-reports*

		Least disadvantaged quartile (25% of schools with the lowest % of students with low educated mothers) in the country/economy											
		Upper secondary						Tertiary					
		Non-immigrant students		Second-generation students		First-generation students		Non-immigrant students		Second-generation students		First-generation students	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
OECD	Australia	524	(5.1)	562	(12.6)	544	(10.3)	560	(5.1)	576	(10.5)	566	(9.0)
	Austria	514	(8.3)	500	(19.6)	c	c	541	(7.4)	c	c	c	c
	Belgium	535	(11.9)	c	c	c	c	582	(5.4)	539	(19.0)	571	(14.0)
	Canada	525	(4.3)	545	(9.5)	529	(13.6)	557	(3.8)	545	(9.5)	552	(7.9)
	Chile	506	(6.8)	c	c	c	c	520	(4.3)	m	m	c	c
	Czech Republic	498	(5.6)	c	c	c	c	527	(7.9)	c	c	c	c
	Denmark	509	(7.7)	c	c	c	c	535	(5.8)	c	c	c	c
	Estonia	504	(5.9)	474	(13.6)	c	c	516	(5.7)	486	(9.1)	c	c
	Finland	525	(7.0)	c	c	c	c	555	(4.7)	c	c	c	c
	France	548	(14.7)	c	c	c	c	581	(9.4)	c	c	c	c
	Germany	565	(6.4)	c	c	c	c	586	(5.6)	c	c	c	c
	Greece	520	(4.5)	c	c	c	c	537	(5.2)	c	c	c	c
	Hungary	552	(5.7)	c	c	c	c	577	(5.2)	c	c	c	c
	Iceland	506	(6.4)	c	c	c	c	535	(4.5)	c	c	c	c
	Ireland	530	(6.3)	c	c	c	c	552	(5.4)	c	c	494	(20.7)
	Israel	509	(7.1)	518	(16.8)	c	c	559	(5.7)	546	(12.3)	525	(16.2)
	Italy	547	(3.3)	527	(18.3)	507	(13.0)	549	(3.5)	518	(14.4)	474	(13.9)
	Japan	553	(8.6)	c	c	m	m	572	(6.9)	c	c	c	c
	Korea	566	(5.3)	m	m	m	m	581	(6.1)	m	m	m	m
	Luxembourg	545	(4.4)	512	(10.9)	547	(11.9)	544	(4.0)	540	(7.4)	566	(7.0)
	Mexico	489	(4.5)	c	c	c	c	493	(4.1)	c	c	c	c
	Netherlands	539	(8.0)	c	c	c	c	566	(8.0)	c	c	c	c
	New Zealand	545	(5.7)	c	c	537	(14.4)	577	(7.2)	599	(14.8)	558	(8.3)
	Norway	500	(5.6)	c	c	c	c	521	(5.8)	c	c	c	c
	Poland	510	(4.6)	m	m	m	m	555	(7.8)	m	m	m	m
	Portugal	540	(5.8)	c	c	c	c	558	(6.2)	c	c	c	c
	Slovak Republic	508	(5.0)	c	c	c	c	540	(5.3)	c	c	m	m
	Slovenia	538	(3.3)	c	c	c	c	562	(3.6)	c	c	c	c
	Spain	513	(4.3)	c	c	435	(15.8)	532	(5.0)	c	c	476	(10.3)
	Sweden	521	(7.7)	c	c	c	c	536	(6.7)	496	(17.3)	c	c
	Switzerland	551	(8.3)	540	(12.0)	c	c	572	(8.0)	554	(11.0)	554	(19.1)
	Turkey	530	(7.3)	c	c	c	c	552	(7.2)	c	c	c	c
	United Kingdom	519	(6.0)	c	c	c	c	547	(6.3)	550	(18.3)	550	(18.7)
	United States	512	(5.7)	c	c	c	c	552	(9.3)	562	(23.0)	c	c
	OECD average	526	(1.2)	522	(5.2)	516	(5.4)	551	(1.1)	543	(4.2)	535	(4.2)
Partners	Albania	437	(9.3)	m	m	m	m	442	(8.9)	m	m	c	c
	Argentina	476	(9.3)	c	c	m	m	487	(8.1)	c	c	c	c
	Azerbaijan	377	(7.8)	c	c	c	c	402	(8.5)	c	c	c	c
	Brazil	482	(4.5)	c	c	c	c	509	(8.1)	c	c	c	c
	Bulgaria	471	(12.2)	m	m	c	c	518	(8.9)	c	c	c	c
	Colombia	462	(9.2)	c	c	m	m	480	(8.2)	c	c	c	c
	Croatia	528	(6.2)	506	(13.4)	c	c	535	(7.8)	531	(14.6)	c	c
	Dubai (UAE)	c	c	518	(11.8)	540	(8.1)	458	(14.4)	520	(6.7)	545	(3.5)
	Hong Kong-China	573	(5.9)	595	(8.3)	c	c	571	(7.8)	c	c	c	c
	Indonesia	440	(7.9)	m	m	c	c	460	(9.4)	m	m	c	c
	Jordan	423	(8.0)	433	(13.8)	c	c	444	(7.8)	441	(21.5)	439	(9.5)
	Kazakhstan	364	(9.3)	c	c	c	c	418	(6.8)	457	(24.6)	412	(22.6)
	Kyrgyzstan	299	(6.4)	c	c	c	c	351	(7.5)	c	c	c	c
	Latvia	488	(5.2)	c	c	c	c	519	(5.4)	513	(9.0)	c	c
	Liechtenstein	c	c	c	c	c	c	c	c	c	c	c	c
	Lithuania	469	(5.3)	c	c	m	m	502	(4.9)	c	c	m	m
	Macao-China	498	(4.8)	497	(5.5)	496	(12.0)	497	(5.7)	502	(12.0)	507	(14.5)
	Montenegro	472	(3.1)	c	c	c	c	474	(5.5)	c	c	c	c
	Panama	453	(10.0)	c	c	c	c	483	(10.6)	c	c	c	c
	Peru	447	(6.7)	m	m	m	m	480	(9.7)	m	m	c	c
	Qatar	374	(8.6)	437	(12.2)	497	(7.5)	374	(5.2)	463	(6.4)	512	(4.2)
	Romania	461	(7.1)	m	m	c	c	475	(10.1)	m	m	c	c
	Russian Federation	453	(9.4)	c	c	c	c	480	(4.7)	456	(11.2)	444	(14.6)
	Serbia	490	(6.6)	c	c	496	(13.0)	498	(5.7)	510	(16.2)	c	c
	Shanghai-China	600	(6.2)	m	m	c	c	615	(4.7)	m	m	m	m
	Singapore	581	(5.1)	c	c	564	(20.3)	601	(3.8)	617	(16.4)	580	(10.2)
	Chinese Taipei	527	(7.4)	m	m	c	c	558	(7.4)	c	c	c	c
	Thailand	465	(5.7)	m	m	m	m	497	(6.7)	m	m	m	m
	Trinidad and Tobago	492	(4.2)	c	c	c	c	529	(5.4)	c	c	c	c
	Tunisia	449	(6.5)	c	c	m	m	471	(8.5)	m	m	c	c
	Uruguay	501	(4.9)	m	m	c	c	515	(5.4)	c	c	c	c

Note: At best primary is defined as MISCED = 0 or 1; Lower secondary is defined as MISCED = 2 , Upper secondary defined as MISCED = 3 or 4 and Tertiary defined as MISCED = 5 or 6.
Source: PISA 2009 Database.
Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 3/4]

Mean performance across mother's educational attainment by quartile of most disadvantaged schools measured as the proportion of students with low educated mothers *(continued)*

Table B5.10a *Results based on students' self-reports*

		Most disadvantaged quartile (25% of schools with the highest % of students with low educated mothers) in the country/economy											
		At best primary						Lower secondary					
		Non-immigrant students		Second-generation students		First-generation students		Non-immigrant students		Second-generation students		First-generation students	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
OECD	Australia	c	c	479	(17.5)	c	c	454	(6.2)	507	(16.4)	c	c
	Austria	c	c	374	(14.4)	c	c	430	(16.3)	407	(16.0)	c	c
	Belgium	437	(11.1)	436	(13.2)	418	(14.0)	485	(10.3)	c	c	451	(29.7)
	Canada	458	(21.7)	499	(19.7)	484	(24.1)	496	(9.7)	522	(13.4)	c	c
	Chile	403	(5.9)	m	m	c	c	405	(5.4)	m	m	m	m
	Czech Republic	c	c	c	c	m	m	438	(10.6)	c	c	c	c
	Denmark	c	c	423	(8.5)	c	c	464	(9.1)	425	(6.6)	c	c
	Estonia	c	c	m	m	m	m	472	(10.0)	c	c	c	c
	Finland	484	(10.4)	c	c	c	c	501	(9.0)	c	c	c	c
	France	c	c	428	(20.8)	c	c	442	(13.4)	440	(13.5)	c	c
	Germany	c	c	c	c	c	c	439	(10.5)	c	c	c	c
	Greece	427	(13.3)	c	c	c	c	426	(11.4)	c	c	c	c
	Hungary	c	c	m	m	m	m	433	(7.4)	c	c	c	c
	Iceland	c	c	c	c	m	m	482	(5.7)	m	m	c	c
	Ireland	429	(12.3)	m	m	c	c	461	(6.3)	c	c	c	c
	Israel	379	(9.7)	c	c	c	c	395	(7.9)	c	c	c	c
	Italy	420	(7.1)	c	c	c	c	438	(5.0)	c	c	383	(17.1)
	Japan	m	m	m	m	m	m	461	(9.5)	c	c	c	c
	Korea	464	(13.6)	m	m	m	m	483	(10.1)	m	m	m	m
	Luxembourg	c	c	412	(6.8)	390	(11.0)	451	(10.1)	425	(9.2)	404	(11.3)
	Mexico	387	(4.7)	347	(17.0)	315	(16.2)	402	(3.8)	c	c	c	c
	Netherlands	454	(13.4)	445	(12.9)	c	c	470	(13.8)	471	(10.5)	c	c
	New Zealand	c	c	c	c	c	c	495	(11.7)	c	c	c	c
	Norway	c	c	c	c	c	c	494	(8.4)	c	c	c	c
	Poland	c	c	m	m	m	m	438	(7.3)	m	m	m	m
	Portugal	444	(7.0)	c	c	c	c	454	(7.0)	c	c	c	c
	Slovak Republic	c	c	m	m	m	m	405	(22.0)	m	m	c	c
	Slovenia	c	c	c	c	c	c	432	(4.2)	418	(19.8)	c	c
	Spain	445	(5.3)	412	(32.4)	375	(9.2)	452	(4.8)	c	c	411	(13.1)
	Sweden	c	c	c	c	c	c	452	(9.8)	c	c	c	c
	Switzerland	c	c	399	(10.5)	402	(13.0)	455	(7.2)	441	(6.2)	410	(10.6)
	Turkey	437	(5.0)	c	c	m	m	424	(7.7)	m	m	m	m
	United Kingdom	418	(15.5)	c	c	c	c	448	(7.7)	c	c	c	c
	United States	c	c	462	(6.3)	447	(12.1)	440	(10.2)	455	(10.0)	444	(17.3)
	OECD average	432	(2.9)	426	(4.8)	404	(5.6)	451	(1.7)	451	(4.1)	417	(7.2)
Partners	Albania	351	(10.4)	m	m	m	m	364	(9.2)	c	c	m	m
	Argentina	353	(7.6)	c	c	c	c	372	(14.0)	c	c	c	c
	Azerbaijan	320	(14.1)	c	c	m	m	348	(9.3)	c	c	c	c
	Brazil	389	(3.8)	c	c	c	c	401	(4.4)	c	c	c	c
	Bulgaria	308	(17.3)	m	m	m	m	360	(11.3)	m	m	m	m
	Colombia	384	(6.2)	c	c	c	c	396	(6.1)	c	c	m	m
	Croatia	c	c	c	c	c	c	420	(6.8)	420	(12.5)	c	c
	Dubai (UAE)	373	(5.8)	386	(10.1)	386	(15.6)	384	(6.4)	393	(16.1)	425	(11.7)
	Hong Kong-China	481	(7.6)	525	(9.5)	487	(9.9)	495	(8.8)	521	(9.5)	486	(9.3)
	Indonesia	376	(5.5)	m	m	c	c	369	(9.1)	m	m	c	c
	Jordan	378	(6.2)	c	c	c	c	389	(6.9)	c	c	c	c
	Kazakhstan	c	c	c	c	c	c	339	(17.6)	c	c	c	c
	Kyrgyzstan	c	c	m	m	m	m	274	(15.4)	c	c	c	c
	Latvia	c	c	m	m	m	m	458	(10.9)	c	c	m	m
	Liechtenstein	c	c	c	c	c	c	c	c	c	c	c	c
	Lithuania	c	c	c	c	m	m	431	(10.1)	m	m	m	m
	Macao-China	470	(6.4)	488	(3.5)	460	(8.4)	475	(8.0)	487	(4.1)	476	(7.7)
	Montenegro	337	(13.1)	m	m	m	m	345	(4.7)	c	c	c	c
	Panama	354	(13.5)	c	c	c	c	363	(21.4)	m	m	c	c
	Peru	313	(5.9)	m	m	c	c	333	(8.0)	m	m	c	c
	Qatar	334	(3.3)	345	(6.3)	348	(11.1)	335	(7.3)	358	(15.1)	c	c
	Romania	348	(11.2)	m	m	c	c	403	(13.7)	m	m	m	m
	Russian Federation	c	c	c	c	c	c	392	(17.9)	c	c	c	c
	Serbia	419	(25.3)	c	c	c	c	395	(8.4)	c	c	c	c
	Shanghai-China	492	(10.2)	c	c	c	c	517	(6.4)	c	c	c	c
	Singapore	469	(4.0)	c	c	c	c	472	(9.0)	c	c	c	c
	Chinese Taipei	450	(7.8)	c	c	c	c	451	(4.9)	c	c	c	c
	Thailand	400	(5.1)	m	m	m	m	401	(7.7)	m	m	m	m
	Trinidad and Tobago	374	(5.8)	c	c	c	c	396	(8.3)	m	m	c	c
	Tunisia	374	(6.1)	c	c	m	m	376	(10.9)	m	m	c	c
	Uruguay	360	(4.7)	m	m	m	m	372	(5.9)	c	c	m	m

Note: At best primary is defined as MISCED = 0 or 1; Lower secondary is defined as MISCED = 2 , Upper secondary defined as MISCED = 3 or 4 and Tertiary defined as MISCED = 5 or 6.
Source: PISA 2009 Database.
Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 4/4]

Mean performance across mother's educational attainment by quartile of most disadvantaged schools measured as the proportion of students with low educated mothers *(continued)*

Table B5.10a *Results based on students' self-reports*

		Mean performance across mother's educational attainment by quartiles of school disadvantaged measured as the proportion of students with low educated mothers in the school											
		Most disadvantaged quartile (25% of schools with the highest % of students with low educated mothers) in the country/economy											
		Upper secondary						Tertiary					
		Non-immigrant students		Second-generation students		First-generation students		Non-immigrant students		Second-generation students		First-generation students	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
OECD	Australia	487	(4.7)	502	(12.3)	499	(19.0)	511	(6.5)	549	(28.4)	517	(20.7)
	Austria	456	(11.0)	421	(15.2)	354	(14.3)	463	(18.2)	455	(14.2)	c	c
	Belgium	479	(6.6)	429	(15.3)	442	(12.2)	491	(8.0)	431	(17.4)	448	(14.6)
	Canada	515	(4.2)	500	(11.7)	484	(19.0)	525	(4.0)	528	(10.4)	514	(8.8)
	Chile	425	(6.4)	m	m	m	m	421	(11.9)	m	m	m	m
	Czech Republic	457	(6.7)	c	c	c	c	456	(11.7)	c	c	c	c
	Denmark	494	(5.3)	438	(8.5)	c	c	511	(5.9)	448	(15.9)	435	(17.2)
	Estonia	501	(3.3)	c	c	c	c	516	(5.4)	c	c	c	c
	Finland	513	(6.3)	c	c	c	c	540	(5.1)	c	c	c	c
	France	461	(8.9)	448	(26.1)	c	c	475	(17.4)	392	(26.2)	c	c
	Germany	478	(6.7)	443	(15.9)	c	c	473	(15.9)	c	c	c	c
	Greece	438	(14.1)	c	c	410	(18.1)	459	(15.6)	c	c	c	c
	Hungary	448	(6.6)	c	c	c	c	438	(10.7)	c	c	c	c
	Iceland	488	(6.2)	m	m	c	c	509	(6.0)	c	c	c	c
	Ireland	487	(9.0)	c	c	c	c	499	(8.5)	c	c	486	(17.8)
	Israel	408	(7.9)	c	c	c	c	405	(10.7)	c	c	c	c
	Italy	443	(5.1)	c	c	388	(11.3)	426	(7.0)	c	c	389	(14.0)
	Japan	457	(9.3)	m	m	c	c	462	(8.8)	c	c	m	m
	Korea	498	(7.7)	m	m	m	m	500	(9.6)	m	m	m	m
	Luxembourg	461	(7.0)	423	(13.4)	403	(13.3)	450	(7.9)	412	(17.0)	396	(15.5)
	Mexico	413	(5.8)	c	c	c	c	397	(5.4)	c	c	c	c
	Netherlands	466	(8.1)	463	(14.9)	c	c	466	(9.1)	440	(17.9)	c	c
	New Zealand	510	(8.2)	495	(17.6)	474	(15.3)	526	(10.0)	c	c	529	(14.0)
	Norway	496	(5.8)	c	c	c	c	511	(3.6)	c	c	c	c
	Poland	481	(4.0)	m	m	m	m	528	(7.5)	m	m	m	m
	Portugal	473	(7.5)	c	c	c	c	474	(13.5)	c	c	c	c
	Slovak Republic	453	(7.6)	c	c	c	c	459	(9.6)	m	m	m	m
	Slovenia	439	(2.5)	433	(9.9)	c	c	436	(6.1)	c	c	c	c
	Spain	466	(5.4)	c	c	398	(17.2)	481	(5.6)	c	c	422	(18.4)
	Sweden	496	(7.6)	c	c	c	c	504	(6.0)	464	(15.9)	c	c
	Switzerland	482	(4.4)	436	(12.0)	415	(10.0)	471	(7.9)	432	(8.5)	428	(21.8)
	Turkey	455	(11.4)	m	m	m	m	c	c	m	m	m	m
	United Kingdom	481	(5.0)	494	(18.5)	431	(17.8)	497	(8.1)	471	(22.5)	470	(23.8)
	United States	467	(8.1)	453	(8.1)	453	(12.4)	475	(7.0)	487	(12.1)	c	c
	OECD average	470	(1.2)	455	(4.0)	429	(4.4)	477	(1.7)	459	(5.2)	457	(5.3)
Partners	Albania	362	(9.3)	c	c	m	m	344	(13.6)	m	m	m	m
	Argentina	368	(11.9)	c	c	c	c	387	(10.3)	c	c	c	c
	Azerbaijan	339	(7.9)	c	c	c	c	352	(6.1)	c	c	c	c
	Brazil	406	(8.8)	m	m	c	c	386	(9.8)	c	c	m	m
	Bulgaria	387	(9.5)	c	c	c	c	383	(14.9)	c	c	m	m
	Colombia	397	(8.1)	c	c	m	m	401	(8.3)	m	m	c	c
	Croatia	443	(4.8)	c	c	c	c	446	(7.0)	c	c	c	c
	Dubai (UAE)	394	(5.7)	398	(9.0)	420	(15.9)	400	(8.6)	419	(12.6)	431	(12.4)
	Hong Kong-China	499	(8.7)	519	(11.9)	491	(12.6)	c	c	c	c	c	c
	Indonesia	379	(11.7)	m	m	m	m	c	c	m	m	m	m
	Jordan	401	(7.2)	c	c	c	c	414	(14.0)	c	c	c	c
	Kazakhstan	346	(8.5)	c	c	c	c	379	(5.8)	392	(28.5)	350	(10.0)
	Kyrgyzstan	279	(7.7)	c	c	c	c	319	(10.2)	c	c	c	c
	Latvia	470	(4.6)	451	(13.1)	c	c	485	(6.1)	c	c	c	c
	Liechtenstein	c	c	m	m	c	c	c	c	c	c	c	c
	Lithuania	439	(6.4)	c	c	c	c	461	(7.2)	c	c	c	c
	Macao-China	481	(11.9)	486	(5.7)	500	(9.9)	c	c	c	c	c	c
	Montenegro	365	(3.4)	c	c	406	(14.3)	378	(7.1)	c	c	c	c
	Panama	381	(15.3)	c	c	c	c	367	(8.8)	c	c	c	c
	Peru	335	(7.6)	c	c	c	c	307	(13.8)	m	m	c	c
	Qatar	329	(3.6)	368	(6.3)	386	(12.1)	316	(5.5)	342	(10.6)	388	(12.2)
	Romania	395	(11.0)	c	c	m	m	380	(12.2)	c	c	c	c
	Russian Federation	402	(10.4)	c	c	c	c	451	(6.5)	410	(17.0)	421	(15.2)
	Serbia	418	(6.9)	c	c	c	c	404	(8.1)	c	c	c	c
	Shanghai-China	519	(8.0)	m	m	c	c	504	(10.6)	m	m	c	c
	Singapore	501	(3.8)	c	c	c	c	511	(7.3)	c	c	495	(13.4)
	Chinese Taipei	452	(6.8)	c	c	m	m	472	(6.4)	c	c	m	m
	Thailand	391	(8.2)	m	m	m	m	c	c	m	m	m	m
	Trinidad and Tobago	382	(4.6)	c	c	c	c	345	(10.8)	c	c	c	c
	Tunisia	351	(10.4)	m	m	m	m	c	c	m	m	m	m
	Uruguay	378	(12.6)	c	c	m	m	379	(11.2)	m	m	c	c

Note: At best primary is defined as MISCED = 0 or 1; Lower secondary is defined as MISCED = 2 , Upper secondary defined as MISCED = 3 or 4 and Tertiary defined as MISCED = 5 or 6.
Source: PISA 2009 Database.
Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



[Part 1/2]

Table B5.10b Mean performance across mother's educational attainment by quartile of least disadvantaged schools measured as the proportion of students with low educated mothers

Results based on students' self-reports

	Least disadvantaged quartile (25% of schools with the lowest % of students with low educated mothers) in the country/economy																							
	At best primary						Lower secondary						Upper secondary						Tertiary					
	Non-immigrant students		Second-generation students		First-generation students		Non-immigrant students		Second-generation students		First-generation students		Non-immigrant students		Second-generation students		First-generation students		Non-immigrant students		Second-generation students		First-generation students	
	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
Settlement	548	(4.6)	c	c	c	c	550	(21.6)	c	c	c	c	541	(24.0)	551	(6.6)	537	(7.1)	569	(16.9)	569	(23.3)	560	(6.8)
Germanic	c	c	515	(41.1)	c	c	531	(30.8)	501	(49.3)	c	c	541	(25.4)	519	(22.6)	526	(59.4)	560	(35.5)	547	(21.6)	561	(12.7)
Franco-Dutch	c	c	c	c	c	c	543	(14.3)	c	c	c	c	541	(6.5)	545	(6.6)	c	c	577	(2.9)	566	(16.8)	558	(10.0)
Nordic	c	c	m	m	c	c	c	c	c	c	c	c	519	(13.0)	512	(10.4)	c	c	537	(12.5)	505	(14.2)	489	(16.7)
Former Soviet Union	m	m	m	m	m	m	m	m	m	m	m	m	474	(61.1)	452	(87.4)	c	c	475	(49.6)	473	(33.0)	440	(57.6)
New migration	493	(34.9)	c	c	c	c	515	(20.1)	c	c	443	(26.4)	533	(5.9)	543	(37.5)	458	(21.8)	543	(8.9)	496	(19.3)	485	(14.5)
Anglo-American	m	m	c	c	c	c	c	c	m	m	m	m	516	(4.9)	533	(21.7)	c	c	550	(3.7)	558	(8.5)	573	(32.5)
Mixed group	485	(25.9)	c	c	c	c	490	(12.3)	c	c	c	c	494	(13.8)	457	(6.3)	444	(4.7)	505	(18.0)	459	(6.1)	454	(7.0)
Former Yugoslavia	c	c	m	m	m	m	484	(29.2)	c	c	c	c	494	(23.5)	495	(38.0)	480	(34.9)	506	(23.7)	517	(10.4)	482	(47.6)
China group	523	(85.6)	520	(91.7)	c	c	520	(79.8)	507	(80.3)	530	(68.8)	553	(62.2)	536	(85.7)	527	(67.1)	545	(62.1)	520	(53.0)	534	(69.4)

[Part 2/2]

Table B5.10b Mean performance across mother's educational attainment by quartile of least disadvantaged schools measured as the proportion of students with low educated mothers in the school *(continued)*

Results based on students' self-reports

	Most disadvantaged quartile (25% of schools with the highest % of students with low educated mothers) in the country/economy																							
	At best primary						Lower secondary						Upper secondary						Tertiary					
	Non-immigrant students		Second-generation students		First-generation students		Non-immigrant students		Second-generation students		First-generation students		Non-immigrant students		Second-generation students		First-generation students		Non-immigrant students		Second-generation students		First-generation students	
	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
Settlement	442	(20.6)	462	(19.6)	445	(20.3)	456	(11.5)	500	(23.7)	472	(8.1)	482	(9.8)	492	(6.5)	481	(11.6)	499	(15.7)	528	(12.1)	512	(3.9)
Germanic	417	(53.7)	407	(12.9)	393	(16.8)	446	(11.1)	425	(15.3)	401	(7.4)	467	(13.3)	428	(18.2)	404	(57.9)	464	(19.4)	432	(22.4)	414	(48.6)
Franco-Dutch	431	(34.9)	439	(6.8)	411	(41.8)	458	(22.6)	452	(17.6)	441	(16.5)	469	(8.2)	448	(7.9)	439	(6.8)	479	(6.7)	422	(26.2)	447	(11.0)
Nordic	418	(11.2)	418	(9.6)	370	(19.1)	454	(15.0)	417	(8.6)	433	(8.8)	473	(31.7)	446	(15.4)	403	(18.3)	501	(19.4)	452	(24.1)	428	(5.7)
Former Soviet Union	c	c	c	c	c	c	423	(80.3)	c	c	c	c	449	(98.0)	428	(71.1)	377	(94.6)	448	(69.3)	437	(80.2)	382	(36.2)
New migration	437	(5.0)	393	(8.1)	383	(53.3)	447	(13.4)	459	(109.0)	404	(16.6)	468	(28.6)	434	(75.8)	404	(23.2)	477	(37.0)	c	c	460	(60.4)
Anglo-American	440	(36.8)	459	(12.6)	442	(11.8)	445	(6.3)	464	(20.7)	439	(14.4)	474	(9.5)	463	(23.5)	446	(13.9)	487	(14.6)	479	(12.1)	475	(10.1)
Mixed group	405	(45.5)	367	(11.4)	c	c	414	(26.2)	c	c	c	c	423	(27.3)	418	(16.3)	401	(30.8)	426	(35.6)	385	(39.4)	370	(80.1)
Former Yugoslavia	385	(63.9)	c	c	c	c	389	(41.7)	421	(28.0)	c	c	405	(45.1)	434	(7.3)	409	(6.9)	413	(24.1)	415	(11.6)	398	(57.8)
China group	477	(9.2)	499	(32.8)	479	(22.3)	488	(17.1)	496	(30.3)	481	(8.5)	496	(13.8)	498	(28.8)	494	(8.8)	c	c	495	(61.4)	c	c

Note: At best primary is defined as MISCED = 0 or 1; Lower secondary is defined as MISCED = 2 , Upper secondary defined as MISCED = 3 or 4 and Tertiary defined as MISCED = 5 or 6.

The country groupings are the following: Germanic (Austria, Germany, Luxembourg, Switzerland), Anglo-American (United Kingdom, United States), Franco-Dutch (Belgium, France, Netherlands), Nordic (Denmark, Norway, Slovenia, Sweden), China group (Hong Kong-China, Macao-China), Former Soviet Union (Estonia, Kazakhstan, Latvia, Russian Federation), Former Yugoslavia (Croatia, Montenegro, Serbia), Mixed group (Argentina, Greece, Jordan, Portugal), New migration (Ireland, Italy, Spain), Settlement (Australia, Canada, Israel, New Zealand, Singapore)

Source: PISA 2009 Database.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.



Table B6.1 Distribution of students by PISA reading performance level

	All students	First-generation students	Second-generation students	Non-immigrant students
	%	%	%	%
Canada				
Low (Level 2 or lower)	26	38	23	26
Medium (Level 3)	27	22	30	27
High (Level 4 and 5)	47	41	47	47
Switzerland				
Low (level 2 or lower)	44	78	61	31
Medium (level 3)	30	14	23	34
High (level 4 and 5)	27	8	16	35

Note: First-generation refers to foreign born students; second-generation refers to domestic-born students with two foreign born parents.
Source: Canadian Youth in Transition Survey and Swiss Transition from Education to Employment Survey. See Picot and Hou (2012).

Table B6.2 Distribution of immigrant students (first- and second-generation combined) by source region

Source region	Immigrant students
	%
In Canada	
China	14.3
India	9.8
Other East, South East Asian	19.7
United States	4.4
Central/South America	13.0
United Kingdom	8.9
Northern/Western Europe	3.9
Other Europe	18.4
Africa and others	7.6
In Switzerland	
Austria, Germany	3.1
Belgium, France	5.1
Italy	17.5
Portugal	9.0
Spain	3.8
Former Yugoslavia	15.6
Albania or Kosovo	13.5
Turkey	9.8
Others	21.6

Source: Swiss Transition from Education to Employment Survey and Canadian Youth in Transition Survey. See Picot and Hou (2012).



Table B6.3 Differences in the likelihood of pursuing a post-secondary education between immigrant students and third-and-higher generation students, by source region

	Coefficients from regression models showing difference in the proportion of attending post-secondary education							
	Low performing students				All students			
	Model 1	Model 2	Model 3	% of gap accounted for in model 3	Model 1	Model 2	Model 3	% of gap accounted for in model 3
Source region	Coef.	Coef.	Coef.	%	Coef.	Coef.	Coef.	%
In Canada								
China	**0.34**	**0.30**	**0.24**	28	**0.28**	**0.20**	**0.16**	45
India	0.08	-0.01	-0.04		**0.19**	0.09	0.04	80
Other East, Southeast Asia	**0.33**	**0.29**	**0.26**	22	**0.20**	**0.19**	**0.15**	25
Other Asia	**0.34**	**0.36**	**0.33**	3	**0.25**	**0.25**	**0.20**	20
United Kingdom	**0.26**	0.20	0.20	21	0.09	0.05	0.05	46
United States	-0.17	-0.06	-0.10	45	-0.05	-0.06	-0.05	
Caribbean, Central and South America	-0.03	-0.04	-0.07		-0.01	0.03	0.01	
Northern, Western Europe	0.21	0.28	0.22		0.07	0.01	0.02	70
Other Europe	0.15	0.13	0.12	22	**0.17**	**0.14**	**0.12**	27
Africa and others	0.07	0.02	-0.00	101	**0.19**	**0.14**	**0.10**	50
In Switzerland								
Germany, Austria, France, Belgium	-0.00	-0.02	-0.05		**0.21**	**0.19**	**0.18**	13
Italy	**-0.12**	**-0.09**	**-0.14**		**-0.14**	0.03	-0.02	88
Spain and Portugal	-0.06	-0.03	-0.11		**-0.21**	-0.07	**-0.11**	48
Former Yugoslavia, Kosovo, Albania	-0.06	-0.00	-0.02	57	**-0.20**	0.05	0.02	111
Turkey	-0.05	0.01	-0.01	72	**-0.20**	0.04	-0.01	94
Other countries	**-0.09**	-0.05	-0.09	3	**-0.13**	-0.02	-0.03	79

Note: Values that are statistically significant at p<=0.05 are indicated in bold.
Source: Swiss Transition from Education to Employment Survey and Canadian Youth in Transition Survey. See Picot and Hou (2012).

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OECD PUBLISHING, 2, rue André-Pascal, 75775 PARIS CEDEX 16
(98 2012 04 1P) ISBN 978-92-64-17229-6 – No. 60131 2012

Untapped Skills

REALISING THE POTENTIAL OF IMMIGRANT STUDENTS

A country's success in integrating immigrants' children is a key benchmark of the efficacy of social policy in general and education policy in particular. The variance in performance gaps between immigrant and non-immigrant students across countries, even after adjusting for socio-economic background, suggests that policy has an important role to play in eliminating such gaps. Yet education policy alone is unlikely to fully address these challenges.

Untapped Skills: Realising the Potential of Immigrant Students was jointly produced by the countries participating in PISA, the experts and institutions working within the framework of the PISA Consortium, the OECD Directorate for Education and the OECD Directorate for Employment, Labour and Social Affairs. It offers an in-depth look at the various factors, including language and socio-economic disadvantage, that can impede the full integration of immigrant students into their host societies.

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Chapter 1. Overview of Immigration Regimes and Education Systems

Chapter 2. The Performance Profiles of Immigrant Students

Chapter 3. Mastery of the Assessment Language and Reading Outcomes

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Chapter 5. Parental Education, Immigrant Concentration and PISA Outcomes

Chapter 6. Post-Secondary Attendance of Immigrants in Switzerland and Canada

THE OECD PROGRAMME FOR INTERNATIONAL STUDENT ASSESSMENT (PISA)

PISA focuses on young people's ability to use their knowledge and skills to meet real-life challenges. This orientation reflects a change in the goals and objectives of curricula themselves, which are increasingly concerned with what students can do with what they learn at school and not merely with whether they have mastered specific curricular content. PISA's unique features include its:

- *Policy orientation,* which highlights differences in performance patterns and identifies features common to high-performing students, schools and education systems by linking data on learning outcomes with data on student characteristics and other key factors that shape learning in and outside of school.
- *Innovative concept of "literacy",* which refers both to students' capacity to apply knowledge and skills in key subject areas and to their ability to analyse, reason and communicate effectively as they pose, interpret and solve problems in a variety of situations.
- *Relevance to lifelong learning,* which goes beyond assessing students' competencies in school subjects by asking them to report on their motivation to learn, their beliefs about themselves and their learning strategies.
- *Regularity,* which enables countries to monitor their progress in meeting key learning objectives.
- *Breadth of geographical coverage and collaborative nature,* which, in PISA 2009, encompasses the 34 OECD member countries and 41 partner countries and economies.

Please cite this publication as:
OECD (2012), *Untapped Skills: Realising the Potential of Immigrant Students,* OECD Publishing.
http://dx.doi.org/10.1787/9789264172470-en

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2012

OECD publishing
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ISBN 978-92-64-17229-6
98 2012 04 1P

