

# Annex **A**

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## TECHNICAL NOTES

**Annex A1:** Technical Background

**Annex A2:** Summary descriptions of the five levels of reading proficiency.

## Annex A1. Construction of indices and other derived measures from the student and school context questionnaires

This section explains the indices derived from the student and school context questionnaires that are used in this report.

Several of PISA's measures reflect indices that summarise responses from students or school representatives (typically principals) to a series of related questions. The questions were selected from larger constructs on the basis of theoretical considerations and previous research. Structural equation modelling was used to confirm the theoretically expected behaviour of the indices and to validate their comparability across countries. For this purpose, a model was estimated separately for each country and collectively for all OECD countries.

For a detailed description of other PISA indices and details on the methods see the *PISA 2000 Technical Report* (OECD, 2002) or the *PISA 2003 Technical Report* (OECD 2005b).

Unless otherwise indicated, where an index involves multiple questions and student responses, the index was scaled using a weighted maximum likelihood estimate (WLE) (see Warm, 1985), using a one-parameter item response model, which in the case of items with more than two categories was the Partial Credit Model. The scaling was done in three stages:

- The item parameters were estimated from equal-sized sub-samples of students from each OECD country.
- The estimates were computed for all students and all schools by anchoring the item parameters obtained in the preceding step.
- The indices were then standardised so that the mean of the index value for the OECD student population was zero and the standard deviation was one (countries being given equal weight in the standardisation process).

To illustrate the meaning of the international scores on the index, item maps were constructed that relate the index value to typical student responses to the questions asked. These item maps can be found on the website [www.pisa.oecd.org](http://www.pisa.oecd.org). The vertical lines on the maps indicate for each of the index scores at the top of the figure which response a student is most likely to give, with zero representing the average student response across OECD countries.

It is important to note that negative values for an index do not necessarily imply that students responded negatively to the underlying questions. A negative value merely indicates that a group of students (or all students, collectively, in a single country) or principals responded less positively than all students or principals did on average across OECD countries. Likewise, a positive value on an index indicates that a group of students or principals responded more favourably, or more positively, than students or principals did, on average, in OECD countries.

Terms enclosed in brackets < > in the following descriptions were replaced in the national versions of the student and school questionnaires by the appropriate national equivalent. For example, the term <qualification at ISCED level 5A> was translated in the United States into "Bachelor's degree, post-graduate certificate program, Master's degree program or first professional degree program". Similarly the term <classes in the language of assessment> in Luxembourg was translated into "German classes" or "French classes" depending on whether students received the German or French version of the assessment instruments.

For additional information on how these indices were constructed, see the *PISA 2000 Technical Report* (OECD, 2002) or the *PISA 2003 Technical Report* (OECD, 2005b).



## Student level variables

### *Student background*

#### Family structure

Students were asked to report who usually lived at home with them. The response categories were then grouped into four categories: *i) single-parent family* (students who reported living with one of the following: mother, father, female guardian or male guardian); *ii) nuclear family* (students who reported living with a mother and a father); *iii) mixed family* (students who reported living with a mother and a guardian, a father and a guardian, or two guardians); and *iv) other response combinations*. Non responses are maintained as missing.

#### Parental occupations

Students were asked to report their mothers' and fathers' occupations, and to state whether each parent was in full-time paid work; part-time paid work; not working but looking for a paid job; or "other". The open-ended responses for occupations were then coded in accordance with the International Standard Classification of Occupations (ISCO 1988).

The PISA *international socio-economic index of occupational status* (ISEI) was derived from students' responses on parental occupation. The index captured the attributes of occupations that convert parents' education into income. The index was derived by the optimal scaling of occupation groups to maximise the indirect effect of education on income through occupation and to minimise the direct effect of education on income, net of occupation (both effects being net of age). For more information on the methodology, see Ganzeboom *et al.* (1992). The *highest international socio-economic index of occupational status* (HISEI) corresponds to the highest ISEI of either the father or the mother.

#### Index of economic, social and cultural status

The index of economic, social and cultural status was created to capture wider aspects of a student's family and home background in addition to occupational status and is a variation of the index used in PISA 2000. It was derived from the following variables: *i)* the highest international socio-economic index of occupational status of the father or mother; *ii)* the highest level of education of the father or mother converted into years of schooling (for the conversion of levels of education into years of schooling see Table A1.1); and *iii)* the number of books at home as well as access to home educational and cultural resources, obtained by asking students whether they had at their home: a desk to study at, a room of their own, a quiet place to study, a computer they can use for school work, educational software, a link to the Internet, their own calculator, classic literature, books of poetry, works of art (*e.g.* paintings), books to help with their school work, and a dictionary. The rationale for the choice of these variables was that socio-economic status is usually seen as being determined by occupational status, education and wealth. As no direct measure on parental wealth was available from PISA, access to relevant household items was used as a proxy. The student scores on the index are factor scores derived from a Principal Component Analysis which are standardised to have an OECD mean of zero and a standard deviation of one.

The Principal Component Analysis was also performed for each participating country to determine to what extent the components of the index operate in similar ways across countries. The analysis revealed that patterns of factor loadings were very similar across countries, with all three components contributing to a similar extent to the index. For the occupational component, the average factor loading was 0.81, ranging from 0.72 to 0.86 across countries. For the educational component, the average factor loading was 0.80, ranging from 0.70 to 0.87 across countries. For the wealth component, the average factor loading was 0.76, ranging from 0.65 to 0.80 across countries. The reliability of the index ranged from 0.56 to 0.77. These results support the cross-national validity of the index of economic, social and cultural status.

The correlation between the average value on the index and the Gross Domestic Product of countries is 0.62 (increasing to 0.69 when Luxembourg is removed).

The index used in PISA 2000 (OECD, 2001b) was similar to the one used for PISA 2003. However, some adjustments were made. First of all, only 11 questions on home educational resources were common to both surveys. Second, for the question on parental levels of education no distinction had been made in PISA 2000 between university-level and non-university tertiary education. Where comparisons between 2000 and 2003 data are made, the index for PISA 2000 was recomputed on the basis of a common methodology used for both assessments. Results may therefore differ slightly

from those reported in PISA 2000. This being said, the correlation between the PISA 2000 and PISA 2003 indices is very high (R of 0.96). This shows that different methods of computation of the indices did not have a major impact on the results. For more information on this index see the *PISA 2003 Technical Report* (OECD, 2005b).

Table A1.1  
Levels of parental education converted into years of schooling

|                          | Did not go to school | Completed ISCED Level 1 (primary education) | Completed ISCED Level 2 (lower secondary education) | Completed ISCED Levels 3B or 3C (upper secondary education providing direct access to the labour market or to ISCED 5B programmes) | Completed ISCED Level 3A (upper secondary education providing access to ISCED 5A and 5B programmes) | Completed ISCED Level 5A (university level tertiary education) | Completed ISCED Level 5B (non-university tertiary education) |
|--------------------------|----------------------|---------------------------------------------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------|
| <b>OECD countries</b>    |                      |                                             |                                                     |                                                                                                                                    |                                                                                                     |                                                                |                                                              |
| Australia                | 0.0                  | 6.5                                         | 10.0                                                | 11.0                                                                                                                               | 12.0                                                                                                | 15.0                                                           | 14.0                                                         |
| Austria                  | 0.0                  | 4.0                                         | 8.0                                                 | 9.0                                                                                                                                | 13.0                                                                                                | 17.0                                                           | 15.0                                                         |
| Belgium                  | 0.0                  | 6.0                                         | 8.0                                                 | 12.0                                                                                                                               | 12.0                                                                                                | 16.0                                                           | 15.0                                                         |
| Canada                   | 0.0                  | 6.0                                         | 9.0                                                 | 12.0                                                                                                                               | 12.0                                                                                                | 17.0                                                           | 15.0                                                         |
| Denmark                  | 0.0                  | 6.0                                         | 9.0                                                 | 12.0                                                                                                                               | 12.0                                                                                                | 15.0                                                           | 14.0                                                         |
| France                   | 0.0                  | 5.0                                         | 9.0                                                 | 11.0                                                                                                                               | 12.0                                                                                                | 14.0                                                           | 14.0                                                         |
| Germany                  | 0.0                  | 4.0                                         | 10.0                                                | 11.0                                                                                                                               | 12.0                                                                                                | 17.0                                                           | 15.0                                                         |
| Luxembourg               | 0.0                  | 6.0                                         | 9.0                                                 | 12.0                                                                                                                               | 13.0                                                                                                | 17.0                                                           | 17.0                                                         |
| Netherlands              | 0.0                  | 6.0                                         | 8.0                                                 | 12.0                                                                                                                               | 13.0                                                                                                | 15.0                                                           | 13.0                                                         |
| New Zealand              | 0.0                  | 6.0                                         | 10.0                                                | 12.0                                                                                                                               | 13.0                                                                                                | 16.0                                                           | 16.0                                                         |
| Norway                   | 0.0                  | 7.0                                         | 10.0                                                | 13.0                                                                                                                               | 13.0                                                                                                | 16.0                                                           | 14.0                                                         |
| Sweden                   | 0.0                  | 6.0                                         | 9.0                                                 | 12.0                                                                                                                               | 12.0                                                                                                | 15.0                                                           | 13.5                                                         |
| Switzerland              | 0.0                  | 6.0                                         | 9.0                                                 | 11.0                                                                                                                               | 12.0                                                                                                | 15.0                                                           | 14.0                                                         |
| United States            | 0.0                  | 6.0                                         | 9.0                                                 | a                                                                                                                                  | 12.0                                                                                                | 15.0                                                           | 14.0                                                         |
| <b>Partner countries</b> |                      |                                             |                                                     |                                                                                                                                    |                                                                                                     |                                                                |                                                              |
| Hong Kong-China          | 0.0                  | 6.0                                         | 9.0                                                 | 11.0                                                                                                                               | 13.0                                                                                                | 17.0                                                           | 16.0                                                         |
| Russian Federation       | 0.0                  | 4.0                                         | 9.0                                                 | 11.0                                                                                                                               | 11.0                                                                                                | 15.0                                                           | 13.0                                                         |

### Educational level of parents

Parental education is a family background variable that is often used in the analysis of educational outcomes. Indices were constructed using information on the *educational level of the father*, the *educational level of the mother*, and the highest level of education between the two parents, referred to as the *highest educational level of parents*. Students were asked to identify the highest level of education of their mother and father on the basis of national qualifications, which were then coded in accordance with the International Standard Classification of Education (ISCED 1997, see OECD, 1999) in order to obtain internationally comparable categories of educational attainment. The resulting categories were: (0) for no education; (1) for the completion of <ISCED Level 1> (primary education); (2) for completion of <ISCED Level 2> (lower secondary education); (3) for the completion of <ISCED Level 3B or 3C> (vocational/pre-vocational upper secondary education, aimed in most countries at providing direct entry into the labour market); (4) for completion of <ISCED Level 3A> (upper secondary education, aimed in most countries at gaining entry into tertiary-type A (university level) education) and/or <ISCED Level 4> (non-tertiary post-secondary); (5) for qualifications in <ISCED 5B> (vocational tertiary); and (6) for completion of <ISCED Level 5A, 6> (tertiary-type A and advanced research programmes).

As noted above, the highest level of educational attainment of the parents was also converted into *years of schooling* using the conversion coefficients shown in **Table A1.1**.



## Immigration background

The index on *immigrant background* was derived from students' responses to questions about whether or not their mother and their father were born in the country of assessment or in another country. The response categories were then grouped into three categories: *i*) "native" students (those students born in the country of assessment or who had at least one parent born in that country); *ii*) "second-generation" students (those born in the country of assessment but whose parents were born in another country); and *iii*) "first-generation" students (those born outside the country of assessment and whose parents were also born in another country). For some comparisons, first-generation and second-generation students were grouped together.

## Language used at home

Students were asked if the language spoken at home most of the time or always was the language of assessment, another official national language, other national dialect or language, or another language. The index on *language spoken at home* distinguishes between students who report using the language of assessment, another official national language, a national dialect or another national language always or most of the time at home and those who report using another language always or most of the time at home.

In most countries, the languages were individually identified and were coded internationally to allow for further research and analysis in this area.

## School climate (students' views)

### Attitudes towards school

The PISA index of *attitudes towards school* was derived from students' reported agreement with the following statements: *i*) school has done little to prepare me for adult life when I leave school; *ii*) school has been a waste of time; *iii*) school helped give me confidence to make decisions; and *iv*) school has taught me things which could be useful in a job. A four-point scale with the response categories "strongly agree" (=1), "agree" (=2), "disagree" (=3) and "strongly disagree" (=4) was used. As items *iii*) and *iv*) were inverted for scaling, positive values on this index indicate positive attitudes towards school. Scale construction was done using IRT scaling.

### Sense of belonging at school

The PISA index of *sense of belonging at school* was derived from students' reported agreement that school is a place where: *i*) I feel like an outsider (or left out of things); *ii*) I make friends easily; *iii*) I feel like I belong; *iv*) I feel awkward and out of place; *v*) other students seem to like me; and *vi*) I feel lonely. A four-point scale with the response categories "strongly agree", "agree", "disagree" and "strongly disagree" was used. Items *ii*), *iii*), and *v*) are inverted for scaling and positive values indicate positive feelings about the students' school. This index was constructed using IRT scaling.

## Self-related cognitions in mathematics

### Interest in and enjoyment of mathematics

The PISA index of *interest in and enjoyment of mathematics* was derived from students' reported agreement with the following statements: *i*) I enjoy reading about mathematics; *ii*) I look forward to my mathematics lessons; *iii*) I do mathematics because I enjoy it; and *iv*) I am interested in the things I learn in mathematics. A four-point scale with the response categories "strongly agree", "agree", "disagree" and "strongly disagree" was used. All items were inverted for IRT scaling and positive values on this index indicate higher levels of interest in and enjoyment of mathematics. This index was constructed using IRT scaling.

### Instrumental motivation in mathematics

The PISA index of *instrumental motivation in mathematics* was derived from students' reported agreement with the following statements: *i*) making an effort in mathematics is worth it because it will help me in the work that I want to do later on; *ii*) learning mathematics is important because it will help me with the subjects that I want to study further on in school; *iii*) mathematics is an important subject for me because I need it for what I want to study later on; and *iv*) I will learn many things in mathematics that will help me get a job. A four-point scale with the response categories "strongly agree", "agree", "disagree" and "strongly disagree" was used. All items were inverted for scaling and positive values on this index indicate higher levels of instrumental motivation to learn mathematics. This index was constructed using IRT scaling.

### Self-efficacy in mathematics

The PISA index of *self-efficacy in mathematics* was derived from students' reported level of confidence with the following calculations: *i*) using a <train timetable>, how long it would take to get from Zedville to Zedtown; *ii*) calculating how much cheaper a TV would be after a 30 per cent discount; *iii*) calculating how many square metres of tiles you need to cover a floor; *iv*) understanding graphs presented in newspapers; solving an equation like  $3x + 5 = 17$ ; *v*) finding the actual distance between two places on a map with a 1:10,000 scale; *vi*) solving an equation like  $2(x+3) = (x + 3)(x - 3)$ ; and *vii*) calculating the petrol consumption rate of a car. A four-point scale with the response categories "very confident", "confident", "not very confident", "not at all confident" was used. All items were inverted for scaling and positive values on this index indicate higher levels of self-efficacy in mathematics. This index was constructed using IRT scaling.

### Anxiety in mathematics

The PISA index of *anxiety in mathematics* was derived from students' reported agreement with the following statements: *i*) I often worry that it will be difficult for me in mathematics classes; *ii*) I get very tense when I have to do mathematics homework; *iii*) I get very nervous doing mathematics problems; *iv*) I feel helpless when doing a mathematics problem; and *v*) I worry that I will get poor <marks> in mathematics. A four-point scale with the response categories "strongly agree", "agree", "disagree" and "strongly disagree" was used. All items were inverted for scaling and positive values on this index indicate higher levels of mathematics anxiety. This index was constructed using IRT scaling.

### Self-concept in mathematics

The PISA index of self-concept in mathematics was derived from students' level of agreement with the following statements: *i*) I am just not good at mathematics; *ii*) I get good <marks> in mathematics; *iii*) I learn mathematics quickly; *iv*) I have always believed that mathematics is one of my best subjects; and *v*) in my mathematics class, I understand even the most difficult work. A four-point scale with the response categories "strongly agree", "agree", "disagree" and "strongly disagree" was used. Items *ii*), *iii*), *iv*), and *v*) were inverted for scaling and positive values on this index indicate a positive self-concept in mathematics. This index was constructed using IRT scaling.

### Expected educational level

In PISA 2003 students were asked about their educational aspirations. Educational levels were classified according to International Standard Classification of Education (OECD, 1999).

An index on the *expected educational level* was developed with the following categories: *i*) did not go to school; *ii*) completed ISCED Level 1 (primary education); *iii*) completed ISCED Level 2 (lower secondary education); *iv*) completed ISCED Levels 3B or 3C (upper secondary education providing direct access to the labour market or to ISCED 5B programmes); *v*) completed ISCED Level 3A (upper secondary education providing access to ISCED 5A and 5B programmes); *vi*) completed ISCED Level 5A (university level tertiary education); and *vii*) completed ISCED Level 5B (non-university level education).

### Classroom climate

#### Teacher support

The PISA index of *teacher support* was derived from students' reports on the frequency with which: *i*) the teacher shows an interest in every student's learning; *ii*) the teacher gives extra help when students need it; *iii*) the teacher helps students with their learning; *iv*) the teacher continues teaching until the students understand; and *v*) the teacher gives students an opportunity to express opinions. A four-point scale with the response categories "every lesson", "most lessons", "some lessons" and "never or hardly ever" was used. All items were inverted for scaling and positive values on this PISA 2003 index indicate perceptions of higher levels of teacher support. This index was constructed using IRT scaling.

#### Disciplinary climate

The PISA index of *disciplinary climate* was derived from students' reports on the frequency with which, in their mathematics lessons: *i*) students don't listen to what the teacher says; *ii*) there is noise and disorder; *iii*) the teacher has to wait a long time for students to <quieten down>; *iv*) students cannot work well; and *v*) students don't start working for a long time after the lesson begins. A four-point scale with the response categories "every lesson", "most lessons", "some lessons", and "never or hardly ever" was used. Positive values on this PISA 2000/2003 index indicate perceptions



of a more positive disciplinary climate whereas low values indicate a more negative disciplinary climate. This index was constructed using IRT scaling.

## School level variables

### *Indicators of school resources*

#### **Quantity of teaching staff at school**

School principals reported the number of full-time and part-time teachers in total, of full-time and part-time teachers fully certified by <the appropriate authority>, of full-time and part-time teachers with an <ISCED 5A> qualification in <pedagogy>. From this an index of **total student-teacher** ratio is obtained by dividing the school size by the total number of teachers. The number of part-time teachers contributes 0.5 and the number of full-time teachers contributes 1.0 to the total number of teachers.

#### **School resources**

##### **Quality of the school's physical infrastructure**

The PISA index of the **quality of the school's physical infrastructure** was derived from three items measuring the school principals' perceptions of potential factors hindering instruction at school: *i*) school buildings and grounds; *ii*) heating/cooling and lighting systems; and *iii*) instructional space (*e.g.* classrooms). A four-point scale with the response categories "not at all", "very little", "to some extent", and "a lot" was used. All items were inverted for scaling and positive values indicate positive evaluations of this aspect. This index was constructed using IRT scaling.

##### **Quality of the school's educational resources**

The PISA index of the **quality of the school's educational resources** was derived from seven items measuring the school principals' perceptions of potential factors hindering instruction at school: *i*) instructional materials (*e.g.* textbooks); *ii*) computers for instruction; *iii*) computer software for instruction; *iv*) calculators for instruction; *v*) library materials; *vi*) audio-visual resources; and *vii*) science laboratory equipment and materials. A four-point scale with the response categories "not at all", "very little", "to some extent", and "a lot" was used. All items were inverted for scaling and positive values indicate positive evaluations of this aspect. This index was constructed using IRT scaling.

##### **Teacher shortage**

The PISA index on **teacher shortage** was derived from items measuring the school principal's perceptions of potential factors hindering instruction at school. These factors are a shortage or inadequacy of: *i*) qualified mathematics teachers; *ii*) qualified science teachers; *iii*) qualified <test language> teachers; *iv*) qualified foreign language teachers; and *v*) experienced teachers. For PISA 2003 these items were administered together with the items on the quality of physical environment and educational resources. A four-point scale with the response categories "not at all", "very little", "to some extent" and "a lot" is used. The items were not inverted for scaling and positive values indicate school principal's reports of teacher shortage at a school. This index was constructed using IRT scaling.

### **School climate (school principals' views)**

#### **School principals' perceptions of teacher morale and commitment**

The PISA index of **teacher morale and commitment** was derived from items measuring the school principals' perceptions of teachers with the following statements: *i*) the morale of teachers in this school is high; *ii*) teachers work with enthusiasm; *iii*) teachers take pride in this school; and *iv*) teachers value academic achievement. A four-point scale with the response categories "strongly agree", "agree", "disagree" and "strongly disagree" was used. All items were inverted for scaling and the categories "disagree" and "strongly disagree" were combined into one category. Positive values indicate principals' reports of higher levels of teacher morale and commitment. This index was constructed using IRT scaling.

#### **School principals' perceptions of teacher-related factors affecting school climate**

The index of **teacher-related factors affecting school climate** was derived from items measuring the school principals' reports of potential factors hindering the learning of students at school with the following statements: *i*) teachers' low expectations of students; *ii*) poor student-teacher relations; *iii*) teachers not meeting individual students' needs; *iv*)



teacher absenteeism; *v*) staff resisting change; *vi*) teachers being too strict with students; and *vii*) students not being encouraged to achieve their full potential. A four-point scale with the response categories “strongly agree”, “agree”, “disagree” and “strongly disagree” was used. All items were inverted for scaling and positive values indicate positive evaluations of this aspect. This index was constructed using IRT scaling.

### **School principals’ perceptions of student-related factors affecting school climate**

The index of *student-related factors affecting school climate* was derived from items measuring the school principals’ perceptions of potential factors hindering the learning of students at school with the following statements: *i*) student absenteeism; *ii*) disruption of classes by students; *iii*) students skipping classes; *iv*) students lacking respect for teachers; *v*) students’ use of alcohol or illegal drugs; and *vi*) students intimidating or bullying other students. A four-point scale with the response categories “strongly agree”, “agree”, “disagree” and “strongly disagree” was used. All items were inverted for scaling and positive values indicate positive evaluations of this aspect. This index was constructed using IRT scaling.



## ANNEX A2. Summary descriptions of the five levels of reading proficiency

Figure A2.1 ■ Combined Reading Literacy Scale





# Annex **B**

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## DATA TABLES FOR CHAPTERS 1,2,3 AND 4

Table 1.1  
Stock of foreign-born and foreign-nationality  
populations

|               | Percentage of total population that: |                         |
|---------------|--------------------------------------|-------------------------|
|               | Is foreign-born                      | Has foreign nationality |
| Australia     | 23.0                                 | 7.4                     |
| Austria       | 12.5                                 | 8.8                     |
| Belgium       | 10.7                                 | 8.2                     |
| Canada        | 19.3                                 | 5.3                     |
| Denmark       | 6.8                                  | 5.0                     |
| France        | 10.0                                 | 5.6                     |
| Germany       | 12.5                                 | 8.9                     |
| Luxembourg    | 32.6                                 | 36.9                    |
| Netherlands   | 10.1                                 | 4.2                     |
| New Zealand   | 19.5                                 | m                       |
| Norway        | 7.3                                  | 4.3                     |
| Sweden        | 12.0                                 | 5.3                     |
| Switzerland   | 22.4                                 | 20.5                    |
| United States | 12.3                                 | 6.6                     |

Source: Census data except for foreign nationality data for Germany (register of foreigners, 2002) and the United Kingdom (Labour force survey).

Table 1.2  
Distribution of permanent or long-term immigration  
flows into selected OECD countries in 2002,  
by main immigration categories<sup>1</sup>

|                            | Percentage of permanent or long-term<br>immigration flows in immigration category: |                         |          |
|----------------------------|------------------------------------------------------------------------------------|-------------------------|----------|
|                            | Workers                                                                            | Family<br>reunification | Refugees |
| Australia <sup>2</sup>     | 54.5                                                                               | 35.3                    | 10.2     |
| Canada                     | 25.8                                                                               | 63.1                    | 11.1     |
| Denmark                    | 23.0                                                                               | 57.5                    | 19.4     |
| France <sup>3</sup>        | 16.2                                                                               | 75.1                    | 8.7      |
| Norway <sup>4</sup>        | 8.2                                                                                | 68.4                    | 23.3     |
| Sweden <sup>5</sup>        | 1.3                                                                                | 57.7                    | 41.0     |
| Switzerland                | 45.4                                                                               | 52.4                    | 2.2      |
| United States <sup>6</sup> | 18.0                                                                               | 69.1                    | 12.9     |

1. For Australia, Canada, Norway, Sweden and the United States, data concern acceptances for settlement. For Denmark, France and Switzerland, entries correspond to residence permits usually delivered for longer than one year. For Australia, category "Workers" includes accompanying dependents who are included in the category "Family reunification" for all other countries.

2. Data refer to fiscal year (July 2001 to June 2002). Category "Workers" includes accompanying dependents. Citizens from New Zealand do not need a visa to enter the country. They are therefore excluded.

3. Entries of EU family members are estimated. Visitors are excluded. Among those who benefited from the regularisation programme, only those who received a permit under the family reunification procedure are counted. The "Family" category also includes spouses of French citizens and scientists, parents of French children and those with family relationships who received the permit "*vie privée et familiale*".

4. Category "Workers" includes specialists and other permits that constitute grounds for permanent residence in Norway. Non-renewable permits are not included. Category "Refugees" includes refugees and individuals granted residence permits on humanitarian grounds on a permanent basis.

5. Excluding Nordic and EEA citizens.

6. Data refer to fiscal year (October 2001 to September 2002).

Immigrants who obtained a permanent residence permit following the 1986 Immigration Reform and Control Act (IRCA) are excluded.

Sources: National Statistical Offices, OECD calculations.

Table 1.3  
**Distribution of native- and foreign-born populations (aged 15 years and older) by level of education in selected OECD countries (circa 2000)**

|               | Below upper secondary education (ISCED 0/1/2) |                         | Upper secondary and post-secondary non-tertiary education (ISCED 3/4) |                         | Tertiary education (ISCED 5A/5B/6) |                         |
|---------------|-----------------------------------------------|-------------------------|-----------------------------------------------------------------------|-------------------------|------------------------------------|-------------------------|
|               | Native-born population                        | Foreign-born population | Native-born population                                                | Foreign-born population | Native-born population             | Foreign-born population |
| Australia     | 45,8                                          | 38,3                    | 15,7                                                                  | 18,8                    | 38,6                               | 42,9                    |
| Austria       | 33,4                                          | 49,4                    | 55,7                                                                  | 39,3                    | 10,9                               | 11,3                    |
| Belgium       | 46,8                                          | 54,2                    | 30,3                                                                  | 24,2                    | 22,9                               | 21,6                    |
| Canada        | 31,6                                          | 30,1                    | 36,9                                                                  | 31,9                    | 31,5                               | 38,0                    |
| Denmark       | 41,0                                          | 48,6                    | 40,2                                                                  | 31,9                    | 18,8                               | 19,5                    |
| France        | 45,8                                          | 54,8                    | 37,4                                                                  | 27,2                    | 16,9                               | 18,1                    |
| Germany       | 23,6                                          | 43,4                    | 57,0                                                                  | 41,0                    | 19,4                               | 15,7                    |
| Luxembourg    | 28,7                                          | 36,7                    | 58,6                                                                  | 41,6                    | 12,8                               | 21,7                    |
| Netherlands   | 40,7                                          | 53,0                    | 39,8                                                                  | 29,4                    | 19,5                               | 17,6                    |
| New Zealand   | 30,1                                          | 18,7                    | 42,7                                                                  | 50,4                    | 27,2                               | 31,0                    |
| Norway        | 21,2                                          | 18,3                    | 55,6                                                                  | 50,6                    | 23,2                               | 31,1                    |
| Sweden        | 25,0                                          | 29,6                    | 52,2                                                                  | 46,2                    | 22,8                               | 24,2                    |
| Switzerland   | 25,6                                          | 41,6                    | 56,3                                                                  | 34,7                    | 18,1                               | 23,7                    |
| United States | 21,9                                          | 39,8                    | 51,2                                                                  | 34,3                    | 26,9                               | 25,9                    |

Note: Data are from the 2000 round of censuses.

Source: OECD (2005), *Trends in International Migration* (SOPEMI 2004), OECD, Paris.

Table 1.4  
**Unemployment rates among national and foreign-nationality or native-born and foreign-born individuals in selected OECD countries<sup>1</sup>**

|               | Unemployment rate (%) by immigrant background |      |      |      |                     |      |      |      |             |      |      |      |              |      |      |      |
|---------------|-----------------------------------------------|------|------|------|---------------------|------|------|------|-------------|------|------|------|--------------|------|------|------|
|               | National                                      |      |      |      | Foreign-nationality |      |      |      | Native-born |      |      |      | Foreign-born |      |      |      |
|               | 1993                                          | 1995 | 2000 | 2003 | 1993                | 1995 | 2000 | 2003 | 1993        | 1995 | 2000 | 2003 | 1993         | 1995 | 2000 | 2003 |
| Australia     | a                                             | a    | a    | a    | a                   | a    | a    | a    | 10.4        | 8.1  | 6.2  | 6.0  | 12.9         | 10.2 | 6.7  | 6.5  |
| Austria       | m                                             | 4.1  | 4.3  | 4.4  | m                   | 6.8  | 8.8  | 8.3  | m           | 4.1  | 4.3  | 4.2  | m            | 6.9  | 8.0  | 8.3  |
| Belgium       | 7.1                                           | 8.2  | 5.8  | 6.9  | 19.4                | 23.5 | 15.6 | 18.2 | 7.3         | 8.4  | 5.6  | 6.4  | 16.0         | 19.5 | 15.8 | 17.8 |
| Canada        | a                                             | a    | a    | a    | a                   | a    | a    | a    | 9.2         | 8.4  | 5.6  | 6.0  | 8.9          | 10.6 | 6.8  | 8.0  |
| Denmark       | 10.9                                          | 7.5  | 4.0  | 4.1  | 30.9                | 24.2 | 10.6 | 9.2  | m           | 7.3  | 3.9  | 4.0  | m            | 20.6 | 9.5  | 8.7  |
| France        | 10.8                                          | 11.3 | 9.6  | 8.5  | 20.7                | 21.7 | 20.9 | 18.8 | 10.8        | 11.2 | 9.4  | 8.2  | 16.4         | 17.6 | 16.7 | 15.8 |
| Germany       | 7.2                                           | 7.5  | 7.5  | 9.2  | 12.5                | 15.1 | 12.9 | 16.7 | m           | m    | 7.4  | 9.1  | m            | m    | 12.6 | 15.7 |
| Luxembourg    | 2.0                                           | 2.5  | 1.6  | 2.4  | 2.9                 | 3.6  | 3.4  | 5.2  | 2.0         | 2.6  | 2.0  | 2.9  | 2.9          | 3.4  | 2.9  | 4.8  |
| Netherlands   | 5.8                                           | 6.5  | 2.6  | 3.4  | 19.7                | 23.6 | 7.2  | 9.5  | 5.5         | 6.0  | 2.3  | 2.9  | 16.2         | 19.6 | 6.3  | 8.9  |
| Norway        | m                                             | m    | 3.4  | 4.1  | m                   | m    | m    | 10.1 | m           | m    | 3.3  | 3.9  | m            | m    | 6.1  | 9.0  |
| Sweden        | m                                             | 7.7  | 5.1  | 5.3  | m                   | 19.7 | 14.6 | 13.2 | m           | 7.3  | 4.7  | 4.8  | m            | 21.7 | 11.6 | 11.1 |
| Switzerland   | m                                             | m    | 1.9  | 2.9  | m                   | m    | 5.6  | 8.8  | m           | m    | m    | 2.9  | m            | m    | m    | 8.0  |
| United States | a                                             | a    | a    | a    | a                   | a    | a    | a    | m           | 5.8  | 4.4  | 6.4  | m            | 8.0  | 4.9  | 7.5  |

1. The categories *national* and *foreign-nationality* are defined on the basis of nationality; the categories *native-born* and *foreign-born* are defined on the basis of country of birth.

Source: OECD (2005), *Trends in International Migration* (SOPEMI 2004), OECD, Paris.

Table 1.5  
**Number and weighted percentage of participating students in PISA 2003, by immigrant status**

|                             | Native students                  |                                          | Second-generation students       |                                          | First-generation students        |                                          | Students with missing values on immigrant status variable |                                          |
|-----------------------------|----------------------------------|------------------------------------------|----------------------------------|------------------------------------------|----------------------------------|------------------------------------------|-----------------------------------------------------------|------------------------------------------|
|                             | Number of participating students | Percentage of all participating students | Number of participating students | Percentage of all participating students | Number of participating students | Percentage of all participating students | Number of participating students                          | Percentage of all participating students |
| <b>OECD countries</b>       |                                  |                                          |                                  |                                          |                                  |                                          |                                                           |                                          |
| Australia                   | 9 682                            | 75.5                                     | 1 342                            | 11.5                                     | 1 258                            | 10.8                                     | 269                                                       | 2.2                                      |
| Austria                     | 3 966                            | 85.7                                     | 174                              | 4.1                                      | 403                              | 9.1                                      | 54                                                        | 1.2                                      |
| Belgium                     | 7 584                            | 85.8                                     | 486                              | 6.2                                      | 497                              | 5.3                                      | 229                                                       | 2.7                                      |
| Canada                      | 23 481                           | 70.8                                     | 1 365                            | 8.2                                      | 1 411                            | 9.6                                      | 1696                                                      | 11.4                                     |
| Denmark                     | 3 891                            | 92.0                                     | 137                              | 3.4                                      | 126                              | 3.0                                      | 64                                                        | 1.6                                      |
| France                      | 3 639                            | 84.0                                     | 442                              | 10.6                                     | 133                              | 3.4                                      | 86                                                        | 2.1                                      |
| Germany                     | 3 685                            | 77.3                                     | 281                              | 6.3                                      | 349                              | 7.8                                      | 345                                                       | 8.7                                      |
| Luxembourg                  | 2 554                            | 64.9                                     | 600                              | 15.4                                     | 658                              | 16.9                                     | 111                                                       | 2.8                                      |
| Netherlands                 | 3 434                            | 85.0                                     | 265                              | 6.8                                      | 147                              | 3.7                                      | 146                                                       | 4.6                                      |
| New Zealand                 | 3 534                            | 78.5                                     | 284                              | 6.4                                      | 602                              | 13.0                                     | 91                                                        | 2.1                                      |
| Norway                      | 3 773                            | 92.9                                     | 95                               | 2.2                                      | 133                              | 3.3                                      | 63                                                        | 1.6                                      |
| Sweden                      | 4 048                            | 87.2                                     | 241                              | 5.6                                      | 271                              | 5.8                                      | 64                                                        | 1.5                                      |
| Switzerland                 | 6 477                            | 78.9                                     | 787                              | 8.8                                      | 1 034                            | 10.9                                     | 122                                                       | 1.4                                      |
| United States               | 4 523                            | 82.9                                     | 442                              | 8.1                                      | 319                              | 5.9                                      | 172                                                       | 3.2                                      |
| <b>Partner countries</b>    |                                  |                                          |                                  |                                          |                                  |                                          |                                                           |                                          |
| Hong Kong-China             | 2 507                            | 55.6                                     | 1 038                            | 22.5                                     | 848                              | 20.0                                     | 85                                                        | 2.0                                      |
| Macao-China                 | 300                              | 23.5                                     | 700                              | 57.1                                     | 231                              | 17.9                                     | 19                                                        | 1.5                                      |
| Russian Federation          | 5 093                            | 85.2                                     | 367                              | 6.3                                      | 417                              | 6.9                                      | 97                                                        | 1.5                                      |
| Belgium (Flemish Community) | 4 572                            | 90.4                                     | 185                              | 3.7                                      | 141                              | 2.8                                      | 161                                                       | 3.0                                      |
| Belgium (French Community)  | 2 377                            | 79.8                                     | 282                              | 9.5                                      | 239                              | 8.4                                      | 60                                                        | 2.3                                      |

Source: OECD PISA 2003 database.

Table 1.6  
**Average age of first-generation students in PISA 2003 at the time of immigration**

|                             | Average age at immigration |
|-----------------------------|----------------------------|
| <b>OECD countries</b>       |                            |
| Australia                   | 6.8                        |
| Austria                     | 5.1                        |
| Belgium                     | 7.9                        |
| Canada                      | 7.2                        |
| Denmark                     | 6.0                        |
| France                      | 6.3                        |
| Germany                     | 5.7                        |
| Luxembourg                  | 5.2                        |
| Netherlands                 | 6.1                        |
| New Zealand                 | 9.1                        |
| Norway                      | 6.1                        |
| Sweden                      | 5.2                        |
| Switzerland                 | 5.3                        |
| United States               | 6.0                        |
| <b>OECD average</b>         | <b>6.1</b>                 |
| <b>Partner countries</b>    |                            |
| Hong Kong-China             | 8.5                        |
| Macao-China                 | 8.2                        |
| Russian Federation          | 5.8                        |
| Belgium (Flemish Community) | 8.1                        |
| Belgium (French Community)  | 7.8                        |

Source: OECD PISA 2003 database.



Table 1.7  
**Comparison of percentage of immigrant students in PISA 2003 with data on total immigrant populations**

|                             | Immigrant students in PISA 2003 |                                  | Total immigrant populations <sup>1</sup> |                                |
|-----------------------------|---------------------------------|----------------------------------|------------------------------------------|--------------------------------|
|                             | Number of immigrant students    | Percentage of immigrant students | Percentage foreign-born                  | Percentage foreign nationality |
| <b>OECD countries</b>       |                                 |                                  |                                          |                                |
| Australia                   | 2 600                           | 22.2                             | 23.0                                     | 7.4                            |
| Austria                     | 577                             | 13.1                             | 12.5                                     | 8.8                            |
| Belgium                     | 983                             | 11.5                             | 10.7                                     | 8.2                            |
| Canada                      | 2 776                           | 17.8                             | 19.3                                     | 5.3                            |
| Denmark                     | 263                             | 6.4                              | 6.8                                      | 5.0                            |
| France                      | 575                             | 14.0                             | 10.0                                     | 5.6                            |
| Germany                     | 630                             | 14.1                             | 12.5                                     | 8.9 <sup>2</sup>               |
| Luxembourg                  | 1 258                           | 32.3                             | 32.6                                     | 36.9                           |
| Netherlands                 | 412                             | 10.5                             | 10.1                                     | 4.2                            |
| New Zealand                 | 886                             | 19.4                             | 19.5                                     | m                              |
| Norway                      | 228                             | 5.5                              | 7.3                                      | 4.3                            |
| Sweden                      | 512                             | 11.4                             | 12.0                                     | 5.3                            |
| Switzerland                 | 1 821                           | 19.7                             | 22.4                                     | 20.5                           |
| United States               | 761                             | 14.0                             | 12.3                                     | 6.6                            |
| <b>Partner countries</b>    |                                 |                                  |                                          |                                |
| Hong Kong-China             | 1 886                           | 42.4                             | m                                        | m                              |
| Macao-China                 | 931                             | 75.0                             | m                                        | m                              |
| Russian Federation          | 784                             | 13.2                             | m                                        | m                              |
| Belgium (Flemish Community) | 326                             | 6.6                              | m                                        | m                              |
| Belgium (French Community)  | 521                             | 17.9                             | m                                        | m                              |

1. Source: OECD (2005), *Trends in International Migration (SOPEMI 2004)*, OECD, Paris.  
 2. Data for Germany from 2002.

Table 1.8  
**Comparison of the three most frequent countries of origin for immigrant students  
 in PISA 2003 and for total immigrant populations**

|                | Three most frequent countries of origin (mother's country of birth) for immigrant students in PISA 2003 | Three most frequent countries of origin for total foreign-born population (SOPEMI)      | Immigrant students in PISA 2003                                |                                  | Stock of foreign-born population by country of birth in SOPEMI 2004 (reference year: 2002) <sup>1</sup> |                                                       |                                 |
|----------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------|---------------------------------|
|                |                                                                                                         |                                                                                         | Number of immigrant students                                   | Percentage of immigrant students | Number of immigrants (thousands)                                                                        | Percentage of total immigrant population <sup>2</sup> |                                 |
| OECD countries | Australia                                                                                               | 1. England and Scotland <sup>2</sup><br>2. New Zealand<br>3. China                      | 1. United Kingdom<br>2. New Zealand<br>3. Italy                | 419<br>189<br>130<br>68          | 13.9<br>7.0<br>5.0<br>2.8                                                                               | 1 123.9<br>413.7<br>164.9<br>235.2                    | 24.6<br>9.1<br>3.6<br>5.2       |
|                | Austria                                                                                                 | 1. Former Yugoslavia <sup>2,3</sup><br>2. Turkey<br>3. Romania                          | 1. Former Yugoslavia <sup>2,4</sup><br>2. Turkey<br>3. Germany | 276<br>141<br>19<br>m            | 47.2<br>25.9<br>3.6<br>m                                                                                | 330.4<br>127.3<br>39.9<br>120.9                       | 35.7<br>13.7<br>4.3<br>13.1     |
|                | Belgium                                                                                                 | 1. France<br>2. Turkey<br>3. Netherlands                                                | 2. France<br>3. Netherlands<br>1. Italy                        | 184<br>140<br>54<br>m            | 16.3<br>14.8<br>5.8<br>m                                                                                | 113.0<br>42.6<br>96.6<br>187.0                        | 13.3<br>5.0<br>11.4<br>22.0     |
|                | Canada                                                                                                  | m                                                                                       | 1. United Kingdom<br>2. China<br>3. Italy                      | m<br>m<br>m                      | m<br>m<br>m                                                                                             | 606.0<br>332.8<br>315.5                               | 11.1<br>6.1<br>5.8              |
|                | Denmark                                                                                                 | 1. Turkey<br>2. Pakistan<br>3. Former Yugoslavia                                        | 1. Turkey<br>2. Former Yugoslavia <sup>2,5</sup><br>3. Germany | 53<br>31<br>23<br>m              | 32.1<br>11.6<br>9.4<br>m                                                                                | 30.9<br>10.7<br>30.5<br>22.5                          | 9.1<br>3.2<br>9.0<br>6.7        |
|                | France                                                                                                  | m                                                                                       | 1. Portugal<br>2. Morocco<br>3. Algeria                        | m<br>m<br>m                      | m<br>m<br>m                                                                                             | 553.7<br>504.1<br>477.5                               | 17.0<br>15.4<br>14.6            |
|                | Germany                                                                                                 | 1. Turkey<br>2. Former Soviet Republic<br>3. Poland<br>Former Yugoslavia <sup>2,6</sup> | 1. Turkey<br>2. Former Yugoslavia <sup>2,7</sup><br>3. Italy   | 197<br>180<br>100<br>45<br>27    | 32.1<br>28.3<br>16.1<br>7.0<br>4.1                                                                      | 1 912.2<br>m<br>317.6<br>986.3<br>609.8               | 26.1<br>m<br>4.3<br>13.4<br>8.3 |
|                | Luxembourg                                                                                              | 1. Portugal<br>2. Italy<br>3. Former Yugoslavia                                         | 1. Portugal<br>3. Italy<br>2. France                           | 595<br>99<br>92<br>m             | 47.3<br>7.9<br>7.3<br>m                                                                                 | 41.7<br>12.3<br>m<br>18.8                             | 28.8<br>8.5<br>m<br>13.0        |
|                | Netherlands                                                                                             | m                                                                                       | 1. Turkey<br>2. Suriname<br>3. Morocco                         | m<br>m<br>m                      | m<br>m<br>m                                                                                             | 190.5<br>189.0<br>163.4                               | 11.1<br>11.0<br>9.5             |
|                | New Zealand                                                                                             | 1. Samoa<br>2. United Kingdom<br>3. China                                               | 1. United Kingdom<br>3. Australia                              | 124<br>103<br>76<br>18           | 14.6<br>11.2<br>8.4<br>2.1                                                                              | 47.1<br>218.4<br>38.9<br>56.3                         | 6.7<br>31.3<br>5.6<br>8.1       |
|                | Norway                                                                                                  | m                                                                                       | 1. Sweden<br>2. Denmark<br>3. Pakistan                         | m<br>m<br>m                      | m<br>m<br>m                                                                                             | 33.0<br>22.3<br>14.6                                  | 9.9<br>6.7<br>4.4               |
|                | Sweden                                                                                                  | m                                                                                       | 1. Finland<br>2. Former Yugoslavia <sup>2,8</sup><br>3. Iraq   | m<br>m<br>m                      | m<br>m<br>m                                                                                             | 189.3<br>139.0<br>67.6                                | 17.6<br>12.9<br>6.3             |
|                | Switzerland                                                                                             | 1. Former Yugoslavia<br>2. Albania/Kosovo<br>3. Italy                                   | 1. Former Yugoslavia <sup>2,9</sup><br>2. Italy<br>3. Portugal | 408<br>257<br>245<br>200         | 23.0<br>16.2<br>11.7<br>8.1                                                                             | 347.3<br>m<br>308.3<br>141.1                          | 24.0<br>m<br>21.3<br>9.7        |
|                | United States                                                                                           | m                                                                                       | 1. Mexico<br>2. Philippines<br>3. India                        | m<br>m<br>m                      | m<br>m<br>m                                                                                             | 10 237.2<br>1 457.5<br>1 183.6                        | 29.6<br>4.2<br>3.4              |
|                | Hong Kong-China                                                                                         | m                                                                                       | m                                                              | m                                | m                                                                                                       | m                                                     | m                               |
|                | Macao-China                                                                                             | m                                                                                       | m                                                              | m                                | m                                                                                                       | m                                                     | m                               |
|                | Russian Federation                                                                                      | m                                                                                       | m                                                              | m                                | m                                                                                                       | m                                                     | m                               |
|                | Belgium (Flemish Community)                                                                             | 1. Turkey<br>2. Netherlands                                                             |                                                                | 87<br>54                         | 27.6<br>18.0                                                                                            | m<br>m                                                | m<br>m                          |
|                | Belgium (French Community)                                                                              | 1. France<br>2. Turkey                                                                  |                                                                | 113<br>49                        | 23.6<br>8.7                                                                                             | m<br>m                                                | m<br>m                          |

Note: Data for the stock of foreign-born population are by: country of birth in Canada, Luxembourg and New Zealand (2001) and in Australia, Austria, the Netherlands and Norway (2002); place of birth in the United States (2003); and nationality in Belgium (2002), France (1999), Germany (2002) and Switzerland (2003).

1. Source: OECD (2005), *Trends in International Migration* (SOPEMI 2004), OECD, Paris.

2. Authors' calculation.

3. Yugoslavia and Slovenia.

4. Bosnia-Herzegovina, Slovenia, Croatia and the former Yugoslavia (other).

5. Refers to persons who immigrated before the dissolution of the former Yugoslavia and persons from Bosnia-Herzegovina.

6. Montenegro, Serbia, Bosnia-Herzegovina, Croatia and Macedonia.

7. Serbia/Montenegro, Bosnia-Herzegovina and Croatia.

8. Serbia/Montenegro and Bosnia-Herzegovina.

9. Serbia/Montenegro, the former Yugoslav Republic of Macedonia, Bosnia-Herzegovina and Croatia.





Table 1.9  
Number and weighted percentage of students participating in PISA 2003 who speak a different language at home from the language of instruction

|                             | Students who speak a different language at home from the language of instruction |                        | Students with missing values on the "language spoken at home" variable |                        |
|-----------------------------|----------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------------|------------------------|
|                             | Number of students                                                               | Percentage of students | Number of students                                                     | Percentage of students |
| OECD countries              |                                                                                  |                        |                                                                        |                        |
| Australia                   | 968                                                                              | 8.7                    | 299                                                                    | 2.3                    |
| Austria                     | 376                                                                              | 8.7                    | 156                                                                    | 3.3                    |
| Belgium                     | 399                                                                              | 4.2                    | 1009                                                                   | 11.5                   |
| Canada                      | 1 688                                                                            | 10.0                   | 1693                                                                   | 11.2                   |
| Denmark                     | 156                                                                              | 3.8                    | 138                                                                    | 3.4                    |
| France                      | 228                                                                              | 5.9                    | 160                                                                    | 3.9                    |
| Germany                     | 296                                                                              | 6.7                    | 544                                                                    | 13.0                   |
| Luxembourg                  | 920                                                                              | 23.7                   | 212                                                                    | 5.4                    |
| Netherlands                 | 166                                                                              | 4.2                    | 275                                                                    | 7.7                    |
| New Zealand                 | 405                                                                              | 8.9                    | 54                                                                     | 1.2                    |
| Norway                      | 178                                                                              | 4.4                    | 134                                                                    | 3.4                    |
| Sweden                      | 288                                                                              | 6.5                    | 285                                                                    | 6.0                    |
| Switzerland                 | 873                                                                              | 8.8                    | 607                                                                    | 7.6                    |
| United States               | 480                                                                              | 8.6                    | 207                                                                    | 4.1                    |
| Partner countries           |                                                                                  |                        |                                                                        |                        |
| Hong Kong-China             | 183                                                                              | 4.3                    | 150                                                                    | 3.5                    |
| Macao-China                 | 54                                                                               | 4.5                    | 35                                                                     | 2.2                    |
| Russian Federation          | 289                                                                              | 5.4                    | 77                                                                     | 1.2                    |
| Belgium (Flemish Community) | 159                                                                              | 3.1                    | 558                                                                    | 11.0                   |
| Belgium (French Community)  | 168                                                                              | 5.6                    | 337                                                                    | 12.0                   |

Source: OECD PISA 2003 database.

Table 1.10  
Number and weighted percentage of students who speak a different language at home from the language of instruction in PISA 2003, by immigrant status

|                             | Native students    |                        | Second-generation students |                        | First-generation students |                        | Immigrant students (first- and second-generation combined) |                        |
|-----------------------------|--------------------|------------------------|----------------------------|------------------------|---------------------------|------------------------|------------------------------------------------------------|------------------------|
|                             | Number of students | Percentage of students | Number of students         | Percentage of students | Number of students        | Percentage of students | Number of students                                         | Percentage of students |
| OECD countries              |                    |                        |                            |                        |                           |                        |                                                            |                        |
| Australia                   | 70                 | 0.7                    | 333                        | 27.5                   | 539                       | 45.1                   | 872                                                        | 36.1                   |
| Austria                     | 30                 | 0.8                    | 92                         | 63.0                   | 248                       | 74.7                   | 340                                                        | 71.0                   |
| Belgium                     | 129                | 1.4                    | 146                        | 40.1                   | 117                       | 32.2                   | 263                                                        | 36.3                   |
| Canada                      | 318                | 1.2                    | 414                        | 30.4                   | 892                       | 66.9                   | 1 306                                                      | 50.2                   |
| Denmark                     | 53                 | 1.4                    | 43                         | 39.6                   | 57                        | 51.0                   | 100                                                        | 45.0                   |
| France                      | 25                 | 0.8                    | 140                        | 35.7                   | 58                        | 52.7                   | 198                                                        | 39.6                   |
| Germany                     | 14                 | 0.5                    | 94                         | 44.8                   | 151                       | 49.0                   | 245                                                        | 47.2                   |
| Luxembourg                  | 38                 | 1.6                    | 352                        | 64.3                   | 511                       | 83.0                   | 863                                                        | 74.1                   |
| Netherlands                 | 14                 | 0.4                    | 76                         | 31.3                   | 68                        | 56.4                   | 144                                                        | 40.0                   |
| New Zealand                 | 9                  | 0.2                    | 77                         | 27.6                   | 77                        | 52.8                   | 385                                                        | 44.4                   |
| Norway                      | 32                 | 0.9                    | 40                         | 50.7                   | 40                        | 83.8                   | 142                                                        | 71.5                   |
| Sweden                      | 23                 | 0.7                    | 85                         | 42.3                   | 176                       | 77.1                   | 261                                                        | 59.9                   |
| Switzerland                 | 47                 | 0.5                    | 196                        | 33.8                   | 615                       | 64.0                   | 811                                                        | 50.9                   |
| United States               | 53                 | 1.1                    | 195                        | 46.9                   | 210                       | 71.0                   | 405                                                        | 57.2                   |
| Partner countries           |                    |                        |                            |                        |                           |                        |                                                            |                        |
| Hong Kong-China             | 103                | 4.3                    | 30                         | 3.0                    | 43                        | 5.9                    | 73                                                         | 4.4                    |
| Macao-China                 | 16                 | 6.4                    | 21                         | 3.9                    | 16                        | 4.9                    | 37                                                         | 4.2                    |
| Russian Federation          | 219                | 4.9                    | 17                         | 5.5                    | 43                        | 10.6                   | 60                                                         | 8.1                    |
| Belgium (Flemish Community) | 28                 | 0.7                    | 76                         | 61.6                   | 52                        | 46.9                   | 128                                                        | 54.2                   |
| Belgium (French Community)  | 47                 | 2.2                    | 68                         | 30.7                   | 49                        | 25.7                   | 117                                                        | 28.4                   |

Source: OECD PISA 2003 database.

Table 1.11

**Number and weighted percentage of most common languages spoken at home, as reported by immigrant students in PISA 2003**

|                             | Test language or other national language |                                       |                                      | Languages other than the language of instruction |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|-----------------------------|------------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------------------|--------------------------------------|------------------------|-----------------------------|--------------------|------------------------|----------------------------|------------------------|------------------------|-----|
|                             |                                          |                                       |                                      | First most common language                       |                                      |                        | Second most common language |                    |                        | Third most common language |                        |                        |     |
|                             | Language <sup>1</sup>                    | Number of students                    | Percentage of students               | Language <sup>1</sup>                            | Number of students                   | Percentage of students | Language <sup>1</sup>       | Number of students | Percentage of students | Language <sup>1</sup>      | Number of students     | Percentage of students |     |
| OECD countries              | Australia                                | English                               | 11258                                | 89.0                                             | Cantonese                            | 87                     | 0.8                         | Arabic             | 78                     | 0.8                        | Vietnamese             | 71                     | 0.7 |
|                             |                                          | Indigenous Australian language        | 26                                   | 0.1                                              |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | Austria                                  | German                                | 4065                                 | 88.0                                             | Serbo-Croat                          | 166                    | 3.7                         | Turkish            | 104                    | 2.5                        | Albanian               | 20                     | 0.4 |
|                             | Belgium                                  | Dutch                                 | 3468                                 | 40.0                                             | Turkish                              | 98                     | 1.2                         | Wallon             | 76                     | 0.3                        | Arabic                 | 58                     | 0.7 |
|                             |                                          | French                                | 2625                                 | 35.9                                             |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             |                                          | German                                | 482                                  | 0.6                                              |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             |                                          | Flemish dialect                       | 813                                  | 8.7                                              |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | Canada                                   | English                               | 20951                                | 60.0                                             | Other languages                      | 1688                   | 10.0                        |                    |                        |                            |                        |                        |     |
|                             |                                          | French                                | 3621                                 | 18.9                                             |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | Denmark                                  | Danish                                | 3924                                 | 92.8                                             | Arabic                               | 26                     | 0.6                         | Turkish            | 19                     | 0.5                        | Serbo-Croatian         | 12                     | 0.3 |
|                             | France                                   | French                                | 3886                                 | 89.7                                             | Other national dialects or languages | 228                    | 5.9                         |                    |                        |                            |                        |                        |     |
|                             |                                          |                                       | Other national dialects or languages | 26                                               |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | Germany                                  | German                                | 3820                                 | 80.3                                             | Russian                              | 81                     | 1.8                         | Turkish            | 71                     | 1.7                        | Polish                 | 26                     | 0.6 |
|                             | Luxembourg                               | Luxembourgian                         | 2460                                 | 62.4                                             | Portuguese                           | 518                    | 13.3                        | Italian            | 89                     | 2.3                        | Yugoslavian and others | 71                     | 2.0 |
|                             |                                          | French                                | 260                                  | 6.7                                              |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             |                                          | German                                | 71                                   | 1.8                                              |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | Netherlands                              | Dutch                                 | 3173                                 | 78.9                                             | Foreign languages                    | 166                    | 4.2                         |                    |                        |                            |                        |                        |     |
|                             |                                          |                                       | Dutch regional languages or dialects | 378                                              |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | New Zealand                              | English                               | 4043                                 | 89.6                                             | Samoan                               | 58                     | 1.4                         | Cantonese          | 58                     | 1.2                        | Mandarin               | 42                     | 0.8 |
|                             | Te Reo Maori                             | 9                                     | 0.2                                  |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |
| Norway                      | Norwegian                                | 3726                                  | 91.7                                 | Other languages                                  | 162                                  | 4                      | Swedish                     | 10                 | 0.3                    | Danish                     | 6                      | 0.1                    |     |
|                             |                                          | Sami                                  | 26                                   |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        | 0.6 |
| Sweden                      | Swedish                                  | 4022                                  | 86.9                                 | Foreign languages                                | 288                                  | 6.8                    |                             |                    |                        |                            |                        |                        |     |
|                             |                                          | Finnish, Yiddish, Romanian and others | 29                                   |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        | 0.7 |
| Switzerland                 | Swiss German                             | 3995                                  | 60.3                                 | Albanian                                         | 237                                  | 2.4                    | Portuguese                  | 125                | 1.1                    | Turkish                    | 66                     | 0.8                    |     |
|                             | French                                   | 2014                                  | 17.9                                 |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | Italian                                  | 672                                   | 3.5                                  |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | Swiss Italian                            | 170                                   | 0.6                                  |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | German                                   | 72                                    | 0.9                                  |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | Romance                                  | 17                                    | 0.3                                  |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |
| United States               | English                                  | 4769                                  | 87.3                                 | Spanish                                          | 327                                  | 5.9                    |                             |                    |                        |                            |                        |                        |     |
| Hong Kong-China             | Cantonese                                | 3961                                  | 87.9                                 | Other languages                                  | 183                                  | 3.8                    |                             |                    |                        |                            |                        |                        |     |
|                             | English                                  | 25                                    | 0.5                                  |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | Oth. nat. dial. or lang.                 | 159                                   | 3.8                                  |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |
| Macao-China                 | Cantonese                                | 1090                                  | 87.4                                 | Other languages                                  | 53                                   | 4.5                    |                             |                    |                        |                            |                        |                        |     |
|                             | Portuguese                               | 1                                     | 0.0                                  |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | Other national dialects                  | 68                                    | 5.8                                  |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |
| Russian Federation          | Russian                                  | 5608                                  | 93.5                                 | Other languages                                  | 289                                  | 5.3                    |                             |                    |                        |                            |                        |                        |     |
| Belgium (Flemish Community) | Dutch                                    | 3431                                  | 38.8                                 | Turkish                                          | 70                                   | 0.8                    | Arabic                      | 22                 | 0.2                    | English                    | 13                     | 0.1                    |     |
|                             | French                                   | 95                                    | 1.0                                  |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | German                                   | 3                                     | 0.0                                  |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | Flemish dialect                          | 813                                   | 8.7                                  |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |
| Belgium (French Community)  | French                                   | 2506                                  | 34.9                                 | Arabic                                           | 35                                   | 0.5                    | Turkish                     | 28                 | 0.4                    | Wallon                     | 25                     | 0.3                    |     |
|                             | Dutch                                    | 30                                    | 0.2                                  |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |
|                             | German                                   | 15                                    | 0.2                                  |                                                  |                                      |                        |                             |                    |                        |                            |                        |                        |     |

1. Language categories in questionnaire were chosen by participating countries.

Source: OECD PISA 2003 database.



Table 2.1a  
Differences in mathematics performance by immigrant status

|                   | Performance on the mathematics scale |            |                            |            |                           |            | Difference in the mathematics score              |             |                                                 |             |                                                            |            |               |
|-------------------|--------------------------------------|------------|----------------------------|------------|---------------------------|------------|--------------------------------------------------|-------------|-------------------------------------------------|-------------|------------------------------------------------------------|------------|---------------|
|                   | Native students                      |            | Second-generation students |            | First-generation students |            | Second-generation students minus native students |             | First-generation students minus native students |             | First-generation students minus second-generation students |            |               |
|                   | Mean score                           | S.E.       | Mean score                 | S.E.       | Mean score                | S.E.       | Difference                                       | S.E.        | Difference                                      | S.E.        | Difference                                                 | S.E.       |               |
| OECD countries    | Australia                            | 527        | (2.1)                      | 522        | (4.7)                     | 525        | (4.9)                                            | -5          | (4.7)                                           | -2          | (4.9)                                                      | 3          | (4.8)         |
|                   | Austria                              | 515        | (3.3)                      | 459        | (8.8)                     | 452        | (6.0)                                            | <b>-56</b>  | (9.3)                                           | <b>-63</b>  | (6.0)                                                      | -7         | (9.5)         |
|                   | Belgium                              | 546        | (2.5)                      | 454        | (7.5)                     | 437        | (10.8)                                           | <b>-92</b>  | (7.6)                                           | <b>-109</b> | (10.9)                                                     | -17        | (12.4)        |
|                   | Canada                               | 537        | (1.6)                      | 543        | (4.3)                     | 530        | (4.7)                                            | 6           | (4.4)                                           | -7          | (4.8)                                                      | <b>-13</b> | (5.1)         |
|                   | Denmark                              | 520        | (2.5)                      | 449        | (11.2)                    | 455        | (10.1)                                           | <b>-70</b>  | (11.1)                                          | <b>-65</b>  | (9.8)                                                      | 5          | (13.5)        |
|                   | France                               | 520        | (2.4)                      | 472        | (6.1)                     | 448        | (15.0)                                           | <b>-48</b>  | (6.6)                                           | <b>-72</b>  | (15.0)                                                     | -25        | (15.5)        |
|                   | Germany                              | 525        | (3.5)                      | 432        | (9.1)                     | 454        | (7.5)                                            | <b>-93</b>  | (9.6)                                           | <b>-71</b>  | (7.9)                                                      | 22         | (11.2)        |
|                   | Luxembourg                           | 507        | (1.3)                      | 476        | (3.3)                     | 462        | (3.7)                                            | <b>-31</b>  | (3.7)                                           | <b>-45</b>  | (4.1)                                                      | <b>-14</b> | (5.6)         |
|                   | Netherlands                          | 551        | (3.0)                      | 492        | (10.3)                    | 472        | (8.4)                                            | <b>-59</b>  | (11.1)                                          | <b>-79</b>  | (8.8)                                                      | -19        | (10.8)        |
|                   | New Zealand                          | 528        | (2.6)                      | 496        | (8.4)                     | 523        | (4.9)                                            | <b>-32</b>  | (9.1)                                           | -5          | (5.6)                                                      | 27         | (8.0)         |
|                   | Norway                               | 499        | (2.3)                      | 460        | (11.7)                    | 438        | (9.3)                                            | <b>-39</b>  | (11.3)                                          | <b>-61</b>  | (9.4)                                                      | -22        | (13.8)        |
|                   | Sweden                               | 517        | (2.2)                      | 483        | (9.8)                     | 425        | (9.6)                                            | <b>-34</b>  | (9.1)                                           | <b>-92</b>  | (9.7)                                                      | <b>-58</b> | (10.9)        |
|                   | Switzerland                          | 543        | (3.3)                      | 484        | (5.0)                     | 453        | (6.1)                                            | <b>-59</b>  | (4.9)                                           | <b>-89</b>  | (6.0)                                                      | <b>-31</b> | (6.4)         |
| Partner countries | United States                        | 490        | (2.8)                      | 468        | (7.6)                     | 453        | (7.5)                                            | <b>-22</b>  | (7.2)                                           | <b>-36</b>  | (7.5)                                                      | -14        | (7.4)         |
|                   | <i>OECD average</i>                  | <b>523</b> | <b>(0.7)</b>               | <b>483</b> | <b>(2.1)</b>              | <b>475</b> | <b>(1.9)</b>                                     | <b>-40</b>  | <b>(2.0)</b>                                    | <b>-48</b>  | <b>(2.1)</b>                                               | <b>-8</b>  | <b>(2.4)</b>  |
|                   | Hong Kong-China                      | <b>557</b> | <b>(4.5)</b>               | <b>570</b> | <b>(4.6)</b>              | <b>516</b> | <b>(5.3)</b>                                     | <b>13</b>   | <b>(4.3)</b>                                    | <b>-41</b>  | <b>(4.5)</b>                                               | <b>-54</b> | <b>(5.2)</b>  |
|                   | Macao-China                          | <b>528</b> | <b>(5.9)</b>               | <b>532</b> | <b>(4.1)</b>              | <b>517</b> | <b>(9.2)</b>                                     | <b>4</b>    | <b>(7.9)</b>                                    | <b>-11</b>  | <b>(10.4)</b>                                              | <b>-15</b> | <b>(10.4)</b> |
|                   | Russian Federation                   | <b>472</b> | <b>(4.4)</b>               | <b>457</b> | <b>(7.2)</b>              | <b>452</b> | <b>(5.9)</b>                                     | <b>-14</b>  | <b>(7.2)</b>                                    | <b>-20</b>  | <b>(5.4)</b>                                               | <b>-6</b>  | <b>(8.3)</b>  |
|                   | Belgium (Flemish Community)          | 567        | (2.9)                      | 445        | (10.7)                    | 472        | (10.0)                                           | <b>-122</b> | (11.3)                                          | <b>-95</b>  | (9.9)                                                      | 27         | (13.5)        |
|                   | Belgium (French Community)           | 514        | (4.3)                      | 458        | (9.6)                     | 419        | (14.4)                                           | <b>-56</b>  | (9.3)                                           | <b>-94</b>  | (14.4)                                                     | <b>-39</b> | (15.2)        |

Note: Differences that are statistically significant are indicated in bold.

Table 2.1b  
Differences in reading performance by immigrant status

|                   | Performance on the reading scale |            |                            |            |                           |            | Difference in the reading score                  |             |                                                 |             |                                                            |            |              |
|-------------------|----------------------------------|------------|----------------------------|------------|---------------------------|------------|--------------------------------------------------|-------------|-------------------------------------------------|-------------|------------------------------------------------------------|------------|--------------|
|                   | Native students                  |            | Second-generation students |            | First-generation students |            | Second-generation students minus native students |             | First-generation students minus native students |             | First-generation students minus second-generation students |            |              |
|                   | Mean score                       | S.E.       | Mean score                 | S.E.       | Mean score                | S.E.       | Difference                                       | S.E.        | Difference                                      | S.E.        | Difference                                                 | S.E.       |              |
| OECD countries    | Australia                        | 529        | (2.2)                      | 525        | (4.6)                     | 517        | (5.0)                                            | -4          | (4.7)                                           | -12         | (4.9)                                                      | -8         | (5.6)        |
|                   | Austria                          | 501        | (3.8)                      | 428        | (13.5)                    | 425        | (8.0)                                            | <b>-73</b>  | (13.8)                                          | <b>-77</b>  | (8.5)                                                      | -3         | (12.9)       |
|                   | Belgium                          | 523        | (2.7)                      | 439        | (7.5)                     | 407        | (11.9)                                           | <b>-84</b>  | (7.2)                                           | <b>-117</b> | (11.9)                                                     | -33        | (12.8)       |
|                   | Canada                           | 534        | (1.6)                      | 543        | (4.2)                     | 515        | (4.7)                                            | 10          | (4.2)                                           | -19         | (4.8)                                                      | <b>-28</b> | (4.8)        |
|                   | Denmark                          | 497        | (2.7)                      | 440        | (13.8)                    | 454        | (9.5)                                            | <b>-57</b>  | (13.8)                                          | <b>-42</b>  | (9.6)                                                      | 15         | (15.5)       |
|                   | France                           | 505        | (2.6)                      | 458        | (6.9)                     | 426        | (15.3)                                           | <b>-48</b>  | (7.4)                                           | <b>-79</b>  | (15.5)                                                     | -32        | (15.2)       |
|                   | Germany                          | 517        | (3.5)                      | 420        | (9.9)                     | 431        | (8.9)                                            | <b>-96</b>  | (10.5)                                          | <b>-86</b>  | (9.0)                                                      | 10         | (12.8)       |
|                   | Luxembourg                       | 500        | (1.8)                      | 454        | (4.0)                     | 431        | (4.4)                                            | <b>-47</b>  | (4.3)                                           | <b>-69</b>  | (4.9)                                                      | <b>-22</b> | (6.3)        |
|                   | Netherlands                      | 524        | (2.9)                      | 475        | (8.2)                     | 463        | (8.1)                                            | <b>-50</b>  | (8.7)                                           | <b>-61</b>  | (8.8)                                                      | -11        | (9.8)        |
|                   | New Zealand                      | 528        | (2.9)                      | 506        | (8.3)                     | 503        | (5.3)                                            | <b>-22</b>  | (9.0)                                           | -25         | (6.1)                                                      | -3         | (8.0)        |
|                   | Norway                           | 505        | (2.7)                      | 446        | (11.1)                    | 436        | (11.5)                                           | <b>-59</b>  | (11.0)                                          | <b>-68</b>  | (11.3)                                                     | -10        | (14.8)       |
|                   | Sweden                           | 522        | (2.2)                      | 502        | (8.7)                     | 433        | (11.3)                                           | <b>-20</b>  | (8.2)                                           | <b>-89</b>  | (11.6)                                                     | <b>-69</b> | (12.2)       |
|                   | Switzerland                      | 515        | (3.2)                      | 462        | (5.2)                     | 422        | (6.3)                                            | <b>-53</b>  | (5.1)                                           | <b>-93</b>  | (6.0)                                                      | <b>-40</b> | (6.7)        |
| Partner countries | United States                    | 503        | (3.1)                      | 481        | (8.7)                     | 453        | (8.3)                                            | <b>-22</b>  | (8.3)                                           | <b>-50</b>  | (8.4)                                                      | -28        | (8.5)        |
|                   | <i>OECD average</i>              | <b>514</b> | <b>(0.8)</b>               | <b>475</b> | <b>(2.1)</b>              | <b>456</b> | <b>(2.1)</b>                                     | <b>-39</b>  | <b>(2.1)</b>                                    | <b>-58</b>  | <b>(2.3)</b>                                               | <b>-19</b> | <b>(2.7)</b> |
|                   | Hong Kong-China                  | <b>513</b> | <b>(3.7)</b>               | <b>522</b> | <b>(3.8)</b>              | <b>494</b> | <b>(4.9)</b>                                     | <b>9</b>    | <b>(3.5)</b>                                    | <b>-19</b>  | <b>(4.1)</b>                                               | <b>-28</b> | <b>(4.8)</b> |
|                   | Macao-China                      | <b>499</b> | <b>(5.1)</b>               | <b>497</b> | <b>(2.9)</b>              | <b>499</b> | <b>(7.1)</b>                                     | <b>-2</b>   | <b>(5.7)</b>                                    | <b>0</b>    | <b>(9.2)</b>                                               | <b>2</b>   | <b>(8.4)</b> |
|                   | Russian Federation               | <b>446</b> | <b>(4.0)</b>               | <b>426</b> | <b>(6.9)</b>              | <b>413</b> | <b>(7.6)</b>                                     | <b>-20</b>  | <b>(6.6)</b>                                    | <b>-34</b>  | <b>(6.8)</b>                                               | <b>-13</b> | <b>(9.7)</b> |
|                   | Belgium (Flemish Community)      | 543        | (3.0)                      | 440        | (10.2)                    | 450        | (10.6)                                           | <b>-103</b> | (11.0)                                          | <b>-93</b>  | (10.8)                                                     | 10         | (14.1)       |
|                   | Belgium (French Community)       | 494        | (4.8)                      | 439        | (10.4)                    | 385        | (15.8)                                           | <b>-55</b>  | (9.4)                                           | <b>-109</b> | (15.6)                                                     | <b>-54</b> | (16.6)       |

Note: Differences that are statistically significant are indicated in bold.

Table 2.1c  
Differences in science performance by immigrant status

|                             | Performance on the science scale |              |                            |              |                           |              | Difference in the science score                  |              |                                                 |              |                                                            |              |
|-----------------------------|----------------------------------|--------------|----------------------------|--------------|---------------------------|--------------|--------------------------------------------------|--------------|-------------------------------------------------|--------------|------------------------------------------------------------|--------------|
|                             | Native students                  |              | Second-generation students |              | First-generation students |              | Second-generation students minus native students |              | First-generation students minus native students |              | First-generation students minus second-generation students |              |
|                             | Mean score                       | S.E.         | Mean score                 | S.E.         | Mean score                | S.E.         | Difference                                       | S.E.         | Difference                                      | S.E.         | Difference                                                 | S.E.         |
| OECD countries              | 529                              | (2.1)        | 520                        | (4.7)        | 515                       | (5.5)        | -10                                              | (4.8)        | -15                                             | (5.4)        | -5                                                         | (5.7)        |
| Australia                   | 502                              | (3.4)        | 434                        | (9.6)        | 422                       | (6.4)        | <b>-68</b>                                       | (10.1)       | <b>-80</b>                                      | (6.4)        | -13                                                        | (11.0)       |
| Austria                     | 524                              | (2.6)        | 435                        | (7.7)        | 416                       | (10.5)       | <b>-89</b>                                       | (7.5)        | <b>-108</b>                                     | (10.4)       | -18                                                        | (11.7)       |
| Belgium                     | 527                              | (1.9)        | 519                        | (5.0)        | 501                       | (5.1)        | -8                                               | (5.2)        | -26                                             | (5.4)        | <b>-18</b>                                                 | (5.6)        |
| Canada                      | 481                              | (2.8)        | 396                        | (13.7)       | 422                       | (11.0)       | <b>-86</b>                                       | (13.8)       | <b>-59</b>                                      | (10.9)       | 27                                                         | (16.4)       |
| Denmark                     | 521                              | (3.0)        | 465                        | (7.0)        | 433                       | (17.1)       | <b>-56</b>                                       | (8.0)        | <b>-88</b>                                      | (17.3)       | -32                                                        | (16.7)       |
| France                      | 529                              | (3.7)        | 412                        | (9.6)        | 444                       | (8.8)        | <b>-117</b>                                      | (10.0)       | <b>-85</b>                                      | (8.9)        | 32                                                         | (12.4)       |
| Germany                     | 500                              | (1.7)        | 464                        | (3.9)        | 441                       | (4.4)        | <b>-35</b>                                       | (4.3)        | <b>-59</b>                                      | (4.5)        | <b>-23</b>                                                 | (6.0)        |
| Luxembourg                  | 538                              | (3.2)        | 465                        | (10.3)       | 457                       | (10.6)       | <b>-72</b>                                       | (10.8)       | <b>-80</b>                                      | (11.1)       | -8                                                         | (13.0)       |
| Netherlands                 | 528                              | (2.7)        | 485                        | (8.8)        | 511                       | (5.3)        | <b>-44</b>                                       | (9.3)        | -17                                             | (5.9)        | 27                                                         | (8.5)        |
| New Zealand                 | 490                              | (2.7)        | 427                        | (13.3)       | 399                       | (11.9)       | <b>-63</b>                                       | (12.9)       | <b>-91</b>                                      | (11.9)       | 38                                                         | (17.7)       |
| Norway                      | 516                              | (2.6)        | 466                        | (9.7)        | 409                       | (10.9)       | <b>-50</b>                                       | (9.4)        | <b>-107</b>                                     | (11.3)       | <b>-57</b>                                                 | (12.0)       |
| Sweden                      | 531                              | (3.5)        | 462                        | (6.0)        | 429                       | (6.8)        | <b>-69</b>                                       | (5.8)        | <b>-102</b>                                     | (6.6)        | <b>-33</b>                                                 | (7.0)        |
| Switzerland                 | 499                              | (2.9)        | 466                        | (8.9)        | 462                       | (8.3)        | <b>-33</b>                                       | (8.7)        | <b>-37</b>                                      | (8.1)        | -4                                                         | (9.1)        |
| United States               | 515                              | <b>(0.9)</b> | 467                        | <b>(2.2)</b> | 456                       | <b>(2.2)</b> | <b>-48</b>                                       | <b>(2.0)</b> | <b>-59</b>                                      | <b>(2.3)</b> | <b>-11</b>                                                 | <b>(2.5)</b> |
| OECD average                | 515                              | <b>(0.9)</b> | 467                        | <b>(2.2)</b> | 456                       | <b>(2.2)</b> | <b>-48</b>                                       | <b>(2.0)</b> | <b>-59</b>                                      | <b>(2.3)</b> | <b>-11</b>                                                 | <b>(2.5)</b> |
| Partner countries           | 545                              | (4.3)        | 557                        | (4.3)        | 511                       | (5.4)        | 12                                               | (4.1)        | <b>-34</b>                                      | (4.5)        | <b>-47</b>                                                 | (5.3)        |
| Hong Kong-China             | 526                              | (6.9)        | 524                        | (4.3)        | 529                       | (8.3)        | -2                                               | (9.0)        | 3                                               | (9.9)        | 5                                                          | (9.8)        |
| Macao-China                 | 493                              | (4.2)        | 463                        | (7.6)        | 478                       | (6.9)        | <b>-30</b>                                       | (7.3)        | <b>-15</b>                                      | (6.4)        | 14                                                         | (10.0)       |
| Russian Federation          | 540                              | (2.8)        | 425                        | (11.2)       | 448                       | (10.0)       | <b>-115</b>                                      | (11.9)       | <b>-92</b>                                      | (9.8)        | 23                                                         | (13.8)       |
| Belgium (Flemish Community) | 500                              | (4.5)        | 440                        | (9.8)        | 401                       | (14.2)       | <b>-60</b>                                       | (9.0)        | <b>-99</b>                                      | (14.1)       | <b>-39</b>                                                 | (15.9)       |
| Belgium (French Community)  |                                  |              |                            |              |                           |              |                                                  |              |                                                 |              |                                                            |              |

Note: Differences that are statistically significant are indicated in bold.

Table 2.1d  
Differences in problem-solving performance by immigrant status

|                             | Performance on the problem-solving scale |              |                            |              |                           |              | Difference in the problem-solving score          |              |                                                 |              |                                                            |              |
|-----------------------------|------------------------------------------|--------------|----------------------------|--------------|---------------------------|--------------|--------------------------------------------------|--------------|-------------------------------------------------|--------------|------------------------------------------------------------|--------------|
|                             | Native students                          |              | Second-generation students |              | First-generation students |              | Second-generation students minus native students |              | First-generation students minus native students |              | First-generation students minus second-generation students |              |
|                             | Mean score                               | S.E.         | Mean score                 | S.E.         | Mean score                | S.E.         | Difference                                       | S.E.         | Difference                                      | S.E.         | Difference                                                 | S.E.         |
| OECD countries              | 534                                      | (2.1)        | 521                        | (4.0)        | 523                       | (4.8)        | -14                                              | (4.3)        | -12                                             | (4.7)        | 2                                                          | (5.1)        |
| Australia                   | 515                                      | (3.2)        | 465                        | (9.9)        | 453                       | (5.9)        | <b>-50</b>                                       | (10.2)       | <b>-62</b>                                      | (5.8)        | -12                                                        | (9.7)        |
| Austria                     | 540                                      | (2.5)        | 445                        | (7.5)        | 447                       | (8.5)        | <b>-95</b>                                       | (7.5)        | <b>-93</b>                                      | (8.8)        | 2                                                          | (10.1)       |
| Belgium                     | 535                                      | (1.6)        | 532                        | (4.0)        | 533                       | (4.7)        | -3                                               | (4.2)        | -2                                              | (4.7)        | 1                                                          | (4.9)        |
| Canada                      | 522                                      | (2.4)        | 443                        | (10.5)       | 464                       | (8.8)        | <b>-79</b>                                       | (10.5)       | <b>-58</b>                                      | (8.7)        | 21                                                         | (13.0)       |
| Denmark                     | 529                                      | (2.5)        | 482                        | (6.2)        | 445                       | (14.8)       | <b>-47</b>                                       | (6.5)        | <b>-84</b>                                      | (14.9)       | <b>-37</b>                                                 | (14.3)       |
| France                      | 534                                      | (3.4)        | 443                        | (9.3)        | 461                       | (7.4)        | <b>-90</b>                                       | (9.6)        | <b>-73</b>                                      | (7.8)        | 18                                                         | (11.6)       |
| Germany                     | 507                                      | (1.8)        | 475                        | (3.7)        | 463                       | (3.9)        | <b>-33</b>                                       | (4.2)        | <b>-44</b>                                      | (4.4)        | <b>-11</b>                                                 | (5.6)        |
| Luxembourg                  | 532                                      | (3.1)        | 463                        | (9.7)        | 462                       | (8.8)        | <b>-69</b>                                       | (10.4)       | <b>-70</b>                                      | (9.5)        | -1                                                         | (10.5)       |
| Netherlands                 | 537                                      | (2.5)        | 500                        | (7.5)        | 534                       | (4.6)        | <b>-38</b>                                       | (8.1)        | -3                                              | (5.3)        | 35                                                         | (7.7)        |
| New Zealand                 | 494                                      | (2.6)        | 452                        | (11.7)       | 417                       | (10.3)       | <b>-43</b>                                       | (11.5)       | <b>-78</b>                                      | (10.7)       | <b>-35</b>                                                 | (14.9)       |
| Norway                      | 516                                      | (2.2)        | 483                        | (8.9)        | 434                       | (10.1)       | <b>-33</b>                                       | (8.3)        | <b>-82</b>                                      | (10.4)       | <b>-49</b>                                                 | (11.5)       |
| Sweden                      | 538                                      | (3.0)        | 480                        | (4.8)        | 447                       | (5.8)        | <b>-58</b>                                       | (4.7)        | <b>-91</b>                                      | (5.9)        | <b>-33</b>                                                 | (6.2)        |
| Switzerland                 | 483                                      | (2.9)        | 464                        | (8.5)        | 446                       | (8.3)        | <b>-19</b>                                       | (8.1)        | <b>-37</b>                                      | (8.1)        | -18                                                        | (8.4)        |
| United States               | 522                                      | <b>(0.8)</b> | 480                        | <b>(2.0)</b> | 476                       | <b>(1.9)</b> | <b>-42</b>                                       | <b>(2.0)</b> | <b>-46</b>                                      | <b>(2.1)</b> | <b>-4</b>                                                  | <b>(2.3)</b> |
| OECD average                | 522                                      | <b>(0.8)</b> | 480                        | <b>(2.0)</b> | 476                       | <b>(1.9)</b> | <b>-42</b>                                       | <b>(2.0)</b> | <b>-46</b>                                      | <b>(2.1)</b> | <b>-4</b>                                                  | <b>(2.3)</b> |
| Partner countries           | 556                                      | (4.1)        | 572                        | (4.0)        | 505                       | (5.0)        | 17                                               | (3.8)        | <b>-51</b>                                      | (4.4)        | <b>-68</b>                                                 | (5.0)        |
| Hong Kong-China             | 536                                      | (5.1)        | 533                        | (3.3)        | 531                       | (8.9)        | -4                                               | (6.5)        | -6                                              | (10.0)       | -2                                                         | (9.6)        |
| Macao-China                 | 482                                      | (4.7)        | 473                        | (6.7)        | 451                       | (7.4)        | <b>-9</b>                                        | (6.9)        | <b>-31</b>                                      | (6.2)        | <b>-22</b>                                                 | (9.4)        |
| Russian Federation          | 559                                      | (2.8)        | 436                        | (10.8)       | 475                       | (10.4)       | <b>-123</b>                                      | (11.4)       | <b>-84</b>                                      | (10.5)       | 39                                                         | (14.4)       |
| Belgium (Flemish Community) | 512                                      | (4.1)        | 449                        | (9.7)        | 433                       | (11.3)       | <b>-63</b>                                       | (9.3)        | <b>-79</b>                                      | (11.5)       | -16                                                        | (12.4)       |
| Belgium (French Community)  |                                          |              |                            |              |                           |              |                                                  |              |                                                 |              |                                                            |              |

Note: Differences that are statistically significant are indicated in bold.



Table 2.2  
Correlations between mathematics, reading, science and problem-solving performance, by immigrant status

|                             |                            | Native students                         |             |                         |             |                                 |             |                     |             |                             |             |                             |             |               |
|-----------------------------|----------------------------|-----------------------------------------|-------------|-------------------------|-------------|---------------------------------|-------------|---------------------|-------------|-----------------------------|-------------|-----------------------------|-------------|---------------|
|                             |                            | Correlation between the performance in: |             |                         |             |                                 |             |                     |             |                             |             |                             |             |               |
|                             |                            | Mathematics and reading                 |             | Mathematics and science |             | Mathematics and problem-solving |             | Reading and science |             | Reading and problem-solving |             | Science and problem-solving |             |               |
|                             |                            | Coef.                                   | S.E.        | Coef.                   | S.E.        | Coef.                           | S.E.        | Coef.               | S.E.        | Coef.                       | S.E.        | Coef.                       | S.E.        |               |
| OECD countries              | Australia                  | 0.77                                    | (0.01)      | 0.84                    | (0.01)      | 0.89                            | (0.00)      | 0.84                | (0.00)      | 0.82                        | (0.01)      | 0.83                        | (0.01)      |               |
|                             | Austria                    | 0.78                                    | (0.01)      | 0.87                    | (0.01)      | 0.90                            | (0.01)      | 0.85                | (0.01)      | 0.81                        | (0.01)      | 0.84                        | (0.01)      |               |
|                             | Belgium                    | 0.79                                    | (0.01)      | 0.84                    | (0.01)      | 0.90                            | (0.00)      | 0.84                | (0.01)      | 0.83                        | (0.01)      | 0.82                        | (0.01)      |               |
|                             | Canada                     | 0.77                                    | (0.01)      | 0.83                    | (0.01)      | 0.88                            | (0.00)      | 0.85                | (0.00)      | 0.85                        | (0.00)      | 0.82                        | (0.00)      |               |
|                             | Denmark                    | 0.71                                    | (0.01)      | 0.79                    | (0.01)      | 0.89                            | (0.00)      | 0.78                | (0.01)      | 0.77                        | (0.01)      | 0.78                        | (0.01)      |               |
|                             | France                     | 0.74                                    | (0.01)      | 0.80                    | (0.01)      | 0.86                            | (0.01)      | 0.84                | (0.01)      | 0.84                        | (0.01)      | 0.77                        | (0.01)      |               |
|                             | Germany                    | 0.76                                    | (0.01)      | 0.86                    | (0.01)      | 0.90                            | (0.01)      | 0.83                | (0.01)      | 0.83                        | (0.01)      | 0.84                        | (0.01)      |               |
|                             | Luxembourg                 | 0.76                                    | (0.01)      | 0.84                    | (0.01)      | 0.88                            | (0.01)      | 0.85                | (0.01)      | 0.82                        | (0.01)      | 0.83                        | (0.01)      |               |
|                             | Netherlands                | 0.86                                    | (0.01)      | 0.89                    | (0.01)      | 0.93                            | (0.00)      | 0.88                | (0.01)      | 0.87                        | (0.01)      | 0.87                        | (0.01)      |               |
|                             | New Zealand                | 0.82                                    | (0.01)      | 0.88                    | (0.01)      | 0.90                            | (0.00)      | 0.85                | (0.01)      | 0.86                        | (0.01)      | 0.83                        | (0.01)      |               |
|                             | Norway                     | 0.74                                    | (0.01)      | 0.81                    | (0.01)      | 0.88                            | (0.01)      | 0.79                | (0.01)      | 0.83                        | (0.01)      | 0.74                        | (0.01)      |               |
|                             | Sweden                     | 0.73                                    | (0.01)      | 0.78                    | (0.01)      | 0.84                            | (0.01)      | 0.84                | (0.01)      | 0.79                        | (0.01)      | 0.73                        | (0.01)      |               |
|                             | Switzerland                | 0.73                                    | (0.01)      | 0.82                    | (0.01)      | 0.87                            | (0.01)      | 0.79                | (0.01)      | 0.79                        | (0.01)      | 0.79                        | (0.01)      |               |
|                             | United States              | 0.84                                    | (0.01)      | 0.86                    | (0.01)      | 0.92                            | (0.00)      | 0.87                | (0.01)      | 0.86                        | (0.01)      | 0.84                        | (0.01)      |               |
|                             |                            | <b>OECD average</b>                     | <b>0.77</b> | <b>(0.00)</b>           | <b>0.83</b> | <b>(0.00)</b>                   | <b>0.89</b> | <b>(0.00)</b>       | <b>0.83</b> | <b>(0.00)</b>               | <b>0.82</b> | <b>(0.00)</b>               | <b>0.80</b> | <b>(0.00)</b> |
|                             | Partner countries          | Hong Kong-China                         | 0.81        | (0.01)                  | 0.86        | (0.01)                          | 0.91        | (0.01)              | 0.83        | (0.01)                      | 0.85        | (0.01)                      | 0.84        | (0.01)        |
|                             |                            | Macao-China                             | 0.58        | (0.05)                  | 0.71        | (0.04)                          | 0.82        | (0.02)              | 0.73        | (0.04)                      | 0.66        | (0.05)                      | 0.69        | (0.05)        |
| Russian Federation          |                            | 0.61                                    | (0.02)      | 0.69                    | (0.01)      | 0.79                            | (0.01)      | 0.74                | (0.01)      | 0.74                        | (0.01)      | 0.62                        | (0.02)      |               |
| Belgium (Flemish community) |                            | 0.76                                    | (0.02)      | 0.82                    | (0.01)      | 0.94                            | (0.01)      | 0.86                | (0.02)      | 0.91                        | (0.02)      | 0.89                        | (0.02)      |               |
|                             | Belgium (French community) | 0.79                                    | (0.02)      | 0.84                    | (0.01)      | 0.92                            | (0.01)      | 0.8                 | (0.02)      | 0.81                        | (0.02)      | 0.82                        | (0.02)      |               |
|                             |                            | Second-generation students              |             |                         |             |                                 |             |                     |             |                             |             |                             |             |               |
|                             |                            | Correlation between the performance in: |             |                         |             |                                 |             |                     |             |                             |             |                             |             |               |
|                             |                            | Mathematics and reading                 |             | Mathematics and science |             | Mathematics and problem-solving |             | Reading and science |             | Reading and problem-solving |             | Science and problem-solving |             |               |
|                             |                            | Coef.                                   | S.E.        | Coef.                   | S.E.        | Coef.                           | S.E.        | Coef.               | S.E.        | Coef.                       | S.E.        | Coef.                       | S.E.        |               |
| OECD countries              | Australia                  | 0.79                                    | (0.02)      | 0.85                    | (0.01)      | 0.90                            | (0.01)      | 0.86                | (0.01)      | 0.83                        | (0.01)      | 0.84                        | (0.01)      |               |
|                             | Austria                    | 0.75                                    | (0.04)      | 0.83                    | (0.03)      | 0.87                            | (0.02)      | 0.76                | (0.06)      | 0.82                        | (0.04)      | 0.81                        | (0.04)      |               |
|                             | Belgium                    | 0.80                                    | (0.02)      | 0.85                    | (0.02)      | 0.90                            | (0.01)      | 0.85                | (0.02)      | 0.84                        | (0.02)      | 0.84                        | (0.02)      |               |
|                             | Canada                     | 0.76                                    | (0.02)      | 0.82                    | (0.01)      | 0.87                            | (0.01)      | 0.85                | (0.01)      | 0.84                        | (0.02)      | 0.82                        | (0.01)      |               |
|                             | Denmark                    | 0.70                                    | (0.05)      | 0.78                    | (0.04)      | 0.85                            | (0.03)      | 0.80                | (0.04)      | 0.78                        | (0.04)      | 0.76                        | (0.04)      |               |
|                             | France                     | 0.73                                    | (0.04)      | 0.78                    | (0.03)      | 0.83                            | (0.02)      | 0.83                | (0.02)      | 0.82                        | (0.02)      | 0.74                        | (0.03)      |               |
|                             | Germany                    | 0.79                                    | (0.03)      | 0.88                    | (0.02)      | 0.91                            | (0.02)      | 0.84                | (0.02)      | 0.85                        | (0.02)      | 0.86                        | (0.03)      |               |
|                             | Luxembourg                 | 0.78                                    | (0.02)      | 0.85                    | (0.02)      | 0.88                            | (0.01)      | 0.87                | (0.01)      | 0.85                        | (0.02)      | 0.84                        | (0.02)      |               |
|                             | Netherlands                | 0.83                                    | (0.02)      | 0.86                    | (0.03)      | 0.92                            | (0.01)      | 0.88                | (0.02)      | 0.85                        | (0.02)      | 0.85                        | (0.03)      |               |
|                             | New Zealand                | 0.84                                    | (0.03)      | 0.89                    | (0.01)      | 0.92                            | (0.01)      | 0.87                | (0.02)      | 0.87                        | (0.02)      | 0.85                        | (0.02)      |               |
|                             | Norway                     | 0.77                                    | (0.05)      | 0.83                    | (0.04)      | 0.90                            | (0.02)      | 0.83                | (0.03)      | 0.85                        | (0.03)      | 0.78                        | (0.04)      |               |
|                             | Sweden                     | 0.73                                    | (0.05)      | 0.79                    | (0.04)      | 0.84                            | (0.03)      | 0.82                | (0.03)      | 0.78                        | (0.03)      | 0.72                        | (0.06)      |               |
|                             | Switzerland                | 0.77                                    | (0.02)      | 0.84                    | (0.02)      | 0.88                            | (0.02)      | 0.81                | (0.02)      | 0.81                        | (0.02)      | 0.81                        | (0.02)      |               |
|                             | United States              | 0.85                                    | (0.02)      | 0.87                    | (0.02)      | 0.92                            | (0.01)      | 0.87                | (0.02)      | 0.86                        | (0.02)      | 0.85                        | (0.02)      |               |
|                             |                            | <b>OECD average</b>                     | <b>0.79</b> | <b>(0.01)</b>           | <b>0.85</b> | <b>(0.01)</b>                   | <b>0.89</b> | <b>(0.00)</b>       | <b>0.85</b> | <b>(0.01)</b>               | <b>0.84</b> | <b>(0.01)</b>               | <b>0.83</b> | <b>(0.01)</b> |
|                             | Partner countries          | Hong Kong-China                         | 0.82        | (0.02)                  | 0.86        | (0.01)                          | 0.90        | (0.01)              | 0.83        | (0.02)                      | 0.86        | (0.01)                      | 0.83        | (0.01)        |
|                             |                            | Macao-China                             | 0.61        | (0.04)                  | 0.71        | (0.04)                          | 0.81        | (0.02)              | 0.75        | (0.02)                      | 0.67        | (0.03)                      | 0.67        | (0.03)        |
| Russian Federation          |                            | 0.55                                    | (0.05)      | 0.58                    | (0.06)      | 0.75                            | (0.03)      | 0.72                | (0.03)      | 0.72                        | (0.04)      | 0.52                        | (0.05)      |               |
| Belgium (Flemish community) |                            | 0.73                                    | (0.05)      | 0.82                    | (0.06)      | 0.90                            | (0.05)      | 0.91                | (0.05)      | 0.95                        | (0.06)      | 0.87                        | (0.06)      |               |
|                             | Belgium (French community) | 0.82                                    | (0.06)      | 0.86                    | (0.05)      | 0.91                            | (0.05)      | 0.82                | (0.07)      | 0.83                        | (0.06)      | 0.86                        | (0.07)      |               |
|                             |                            | First-generation students               |             |                         |             |                                 |             |                     |             |                             |             |                             |             |               |
|                             |                            | Correlation between the performance in: |             |                         |             |                                 |             |                     |             |                             |             |                             |             |               |
|                             |                            | Mathematics and reading                 |             | Mathematics and science |             | Mathematics and problem-solving |             | Reading and science |             | Reading and problem-solving |             | Science and problem-solving |             |               |
|                             |                            | Coef.                                   | S.E.        | Coef.                   | S.E.        | Coef.                           | S.E.        | Coef.               | S.E.        | Coef.                       | S.E.        | Coef.                       | S.E.        |               |
| OECD countries              | Australia                  | 0.81                                    | (0.02)      | 0.86                    | (0.02)      | 0.91                            | (0.01)      | 0.87                | (0.01)      | 0.84                        | (0.02)      | 0.85                        | (0.02)      |               |
|                             | Austria                    | 0.79                                    | (0.02)      | 0.86                    | (0.01)      | 0.88                            | (0.01)      | 0.83                | (0.02)      | 0.80                        | (0.02)      | 0.82                        | (0.02)      |               |
|                             | Belgium                    | 0.84                                    | (0.03)      | 0.88                    | (0.02)      | 0.89                            | (0.01)      | 0.88                | (0.02)      | 0.85                        | (0.02)      | 0.84                        | (0.02)      |               |
|                             | Canada                     | 0.79                                    | (0.02)      | 0.83                    | (0.02)      | 0.89                            | (0.01)      | 0.87                | (0.01)      | 0.85                        | (0.02)      | 0.83                        | (0.02)      |               |
|                             | Denmark                    | 0.74                                    | (0.05)      | 0.80                    | (0.05)      | 0.89                            | (0.03)      | 0.80                | (0.04)      | 0.79                        | (0.04)      | 0.76                        | (0.06)      |               |
|                             | France                     | 0.81                                    | (0.04)      | 0.83                    | (0.03)      | 0.89                            | (0.02)      | 0.86                | (0.03)      | 0.86                        | (0.03)      | 0.80                        | (0.03)      |               |
|                             | Germany                    | 0.81                                    | (0.02)      | 0.88                    | (0.01)      | 0.92                            | (0.01)      | 0.86                | (0.02)      | 0.86                        | (0.02)      | 0.86                        | (0.02)      |               |
|                             | Luxembourg                 | 0.82                                    | (0.02)      | 0.87                    | (0.01)      | 0.91                            | (0.01)      | 0.88                | (0.01)      | 0.86                        | (0.01)      | 0.86                        | (0.01)      |               |
|                             | Netherlands                | 0.82                                    | (0.04)      | 0.85                    | (0.03)      | 0.93                            | (0.01)      | 0.88                | (0.02)      | 0.83                        | (0.04)      | 0.84                        | (0.04)      |               |
|                             | New Zealand                | 0.80                                    | (0.02)      | 0.87                    | (0.01)      | 0.91                            | (0.01)      | 0.87                | (0.01)      | 0.85                        | (0.02)      | 0.84                        | (0.02)      |               |
|                             | Norway                     | 0.77                                    | (0.04)      | 0.82                    | (0.05)      | 0.86                            | (0.03)      | 0.80                | (0.03)      | 0.82                        | (0.04)      | 0.74                        | (0.06)      |               |
|                             | Sweden                     | 0.78                                    | (0.04)      | 0.79                    | (0.03)      | 0.85                            | (0.03)      | 0.88                | (0.02)      | 0.81                        | (0.03)      | 0.76                        | (0.04)      |               |
|                             | Switzerland                | 0.81                                    | (0.03)      | 0.85                    | (0.02)      | 0.90                            | (0.01)      | 0.83                | (0.02)      | 0.83                        | (0.02)      | 0.83                        | (0.02)      |               |
|                             | United States              | 0.85                                    | (0.02)      | 0.87                    | (0.02)      | 0.93                            | (0.01)      | 0.88                | (0.02)      | 0.86                        | (0.02)      | 0.86                        | (0.02)      |               |
|                             |                            | <b>OECD average</b>                     | <b>0.82</b> | <b>(0.01)</b>           | <b>0.87</b> | <b>(0.00)</b>                   | <b>0.91</b> | <b>(0.00)</b>       | <b>0.87</b> | <b>(0.00)</b>               | <b>0.85</b> | <b>(0.00)</b>               | <b>0.85</b> | <b>(0.01)</b> |
|                             | Partner countries          | Hong Kong-China                         | 0.80        | (0.02)                  | 0.85        | (0.02)                          | 0.90        | (0.01)              | 0.82        | (0.02)                      | 0.84        | (0.02)                      | 0.83        | (0.02)        |
|                             |                            | Macao-China                             | 0.63        | (0.06)                  | 0.70        | (0.05)                          | 0.82        | (0.03)              | 0.75        | (0.03)                      | 0.72        | (0.05)                      | 0.69        | (0.05)        |
| Russian Federation          |                            | 0.60                                    | (0.04)      | 0.68                    | (0.04)      | 0.81                            | (0.03)      | 0.75                | (0.03)      | 0.75                        | (0.04)      | 0.62                        | (0.04)      |               |
| Belgium (Flemish community) |                            | 0.79                                    | (0.04)      | 0.89                    | (0.04)      | 0.97                            | (0.06)      | 0.95                | (0.06)      | 1.00                        | (0.06)      | 0.92                        | (0.07)      |               |
|                             | Belgium (French community) | 0.72                                    | (0.05)      | 0.79                    | (0.06)      | 0.87                            | (0.04)      | 0.89                | (0.06)      | 0.92                        | (0.07)      | 0.87                        | (0.09)      |               |

Table2.3a

## Distribution of student performance on the mathematics scale by immigrant status

|                   |                             | Native students            |        |                                                         |        |                  |        |                  |        |                  |        |
|-------------------|-----------------------------|----------------------------|--------|---------------------------------------------------------|--------|------------------|--------|------------------|--------|------------------|--------|
|                   |                             | Mean score                 |        | Percentiles of the mathematics performance distribution |        |                  |        |                  |        |                  |        |
|                   |                             |                            |        | 5 <sup>th</sup>                                         |        | 25 <sup>th</sup> |        | 75 <sup>th</sup> |        | 95 <sup>th</sup> |        |
|                   |                             | Mean                       | S.E.   | Score                                                   | S.E.   | Score            | S.E.   | Score            | S.E.   | Score            | S.E.   |
| OECD countries    | Australia                   | 527                        | (2.1)  | 371                                                     | (3.3)  | 463              | (2.5)  | 592              | (2.3)  | 675              | (2.5)  |
|                   | Austria                     | 515                        | (3.3)  | 366                                                     | (4.2)  | 451              | (4.1)  | 579              | (3.7)  | 664              | (4.4)  |
|                   | Belgium                     | 546                        | (2.5)  | 369                                                     | (5.3)  | 477              | (3.4)  | 620              | (2.4)  | 698              | (2.1)  |
|                   | Canada                      | 537                        | (1.6)  | 390                                                     | (2.7)  | 478              | (1.9)  | 598              | (2.0)  | 676              | (2.5)  |
|                   | Denmark                     | 520                        | (2.5)  | 369                                                     | (4.2)  | 460              | (3.0)  | 582              | (3.0)  | 665              | (3.8)  |
|                   | France                      | 520                        | (2.4)  | 369                                                     | (5.1)  | 460              | (3.4)  | 582              | (2.8)  | 660              | (3.6)  |
|                   | Germany                     | 525                        | (3.5)  | 371                                                     | (4.9)  | 462              | (4.5)  | 590              | (3.5)  | 669              | (3.6)  |
|                   | Luxembourg                  | 507                        | (1.3)  | 361                                                     | (3.2)  | 449              | (2.0)  | 566              | (1.9)  | 644              | (2.8)  |
|                   | Netherlands                 | 551                        | (3.0)  | 408                                                     | (4.5)  | 487              | (4.7)  | 617              | (3.2)  | 688              | (3.4)  |
|                   | New Zealand                 | 528                        | (2.6)  | 367                                                     | (4.6)  | 461              | (3.3)  | 596              | (2.6)  | 684              | (2.9)  |
| Partner countries | Norway                      | 499                        | (2.3)  | 348                                                     | (3.5)  | 437              | (2.5)  | 563              | (3.1)  | 647              | (3.2)  |
|                   | Sweden                      | 517                        | (2.2)  | 368                                                     | (3.3)  | 455              | (2.6)  | 581              | (2.8)  | 666              | (4.3)  |
|                   | Switzerland                 | 543                        | (3.3)  | 388                                                     | (4.2)  | 482              | (3.4)  | 605              | (4.4)  | 690              | (6.3)  |
|                   | United States               | 490                        | (2.8)  | 333                                                     | (4.0)  | 427              | (3.3)  | 555              | (3.1)  | 642              | (4.0)  |
|                   | <i>OECD average</i>         | 523                        | (0.7)  | 368                                                     | (1.3)  | 459              | (1.0)  | 589              | (0.8)  | 672              | (0.9)  |
|                   | Hong Kong-China             | 557                        | (4.5)  | 384                                                     | (10.8) | 494              | (6.6)  | 627              | (3.8)  | 702              | (4.9)  |
|                   | Macao-China                 | 528                        | (5.9)  | 393                                                     | (12.7) | 468              | (9.8)  | 584              | (8.0)  | 664              | (7.5)  |
|                   | Russian Federation          | 472                        | (4.4)  | 321                                                     | (5.2)  | 408              | (5.2)  | 534              | (4.5)  | 626              | (6.0)  |
|                   | Belgium (Flemish Community) | 567                        | (2.9)  | 399                                                     | (7.8)  | 503              | (4.0)  | 637              | (2.5)  | 709              | (2.2)  |
|                   | Belgium (French Community)  | 514                        | (4.3)  | 339                                                     | (7.6)  | 448              | (5.3)  | 586              | (4.7)  | 672              | (6.2)  |
|                   |                             | Second-generation students |        |                                                         |        |                  |        |                  |        |                  |        |
|                   |                             | Mean score                 |        | Percentiles of the mathematics performance distribution |        |                  |        |                  |        |                  |        |
|                   |                             |                            |        | 5 <sup>th</sup>                                         |        | 25 <sup>th</sup> |        | 75 <sup>th</sup> |        | 95 <sup>th</sup> |        |
|                   |                             | Mean                       | S.E.   | Score                                                   | S.E.   | Score            | S.E.   | Score            | S.E.   | Score            | S.E.   |
| OECD countries    | Australia                   | 522                        | (4.7)  | 360                                                     | (8.1)  | 455              | (5.0)  | 590              | (5.7)  | 676              | (9.7)  |
|                   | Austria                     | 459                        | (8.8)  | 317                                                     | (21.9) | 397              | (12.1) | 521              | (12.0) | 593              | (12.1) |
|                   | Belgium                     | 454                        | (7.5)  | 286                                                     | (12.1) | 383              | (7.7)  | 525              | (9.8)  | 630              | (11.1) |
|                   | Canada                      | 543                        | (4.3)  | 404                                                     | (7.6)  | 484              | (4.2)  | 601              | (5.7)  | 684              | (6.8)  |
|                   | Denmark                     | 449                        | (11.2) | c                                                       | c      | 388              | (13.7) | 500              | (11.2) | c                | c      |
|                   | France                      | 472                        | (6.1)  | 322                                                     | (9.8)  | 412              | (7.5)  | 531              | (6.2)  | 612              | (9.6)  |
|                   | Germany                     | 432                        | (9.1)  | 280                                                     | (19.1) | 361              | (11.4) | 497              | (11.0) | 603              | (11.9) |
|                   | Luxembourg                  | 476                        | (3.3)  | 324                                                     | (6.7)  | 415              | (3.8)  | 534              | (4.3)  | 633              | (7.3)  |
|                   | Netherlands                 | 492                        | (10.3) | 361                                                     | (11.0) | 431              | (12.0) | 552              | (11.5) | 634              | (14.3) |
|                   | New Zealand                 | 496                        | (8.4)  | 335                                                     | (13.9) | 423              | (10.0) | 567              | (10.6) | 664              | (13.1) |
| Partner countries | Norway                      | 460                        | (11.7) | 281                                                     | (18.8) | 386              | (13.0) | 535              | (18.6) | c                | c      |
|                   | Sweden                      | 483                        | (9.8)  | 321                                                     | (17.7) | 421              | (10.3) | 547              | (14.6) | 645              | (17.9) |
|                   | Switzerland                 | 484                        | (5.0)  | 328                                                     | (7.7)  | 417              | (5.5)  | 549              | (6.6)  | 648              | (8.1)  |
|                   | United States               | 468                        | (7.6)  | 318                                                     | (11.1) | 398              | (9.1)  | 535              | (9.6)  | 623              | (14.1) |
|                   | <i>OECD average</i>         | 483                        | (2.1)  | 324                                                     | (3.4)  | 416              | (2.2)  | 549              | (2.8)  | 645              | (3.1)  |
|                   | Hong Kong-China             | 570                        | (4.6)  | 388                                                     | (10.4) | 514              | (7.8)  | 636              | (4.2)  | 706              | (5.3)  |
|                   | Macao-China                 | 532                        | (4.1)  | 384                                                     | (7.4)  | 473              | (5.1)  | 591              | (5.4)  | 669              | (10.9) |
|                   | Russian Federation          | 457                        | (7.2)  | 318                                                     | (13.3) | 403              | (7.5)  | 509              | (9.6)  | 594              | (12.6) |
|                   | Belgium (Flemish Community) | 445                        | (10.7) | 276                                                     | (23.1) | 374              | (12.5) | 511              | (15.6) | 637              | (22.3) |
|                   | Belgium (French Community)  | 458                        | (9.6)  | 289                                                     | (16.6) | 387              | (10.8) | 532              | (11.5) | 626              | (12.0) |
|                   |                             | First-generation students  |        |                                                         |        |                  |        |                  |        |                  |        |
|                   |                             | Mean score                 |        | Percentiles of the mathematics performance distribution |        |                  |        |                  |        |                  |        |
|                   |                             |                            |        | 5 <sup>th</sup>                                         |        | 25 <sup>th</sup> |        | 75 <sup>th</sup> |        | 95 <sup>th</sup> |        |
|                   |                             | Mean                       | S.E.   | Score                                                   | S.E.   | Score            | S.E.   | Score            | S.E.   | Score            | S.E.   |
| OECD countries    | Australia                   | 525                        | (4.9)  | 357                                                     | (9.3)  | 455              | (6.8)  | 596              | (5.8)  | 687              | (10.1) |
|                   | Austria                     | 452                        | (6.0)  | 321                                                     | (7.7)  | 391              | (7.2)  | 506              | (8.8)  | 608              | (13.4) |
|                   | Belgium                     | 437                        | (10.8) | 245                                                     | (19.9) | 357              | (19.7) | 513              | (8.7)  | 625              | (10.4) |
|                   | Canada                      | 530                        | (4.7)  | 377                                                     | (7.8)  | 468              | (6.2)  | 596              | (6.1)  | 674              | (7.5)  |
|                   | Denmark                     | 455                        | (10.1) | 296                                                     | (33.6) | 396              | (12.9) | 516              | (12.6) | c                | c      |
|                   | France                      | 448                        | (15.0) | 283                                                     | (21.6) | 367              | (16.7) | 526              | (23.6) | 621              | (18.1) |
|                   | Germany                     | 454                        | (7.5)  | 297                                                     | (9.8)  | 379              | (8.5)  | 528              | (9.1)  | 609              | (9.5)  |
|                   | Luxembourg                  | 462                        | (3.7)  | 302                                                     | (6.3)  | 391              | (5.0)  | 532              | (5.6)  | 632              | (8.0)  |
|                   | Netherlands                 | 472                        | (8.4)  | 344                                                     | (16.6) | 415              | (9.1)  | 526              | (11.6) | 611              | (24.4) |
|                   | New Zealand                 | 523                        | (4.9)  | 351                                                     | (11.5) | 455              | (7.4)  | 595              | (5.5)  | 677              | (6.9)  |
| Partner countries | Norway                      | 438                        | (9.3)  | 292                                                     | (25.2) | 370              | (9.2)  | 499              | (10.2) | 599              | (19.7) |
|                   | Sweden                      | 425                        | (9.6)  | 253                                                     | (19.6) | 361              | (12.6) | 492              | (9.5)  | 587              | (15.5) |
|                   | Switzerland                 | 453                        | (6.1)  | 297                                                     | (8.7)  | 380              | (6.9)  | 514              | (6.4)  | 634              | (13.5) |
|                   | United States               | 453                        | (7.5)  | 287                                                     | (12.4) | 374              | (11.5) | 527              | (7.8)  | 619              | (9.9)  |
|                   | <i>OECD average</i>         | 475                        | (1.9)  | 306                                                     | (3.4)  | 401              | (2.5)  | 547              | (2.6)  | 647              | (2.8)  |
|                   | Hong Kong-China             | 516                        | (5.3)  | 355                                                     | (10.9) | 457              | (6.1)  | 583              | (4.9)  | 662              | (7.1)  |
|                   | Macao-China                 | 517                        | (9.2)  | 367                                                     | (13.5) | 452              | (11.1) | 575              | (12.6) | 672              | (14.5) |
|                   | Russian Federation          | 452                        | (5.9)  | 302                                                     | (11.2) | 394              | (7.1)  | 507              | (7.8)  | 606              | (12.0) |
|                   | Belgium (Flemish Community) | 472                        | (10.0) | c                                                       | c      | 406              | (16.8) | 537              | (9.4)  | 630              | (20.7) |
|                   | Belgium (French Community)  | 419                        | (14.4) | 233                                                     | (20.5) | 332              | (25.0) | 496              | (11.6) | 622              | (12.6) |


 Table2.3b  
 Distribution of student performance on the reading scale by immigrant status

|                             |                   | Native students                                     |            |                                                     |            |                  |            |                  |            |                  |            |              |
|-----------------------------|-------------------|-----------------------------------------------------|------------|-----------------------------------------------------|------------|------------------|------------|------------------|------------|------------------|------------|--------------|
|                             |                   | Mean score                                          |            | Percentiles of the reading performance distribution |            |                  |            |                  |            |                  |            |              |
|                             |                   |                                                     |            | 5 <sup>th</sup>                                     |            | 25 <sup>th</sup> |            | 75 <sup>th</sup> |            | 95 <sup>th</sup> |            |              |
| Mean                        | S.E.              | Score                                               | S.E.       | Score                                               | S.E.       | Score            | S.E.       | Score            | S.E.       |                  |            |              |
| OECD countries              | Australia         | 529                                                 | (2.2)      | 358                                                 | (4.1)      | 469              | (3.0)      | 595              | (2.0)      | 673              | (2.5)      |              |
|                             | Austria           | 501                                                 | (3.8)      | 331                                                 | (6.0)      | 437              | (4.8)      | 572              | (3.7)      | 651              | (4.1)      |              |
|                             | Belgium           | 523                                                 | (2.7)      | 341                                                 | (7.8)      | 462              | (3.8)      | 595              | (1.9)      | 666              | (2.1)      |              |
|                             | Canada            | 534                                                 | (1.6)      | 380                                                 | (3.0)      | 479              | (2.0)      | 595              | (1.6)      | 666              | (2.1)      |              |
|                             | Denmark           | 497                                                 | (2.7)      | 347                                                 | (5.7)      | 443              | (3.1)      | 556              | (2.7)      | 628              | (3.0)      |              |
|                             | France            | 505                                                 | (2.6)      | 339                                                 | (7.5)      | 446              | (3.3)      | 572              | (2.5)      | 644              | (3.2)      |              |
|                             | Germany           | 517                                                 | (3.5)      | 353                                                 | (5.9)      | 455              | (4.8)      | 584              | (3.3)      | 659              | (3.1)      |              |
|                             | Luxembourg        | 500                                                 | (1.8)      | 340                                                 | (3.9)      | 444              | (2.2)      | 564              | (2.1)      | 635              | (2.9)      |              |
|                             | Netherlands       | 524                                                 | (2.9)      | 390                                                 | (5.0)      | 468              | (4.2)      | 583              | (2.7)      | 649              | (2.9)      |              |
|                             | New Zealand       | 528                                                 | (2.9)      | 350                                                 | (6.4)      | 462              | (3.9)      | 600              | (2.6)      | 683              | (2.8)      |              |
|                             | Norway            | 505                                                 | (2.7)      | 330                                                 | (4.4)      | 441              | (3.3)      | 574              | (3.0)      | 658              | (3.7)      |              |
|                             | Sweden            | 522                                                 | (2.2)      | 365                                                 | (4.4)      | 462              | (2.6)      | 586              | (2.4)      | 663              | (3.4)      |              |
|                             | Switzerland       | 515                                                 | (3.2)      | 366                                                 | (5.9)      | 460              | (3.6)      | 574              | (3.1)      | 649              | (4.6)      |              |
|                             | United States     | 503                                                 | (3.1)      | 336                                                 | (5.3)      | 438              | (3.4)      | 573              | (2.9)      | 655              | (3.4)      |              |
|                             |                   | <i>OECD average</i>                                 | <i>514</i> | <i>(0.8)</i>                                        | <i>350</i> | <i>(1.7)</i>     | <i>454</i> | <i>(1.0)</i>     | <i>580</i> | <i>(0.7)</i>     | <i>657</i> | <i>(0.8)</i> |
|                             | Partner countries | Hong Kong-China                                     | 513        | (3.7)                                               | 363        | (10.3)           | 463        | (5.3)            | 572        | (3.0)            | 634        | (3.3)        |
|                             |                   | Macao-China                                         | 499        | (5.1)                                               | 383        | (8.8)            | 456        | (6.9)            | 543        | (5.3)            | 601        | (6.8)        |
| Russian Federation          |                   | 446                                                 | (4.0)      | 287                                                 | (5.4)      | 386              | (5.1)      | 510              | (3.9)      | 591              | (3.9)      |              |
| Belgium (Flemish Community) |                   | 543                                                 | (3.0)      | 381                                                 | (7.7)      | 485              | (4.2)      | 608              | (2.2)      | 676              | (2.1)      |              |
| Belgium (French Community)  |                   | 494                                                 | (4.8)      | 300                                                 | (11.0)     | 430              | (6.8)      | 570              | (4.1)      | 644              | (4.5)      |              |
| Second-generation students  |                   |                                                     |            |                                                     |            |                  |            |                  |            |                  |            |              |
|                             |                   | Percentiles of the reading performance distribution |            |                                                     |            |                  |            |                  |            |                  |            |              |
|                             |                   | Mean score                                          |            | 5 <sup>th</sup>                                     |            | 25 <sup>th</sup> |            | 75 <sup>th</sup> |            | 95 <sup>th</sup> |            |              |
| Mean                        |                   | S.E.                                                | Score      | S.E.                                                | Score      | S.E.             | Score      | S.E.             | Score      | S.E.             |            |              |
| OECD countries              |                   | Australia                                           | 525        | (4.6)                                               | 351        | (10.1)           | 462        | (5.9)            | 596        | (5.2)            | 673        | (7.5)        |
|                             | Austria           | 428                                                 | (13.5)     | c                                                   | c          | 355              | (16.1)     | 512              | (12.6)     | 591              | (14.1)     |              |
|                             | Belgium           | 439                                                 | (7.5)      | 253                                                 | (14.1)     | 365              | (12.4)     | 519              | (7.3)      | 606              | (10.1)     |              |
|                             | Canada            | 543                                                 | (4.2)      | 403                                                 | (8.0)      | 488              | (5.0)      | 600              | (4.3)      | 679              | (7.8)      |              |
|                             | Denmark           | 440                                                 | (13.8)     | c                                                   | c          | 383              | (20.8)     | 506              | (15.5)     | 589              | (21.2)     |              |
|                             | France            | 458                                                 | (6.9)      | 287                                                 | (15.6)     | 400              | (9.5)      | 523              | (7.2)      | 599              | (8.7)      |              |
|                             | Germany           | 420                                                 | (9.9)      | 254                                                 | (20.8)     | 349              | (16.2)     | 486              | (12.2)     | 596              | (12.3)     |              |
|                             | Luxembourg        | 454                                                 | (4.0)      | 281                                                 | (8.1)      | 388              | (6.0)      | 524              | (4.9)      | 607              | (6.1)      |              |
|                             | Netherlands       | 475                                                 | (8.2)      | 353                                                 | (9.9)      | 418              | (11.5)     | 527              | (8.4)      | 598              | (15.9)     |              |
|                             | New Zealand       | 506                                                 | (8.3)      | 326                                                 | (14.9)     | 430              | (11.0)     | 580              | (9.8)      | 687              | (13.6)     |              |
|                             | Norway            | 446                                                 | (11.1)     | 260                                                 | (26.3)     | 375              | (15.3)     | 517              | (12.8)     | c                | c          |              |
|                             | Sweden            | 502                                                 | (8.7)      | 333                                                 | (19.4)     | 439              | (10.8)     | 566              | (11.0)     | 649              | (13.2)     |              |
|                             | Switzerland       | 462                                                 | (5.2)      | 303                                                 | (11.6)     | 398              | (6.5)      | 529              | (5.7)      | 617              | (7.1)      |              |
|                             | United States     | 481                                                 | (8.7)      | 308                                                 | (14.7)     | 410              | (10.6)     | 550              | (9.5)      | 641              | (11.7)     |              |
|                             |                   | <i>OECD average</i>                                 | <i>475</i> | <i>(2.1)</i>                                        | <i>295</i> | <i>(4.3)</i>     | <i>407</i> | <i>(2.6)</i>     | <i>546</i> | <i>(2.4)</i>     | <i>637</i> | <i>(2.6)</i> |
|                             | Partner countries | Hong Kong-China                                     | 522        | (3.8)                                               | 364        | (10.7)           | 479        | (5.1)            | 577        | (3.2)            | 632        | (4.7)        |
|                             |                   | Macao-China                                         | 497        | (2.9)                                               | 380        | (5.7)            | 455        | (4.4)            | 543        | (4.2)            | 599        | (4.2)        |
| Russian Federation          |                   | 426                                                 | (6.9)      | 265                                                 | (15.6)     | 368              | (8.7)      | 491              | (8.2)      | 569              | (7.3)      |              |
| Belgium (Flemish Community) |                   | 440                                                 | (10.2)     | 268                                                 | (17.3)     | 363              | (11.8)     | 513              | (13.1)     | 608              | (19.0)     |              |
| Belgium (French Community)  | 439               | (10.4)                                              | 246        | (22.6)                                              | 365        | (18.9)           | 521        | (9.2)            | 604        | (12.4)           |            |              |
| First-generation students   |                   |                                                     |            |                                                     |            |                  |            |                  |            |                  |            |              |
|                             |                   | Percentiles of the reading performance distribution |            |                                                     |            |                  |            |                  |            |                  |            |              |
|                             |                   | Mean score                                          |            | 5 <sup>th</sup>                                     |            | 25 <sup>th</sup> |            | 75 <sup>th</sup> |            | 95 <sup>th</sup> |            |              |
| Mean                        | S.E.              | Score                                               | S.E.       | Score                                               | S.E.       | Score            | S.E.       | Score            | S.E.       |                  |            |              |
| OECD countries              | Australia         | 517                                                 | (5.0)      | 331                                                 | (11.2)     | 452              | (7.7)      | 590              | (5.9)      | 675              | (7.2)      |              |
|                             | Austria           | 425                                                 | (8.0)      | 254                                                 | (15.9)     | 354              | (9.8)      | 497              | (8.0)      | 597              | (12.7)     |              |
|                             | Belgium           | 407                                                 | (11.9)     | 193                                                 | (24.0)     | 321              | (21.2)     | 492              | (10.1)     | 610              | (13.9)     |              |
|                             | Canada            | 515                                                 | (4.7)      | 353                                                 | (8.3)      | 457              | (6.1)      | 579              | (4.1)      | 654              | (6.3)      |              |
|                             | Denmark           | 454                                                 | (9.5)      | 291                                                 | (25.0)     | 389              | (13.1)     | 526              | (11.1)     | c                | c          |              |
|                             | France            | 426                                                 | (15.3)     | 223                                                 | (18.5)     | 339              | (25.5)     | 508              | (14.4)     | 593              | (18.1)     |              |
|                             | Germany           | 431                                                 | (8.9)      | 248                                                 | (14.7)     | 351              | (10.5)     | 514              | (9.1)      | 599              | (12.3)     |              |
|                             | Luxembourg        | 431                                                 | (4.4)      | 253                                                 | (9.0)      | 355              | (5.6)      | 511              | (6.0)      | 600              | (7.2)      |              |
|                             | Netherlands       | 463                                                 | (8.1)      | 349                                                 | (16.6)     | 409              | (8.2)      | 514              | (11.0)     | 602              | (17.5)     |              |
|                             | New Zealand       | 503                                                 | (5.3)      | 310                                                 | (10.2)     | 430              | (7.4)      | 580              | (5.6)      | 675              | (6.4)      |              |
|                             | Norway            | 436                                                 | (11.5)     | 250                                                 | (31.3)     | 363              | (15.0)     | 512              | (12.8)     | 609              | (21.2)     |              |
|                             | Sweden            | 433                                                 | (11.3)     | 232                                                 | (29.3)     | 362              | (17.1)     | 516              | (10.6)     | 602              | (11.9)     |              |
|                             | Switzerland       | 422                                                 | (6.3)      | 255                                                 | (8.5)      | 349              | (9.0)      | 492              | (7.6)      | 594              | (14.6)     |              |
|                             | United States     | 453                                                 | (8.3)      | 267                                                 | (11.5)     | 369              | (12.1)     | 538              | (9.4)      | 629              | (10.6)     |              |
|                             |                   | <i>OECD average</i>                                 | <i>456</i> | <i>(2.1)</i>                                        | <i>265</i> | <i>(4.0)</i>     | <i>379</i> | <i>(2.9)</i>     | <i>538</i> | <i>(2.1)</i>     | <i>634</i> | <i>(2.5)</i> |
|                             | Partner countries | Hong Kong-China                                     | 494        | (4.8)                                               | 349        | (11.8)           | 442        | (5.5)            | 550        | (3.9)            | 611        | (5.2)        |
|                             |                   | Macao-China                                         | 499        | (7.1)                                               | 382        | (18.7)           | 451        | (6.5)            | 548        | (7.3)            | 609        | (10.1)       |
| Russian Federation          |                   | 413                                                 | (7.5)      | 251                                                 | (13.7)     | 346              | (9.3)      | 479              | (6.3)      | 561              | (9.9)      |              |
| Belgium (Flemish Community) |                   | 450                                                 | (10.6)     | 253                                                 | (25.3)     | 379              | (16.3)     | 527              | (13.8)     | 633              | (19.8)     |              |
| Belgium (French Community)  | 385               | (15.8)                                              | 180        | (19.8)                                              | 291        | (28.7)           | 472        | (12.0)           | 586        | (20.8)           |            |              |



Table 2.4a  
Percentage of native students at each level of proficiency on the mathematics scale

|                   |                             | Native students - Proficiency levels      |       |                                           |       |                                           |       |                                           |       |                                           |       |                                            |       |
|-------------------|-----------------------------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|--------------------------------------------|-------|
|                   |                             | Below Level 1<br>(below 358 score points) |       | Level 1<br>(from 358 to 420 score points) |       | Level 2<br>(from 421 to 482 score points) |       | Level 3<br>(from 483 to 544 score points) |       | Level 4<br>(from 545 to 606 score points) |       | Levels 5 and 6<br>(above 606 score points) |       |
|                   |                             | %                                         | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                          | S.E.  |
| OECD countries    | Australia                   | 3.7                                       | (0.4) | 9.5                                       | (0.5) | 18.5                                      | (0.7) | 24.4                                      | (0.7) | 23.9                                      | (0.6) | 20.0                                       | (0.7) |
|                   | Austria                     | 4.0                                       | (0.7) | 11.6                                      | (0.9) | 20.6                                      | (1.0) | 25.9                                      | (1.3) | 21.9                                      | (0.9) | 16.0                                       | (1.1) |
|                   | Belgium                     | 4.0                                       | (0.4) | 7.4                                       | (0.5) | 15.2                                      | (0.7) | 20.8                                      | (0.8) | 22.9                                      | (0.7) | 29.7                                       | (1.0) |
|                   | Canada                      | 2.1                                       | (0.3) | 7.1                                       | (0.4) | 17.3                                      | (0.6) | 26.0                                      | (0.8) | 25.8                                      | (0.6) | 21.7                                       | (0.7) |
|                   | Denmark                     | 3.8                                       | (0.5) | 9.8                                       | (0.7) | 20.0                                      | (0.9) | 26.6                                      | (0.9) | 22.8                                      | (0.9) | 17.0                                       | (1.0) |
|                   | France                      | 3.8                                       | (0.6) | 9.7                                       | (0.9) | 19.5                                      | (1.0) | 26.5                                      | (1.1) | 23.7                                      | (1.2) | 16.8                                       | (1.0) |
|                   | Germany                     | 3.6                                       | (0.6) | 9.4                                       | (0.8) | 18.9                                      | (1.3) | 24.8                                      | (1.0) | 23.9                                      | (1.1) | 19.4                                       | (1.1) |
|                   | Luxembourg                  | 4.5                                       | (0.5) | 11.8                                      | (1.0) | 21.6                                      | (1.4) | 28.2                                      | (1.0) | 21.7                                      | (1.1) | 12.2                                       | (0.8) |
|                   | Netherlands                 | 0.9                                       | (0.3) | 6.0                                       | (0.7) | 16.3                                      | (1.2) | 23.4                                      | (1.2) | 24.3                                      | (1.4) | 29.0                                       | (1.5) |
|                   | New Zealand                 | 4.0                                       | (0.5) | 9.4                                       | (0.7) | 19.0                                      | (0.7) | 23.4                                      | (0.9) | 22.7                                      | (0.9) | 21.5                                       | (0.9) |
|                   | Norway                      | 6.1                                       | (0.5) | 13.2                                      | (0.8) | 23.5                                      | (1.1) | 25.7                                      | (1.1) | 19.6                                      | (1.1) | 11.8                                       | (0.7) |
|                   | Sweden                      | 3.8                                       | (0.4) | 10.5                                      | (0.6) | 21.2                                      | (0.9) | 26.2                                      | (0.9) | 21.1                                      | (0.9) | 17.2                                       | (0.8) |
|                   | Switzerland                 | 2.6                                       | (0.4) | 6.7                                       | (0.6) | 15.8                                      | (0.8) | 25.3                                      | (1.1) | 25.3                                      | (0.8) | 24.2                                       | (1.6) |
|                   | United States               | 8.4                                       | (0.7) | 14.5                                      | (0.9) | 24.0                                      | (0.8) | 24.8                                      | (0.9) | 17.5                                      | (0.8) | 10.9                                       | (0.8) |
| Partner countries | Hong Kong-China             | 3.5                                       | (0.8) | 5.8                                       | (0.8) | 12.8                                      | (1.0) | 19.6                                      | (1.4) | 25.0                                      | (1.4) | 33.2                                       | (1.8) |
|                   | Macao-China                 | 1.5                                       | (0.9) | 7.8                                       | (3.2) | 21.1                                      | (4.1) | 27.3                                      | (3.6) | 23.8                                      | (3.6) | 18.5                                       | (2.6) |
|                   | Russian Federation          | 10.9                                      | (1.1) | 18.2                                      | (1.2) | 25.9                                      | (1.1) | 23.6                                      | (1.0) | 13.9                                      | (1.0) | 7.5                                        | (0.8) |
|                   | Belgium (Flemish Community) | 2.1                                       | (0.4) | 5.2                                       | (0.5) | 12.3                                      | (0.6) | 19.1                                      | (0.7) | 24.1                                      | (0.7) | 37.3                                       | (1.1) |
|                   | Belgium (French Community)  | 6.9                                       | (0.9) | 10.6                                      | (0.9) | 19.4                                      | (1.0) | 23.3                                      | (1.1) | 21.2                                      | (1.1) | 18.6                                       | (1.4) |

Table 2.4b  
Percentage of second-generation students at each level of proficiency on the mathematics scale

|                   |                             | Second-generation students - Proficiency levels |       |                                           |       |                                           |       |                                           |       |                                           |       |                                            |       |
|-------------------|-----------------------------|-------------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|--------------------------------------------|-------|
|                   |                             | Below Level 1<br>(below 358 score points)       |       | Level 1<br>(from 358 to 420 score points) |       | Level 2<br>(from 421 to 482 score points) |       | Level 3<br>(from 483 to 544 score points) |       | Level 4<br>(from 545 to 606 score points) |       | Levels 5 and 6<br>(above 606 score points) |       |
|                   |                             | %                                               | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                          | S.E.  |
| OECD countries    | Australia                   | 4.7                                             | (1.0) | 10.4                                      | (1.0) | 19.7                                      | (1.6) | 23.1                                      | (2.0) | 22.4                                      | (2.3) | 19.7                                       | (2.0) |
|                   | Austria                     | 13.2                                            | (3.4) | 20.6                                      | (3.6) | 27.0                                      | (3.9) | 20.6                                      | (3.5) | 15.7                                      | (3.6) | 2.9                                        | (1.5) |
|                   | Belgium                     | 17.4                                            | (2.5) | 20.7                                      | (2.0) | 23.1                                      | (2.4) | 19.0                                      | (3.1) | 11.9                                      | (2.4) | 7.8                                        | (2.0) |
|                   | Canada                      | 1.4                                             | (0.6) | 5.9                                       | (1.0) | 16.3                                      | (1.7) | 28.0                                      | (2.3) | 25.5                                      | (2.3) | 22.9                                       | (9.0) |
|                   | Denmark                     | 15.7                                            | (3.9) | 20.4                                      | (4.6) | 28.0                                      | (6.9) | 23.5                                      | (6.7) | 8.2                                       | (3.6) | 4.2                                        | (2.6) |
|                   | France                      | 10.9                                            | (2.3) | 17.1                                      | (2.3) | 24.8                                      | (3.5) | 26.7                                      | (2.8) | 14.5                                      | (2.6) | 5.9                                        | (2.3) |
|                   | Germany                     | 23.5                                            | (4.2) | 23.3                                      | (3.3) | 23.8                                      | (3.4) | 16.3                                      | (2.7) | 8.4                                       | (2.3) | 4.8                                        | (1.4) |
|                   | Luxembourg                  | 9.3                                             | (1.3) | 17.4                                      | (2.1) | 27.3                                      | (2.3) | 24.5                                      | (2.0) | 13.1                                      | (1.7) | 8.5                                        | (1.1) |
|                   | Netherlands                 | 4.2                                             | (1.5) | 16.4                                      | (4.2) | 27.9                                      | (4.3) | 23.9                                      | (4.2) | 18.6                                      | (3.2) | 9.0                                        | (2.6) |
|                   | New Zealand                 | 8.7                                             | (3.3) | 15.6                                      | (3.1) | 21.8                                      | (3.4) | 22.2                                      | (3.1) | 17.4                                      | (2.7) | 14.4                                       | (2.7) |
|                   | Norway                      | 15.2                                            | (4.9) | 19.5                                      | (4.8) | 25.0                                      | (7.9) | 17.7                                      | (5.8) | 13.6                                      | (4.2) | 9.0                                        | (3.6) |
|                   | Sweden                      | 9.6                                             | (2.4) | 14.8                                      | (3.4) | 26.5                                      | (3.2) | 23.5                                      | (4.9) | 14.4                                      | (3.7) | 11.2                                       | (3.3) |
|                   | Switzerland                 | 8.8                                             | (1.6) | 17.6                                      | (2.3) | 25.6                                      | (2.7) | 21.3                                      | (2.4) | 15.3                                      | (1.7) | 11.4                                       | (2.3) |
|                   | United States               | 12.5                                            | (2.5) | 21.0                                      | (3.0) | 23.3                                      | (2.3) | 21.0                                      | (2.4) | 14.2                                      | (2.2) | 8.0                                        | (2.0) |
| Partner countries | Hong Kong-China             | 2.9                                             | (0.8) | 4.9                                       | (0.9) | 10.2                                      | (1.4) | 16.3                                      | (1.5) | 27.8                                      | (1.9) | 37.9                                       | (2.2) |
|                   | Macao-China                 | 2.4                                             | (0.7) | 7.9                                       | (1.2) | 18.2                                      | (1.8) | 26.9                                      | (2.4) | 24.6                                      | (2.2) | 20.0                                       | (2.1) |
|                   | Russian Federation          | 10.0                                            | (2.4) | 21.9                                      | (3.1) | 31.0                                      | (4.1) | 22.8                                      | (3.7) | 10.3                                      | (2.5) | 4.0                                        | (2.0) |
|                   | Belgium (Flemish Community) | 21.3                                            | (3.4) | 21.0                                      | (3.1) | 25.0                                      | (2.9) | 15.6                                      | (2.9) | 9.1                                       | (2.3) | 8.1                                        | (2.3) |
|                   | Belgium (French Community)  | 15.4                                            | (2.9) | 20.6                                      | (2.4) | 22.1                                      | (2.5) | 20.8                                      | (2.7) | 13.4                                      | (2.5) | 7.6                                        | (1.7) |





Table 2.4c  
Percentage of first-generation students at each level of proficiency on the mathematics scale

|                   |                             | First-generation students - Proficiency levels |       |                                           |       |                                           |       |                                           |       |                                           |       |                                            |       |
|-------------------|-----------------------------|------------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|--------------------------------------------|-------|
|                   |                             | Below Level 1<br>(below 358 score points)      |       | Level 1<br>(from 358 to 420 score points) |       | Level 2<br>(from 421 to 482 score points) |       | Level 3<br>(from 483 to 544 score points) |       | Level 4<br>(from 545 to 606 score points) |       | Levels 5 and 6<br>(above 606 score points) |       |
|                   |                             | %                                              | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                          | S.E.  |
| OECD countries    | Australia                   | 5.1                                            | (1.0) | 10.5                                      | (1.5) | 17.9                                      | (1.5) | 22.7                                      | (1.9) | 22.4                                      | (2.0) | 21.5                                       | (2.0) |
|                   | Austria                     | 14.1                                           | (2.4) | 23.6                                      | (3.9) | 28.4                                      | (3.2) | 18.7                                      | (2.2) | 10.2                                      | (1.8) | 5.1                                        | (1.4) |
|                   | Belgium                     | 25.0                                           | (4.6) | 18.6                                      | (2.7) | 21.2                                      | (3.0) | 17.9                                      | (2.7) | 10.0                                      | (2.1) | 7.3                                        | (1.6) |
|                   | Canada                      | 3.3                                            | (0.7) | 8.3                                       | (1.4) | 18.0                                      | (2.4) | 25.7                                      | (2.2) | 22.8                                      | (2.0) | 22.0                                       | (2.1) |
|                   | Denmark                     | 14.4                                           | (4.3) | 19.4                                      | (4.7) | 28.2                                      | (4.5) | 20.5                                      | (4.4) | 13.6                                      | (3.8) | 3.8                                        | (2.3) |
|                   | France                      | 22.0                                           | (5.3) | 20.6                                      | (4.1) | 21.7                                      | (4.2) | 15.3                                      | (3.7) | 12.8                                      | (3.9) | 7.5                                        | (2.7) |
|                   | Germany                     | 17.5                                           | (2.8) | 21.3                                      | (3.4) | 20.7                                      | (2.9) | 20.5                                      | (2.4) | 14.4                                      | (2.7) | 5.6                                        | (2.0) |
|                   | Luxembourg                  | 15.0                                           | (1.7) | 20.4                                      | (2.1) | 24.4                                      | (2.0) | 18.9                                      | (1.7) | 12.9                                      | (1.6) | 8.5                                        | (1.4) |
|                   | Netherlands                 | 6.3                                            | (2.1) | 21.4                                      | (4.8) | 32.2                                      | (5.6) | 21.3                                      | (5.0) | 12.9                                      | (4.2) | 5.8                                        | (2.3) |
|                   | New Zealand                 | 5.5                                            | (1.3) | 10.0                                      | (1.9) | 18.2                                      | (3.1) | 24.1                                      | (2.8) | 20.7                                      | (2.1) | 21.6                                       | (1.9) |
| Partner countries | Norway                      | 18.9                                           | (4.3) | 26.8                                      | (5.1) | 23.5                                      | (4.2) | 17.3                                      | (4.5) | 8.9                                       | (4.3) | 4.6                                        | (2.2) |
|                   | Sweden                      | 24.0                                           | (4.2) | 23.1                                      | (3.9) | 24.7                                      | (4.2) | 16.5                                      | (2.7) | 8.4                                       | (2.4) | 3.3                                        | (1.5) |
|                   | Switzerland                 | 17.2                                           | (2.1) | 21.9                                      | (2.4) | 23.7                                      | (2.7) | 20.0                                      | (2.0) | 8.8                                       | (1.3) | 8.4                                        | (1.7) |
|                   | United States               | 19.5                                           | (3.4) | 18.3                                      | (2.4) | 22.4                                      | (4.0) | 20.6                                      | (3.3) | 12.7                                      | (2.5) | 6.5                                        | (1.6) |
|                   | Hong Kong-China             | 5.2                                            | (1.3) | 9.6                                       | (1.3) | 20.5                                      | (2.3) | 25.4                                      | (2.5) | 23.0                                      | (2.2) | 16.3                                       | (1.6) |
|                   | Macao-China                 | 3.2                                            | (1.8) | 12.1                                      | (4.0) | 21.2                                      | (4.0) | 25.5                                      | (4.2) | 21.9                                      | (3.8) | 16.1                                       | (3.7) |
|                   | Russian Federation          | 14.1                                           | (2.5) | 21.9                                      | (3.2) | 30.1                                      | (3.0) | 19.3                                      | (2.1) | 9.5                                       | (1.8) | 5.2                                        | (1.5) |
|                   | Belgium (Flemish Community) | 13.4                                           | (4.0) | 15.8                                      | (3.1) | 22.8                                      | (3.3) | 25.8                                      | (5.0) | 14.3                                      | (2.6) | 7.9                                        | (2.4) |
|                   | Belgium (French Community)  | 30.6                                           | (6.1) | 19.9                                      | (2.8) | 20.5                                      | (3.4) | 14.2                                      | (2.5) | 7.8                                       | (1.8) | 6.9                                        | (1.8) |

Table 2.4d  
Percentage of native students at each level of proficiency on the reading scale

|                   |                             | Native students - Proficiency levels      |       |                                           |       |                                           |       |                                           |       |                                           |       |                                     |       |
|-------------------|-----------------------------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------|-------|
|                   |                             | Below Level 1<br>(below 335 score points) |       | Level 1<br>(from 335 to 407 score points) |       | Level 2<br>(from 408 to 480 score points) |       | Level 3<br>(from 481 to 552 score points) |       | Level 4<br>(from 553 to 626 score points) |       | Level 5<br>(above 626 score points) |       |
|                   |                             | %                                         | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                   | S.E.  |
| OECD countries    | Australia                   | 3.1                                       | (0.4) | 7.7                                       | (0.5) | 17.9                                      | (0.7) | 28.6                                      | (0.8) | 27.8                                      | (0.8) | 14.9                                | (0.7) |
|                   | Austria                     | 5.4                                       | (0.8) | 11.7                                      | (1.0) | 22.1                                      | (1.0) | 28.6                                      | (1.2) | 22.9                                      | (1.1) | 9.3                                 | (0.9) |
|                   | Belgium                     | 4.5                                       | (0.6) | 8.2                                       | (0.6) | 17.6                                      | (0.7) | 27.3                                      | (0.8) | 28.2                                      | (0.9) | 14.1                                | (0.6) |
|                   | Canada                      | 1.8                                       | (0.2) | 6.6                                       | (0.4) | 17.1                                      | (0.6) | 30.7                                      | (0.8) | 29.9                                      | (0.6) | 13.9                                | (0.6) |
|                   | Denmark                     | 3.9                                       | (0.6) | 11.2                                      | (0.7) | 24.4                                      | (1.2) | 34.3                                      | (1.2) | 20.8                                      | (1.0) | 5.5                                 | (0.5) |
|                   | France                      | 4.6                                       | (0.7) | 10.1                                      | (0.6) | 22.0                                      | (0.9) | 30.4                                      | (1.0) | 24.6                                      | (0.9) | 8.3                                 | (0.7) |
|                   | Germany                     | 3.3                                       | (0.5) | 10.3                                      | (1.0) | 19.5                                      | (1.1) | 29.3                                      | (0.9) | 25.9                                      | (1.2) | 11.6                                | (0.8) |
|                   | Luxembourg                  | 4.5                                       | (0.4) | 10.4                                      | (0.7) | 23.8                                      | (0.9) | 31.9                                      | (1.3) | 22.9                                      | (1.4) | 6.6                                 | (0.5) |
|                   | Netherlands                 | 1.0                                       | (0.3) | 6.9                                       | (0.8) | 21.8                                      | (1.2) | 31.7                                      | (1.4) | 28.7                                      | (1.3) | 10.0                                | (0.8) |
|                   | New Zealand                 | 3.9                                       | (0.5) | 8.6                                       | (0.7) | 18.1                                      | (1.0) | 26.7                                      | (1.1) | 25.2                                      | (1.1) | 17.5                                | (0.8) |
| Partner countries | Norway                      | 5.5                                       | (0.5) | 11.0                                      | (0.8) | 21.1                                      | (1.3) | 29.5                                      | (1.1) | 22.4                                      | (0.9) | 10.4                                | (0.8) |
|                   | Sweden                      | 2.6                                       | (0.4) | 8.3                                       | (0.7) | 20.2                                      | (1.0) | 30.5                                      | (1.6) | 26.1                                      | (1.3) | 12.3                                | (0.7) |
|                   | Switzerland                 | 2.5                                       | (0.3) | 8.5                                       | (0.8) | 21.5                                      | (1.1) | 33.4                                      | (1.5) | 25.1                                      | (1.1) | 9.1                                 | (0.9) |
|                   | United States               | 4.8                                       | (0.6) | 11.8                                      | (0.9) | 22.7                                      | (1.1) | 28.6                                      | (1.1) | 22.2                                      | (0.9) | 9.9                                 | (0.7) |
|                   | Hong Kong-China             | 3.1                                       | (0.7) | 8.2                                       | (1.0) | 20.1                                      | (1.6) | 34.5                                      | (1.6) | 27.7                                      | (1.5) | 6.5                                 | (0.7) |
|                   | Macao-China                 | 0.8                                       | (0.9) | 9.5                                       | (2.9) | 25.9                                      | (4.1) | 43.6                                      | (3.8) | 18.3                                      | (2.7) | 2.0                                 | (0.9) |
|                   | Russian Federation          | 11.7                                      | (1.0) | 20.7                                      | (1.0) | 30.5                                      | (1.0) | 25.4                                      | (1.1) | 9.8                                       | (0.9) | 2.0                                 | (0.3) |
|                   | Belgium (Flemish Community) | 2.1                                       | (0.5) | 6.2                                       | (0.5) | 15.3                                      | (0.7) | 26.7                                      | (0.8) | 31.8                                      | (0.9) | 17.9                                | (0.7) |
|                   | Belgium (French Community)  | 8.2                                       | (1.1) | 11.2                                      | (1.0) | 21.1                                      | (1.0) | 28.2                                      | (1.2) | 23.0                                      | (1.1) | 8.4                                 | (0.9) |

Table 2.4e  
Percentage of second-generation students at each level of proficiency on the reading scale

|                   |                             | Second-generation students - Proficiency levels |       |                                           |       |                                           |       |                                           |       |                                           |       |                                     |       |
|-------------------|-----------------------------|-------------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------|-------|
|                   |                             | Below Level 1<br>(below 335 score points)       |       | Level 1<br>(from 335 to 407 score points) |       | Level 2<br>(from 408 to 480 score points) |       | Level 3<br>(from 481 to 552 score points) |       | Level 4<br>(from 553 to 626 score points) |       | Level 5<br>(above 626 score points) |       |
|                   |                             | %                                               | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                   | S.E.  |
| OECD countries    | Australia                   | 3.7                                             | (0.9) | 8.7                                       | (1.1) | 17.7                                      | (1.4) | 28.9                                      | (1.8) | 26.0                                      | (1.9) | 15.0                                | (1.9) |
|                   | Austria                     | 18.7                                            | (4.5) | 20.6                                      | (3.6) | 25.0                                      | (5.0) | 23.7                                      | (3.9) | 10.3                                      | (2.8) | 1.7                                 | (1.1) |
|                   | Belgium                     | 18.6                                            | (2.5) | 17.9                                      | (2.2) | 24.5                                      | (3.0) | 24.3                                      | (2.6) | 11.4                                      | (2.1) | 3.2                                 | (1.2) |
|                   | Canada                      | 1.0                                             | (0.3) | 4.5                                       | (0.9) | 16.5                                      | (1.7) | 31.6                                      | (2.2) | 31.1                                      | (2.2) | 15.4                                | (2.1) |
|                   | Denmark                     | 15.3                                            | (4.9) | 17.2                                      | (4.1) | 34.1                                      | (6.4) | 22.3                                      | (5.4) | 9.4                                       | (4.1) | 1.7                                 | (1.7) |
|                   | France                      | 10.6                                            | (2.2) | 16.8                                      | (2.4) | 29.6                                      | (3.2) | 27.6                                      | (4.6) | 12.8                                      | (2.3) | 2.6                                 | (0.9) |
|                   | Germany                     | 21.6                                            | (4.4) | 22.5                                      | (3.8) | 28.9                                      | (4.0) | 15.9                                      | (2.7) | 8.7                                       | (2.1) | 2.5                                 | (1.2) |
|                   | Luxembourg                  | 12.8                                            | (1.4) | 18.5                                      | (1.9) | 27.1                                      | (2.2) | 25.5                                      | (1.9) | 12.9                                      | (1.7) | 3.1                                 | (0.7) |
|                   | Netherlands                 | 3.0                                             | (1.4) | 17.4                                      | (4.0) | 31.1                                      | (3.8) | 33.3                                      | (4.2) | 12.2                                      | (2.6) | 3.0                                 | (1.3) |
|                   | New Zealand                 | 5.7                                             | (1.7) | 13.0                                      | (3.0) | 21.0                                      | (3.2) | 25.2                                      | (3.2) | 22.6                                      | (4.5) | 12.5                                | (2.6) |
|                   | Norway                      | 14.3                                            | (4.8) | 20.7                                      | (5.5) | 26.4                                      | (6.2) | 23.4                                      | (5.6) | 10.7                                      | (3.4) | 4.5                                 | (2.4) |
|                   | Sweden                      | 4.9                                             | (1.8) | 10.6                                      | (3.0) | 22.7                                      | (3.7) | 31.7                                      | (4.0) | 20.7                                      | (3.9) | 9.4                                 | (2.8) |
|                   | Switzerland                 | 9.6                                             | (2.0) | 19.5                                      | (2.6) | 28.6                                      | (2.7) | 24.7                                      | (3.4) | 13.6                                      | (1.7) | 4.0                                 | (1.4) |
|                   | United States               | 8.0                                             | (2.1) | 16.3                                      | (2.6) | 24.6                                      | (3.3) | 26.4                                      | (2.8) | 16.6                                      | (3.0) | 8.0                                 | (2.1) |
| Partner countries | Hong Kong-China             | 3.0                                             | (0.8) | 6.0                                       | (1.1) | 16.3                                      | (1.5) | 35.7                                      | (1.9) | 32.6                                      | (2.0) | 6.4                                 | (0.9) |
|                   | Macao-China                 | 1.1                                             | (0.5) | 8.8                                       | (1.3) | 27.0                                      | (2.4) | 42.0                                      | (2.3) | 19.6                                      | (2.3) | 1.4                                 | (0.6) |
|                   | Russian Federation          | 15.4                                            | (2.7) | 25.1                                      | (3.3) | 30.5                                      | (4.1) | 20.5                                      | (3.2) | 8.1                                       | (2.1) | 0.4                                 | c     |
|                   | Belgium (Flemish Community) | 16.4                                            | (3.2) | 22.2                                      | (3.2) | 25.3                                      | (3.1) | 22.1                                      | (3.4) | 10.3                                      | (2.3) | 3.7                                 | (1.5) |
|                   | Belgium (French Community)  | 19.7                                            | (3.4) | 15.7                                      | (2.6) | 24.1                                      | (3.2) | 25.4                                      | (3.0) | 12.0                                      | (2.2) | 3.0                                 | (1.2) |

Table 2.4f  
Percentage of first-generation students at each level of proficiency on the reading scale

|                   |                             | First-generation students - Proficiency levels |       |                                           |       |                                           |       |                                           |       |                                           |       |                                     |       |
|-------------------|-----------------------------|------------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------------|-------|-------------------------------------|-------|
|                   |                             | Below Level 1<br>(below 335 score points)      |       | Level 1<br>(from 335 to 407 score points) |       | Level 2<br>(from 408 to 480 score points) |       | Level 3<br>(from 481 to 552 score points) |       | Level 4<br>(from 553 to 626 score points) |       | Level 5<br>(above 626 score points) |       |
|                   |                             | %                                              | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                         | S.E.  | %                                   | S.E.  |
| OECD countries    | Australia                   | 5.3                                            | (0.9) | 9.5                                       | (1.1) | 19.3                                      | (1.6) | 26.8                                      | (2.5) | 24.5                                      | (2.2) | 14.7                                | (1.8) |
|                   | Austria                     | 18.9                                           | (3.2) | 24.7                                      | (3.2) | 25.9                                      | (2.6) | 19.6                                      | (2.3) | 8.6                                       | (1.5) | 2.3                                 | (1.0) |
|                   | Belgium                     | 27.5                                           | (4.6) | 21.3                                      | (2.5) | 22.9                                      | (3.6) | 16.9                                      | (2.2) | 7.7                                       | (1.8) | 3.8                                 | (1.1) |
|                   | Canada                      | 3.4                                            | (0.8) | 9.3                                       | (1.7) | 20.3                                      | (2.0) | 31.1                                      | (2.3) | 25.5                                      | (2.1) | 10.5                                | (1.4) |
|                   | Denmark                     | 11.5                                           | (3.0) | 19.9                                      | (4.9) | 27.5                                      | (5.6) | 24.9                                      | (5.6) | 13.8                                      | (5.1) | 2.5                                 | (1.6) |
|                   | France                      | 23.3                                           | (6.0) | 17.8                                      | (5.2) | 22.9                                      | (4.5) | 23.3                                      | (4.9) | 10.0                                      | (2.9) | 2.7                                 | (1.8) |
|                   | Germany                     | 20.1                                           | (3.6) | 21.8                                      | (4.2) | 21.4                                      | (3.6) | 22.8                                      | (2.6) | 11.4                                      | (2.6) | 2.5                                 | (1.3) |
|                   | Luxembourg                  | 18.7                                           | (1.6) | 22.9                                      | (1.8) | 23.8                                      | (2.3) | 20.3                                      | (2.2) | 11.8                                      | (1.7) | 2.5                                 | (0.7) |
|                   | Netherlands                 | 2.8                                            | (2.0) | 21.5                                      | (4.5) | 36.8                                      | (5.5) | 26.4                                      | (5.3) | 9.7                                       | (3.0) | 2.8                                 | (1.6) |
|                   | New Zealand                 | 7.4                                            | (1.4) | 12.2                                      | (1.5) | 19.8                                      | (2.3) | 25.6                                      | (2.0) | 21.7                                      | (2.5) | 13.2                                | (1.9) |
|                   | Norway                      | 17.7                                           | (4.4) | 21.8                                      | (4.5) | 25.3                                      | (4.2) | 20.7                                      | (4.4) | 10.9                                      | (3.9) | 3.6                                 | (2.2) |
|                   | Sweden                      | 19.6                                           | (4.4) | 19.1                                      | (2.9) | 24.6                                      | (4.2) | 21.3                                      | (3.2) | 12.9                                      | (3.2) | 2.5                                 | (1.4) |
|                   | Switzerland                 | 21.7                                           | (3.0) | 22.8                                      | (2.4) | 26.2                                      | (3.1) | 18.7                                      | (3.0) | 7.7                                       | (1.9) | 2.8                                 | (1.0) |
|                   | United States               | 16.5                                           | (3.0) | 18.8                                      | (2.7) | 20.1                                      | (2.7) | 24.5                                      | (3.1) | 14.5                                      | (2.7) | 5.5                                 | (1.5) |
| Partner countries | Hong Kong-China             | 3.5                                            | (1.1) | 11.7                                      | (1.5) | 24.1                                      | (2.2) | 37.1                                      | (2.2) | 20.5                                      | (1.9) | 3.2                                 | (0.7) |
|                   | Macao-China                 | 1.0                                            | (1.2) | 7.7                                       | (2.4) | 32.1                                      | (5.9) | 36.1                                      | (6.5) | 20.8                                      | (5.5) | 2.2                                 | (1.7) |
|                   | Russian Federation          | 21.2                                           | (3.6) | 24.0                                      | (2.4) | 30.2                                      | (3.0) | 18.6                                      | (2.2) | 5.4                                       | (1.2) | 0.6                                 | (0.5) |
|                   | Belgium (Flemish Community) | 14.7                                           | (3.4) | 19.4                                      | (3.2) | 26.4                                      | (4.9) | 22.9                                      | (3.0) | 10.2                                      | (2.7) | 6.4                                 | (2.0) |
|                   | Belgium (French Community)  | 33.7                                           | (6.2) | 22.3                                      | (3.1) | 21.3                                      | (3.1) | 13.8                                      | (2.4) | 6.3                                       | (1.7) | 2.5                                 | (1.0) |



Table 2.5a  
Performance on the mathematics scale by immigrant status and language spoken at home

Results based on students' self-reports

|                   |                             | Performance on the mathematics scale                                                                                                      |              |                            |              |                           |              |                                                                                                                                                      |              |                           |              |
|-------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------|--------------|---------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------|--------------|
|                   |                             | Language spoken at home most of the time IS THE SAME as the language of assessment, other official languages or another national dialects |              |                            |              |                           |              | Language spoken at home most of the time IS DIFFERENT from the language of assessment, from other official languages or from other national dialects |              |                           |              |
|                   |                             | Native students                                                                                                                           |              | Second-generation students |              | First-generation 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.         |
| OECD countries    | Australia                   | 528                                                                                                                                       | (2.1)        | 528                        | (4.5)        | 527                       | (5.4)        | 514                                                                                                                                                  | (7.5)        | 523                       | (7.5)        |
|                   | Austria                     | 515                                                                                                                                       | (3.3)        | 471                        | (13.9)       | 468                       | (9.8)        | 460                                                                                                                                                  | (11.2)       | 453                       | (7.8)        |
|                   | Belgium                     | 551                                                                                                                                       | (2.4)        | 473                        | (11.4)       | 443                       | (16.4)       | 454                                                                                                                                                  | (11.7)       | 425                       | (11.4)       |
|                   | Canada                      | 538                                                                                                                                       | (1.6)        | 551                        | (5.0)        | 530                       | (6.0)        | 531                                                                                                                                                  | (6.2)        | 533                       | (5.4)        |
|                   | Denmark                     | 520                                                                                                                                       | (2.6)        | 455                        | (15.3)       | 446                       | (15.5)       | 438                                                                                                                                                  | (17.4)       | 458                       | (14.3)       |
|                   | France                      | 521                                                                                                                                       | (2.4)        | 488                        | (5.9)        | 461                       | (19.6)       | 455                                                                                                                                                  | (9.8)        | 441                       | (21.6)       |
|                   | Germany                     | 528                                                                                                                                       | (3.5)        | 458                        | (9.8)        | 480                       | (10.5)       | 427                                                                                                                                                  | (15.5)       | 435                       | (9.0)        |
|                   | Luxembourg                  | 509                                                                                                                                       | (1.5)        | 482                        | (6.6)        | 513                       | (11.1)       | 480                                                                                                                                                  | (5.2)        | 455                       | (3.8)        |
|                   | Netherlands                 | 553                                                                                                                                       | (3.1)        | 508                        | (11.4)       | 486                       | (14.1)       | 470                                                                                                                                                  | (13.1)       | 462                       | (10.4)       |
|                   | New Zealand                 | 528                                                                                                                                       | (2.6)        | 502                        | (9.4)        | 528                       | (6.2)        | 478                                                                                                                                                  | (13.4)       | 523                       | (6.8)        |
| Partner countries | Norway                      | 501                                                                                                                                       | (2.3)        | 445                        | (19.8)       | 418                       | (24.3)       | 483                                                                                                                                                  | (15.2)       | 442                       | (10.8)       |
|                   | Sweden                      | 519                                                                                                                                       | (2.2)        | 499                        | (9.4)        | 445                       | (19.3)       | 484                                                                                                                                                  | (16.2)       | 427                       | (10.1)       |
|                   | Switzerland                 | 545                                                                                                                                       | (3.5)        | 495                        | (7.3)        | 480                       | (10.2)       | 487                                                                                                                                                  | (8.6)        | 447                       | (7.8)        |
|                   | United States               | 492                                                                                                                                       | (2.8)        | 493                        | (8.4)        | 481                       | (11.3)       | 447                                                                                                                                                  | (9.7)        | 449                       | (8.0)        |
|                   | <b>OECD average</b>         | <b>525</b>                                                                                                                                | <b>(0.7)</b> | <b>500</b>                 | <b>(2.4)</b> | <b>495</b>                | <b>(3.4)</b> | <b>474</b>                                                                                                                                           | <b>(3.2)</b> | <b>470</b>                | <b>(2.5)</b> |
|                   | Hong Kong-China             | 561                                                                                                                                       | (4.4)        | 573                        | (4.7)        | 521                       | (5.3)        | 508                                                                                                                                                  | (23.3)       | 442                       | (14.5)       |
|                   | Macao-China                 | 531                                                                                                                                       | (6.1)        | 534                        | (4.2)        | 522                       | (9.6)        | 491                                                                                                                                                  | (21.8)       | 468                       | (20.2)       |
|                   | Russian Federation          | 474                                                                                                                                       | (4.2)        | 460                        | (7.4)        | 460                       | (5.5)        | 419                                                                                                                                                  | (21.1)       | 400                       | (15.9)       |
|                   | Belgium (Flemish Community) | 571                                                                                                                                       | (2.8)        | 501                        | (18.1)       | 499                       | (9.6)        | 431                                                                                                                                                  | (15.0)       | 441                       | (18.4)       |
|                   | Belgium (French Community)  | 519                                                                                                                                       | (4.1)        | 466                        | (13.2)       | 422                       | (20.0)       | 475                                                                                                                                                  | (14.4)       | 410                       | (15.5)       |

|                   |                             | Difference in the mathematics score                  |              |                                                               |              |                                                      |              |                                                              |              |
|-------------------|-----------------------------|------------------------------------------------------|--------------|---------------------------------------------------------------|--------------|------------------------------------------------------|--------------|--------------------------------------------------------------|--------------|
|                   |                             | Second-generation minus native students              |              |                                                               |              | First-generation minus native students               |              |                                                              |              |
|                   |                             | Both sub-groups speak language of assessment at home |              | Second-generation students speak a different language at home |              | Both sub-groups speak language of assessment at home |              | First-generation students speak a different language at home |              |
|                   |                             | Difference.                                          | S.E.         | Difference.                                                   | S.E.         | Difference.                                          | S.E.         | Difference.                                                  | S.E.         |
| OECD countries    | Australia                   | -1                                                   | (4.6)        | -14                                                           | (7.4)        | -1                                                   | (5.1)        | -6                                                           | (7.6)        |
|                   | Austria                     | <b>-44</b>                                           | (14.3)       | <b>-55</b>                                                    | (11.5)       | <b>-48</b>                                           | (9.1)        | <b>-62</b>                                                   | (7.9)        |
|                   | Belgium                     | <b>-77</b>                                           | (11.7)       | <b>-96</b>                                                    | (11.4)       | <b>-107</b>                                          | (16.5)       | <b>-126</b>                                                  | (11.3)       |
|                   | Canada                      | <b>13</b>                                            | (5.0)        | -8                                                            | (6.6)        | -8                                                   | (6.2)        | -5                                                           | (5.5)        |
|                   | Denmark                     | <b>-65</b>                                           | (15.1)       | <b>-81</b>                                                    | (17.7)       | <b>-74</b>                                           | (15.3)       | <b>-61</b>                                                   | (14.3)       |
|                   | France                      | <b>-33</b>                                           | (6.3)        | <b>-66</b>                                                    | (10.1)       | <b>-60</b>                                           | (19.4)       | <b>-80</b>                                                   | (21.9)       |
|                   | Germany                     | <b>-71</b>                                           | (10.2)       | <b>-102</b>                                                   | (15.7)       | <b>-48</b>                                           | (11.0)       | <b>-93</b>                                                   | (8.9)        |
|                   | Luxembourg                  | <b>-27</b>                                           | (7.0)        | <b>-30</b>                                                    | (5.4)        | 4                                                    | (11.2)       | <b>-54</b>                                                   | (4.3)        |
|                   | Netherlands                 | <b>-45</b>                                           | (12.2)       | <b>-83</b>                                                    | (13.8)       | <b>-67</b>                                           | (14.5)       | <b>-92</b>                                                   | (10.8)       |
|                   | New Zealand                 | <b>-27</b>                                           | (9.9)        | <b>-50</b>                                                    | (13.8)       | -1                                                   | (6.4)        | -5                                                           | (7.4)        |
| Partner countries | Norway                      | <b>-55</b>                                           | (19.7)       | -17                                                           | (14.9)       | <b>-83</b>                                           | (24.2)       | <b>-58</b>                                                   | (10.9)       |
|                   | Sweden                      | <b>-20</b>                                           | (9.4)        | <b>-36</b>                                                    | (15.7)       | <b>-75</b>                                           | (18.9)       | <b>-92</b>                                                   | (10.5)       |
|                   | Switzerland                 | <b>-50</b>                                           | (6.9)        | <b>-58</b>                                                    | (8.6)        | <b>-65</b>                                           | (9.3)        | <b>-98</b>                                                   | (7.6)        |
|                   | United States               | 2                                                    | (8.1)        | <b>-45</b>                                                    | (9.8)        | -11                                                  | (10.9)       | <b>-43</b>                                                   | (8.4)        |
|                   | <b>OECD average</b>         | <b>-25</b>                                           | <b>(2.3)</b> | <b>-51</b>                                                    | <b>(3.2)</b> | <b>-29</b>                                           | <b>(3.4)</b> | <b>-54</b>                                                   | <b>(2.7)</b> |
|                   | Hong Kong-China             | <b>12</b>                                            | (4.5)        | <b>-53</b>                                                    | (22.9)       | <b>-39</b>                                           | (4.5)        | <b>-119</b>                                                  | (13.8)       |
|                   | Macao-China                 | <b>3</b>                                             | (7.9)        | <b>-40</b>                                                    | (22.8)       | <b>-9</b>                                            | (11.1)       | <b>-63</b>                                                   | (21.4)       |
|                   | Russian Federation          | <b>-14</b>                                           | (7.4)        | <b>-55</b>                                                    | (21.5)       | <b>-14</b>                                           | (5.4)        | <b>-74</b>                                                   | (15.2)       |
|                   | Belgium (Flemish Community) | <b>-70</b>                                           | (18.4)       | <b>-140</b>                                                   | (15.7)       | <b>-72</b>                                           | (9.5)        | <b>-130</b>                                                  | (18.2)       |
|                   | Belgium (French Community)  | <b>-53</b>                                           | (13.3)       | <b>-44</b>                                                    | (13.1)       | <b>-98</b>                                           | (20.2)       | <b>-110</b>                                                  | (15.4)       |

Note: Differences that are statistically significant are indicated in bold.

Table 2.5b  
Performance on the reading scale by immigrant status and language spoken at home

Results based on students' self-reports

|                                 |                             | Performance on the reading scale                                                                                                          |              |                                                               |              |                                                      |              |                                                                                                                                                      |              |                           |              |
|---------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------|--------------|------------------------------------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------|--------------|
|                                 |                             | Language spoken at home most of the time IS THE SAME as the language of assessment, other official languages or another national dialects |              |                                                               |              |                                                      |              | Language spoken at home most of the time IS DIFFERENT from the language of assessment, from other official languages or from other national dialects |              |                           |              |
|                                 |                             | Native students                                                                                                                           |              | Second-generation students                                    |              | First-generation 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.         |
| OECD countries                  | Australia                   | 530                                                                                                                                       | (2.2)        | 531                                                           | (5.1)        | 524                                                  | (5.6)        | 516                                                                                                                                                  | (7.0)        | 508                       | (7.5)        |
|                                 | Austria                     | 502                                                                                                                                       | (3.9)        | 461                                                           | (16.5)       | 460                                                  | (12.7)       | 413                                                                                                                                                  | (21.5)       | 421                       | (9.4)        |
|                                 | Belgium                     | 529                                                                                                                                       | (2.6)        | 462                                                           | (12.0)       | 412                                                  | (18.6)       | 436                                                                                                                                                  | (12.8)       | 403                       | (15.1)       |
|                                 | Canada                      | 535                                                                                                                                       | (1.6)        | 553                                                           | (4.3)        | 527                                                  | (6.1)        | 527                                                                                                                                                  | (7.0)        | 512                       | (5.7)        |
|                                 | Denmark                     | 497                                                                                                                                       | (2.8)        | 443                                                           | (18.5)       | 452                                                  | (14.6)       | 443                                                                                                                                                  | (22.8)       | 458                       | (13.8)       |
|                                 | France                      | 507                                                                                                                                       | (2.7)        | 477                                                           | (6.3)        | 450                                                  | (21.8)       | 435                                                                                                                                                  | (12.0)       | 412                       | (19.4)       |
|                                 | Germany                     | 520                                                                                                                                       | (3.5)        | 457                                                           | (9.5)        | 463                                                  | (11.4)       | 404                                                                                                                                                  | (17.0)       | 404                       | (11.8)       |
|                                 | Luxembourg                  | 503                                                                                                                                       | (1.8)        | 466                                                           | (6.9)        | 487                                                  | (10.7)       | 452                                                                                                                                                  | (5.8)        | 422                       | (4.7)        |
|                                 | Netherlands                 | 527                                                                                                                                       | (3.0)        | 489                                                           | (9.1)        | 477                                                  | (13.4)       | 458                                                                                                                                                  | (11.7)       | 459                       | (10.0)       |
|                                 | New Zealand                 | 529                                                                                                                                       | (2.9)        | 522                                                           | (10.0)       | 535                                                  | (6.9)        | 465                                                                                                                                                  | (12.8)       | 481                       | (6.8)        |
| Partner countries               | Norway                      | 506                                                                                                                                       | (2.6)        | 440                                                           | (22.0)       | 429                                                  | (27.3)       | 457                                                                                                                                                  | (17.1)       | 435                       | (12.6)       |
|                                 | Sweden                      | 524                                                                                                                                       | (2.1)        | 512                                                           | (9.9)        | 466                                                  | (21.5)       | 507                                                                                                                                                  | (16.3)       | 431                       | (12.4)       |
|                                 | Switzerland                 | 517                                                                                                                                       | (3.3)        | 473                                                           | (7.9)        | 455                                                  | (10.6)       | 464                                                                                                                                                  | (8.1)        | 412                       | (8.3)        |
|                                 | United States               | 505                                                                                                                                       | (3.0)        | 507                                                           | (8.6)        | 494                                                  | (11.7)       | 462                                                                                                                                                  | (11.8)       | 443                       | (8.8)        |
|                                 | <b>OECD average</b>         | <b>516</b>                                                                                                                                | <b>(0.8)</b> | <b>496</b>                                                    | <b>(2.4)</b> | <b>488</b>                                           | <b>(3.7)</b> | <b>460</b>                                                                                                                                           | <b>(3.4)</b> | <b>446</b>                | <b>(2.6)</b> |
|                                 | Hong Kong-China             | 516                                                                                                                                       | (3.4)        | 525                                                           | (3.9)        | 498                                                  | (4.9)        | 460                                                                                                                                                  | (21.5)       | 436                       | (13.2)       |
|                                 | Macao-China                 | 502                                                                                                                                       | (5.3)        | 498                                                           | (3.0)        | 502                                                  | (7.7)        | 470                                                                                                                                                  | (13.5)       | 470                       | (20.9)       |
|                                 | Russian Federation          | 449                                                                                                                                       | (3.6)        | 430                                                           | (7.1)        | 420                                                  | (7.6)        | 377                                                                                                                                                  | (24.5)       | 367                       | (13.8)       |
|                                 | Belgium (Flemish Community) | 547                                                                                                                                       | (2.9)        | 493                                                           | (17.5)       | 479                                                  | (15.5)       | 423                                                                                                                                                  | (14.7)       | 427                       | (22.2)       |
|                                 | Belgium (French Community)  | 501                                                                                                                                       | (4.5)        | 454                                                           | (14.8)       | 387                                                  | (22.6)       | 447                                                                                                                                                  | (19.1)       | 382                       | (20.9)       |
| Difference in the reading score |                             |                                                                                                                                           |              |                                                               |              |                                                      |              |                                                                                                                                                      |              |                           |              |
|                                 |                             | Second-generation minus native students                                                                                                   |              |                                                               |              | First-generation minus native students               |              |                                                                                                                                                      |              |                           |              |
|                                 |                             | Both sub-groups speak language of assessment at home                                                                                      |              | Second-generation students speak a different language at home |              | Both sub-groups speak language of assessment at home |              | First-generation students speak a different language at home                                                                                         |              |                           |              |
|                                 |                             | Difference                                                                                                                                | S.E.         | Difference                                                    | S.E.         | Difference                                           | S.E.         | Difference                                                                                                                                           | S.E.         |                           |              |
| OECD countries                  | Australia                   | 1                                                                                                                                         | (5.2)        | -14                                                           | (7.2)        | -6                                                   | (5.4)        | -22                                                                                                                                                  | (7.6)        |                           |              |
|                                 | Austria                     | <b>-41</b>                                                                                                                                | (17.0)       | <b>-90</b>                                                    | (21.4)       | <b>-42</b>                                           | (12.5)       | <b>-81</b>                                                                                                                                           | (10.0)       |                           |              |
|                                 | Belgium                     | <b>-67</b>                                                                                                                                | (11.9)       | <b>-93</b>                                                    | (12.3)       | <b>-117</b>                                          | (18.6)       | <b>-125</b>                                                                                                                                          | (15.1)       |                           |              |
|                                 | Canada                      | 18                                                                                                                                        | (4.2)        | -8                                                            | (7.2)        | -8                                                   | (6.3)        | -23                                                                                                                                                  | (5.7)        |                           |              |
|                                 | Denmark                     | <b>-54</b>                                                                                                                                | (18.4)       | <b>-53</b>                                                    | (23.2)       | <b>-45</b>                                           | (14.8)       | <b>-39</b>                                                                                                                                           | (14.1)       |                           |              |
|                                 | France                      | <b>-31</b>                                                                                                                                | (7.0)        | <b>-72</b>                                                    | (12.1)       | <b>-57</b>                                           | (21.8)       | <b>-95</b>                                                                                                                                           | (19.6)       |                           |              |
|                                 | Germany                     | <b>-63</b>                                                                                                                                | (9.9)        | <b>-115</b>                                                   | (17.3)       | <b>-57</b>                                           | (11.9)       | <b>-116</b>                                                                                                                                          | (11.5)       |                           |              |
|                                 | Luxembourg                  | <b>-36</b>                                                                                                                                | (7.2)        | <b>-51</b>                                                    | (6.1)        | -16                                                  | (11.1)       | <b>-81</b>                                                                                                                                           | (5.0)        |                           |              |
|                                 | Netherlands                 | <b>-38</b>                                                                                                                                | (9.6)        | <b>-69</b>                                                    | (12.1)       | <b>-49</b>                                           | (13.8)       | <b>-68</b>                                                                                                                                           | (10.5)       |                           |              |
|                                 | New Zealand                 | -7                                                                                                                                        | (10.7)       | <b>-64</b>                                                    | (12.9)       | 6                                                    | (7.3)        | <b>-48</b>                                                                                                                                           | (7.5)        |                           |              |
| Partner countries               | Norway                      | <b>-67</b>                                                                                                                                | (22.0)       | <b>-49</b>                                                    | (17.0)       | <b>-78</b>                                           | (26.9)       | <b>-71</b>                                                                                                                                           | (12.4)       |                           |              |
|                                 | Sweden                      | -11                                                                                                                                       | (9.8)        | -17                                                           | (16.1)       | <b>-58</b>                                           | (21.3)       | <b>-93</b>                                                                                                                                           | (12.8)       |                           |              |
|                                 | Switzerland                 | <b>-45</b>                                                                                                                                | (7.2)        | <b>-53</b>                                                    | (8.1)        | <b>-63</b>                                           | (9.3)        | <b>-105</b>                                                                                                                                          | (8.0)        |                           |              |
|                                 | United States               | 2                                                                                                                                         | (8.3)        | <b>-43</b>                                                    | (11.8)       | -12                                                  | (11.7)       | <b>-62</b>                                                                                                                                           | (9.1)        |                           |              |
|                                 | <b>OECD average</b>         | <b>-20</b>                                                                                                                                | <b>(2.4)</b> | <b>-56</b>                                                    | <b>(3.4)</b> | <b>-28</b>                                           | <b>(3.7)</b> | <b>-70</b>                                                                                                                                           | <b>(2.8)</b> |                           |              |
|                                 | Hong Kong-China             | 8                                                                                                                                         | (3.6)        | <b>-57</b>                                                    | (21.2)       | <b>-18</b>                                           | (4.2)        | <b>-80</b>                                                                                                                                           | (13.4)       |                           |              |
|                                 | Macao-China                 | -4                                                                                                                                        | (5.6)        | <b>-33</b>                                                    | (14.9)       | 0                                                    | (10.1)       | <b>-32</b>                                                                                                                                           | (20.7)       |                           |              |
|                                 | Russian Federation          | <b>-20</b>                                                                                                                                | (6.8)        | <b>-72</b>                                                    | (24.5)       | <b>-29</b>                                           | (7.0)        | <b>-82</b>                                                                                                                                           | (13.2)       |                           |              |
|                                 | Belgium (Flemish Community) | <b>-54</b>                                                                                                                                | (18.0)       | <b>-124</b>                                                   | (15.5)       | <b>-69</b>                                           | (15.7)       | <b>-120</b>                                                                                                                                          | (22.3)       |                           |              |
|                                 | Belgium (French Community)  | <b>-47</b>                                                                                                                                | (14.4)       | <b>-53</b>                                                    | (17.6)       | <b>-114</b>                                          | (22.5)       | <b>-119</b>                                                                                                                                          | (20.6)       |                           |              |

Note: Differences that are statistically significant are indicated in bold.



Table 2.6a  
Comparison of differences in mathematics scores between immigrant and native students accounting for language differences

|                   |                             | Difference in the mathematics score              |            |                                                 |            |                                                  |            |                                                 |            |
|-------------------|-----------------------------|--------------------------------------------------|------------|-------------------------------------------------|------------|--------------------------------------------------|------------|-------------------------------------------------|------------|
|                   |                             | WITHOUT accounting for language differences      |            |                                                 |            | WITH accounting for language differences         |            |                                                 |            |
|                   |                             | Second-generation students minus native students |            | First-generation students minus native students |            | Second-generation students minus native students |            | First-generation students minus native students |            |
|                   |                             | Difference                                       | S.E.       | Difference                                      | S.E.       | Difference                                       | S.E.       | Difference                                      | S.E.       |
| OECD countries    | Australia                   | -5                                               | (4.4)      | 0                                               | (5.0)      | -3                                               | (4.2)      | 4                                               | (4.5)      |
|                   | Austria                     | <b>-43</b>                                       | (10.1)     | <b>-56</b>                                      | (6.9)      | <b>-33</b>                                       | (11.1)     | <b>-44</b>                                      | (8.5)      |
|                   | Belgium                     | <b>-76</b>                                       | (8.4)      | <b>-104</b>                                     | (11.0)     | <b>-62</b>                                       | (9.1)      | <b>-90</b>                                      | (12.5)     |
|                   | Canada                      | 7                                                | (4.5)      | -1                                              | (4.6)      | <b>13</b>                                        | (4.5)      | 11                                              | (5.5)      |
|                   | Denmark                     | <b>-70</b>                                       | (13.2)     | <b>-61</b>                                      | (10.9)     | <b>-71</b>                                       | (13.0)     | <b>-63</b>                                      | (11.6)     |
|                   | France                      | <b>-42</b>                                       | (5.9)      | <b>-64</b>                                      | (17.6)     | <b>-34</b>                                       | (6.6)      | <b>-50</b>                                      | (18.1)     |
|                   | Germany                     | <b>-86</b>                                       | (11.4)     | <b>-58</b>                                      | (8.9)      | <b>-68</b>                                       | (10.8)     | <b>-40</b>                                      | (9.3)      |
|                   | Luxembourg                  | <b>-28</b>                                       | (4.2)      | <b>-44</b>                                      | (4.0)      | -13                                              | (6.3)      | <b>-25</b>                                      | (7.5)      |
|                   | Netherlands                 | <b>-56</b>                                       | (11.7)     | <b>-77</b>                                      | (10.5)     | <b>-45</b>                                       | (11.4)     | <b>-57</b>                                      | (12.5)     |
|                   | New Zealand                 | <b>-36</b>                                       | (10.4)     | -7                                              | (6.4)      | <b>-30</b>                                       | (10.6)     | 4                                               | (7.7)      |
|                   | Norway                      | <b>-32</b>                                       | (13.2)     | <b>-54</b>                                      | (10.6)     | -33                                              | (16.5)     | <b>-55</b>                                      | (18.2)     |
|                   | Sweden                      | <b>-25</b>                                       | (9.6)      | <b>-79</b>                                      | (9.2)      | <b>-18</b>                                       | (8.0)      | <b>-67</b>                                      | (11.8)     |
|                   | Switzerland                 | <b>-50</b>                                       | (5.9)      | <b>-80</b>                                      | (6.0)      | <b>-42</b>                                       | (6.3)      | <b>-65</b>                                      | (7.8)      |
|                   | United States               | <b>-16</b>                                       | (7.4)      | <b>-32</b>                                      | (7.6)      | 2                                                | (7.5)      | -4                                              | (8.0)      |
|                   | <b>OECD average</b>         |                                                  | <b>-33</b> | <b>(2.2)</b>                                    | <b>-42</b> | <b>(2.1)</b>                                     | <b>-22</b> | <b>(2.2)</b>                                    | <b>-25</b> |
| Partner countries | Hong Kong-China             | <b>14</b>                                        | (4.6)      | <b>-40</b>                                      | (4.7)      | <b>13</b>                                        | (4.6)      | <b>-39</b>                                      | (4.5)      |
|                   | Macao-China                 | 5                                                | (8.0)      | -9                                              | (10.8)     | 4                                                | (8.0)      | -10                                             | (10.7)     |
|                   | Russian Federation          | <b>-14</b>                                       | (7.2)      | <b>-20</b>                                      | (5.6)      | <b>-14</b>                                       | (7.2)      | <b>-17</b>                                      | (5.4)      |
|                   | Belgium (Flemish Community) | <b>-98</b>                                       | (14.8)     | <b>-90</b>                                      | (11.3)     | <b>-70</b>                                       | (16.1)     | <b>-66</b>                                      | (12.9)     |
|                   | Belgium (French Community)  | <b>-45</b>                                       | (9.5)      | <b>-93</b>                                      | (14.8)     | <b>-36</b>                                       | (9.7)      | <b>-84</b>                                      | (15.6)     |

Note: Differences that are statistically significant are indicated in bold.

Table 2.6b  
Comparison of differences in reading scores between immigrant and native students accounting for language differences

|                   |                             | Difference in the reading score                  |            |                                                 |            |                                                  |            |                                                 |            |
|-------------------|-----------------------------|--------------------------------------------------|------------|-------------------------------------------------|------------|--------------------------------------------------|------------|-------------------------------------------------|------------|
|                   |                             | WITHOUT accounting for language differences      |            |                                                 |            | WITH accounting for language differences         |            |                                                 |            |
|                   |                             | Second-generation students minus native students |            | First-generation students minus native students |            | Second-generation students minus native students |            | First-generation students minus native students |            |
|                   |                             | Difference                                       | S.E.       | Difference                                      | S.E.       | Difference                                       | S.E.       | Difference                                      | S.E.       |
| OECD countries    | Australia                   | -3                                               | (4.7)      | <b>-13</b>                                      | (4.9)      | 1                                                | (4.8)      | -7                                              | (4.7)      |
|                   | Austria                     | <b>-71</b>                                       | (14.8)     | <b>-71</b>                                      | (9.1)      | <b>-45</b>                                       | (12.0)     | <b>-40</b>                                      | (11.3)     |
|                   | Belgium                     | <b>-76</b>                                       | (8.6)      | <b>-118</b>                                     | (14.1)     | <b>-61</b>                                       | (10.0)     | <b>-106</b>                                     | (16.4)     |
|                   | Canada                      | 11                                               | (4.2)      | -17                                             | (4.7)      | <b>19</b>                                        | (4.2)      | 1                                               | (5.4)      |
|                   | Denmark                     | <b>-54</b>                                       | (15.4)     | <b>-42</b>                                      | (10.9)     | <b>-57</b>                                       | (15.0)     | <b>-46</b>                                      | (12.1)     |
|                   | France                      | <b>-45</b>                                       | (7.3)      | <b>-76</b>                                      | (17.6)     | <b>-28</b>                                       | (7.3)      | <b>-51</b>                                      | (17.0)     |
|                   | Germany                     | <b>-86</b>                                       | (11.5)     | <b>-86</b>                                      | (9.3)      | <b>-60</b>                                       | (11.7)     | <b>-57</b>                                      | (9.8)      |
|                   | Luxembourg                  | <b>-45</b>                                       | (4.8)      | <b>-69</b>                                      | (4.8)      | <b>-20</b>                                       | (6.3)      | <b>-37</b>                                      | (7.5)      |
|                   | Netherlands                 | <b>-47</b>                                       | (8.7)      | <b>-59</b>                                      | (9.2)      | <b>-38</b>                                       | (8.7)      | <b>-42</b>                                      | (10.7)     |
|                   | New Zealand                 | <b>-22</b>                                       | (9.0)      | -22                                             | (5.8)      | -7                                               | (9.3)      | 8                                               | (7.2)      |
|                   | Norway                      | <b>-57</b>                                       | (12.5)     | <b>-72</b>                                      | (11.9)     | <b>-51</b>                                       | (15.8)     | <b>-62</b>                                      | (21.3)     |
|                   | Sweden                      | -13                                              | (8.7)      | <b>-85</b>                                      | (11.5)     | -7                                               | (7.8)      | <b>-73</b>                                      | (15.7)     |
|                   | Switzerland                 | <b>-47</b>                                       | (5.7)      | <b>-90</b>                                      | (5.9)      | <b>-37</b>                                       | (6.8)      | <b>-70</b>                                      | (7.8)      |
|                   | United States               | <b>-19</b>                                       | (7.6)      | <b>-47</b>                                      | (8.3)      | 5                                                | (7.6)      | -11                                             | (9.0)      |
|                   | <b>OECD average</b>         |                                                  | <b>-34</b> | <b>(2.2)</b>                                    | <b>-54</b> | <b>(2.2)</b>                                     | <b>-18</b> | <b>(2.3)</b>                                    | <b>-29</b> |
| Partner countries | Hong Kong-China             | <b>9</b>                                         | (3.5)      | <b>-20</b>                                      | (4.2)      | <b>8</b>                                         | (3.5)      | <b>-19</b>                                      | (4.2)      |
|                   | Macao-China                 | -2                                               | (5.6)      | 2                                               | (9.4)      | -3                                               | (5.6)      | 1                                               | (9.4)      |
|                   | Russian Federation          | <b>-20</b>                                       | (6.6)      | <b>-32</b>                                      | (6.8)      | <b>-20</b>                                       | (6.7)      | <b>-29</b>                                      | (6.6)      |
|                   | Belgium (Flemish Community) | <b>-96</b>                                       | (13.0)     | <b>-92</b>                                      | (13.1)     | <b>-59</b>                                       | (14.8)     | <b>-64</b>                                      | (13.8)     |
|                   | Belgium (French Community)  | <b>-47</b>                                       | (11.0)     | <b>-113</b>                                     | (18.2)     | -38                                              | (11.7)     | <b>-106</b>                                     | (20.2)     |

Note: Differences that are statistically significant are indicated in bold.

Table 2.7  
Mean score and gender differences in student performance on the mathematics and reading scales, by immigrant status

|                             | Performance on the mathematics scale |                             |            |              |                    |              | Performance on the reading scale |              |            |              |                    |              |            |              |
|-----------------------------|--------------------------------------|-----------------------------|------------|--------------|--------------------|--------------|----------------------------------|--------------|------------|--------------|--------------------|--------------|------------|--------------|
|                             | Native students                      |                             |            |              |                    |              | Native students                  |              |            |              |                    |              |            |              |
|                             | Males                                |                             | Females    |              | Difference (F - M) |              | Males                            |              | Females    |              | Difference (F - M) |              |            |              |
|                             | Mean score                           | S.E.                        | Mean score | S.E.         | Score dif.         | S.E.         | Mean score                       | S.E.         | Mean score | S.E.         | Score dif.         | S.E.         |            |              |
| OECD countries              | Australia                            | 529                         | (2.9)      | 525          | (2.5)              | 4            | (3.3)                            | 509          | (2.8)      | 550          | (2.2)              | -41          | (3.2)      |              |
|                             | Austria                              | 520                         | (4.2)      | 510          | (4.0)              | 10           | (4.8)                            | 479          | (4.8)      | 523          | (4.3)              | -44          | (5.9)      |              |
|                             | Belgium                              | 550                         | (3.8)      | 540          | (2.8)              | 10           | (4.6)                            | 507          | (4.0)      | 541          | (2.9)              | -34          | (4.7)      |              |
|                             | Canada                               | 543                         | (2.0)      | 531          | (1.9)              | 12           | (2.3)                            | 518          | (2.1)      | 549          | (1.9)              | -31          | (2.3)      |              |
|                             | Denmark                              | 528                         | (3.2)      | 512          | (2.8)              | 17           | (3.2)                            | 484          | (3.2)      | 509          | (3.0)              | -25          | (3.1)      |              |
|                             | France                               | 525                         | (3.5)      | 515          | (2.8)              | 10           | (4.2)                            | 486          | (3.6)      | 524          | (3.0)              | -38          | (4.2)      |              |
|                             | Germany                              | 532                         | (4.1)      | 520          | (4.0)              | 12           | (4.0)                            | 497          | (4.3)      | 537          | (3.8)              | -39          | (4.2)      |              |
|                             | Luxembourg                           | 518                         | (2.4)      | 497          | (2.0)              | 22           | (3.7)                            | 486          | (2.9)      | 514          | (2.3)              | -28          | (3.8)      |              |
|                             | Netherlands                          | 553                         | (4.0)      | 549          | (3.4)              | 4            | (4.2)                            | 513          | (3.8)      | 536          | (3.1)              | -22          | (3.9)      |              |
|                             | New Zealand                          | 536                         | (3.2)      | 521          | (3.4)              | 15           | (4.0)                            | 514          | (3.8)      | 543          | (3.5)              | -29          | (4.6)      |              |
|                             | Norway                               | 503                         | (2.8)      | 495          | (2.8)              | 7            | (3.1)                            | 480          | (3.2)      | 529          | (3.2)              | -50          | (3.4)      |              |
|                             | Sweden                               | 520                         | (2.8)      | 515          | (2.9)              | 5            | (3.4)                            | 503          | (2.6)      | 541          | (2.7)              | -39          | (3.3)      |              |
|                             | Switzerland                          | 552                         | (4.7)      | 533          | (3.8)              | 18           | (5.2)                            | 498          | (4.5)      | 533          | (3.0)              | -34          | (5.0)      |              |
|                             | United States                        | 494                         | (3.2)      | 486          | (3.2)              | 8            | (3.0)                            | 488          | (3.6)      | 518          | (3.5)              | -30          | (3.5)      |              |
|                             |                                      | <i>OECD average</i>         | <i>529</i> | <i>(1.0)</i> | <i>517</i>         | <i>(0.8)</i> | <i>11</i>                        | <i>(1.0)</i> | <i>497</i> | <i>(1.0)</i> | <i>531</i>         | <i>(0.8)</i> | <i>-34</i> | <i>(1.0)</i> |
|                             | Partner countries                    | Hong Kong-China             | 558        | (6.5)        | 556                | (4.9)        | 2                                | (7.0)        | 496        | (5.3)        | 529                | (3.7)        | -33        | (5.8)        |
|                             |                                      | Macao-China                 | 548        | (8.1)        | 512                | (7.6)        | 37                               | (10.9)       | 493        | (6.9)        | 503                | (6.5)        | -10        | (8.8)        |
|                             |                                      | Russian Federation          | 478        | (5.5)        | 465                | (4.4)        | 13                               | (4.4)        | 433        | (4.7)        | 459                | (4.0)        | -27        | (4.1)        |
|                             |                                      | Belgium (Flemish Community) | 574        | (4.6)        | 559                | (3.2)        | -15                              | (5.4)        | 529        | (4.5)        | 557                | (3.3)        | 28         | (5.4)        |
| Belgium (French Community)  |                                      | 516                         | (6.6)      | 512          | (4.7)              | -4           | (7.8)                            | 475          | (7.0)      | 515          | (5.3)              | 40           | (8.8)      |              |
| OECD countries              | Second-generation students           |                             |            |              |                    |              | Second-generation students       |              |            |              |                    |              |            |              |
|                             | Males                                |                             | Females    |              | Difference (F - M) |              | Males                            |              | Females    |              | Difference (F - M) |              |            |              |
|                             | Mean score                           | S.E.                        | Mean score | S.E.         | Score dif.         | S.E.         | Mean score                       | S.E.         | Mean score | S.E.         | Score dif.         | S.E.         |            |              |
|                             | Australia                            | 526                         | (7.3)      | 518          | (6.3)              | 8            | (9.9)                            | 505          | (7.3)      | 544          | (6.4)              | -38          | (9.9)      |              |
|                             | Austria                              | 470                         | (10.9)     | 444          | (13.2)             | 26           | (16.5)                           | 410          | (11.7)     | 452          | (22.6)             | -42          | (22.1)     |              |
|                             | Belgium                              | 458                         | (9.5)      | 450          | (8.4)              | 8            | (10.1)                           | 419          | (10.0)     | 460          | (9.4)              | -41          | (12.2)     |              |
|                             | Canada                               | 553                         | (5.9)      | 534          | (4.7)              | 19           | (6.2)                            | 532          | (5.4)      | 554          | (4.7)              | -22          | (5.7)      |              |
|                             | Denmark                              | 470                         | (16.3)     | 432          | (12.5)             | 38           | (17.8)                           | 425          | (17.6)     | 452          | (15.6)             | -28          | (18.7)     |              |
|                             | France                               | 470                         | (10.0)     | 474          | (7.1)              | -5           | (11.8)                           | 433          | (10.2)     | 476          | (7.4)              | -43          | (12.4)     |              |
|                             | Germany                              | 441                         | (11.2)     | 429          | (10.4)             | 12           | (11.9)                           | 396          | (11.9)     | 446          | (10.2)             | -50          | (12.3)     |              |
|                             | Luxembourg                           | 481                         | (5.2)      | 472          | (4.2)              | 10           | (6.7)                            | 433          | (5.9)      | 474          | (4.9)              | -41          | (7.3)      |              |
|                             | Netherlands                          | 510                         | (12.7)     | 476          | (10.8)             | 34           | (12.5)                           | 478          | (11.4)     | 472          | (8.8)              | 5            | (12.0)     |              |
|                             | New Zealand                          | 490                         | (10.7)     | 502          | (10.3)             | -12          | (12.6)                           | 481          | (11.0)     | 532          | (10.3)             | -51          | (14.7)     |              |
|                             | Norway                               | 476                         | (15.3)     | 443          | (17.6)             | 33           | (23.6)                           | 446          | (15.8)     | 446          | (17.5)             | 1            | (24.6)     |              |
|                             | Sweden                               | 495                         | (12.1)     | 472          | (11.8)             | 23           | (14.4)                           | 491          | (11.9)     | 511          | (10.0)             | -20          | (13.0)     |              |
|                             | Switzerland                          | 491                         | (7.1)      | 475          | (6.8)              | 16           | (9.5)                            | 447          | (7.2)      | 479          | (6.8)              | -32          | (9.8)      |              |
|                             | United States                        | 474                         | (9.7)      | 461          | (8.8)              | 13           | (10.7)                           | 471          | (9.8)      | 493          | (10.9)             | -22          | (11.6)     |              |
|                             |                                      | <i>OECD average</i>         | <i>489</i> | <i>(2.6)</i> | <i>477</i>         | <i>(2.5)</i> | <i>12</i>                        | <i>(2.8)</i> | <i>458</i> | <i>(2.8)</i> | <i>491</i>         | <i>(2.6)</i> | <i>-33</i> | <i>(3.2)</i> |
|                             | Partner countries                    | Hong Kong-China             | 572        | (7.1)        | 568                | (5.6)        | 3                                | (9.0)        | 507        | (6.0)        | 538                | (4.7)        | -31        | (7.7)        |
| Macao-China                 |                                      | 540                         | (6.3)      | 524          | (5.0)              | 16           | (7.9)                            | 491          | (4.6)      | 503          | (3.9)              | -12          | (6.2)      |              |
| Russian Federation          |                                      | 455                         | (8.3)      | 461          | (9.9)              | -5           | (11.1)                           | 414          | (8.7)      | 445          | (7.1)              | -31          | (10.0)     |              |
| Belgium (Flemish Community) |                                      | 455                         | (15.9)     | 436          | (11.2)             | -18          | (17.7)                           | 423          | (16.9)     | 454          | (11.8)             | 31           | (19.5)     |              |
| Belgium (French Community)  |                                      | 459                         | (11.5)     | 458          | (12.0)             | -2           | (13.4)                           | 417          | (12.6)     | 463          | (13.7)             | 47           | (16.5)     |              |
| OECD countries              | First-generation students            |                             |            |              |                    |              | First-generation students        |              |            |              |                    |              |            |              |
|                             | Males                                |                             | Females    |              | Difference (F - M) |              | Males                            |              | Females    |              | Difference (F - M) |              |            |              |
|                             | Mean score                           | S.E.                        | Mean score | S.E.         | Score dif.         | S.E.         | Mean score                       | S.E.         | Mean score | S.E.         | Score dif.         | S.E.         |            |              |
|                             | Australia                            | 531                         | (7.6)      | 519          | (8.1)              | 12           | (12.3)                           | 504          | (7.9)      | 531          | (7.5)              | -27          | (11.5)     |              |
|                             | Austria                              | 451                         | (8.6)      | 452          | (7.1)              | -1           | (10.6)                           | 400          | (10.0)     | 455          | (9.5)              | -55          | (12.6)     |              |
|                             | Belgium                              | 437                         | (14.0)     | 436          | (12.6)             | 0            | (16.5)                           | 387          | (14.7)     | 437          | (14.2)             | -50          | (17.0)     |              |
|                             | Canada                               | 533                         | (6.5)      | 528          | (5.3)              | 5            | (7.2)                            | 498          | (6.5)      | 532          | (6.0)              | -34          | (8.5)      |              |
|                             | Denmark                              | 450                         | (12.5)     | 459          | (13.5)             | -9           | (16.6)                           | 437          | (13.7)     | 472          | (12.9)             | -35          | (19.1)     |              |
|                             | France                               | 449                         | (16.8)     | 446          | (18.3)             | 3            | (18.4)                           | 403          | (18.0)     | 449          | (19.3)             | -46          | (20.9)     |              |
|                             | Germany                              | 466                         | (9.3)      | 446          | (9.0)              | 21           | (10.5)                           | 420          | (11.3)     | 443          | (10.6)             | -23          | (12.9)     |              |
|                             | Luxembourg                           | 472                         | (5.7)      | 451          | (4.8)              | 22           | (7.6)                            | 418          | (6.7)      | 446          | (5.4)              | -27          | (8.6)      |              |
|                             | Netherlands                          | 482                         | (10.9)     | 463          | (11.4)             | 19           | (14.7)                           | 458          | (10.8)     | 469          | (10.1)             | -11          | (13.2)     |              |
|                             | New Zealand                          | 537                         | (5.9)      | 510          | (7.3)              | 26           | (9.2)                            | 498          | (7.6)      | 508          | (7.9)              | -10          | (11.3)     |              |
|                             | Norway                               | 431                         | (12.5)     | 446          | (12.3)             | -15          | (16.5)                           | 406          | (14.6)     | 468          | (14.1)             | -62          | (17.9)     |              |
|                             | Sweden                               | 427                         | (14.0)     | 424          | (9.4)              | 3            | (14.1)                           | 416          | (15.4)     | 449          | (10.9)             | -33          | (14.0)     |              |
|                             | Switzerland                          | 459                         | (8.1)      | 447          | (7.3)              | 12           | (9.6)                            | 405          | (7.9)      | 441          | (7.9)              | -37          | (9.9)      |              |
|                             | United States                        | 460                         | (8.6)      | 445          | (10.8)             | 15           | (12.2)                           | 440          | (9.3)      | 469          | (12.7)             | -29          | (14.6)     |              |
|                             |                                      | <i>OECD average</i>         | <i>479</i> | <i>(2.8)</i> | <i>470</i>         | <i>(2.3)</i> | <i>10</i>                        | <i>(3.4)</i> | <i>440</i> | <i>(3.0)</i> | <i>474</i>         | <i>(2.8)</i> | <i>-34</i> | <i>(4.0)</i> |
|                             | Partner countries                    | Hong Kong-China             | 520        | (9.4)        | 512                | (4.9)        | 8                                | (10.2)       | 480        | (8.2)        | 507                | (4.3)        | -27        | (9.0)        |
| Macao-China                 |                                      | 523                         | (14.5)     | 510          | (8.2)              | 13           | (15.1)                           | 487          | (11.5)     | 512          | (7.3)              | -26          | (13.1)     |              |
| Russian Federation          |                                      | 454                         | (8.2)      | 449          | (8.3)              | 6            | (11.5)                           | 401          | (9.6)      | 429          | (9.6)              | -28          | (12.4)     |              |
| Belgium (Flemish Community) |                                      | 483                         | (11.4)     | 459          | (14.6)             | -25          | (18.0)                           | 437          | (13.2)     | 464          | (15.3)             | 27           | (18.7)     |              |
| Belgium (French Community)  |                                      | 418                         | (17.2)     | 421          | (17.5)             | 3            | (20.2)                           | 368          | (18.1)     | 418          | (20.5)             | 50           | (21.6)     |              |

Note: Differences that are statistically significant are indicated in bold.



Table 2.8  
Three most common countries of origin for immigrant students in each case country

|                   | Most common immigrant groups <sup>1</sup> | Participating students         |            | Performance on the mathematics scale |        |                 |       | Difference in mathematics score          |             |        |
|-------------------|-------------------------------------------|--------------------------------|------------|--------------------------------------|--------|-----------------|-------|------------------------------------------|-------------|--------|
|                   |                                           | Number                         | Weighted % | Immigrant students                   |        | Native students |       | Immigrant students minus native students |             |        |
|                   |                                           |                                |            | Mean score                           | S.E.   | Mean score      | S.E.  | Difference                               | S.E.        |        |
| OECD countries    | Australia                                 | England                        | 357        | 11.8                                 | 540    | (7.3)           |       |                                          | 13          | (7.5)  |
|                   |                                           | New Zealand                    | 189        | 7.0                                  | 516    | (7.6)           | 527   | (2.1)                                    | -11         | (7.5)  |
|                   |                                           | China                          | 130        | 5.0                                  | 576    | (16.7)          |       |                                          | <b>49</b>   | (16.7) |
|                   | Austria                                   | Former Yugoslavia <sup>2</sup> | 276        | 47.2                                 | 456    | (6.7)           |       |                                          | <b>-59</b>  | (7.6)  |
|                   |                                           | Turkey                         | 141        | 25.9                                 | 423    | (8.9)           | 515   | (3.3)                                    | <b>-92</b>  | (9.1)  |
|                   |                                           | Romania                        | 19         | c                                    | c      | c               |       |                                          | c           | c      |
|                   | Belgium                                   | France                         | 184        | 16.3                                 | 413    | (25.3)          |       |                                          | <b>-133</b> | (25.2) |
|                   |                                           | Turkey                         | 140        | 14.8                                 | 421    | (13.1)          | 546   | (2.5)                                    | <b>-125</b> | (12.8) |
|                   |                                           | Netherlands                    | 54         | 5.8                                  | 521    | (13.9)          |       |                                          | <b>-24</b>  | (14.1) |
|                   | Canada                                    | a                              | a          | a                                    | a      | a               | a     | a                                        | a           | a      |
|                   | Denmark                                   | Turkey                         | 53         | 32.1                                 | 424    | (12.4)          |       |                                          | <b>-95</b>  | (12.3) |
|                   |                                           | Pakistan                       | 31         | 11.6                                 | 449    | (14.3)          | 520   | (2.5)                                    | <b>-71</b>  | (14.1) |
|                   |                                           | Former Yugoslavia              | 23         | c                                    | c      | c               |       |                                          | c           | c      |
|                   | France                                    | a                              | a          | a                                    | a      | a               | a     | a                                        | a           | a      |
|                   | Germany                                   | Turkey                         | 197        | 32.1                                 | 405    | (10.8)          |       |                                          | <b>-120</b> | (11.6) |
|                   | Former Soviet Republic                    | 180                            | 28.3       | 466                                  | (8.3)  | 525             | (3.5) | <b>-59</b>                               | (9.3)       |        |
|                   | Poland                                    | 100                            | 16.1       | 486                                  | (11.5) |                 |       | <b>-39</b>                               | (11.2)      |        |
| Luxembourg        | Portugal                                  | 595                            | 47.3       | 446                                  | (3.2)  |                 |       | <b>-61</b>                               | (3.6)       |        |
|                   | Italy                                     | 99                             | 7.9        | 466                                  | (9.0)  | 507             | (1.3) | <b>-41</b>                               | (9.0)       |        |
|                   | Former Yugoslavia                         | 92                             | 7.3        | 421                                  | (10.2) |                 |       | <b>-86</b>                               | (10.2)      |        |
| Netherlands       | a                                         | a                              | a          | a                                    | a      | a               | a     | a                                        | a           |        |
| New Zealand       | Samoa                                     | 124                            | 14.6       | 447                                  | (10.3) |                 |       | <b>-81</b>                               | (10.5)      |        |
|                   | United Kingdom                            | 103                            | 11.2       | 546                                  | (8.5)  | 528             | (2.6) | 18                                       | (9.0)       |        |
|                   | China                                     | 76                             | 8.4        | 541                                  | (17.7) |                 |       | 13                                       | (18.1)      |        |
| Norway            | a                                         | a                              | a          | a                                    | a      | a               | a     | a                                        | a           |        |
| Portugal          | a                                         | a                              | a          | a                                    | a      | a               | a     | a                                        | a           |        |
| Sweden            | a                                         | a                              | a          | a                                    | a      | a               | a     | a                                        | a           |        |
| Switzerland       | Former Yugoslavia                         | 408                            | 23.0       | 460                                  | (7.3)  |                 |       | <b>-82</b>                               | (8.0)       |        |
|                   | Albania/Kosovo                            | 257                            | 16.2       | 404                                  | (6.8)  | 543             | (3.3) | <b>-139</b>                              | (7.5)       |        |
|                   | Italy                                     | 245                            | 11.7       | 467                                  | (8.3)  |                 |       | <b>-75</b>                               | (8.1)       |        |
| United Kingdom    | a                                         | a                              | a          | a                                    | a      | a               | a     | a                                        | a           |        |
| United States     | Spanish speaking immigrants               | 270                            | 35.0       | 423                                  | (7.3)  | 490             | (2.8) | <b>-66</b>                               | (7.5)       |        |
| Partner countries | Hong Kong-China                           | a                              | a          | a                                    | a      | a               | a     | a                                        | a           |        |
|                   | Macao-China                               | a                              | a          | a                                    | a      | a               | a     | a                                        | a           |        |
|                   | Russian Federation                        | a                              | a          | a                                    | a      | a               | a     | a                                        | a           |        |

Note: Differences that are statistically significant are indicated in bold.

1. These categories are chosen by countries.

2. Authors' calculations.

Table 2.9  
**Comparison of performance levels for immigrant students whose families came from Turkey and the former Yugoslavia**

|             | Immigrant students     |            |                                      |        |                        |            |                                      |            | Native students |       | Difference in mathematics performance between native students and Turkish immigrant students |        | Difference in mathematics performance between native students and immigrant students from the former Yugoslavia |        |
|-------------|------------------------|------------|--------------------------------------|--------|------------------------|------------|--------------------------------------|------------|-----------------|-------|----------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------|--------|
|             | Turkey                 |            |                                      |        | Former Yugoslavia      |            |                                      |            |                 |       |                                                                                              |        |                                                                                                                 |        |
|             | Participating Students |            | Performance on the mathematics scale |        | Participating Students |            | Performance on the mathematics scale |            | Mean score      | S.E.  | Difference                                                                                   | S.E.   | Difference                                                                                                      | S.E.   |
| N           | Weighted %             | Mean score | S.E.                                 | N      | Weighted %             | Mean score | S.E.                                 | Mean score | S.E.            |       |                                                                                              |        |                                                                                                                 |        |
| Austria     | 141                    | 25.9       | 423                                  | (8.9)  | 276                    | 47.2       | 456                                  | (6.7)      | 515             | (3.3) | <b>-92</b>                                                                                   | (9.1)  | <b>-59</b>                                                                                                      | (7.6)  |
| Belgium     | 140                    | 14.8       | 421                                  | (13.1) | c                      | c          | c                                    | c          | 546             | (2.5) | <b>-125</b>                                                                                  | (12.8) | c                                                                                                               | c      |
| Denmark     | 53                     | 32.1       | 424                                  | (12.4) | c                      | c          | c                                    | c          | 520             | (2.5) | <b>-95</b>                                                                                   | (12.3) | c                                                                                                               | c      |
| Germany     | 197                    | 32.1       | 405                                  | (10.8) | 45                     | 7.0        | 448                                  | (17.0)     | 525             | (3.5) | <b>-120</b>                                                                                  | (11.6) | <b>-78</b>                                                                                                      | (17.0) |
| Luxembourg  | c                      | c          | c                                    | c      | 92                     | 7.3        | 421                                  | (10.2)     | 507             | (1.3) | c                                                                                            | c      | <b>-86</b>                                                                                                      | (10.2) |
| Switzerland | 142                    | 8.5        | 436                                  | (10.4) | 408                    | 23.0       | 460                                  | (7.3)      | 543             | (3.3) | <b>-106</b>                                                                                  | (10.3) | <b>-82</b>                                                                                                      | (8.0)  |

Note: Differences that are statistically significant are indicated in bold.





Table 3.1  
**Highest level of parental education (in years of schooling) by immigrant status**

|                    |                             | Highest level of parental education in years of schooling <sup>1</sup> |             |                            |             |                           |             |               |
|--------------------|-----------------------------|------------------------------------------------------------------------|-------------|----------------------------|-------------|---------------------------|-------------|---------------|
|                    |                             | Native students                                                        |             | Second-generation students |             | First-generation students |             |               |
|                    |                             | Mean                                                                   | S.E.        | Mean                       | S.E.        | Mean                      | S.E.        |               |
| OECD countries     | Australia                   | 13.1                                                                   | (0.04)      | <b>12.6</b>                | (0.13)      | <b>13.5</b>               | (0.15)      |               |
|                    | Austria                     | 13.2                                                                   | (0.06)      | <b>11.1</b>                | (0.31)      | <b>12.3</b>               | (0.24)      |               |
|                    | Belgium                     | 13.8                                                                   | (0.05)      | <b>10.7</b>                | (0.33)      | <b>12.1</b>               | (0.30)      |               |
|                    | Canada                      | 14.5                                                                   | (0.04)      | 14.4                       | (0.13)      | <b>15.2</b>               | (0.14)      |               |
|                    | Denmark                     | 14.6                                                                   | (0.07)      | <b>11.8</b>                | (0.64)      | <b>13.3</b>               | (0.50)      |               |
|                    | France                      | 12.4                                                                   | (0.05)      | <b>9.3</b>                 | (0.29)      | <b>9.7</b>                | (0.54)      |               |
|                    | Germany                     | 13.9                                                                   | (0.06)      | <b>9.0</b>                 | (0.47)      | <b>8.7</b>                | (0.43)      |               |
|                    | Luxembourg                  | 14.5                                                                   | (0.06)      | <b>11.4</b>                | (0.26)      | <b>11.2</b>               | (0.25)      |               |
|                    | Netherlands                 | 13.1                                                                   | (0.06)      | <b>10.0</b>                | (0.39)      | <b>11.6</b>               | (0.46)      |               |
|                    | New Zealand                 | 13.5                                                                   | (0.07)      | <b>12.1</b>                | (0.33)      | 13.8                      | (0.18)      |               |
|                    | Norway                      | 14.6                                                                   | (0.04)      | <b>13.7</b>                | (0.43)      | <b>13.7</b>               | (0.39)      |               |
|                    | Sweden                      | 13.6                                                                   | (0.05)      | <b>12.2</b>                | (0.37)      | <b>12.3</b>               | (0.36)      |               |
|                    | Switzerland                 | 12.6                                                                   | (0.06)      | <b>10.7</b>                | (0.17)      | <b>10.9</b>               | (0.19)      |               |
|                    | United States               | 13.8                                                                   | (0.05)      | <b>11.9</b>                | (0.32)      | <b>12.1</b>               | (0.27)      |               |
|                    |                             | <b>OECD average</b>                                                    | <b>13.7</b> | <b>(0.02)</b>              | <b>11.4</b> | <b>(0.09)</b>             | <b>12.3</b> | <b>(0.08)</b> |
|                    | Partner countries           | Hong Kong-China                                                        | 10.3        | (0.12)                     | <b>9.2</b>  | (0.11)                    | <b>8.7</b>  | (0.12)        |
| Macao-China        |                             | 10.0                                                                   | (0.31)      | <b>9.3</b>                 | (0.16)      | <b>9.3</b>                | (0.31)      |               |
| Russian Federation |                             | 13.3                                                                   | (0.04)      | <b>13.2</b>                | (0.10)      | <b>13.3</b>               | (0.09)      |               |
|                    |                             |                                                                        |             |                            |             |                           |             |               |
|                    | Belgium (Flemish Community) | 13.7                                                                   | (0.06)      | <b>10.2</b>                | (0.41)      | <b>12.0</b>               | (0.58)      |               |
|                    | Belgium (French Community)  | 14.0                                                                   | (0.08)      | <b>11.0</b>                | (0.48)      | <b>12.2</b>               | (0.37)      |               |

Note: Statistically significant differences from native students' scores are indicated in bold.

1. Table A1.1 in Annex A1 shows conversions used for years of schooling.

Table 3.2  
**Distribution of the index of economic, social and cultural status (ESCS) by immigrant status**  
 (scores standardised within each country sample)

|                   |                             | Distribution of the index of economic, social and cultural status (ESCS) |              |                 |              |                  |             |                  |        |                  |        |        |
|-------------------|-----------------------------|--------------------------------------------------------------------------|--------------|-----------------|--------------|------------------|-------------|------------------|--------|------------------|--------|--------|
|                   |                             | ESCS mean                                                                |              | Percentiles     |              |                  |             |                  |        |                  |        |        |
|                   |                             | Index                                                                    | S.E.         | 5 <sup>th</sup> |              | 25 <sup>th</sup> |             | 75 <sup>th</sup> |        | 95 <sup>th</sup> |        |        |
|                   |                             | Index                                                                    | S.E.         | Index           | S.E.         | Index            | S.E.        | Index            | S.E.   | Index            | S.E.   |        |
| OECD countries    | Australia                   | Native                                                                   | 0.03         | (0.02)          | -1.55        | (0.03)           | -0.62       | (0.03)           | 0.73   | (0.02)           | 1.64   | (0.00) |
|                   | Second-generation           | <b>-0.20</b>                                                             | (0.05)       | <b>-1.85</b>    | (0.09)       | <b>-0.88</b>     | (0.06)      | <b>0.54</b>      | (0.05) | 1.57             | (0.09) |        |
|                   | First-generation            | 0.04                                                                     | (0.07)       | -1.72           | (0.30)       | -0.68            | (0.07)      | 0.84             | (0.05) | 1.63             | (0.02) |        |
|                   | Austria                     | Native                                                                   | 0.10         | (0.03)          | -1.30        | (0.03)           | -0.60       | (0.03)           | 0.74   | (0.04)           | 1.73   | (0.03) |
|                   | Second-generation           | <b>-0.66</b>                                                             | (0.11)       | <b>-2.56</b>    | (0.24)       | <b>-1.47</b>     | (0.14)      | <b>-0.05</b>     | (0.16) | 1.67             | (0.29) |        |
|                   | First-generation            | <b>-0.60</b>                                                             | (0.07)       | <b>-2.17</b>    | (0.14)       | <b>-1.34</b>     | (0.09)      | <b>0.01</b>      | (0.08) | <b>1.33</b>      | (0.16) |        |
|                   | Belgium                     | Native                                                                   | 0.10         | (0.02)          | -1.42        | (0.04)           | -0.57       | (0.03)           | 0.80   | (0.02)           | 1.61   | (0.03) |
|                   | Second-generation           | <b>-0.80</b>                                                             | (0.08)       | <b>-2.82</b>    | (0.10)       | <b>-1.63</b>     | (0.10)      | <b>-0.04</b>     | (0.11) | <b>1.19</b>      | (0.13) |        |
|                   | First-generation            | <b>-0.59</b>                                                             | (0.07)       | <b>-2.55</b>    | (0.13)       | <b>-1.32</b>     | (0.11)      | <b>0.19</b>      | (0.08) | <b>1.17</b>      | (0.15) |        |
|                   | Canada                      | Native                                                                   | 0.00         | (0.02)          | -1.60        | (0.03)           | -0.70       | (0.02)           | 0.73   | (0.03)           | 1.66   | (0.01) |
|                   | Second-generation           | -0.07                                                                    | (0.05)       | -1.67           | (0.07)       | -0.83            | (0.06)      | 0.70             | (0.07) | 1.65             | (0.04) |        |
|                   | First-generation            | 0.15                                                                     | (0.05)       | -1.57           | (0.09)       | -0.54            | (0.08)      | 0.89             | (0.06) | 1.67             | (0.03) |        |
|                   | Denmark                     | Native                                                                   | 0.06         | (0.03)          | -1.47        | (0.04)           | -0.61       | (0.03)           | 0.72   | (0.04)           | 1.64   | (0.04) |
|                   | Second-generation           | <b>-0.81</b>                                                             | (0.15)       | c               | c            | <b>-1.52</b>     | (0.16)      | <b>-0.08</b>     | (0.20) | c                | c      |        |
|                   | First-generation            | <b>-0.58</b>                                                             | (0.11)       | <b>-3.10</b>    | (0.40)       | <b>-1.20</b>     | (0.08)      | <b>0.10</b>      | (0.11) | 1.14             | (0.23) |        |
|                   | France                      | Native                                                                   | 0.12         | (0.03)          | -1.29        | (0.05)           | -0.54       | (0.04)           | 0.77   | (0.04)           | 1.66   | (0.06) |
|                   | Second-generation           | <b>-0.76</b>                                                             | (0.07)       | <b>-2.82</b>    | (0.11)       | <b>-1.44</b>     | (0.10)      | <b>0.01</b>      | (0.09) | <b>1.07</b>      | (0.14) |        |
|                   | First-generation            | <b>-0.66</b>                                                             | (0.15)       | <b>-2.95</b>    | (0.18)       | <b>-1.46</b>     | (0.24)      | 0.29             | (0.26) | c                | c      |        |
|                   | Germany                     | Native                                                                   | 0.18         | (0.03)          | -1.08        | (0.03)           | -0.43       | (0.02)           | 0.77   | (0.04)           | 1.69   | (0.01) |
|                   | Second-generation           | <b>-0.91</b>                                                             | (0.09)       | <b>-2.57</b>    | (0.08)       | <b>-1.89</b>     | (0.16)      | <b>-0.30</b>     | (0.13) | <b>1.10</b>      | (0.17) |        |
|                   | First-generation            | <b>-0.90</b>                                                             | (0.08)       | <b>-2.58</b>    | (0.07)       | <b>-1.89</b>     | (0.12)      | <b>-0.05</b>     | (0.12) | <b>1.27</b>      | (0.19) |        |
|                   | Luxembourg                  | Native                                                                   | 0.23         | (0.01)          | -1.26        | (0.04)           | -0.27       | (0.02)           | 0.79   | (0.02)           | 1.52   | (0.01) |
|                   | Second-generation           | <b>-0.36</b>                                                             | (0.05)       | <b>-2.12</b>    | (0.06)       | <b>-1.33</b>     | (0.06)      | <b>0.49</b>      | (0.05) | 1.42             | (0.05) |        |
|                   | First-generation            | <b>-0.54</b>                                                             | (0.05)       | <b>-2.28</b>    | (0.06)       | <b>-1.52</b>     | (0.05)      | <b>0.46</b>      | (0.08) | 1.50             | (0.02) |        |
|                   | Netherlands                 | Native                                                                   | 0.10         | (0.03)          | -1.36        | (0.04)           | -0.58       | (0.04)           | 0.81   | (0.03)           | 1.69   | (0.05) |
|                   | Second-generation           | <b>-0.81</b>                                                             | (0.12)       | <b>-3.01</b>    | (0.16)       | <b>-1.55</b>     | (0.12)      | <b>0.02</b>      | (0.15) | 1.15             | (0.33) |        |
|                   | First-generation            | <b>-0.58</b>                                                             | (0.12)       | <b>-3.25</b>    | (0.40)       | <b>-1.30</b>     | (0.16)      | <b>0.17</b>      | (0.20) | <b>1.15</b>      | (0.21) |        |
|                   | New Zealand                 | Native                                                                   | 0.02         | (0.02)          | -1.56        | (0.06)           | -0.60       | (0.02)           | 0.70   | (0.03)           | 1.57   | (0.03) |
|                   | Second-generation           | <b>-0.39</b>                                                             | (0.08)       | <b>-2.54</b>    | (0.17)       | <b>-1.19</b>     | (0.12)      | <b>0.40</b>      | (0.11) | 1.45             | (0.12) |        |
|                   | First-generation            | 0.10                                                                     | (0.04)       | <b>-2.17</b>    | (0.24)       | -0.43            | (0.05)      | 0.85             | (0.05) | 1.55             | (0.05) |        |
|                   | Norway                      | Native                                                                   | 0.03         | (0.03)          | -1.50        | (0.04)           | -0.65       | (0.03)           | 0.73   | (0.03)           | 1.61   | (0.01) |
|                   | Second-generation           | <b>-0.39</b>                                                             | (0.16)       | <b>-2.79</b>    | (0.36)       | <b>-1.37</b>     | (0.21)      | 0.51             | (0.26) | c                | c      |        |
|                   | First-generation            | <b>-0.57</b>                                                             | (0.13)       | <b>-3.19</b>    | (0.69)       | <b>-1.37</b>     | (0.15)      | <b>0.35</b>      | (0.16) | 1.50             | (0.13) |        |
|                   | Sweden                      | Native                                                                   | 0.08         | (0.03)          | -1.45        | (0.04)           | -0.57       | (0.02)           | 0.79   | (0.04)           | 1.60   | (0.02) |
|                   | Second-generation           | <b>-0.49</b>                                                             | (0.09)       | <b>-2.77</b>    | (0.30)       | <b>-1.17</b>     | (0.12)      | <b>0.35</b>      | (0.13) | <b>1.07</b>      | (0.13) |        |
|                   | First-generation            | <b>-0.62</b>                                                             | (0.10)       | <b>-3.03</b>    | (0.26)       | <b>-1.37</b>     | (0.19)      | <b>0.30</b>      | (0.10) | <b>1.29</b>      | (0.11) |        |
| Switzerland       | Native                      | 0.15                                                                     | (0.03)       | -1.32           | (0.05)       | -0.45            | (0.03)      | 0.75             | (0.04) | 1.64             | (0.03) |        |
| Second-generation | <b>-0.52</b>                | (0.04)                                                                   | <b>-2.50</b> | (0.18)          | <b>-1.33</b> | (0.06)           | <b>0.14</b> | (0.08)           | 1.46   | (0.08)           |        |        |
| First-generation  | <b>-0.68</b>                | (0.06)                                                                   | <b>-2.66</b> | (0.12)          | <b>-1.44</b> | (0.05)           | <b>0.00</b> | (0.09)           | 1.33   | (0.14)           |        |        |
| United States     | Native                      | 0.10                                                                     | (0.03)       | -1.36           | (0.03)       | -0.55            | (0.02)      | 0.79             | (0.04) | 1.56             | (0.01) |        |
| Second-generation | <b>-0.46</b>                | (0.11)                                                                   | <b>-2.77</b> | (0.21)          | <b>-1.27</b> | (0.15)           | <b>0.36</b> | (0.09)           | 1.47   | (0.10)           |        |        |
| First-generation  | <b>-0.55</b>                | (0.08)                                                                   | <b>-2.58</b> | (0.33)          | <b>-1.48</b> | (0.09)           | 0.54        | (0.13)           | 1.37   | (0.17)           |        |        |
| Partner countries | Hong Kong-China             | Native                                                                   | 0.23         | (0.04)          | -1.38        | (0.06)           | -0.46       | (0.04)           | 0.90   | (0.06)           | 1.97   | (0.10) |
|                   | Second-generation           | <b>-0.16</b>                                                             | (0.03)       | <b>-1.65</b>    | (0.06)       | <b>-0.68</b>     | (0.03)      | <b>0.36</b>      | (0.05) | <b>1.34</b>      | (0.09) |        |
|                   | First-generation            | <b>-0.45</b>                                                             | (0.03)       | <b>-1.87</b>    | (0.11)       | <b>-1.06</b>     | (0.04)      | <b>0.05</b>      | (0.04) | <b>1.12</b>      | (0.15) |        |
|                   | Macao-China                 | Native                                                                   | 0.28         | (0.08)          | -1.80        | (0.17)           | -0.41       | (0.14)           | 1.02   | (0.09)           | 2.00   | (0.11) |
|                   | Second-generation           | <b>-0.05</b>                                                             | (0.04)       | -1.79           | (0.12)       | -0.64            | (0.05)      | <b>0.58</b>      | (0.04) | <b>1.33</b>      | (0.06) |        |
|                   | First-generation            | <b>-0.15</b>                                                             | (0.07)       | -1.75           | (0.17)       | -0.78            | (0.06)      | <b>0.46</b>      | (0.09) | <b>1.33</b>      | (0.13) |        |
|                   | Russian Federation          | Native                                                                   | 0.01         | (0.03)          | -1.42        | (0.03)           | -0.78       | (0.03)           | 0.80   | (0.06)           | 1.70   | (0.04) |
|                   | Second-generation           | -0.03                                                                    | (0.07)       | -1.58           | (0.10)       | -0.79            | (0.09)      | 0.75             | (0.10) | 1.63             | (0.11) |        |
|                   | First-generation            | -0.03                                                                    | (0.07)       | -1.61           | (0.12)       | -0.81            | (0.09)      | 0.79             | (0.08) | 1.64             | (0.17) |        |
|                   | Belgium (Flemish Community) | Native                                                                   | 0.06         | (0.03)          | -1.43        | (0.07)           | -0.62       | (0.04)           | 0.79   | (0.02)           | 1.62   | (0.03) |
|                   | Second-generation           | <b>-1.03</b>                                                             | (0.10)       | <b>-2.78</b>    | (0.13)       | <b>-1.90</b>     | (0.14)      | <b>-0.33</b>     | (0.15) | <b>0.76</b>      | (0.26) |        |
|                   | First-generation            | <b>-0.55</b>                                                             | (0.14)       | <b>-2.90</b>    | (0.32)       | <b>-1.38</b>     | (0.26)      | <b>0.35</b>      | (0.13) | c                | c      |        |
|                   | Belgium (French Community)  | Native                                                                   | 0.14         | (0.04)          | -1.40        | (0.07)           | -0.52       | (0.05)           | 0.82   | (0.04)           | 1.59   | (0.04) |
|                   | Second-generation           | <b>-0.64</b>                                                             | (0.10)       | <b>-2.77</b>    | (0.13)       | <b>-1.39</b>     | (0.17)      | <b>0.10</b>      | (0.12) | 1.33             | (0.11) |        |
|                   | First-generation            | <b>-0.57</b>                                                             | (0.08)       | <b>-2.35</b>    | (0.20)       | <b>-1.26</b>     | (0.15)      | <b>0.16</b>      | (0.12) | 1.18             | (0.17) |        |

Note: Statistically significant differences from native students' scores are indicated in bold.



Table 3.3  
Differences between native and immigrant students in mathematics performance and highest level of parental education (in years of schooling)

|                             | Difference in mathematics score                  |              |                                                 |              | Difference in highest parental education in years of schooling <sup>1</sup> |               |                                                 |               |
|-----------------------------|--------------------------------------------------|--------------|-------------------------------------------------|--------------|-----------------------------------------------------------------------------|---------------|-------------------------------------------------|---------------|
|                             | Second-generation students minus native students |              | First-generation students minus native students |              | Second-generation students minus native students                            |               | First-generation students minus native students |               |
|                             | Difference                                       | S.E.         | Difference                                      | S.E.         | Difference                                                                  | S.E.          | Difference                                      | S.E.          |
| OECD countries              |                                                  |              |                                                 |              |                                                                             |               |                                                 |               |
| Australia                   | -5                                               | (4.7)        | -2                                              | (4.9)        | <b>-0.44</b>                                                                | (0.13)        | <b>0.44</b>                                     | (0.14)        |
| Austria                     | <b>-56</b>                                       | (9.3)        | <b>-63</b>                                      | (6.0)        | <b>-2.18</b>                                                                | (0.31)        | <b>-0.98</b>                                    | (0.24)        |
| Belgium                     | <b>-92</b>                                       | (7.6)        | <b>-109</b>                                     | (10.9)       | <b>-3.13</b>                                                                | (0.33)        | <b>-1.70</b>                                    | (0.30)        |
| Canada                      | 6                                                | (4.4)        | -7                                              | (4.8)        | -0.06                                                                       | (0.13)        | <b>0.71</b>                                     | (0.14)        |
| Denmark                     | <b>-70</b>                                       | (11.1)       | <b>-65</b>                                      | (9.8)        | <b>-2.83</b>                                                                | (0.62)        | <b>-1.40</b>                                    | (0.50)        |
| France                      | <b>-48</b>                                       | (6.6)        | <b>-72</b>                                      | (15.0)       | <b>-3.04</b>                                                                | (0.29)        | <b>-2.64</b>                                    | (0.54)        |
| Germany                     | <b>-93</b>                                       | (9.6)        | <b>-71</b>                                      | (7.9)        | <b>-4.85</b>                                                                | (0.48)        | <b>-5.20</b>                                    | (0.43)        |
| Luxembourg                  | <b>-31</b>                                       | (3.7)        | <b>-45</b>                                      | (4.1)        | <b>-3.10</b>                                                                | (0.27)        | <b>-3.33</b>                                    | (0.25)        |
| Netherlands                 | <b>-59</b>                                       | (11.1)       | <b>-79</b>                                      | (8.8)        | <b>-3.04</b>                                                                | (0.39)        | <b>-1.43</b>                                    | (0.47)        |
| New Zealand                 | <b>-32</b>                                       | (9.1)        | -5                                              | (5.6)        | <b>-1.49</b>                                                                | (0.34)        | 0.26                                            | (0.20)        |
| Norway                      | <b>-39</b>                                       | (11.3)       | <b>-61</b>                                      | (9.4)        | <b>-0.97</b>                                                                | (0.42)        | <b>-0.99</b>                                    | (0.39)        |
| Sweden                      | <b>-34</b>                                       | (9.1)        | <b>-92</b>                                      | (9.7)        | <b>-1.38</b>                                                                | (0.36)        | <b>-1.36</b>                                    | (0.36)        |
| Switzerland                 | <b>-59</b>                                       | (4.9)        | <b>-89</b>                                      | (6.0)        | <b>-1.90</b>                                                                | (0.18)        | <b>-1.78</b>                                    | (0.20)        |
| United States               | <b>-22</b>                                       | (7.2)        | <b>-36</b>                                      | (7.5)        | <b>-1.86</b>                                                                | (0.32)        | <b>-1.71</b>                                    | (0.27)        |
| <i>OECD average</i>         | <b>-40</b>                                       | <b>(2.0)</b> | <b>-48</b>                                      | <b>(2.1)</b> | <b>-2.24</b>                                                                | <b>(0.09)</b> | <b>-1.41</b>                                    | <b>(0.08)</b> |
| Partner countries           |                                                  |              |                                                 |              |                                                                             |               |                                                 |               |
| Hong Kong-China             | <b>13</b>                                        | (4.3)        | <b>-41</b>                                      | (4.5)        | <b>-1.07</b>                                                                | (0.14)        | <b>-1.58</b>                                    | (0.17)        |
| Macao-China                 | 4                                                | (7.9)        | -11                                             | (10.4)       | -0.67                                                                       | (0.37)        | -0.67                                           | (0.43)        |
| Russian Federation          | <b>-14</b>                                       | (7.2)        | <b>-20</b>                                      | (5.4)        | -0.10                                                                       | (0.10)        | 0.00                                            | (0.10)        |
| Belgium (Flemish Community) | <b>-122</b>                                      | (11.3)       | <b>-95</b>                                      | (9.9)        | <b>-3.57</b>                                                                | (0.40)        | <b>-1.76</b>                                    | (0.58)        |
| Belgium (French Community)  | <b>-56</b>                                       | (9.3)        | <b>-94</b>                                      | (14.4)       | <b>-3.02</b>                                                                | (0.50)        | <b>-1.83</b>                                    | (0.37)        |

Note: Statistically significant differences are indicated in bold.

1. Table A1.1 in Annex A1 shows conversions used for years of schooling.

Table 3.4  
Differences between native and immigrant students in mathematics performance and parents' economic, social and cultural status (ESCS)

|                             | Difference in mathematics score                  |              |                                                 |              | Difference in the index of economic, social and cultural status (ESCS) |               |                                                 |               |
|-----------------------------|--------------------------------------------------|--------------|-------------------------------------------------|--------------|------------------------------------------------------------------------|---------------|-------------------------------------------------|---------------|
|                             | Second-generation students minus native students |              | First-generation students minus native students |              | Second-generation students minus native students                       |               | First-generation students minus native students |               |
|                             | Difference                                       | S.E.         | Difference                                      | S.E.         | Difference                                                             | S.E.          | Difference                                      | S.E.          |
| OECD countries              |                                                  |              |                                                 |              |                                                                        |               |                                                 |               |
| Australia                   | -5                                               | (4.7)        | -2                                              | (4.9)        | <b>-0.20</b>                                                           | (0.04)        | <b>0.00</b>                                     | (0.05)        |
| Austria                     | <b>-56</b>                                       | (9.3)        | <b>-63</b>                                      | (6.0)        | <b>-0.64</b>                                                           | (0.09)        | <b>-0.59</b>                                    | (0.05)        |
| Belgium                     | <b>-92</b>                                       | (7.6)        | <b>-109</b>                                     | (10.9)       | <b>-0.85</b>                                                           | (0.07)        | <b>-0.65</b>                                    | (0.07)        |
| Canada                      | 6                                                | (4.4)        | -7                                              | (4.8)        | -0.06                                                                  | (0.04)        | <b>0.13</b>                                     | (0.04)        |
| Denmark                     | <b>-70</b>                                       | (11.1)       | <b>-65</b>                                      | (9.8)        | <b>-0.75</b>                                                           | (0.12)        | <b>-0.55</b>                                    | (0.10)        |
| France                      | <b>-48</b>                                       | (6.6)        | <b>-72</b>                                      | (15.0)       | <b>-0.83</b>                                                           | (0.07)        | <b>-0.74</b>                                    | (0.13)        |
| Germany                     | <b>-93</b>                                       | (9.6)        | <b>-71</b>                                      | (7.9)        | <b>-1.08</b>                                                           | (0.09)        | <b>-1.07</b>                                    | (0.08)        |
| Luxembourg                  | <b>-31</b>                                       | (3.7)        | <b>-45</b>                                      | (4.1)        | <b>-0.64</b>                                                           | (0.06)        | <b>-0.84</b>                                    | (0.05)        |
| Netherlands                 | <b>-59</b>                                       | (11.1)       | <b>-79</b>                                      | (8.8)        | <b>-0.78</b>                                                           | (0.10)        | <b>-0.58</b>                                    | (0.11)        |
| New Zealand                 | <b>-32</b>                                       | (9.1)        | -5                                              | (5.6)        | <b>-0.37</b>                                                           | (0.08)        | 0.08                                            | (0.05)        |
| Norway                      | <b>-39</b>                                       | (11.3)       | <b>-61</b>                                      | (9.4)        | <b>-0.33</b>                                                           | (0.12)        | <b>-0.47</b>                                    | (0.10)        |
| Sweden                      | <b>-34</b>                                       | (9.1)        | <b>-92</b>                                      | (9.7)        | <b>-0.50</b>                                                           | (0.07)        | <b>-0.61</b>                                    | (0.08)        |
| Switzerland                 | <b>-59</b>                                       | (4.9)        | <b>-89</b>                                      | (6.0)        | <b>-0.57</b>                                                           | (0.05)        | <b>-0.70</b>                                    | (0.05)        |
| United States               | <b>-22</b>                                       | (7.2)        | <b>-36</b>                                      | (7.5)        | <b>-0.52</b>                                                           | (0.10)        | <b>-0.59</b>                                    | (0.08)        |
| <i>OECD average</i>         | <b>-40</b>                                       | <b>(2.0)</b> | <b>-48</b>                                      | <b>(2.1)</b> | <b>-0.58</b>                                                           | <b>(0.02)</b> | <b>-0.47</b>                                    | <b>(0.02)</b> |
| Partner countries           |                                                  |              |                                                 |              |                                                                        |               |                                                 |               |
| Hong Kong-China             | <b>13</b>                                        | (4.3)        | <b>-41</b>                                      | (4.5)        | <b>-0.31</b>                                                           | (0.03)        | <b>-0.55</b>                                    | (0.04)        |
| Macao-China                 | 4                                                | (7.9)        | -11                                             | (10.4)       | -0.28                                                                  | (0.07)        | -0.37                                           | (0.09)        |
| Russian Federation          | <b>-14</b>                                       | (7.2)        | <b>-20</b>                                      | (5.4)        | <b>-0.03</b>                                                           | (0.05)        | <b>-0.03</b>                                    | (0.05)        |
| Belgium (Flemish Community) | <b>-122</b>                                      | (11.3)       | <b>-95</b>                                      | (9.9)        | <b>-0.99</b>                                                           | (0.09)        | <b>-0.55</b>                                    | (0.13)        |
| Belgium (French Community)  | <b>-56</b>                                       | (9.3)        | <b>-94</b>                                      | (14.4)       | <b>-0.77</b>                                                           | (0.10)        | <b>-0.70</b>                                    | (0.08)        |

Note: Statistically significant differences are indicated in bold.

Table 3.5

**Regression estimates of mathematics performance on immigrant status, parental education (in years of schooling), parents' occupational status (HISEI), language spoken at home and age at immigration**

| OECD countries |                                          | Regression    |         |              |         |              |         |              |         |              |         | Explained variance (unique) Percentage | Missing (un-weighted) Percentage |
|----------------|------------------------------------------|---------------|---------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|----------------------------------------|----------------------------------|
|                |                                          | Model 1       |         | Model 2      |         | Model 3      |         | Model 4      |         | Model 5      |         |                                        |                                  |
|                |                                          | B             | S.E.    | B            | S.E.    | B            | S.E.    | B            | S.E.    | B            | S.E.    |                                        |                                  |
| Australia      | Second-generation                        | -5.2          | (4.43)  | -1.9         | (4.12)  | 1.8          | (4.01)  | 1.9          | (3.80)  | 1.6          | (3.73)  | 0.0                                    | 9.8                              |
|                | First-generation                         | 0.1           | (5.01)  | -5.4         | (4.86)  | -4.7         | (4.84)  | -4.4         | (4.43)  | 2.6          | (6.42)  | 0.0                                    |                                  |
|                | Parental education in years of schooling |               |         | <b>8.5</b>   | (0.62)  | <b>4.1</b>   | (0.57)  | <b>4.1</b>   | (0.57)  | <b>4.1</b>   | (0.58)  | 0.8                                    |                                  |
|                | Parents' occupational status             |               |         |              |         | <b>1.6</b>   | (0.07)  | <b>1.6</b>   | (0.07)  | <b>1.6</b>   | (0.07)  | 6.1                                    |                                  |
|                | Foreign language spoken at home          |               |         |              |         |              |         | -0.6         | (5.05)  | 0.8          | (5.18)  | 0.0                                    |                                  |
|                | Age at immigration                       |               |         |              |         |              |         |              |         | -1.5         | (0.63)  | 0.1                                    |                                  |
|                | R-squared                                | 0.00          |         | 0.04         |         | 0.10         |         | 0.10         |         | 0.11         |         |                                        |                                  |
|                |                                          |               |         |              |         |              |         |              |         |              |         |                                        |                                  |
| Austria        | Second-generation                        | <b>-42.6</b>  | (10.11) | <b>-27.6</b> | (9.80)  | <b>-25.3</b> | (10.00) | <b>-23.5</b> | (10.74) | <b>-23.9</b> | (10.74) | 0.2                                    | 8.5                              |
|                | First-generation                         | <b>-55.6</b>  | (6.90)  | <b>-48.1</b> | (6.82)  | <b>-38.4</b> | (6.83)  | <b>-36.3</b> | (7.72)  | <b>-29.2</b> | (9.99)  | 0.2                                    |                                  |
|                | Parental education in years of schooling |               |         | <b>7.1</b>   | (0.85)  | <b>3.3</b>   | (0.80)  | <b>3.3</b>   | (0.80)  | <b>3.4</b>   | (0.80)  | 0.8                                    |                                  |
|                | Parents' occupational status             |               |         |              |         | <b>1.4</b>   | (0.13)  | <b>1.4</b>   | (0.13)  | <b>1.4</b>   | (0.13)  | 5.2                                    |                                  |
|                | Foreign language spoken at home          |               |         |              |         |              |         |              |         | -2.9         | (7.97)  | 0.0                                    |                                  |
|                | Age at immigration                       |               |         |              |         |              |         |              |         | -1.3         | (1.56)  | 0.2                                    |                                  |
|                | R-squared                                | 0.03          |         | 0.07         |         | 0.12         |         | 0.12         |         | 0.13         |         |                                        |                                  |
|                |                                          |               |         |              |         |              |         |              |         |              |         |                                        |                                  |
| Belgium        | Second-generation                        | <b>-75.8</b>  | (8.41)  | <b>-55.0</b> | (7.95)  | <b>-50.6</b> | (7.51)  | <b>-40.9</b> | (7.92)  | <b>-40.7</b> | (8.05)  | 0.6                                    | 19.1                             |
|                | First-generation                         | <b>-103.6</b> | (10.99) | <b>-89.0</b> | (10.38) | <b>-83.0</b> | (9.54)  | <b>-73.7</b> | (10.55) | <b>-25.4</b> | (9.98)  | 0.1                                    |                                  |
|                | Parental education in years of schooling |               |         | <b>7.9</b>   | (0.51)  | <b>3.0</b>   | (0.49)  | <b>2.9</b>   | (0.49)  | <b>2.9</b>   | (0.48)  | 0.6                                    |                                  |
|                | Parents' occupational status             |               |         |              |         | <b>1.8</b>   | (0.11)  | <b>1.8</b>   | (0.11)  | <b>1.8</b>   | (0.11)  | 7.2                                    |                                  |
|                | Foreign language spoken at home          |               |         |              |         |              |         |              |         | <b>-30.6</b> | (9.07)  | 0.3                                    |                                  |
|                | Age at immigration                       |               |         |              |         |              |         |              |         | <b>-5.2</b>  | (1.05)  | 0.8                                    |                                  |
|                | R-squared                                | 0.06          |         | 0.11         |         | 0.18         |         | 0.19         |         | 0.19         |         |                                        |                                  |
|                |                                          |               |         |              |         |              |         |              |         |              |         |                                        |                                  |
| Canada         | Second-generation                        | 7.4           | (4.47)  | 8.0          | (4.27)  | <b>10.6</b>  | (4.09)  | <b>14.1</b>  | (4.23)  | <b>13.9</b>  | (4.25)  | 0.2                                    | 10.8                             |
|                | First-generation                         | -1.1          | (4.65)  | -6.4         | (4.68)  | -6.0         | (4.53)  | 1.9          | (5.43)  | 7.0          | (7.38)  | 0.0                                    |                                  |
|                | Parental education in years of schooling |               |         | <b>6.8</b>   | (0.45)  | <b>3.3</b>   | (0.43)  | <b>3.3</b>   | (0.43)  | <b>3.3</b>   | (0.43)  | 0.7                                    |                                  |
|                | Parents' occupational status             |               |         |              |         | <b>1.2</b>   | (0.07)  | <b>1.2</b>   | (0.08)  | <b>1.2</b>   | (0.08)  | 4.1                                    |                                  |
|                | Foreign language spoken at home          |               |         |              |         |              |         |              |         | <b>-11.9</b> | (5.18)  | 0.1                                    |                                  |
|                | Age at immigration                       |               |         |              |         |              |         |              |         | -0.7         | (0.77)  | 0.1                                    |                                  |
|                | R-squared                                | 0.00          |         | 0.04         |         | 0.08         |         | 0.08         |         | 0.08         |         |                                        |                                  |
|                |                                          |               |         |              |         |              |         |              |         |              |         |                                        |                                  |
| Denmark        | Second-generation                        | <b>-69.6</b>  | (13.24) | <b>-49.4</b> | (13.98) | <b>-45.3</b> | (13.13) | <b>-47.4</b> | (12.89) | <b>-48.2</b> | (12.77) | 0.7                                    | 9.0                              |
|                | First-generation                         | <b>-60.9</b>  | (10.89) | <b>-55.3</b> | (12.21) | <b>-52.5</b> | (12.04) | <b>-55.3</b> | (12.77) | -18.0        | (13.53) | 0.0                                    |                                  |
|                | Parental education in years of schooling |               |         | <b>8.2</b>   | (0.74)  | <b>5.1</b>   | (0.70)  | <b>5.1</b>   | (0.70)  | <b>5.2</b>   | (0.69)  | 1.9                                    |                                  |
|                | Parents' occupational status             |               |         |              |         | <b>1.3</b>   | (0.11)  | <b>1.3</b>   | (0.11)  | <b>1.3</b>   | (0.11)  | 4.5                                    |                                  |
|                | Foreign language spoken at home          |               |         |              |         |              |         |              |         | 5.6          | (10.06) | 0.0                                    |                                  |
|                | Age at immigration                       |               |         |              |         |              |         |              |         | <b>-6.5</b>  | (1.53)  | 0.5                                    |                                  |
|                | R-squared                                | 0.03          |         | 0.08         |         | 0.13         |         | 0.13         |         | 0.13         |         |                                        |                                  |
|                |                                          |               |         |              |         |              |         |              |         |              |         |                                        |                                  |
| France         | Second-generation                        | <b>-42.3</b>  | (5.94)  | <b>-20.8</b> | (6.10)  | <b>-18.4</b> | (5.90)  | <b>-15.6</b> | (6.31)  | <b>-15.9</b> | (6.33)  | 0.2                                    | 12.0                             |
|                | First-generation                         | <b>-64.4</b>  | (17.56) | <b>-45.9</b> | (14.61) | <b>-47.4</b> | (14.35) | <b>-42.5</b> | (15.21) | <b>-13.7</b> | (14.65) | 0.1                                    |                                  |
|                | Parental education in years of schooling |               |         | <b>7.6</b>   | (0.68)  | <b>3.2</b>   | (0.67)  | <b>3.1</b>   | (0.69)  | <b>3.1</b>   | (0.69)  | 0.7                                    |                                  |
|                | Parents' occupational status             |               |         |              |         | <b>1.5</b>   | (0.13)  | <b>1.5</b>   | (0.13)  | <b>1.5</b>   | (0.13)  | 6.2                                    |                                  |
|                | Foreign language spoken at home          |               |         |              |         |              |         |              |         | -9.6         | (9.52)  | 0.1                                    |                                  |
|                | Age at immigration                       |               |         |              |         |              |         |              |         | <b>-4.3</b>  | (1.81)  | 0.3                                    |                                  |
|                | R-squared                                | 0.03          |         | 0.08         |         | 0.14         |         | 0.14         |         | 0.15         |         |                                        |                                  |
|                |                                          |               |         |              |         |              |         |              |         |              |         |                                        |                                  |
| Germany        | Second-generation                        | <b>-86.0</b>  | (11.37) | <b>-57.2</b> | (10.31) | <b>-51.3</b> | (9.26)  | <b>-35.9</b> | (9.89)  | <b>-40.5</b> | (9.20)  | 0.7                                    | 20.8                             |
|                | First-generation                         | <b>-58.0</b>  | (8.88)  | <b>-24.9</b> | (9.36)  | <b>-24.5</b> | (8.98)  | -9.1         | (9.05)  | 13.6         | (11.51) | 0.1                                    |                                  |
|                | Parental education in years of schooling |               |         | <b>6.6</b>   | (0.63)  | <b>3.3</b>   | (0.61)  | <b>3.2</b>   | (0.59)  | <b>3.2</b>   | (0.60)  | 1.1                                    |                                  |
|                | Parents' occupational status             |               |         |              |         | <b>1.8</b>   | (0.11)  | <b>1.8</b>   | (0.11)  | <b>1.8</b>   | (0.11)  | 7.7                                    |                                  |
|                | Foreign language spoken at home          |               |         |              |         |              |         |              |         | <b>-35.6</b> | (9.20)  | 0.2                                    |                                  |
|                | Age at immigration                       |               |         |              |         |              |         |              |         | <b>-5.7</b>  | (1.85)  | 0.4                                    |                                  |
|                | R-squared                                | 0.07          |         | 0.12         |         | 0.19         |         | 0.20         |         | 0.20         |         |                                        |                                  |
|                |                                          |               |         |              |         |              |         |              |         |              |         |                                        |                                  |
| Luxembourg     | Second-generation                        | <b>-28.3</b>  | (4.23)  | <b>-13.2</b> | (4.43)  | <b>-10.1</b> | (4.36)  | -9.9         | (5.95)  | -10.3        | (6.05)  | 0.1                                    | 21.1                             |
|                | First-generation                         | <b>-44.3</b>  | (4.03)  | <b>-28.4</b> | (4.21)  | <b>-20.9</b> | (4.19)  | <b>-20.7</b> | (7.28)  | -11.9        | (8.30)  | 0.1                                    |                                  |
|                | Parental education in years of schooling |               |         | <b>4.7</b>   | (0.32)  | <b>1.8</b>   | (0.38)  | <b>1.8</b>   | (0.39)  | <b>1.8</b>   | (0.39)  | 0.6                                    |                                  |
|                | Parents' occupational status             |               |         |              |         | <b>1.7</b>   | (0.13)  | <b>1.7</b>   | (0.13)  | <b>1.7</b>   | (0.13)  | 6.5                                    |                                  |
|                | Foreign language spoken at home          |               |         |              |         |              |         |              |         | -0.3         | (7.42)  | 0.0                                    |                                  |
|                | Age at immigration                       |               |         |              |         |              |         |              |         | -1.9         | (1.08)  | 0.1                                    |                                  |
|                | R-squared                                | 0.04          |         | 0.09         |         | 0.16         |         | 0.16         |         | 0.16         |         |                                        |                                  |
|                |                                          |               |         |              |         |              |         |              |         |              |         |                                        |                                  |

Note: Statistically significant coefficients are indicated in bold. For the variable *Age at immigration* the number of missing values is particularly high, therefore mean substitution is used and a dummy variable indicating whether or not the age at immigration is missing was included in the regression model. Table A1.1 in Annex A1 shows the conversions used for the variable *Parental education in years of schooling*.



Table 3.5 (continued)

**Regression estimates of mathematics performance on immigrant status, parental education (in years of schooling), parents' occupational status (HISEI), language spoken at home and age at immigration**

|                |                                          | Regression                                      |                      |                      |                      |                      |                     |                      |                      |                      |                      | Explained variance (unique) Percentage | Missing (un-weighted) Percentage |      |
|----------------|------------------------------------------|-------------------------------------------------|----------------------|----------------------|----------------------|----------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------------------------|----------------------------------|------|
|                |                                          | Model 1                                         |                      | Model 2              |                      | Model 3              |                     | Model 4              |                      | Model 5              |                      |                                        |                                  |      |
|                |                                          | B                                               | S.E.                 | B                    | S.E.                 | B                    | S.E.                | B                    | S.E.                 | B                    | S.E.                 |                                        |                                  |      |
| OECD countries | Netherlands                              |                                                 |                      |                      |                      |                      |                     |                      |                      |                      |                      |                                        |                                  |      |
|                |                                          | Second-generation                               | <b>-55.6</b> (11.69) |                      | <b>-40.3</b> (10.96) |                      | <b>-38.1</b> (9.85) |                      | <b>-32.1</b> (9.84)  |                      | <b>-33.0</b> (9.88)  |                                        | 0.7                              |      |
|                |                                          | First-generation                                | <b>-77.3</b> (10.48) |                      | <b>-69.7</b> (10.47) |                      | <b>-66.3</b> (9.95) |                      | <b>-54.6</b> (11.83) |                      | <b>-36.4</b> (13.99) |                                        | 0.2                              |      |
|                |                                          | Parental education in years of schooling        |                      |                      | <b>7.1</b> (0.71)    |                      | <b>2.5</b> (0.77)   |                      | <b>2.4</b> (0.77)    |                      | <b>2.4</b> (0.76)    |                                        | 0.4                              |      |
|                |                                          | Parents' occupational status                    |                      |                      |                      |                      | <b>1.6</b> (0.13)   |                      | <b>1.6</b> (0.13)    |                      | <b>1.6</b> (0.13)    |                                        | 6.6                              |      |
|                |                                          | Foreign language spoken at home                 |                      |                      |                      |                      |                     |                      | <b>-21.4</b> (10.92) |                      | <b>-19.0</b> (11.03) |                                        | 0.1                              |      |
|                |                                          | Age at immigration                              |                      |                      |                      |                      |                     |                      |                      |                      | <b>-3.2</b> (1.60)   |                                        | 0.2                              |      |
|                |                                          | R-squared                                       |                      | 0.04                 |                      | 0.08                 |                     | 0.15                 |                      | 0.15                 |                      | 0.15                                   |                                  | 15.0 |
|                |                                          | New Zealand                                     |                      |                      |                      |                      |                     |                      |                      |                      |                      |                                        |                                  |      |
|                |                                          | Second-generation                               | <b>-35.9</b> (10.39) |                      | <b>-25.8</b> (10.47) |                      | <b>-22.8</b> (9.44) |                      | <b>-20.0</b> (9.51)  |                      | <b>-20.4</b> (9.46)  |                                        | 0.3                              |      |
|                | First-generation                         | <b>-7.5</b> (6.43)                              |                      | <b>-9.5</b> (6.22)   |                      | <b>-14.9</b> (6.13)  |                     | <b>-8.9</b> (7.07)   |                      | <b>2.4</b> (10.66)   |                      | 0.0                                    |                                  |      |
|                | Parental education in years of schooling |                                                 |                      | <b>6.8</b> (0.58)    |                      | <b>4.4</b> (0.58)    |                     | <b>4.3</b> (0.59)    |                      | <b>4.4</b> (0.59)    |                      | 2.0                                    |                                  |      |
|                | Parents' occupational status             |                                                 |                      |                      |                      | <b>1.5</b> (0.11)    |                     | <b>1.5</b> (0.11)    |                      | <b>1.5</b> (0.11)    |                      | 5.7                                    |                                  |      |
|                | Foreign language spoken at home          |                                                 |                      |                      |                      |                      |                     | <b>-12.0</b> (8.63)  |                      | <b>-10.7</b> (8.72)  |                      | 0.1                                    |                                  |      |
|                | Age at immigration                       |                                                 |                      |                      |                      |                      |                     |                      |                      | <b>-1.3</b> (0.91)   |                      | 0.1                                    |                                  |      |
|                | R-squared                                |                                                 | 0.01                 |                      | 0.06                 |                      | 0.12                |                      | 0.12                 |                      | 0.12                 |                                        | 26.3                             |      |
|                | Norway                                   |                                                 |                      |                      |                      |                      |                     |                      |                      |                      |                      |                                        |                                  |      |
|                | Second-generation                        | <b>-32.1</b> (13.23)                            |                      | <b>-22.5</b> (11.88) |                      | <b>-25.6</b> (11.17) |                     | <b>-28.2</b> (15.07) |                      | <b>-29.7</b> (15.16) |                      | 0.1                                    |                                  |      |
|                | First-generation                         | <b>-53.9</b> (10.61)                            |                      | <b>-47.1</b> (10.27) |                      | <b>-40.3</b> (9.97)  |                     | <b>-44.5</b> (16.61) |                      | <b>-30.2</b> (17.04) |                      | 0.1                                    |                                  |      |
|                | Parental education in years of schooling |                                                 |                      | <b>8.2</b> (0.74)    |                      | <b>3.2</b> (0.77)    |                     | <b>3.2</b> (0.77)    |                      | <b>3.3</b> (0.77)    |                      | 0.4                                    |                                  |      |
|                | Parents' occupational status             |                                                 |                      |                      |                      | <b>1.5</b> (0.11)    |                     | <b>1.5</b> (0.11)    |                      | <b>1.5</b> (0.11)    |                      | 5.4                                    |                                  |      |
|                | Foreign language spoken at home          |                                                 |                      |                      |                      |                      |                     | <b>4.9</b> (15.75)   |                      | <b>7.6</b> (15.99)   |                      | 0.0                                    |                                  |      |
|                | Age at immigration                       |                                                 |                      |                      |                      |                      |                     |                      |                      | <b>-2.6</b> (1.45)   |                      | 0.1                                    |                                  |      |
|                | R-squared                                |                                                 | 0.01                 |                      | 0.04                 |                      | 0.10                |                      | 0.10                 |                      | 0.10                 |                                        | 8.6                              |      |
|                | Sweden                                   |                                                 |                      |                      |                      |                      |                     |                      |                      |                      |                      |                                        |                                  |      |
|                | Second-generation                        | <b>-25.2</b> (9.59)                             |                      | <b>-20.1</b> (9.27)  |                      | <b>-12.5</b> (9.70)  |                     | <b>-4.8</b> (8.36)   |                      | <b>-5.3</b> (8.63)   |                      | 0.0                                    |                                  |      |
|                | First-generation                         | <b>-78.8</b> (9.15)                             |                      | <b>-74.7</b> (9.06)  |                      | <b>-69.3</b> (8.37)  |                     | <b>-56.2</b> (11.54) |                      | <b>-48.8</b> (11.74) |                      | 0.5                                    |                                  |      |
|                | Parental education in years of schooling |                                                 |                      | <b>5.3</b> (0.61)    |                      | <b>2.2</b> (0.58)    |                     | <b>2.2</b> (0.59)    |                      | <b>2.2</b> (0.60)    |                      | 0.4                                    |                                  |      |
|                | Parents' occupational status             |                                                 |                      |                      |                      | <b>1.5</b> (0.12)    |                     | <b>1.5</b> (0.12)    |                      | <b>1.5</b> (0.12)    |                      | 5.9                                    |                                  |      |
|                | Foreign language spoken at home          |                                                 |                      |                      |                      |                      |                     | <b>-17.7</b> (10.36) |                      | <b>-16.1</b> (10.59) |                      | 0.1                                    |                                  |      |
|                | Age at immigration                       |                                                 |                      |                      |                      |                      |                     |                      |                      | <b>-1.6</b> (1.75)   |                      | 0.2                                    |                                  |      |
|                | R-squared                                |                                                 | 0.04                 |                      | 0.06                 |                      | 0.12                |                      | 0.12                 |                      | 0.12                 |                                        | 12.4                             |      |
|                | Switzerland                              |                                                 |                      |                      |                      |                      |                     |                      |                      |                      |                      |                                        |                                  |      |
|                | Second-generation                        | <b>-49.9</b> (5.92)                             |                      | <b>-35.9</b> (6.00)  |                      | <b>-31.0</b> (5.84)  |                     | <b>-28.7</b> (6.06)  |                      | <b>-29.7</b> (6.04)  |                      | 0.6                                    |                                  |      |
|                | First-generation                         | <b>-79.9</b> (6.00)                             |                      | <b>-65.3</b> (5.58)  |                      | <b>-56.7</b> (5.50)  |                     | <b>-52.2</b> (6.67)  |                      | <b>-34.9</b> (10.64) |                      | 0.4                                    |                                  |      |
|                | Parental education in years of schooling |                                                 |                      | <b>8.9</b> (0.77)    |                      | <b>6.3</b> (0.71)    |                     | <b>6.3</b> (0.71)    |                      | <b>6.4</b> (0.71)    |                      | 2.6                                    |                                  |      |
|                | Parents' occupational status             |                                                 |                      |                      |                      | <b>1.1</b> (0.10)    |                     | <b>1.1</b> (0.10)    |                      | <b>1.1</b> (0.10)    |                      | 2.7                                    |                                  |      |
|                | Foreign language spoken at home          |                                                 |                      |                      |                      |                      |                     | <b>-7.3</b> (7.48)   |                      | <b>-4.5</b> (7.48)   |                      | 0.0                                    |                                  |      |
|                | Age at immigration                       |                                                 |                      |                      |                      |                      |                     |                      |                      | <b>-3.7</b> (1.21)   |                      | 0.4                                    |                                  |      |
|                | R-squared                                |                                                 | 0.07                 |                      | 0.13                 |                      | 0.16                |                      | 0.16                 |                      | 0.16                 |                                        | 12.3                             |      |
|                | United States                            |                                                 |                      |                      |                      |                      |                     |                      |                      |                      |                      |                                        |                                  |      |
|                | Second-generation                        | <b>-16.1</b> (7.43)                             |                      | <b>-3.0</b> (6.61)   |                      | <b>-0.4</b> (6.06)   |                     | <b>8.8</b> (6.21)    |                      | <b>8.3</b> (6.17)    |                      | 0.0                                    |                                  |      |
|                | First-generation                         | <b>-32.1</b> (7.58)                             |                      | <b>-19.8</b> (7.36)  |                      | <b>-14.7</b> (6.58)  |                     | <b>0.1</b> (7.32)    |                      | <b>13.5</b> (10.16)  |                      | 0.0                                    |                                  |      |
|                | Parental education in years of schooling |                                                 |                      | <b>8.2</b> (0.60)    |                      | <b>4.4</b> (0.59)    |                     | <b>4.2</b> (0.58)    |                      | <b>4.3</b> (0.59)    |                      | 1.1                                    |                                  |      |
|                | Parents' occupational status             |                                                 |                      |                      |                      | <b>1.5</b> (0.10)    |                     | <b>1.5</b> (0.10)    |                      | <b>1.5</b> (0.10)    |                      | 5.9                                    |                                  |      |
|                | Foreign language spoken at home          |                                                 |                      |                      |                      |                      |                     | <b>-22.2</b> (7.13)  |                      | <b>-21.0</b> (7.27)  |                      | 0.2                                    |                                  |      |
|                | Age at immigration                       |                                                 |                      |                      |                      |                      |                     |                      |                      | <b>-2.2</b> (1.38)   |                      | 0.1                                    |                                  |      |
|                | R-squared                                |                                                 | 0.01                 |                      | 0.06                 |                      | 0.12                |                      | 0.12                 |                      | 0.12                 |                                        | 11.2                             |      |
|                | <b>OECD average</b>                      |                                                 |                      |                      |                      |                      |                     |                      |                      |                      |                      |                                        |                                  |      |
|                |                                          | <b>Second-generation</b>                        | <b>-32.9</b> (2.16)  |                      | <b>-20.4</b> (2.19)  |                      | <b>-17.3</b> (2.11) |                      | <b>-11.5</b> (2.10)  |                      | <b>-11.8</b> (2.09)  |                                        | 0.1                              |      |
|                |                                          | <b>First-generation</b>                         | <b>-42.1</b> (2.08)  |                      | <b>-34.0</b> (2.10)  |                      | <b>-30.4</b> (1.94) |                      | <b>-21.1</b> (2.13)  |                      | <b>-14.1</b> (2.83)  |                                        | 0.1                              |      |
|                |                                          | <b>Parental education in years of schooling</b> |                      |                      | <b>6.3</b> (0.14)    |                      | <b>2.9</b> (0.15)   |                      | <b>2.8</b> (0.15)    |                      | <b>2.9</b> (0.15)    |                                        | 0.7                              |      |
|                |                                          | <b>Parents' occupational status</b>             |                      |                      |                      | <b>1.5</b> (0.03)    |                     | <b>1.5</b> (0.03)    |                      | <b>1.5</b> (0.03)    |                      | 5.6                                    |                                  |      |
|                |                                          | <b>Foreign language spoken at home</b>          |                      |                      |                      |                      |                     | <b>-15.3</b> (2.01)  |                      | <b>-14.5</b> (2.02)  |                      | 0.1                                    |                                  |      |
|                |                                          | <b>Age at immigration</b>                       |                      |                      |                      |                      |                     |                      |                      | <b>-1.3</b> (0.36)   |                      | 0.1                                    |                                  |      |
|                |                                          | <b>R-squared</b>                                |                      | 0.02                 |                      | 0.06                 |                     | 0.12                 |                      | 0.12                 |                      | 0.12                                   | 14.1                             |      |

Note: Statistically significant coefficients are indicated in bold. For the variable *Age at immigration* the number of missing values is particularly high, therefore mean substitution is used and a dummy variable indicating whether or not the age at immigration is missing was included in the regression model. Table A1.1 in Annex A1 shows the conversions used for the variable *Parental education in years of schooling*.

Table 3.5 (continued)

Regression estimates of mathematics performance on immigrant status, parental education (in years of schooling), parents' occupational status (HISEI), language spoken at home and age at immigration

|                             |                                          | Regression   |         |              |         |              |         |              |         |              |         | Explained variance (unique) | Missing (un-weighted) |      |
|-----------------------------|------------------------------------------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|-----------------------------|-----------------------|------|
|                             |                                          | Model 1      |         | Model 2      |         | Model 3      |         | Model 4      |         | Model 5      |         | Percentage                  | Percentage            |      |
|                             |                                          | B            | S.E.    | B            | S.E.    | B            | S.E.    | B            | S.E.    | B            | S.E.    |                             |                       |      |
| Hong Kong-China             | Second-generation                        | <b>13.6</b>  | (4.62)  | <b>17.1</b>  | (4.61)  | <b>21.0</b>  | (4.65)  | <b>20.1</b>  | (4.63)  | <b>17.4</b>  | (4.55)  | 0.5                         |                       |      |
|                             | First-generation                         | <b>-39.6</b> | (4.71)  | <b>-34.6</b> | (4.77)  | <b>-27.3</b> | (4.91)  | <b>-26.9</b> | (4.73)  | 10.4         | (6.20)  | 0.0                         |                       |      |
|                             | Parental education in years of schooling |              |         | <b>3.3</b>   | (0.76)  | 1.3          | (0.69)  | 1.4          | (0.68)  | <b>1.4</b>   | (0.67)  | 0.2                         |                       |      |
|                             | Parents' occupational status             |              |         |              |         | <b>1.1</b>   | (0.16)  |              |         | <b>1.0</b>   | (0.15)  | <b>0.9</b>                  | (0.15)                | 1.2  |
|                             | Foreign language spoken at home          |              |         |              |         |              |         | <b>-58.7</b> | (9.61)  | <b>-54.5</b> | (9.31)  | 1.3                         |                       |      |
|                             | Age at immigration                       |              |         |              |         |              |         |              |         | <b>-4.9</b>  | (0.55)  | 2.5                         |                       |      |
|                             | R-squared                                |              | 0.04    |              | 0.05    |              | 0.06    |              | 0.08    |              | 0.10    |                             |                       | 9.3  |
| Macao-China                 | Second-generation                        | 5.3          | (8.04)  | 6.6          | (8.02)  | 9.1          | (8.21)  | 7.7          | (8.21)  | 7.1          | (8.23)  | 0.1                         |                       |      |
|                             | First-generation                         | <b>-9.5</b>  | (10.84) | <b>-8.1</b>  | (10.83) | <b>-5.0</b>  | (11.08) | <b>-6.1</b>  | (10.98) | 12.1         | (15.62) | 0.1                         |                       |      |
|                             | Parental education in years of schooling |              |         | <b>1.9</b>   | (0.76)  | 1.3          | (0.86)  | 1.2          | (0.86)  | 1.0          | (0.86)  | 0.2                         |                       |      |
|                             | Parents' occupational status             |              |         |              |         | 0.5          | (0.29)  | 0.5          | (0.29)  | 0.5          | (0.29)  | 0.3                         |                       |      |
|                             | Foreign language spoken at home          |              |         |              |         |              |         | <b>-41.9</b> | (15.38) | <b>-36.8</b> | (15.91) | 0.8                         |                       |      |
|                             | Age at immigration                       |              |         |              |         |              |         |              |         | <b>-2.6</b>  | (1.78)  | 2.0                         |                       |      |
|                             | R-squared                                |              | 0.00    |              | 0.01    |              | 0.02    |              | 0.03    |              | 0.05    |                             |                       | 6.8  |
| Russian Federation          | Second-generation                        | <b>-14.0</b> | (7.21)  | <b>-13.1</b> | (6.98)  | <b>-13.4</b> | (7.02)  | <b>-13.0</b> | (7.02)  | <b>-13.2</b> | (7.05)  | 0.2                         |                       |      |
|                             | First-generation                         | <b>-19.6</b> | (5.62)  | <b>-19.5</b> | (5.22)  | <b>-20.5</b> | (5.38)  | <b>-18.6</b> | (5.32)  | <b>-12.0</b> | (7.97)  | 0.1                         |                       |      |
|                             | Parental education in years of schooling |              |         | <b>12.9</b>  | (1.08)  | <b>7.2</b>   | (1.27)  | <b>6.9</b>   | (1.26)  | <b>6.9</b>   | (1.26)  | 1.0                         |                       |      |
|                             | Parents' occupational status             |              |         |              |         | <b>1.0</b>   | (0.13)  | <b>0.9</b>   | (0.13)  | <b>0.9</b>   | (0.13)  | 2.1                         |                       |      |
|                             | Foreign language spoken at home          |              |         |              |         |              |         | <b>-32.9</b> | (12.98) | <b>-32.9</b> | (13.11) | 0.6                         |                       |      |
|                             | Age at immigration                       |              |         |              |         |              |         |              |         | <b>-1.3</b>  | (0.77)  | 0.1                         |                       |      |
|                             | R-squared                                |              | 0.00    |              | 0.05    |              | 0.07    |              | 0.08    |              | 0.08    |                             |                       | 4.9  |
| Belgium (Flemish Community) | Second-generation                        | <b>-98.3</b> | (14.85) | <b>-70.7</b> | (13.74) | <b>-64.7</b> | (13.10) | <b>-43.4</b> | (14.48) | <b>-44.0</b> | (14.79) | 0.3                         |                       |      |
|                             | First-generation                         | <b>-90.1</b> | (11.31) | <b>-69.6</b> | (10.30) | <b>-70.6</b> | (10.02) | <b>-51.8</b> | (11.79) | 2.1          | (18.76) | 0.0                         |                       |      |
|                             | Parental education in years of schooling |              |         | <b>9.4</b>   | (0.69)  | <b>4.1</b>   | (0.66)  | <b>1.8</b>   | (0.13)  | <b>4.0</b>   | (0.67)  | 1.0                         |                       |      |
|                             | Parents' occupational status             |              |         |              |         | <b>1.8</b>   | (0.13)  | <b>4.0</b>   | (0.66)  | <b>1.8</b>   | (0.13)  | 7.2                         |                       |      |
|                             | Foreign language spoken at home          |              |         |              |         |              |         | <b>-41.0</b> | (13.10) | <b>-40.2</b> | (13.32) | 0.3                         |                       |      |
|                             | Age at immigration                       |              |         |              |         |              |         |              |         | <b>-6.3</b>  | (1.57)  | 0.3                         |                       |      |
|                             | R-squared                                |              | 0.04    |              | 0.11    |              | 0.19    |              | 0.19    |              | 0.19    |                             |                       | 16.4 |
| Belgium (French Community)  | Second-generation                        | <b>-45.1</b> | (9.46)  | <b>-26.0</b> | (9.12)  | <b>-22.0</b> | (8.69)  | <b>-16.7</b> | (8.63)  | <b>-17.1</b> | (8.70)  | 0.2                         |                       |      |
|                             | First-generation                         | <b>-92.5</b> | (14.76) | <b>-79.1</b> | (14.42) | <b>-69.1</b> | (13.39) | <b>-63.8</b> | (13.97) | <b>-31.3</b> | (14.55) | 0.3                         |                       |      |
|                             | Parental education in years of schooling |              |         | <b>7.1</b>   | (0.84)  | <b>3.0</b>   | (0.74)  | <b>1.8</b>   | (0.19)  | <b>2.9</b>   | (0.69)  | 0.6                         |                       |      |
|                             | Parents' occupational status             |              |         |              |         | <b>1.8</b>   | (0.19)  | <b>3.0</b>   | (0.74)  | <b>1.8</b>   | (0.19)  | 7.4                         |                       |      |
|                             | Foreign language spoken at home          |              |         |              |         |              |         | <b>-23.5</b> | (10.63) | <b>-25.4</b> | (10.48) | 0.3                         |                       |      |
|                             | Age at immigration                       |              |         |              |         |              |         |              |         | <b>-3.5</b>  | (1.38)  | 0.7                         |                       |      |
|                             | R-squared                                |              | 0.06    |              | 0.11    |              | 0.18    |              | 0.18    |              | 0.19    |                             |                       | 21.4 |

Note: Statistically significant coefficients are indicated in bold. For the variable *Age at immigration* the number of missing values is particularly high, therefore mean substitution is used and a dummy variable indicating whether or not the age at immigration is missing was included in the regression model. Table A1.1 in Annex A1 shows the conversions used for the variable *Parental education in years of schooling*.



Table 3.6  
Between- and within-school variance in student performance in mathematics

|                     | Percentage of the total variance within the country that is: |                | Variance explained by students' immigrant status |                                  |                                                                                   |                                                                                  |
|---------------------|--------------------------------------------------------------|----------------|--------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
|                     | Between schools                                              | Within schools | Between-school variance explained                | Within-school variance explained | Between-school variance explained expressed as a percentage of the total variance | Within-school variance explained expressed as a percentage of the total variance |
| OECD countries      |                                                              |                |                                                  |                                  |                                                                                   |                                                                                  |
| Australia           | 20.9                                                         | 79.1           | 0.09                                             | 0.05                             | 0.02                                                                              | 0.04                                                                             |
| Austria             | 55.2                                                         | 44.8           | 6.53                                             | 3.36                             | 3.61                                                                              | 1.51                                                                             |
| Belgium             | 53.0                                                         | 47.0           | 9.93                                             | 2.92                             | 5.26                                                                              | 1.37                                                                             |
| Canada <sup>1</sup> | 17.0                                                         | 83.0           | a                                                | a                                | a                                                                                 | a                                                                                |
| Denmark             | 13.7                                                         | 86.3           | 11.29                                            | 2.23                             | 1.54                                                                              | 1.92                                                                             |
| France              | 46.1                                                         | 53.9           | 4.44                                             | 2.20                             | 2.04                                                                              | 1.18                                                                             |
| Germany             | 51.8                                                         | 48.2           | 10.68                                            | 3.24                             | 5.53                                                                              | 1.56                                                                             |
| Luxembourg          | 31.3                                                         | 68.7           | 6.17                                             | 2.66                             | 1.93                                                                              | 1.83                                                                             |
| Netherlands         | 57.9                                                         | 42.1           | 6.70                                             | 3.34                             | 3.88                                                                              | 1.41                                                                             |
| New Zealand         | 17.9                                                         | 82.1           | 1.52                                             | 0.30                             | 0.27                                                                              | 0.24                                                                             |
| Norway              | 6.7                                                          | 93.3           | 5.31                                             | 1.55                             | 0.36                                                                              | 1.45                                                                             |
| Sweden              | 10.9                                                         | 89.1           | 28.33                                            | 3.25                             | 3.09                                                                              | 2.90                                                                             |
| Switzerland         | 34.0                                                         | 66.0           | 16.82                                            | 7.20                             | 5.72                                                                              | 4.75                                                                             |
| United States       | 25.3                                                         | 74.7           | 2.46                                             | 0.25                             | 0.62                                                                              | 0.18                                                                             |
| Partner countries   |                                                              |                |                                                  |                                  |                                                                                   |                                                                                  |
| Hong Kong-China     | 46.5                                                         | 53.5           | 2.83                                             | 2.22                             | 1.32                                                                              | 1.19                                                                             |
| Macao-China         | 18.3                                                         | 81.7           | 0.24                                             | 0.27                             | 0.04                                                                              | 0.22                                                                             |
| Russian Federation  | 29.8                                                         | 70.2           | 0.44                                             | 0.38                             | 0.13                                                                              | 0.27                                                                             |

Note: The variance components were estimated for all students with data on immigrant status.

1. Accounting for immigrant student status slightly increases the school-level variance in Canada, thus resulting in a negative estimate for explained between-school variance.

Table 3.7a  
Percentage of second-generation students attending schools with different sized immigrant student populations (first- and second-generation students combined)

|                             | Proportion of immigrant students within the school |        |             |        |             |        |             |        |             |         |             |        |             |        |               | Total   |       |
|-----------------------------|----------------------------------------------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|---------|-------------|--------|-------------|--------|---------------|---------|-------|
|                             | 0% to <10%                                         | S.E.   | 10% to <20% | S.E.   | 20% to <30% | S.E.   | 30% to <40% | S.E.   | 40% to <50% | S.E.    | 50% to <60% | S.E.   | 60% to <70% | S.E.   | 70% or higher |         | S.E.  |
| OECD countries              |                                                    |        |             |        |             |        |             |        |             |         |             |        |             |        |               |         |       |
| Australia                   | 7.6                                                | (1.07) | 14.0        | (2.23) | 17.3        | (3.04) | 15.1        | (3.06) | 10.2        | (3.49)  | 9.4         | (3.06) | 6.5         | (2.84) | 19.8          | (5.01)  | 100.0 |
| Austria                     | 12.6                                               | (3.11) | 14.3        | (3.96) | 16.9        | (6.08) | 11.6        | (5.17) | 3.6         | (3.50)  | 15.9        | (6.13) | 9.8         | (6.96) | 15.3          | (5.56)  | 100.0 |
| Belgium                     | 17.6                                               | (2.76) | 21.3        | (3.91) | 19.9        | (4.81) | 10.7        | (3.18) | 5.5         | (3.43)  | 7.1         | (4.38) | 2.1         | (1.30) | 15.8          | (7.24)  | 100.0 |
| Canada                      | 9.5                                                | (1.20) | 8.9         | (1.47) | 13.2        | (2.05) | 12.1        | (3.02) | 9.6         | (2.25)  | 14.9        | (3.52) | 6.9         | (2.72) | 24.9          | (4.38)  | 100.0 |
| Denmark                     | 25.1                                               | (5.35) | 25.7        | (6.81) | 7.6         | (4.48) | 7.2         | (4.11) | 5.3         | (3.60)  | 3.7         | (3.67) | 4.9         | (4.87) | 20.6          | (11.64) | 100.0 |
| France                      | 10.4                                               | (2.22) | 21.9        | (4.52) | 13.6        | (3.56) | 14.8        | (3.87) | 20.9        | (5.93)  | 4.5         | (3.13) | 6.5         | (4.43) | 7.5           | (4.22)  | 100.0 |
| Germany                     | 7.9                                                | (1.85) | 11.1        | (3.06) | 18.3        | (4.31) | 12.9        | (3.77) | 13.4        | (4.97)  | 13.3        | (5.46) | 10.5        | (5.22) | 12.7          | (6.96)  | 100.0 |
| Luxembourg                  | 0.6                                                | (0.32) | 15.1        | (1.29) | 23.2        | (1.39) | 9.7         | (1.02) | 26.1        | (1.72)  | 6.5         | (0.89) | 6.1         | (0.82) | 12.7          | (1.05)  | 100.0 |
| Netherlands                 | 15.6                                               | (3.68) | 25.9        | (6.07) | 11.8        | (4.76) | 0.0         | c      | 3.9         | (3.92)  | 16.4        | (7.83) | 5.0         | (4.91) | 21.3          | (8.90)  | 100.0 |
| New Zealand                 | 9.3                                                | (2.11) | 12.7        | (2.50) | 8.4         | (2.50) | 17.5        | (4.87) | 14.4        | (4.13)  | 9.9         | (2.95) | 2.7         | (2.64) | 25.3          | (7.98)  | 100.0 |
| Norway                      | 26.3                                               | (6.63) | 23.9        | (7.42) | 12.4        | (6.80) | 6.4         | (4.48) | 24.4        | (12.01) | 6.7         | (6.39) | 0.0         | c      | 0.0           | c       | 100.0 |
| Sweden                      | 14.4                                               | (2.58) | 22.4        | (4.76) | 23.4        | (5.88) | 12.1        | (5.31) | 11.3        | (5.24)  | 0.6         | (0.58) | 9.2         | (5.80) | 6.6           | (2.38)  | 100.0 |
| Switzerland                 | 5.0                                                | (1.14) | 25.3        | (3.59) | 25.0        | (3.67) | 10.7        | (2.80) | 6.1         | (1.57)  | 17.0        | (3.73) | 4.4         | (1.40) | 6.5           | (2.87)  | 100.0 |
| United States               | 7.6                                                | (1.62) | 12.1        | (2.55) | 11.5        | (3.38) | 13.5        | (3.48) | 19.5        | (4.64)  | 6.7         | (2.84) | 9.6         | (4.22) | 19.5          | (6.39)  | 100.0 |
| OECD average                | 9.6                                                | (0.48) | 17.5        | (0.99) | 16.5        | (1.13) | 12.1        | (0.94) | 14.1        | (1.21)  | 8.7         | (0.97) | 6.2         | (1.03) | 15.2          | (1.54)  | 100.0 |
| Partner countries           |                                                    |        |             |        |             |        |             |        |             |         |             |        |             |        |               |         |       |
| Hong Kong-China             | 0.0                                                | c      | 2.5         | (0.93) | 7.4         | (1.91) | 23.7        | (3.65) | 29.4        | (4.12)  | 20.6        | (3.79) | 11.2        | (3.24) | 5.1           | (2.33)  | 100.0 |
| Macao-China                 | 0.0                                                | c      | 0.0         | c      | 0.6         | (0.17) | 0.0         | c      | 2.0         | (0.48)  | 9.6         | (0.90) | 17.8        | (0.95) | 70.1          | (1.11)  | 100.0 |
| Russian Federation          | 20.1                                               | (3.43) | 33.5        | (4.97) | 32.1        | (5.47) | 10.6        | (4.31) | 0.0         | c       | 3.6         | (2.73) | 0.0         | c      | 0.0           | c       | 100.0 |
| Belgium (Flemish Community) | 30.7                                               | (5.64) | 14.9        | (4.25) | 21.2        | (5.64) | 17.1        | (6.42) | 7.2         | (6.88)  | 2.6         | (2.35) | 0.5         | (0.54) | 5.6           | (5.41)  | 100.0 |
| Belgium (French Community)  | 10.9                                               | (2.64) | 24.7        | (5.63) | 19.0        | (6.62) | 7.3         | (3.52) | 4.6         | (3.89)  | 9.4         | (6.48) | 2.9         | (1.98) | 21.1          | (10.30) | 100.0 |



Table 3.7b

Percentage of first-generation students attending schools with different sized immigrant student populations  
(first- and second-generation students combined)

|                   |                             | Proportion of immigrant students within the school |             |                   |             |                   |             |                   |             |                   |             |                   |            |                   |            |                     |             |               |
|-------------------|-----------------------------|----------------------------------------------------|-------------|-------------------|-------------|-------------------|-------------|-------------------|-------------|-------------------|-------------|-------------------|------------|-------------------|------------|---------------------|-------------|---------------|
|                   |                             | 0% to<br><10%                                      |             | 10%<br>to<br><20% |             | 20%<br>to<br><30% |             | 30%<br>to<br><40% |             | 40%<br>to<br><50% |             | 50%<br>to<br><60% |            | 60%<br>to<br><70% |            | 70%<br>or<br>higher |             | Total         |
|                   |                             | S.E.                                               | S.E.        | S.E.              | S.E.        | S.E.              | S.E.        | S.E.              | S.E.        | S.E.              | S.E.        | S.E.              | S.E.       | S.E.              | S.E.       | S.E.                | S.E.        |               |
| OECD countries    | Australia                   | 5.4                                                | (0.86)      | 14.2              | (2.14)      | 19.3              | (3.06)      | 15.6              | (3.24)      | 9.4               | (3.70)      | 11.0              | (2.84)     | 5.0               | (2.19)     | 20.1                | (4.20)      | 100.0         |
|                   | Austria                     | 19.2                                               | (2.77)      | 26.5              | (4.49)      | 15.0              | (4.34)      | 10.6              | (3.76)      | 2.2               | (2.11)      | 10.3              | (4.35)     | 4.6               | (3.24)     | 11.7                | (3.53)      | 100.0         |
|                   | Belgium                     | 15.4                                               | (2.57)      | 15.5              | (2.84)      | 20.8              | (4.72)      | 9.9               | (3.04)      | 4.3               | (3.43)      | 3.6               | (2.31)     | 18.8              | (7.11)     | 11.6                | (5.16)      | 100.0         |
|                   | Canada                      | 6.6                                                | (1.02)      | 7.0               | (1.26)      | 10.3              | (2.03)      | 7.7               | (1.94)      | 8.5               | (2.25)      | 15.8              | (3.46)     | 9.4               | (3.25)     | 34.7                | (5.35)      | 100.0         |
|                   | Denmark                     | 38.1                                               | (5.76)      | 29.5              | (7.61)      | 6.4               | (3.86)      | 7.5               | (4.41)      | 6.8               | (6.42)      | 0.8               | (0.83)     | 2.9               | (2.94)     | 8.1                 | (5.11)      | 100.0         |
|                   | France                      | 11.6                                               | (3.17)      | 17.8              | (5.24)      | 14.9              | (4.52)      | 17.2              | (4.93)      | 17.3              | (6.56)      | 0.0               | c          | 3.5               | (2.46)     | 17.7                | (9.92)      | 100.0         |
|                   | Germany                     | 16.3                                               | (2.95)      | 13.2              | (3.13)      | 20.0              | (3.90)      | 17.8              | (4.64)      | 6.8               | (3.05)      | 10.2              | (6.78)     | 6.1               | (3.35)     | 9.5                 | (3.89)      | 100.0         |
|                   | Luxembourg                  | 0.0                                                | c           | 11.0              | (1.02)      | 19.5              | (1.31)      | 10.2              | (0.99)      | 25.7              | (1.62)      | 6.6               | (0.87)     | 13.1              | (0.88)     | 13.9                | (1.02)      | 100.0         |
|                   | Netherlands                 | 31.1                                               | (6.25)      | 25.9              | (5.81)      | 11.6              | (4.81)      | 0.0               | c           | 0.6               | (0.64)      | 12.2              | (6.01)     | 1.7               | (1.67)     | 17.0                | (7.41)      | 100.0         |
|                   | New Zealand                 | 10.3                                               | (1.55)      | 13.2              | (2.20)      | 12.1              | (2.43)      | 21.2              | (3.20)      | 19.5              | (2.84)      | 12.5              | (2.29)     | 0.7               | (0.66)     | 10.7                | (2.91)      | 100.0         |
|                   | Norway                      | 41.0                                               | (6.52)      | 31.7              | (7.13)      | 3.4               | (2.17)      | 11.6              | (4.98)      | 6.5               | (3.76)      | 5.8               | (5.55)     | 0.0               | c          | 0.0                 | c           | 100.0         |
|                   | Sweden                      | 13.7                                               | (2.73)      | 23.1              | (4.00)      | 13.3              | (4.32)      | 15.6              | (6.16)      | 3.1               | (2.19)      | 1.1               | (0.78)     | 6.1               | (3.58)     | 24.0                | (7.96)      | 100.0         |
|                   | Switzerland                 | 6.9                                                | (1.70)      | 21.4              | (3.64)      | 28.1              | (4.20)      | 11.1              | (2.01)      | 5.2               | (1.14)      | 14.8              | (3.64)     | 4.6               | (1.44)     | 7.9                 | (2.94)      | 100.0         |
|                   | United States               | 8.2                                                | (1.93)      | 21.1              | (3.13)      | 10.4              | (3.05)      | 19.6              | (5.14)      | 13.8              | (3.59)      | 9.2               | (4.11)     | 7.2               | (3.61)     | 10.5                | (3.63)      | 100.0         |
|                   | <b>OECD average</b>         |                                                    | <b>11.5</b> | <b>(0.64)</b>     | <b>17.1</b> | <b>(0.99)</b>     | <b>16.1</b> | <b>(0.99)</b>     | <b>13.4</b> | <b>(0.86)</b>     | <b>11.8</b> | <b>(0.93)</b>     | <b>9.0</b> | <b>(0.87)</b>     | <b>6.4</b> | <b>(0.79)</b>       | <b>14.8</b> | <b>(1.25)</b> |
| Partner countries | Hong Kong-China             | 0.0                                                | c           | 1.0               | (0.55)      | 7.1               | (2.03)      | 15.5              | (2.89)      | 29.1              | (5.05)      | 24.1              | (4.31)     | 13.9              | (5.02)     | 9.2                 | (4.21)      | 100.0         |
|                   | Macao-China                 | 0.0                                                | c           | 0.0               | c           | 0.5               | (0.33)      | 0.0               | c           | 0.9               | (0.64)      | 6.9               | (1.67)     | 10.0              | (2.12)     | 81.8                | (2.58)      | 100.0         |
|                   | Russian Federation          | 15.7                                               | (2.88)      | 41.2              | (4.96)      | 26.9              | (4.16)      | 11.0              | (3.95)      | 0.0               | c           | 5.3               | (3.91)     | 0.0               | c          | 0.0                 | c           | 100.0         |
|                   | Belgium (Flemish Community) | 32.7                                               | (7.19)      | 17.6              | (5.04)      | 19.7              | (4.69)      | 12.7              | (4.88)      | 0.0               | c           | 1.5               | (1.39)     | 13.6              | (12.02)    | 2.2                 | (2.21)      | 100.0         |
|                   | Belgium (French Community)  | 8.0                                                | (2.49)      | 14.1              | (3.53)      | 20.6              | (6.67)      | 8.3               | (3.82)      | 6.4               | (5.01)      | 4.7               | (3.35)     | 21.8              | (9.06)     | 16.2                | (7.54)      | 100.0         |

Table 3.7c

Percentage of native students attending schools with different sized immigrant student populations  
(first- and second-generation students combined)

|                   |                             | Proportion of immigrant students within the school |             |                   |             |                   |            |                   |            |                   |            |                   |            |                   |            |                     |            |               |
|-------------------|-----------------------------|----------------------------------------------------|-------------|-------------------|-------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|---------------------|------------|---------------|
|                   |                             | 0% to<br><10%                                      |             | 10%<br>to<br><20% |             | 20%<br>to<br><30% |            | 30%<br>to<br><40% |            | 40%<br>to<br><50% |            | 50%<br>to<br><60% |            | 60%<br>to<br><70% |            | 70%<br>or<br>higher |            | Total         |
|                   |                             | S.E.                                               | S.E.        | S.E.              | S.E.        | S.E.              | S.E.       | S.E.              | S.E.       | S.E.              | S.E.       | S.E.              | S.E.       | S.E.              | S.E.       | S.E.                | S.E.       |               |
| OECD countries    | Australia                   | 42.8                                               | (2.49)      | 24.0              | (2.86)      | 16.1              | (2.28)     | 8.5               | (1.53)     | 3.6               | (1.32)     | 2.6               | (0.68)     | 1.0               | (0.44)     | 1.3                 | (0.37)     | 100.0         |
|                   | Austria                     | 66.3                                               | (3.57)      | 20.1              | (3.30)      | 7.5               | (1.92)     | 3.4               | (1.20)     | 0.5               | (0.48)     | 1.4               | (0.60)     | 0.4               | (0.31)     | 0.5                 | (0.21)     | 100.0         |
|                   | Belgium                     | 70.7                                               | (2.77)      | 15.5              | (2.12)      | 8.5               | (1.67)     | 2.8               | (0.83)     | 0.9               | (0.49)     | 0.6               | (0.38)     | 0.7               | (0.30)     | 0.3                 | (0.15)     | 100.0         |
|                   | Canada                      | 65.5                                               | (1.99)      | 12.5              | (1.59)      | 9.2               | (1.30)     | 4.5               | (1.01)     | 2.8               | (0.60)     | 3.5               | (0.75)     | 1.1               | (0.31)     | 1.1                 | (0.25)     | 100.0         |
|                   | Denmark                     | 84.9                                               | (2.47)      | 11.3              | (2.35)      | 1.7               | (0.90)     | 1.1               | (0.59)     | 0.5               | (0.37)     | 0.1               | (0.14)     | 0.2               | (0.16)     | 0.1                 | (0.14)     | 100.0         |
|                   | France                      | 61.0                                               | (3.79)      | 21.2              | (3.56)      | 7.1               | (1.81)     | 5.0               | (1.25)     | 4.3               | (1.37)     | 0.5               | (0.38)     | 0.5               | (0.34)     | 0.5                 | (0.29)     | 100.0         |
|                   | Germany                     | 63.5                                               | (3.31)      | 14.1              | (2.70)      | 11.5              | (2.04)     | 5.4               | (1.39)     | 2.3               | (0.84)     | 2.0               | (1.10)     | 0.8               | (0.44)     | 0.5                 | (0.30)     | 100.0         |
|                   | Luxembourg                  | 1.7                                                | (0.11)      | 35.0              | (0.38)      | 32.5              | (0.47)     | 8.5               | (0.30)     | 16.6              | (0.50)     | 2.3               | (0.26)     | 2.4               | (0.21)     | 0.9                 | (0.18)     | 100.0         |
|                   | Netherlands                 | 74.0                                               | (3.94)      | 19.0              | (3.52)      | 4.3               | (1.66)     | 0.0               | c          | 0.4               | (0.40)     | 1.7               | (0.90)     | 0.3               | (0.29)     | 0.4                 | (0.19)     | 100.0         |
|                   | New Zealand                 | 54.8                                               | (3.07)      | 18.9              | (2.47)      | 7.6               | (1.69)     | 9.5               | (1.50)     | 5.8               | (1.05)     | 2.3               | (0.58)     | 0.2               | (0.16)     | 1.0                 | (0.35)     | 100.0         |
|                   | Norway                      | 85.8                                               | (2.56)      | 10.4              | (2.31)      | 1.4               | (0.82)     | 1.1               | (0.58)     | 1.0               | (0.59)     | 0.3               | (0.30)     | 0.0               | c          | 0.0                 | c          | 100.0         |
|                   | Sweden                      | 68.0                                               | (3.12)      | 19.0              | (2.89)      | 7.2               | (1.78)     | 3.5               | (1.44)     | 1.4               | (0.66)     | 0.1               | (0.08)     | 0.6               | (0.35)     | 0.2                 | (0.13)     | 100.0         |
|                   | Switzerland                 | 34.7                                               | (4.03)      | 33.1              | (4.08)      | 20.7              | (2.82)     | 5.3               | (1.03)     | 1.8               | (0.40)     | 3.4               | (0.82)     | 0.6               | (0.22)     | 0.5                 | (0.20)     | 100.0         |
|                   | United States               | 67.2                                               | (2.35)      | 15.2              | (2.18)      | 6.2               | (1.55)     | 5.1               | (1.25)     | 3.8               | (0.91)     | 1.1               | (0.45)     | 0.9               | (0.41)     | 0.6                 | (0.21)     | 100.0         |
|                   | <b>OECD average</b>         |                                                    | <b>61.7</b> | <b>(0.87)</b>     | <b>18.9</b> | <b>(0.83)</b>     | <b>9.4</b> | <b>(0.50)</b>     | <b>4.5</b> | <b>(0.29)</b>     | <b>3.0</b> | <b>(0.23)</b>     | <b>1.4</b> | <b>(0.14)</b>     | <b>0.6</b> | <b>(0.09)</b>       | <b>0.5</b> | <b>(0.07)</b> |
| Partner countries | Hong Kong-China             | 0.0                                                | c           | 6.5               | (2.39)      | 17.5              | (3.65)     | 27.7              | (3.85)     | 26.9              | (3.93)     | 14.3              | (2.54)     | 5.3               | (1.78)     | 1.7                 | (0.84)     | 100.0         |
|                   | Macao-China                 | 0.0                                                | c           | 0.0               | c           | 4.5               | (0.48)     | 0.0               | c          | 6.1               | (1.12)     | 23.9              | (2.23)     | 26.6              | (2.41)     | 38.9                | (3.14)     | 100.0         |
|                   | Russian Federation          | 46.6                                               | (4.37)      | 34.9              | (3.96)      | 14.8              | (2.57)     | 3.1               | (1.14)     | 0.0               | c          | 0.6               | (0.43)     | 0.0               | c          | 0.0                 | c          | 100.0         |
|                   | Belgium (Flemish Community) | 84.9                                               | (2.38)      | 7.6               | (1.77)      | 4.5               | (0.98)     | 2.1               | (0.83)     | 0.3               | (0.33)     | 0.2               | (0.14)     | 0.3               | (0.30)     | 0.1                 | (0.09)     | 100.0         |
|                   | Belgium (French Community)  | 50.4                                               | (5.87)      | 26.9              | (4.61)      | 14.1              | (3.92)     | 3.7               | (1.70)     | 1.8               | (1.14)     | 1.3               | (0.93)     | 1.3               | (0.61)     | 0.6                 | (0.36)     | 100.0         |





Table 3.8  
Differences between native and immigrant students in mathematics performance and percentage of immigrant students within countries

|                            | Difference in mathematics score<br>(immigrant students minus native students) |                     | Percentage of immigrant students in the country |              |             |
|----------------------------|-------------------------------------------------------------------------------|---------------------|-------------------------------------------------|--------------|-------------|
|                            | Difference                                                                    | S.E.                | Percentage                                      | S.E.         |             |
| OECD countries             | Australia                                                                     | -3                  | (4.1)                                           | 22.7         | (1.13)      |
|                            | Austria                                                                       | <b>-61</b>          | (5.7)                                           | 13.3         | (0.99)      |
|                            | Belgium                                                                       | <b>-100</b>         | (7.0)                                           | 11.8         | (0.91)      |
|                            | Canada                                                                        | -1                  | (3.9)                                           | 20.1         | (1.14)      |
|                            | Denmark                                                                       | <b>-68</b>          | (8.0)                                           | 6.5          | (0.78)      |
|                            | France                                                                        | <b>-54</b>          | (7.0)                                           | 14.3         | (1.33)      |
|                            | Germany                                                                       | <b>-81</b>          | (6.9)                                           | 15.4         | (1.10)      |
|                            | Luxembourg                                                                    | <b>-38</b>          | (2.8)                                           | 33.3         | (0.61)      |
|                            | Netherlands                                                                   | <b>-66</b>          | (9.0)                                           | 11.0         | (1.39)      |
|                            | New Zealand                                                                   | <b>-14</b>          | (6.0)                                           | 19.8         | (1.14)      |
|                            | Norway                                                                        | <b>-52</b>          | (7.6)                                           | 5.6          | (0.73)      |
|                            | Sweden                                                                        | <b>-64</b>          | (8.3)                                           | 11.5         | (0.87)      |
|                            | Switzerland                                                                   | <b>-76</b>          | (4.5)                                           | 20.0         | (0.91)      |
|                            | United States                                                                 | <b>-28</b>          | (6.3)                                           | 14.4         | (0.95)      |
|                            |                                                                               | <b>OECD average</b> | <b>-44</b>                                      | <b>(1.7)</b> | <b>15.7</b> |
| Partner countries          | Hong Kong-China                                                               | <b>-12</b>          | (3.6)                                           | 43.3         | (1.41)      |
|                            | Macao-China                                                                   | 1                   | (7.3)                                           | 76.1         | (1.41)      |
|                            | Russian Federation                                                            | <b>-17</b>          | (4.8)                                           | 13.5         | (0.71)      |
|                            | Belgium (Flemish Community)                                                   | <b>-110</b>         | (8.8)                                           | 6.8          | (0.72)      |
| Belgium (French Community) | <b>-74</b>                                                                    | (9.4)               | 18.3                                            | (1.87)       |             |

Note: Statistically significant differences are indicated in bold.

Table 3.9  
**Characteristics of schools attended by native and immigrant students**  
 (scores standardised within each country sample)

|                            |                             | Characteristics of schools attended by native students and immigrant students |              |                     |             |                                                 |              |                                               |             |                     |             |                                    |              |                    |             |                     |              |                     |             |                    |   |
|----------------------------|-----------------------------|-------------------------------------------------------------------------------|--------------|---------------------|-------------|-------------------------------------------------|--------------|-----------------------------------------------|-------------|---------------------|-------------|------------------------------------|--------------|--------------------|-------------|---------------------|--------------|---------------------|-------------|--------------------|---|
|                            |                             | Economic, social and cultural status of students within the school (ESCS)     |              |                     |             | Human resources                                 |              |                                               |             |                     |             | Physical and educational resources |              |                    |             |                     |              |                     |             |                    |   |
|                            |                             | Student/teacher ratio                                                         |              | Teacher shortage    |             | Quality of the school's physical infrastructure |              | Quality of the school's educational resources |             |                     |             |                                    |              |                    |             |                     |              |                     |             |                    |   |
|                            |                             | Native students                                                               |              | Immigrant students  |             | Native students                                 |              | Immigrant students                            |             | Native students     |             | Immigrant students                 |              | Native students    |             | Immigrant students  |              |                     |             |                    |   |
|                            |                             | Mean index                                                                    | S.E.         | Mean index          | S.E.        | Mean index                                      | S.E.         | Mean index                                    | S.E.        | Mean index          | S.E.        | Mean index                         | S.E.         | Mean index         | S.E.        | Mean index          | S.E.         |                     |             |                    |   |
| OECD countries             | Australia                   | 0.02 (0.04)                                                                   |              | -0.06 (0.08)        |             | 0.02 (0.08)                                     |              | -0.07 (0.09)                                  |             | 0.01 (0.05)         |             | -0.02 (0.08)                       |              | -0.02 (0.06)       |             | 0.07 (0.11)         |              | -0.02 (0.06)        |             | 0.08 (0.11)        |   |
|                            | Austria                     | 0.05 (0.06)                                                                   |              | <b>-0.35</b> (0.09) |             | 0.01 (0.06)                                     |              | -0.08 (0.06)                                  |             | -0.02 (0.08)        |             | 0.11 (0.11)                        |              | 0.02 (0.09)        |             | -0.15 (0.10)        |              | 0.03 (0.09)         |             | -0.17 (0.11)       |   |
|                            | Belgium                     | 0.09 (0.04)                                                                   |              | <b>-0.66</b> (0.12) |             | 0.04 (0.05)                                     |              | <b>-0.29</b> (0.09)                           |             | -0.04 (0.06)        |             | <b>0.30</b> (0.11)                 |              | 0.01 (0.07)        |             | -0.05 (0.09)        |              | 0.01 (0.06)         |             | -0.08 (0.10)       |   |
|                            | Canada                      | -0.05 (0.04)                                                                  |              | <b>0.22</b> (0.09)  |             | -0.02 (0.04)                                    |              | 0.09 (0.09)                                   |             | 0.04 (0.05)         |             | -0.17 (0.08)                       |              | 0.03 (0.04)        |             | -0.12 (0.08)        |              | 0.01 (0.05)         |             | -0.02 (0.10)       |   |
|                            | Denmark                     | 0.05 (0.06)                                                                   |              | <b>-0.70</b> (0.29) |             | 0.00 (0.06)                                     |              | 0.04 (0.11)                                   |             | 0.01 (0.08)         |             | -0.17 (0.14)                       |              | 0.01 (0.08)        |             | -0.21 (0.23)        |              | 0.01 (0.08)         |             | -0.16 (0.24)       |   |
|                            | France                      | 0.08 (0.06)                                                                   |              | <b>-0.49</b> (0.12) |             | w                                               | w            | w                                             | w           | w                   | w           | w                                  | w            | w                  | w           | w                   | w            | w                   | w           | w                  | w |
|                            | Germany                     | 0.12 (0.04)                                                                   |              | <b>-0.67</b> (0.08) |             | 0.00 (0.07)                                     |              | -0.02 (0.12)                                  |             | -0.01 (0.08)        |             | 0.07 (0.13)                        |              | 0.00 (0.08)        |             | -0.02 (0.14)        |              | 0.00 (0.07)         |             | 0.02 (0.14)        |   |
|                            | Luxembourg                  | 0.06 (0.01)                                                                   |              | <b>-0.12</b> (0.02) |             | -0.19 (0.01)                                    |              | <b>0.35</b> (0.02)                            |             | 0.08 (0.01)         |             | <b>-0.17</b> (0.02)                |              | 0.04 (0.01)        |             | <b>-0.09</b> (0.02) |              | -0.05 (0.01)        |             | <b>0.10</b> (0.02) |   |
|                            | Netherlands                 | 0.08 (0.06)                                                                   |              | <b>-0.61</b> (0.17) |             | 0.03 (0.08)                                     |              | -0.27 (0.18)                                  |             | -0.05 (0.08)        |             | 0.38 (0.17)                        |              | 0.01 (0.08)        |             | -0.09 (0.18)        |              | -0.01 (0.07)        |             | 0.09 (0.18)        |   |
|                            | New Zealand                 | -0.02 (0.05)                                                                  |              | 0.08 (0.07)         |             | -0.09 (0.07)                                    |              | <b>0.37</b> (0.10)                            |             | -0.02 (0.05)        |             | 0.08 (0.09)                        |              | -0.01 (0.06)       |             | 0.05 (0.09)         |              | -0.05 (0.06)        |             | 0.22 (0.09)        |   |
|                            | Norway                      | 0.01 (0.06)                                                                   |              | -0.11 (0.18)        |             | 0.01 (0.08)                                     |              | -0.13 (0.15)                                  |             | 0.00 (0.08)         |             | 0.03 (0.11)                        |              | -0.01 (0.07)       |             | 0.12 (0.15)         |              | 0.01 (0.08)         |             | -0.16 (0.16)       |   |
|                            | Sweden                      | 0.05 (0.07)                                                                   |              | -0.38 (0.19)        |             | 0.03 (0.08)                                     |              | -0.23 (0.09)                                  |             | -0.01 (0.07)        |             | 0.06 (0.13)                        |              | 0.02 (0.07)        |             | -0.16 (0.14)        |              | 0.02 (0.08)         |             | -0.18 (0.10)       |   |
|                            | Switzerland                 | 0.08 (0.06)                                                                   |              | <b>-0.31</b> (0.06) |             | 0.03 (0.09)                                     |              | -0.11 (0.11)                                  |             | -0.04 (0.08)        |             | 0.17 (0.10)                        |              | 0.01 (0.07)        |             | -0.02 (0.08)        |              | 0.01 (0.08)         |             | -0.04 (0.09)       |   |
|                            | United States               | 0.08 (0.05)                                                                   |              | <b>-0.46</b> (0.15) |             | -0.05 (0.06)                                    |              | <b>0.35</b> (0.14)                            |             | -0.02 (0.07)        |             | 0.14 (0.11)                        |              | 0.03 (0.07)        |             | -0.18 (0.11)        |              | 0.01 (0.08)         |             | -0.06 (0.12)       |   |
| <b>OECD average</b>        |                             | <b>0.06</b> (0.01)                                                            |              | <b>-0.30</b> (0.03) |             | <b>-0.01</b> (0.02)                             |              | <b>0.06</b> (0.02)                            |             | <b>-0.02</b> (0.02) |             | <b>0.10</b> (0.02)                 |              | <b>0.00</b> (0.02) |             | <b>-0.03</b> (0.03) |              | <b>-0.01</b> (0.02) |             | <b>0.04</b> (0.03) |   |
| Partner countries          | Hong Kong-China             | 0.14 (0.09)                                                                   |              | <b>-0.18</b> (0.06) |             | -0.02 (0.07)                                    |              | 0.02 (0.08)                                   |             | 0.01 (0.09)         |             | -0.02 (0.08)                       |              | -0.03 (0.09)       |             | 0.03 (0.09)         |              | -0.01 (0.10)        |             | 0.01 (0.07)        |   |
|                            | Macao-China                 | 0.44 (0.06)                                                                   |              | <b>-0.14</b> (0.02) |             | 0.17 (0.05)                                     |              | <b>-0.06</b> (0.02)                           |             | -0.02 (0.05)        |             | 0.01 (0.02)                        |              | -0.11 (0.05)       |             | <b>0.04</b> (0.02)  |              | -0.18 (0.05)        |             | <b>0.06</b> (0.02) |   |
|                            | Russian Federation          | 0.01 (0.07)                                                                   |              | -0.06 (0.09)        |             | -0.01 (0.11)                                    |              | 0.07 (0.12)                                   |             | -0.02 (0.09)        |             | 0.10 (0.11)                        |              | -0.01 (0.10)       |             | 0.03 (0.10)         |              | -0.02 (0.08)        |             | 0.10 (0.09)        |   |
|                            | Belgium (Flemish Community) | 0.05 (0.06)                                                                   |              | <b>-0.54</b> (0.11) |             | 0.03 (0.07)                                     |              | <b>-0.43</b> (0.07)                           |             | -0.02 (0.08)        |             | 0.25 (0.14)                        |              | 0.01 (0.09)        |             | -0.08 (0.14)        |              | 0.01 (0.09)         |             | -0.20 (0.15)       |   |
| Belgium (French Community) | 0.08 (0.11)                 |                                                                               | -0.40 (0.16) |                     | 0.06 (0.08) |                                                 | -0.27 (0.13) |                                               | 0.00 (0.10) |                     | 0.00 (0.16) |                                    | -0.03 (0.11) |                    | 0.12 (0.12) |                     | -0.06 (0.11) |                     | 0.28 (0.15) |                    |   |

|                            |                             | Characteristics of schools attended by native students and immigrant students |             |                      |             |                    |              |                                           |             |                         |              |                               |             |                    |              |                     |             |                    |              |                     |
|----------------------------|-----------------------------|-------------------------------------------------------------------------------|-------------|----------------------|-------------|--------------------|--------------|-------------------------------------------|-------------|-------------------------|--------------|-------------------------------|-------------|--------------------|--------------|---------------------|-------------|--------------------|--------------|---------------------|
|                            |                             | Students' perceptions of classroom climate                                    |             |                      |             |                    |              | Principals' perceptions of school climate |             |                         |              |                               |             |                    |              |                     |             |                    |              |                     |
|                            |                             | Teacher support                                                               |             | Disciplinary climate |             |                    |              | Student-related factors                   |             | Teacher-related factors |              | Teacher morale and commitment |             |                    |              |                     |             |                    |              |                     |
|                            |                             | Native students                                                               |             | Immigrant students   |             | Native students    |              | Immigrant students                        |             | Native students         |              | Immigrant students            |             | Native students    |              | Immigrant students  |             |                    |              |                     |
|                            |                             | Mean index                                                                    | S.E.        | Mean index           | S.E.        | Mean index         | S.E.         | Mean index                                | S.E.        | Mean index              | S.E.         | Mean index                    | S.E.        | Mean index         | S.E.         | Mean index          | S.E.        |                    |              |                     |
| OECD countries             | Australia                   | -0.01 (0.08)                                                                  |             | 0.03 (0.07)          |             | 0.00 (0.06)        |              | 0.01 (0.09)                               |             | -0.02 (0.05)            |              | 0.05 (0.07)                   |             | 0.01 (0.05)        |              | -0.04 (0.10)        |             | 0.03 (0.07)        |              | -0.09 (0.09)        |
|                            | Austria                     | -0.02 (0.07)                                                                  |             | 0.13 (0.10)          |             | 0.07 (0.06)        |              | <b>-0.44</b> (0.08)                       |             | 0.05 (0.08)             |              | <b>-0.31</b> (0.11)           |             | 0.03 (0.09)        |              | -0.19 (0.09)        |             | 0.04 (0.08)        |              | -0.23 (0.13)        |
|                            | Belgium                     | -0.02 (0.07)                                                                  |             | 0.15 (0.09)          |             | 0.05 (0.06)        |              | <b>-0.38</b> (0.10)                       |             | 0.06 (0.06)             |              | <b>-0.46</b> (0.09)           |             | 0.04 (0.06)        |              | <b>-0.28</b> (0.10) |             | 0.05 (0.06)        |              | <b>-0.39</b> (0.08) |
|                            | Canada                      | 0.00 (0.04)                                                                   |             | 0.01 (0.08)          |             | -0.01 (0.04)       |              | 0.05 (0.07)                               |             | 0.00 (0.05)             |              | 0.01 (0.09)                   |             | 0.04 (0.05)        |              | -0.14 (0.10)        |             | 0.02 (0.04)        |              | -0.07 (0.08)        |
|                            | Denmark                     | 0.02 (0.06)                                                                   |             | -0.33 (0.17)         |             | 0.01 (0.07)        |              | -0.09 (0.14)                              |             | 0.02 (0.07)             |              | -0.36 (0.18)                  |             | 0.03 (0.07)        |              | -0.39 (0.15)        |             | 0.02 (0.08)        |              | -0.28 (0.13)        |
|                            | France                      | 0.00 (0.06)                                                                   |             | 0.00 (0.10)          |             | 0.03 (0.07)        |              | -0.15 (0.10)                              |             | w                       | w            | w                             | w           | w                  | w            | w                   | w           | w                  | w            | w                   |
|                            | Germany                     | -0.04 (0.07)                                                                  |             | 0.22 (0.11)          |             | 0.07 (0.07)        |              | <b>-0.37</b> (0.11)                       |             | 0.05 (0.07)             |              | -0.27 (0.12)                  |             | -0.02 (0.08)       |              | 0.11 (0.15)         |             | 0.00 (0.07)        |              | 0.01 (0.12)         |
|                            | Luxembourg                  | -0.14 (0.01)                                                                  |             | <b>0.29</b> (0.02)   |             | 0.06 (0.01)        |              | <b>-0.11</b> (0.02)                       |             | 0.03 (0.01)             |              | <b>-0.05</b> (0.02)           |             | 0.02 (0.01)        |              | <b>-0.04</b> (0.02) |             | -0.06 (0.01)       |              | <b>0.12</b> (0.02)  |
|                            | Netherlands                 | -0.01 (0.09)                                                                  |             | 0.04 (0.17)          |             | 0.03 (0.09)        |              | -0.26 (0.13)                              |             | 0.06 (0.09)             |              | <b>-0.44</b> (0.12)           |             | 0.03 (0.09)        |              | -0.22 (0.15)        |             | 0.01 (0.08)        |              | -0.09 (0.15)        |
|                            | New Zealand                 | -0.01 (0.08)                                                                  |             | 0.05 (0.08)          |             | -0.02 (0.06)       |              | 0.09 (0.07)                               |             | -0.03 (0.06)            |              | 0.11 (0.06)                   |             | -0.02 (0.07)       |              | 0.08 (0.10)         |             | -0.03 (0.08)       |              | 0.13 (0.08)         |
|                            | Norway                      | 0.02 (0.07)                                                                   |             | -0.28 (0.14)         |             | -0.01 (0.07)       |              | 0.14 (0.15)                               |             | 0.00 (0.08)             |              | -0.05 (0.12)                  |             | -0.01 (0.09)       |              | 0.21 (0.13)         |             | 0.00 (0.08)        |              | 0.05 (0.13)         |
|                            | Sweden                      | 0.02 (0.07)                                                                   |             | -0.18 (0.14)         |             | 0.03 (0.08)        |              | -0.22 (0.13)                              |             | 0.05 (0.07)             |              | <b>-0.38</b> (0.11)           |             | 0.03 (0.08)        |              | -0.26 (0.13)        |             | 0.00 (0.08)        |              | -0.02 (0.14)        |
|                            | Switzerland                 | -0.04 (0.06)                                                                  |             | 0.15 (0.07)          |             | 0.05 (0.08)        |              | -0.21 (0.07)                              |             | 0.05 (0.11)             |              | -0.22 (0.08)                  |             | 0.02 (0.07)        |              | -0.09 (0.08)        |             | 0.04 (0.08)        |              | -0.14 (0.08)        |
|                            | United States               | 0.01 (0.07)                                                                   |             | -0.04 (0.09)         |             | 0.02 (0.06)        |              | -0.12 (0.09)                              |             | 0.03 (0.08)             |              | -0.19 (0.10)                  |             | 0.01 (0.07)        |              | -0.09 (0.10)        |             | -0.01 (0.07)       |              | 0.08 (0.11)         |
| <b>OECD average</b>        |                             | <b>-0.01</b> (0.01)                                                           |             | <b>0.06</b> (0.02)   |             | <b>0.03</b> (0.02) |              | <b>-0.15</b> (0.02)                       |             | <b>0.03</b> (0.02)      |              | <b>-0.19</b> (0.03)           |             | <b>0.02</b> (0.02) |              | <b>-0.12</b> (0.03) |             | <b>0.02</b> (0.02) |              | <b>-0.09</b> (0.03) |
| Partner countries          | Hong Kong-China             | 0.03 (0.08)                                                                   |             | -0.03 (0.08)         |             | 0.02 (0.09)        |              | -0.02 (0.09)                              |             | -0.01 (0.09)            |              | 0.01 (0.07)                   |             | -0.02 (0.08)       |              | 0.02 (0.07)         |             | 0.03 (0.08)        |              | -0.04 (0.08)        |
|                            | Macao-China                 | -0.20 (0.05)                                                                  |             | <b>0.06</b> (0.02)   |             | -0.16 (0.05)       |              | <b>0.05</b> (0.02)                        |             | 0.11 (0.05)             |              | <b>-0.03</b> (0.02)           |             | 0.25 (0.06)        |              | <b>-0.08</b> (0.02) |             | 0.06 (0.05)        |              | -0.02 (0.02)        |
|                            | Russian Federation          | 0.01 (0.08)                                                                   |             | -0.09 (0.08)         |             | 0.02 (0.08)        |              | -0.14 (0.11)                              |             | -0.01 (0.08)            |              | 0.06 (0.11)                   |             | -0.01 (0.08)       |              | 0.05 (0.08)         |             | 0.01 (0.07)        |              | -0.09 (0.11)        |
|                            | Belgium (Flemish Community) | -0.01 (0.08)                                                                  |             | 0.04 (0.16)          |             | 0.03 (0.07)        |              | -0.27 (0.12)                              |             | 0.04 (0.07)             |              | <b>-0.50</b> (0.16)           |             | 0.01 (0.08)        |              | -0.10 (0.13)        |             | 0.02 (0.07)        |              | -0.21 (0.15)        |
| Belgium (French Community) | -0.06 (0.12)                |                                                                               | 0.30 (0.13) |                      | 0.07 (0.12) |                    | -0.21 (0.13) |                                           | 0.04 (0.11) |                         | -0.19 (0.13) |                               | 0.02 (0.12) |                    | -0.10 (0.16) |                     | 0.06 (0.11) |                    | -0.29 (0.10) |                     |

Note: Statistically significant differences from native students' scores are indicated in bold.



Table 4.1  
Index of interest in and enjoyment of mathematics and student performance on the mathematics scale

Results based on students' self-reports

|                   |                             | Index of interest in and enjoyment of mathematics |               |                            |               |                           |               |
|-------------------|-----------------------------|---------------------------------------------------|---------------|----------------------------|---------------|---------------------------|---------------|
|                   |                             | Native students                                   |               | Second-generation students |               | First-generation students |               |
|                   |                             | Mean index                                        | S.E.          | Mean index                 | S.E.          | Mean index                | S.E.          |
| OECD countries    | Australia                   | -0.06                                             | (0.02)        | <b>0.22</b>                | (0.04)        | <b>0.30</b>               | (0.04)        |
|                   | Austria                     | -0.32                                             | (0.02)        | -0.15                      | (0.08)        | <b>-0.09</b>              | (0.06)        |
|                   | Belgium                     | -0.20                                             | (0.02)        | <b>-0.01</b>               | (0.05)        | <b>0.16</b>               | (0.07)        |
|                   | Canada                      | -0.09                                             | (0.01)        | <b>0.13</b>                | (0.04)        | <b>0.49</b>               | (0.05)        |
|                   | Denmark                     | 0.40                                              | (0.02)        | 0.58                       | (0.09)        | <b>0.66</b>               | (0.10)        |
|                   | France                      | 0.04                                              | (0.02)        | 0.07                       | (0.05)        | <b>0.32</b>               | (0.10)        |
|                   | Germany                     | 0.00                                              | (0.02)        | <b>0.24</b>                | (0.07)        | <b>0.27</b>               | (0.07)        |
|                   | Luxembourg                  | -0.34                                             | (0.02)        | <b>-0.21</b>               | (0.04)        | <b>0.04</b>               | (0.04)        |
|                   | Netherlands                 | -0.25                                             | (0.02)        | <b>0.19</b>                | (0.06)        | <b>0.23</b>               | (0.11)        |
|                   | New Zealand                 | 0.03                                              | (0.02)        | <b>0.35</b>                | (0.07)        | <b>0.54</b>               | (0.04)        |
| Partner countries | Norway                      | -0.19                                             | (0.02)        | <b>0.17</b>                | (0.11)        | <b>0.14</b>               | (0.08)        |
|                   | Sweden                      | 0.05                                              | (0.02)        | 0.20                       | (0.08)        | <b>0.45</b>               | (0.06)        |
|                   | Switzerland                 | 0.08                                              | (0.02)        | 0.16                       | (0.05)        | <b>0.38</b>               | (0.04)        |
|                   | United States               | 0.00                                              | (0.02)        | <b>0.23</b>                | (0.06)        | <b>0.40</b>               | (0.07)        |
|                   | <b>OECD average</b>         | <b>-0.05</b>                                      | <b>(0.01)</b> | <b>0.12</b>                | <b>(0.02)</b> | <b>0.29</b>               | <b>(0.02)</b> |
|                   | Hong Kong-China             | 0.19                                              | (0.03)        | <b>0.27</b>                | (0.03)        | <b>0.26</b>               | (0.02)        |
|                   | Macao-China                 | 0.05                                              | (0.05)        | 0.11                       | (0.05)        | <b>0.27</b>               | (0.06)        |
|                   | <b>Russian Federation</b>   | <b>0.25</b>                                       | <b>(0.02)</b> | <b>0.21</b>                | <b>(0.05)</b> | <b>0.23</b>               | <b>(0.06)</b> |
|                   | Belgium (Flemish Community) | -0.24                                             | (0.02)        | <b>-0.04</b>               | (0.07)        | <b>0.04</b>               | (0.11)        |
|                   | Belgium (French Community)  | -0.12                                             | (0.03)        | 0.00                       | (0.07)        | <b>0.24</b>               | (0.08)        |

|                   |                             | Change in the mathematics score per unit of the index of interest in and enjoyment of mathematics |              |                            |              |                           |              |
|-------------------|-----------------------------|---------------------------------------------------------------------------------------------------|--------------|----------------------------|--------------|---------------------------|--------------|
|                   |                             | Native students                                                                                   |              | Second-generation students |              | First-generation students |              |
|                   |                             | Effect                                                                                            | S.E.         | Effect                     | S.E.         | Effect                    | S.E.         |
| OECD countries    | Australia                   | <b>20.5</b>                                                                                       | (1.5)        | <b>15.5</b>                | (3.8)        | <b>12.9</b>               | (2.9)        |
|                   | Austria                     | <b>13.0</b>                                                                                       | (2.0)        | 5.0                        | (5.9)        | -3.4                      | (5.0)        |
|                   | Belgium                     | <b>20.8</b>                                                                                       | (1.5)        | 2.4                        | (6.4)        | -11.0                     | (6.5)        |
|                   | Canada                      | <b>21.9</b>                                                                                       | (1.0)        | <b>24.2</b>                | (2.9)        | <b>16.0</b>               | (3.2)        |
|                   | Denmark                     | <b>30.8</b>                                                                                       | (1.7)        | 2.0                        | (8.5)        | 8.6                       | (7.9)        |
|                   | France                      | <b>21.7</b>                                                                                       | (2.0)        | <b>17.4</b>                | (4.5)        | <b>26.4</b>               | (12.4)       |
|                   | Germany                     | <b>13.7</b>                                                                                       | (1.8)        | <b>21.4</b>                | (5.4)        | 5.8                       | (4.6)        |
|                   | Luxembourg                  | <b>12.4</b>                                                                                       | (1.7)        | 6.8                        | (4.0)        | -2.3                      | (4.2)        |
|                   | Netherlands                 | <b>21.3</b>                                                                                       | (1.7)        | 2.7                        | (7.0)        | 6.5                       | (6.7)        |
|                   | New Zealand                 | <b>15.1</b>                                                                                       | (2.1)        | 2.6                        | (5.8)        | 8.3                       | (4.8)        |
| Partner countries | Norway                      | <b>36.5</b>                                                                                       | (1.4)        | <b>36.7</b>                | (9.5)        | <b>16.3</b>               | (7.2)        |
|                   | Sweden                      | <b>30.7</b>                                                                                       | (1.8)        | <b>29.8</b>                | (7.9)        | <b>10.9</b>               | (5.9)        |
|                   | Switzerland                 | <b>17.2</b>                                                                                       | (1.7)        | -1.9                       | (5.0)        | -6.6                      | (5.3)        |
|                   | United States               | <b>9.9</b>                                                                                        | (1.7)        | <b>12.7</b>                | (4.8)        | 0.9                       | (6.3)        |
|                   | <b>OECD average</b>         | <b>19.8</b>                                                                                       | <b>(0.5)</b> | <b>12.1</b>                | <b>(1.3)</b> | <b>7.4</b>                | <b>(1.3)</b> |
|                   | Hong Kong-China             | <b>32.4</b>                                                                                       | (2.3)        | <b>33.2</b>                | (3.5)        | <b>30.2</b>               | (4.3)        |
|                   | Macao-China                 | <b>12.1</b>                                                                                       | (6.7)        | <b>24.7</b>                | (5.0)        | <b>17.0</b>               | (9.2)        |
|                   | <b>Russian Federation</b>   | <b>15.1</b>                                                                                       | <b>(2.2)</b> | <b>-2.5</b>                | <b>(5.5)</b> | <b>9.2</b>                | <b>(6.6)</b> |
|                   | Belgium (Flemish Community) | <b>30.0</b>                                                                                       | (1.8)        | 0.8                        | (9.0)        | -10.4                     | (8.5)        |
|                   | Belgium (French Community)  | <b>11.7</b>                                                                                       | (2.7)        | 2.9                        | (7.7)        | -9.9                      | (9.2)        |

|                   |                             | Regression estimates of the index of interest in and enjoyment of mathematics |               |                           |               |                                        |               |                           |               |
|-------------------|-----------------------------|-------------------------------------------------------------------------------|---------------|---------------------------|---------------|----------------------------------------|---------------|---------------------------|---------------|
|                   |                             | Accounting for ESCS                                                           |               |                           |               | Accounting for mathematics performance |               |                           |               |
|                   |                             | Second-generation students                                                    |               | First-generation students |               | Second-generation students             |               | First-generation students |               |
|                   |                             | Coef.                                                                         | S.E.          | Coef.                     | S.E.          | Coef.                                  | S.E.          | Coef.                     | S.E.          |
| OECD countries    | Australia                   | <b>0.29</b>                                                                   | (0.04)        | <b>0.36</b>               | (0.04)        | <b>0.29</b>                            | (0.04)        | <b>0.36</b>               | (0.04)        |
|                   | Austria                     | <b>0.17</b>                                                                   | (0.08)        | <b>0.21</b>               | (0.07)        | <b>0.26</b>                            | (0.08)        | <b>0.32</b>               | (0.07)        |
|                   | Belgium                     | <b>0.26</b>                                                                   | (0.06)        | <b>0.39</b>               | (0.07)        | <b>0.35</b>                            | (0.06)        | <b>0.52</b>               | (0.08)        |
|                   | Canada                      | <b>0.23</b>                                                                   | (0.04)        | <b>0.57</b>               | (0.05)        | <b>0.20</b>                            | (0.04)        | <b>0.60</b>               | (0.05)        |
|                   | Denmark                     | <b>0.30</b>                                                                   | (0.09)        | <b>0.33</b>               | (0.10)        | <b>0.43</b>                            | (0.10)        | <b>0.49</b>               | (0.10)        |
|                   | France                      | 0.09                                                                          | (0.06)        | <b>0.34</b>               | (0.11)        | <b>0.15</b>                            | (0.06)        | <b>0.46</b>               | (0.10)        |
|                   | Germany                     | <b>0.27</b>                                                                   | (0.08)        | <b>0.32</b>               | (0.08)        | <b>0.45</b>                            | (0.08)        | <b>0.41</b>               | (0.09)        |
|                   | Luxembourg                  | <b>0.16</b>                                                                   | (0.05)        | <b>0.40</b>               | (0.05)        | <b>0.19</b>                            | (0.05)        | <b>0.45</b>               | (0.05)        |
|                   | Netherlands                 | <b>0.47</b>                                                                   | (0.06)        | <b>0.52</b>               | (0.12)        | <b>0.55</b>                            | (0.06)        | <b>0.65</b>               | (0.11)        |
|                   | New Zealand                 | <b>0.33</b>                                                                   | (0.07)        | <b>0.51</b>               | (0.05)        | <b>0.37</b>                            | (0.07)        | <b>0.52</b>               | (0.05)        |
| Partner countries | Norway                      | <b>0.46</b>                                                                   | (0.11)        | <b>0.46</b>               | (0.08)        | <b>0.55</b>                            | (0.12)        | <b>0.63</b>               | (0.09)        |
|                   | Sweden                      | <b>0.22</b>                                                                   | (0.09)        | <b>0.50</b>               | (0.07)        | <b>0.27</b>                            | (0.08)        | <b>0.72</b>               | (0.07)        |
|                   | Switzerland                 | 0.09                                                                          | (0.06)        | <b>0.31</b>               | (0.06)        | <b>0.20</b>                            | (0.06)        | <b>0.47</b>               | (0.06)        |
|                   | United States               | <b>0.24</b>                                                                   | (0.07)        | <b>0.41</b>               | (0.08)        | <b>0.26</b>                            | (0.06)        | <b>0.44</b>               | (0.08)        |
|                   | <b>OECD average</b>         | <b>0.21</b>                                                                   | <b>(0.02)</b> | <b>0.37</b>               | <b>(0.02)</b> | <b>0.27</b>                            | <b>(0.02)</b> | <b>0.45</b>               | <b>(0.02)</b> |
|                   | Hong Kong-China             | <b>0.10</b>                                                                   | (0.03)        | <b>0.10</b>               | (0.04)        | 0.03                                   | (0.03)        | <b>0.19</b>               | (0.04)        |
|                   | Macao-China                 | <b>0.07</b>                                                                   | (0.08)        | <b>0.23</b>               | (0.07)        | 0.06                                   | (0.07)        | <b>0.24</b>               | (0.07)        |
|                   | <b>Russian Federation</b>   | <b>-0.04</b>                                                                  | <b>(0.05)</b> | <b>-0.02</b>              | <b>(0.06)</b> | <b>-0.03</b>                           | <b>(0.05)</b> | <b>0.01</b>               | <b>(0.06)</b> |
|                   | Belgium (Flemish Community) | <b>0.35</b>                                                                   | (0.08)        | <b>0.36</b>               | (0.11)        | <b>0.55</b>                            | (0.08)        | <b>0.55</b>               | (0.12)        |
|                   | Belgium (French Community)  | 0.14                                                                          | (0.08)        | <b>0.34</b>               | (0.09)        | <b>0.18</b>                            | (0.09)        | <b>0.42</b>               | (0.09)        |

Note: Values that are statistically significant are indicated in bold.

Table 4.2

## Index of instrumental motivation in mathematics and student performance on the mathematics scale

Results based on students' self-reports

|                             |                   | Index of instrumental motivation in mathematics |               |                            |               |                           |               |               |
|-----------------------------|-------------------|-------------------------------------------------|---------------|----------------------------|---------------|---------------------------|---------------|---------------|
|                             |                   | Native students                                 |               | Second-generation students |               | First-generation students |               |               |
|                             |                   | Mean index                                      | S.E.          | Mean index                 | S.E.          | Mean index                | S.E.          |               |
| OECD countries              | Australia         | 0.19                                            | (0.02)        | <b>0.35</b>                | (0.04)        | <b>0.37</b>               | (0.03)        |               |
|                             | Austria           | -0.53                                           | (0.03)        | -0.32                      | (0.10)        | <b>-0.29</b>              | (0.07)        |               |
|                             | Belgium           | -0.35                                           | (0.02)        | <b>-0.19</b>               | (0.07)        | <b>0.03</b>               | (0.06)        |               |
|                             | Canada            | 0.17                                            | (0.01)        | <b>0.36</b>                | (0.05)        | <b>0.52</b>               | (0.04)        |               |
|                             | Denmark           | 0.37                                            | (0.02)        | 0.39                       | (0.09)        | 0.37                      | (0.10)        |               |
|                             | France            | -0.11                                           | (0.02)        | <b>0.02</b>                | (0.05)        | <b>0.30</b>               | (0.10)        |               |
|                             | Germany           | -0.08                                           | (0.02)        | <b>0.09</b>                | (0.06)        | <b>0.17</b>               | (0.06)        |               |
|                             | Luxembourg        | -0.52                                           | (0.02)        | <b>-0.30</b>               | (0.05)        | <b>-0.04</b>              | (0.05)        |               |
|                             | Netherlands       | -0.30                                           | (0.02)        | <b>0.08</b>                | (0.07)        | <b>-0.03</b>              | (0.09)        |               |
|                             | New Zealand       | 0.25                                            | (0.02)        | <b>0.45</b>                | (0.06)        | <b>0.47</b>               | (0.04)        |               |
|                             | Norway            | 0.15                                            | (0.02)        | 0.33                       | (0.12)        | 0.24                      | (0.09)        |               |
|                             | Sweden            | -0.01                                           | (0.02)        | <b>0.21</b>                | (0.07)        | <b>0.28</b>               | (0.04)        |               |
|                             | Switzerland       | -0.09                                           | (0.02)        | <b>0.05</b>                | (0.04)        | <b>0.21</b>               | (0.05)        |               |
|                             | United States     | 0.16                                            | (0.02)        | 0.26                       | (0.05)        | <b>0.33</b>               | (0.06)        |               |
|                             |                   | <b>OECD average</b>                             | <b>-0.04</b>  | <b>(0.01)</b>              | <b>0.10</b>   | <b>(0.02)</b>             | <b>0.20</b>   | <b>(0.02)</b> |
|                             | Partner countries | Hong Kong-China                                 | -0.16         | (0.02)                     | -0.12         | (0.03)                    | <b>0.02</b>   | (0.03)        |
|                             |                   | Macao-China                                     | -0.11         | (0.05)                     | -0.02         | (0.04)                    | <b>0.02</b>   | (0.06)        |
| <b>Russian Federation</b>   |                   | <b>0.00</b>                                     | <b>(0.02)</b> | <b>-0.01</b>               | <b>(0.05)</b> | <b>0.01</b>               | <b>(0.06)</b> |               |
| Belgium (Flemish Community) |                   | -0.45                                           | (0.02)        | -0.31                      | (0.08)        | <b>-0.23</b>              | (0.07)        |               |
| Belgium (French Community)  |                   | -0.20                                           | (0.02)        | -0.13                      | (0.09)        | <b>0.18</b>               | (0.08)        |               |

|                             |                   | Change in the mathematics score per unit of the index of instrumental motivation in mathematics |             |              |                            |             |              |                                                             |             |              |            |
|-----------------------------|-------------------|-------------------------------------------------------------------------------------------------|-------------|--------------|----------------------------|-------------|--------------|-------------------------------------------------------------|-------------|--------------|------------|
|                             |                   | Explained variance in student performance (r-squared x 100)                                     |             |              | Second-generation students |             |              | Explained variance in student performance (r-squared x 100) |             |              |            |
|                             |                   | Native students                                                                                 |             |              | Second-generation students |             |              | First-generation students                                   |             |              |            |
|                             |                   | Effect                                                                                          | S.E.        | %            | Effect                     | S.E.        | %            | Effect                                                      | S.E.        | %            |            |
| OECD countries              | Australia         | <b>17.4</b>                                                                                     | (1.2)       | 3.3          | <b>17.4</b>                | (3.3)       | 3.1          | <b>16.3</b>                                                 | (2.8)       | 2.5          |            |
|                             | Austria           | -0.6                                                                                            | (1.7)       | 0.0          | -4.9                       | (7.1)       | 0.5          | -7.1                                                        | (4.5)       | 0.8          |            |
|                             | Belgium           | <b>15.8</b>                                                                                     | (1.6)       | 2.4          | 3.2                        | (6.3)       | 0.2          | -4.0                                                        | (5.6)       | 0.2          |            |
|                             | Canada            | <b>20.8</b>                                                                                     | (1.1)       | 6.1          | <b>17.6</b>                | (3.2)       | 4.7          | <b>16.6</b>                                                 | (3.4)       | 3.4          |            |
|                             | Denmark           | <b>22.2</b>                                                                                     | (1.7)       | 5.0          | 15.1                       | (10.5)      | 2.7          | 5.9                                                         | (9.2)       | 0.5          |            |
|                             | France            | <b>15.5</b>                                                                                     | (1.6)       | 3.2          | <b>11.4</b>                | (3.8)       | 1.9          | 14.4                                                        | (10.9)      | 2.1          |            |
|                             | Germany           | 4.4                                                                                             | (2.2)       | 0.2          | 4.6                        | (5.8)       | 0.3          | 0.7                                                         | (6.3)       | 0.0          |            |
|                             | Luxembourg        | <b>6.6</b>                                                                                      | (1.9)       | 0.8          | -5.9                       | (3.5)       | 0.5          | -7.2                                                        | (3.8)       | 0.6          |            |
|                             | Netherlands       | <b>10.3</b>                                                                                     | (1.9)       | 1.0          | 2.2                        | (8.5)       | 0.1          | 10.7                                                        | (7.6)       | 1.8          |            |
|                             | New Zealand       | <b>18.3</b>                                                                                     | (2.1)       | 3.1          | -2.8                       | (6.9)       | 0.1          | <b>12.5</b>                                                 | (5.1)       | 1.3          |            |
|                             | Norway            | <b>28.8</b>                                                                                     | (1.5)       | 10.5         | <b>30.5</b>                | (10.2)      | 12.1         | <b>30.9</b>                                                 | (7.9)       | 12.1         |            |
|                             | Sweden            | <b>26.1</b>                                                                                     | (1.8)       | 7.3          | <b>31.5</b>                | (8.8)       | 8.8          | 7.2                                                         | (7.6)       | 0.5          |            |
|                             | Switzerland       | 2.8                                                                                             | (1.8)       | 0.1          | -7.6                       | (4.0)       | 0.6          | <b>-12.5</b>                                                | (4.2)       | 1.7          |            |
|                             | United States     | <b>13.8</b>                                                                                     | (1.7)       | 2.2          | <b>18.2</b>                | (5.0)       | 3.4          | <b>15.7</b>                                                 | (6.4)       | 2.2          |            |
|                             |                   | <b>OECD average</b>                                                                             | <b>12.4</b> | <b>(0.5)</b> | <b>1.9</b>                 | <b>9.6</b>  | <b>(1.2)</b> | <b>1.1</b>                                                  | <b>8.2</b>  | <b>(1.6)</b> | <b>0.7</b> |
|                             | Partner countries | Hong Kong-China                                                                                 | <b>28.7</b> | (2.3)        | 6.2                        | <b>27.6</b> | (4.0)        | 6.6                                                         | <b>22.5</b> | (5.2)        | 3.4        |
|                             |                   | Macao-China                                                                                     | -9.1        | (7.5)        | 0.8                        | <b>10.7</b> | (4.6)        | 1.2                                                         | -8.0        | (10.8)       | 0.5        |
| <b>Russian Federation</b>   |                   | <b>14.4</b>                                                                                     | (1.6)       | 2.1          | <b>13.4</b>                | (5.2)       | 2.2          | <b>6.8</b>                                                  | (4.7)       | 0.6          |            |
| Belgium (Flemish Community) |                   | <b>25.9</b>                                                                                     | (2.1)       | 6.3          | 5.1                        | (10.2)      | 0.3          | -10.3                                                       | (8.8)       | 1.2          |            |
| Belgium (French Community)  |                   | <b>11.3</b>                                                                                     | (2.5)       | 1.4          | 1.9                        | (7.4)       | 0.1          | 2.0                                                         | (8.0)       | 0.0          |            |

|                             |                   | Regression estimate of the index of instrumental motivation in mathematics |               |                           |               |                                        |               |                           |               |               |
|-----------------------------|-------------------|----------------------------------------------------------------------------|---------------|---------------------------|---------------|----------------------------------------|---------------|---------------------------|---------------|---------------|
|                             |                   | Accounting for ESCS                                                        |               |                           |               | Accounting for mathematics performance |               |                           |               |               |
|                             |                   | Second-generation students                                                 |               | First-generation students |               | Second-generation students             |               | First-generation students |               |               |
|                             |                   | Coef.                                                                      | S.E.          | Coef.                     | S.E.          | Coef.                                  | S.E.          | Coef.                     | S.E.          |               |
| OECD countries              | Australia         | <b>0.18</b>                                                                | (0.04)        | <b>0.19</b>               | (0.03)        | <b>0.17</b>                            | (0.04)        | <b>0.19</b>               | (0.03)        |               |
|                             | Austria           | 0.14                                                                       | (0.10)        | <b>0.16</b>               | (0.07)        | 0.20                                   | (0.10)        | <b>0.22</b>               | (0.08)        |               |
|                             | Belgium           | <b>0.24</b>                                                                | (0.07)        | <b>0.43</b>               | (0.07)        | <b>0.29</b>                            | (0.08)        | <b>0.51</b>               | (0.07)        |               |
|                             | Canada            | <b>0.19</b>                                                                | (0.05)        | <b>0.33</b>               | (0.04)        | <b>0.17</b>                            | (0.05)        | <b>0.36</b>               | (0.04)        |               |
|                             | Denmark           | 0.12                                                                       | (0.09)        | 0.06                      | (0.10)        | 0.18                                   | (0.10)        | 0.14                      | (0.10)        |               |
|                             | France            | <b>0.19</b>                                                                | (0.06)        | <b>0.48</b>               | (0.11)        | <b>0.23</b>                            | (0.06)        | <b>0.55</b>               | (0.12)        |               |
|                             | Germany           | <b>0.16</b>                                                                | (0.06)        | <b>0.24</b>               | (0.07)        | <b>0.22</b>                            | (0.07)        | <b>0.29</b>               | (0.07)        |               |
|                             | Luxembourg        | <b>0.21</b>                                                                | (0.06)        | <b>0.48</b>               | (0.06)        | <b>0.24</b>                            | (0.05)        | <b>0.51</b>               | (0.05)        |               |
|                             | Netherlands       | <b>0.42</b>                                                                | (0.07)        | <b>0.30</b>               | (0.09)        | <b>0.44</b>                            | (0.07)        | <b>0.36</b>               | (0.09)        |               |
|                             | New Zealand       | <b>0.24</b>                                                                | (0.07)        | <b>0.20</b>               | (0.04)        | <b>0.25</b>                            | (0.07)        | <b>0.22</b>               | (0.04)        |               |
|                             | Norway            | <b>0.27</b>                                                                | (0.12)        | <b>0.25</b>               | (0.07)        | <b>0.32</b>                            | (0.11)        | <b>0.32</b>               | (0.08)        |               |
|                             | Sweden            | <b>0.30</b>                                                                | (0.08)        | <b>0.39</b>               | (0.05)        | <b>0.31</b>                            | (0.07)        | <b>0.53</b>               | (0.05)        |               |
|                             | Switzerland       | <b>0.10</b>                                                                | (0.05)        | <b>0.25</b>               | (0.05)        | <b>0.15</b>                            | (0.05)        | <b>0.31</b>               | (0.05)        |               |
|                             | United States     | <b>0.14</b>                                                                | (0.05)        | <b>0.21</b>               | (0.06)        | <b>0.14</b>                            | (0.05)        | <b>0.23</b>               | (0.06)        |               |
|                             |                   | <b>OECD average</b>                                                        | <b>0.29</b>   | <b>(0.02)</b>             | <b>0.28</b>   | <b>(0.04)</b>                          | <b>0.20</b>   | <b>(0.02)</b>             | <b>0.31</b>   | <b>(0.02)</b> |
|                             | Partner countries | Hong Kong-China                                                            | <b>0.07</b>   | (0.03)                    | <b>0.22</b>   | (0.03)                                 | 0.00          | (0.03)                    | <b>0.26</b>   | (0.03)        |
|                             |                   | Macao-China                                                                | <b>0.09</b>   | (0.07)                    | 0.10          | (0.08)                                 | 0.09          | (0.06)                    | 0.13          | (0.08)        |
| <b>Russian Federation</b>   |                   | <b>-0.01</b>                                                               | <b>(0.06)</b> | <b>0.02</b>               | <b>(0.06)</b> | <b>0.01</b>                            | <b>(0.06)</b> | <b>0.05</b>               | <b>(0.06)</b> |               |
| Belgium (Flemish Community) |                   | <b>0.26</b>                                                                | (0.09)        | <b>0.30</b>               | (0.08)        | <b>0.42</b>                            | (0.09)        | <b>0.44</b>               | (0.08)        |               |
| Belgium (French Community)  |                   | 0.11                                                                       | (0.10)        | <b>0.38</b>               | (0.08)        | 0.14                                   | (0.10)        | <b>0.47</b>               | (0.09)        |               |

Note: Values that are statistically significant are indicated in bold.

Table 4.3a  
Performance in mathematics and reading by students' expected level of education

Results based on students' self-reports

|                   |                             | Students expecting to complete lower secondary education (ISCED Level 2) |            |                                      |            |                                  |                        | Students expecting to complete upper secondary education, not providing access to university-level programmes (ISCED Levels 3B and 3C) |            |                                      |            |                                  |                        | Students expecting to complete upper secondary education, providing access to university-level programmes (ISCED Levels 3A and 4) |            |                                      |            |                                  |      |
|-------------------|-----------------------------|--------------------------------------------------------------------------|------------|--------------------------------------|------------|----------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------------------|------------|----------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------------------|------------|----------------------------------|------|
|                   |                             | Percentage of students                                                   |            | Performance on the mathematics scale |            | Performance on the reading scale |                        | Percentage of students                                                                                                                 |            | Performance on the mathematics scale |            | Performance on the reading scale |                        | Percentage of students                                                                                                            |            | Performance on the mathematics scale |            | Performance on the reading scale |      |
|                   |                             |                                                                          |            | Mean score                           | S.E.       | Mean score                       | S.E.                   |                                                                                                                                        |            | Mean score                           | S.E.       | Mean score                       | S.E.                   |                                                                                                                                   |            | Mean score                           | S.E.       | Mean score                       | S.E. |
|                   |                             | S.E.                                                                     | Mean score | S.E.                                 | Mean score | S.E.                             | Percentage of students | S.E.                                                                                                                                   | Mean score | S.E.                                 | Mean score | S.E.                             | Percentage of students | S.E.                                                                                                                              | Mean score | S.E.                                 | Mean score | S.E.                             |      |
| OECD countries    | Australia                   | Native                                                                   | 3.0 (0.2)  | 427 (5.8)                            | 406 (5.6)  | 4.1 (0.3)                        | 456 (5.3)              | 446 (5.4)                                                                                                                              | 25.1 (0.6) | 485 (3.1)                            | 482 (3.1)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | Second-generation                                                        | 1.2 (0.3)  | 427 (20.1)                           | 402 (31.9) | 2.9 (0.7)                        | 462 (22.0)             | 450 (22.6)                                                                                                                             | 14.2 (1.3) | 463 (9.2)                            | 457 (10.0) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | First-generation                                                         | 1.5 (0.4)  | 402 (23.3)                           | 378 (31.8) | 1.5 (0.4)                        | 429 (19.6)             | 416 (15.0)                                                                                                                             | 13.9 (1.1) | 466 (8.3)                            | 458 (9.2)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Austria                     | Native                                                                   | 3.2 (0.3)  | 471 (10.3)                           | 463 (10.0) | 26.3 (1.5)                       | 459 (3.9)              | 439 (4.3)                                                                                                                              | 28.0 (1.1) | 535 (3.6)                            | 537 (3.1)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | Second-generation                                                        | 7.1 (1.9)  | 402 (23.7)                           | 349 (27.6) | 30.8 (4.4)                       | 427 (11.9)             | 390 (15.5)                                                                                                                             | 31.4 (4.0) | 461 (10.5)                           | 456 (12.2) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | First-generation                                                         | 5.7 (1.3)  | 423 (19.8)                           | 383 (27.4) | 36.2 (2.7)                       | 407 (7.2)              | 377 (8.8)                                                                                                                              | 27.5 (2.5) | 479 (9.1)                            | 459 (11.5) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Belgium                     | Native                                                                   | 5.9 (0.4)  | 458 (7.2)                            | 441 (7.4)  | 6.6 (0.4)                        | 431 (5.3)              | 411 (7.3)                                                                                                                              | 27.5 (0.9) | 505 (2.9)                            | 483 (3.4)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | Second-generation                                                        | 12.0 (1.8) | 433 (16.7)                           | 415 (18.1) | 12.9 (1.9)                       | 383 (12.2)             | 363 (12.8)                                                                                                                             | 29.3 (2.7) | 426 (9.5)                            | 416 (10.5) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | First-generation                                                         | 12.0 (2.0) | 396 (11.9)                           | 374 (18.6) | 13.8 (2.4)                       | 409 (14.5)             | 382 (14.0)                                                                                                                             | 28.8 (2.9) | 445 (10.3)                           | 407 (11.1) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Canada                      | Native                                                                   | 0.7 (0.1)  | 460 (11.5)                           | 439 (12.3) | 7.2 (0.3)                        | 470 (4.4)              | 462 (4.1)                                                                                                                              | 8.9 (0.4)  | 504 (3.7)                            | 487 (3.6)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | Second-generation                                                        | 0.5 (0.2)  | 424 (29.6)                           | 440 (38.9) | 5.8 (0.9)                        | 476 (10.9)             | 474 (11.0)                                                                                                                             | 1.9 (0.5)  | 481 (13.5)                           | 477 (15.3) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | First-generation                                                         | 0.6 (0.3)  | 471 (25.6)                           | 419 (23.9) | 2.1 (0.5)                        | 443 (11.6)             | 426 (15.0)                                                                                                                             | 2.0 (0.5)  | 470 (26.7)                           | 441 (26.5) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Denmark                     | Native                                                                   | 9.6 (0.5)  | 443 (4.9)                            | 418 (5.3)  | 12.5 (0.6)                       | 480 (4.5)              | 445 (5.2)                                                                                                                              | 35.0 (0.8) | 508 (2.8)                            | 491 (2.7)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | Second-generation                                                        | 6.7 (2.0)  | 423 (36.0)                           | 368 (39.7) | 11.6 (2.1)                       | 385 (18.4)             | 371 (34.5)                                                                                                                             | 36.1 (4.1) | 444 (15.3)                           | 434 (17.2) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | First-generation                                                         | 11.3 (2.9) | 357 (23.6)                           | 329 (24.1) | 6.1 (2.2)                        | 441 (29.7)             | 440 (39.4)                                                                                                                             | 27.8 (4.7) | 471 (15.9)                           | 465 (14.8) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | France                      | Native                                                                   | 1.5 (0.2)  | 442 (12.4)                           | 409 (13.8) | 24.6 (1.0)                       | 445 (3.4)              | 423 (4.5)                                                                                                                              | 22.4 (0.9) | 531 (3.5)                            | 519 (4.4)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | Second-generation                                                        | 2.9 (0.9)  | 403 (23.5)                           | 368 (28.1) | 18.7 (2.6)                       | 388 (9.8)              | 368 (11.5)                                                                                                                             | 20.6 (1.9) | 483 (10.1)                           | 475 (9.2)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | First-generation                                                         | 0.9 (0.9)  | 350 (44.3)                           | 262 (48.7) | 32.7 (4.7)                       | 392 (16.5)             | 361 (17.5)                                                                                                                             | 17.8 (3.1) | 447 (21.6)                           | 442 (23.4) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Germany                     | Native                                                                   | 40.6 (1.7) | 469 (3.2)                            | 459 (3.3)  | 3.3 (0.3)                        | 504 (8.1)              | 493 (7.9)                                                                                                                              | 33.7 (1.0) | 552 (2.8)                            | 546 (3.1)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Second-generation           | 61.9 (3.6)                                                               | 397 (9.0)  | 384 (10.3)                           | 1.7 (0.7)  | 451 (38.8)                       | 440 (26.1)             | 22.2 (2.6)                                                                                                                             | 472 (13.4) | 469 (13.8)                           |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | First-generation            | 53.4 (3.4)                                                               | 416 (8.1)  | 386 (9.3)                            | 5.8 (1.3)  | 453 (21.7)                       | 428 (19.8)             | 24.6 (2.7)                                                                                                                             | 496 (10.2) | 482 (11.3)                           |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
| Luxembourg        | Native                      | 6.6 (0.5)                                                                | 479 (5.4)  | 479 (6.0)                            | 16.3 (0.7) | 436 (3.6)                        | 422 (4.2)              | 2.2 (1.7)                                                                                                                              | 484 (3.6)  | 477 (4.0)                            |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Second-generation           | 4.0 (0.7)                                                                | 440 (16.5) | 415 (16.3)                           | 19.4 (1.4) | 403 (6.5)                        | 372 (8.6)              | 21.4 (1.7)                                                                                                                             | 454 (7.3)  | 427 (8.4)                            |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | First-generation            | 2.3 (0.5)                                                                | 436 (25.1) | 400 (22.8)                           | 25.5 (1.5) | 391 (6.2)                        | 351 (7.9)              | 20.1 (1.6)                                                                                                                             | 442 (6.0)  | 415 (7.2)                            |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
| Netherlands       | Native                      | 29.9 (1.6)                                                               | 479 (4.1)  | 460 (4.1)                            | a          | a                                | a                      | a                                                                                                                                      | 29.1 (1.1) | 546 (3.2)                            | 521 (3.1)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Second-generation           | 27.9 (4.2)                                                               | 449 (13.9) | 434 (12.3)                           | a          | a                                | a                      | a                                                                                                                                      | 26.8 (3.4) | 479 (11.0)                           | 466 (11.3) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | First-generation            | 30.5 (5.0)                                                               | 428 (10.9) | 420 (12.3)                           | a          | a                                | a                      | a                                                                                                                                      | 29.0 (4.3) | 466 (11.9)                           | 453 (11.5) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
| New Zealand       | Native                      | 1.7 (0.3)                                                                | 437 (12.1) | 421 (14.2)                           | 13.4 (0.7) | 453 (4.7)                        | 442 (6.0)              | 36.1 (0.9)                                                                                                                             | 510 (2.8)  | 508 (3.1)                            |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Second-generation           | 0.3 (0.3)                                                                | 334 (32.4) | 334 (56.0)                           | 7.2 (1.6)  | 447 (21.1)                       | 445 (23.8)             | 30.6 (2.5)                                                                                                                             | 464 (12.9) | 478 (13.8)                           |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | First-generation            | 2.0 (0.7)                                                                | 402 (23.3) | 368 (29.4)                           | 5.9 (1.0)  | 443 (16.6)                       | 382 (26.6)             | 22.9 (1.8)                                                                                                                             | 490 (8.4)  | 468 (8.7)                            |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
| Norway            | Native                      | 0.9 (0.2)                                                                | 414 (15.8) | 404 (20.1)                           | 25.4 (0.8) | 456 (2.8)                        | 452 (3.5)              | 18.0 (0.7)                                                                                                                             | 472 (4.1)  | 474 (4.9)                            |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Second-generation           | 1.0 (0.9)                                                                | 520 (28.4) | 688 (73.1)                           | 14.9 (3.4) | 420 (22.0)                       | 416 (24.1)             | 18.8 (4.2)                                                                                                                             | 461 (26.1) | 429 (27.7)                           |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | First-generation            | 2.8 (1.3)                                                                | 397 (33.6) | 329 (43.5)                           | 24.7 (4.3) | 413 (16.8)                       | 403 (21.9)             | 20.1 (3.7)                                                                                                                             | 402 (17.5) | 395 (26.5)                           |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
| Sweden            | Native                      | 4.1 (0.3)                                                                | 445 (6.4)  | 446 (7.3)                            | 15.5 (0.7) | 488 (3.9)                        | 490 (5.1)              | 23.8 (0.8)                                                                                                                             | 478 (3.4)  | 482 (3.3)                            |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Second-generation           | 3.9 (1.4)                                                                | 359 (32.6) | 361 (37.2)                           | 14.8 (2.4) | 464 (15.7)                       | 490 (17.4)             | 12.2 (2.4)                                                                                                                             | 440 (15.1) | 448 (15.8)                           |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | First-generation            | 6.2 (1.7)                                                                | 368 (33.5) | 351 (39.6)                           | 11.4 (2.3) | 373 (12.9)                       | 395 (17.0)             | 16.2 (3.0)                                                                                                                             | 393 (16.9) | 387 (16.0)                           |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
| Switzerland       | Native                      | 7.9 (0.6)                                                                | 459 (5.7)  | 451 (5.3)                            | 47.3 (1.9) | 511 (2.3)                        | 488 (2.6)              | 19.1 (0.8)                                                                                                                             | 582 (3.6)  | 552 (3.5)                            |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Second-generation           | 12.5 (1.7)                                                               | 420 (11.1) | 414 (12.9)                           | 51.4 (2.8) | 455 (5.5)                        | 432 (6.9)              | 15.2 (1.8)                                                                                                                             | 534 (11.7) | 509 (10.2)                           |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | First-generation            | 10.7 (1.3)                                                               | 397 (13.4) | 385 (14.6)                           | 53.9 (2.5) | 428 (5.8)                        | 396 (6.6)              | 11.9 (1.3)                                                                                                                             | 489 (10.2) | 464 (13.7)                           |            |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
| United States     | Native                      | 0.6 (0.1)                                                                | 386 (20.2) | 378 (22.9)                           | a          | a                                | a                      | a                                                                                                                                      | 21.9 (0.8) | 436 (3.8)                            | 444 (4.0)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Second-generation           | 0.6 (0.4)                                                                | 368 (61.8) | 322 (44.5)                           | a          | a                                | a                      | a                                                                                                                                      | 23.3 (2.5) | 402 (9.2)                            | 409 (11.9) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | First-generation            | 2.0 (0.9)                                                                | 341 (24.1) | 318 (22.2)                           | a          | a                                | a                      | a                                                                                                                                      | 29.2 (2.4) | 387 (11.3)                           | 374 (11.4) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
| Partner countries | Hong Kong-China             | Native                                                                   | 0.7 (0.2)  | 424 (32.9)                           | 377 (27.7) | 11.7 (0.9)                       | 459 (7.5)              | 432 (7.8)                                                                                                                              | 21.5 (1.1) | 518 (6.1)                            | 483 (5.5)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | Second-generation                                                        | 0.8 (0.2)  | 423 (31.4)                           | 367 (34.3) | 11.5 (1.2)                       | 481 (13.0)             | 439 (12.1)                                                                                                                             | 23.3 (1.3) | 532 (7.2)                            | 495 (6.4)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | First-generation                                                         | 3.3 (0.5)  | 443 (19.9)                           | 412 (17.1) | 11.3 (1.2)                       | 426 (14.3)             | 421 (15.0)                                                                                                                             | 28.6 (1.2) | 489 (6.3)                            | 471 (6.6)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Macao-China                 | Native                                                                   | 2.9 (1.4)  | 432 (17.5)                           | 423 (22.5) | 1.9 (0.9)                        | 516 (21.5)             | 421 (37.7)                                                                                                                             | 29.8 (3.1) | 496 (9.7)                            | 472 (7.6)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | Second-generation                                                        | 3.2 (0.6)  | 418 (14.8)                           | 409 (12.7) | 1.8 (0.7)                        | 499 (29.8)             | 423 (28.4)                                                                                                                             | 27.2 (2.0) | 500 (7.9)                            | 467 (6.6)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | First-generation                                                         | 5.3 (1.9)  | 431 (25.2)                           | 410 (28.8) | 2.4 (1.2)                        | 461 (13.0)             | 454 (21.9)                                                                                                                             | 32.1 (3.5) | 482 (15.9)                           | 470 (11.5) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Russian Federation          | Native                                                                   | 2.2 (0.3)  | 371 (10.5)                           | 321 (11.9) | 6.9 (1.2)                        | 398 (8.7)              | 372 (8.5)                                                                                                                              | 26.5 (1.1) | 433 (4.7)                            | 408 (4.6)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | Second-generation                                                        | 1.4 (0.6)  | 393 (49.5)                           | 323 (55.8) | 8.1 (2.1)                        | 413 (21.1)             | 365 (26.7)                                                                                                                             | 30.7 (3.2) | 430 (11.0)                           | 391 (9.7)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | First-generation                                                         | 0.8 (0.3)  | 385 (35.3)                           | 297 (58.8) | 9.2 (1.9)                        | 410 (14.4)             | 338 (20.4)                                                                                                                             | 32.5 (2.6) | 419 (9.2)                            | 391 (12.3) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Belgium (Flemish Community) | Native                                                                   | 0.9 (0.2)  | 517 (20.1)                           | 504 (19.7) | 7.4 (0.6)                        | 440 (6.3)              | 423 (8.7)                                                                                                                              | 26.4 (1.1) | 515 (3.2)                            | 493 (3.5)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | Second-generation                                                        | 0.6 (0.4)  | 591 (10.8)                           | 493 (22.1) | 23.2 (4.0)                       | 390 (11.1)             | 366 (15.4)                                                                                                                             | 27.0 (4.0) | 412 (13.3)                           | 421 (12.1) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | First-generation                                                         | 4.6 (2.3)  | 427 (36.9)                           | 425 (62.1) | 17.1 (3.2)                       | 430 (23.7)             | 403 (25.0)                                                                                                                             | 24.6 (5.3) | 471 (13.6)                           | 434 (14.5) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   | Belgium (French Community)  | Native                                                                   | 13.8 (1.0) | 453 (7.6)                            | 435 (8.1)  | 5.3 (0.6)                        | 410 (10.9)             | 386 (12.4)                                                                                                                             | 29.0 (1.3) | 491 (5.4)                            | 469 (6.1)  |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | Second-generation                                                        | 18.0 (2.4) | 431 (17.2)                           | 414 (18.4) | 7.5 (1.8)                        | 371 (25.8)             | 356 (24.3)                                                                                                                             | 30.5 (3.6) | 432 (12.1)                           | 413 (14.0) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |
|                   |                             | First-generation                                                         | 15.8 (2.8) | 391 (12.5)                           | 366 (19.2) | 12.4 (3.4)                       | 393 (16.3)             | 366 (14.1)                                                                                                                             | 30.7 (3.6) | 432 (12.1)                           | 392 (14.4) |                                  |                        |                                                                                                                                   |            |                                      |            |                                  |      |

Table 4.3a (continued)  
**Performance in mathematics and reading by students' expected level of education**

Results based on students' self-reports

|                             |                   | Students expecting to complete a non-university tertiary-level programme (ISCED Level 5B) |                                      |            |        |            |                                  | Students expecting to complete a university-level programme (ISCED Levels 5A and 6) |                        |                                      |        |            |        |                                  |      |
|-----------------------------|-------------------|-------------------------------------------------------------------------------------------|--------------------------------------|------------|--------|------------|----------------------------------|-------------------------------------------------------------------------------------|------------------------|--------------------------------------|--------|------------|--------|----------------------------------|------|
|                             |                   | Percentage of students                                                                    | Performance on the mathematics scale |            |        |            | Performance on the reading scale |                                                                                     | Percentage of students | Performance on the mathematics scale |        |            |        | Performance on the reading scale |      |
|                             |                   |                                                                                           | S.E.                                 | Mean score | S.E.   | Mean score | S.E.                             | S.E.                                                                                |                        | Mean score                           | S.E.   | Mean score | S.E.   | Mean score                       | S.E. |
| OECD countries              | Australia         | Native                                                                                    | 8.5                                  | (0.3)      | 504    | (4.1)      | 508                              | (4.7)                                                                               | 58.9                   | (0.8)                                | 559    | (2.1)      | 565    | (2.1)                            |      |
|                             |                   | Second-generation                                                                         | 7.2                                  | (0.8)      | 483    | (11.8)     | 481                              | (13.7)                                                                              | 74.5                   | (1.6)                                | 541    | (4.9)      | 547    | (4.5)                            |      |
|                             |                   | First-generation                                                                          | 5.2                                  | (0.6)      | 489    | (12.8)     | 489                              | (15.9)                                                                              | 77.4                   | (1.5)                                | 543    | (5.4)      | 535    | (5.2)                            |      |
|                             | Austria           | Native                                                                                    | 17.7                                 | (0.9)      | 487    | (4.7)      | 460                              | (5.3)                                                                               | 24.7                   | (1.4)                                | 583    | (3.8)      | 572    | (3.7)                            |      |
|                             |                   | Second-generation                                                                         | 5.2                                  | (1.5)      | 450    | (26.3)     | 426                              | (35.0)                                                                              | 25.4                   | (3.4)                                | 536    | (12.1)     | 516    | (14.9)                           |      |
|                             |                   | First-generation                                                                          | 10.4                                 | (1.5)      | 442    | (13.5)     | 406                              | (17.7)                                                                              | 18.7                   | (2.4)                                | 520    | (12.0)     | 507    | (11.6)                           |      |
|                             | Belgium           | Native                                                                                    | 23.2                                 | (0.7)      | 562    | (2.7)      | 545                              | (2.5)                                                                               | 36.4                   | (1.0)                                | 609    | (2.4)      | 582    | (2.2)                            |      |
|                             |                   | Second-generation                                                                         | 19.4                                 | (2.4)      | 486    | (12.6)     | 481                              | (12.4)                                                                              | 25.5                   | (2.5)                                | 522    | (11.9)     | 508    | (12.8)                           |      |
|                             |                   | First-generation                                                                          | 14.3                                 | (1.8)      | 487    | (14.9)     | 460                              | (16.3)                                                                              | 28.7                   | (2.7)                                | 505    | (13.1)     | 487    | (13.7)                           |      |
|                             | Canada            | Native                                                                                    | 24.8                                 | (0.6)      | 514    | (2.1)      | 517                              | (2.3)                                                                               | 58.3                   | (0.8)                                | 562    | (1.8)      | 559    | (1.6)                            |      |
|                             |                   | Second-generation                                                                         | 15.6                                 | (1.3)      | 496    | (6.6)      | 502                              | (7.5)                                                                               | 76.2                   | (1.8)                                | 561    | (4.5)      | 560    | (4.2)                            |      |
|                             |                   | First-generation                                                                          | 13.1                                 | (1.3)      | 474    | (10.3)     | 472                              | (10.4)                                                                              | 81.9                   | (1.5)                                | 544    | (5.0)      | 527    | (4.6)                            |      |
|                             | Denmark           | Native                                                                                    | 18.3                                 | (0.7)      | 538    | (3.6)      | 518                              | (3.7)                                                                               | 24.5                   | (0.9)                                | 574    | (3.2)      | 547    | (3.3)                            |      |
|                             |                   | Second-generation                                                                         | 9.1                                  | (2.8)      | 472    | (27.9)     | 467                              | (20.4)                                                                              | 36.4                   | (5.4)                                | 474    | (16.7)     | 473    | (18.8)                           |      |
|                             |                   | First-generation                                                                          | 12.2                                 | (3.2)      | 462    | (24.4)     | 468                              | (26.7)                                                                              | 41.9                   | (5.0)                                | 473    | (13.8)     | 482    | (12.9)                           |      |
|                             | France            | Native                                                                                    | 16.7                                 | (0.8)      | 517    | (3.5)      | 501                              | (3.6)                                                                               | 34.3                   | (1.0)                                | 575    | (3.0)      | 562    | (2.8)                            |      |
|                             |                   | Second-generation                                                                         | 19.4                                 | (2.0)      | 463    | (10.3)     | 444                              | (8.0)                                                                               | 38.1                   | (3.0)                                | 520    | (6.4)      | 506    | (7.5)                            |      |
|                             |                   | First-generation                                                                          | 15.1                                 | (3.6)      | 447    | (22.3)     | 419                              | (25.2)                                                                              | 30.9                   | (4.6)                                | 536    | (15.7)     | 515    | (17.1)                           |      |
| Germany                     | Native            | 2.1                                                                                       | (0.2)                                | 547        | (12.1) | 537        | (10.5)                           | 19.8                                                                                | (1.0)                  | 598                                  | (3.1)  | 588        | (3.0)  |                                  |      |
|                             | Second-generation | 1.0                                                                                       | (0.7)                                | 537        | (27.8) | 519        | (43.7)                           | 12.4                                                                                | (2.2)                  | 518                                  | (22.8) | 500        | (23.7) |                                  |      |
|                             | First-generation  | 0.7                                                                                       | (0.4)                                | 523        | (18.8) | 555        | (31.1)                           | 14.8                                                                                | (2.1)                  | 533                                  | (14.6) | 517        | (14.2) |                                  |      |
| Luxembourg                  | Native            | 15.2                                                                                      | (0.7)                                | 517        | (4.4)  | 521        | (4.6)                            | 40.9                                                                                | (0.8)                  | 554                                  | (2.2)  | 545        | (2.8)  |                                  |      |
|                             | Second-generation | 10.0                                                                                      | (1.3)                                | 494        | (8.7)  | 481        | (9.2)                            | 41.3                                                                                | (1.8)                  | 527                                  | (6.0)  | 510        | (6.6)  |                                  |      |
|                             | First-generation  | 6.7                                                                                       | (0.9)                                | 484        | (14.0) | 467        | (15.1)                           | 41.2                                                                                | (2.0)                  | 524                                  | (5.3)  | 496        | (6.1)  |                                  |      |
| Netherlands                 | Native            | a                                                                                         | a                                    | a          | a      | a          | a                                | 40.6                                                                                | (1.5)                  | 610                                  | (2.8)  | 576        | (2.6)  |                                  |      |
|                             | Second-generation | a                                                                                         | a                                    | a          | a      | a          | a                                | 44.2                                                                                | (4.9)                  | 529                                  | (13.3) | 507        | (9.8)  |                                  |      |
|                             | First-generation  | a                                                                                         | a                                    | a          | a      | a          | a                                | 39.9                                                                                | (4.5)                  | 512                                  | (13.1) | 504        | (12.0) |                                  |      |
| New Zealand                 | Native            | 13.5                                                                                      | (0.6)                                | 545        | (4.1)  | 559        | (4.0)                            | 35.3                                                                                | (1.1)                  | 576                                  | (3.0)  | 579        | (3.3)  |                                  |      |
|                             | Second-generation | 13.0                                                                                      | (1.9)                                | 491        | (17.4) | 510        | (17.9)                           | 48.8                                                                                | (2.7)                  | 526                                  | (10.5) | 534        | (12.3) |                                  |      |
|                             | First-generation  | 12.3                                                                                      | (1.5)                                | 502        | (10.5) | 492        | (13.0)                           | 56.3                                                                                | (2.2)                  | 556                                  | (6.4)  | 540        | (6.7)  |                                  |      |
| Norway                      | Native            | 29.9                                                                                      | (0.8)                                | 517        | (3.2)  | 528        | (3.8)                            | 25.3                                                                                | (0.9)                  | 546                                  | (3.5)  | 559        | (4.0)  |                                  |      |
|                             | Second-generation | 24.6                                                                                      | (3.8)                                | 449        | (20.6) | 430        | (26.7)                           | 39.8                                                                                | (4.2)                  | 485                                  | (19.3) | 476        | (15.9) |                                  |      |
|                             | First-generation  | 24.2                                                                                      | (3.3)                                | 431        | (17.8) | 438        | (18.3)                           | 27.6                                                                                | (3.9)                  | 497                                  | (15.0) | 503        | (19.7) |                                  |      |
| Sweden                      | Native            | 24.7                                                                                      | (0.7)                                | 538        | (2.6)  | 546        | (2.8)                            | 31.4                                                                                | (1.1)                  | 558                                  | (3.2)  | 562        | (2.8)  |                                  |      |
|                             | Second-generation | 24.4                                                                                      | (3.0)                                | 504        | (12.0) | 528        | (12.7)                           | 43.8                                                                                | (3.9)                  | 506                                  | (16.3) | 525        | (13.3) |                                  |      |
|                             | First-generation  | 16.2                                                                                      | (2.5)                                | 448        | (14.6) | 458        | (17.2)                           | 47.0                                                                                | (4.0)                  | 457                                  | (9.2)  | 473        | (10.4) |                                  |      |
| Switzerland                 | Native            | 7.5                                                                                       | (0.5)                                | 564        | (5.9)  | 518        | (6.0)                            | 17.9                                                                                | (1.5)                  | 616                                  | (5.1)  | 576        | (4.5)  |                                  |      |
|                             | Second-generation | 4.6                                                                                       | (0.8)                                | 542        | (14.6) | 511        | (23.3)                           | 15.9                                                                                | (1.7)                  | 564                                  | (10.3) | 538        | (10.3) |                                  |      |
|                             | First-generation  | 6.3                                                                                       | (1.8)                                | 460        | (12.6) | 425        | (17.5)                           | 16.3                                                                                | (2.1)                  | 558                                  | (14.1) | 525        | (12.9) |                                  |      |
| United States               | Native            | 12.6                                                                                      | (0.6)                                | 486        | (4.5)  | 497        | (4.4)                            | 64.7                                                                                | (0.9)                  | 510                                  | (2.8)  | 526        | (3.0)  |                                  |      |
|                             | Second-generation | 8.2                                                                                       | (1.3)                                | 469        | (17.1) | 485        | (16.1)                           | 67.8                                                                                | (2.7)                  | 492                                  | (7.9)  | 508        | (8.4)  |                                  |      |
|                             | First-generation  | 9.5                                                                                       | (1.9)                                | 465        | (18.7) | 466        | (23.7)                           | 58.4                                                                                | (2.9)                  | 490                                  | (7.5)  | 497        | (8.6)  |                                  |      |
| Hong Kong-China             | Native            | 12.1                                                                                      | (0.6)                                | 553        | (7.1)  | 510        | (6.3)                            | 53.8                                                                                | (1.8)                  | 597                                  | (3.8)  | 546        | (2.8)  |                                  |      |
|                             | Second-generation | 9.3                                                                                       | (0.9)                                | 560        | (7.8)  | 519        | (7.0)                            | 55.2                                                                                | (1.9)                  | 608                                  | (4.6)  | 553        | (3.3)  |                                  |      |
|                             | First-generation  | 10.4                                                                                      | (1.0)                                | 526        | (9.5)  | 499        | (9.0)                            | 46.3                                                                                | (1.5)                  | 558                                  | (5.3)  | 531        | (4.2)  |                                  |      |
| Macao-China                 | Native            | 16.7                                                                                      | (2.4)                                | 517        | (12.9) | 500        | (11.9)                           | 48.9                                                                                | (2.9)                  | 556                                  | (7.4)  | 522        | (5.9)  |                                  |      |
|                             | Second-generation | 18.2                                                                                      | (1.7)                                | 535        | (7.4)  | 500        | (6.9)                            | 49.2                                                                                | (1.9)                  | 557                                  | (6.6)  | 522        | (3.8)  |                                  |      |
|                             | First-generation  | 11.7                                                                                      | (2.6)                                | 544        | (23.8) | 529        | (18.0)                           | 48.1                                                                                | (4.2)                  | 547                                  | (10.1) | 523        | (6.4)  |                                  |      |
| Russian Federation          | Native            | a                                                                                         | a                                    | a          | a      | a          | a                                | 64.4                                                                                | (2.0)                  | 499                                  | (3.9)  | 475        | (3.6)  |                                  |      |
|                             | Second-generation | a                                                                                         | a                                    | a          | a      | a          | a                                | 59.8                                                                                | (3.3)                  | 479                                  | (7.9)  | 455        | (9.0)  |                                  |      |
|                             | First-generation  | a                                                                                         | a                                    | a          | a      | a          | a                                | 57.0                                                                                | (3.5)                  | 480                                  | (7.2)  | 441        | (7.2)  |                                  |      |
| Belgium (Flemish Community) | Native            | 26.6                                                                                      | (0.9)                                | 575        | (3.1)  | 556        | (2.5)                            | 38.3                                                                                | (1.3)                  | 629                                  | (2.2)  | 598        | (2.3)  |                                  |      |
|                             | Second-generation | 23.5                                                                                      | (3.5)                                | 460        | (18.3) | 466        | (16.1)                           | 24.5                                                                                | (3.7)                  | 530                                  | (19.2) | 521        | (17.2) |                                  |      |
|                             | First-generation  | 18.2                                                                                      | (3.6)                                | 507        | (16.2) | 494        | (18.6)                           | 33.3                                                                                | (4.2)                  | 508                                  | (14.1) | 496        | (17.3) |                                  |      |
| Belgium (French Community)  | Native            | 18.0                                                                                      | (1.0)                                | 532        | (6.1)  | 520        | (6.2)                            | 33.6                                                                                | (1.5)                  | 575                                  | (5.0)  | 554        | (4.5)  |                                  |      |
|                             | Second-generation | 17.2                                                                                      | (3.3)                                | 505        | (16.3) | 491        | (18.3)                           | 26.0                                                                                | (3.0)                  | 518                                  | (14.5) | 502        | (16.4) |                                  |      |
|                             | First-generation  | 12.4                                                                                      | (2.2)                                | 472        | (23.3) | 434        | (25.3)                           | 26.3                                                                                | (3.8)                  | 503                                  | (20.1) | 479        | (22.5) |                                  |      |





**Table 4.3b**  
**Index of instrumental motivation in mathematics by students' expected level of education**

*Results based on students' self-reports*

|                    |                             |                   | Index of instrumental motivation in mathematics for students expecting to complete : |        |                                                                                                         |        |                                                                                                    |        |                                                            |        |                                                      |        |
|--------------------|-----------------------------|-------------------|--------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------|--------|------------------------------------------------------------|--------|------------------------------------------------------|--------|
|                    |                             |                   | Lower secondary education (ISCED Level 2)                                            |        | Upper secondary education, not providing access to university-level programmes (ISCED Levels 3B and 3C) |        | Upper secondary education, providing access to university-level programmes (ISCED Levels 3A and 4) |        | A non-university tertiary-level programme (ISCED Level 5B) |        | A university-level programme (ISCED Levels 5A and 6) |        |
|                    |                             |                   | Mean index                                                                           | S.E.   | Mean index                                                                                              | S.E.   | Mean index                                                                                         | S.E.   | Mean index                                                 | S.E.   | Mean index                                           | S.E.   |
| OECD countries     | Australia                   | Native            | -0.07                                                                                | (0.08) | -0.03                                                                                                   | (0.05) | -0.10                                                                                              | (0.03) | -0.07                                                      | (0.04) | 0.38                                                 | (0.02) |
|                    |                             | Second-generation | -0.47                                                                                | (0.25) | 0.29                                                                                                    | (0.38) | 0.02                                                                                               | (0.09) | -0.12                                                      | (0.09) | 0.47                                                 | (0.04) |
|                    |                             | First-generation  | -0.56                                                                                | (0.30) | -0.12                                                                                                   | (0.17) | -0.10                                                                                              | (0.08) | 0.07                                                       | (0.09) | 0.50                                                 | (0.04) |
|                    | Austria                     | Native            | -0.41                                                                                | (0.10) | -0.46                                                                                                   | (0.04) | -0.71                                                                                              | (0.04) | -0.26                                                      | (0.05) | -0.60                                                | (0.04) |
|                    |                             | Second-generation | -0.51                                                                                | (0.47) | -0.24                                                                                                   | (0.18) | -0.29                                                                                              | (0.14) | -0.33                                                      | (0.37) | -0.44                                                | (0.19) |
|                    |                             | First-generation  | -0.18                                                                                | (0.26) | -0.13                                                                                                   | (0.09) | -0.28                                                                                              | (0.10) | -0.20                                                      | (0.15) | -0.75                                                | (0.16) |
|                    | Belgium                     | Native            | -0.39                                                                                | (0.05) | -0.55                                                                                                   | (0.06) | -0.48                                                                                              | (0.03) | -0.47                                                      | (0.03) | -0.14                                                | (0.02) |
|                    |                             | Second-generation | -0.02                                                                                | (0.14) | -0.48                                                                                                   | (0.18) | -0.19                                                                                              | (0.10) | -0.47                                                      | (0.11) | 0.09                                                 | (0.12) |
|                    |                             | First-generation  | -0.10                                                                                | (0.17) | 0.10                                                                                                    | (0.17) | 0.20                                                                                               | (0.10) | -0.22                                                      | (0.10) | 0.00                                                 | (0.13) |
|                    | Canada                      | Native            | -0.58                                                                                | (0.15) | -0.35                                                                                                   | (0.04) | -0.11                                                                                              | (0.04) | -0.04                                                      | (0.03) | 0.38                                                 | (0.02) |
|                    |                             | Second-generation | -0.06                                                                                | (0.28) | -0.14                                                                                                   | (0.18) | 0.03                                                                                               | (0.20) | -0.10                                                      | (0.08) | 0.51                                                 | (0.05) |
|                    |                             | First-generation  | 0.49                                                                                 | (0.40) | -0.18                                                                                                   | (0.33) | 0.10                                                                                               | (0.17) | 0.17                                                       | (0.10) | 0.60                                                 | (0.04) |
|                    | Denmark                     | Native            | 0.05                                                                                 | (0.04) | 0.28                                                                                                    | (0.05) | 0.29                                                                                               | (0.03) | 0.31                                                       | (0.04) | 0.70                                                 | (0.03) |
|                    |                             | Second-generation | 0.51                                                                                 | (0.38) | 0.17                                                                                                    | (0.32) | 0.32                                                                                               | (0.12) | 0.33                                                       | (0.18) | 0.51                                                 | (0.22) |
|                    |                             | First-generation  | 0.31                                                                                 | (0.27) | 0.03                                                                                                    | (0.23) | 0.38                                                                                               | (0.14) | 0.05                                                       | (0.26) | 0.50                                                 | (0.15) |
|                    | France                      | Native            | 0.00                                                                                 | (0.13) | -0.24                                                                                                   | (0.04) | -0.20                                                                                              | (0.04) | -0.14                                                      | (0.05) | 0.11                                                 | (0.04) |
|                    |                             | Second-generation | -0.15                                                                                | (0.43) | -0.01                                                                                                   | (0.12) | 0.10                                                                                               | (0.14) | -0.19                                                      | (0.13) | 0.14                                                 | (0.09) |
|                    |                             | First-generation  | 0.89                                                                                 | (0.00) | -0.08                                                                                                   | (0.19) | 0.03                                                                                               | (0.23) | 0.30                                                       | (0.27) | 0.73                                                 | (0.13) |
|                    | Germany                     | Native            | -0.09                                                                                | (0.03) | -0.20                                                                                                   | (0.08) | -0.12                                                                                              | (0.03) | -0.08                                                      | (0.12) | 0.01                                                 | (0.05) |
|                    |                             | Second-generation | 0.09                                                                                 | (0.07) | -0.79                                                                                                   | (0.43) | 0.03                                                                                               | (0.16) | -0.39                                                      | (0.68) | 0.30                                                 | (0.24) |
|                    |                             | First-generation  | 0.17                                                                                 | (0.08) | 0.07                                                                                                    | (0.16) | 0.10                                                                                               | (0.14) | 0.75                                                       | (0.74) | 0.37                                                 | (0.17) |
| Luxembourg         | Native                      | -0.75             | (0.08)                                                                               | -0.57  | (0.06)                                                                                                  | -0.48  | (0.05)                                                                                             | -0.63  | (0.05)                                                     | -0.43  | (0.04)                                               |        |
|                    | Second-generation           | -0.59             | (0.29)                                                                               | -0.02  | (0.10)                                                                                                  | -0.31  | (0.10)                                                                                             | -0.44  | (0.14)                                                     | -0.36  | (0.07)                                               |        |
|                    | First-generation            | -0.44             | (0.37)                                                                               | 0.22   | (0.08)                                                                                                  | -0.16  | (0.08)                                                                                             | -0.13  | (0.20)                                                     | -0.07  | (0.07)                                               |        |
| Netherlands        | Native                      | -0.31             | (0.04)                                                                               | a      | a                                                                                                       | -0.35  | (0.03)                                                                                             | a      | a                                                          | -0.26  | (0.02)                                               |        |
|                    | Second-generation           | 0.06              | (0.13)                                                                               | a      | a                                                                                                       | -0.03  | (0.13)                                                                                             | a      | a                                                          | 0.16   | (0.12)                                               |        |
|                    | First-generation            | 0.06              | (0.14)                                                                               | a      | a                                                                                                       | 0.05   | (0.18)                                                                                             | a      | a                                                          | -0.15  | (0.15)                                               |        |
| New Zealand        | Native                      | -0.22             | (0.14)                                                                               | -0.05  | (0.04)                                                                                                  | 0.16   | (0.02)                                                                                             | 0.34   | (0.04)                                                     | 0.46   | (0.03)                                               |        |
|                    | Second-generation           | 0.10              | (0.00)                                                                               | 0.19   | (0.25)                                                                                                  | 0.23   | (0.09)                                                                                             | 0.41   | (0.13)                                                     | 0.63   | (0.08)                                               |        |
|                    | First-generation            | 0.13              | (0.30)                                                                               | 0.25   | (0.14)                                                                                                  | 0.16   | (0.07)                                                                                             | 0.37   | (0.10)                                                     | 0.65   | (0.05)                                               |        |
| Norway             | Native                      | -0.45             | (0.24)                                                                               | -0.15  | (0.04)                                                                                                  | -0.05  | (0.04)                                                                                             | 0.20   | (0.03)                                                     | 0.54   | (0.04)                                               |        |
|                    | Second-generation           | 0.10              | (0.00)                                                                               | -0.33  | (0.25)                                                                                                  | 0.26   | (0.26)                                                                                             | 0.43   | (0.19)                                                     | 0.57   | (0.30)                                               |        |
|                    | First-generation            | -0.36             | (0.44)                                                                               | 0.03   | (0.20)                                                                                                  | -0.01  | (0.20)                                                                                             | 0.24   | (0.21)                                                     | 0.70   | (0.15)                                               |        |
| Sweden             | Native                      | -0.28             | (0.08)                                                                               | -0.23  | (0.04)                                                                                                  | -0.23  | (0.03)                                                                                             | -0.03  | (0.03)                                                     | 0.32   | (0.04)                                               |        |
|                    | Second-generation           | -0.53             | (0.39)                                                                               | -0.11  | (0.20)                                                                                                  | -0.16  | (0.12)                                                                                             | 0.18   | (0.11)                                                     | 0.49   | (0.08)                                               |        |
|                    | First-generation            | 0.11              | (0.16)                                                                               | 0.24   | (0.16)                                                                                                  | -0.05  | (0.09)                                                                                             | 0.07   | (0.14)                                                     | 0.49   | (0.08)                                               |        |
| Switzerland        | Native                      | -0.17             | (0.05)                                                                               | -0.03  | (0.03)                                                                                                  | -0.25  | (0.03)                                                                                             | 0.26   | (0.09)                                                     | -0.18  | (0.06)                                               |        |
|                    | Second-generation           | -0.10             | (0.09)                                                                               | 0.22   | (0.07)                                                                                                  | -0.10  | (0.12)                                                                                             | -0.18  | (0.17)                                                     | -0.17  | (0.08)                                               |        |
|                    | First-generation            | -0.04             | (0.17)                                                                               | 0.37   | (0.07)                                                                                                  | 0.08   | (0.12)                                                                                             | 0.46   | (0.14)                                                     | -0.10  | (0.10)                                               |        |
| United States      | Native                      | 0.04              | (0.24)                                                                               | a      | a                                                                                                       | -0.10  | (0.04)                                                                                             | 0.04   | (0.05)                                                     | 0.27   | (0.02)                                               |        |
|                    | Second-generation           | -0.99             | (0.35)                                                                               | a      | a                                                                                                       | -0.12  | (0.06)                                                                                             | 0.21   | (0.20)                                                     | 0.41   | (0.06)                                               |        |
|                    | First-generation            | -0.01             | (0.57)                                                                               | a      | a                                                                                                       | 0.12   | (0.14)                                                                                             | 0.11   | (0.13)                                                     | 0.50   | (0.08)                                               |        |
| Hong Kong-China    | Native                      | -0.81             | (0.28)                                                                               | -0.49  | (0.06)                                                                                                  | -0.28  | (0.03)                                                                                             | -0.23  | (0.06)                                                     | -0.01  | (0.03)                                               |        |
|                    | Second-generation           | -0.75             | (0.14)                                                                               | -0.47  | (0.09)                                                                                                  | -0.23  | (0.07)                                                                                             | -0.29  | (0.10)                                                     | 0.03   | (0.05)                                               |        |
|                    | First-generation            | -0.44             | (0.20)                                                                               | -0.20  | (0.06)                                                                                                  | -0.08  | (0.05)                                                                                             | 0.01   | (0.08)                                                     | 0.17   | (0.04)                                               |        |
| Macao-China        | Native                      | -0.21             | (0.25)                                                                               | -0.23  | (0.39)                                                                                                  | -0.14  | (0.09)                                                                                             | -0.13  | (0.12)                                                     | -0.08  | (0.07)                                               |        |
|                    | Second-generation           | -0.32             | (0.19)                                                                               | -0.83  | (0.40)                                                                                                  | -0.18  | (0.07)                                                                                             | 0.02   | (0.09)                                                     | 0.11   | (0.06)                                               |        |
|                    | First-generation            | 0.01              | (0.19)                                                                               | 0.13   | (0.18)                                                                                                  | 0.00   | (0.09)                                                                                             | -0.30  | (0.20)                                                     | 0.11   | (0.09)                                               |        |
| Russian Federation | Native                      | -0.18             | (0.10)                                                                               | -0.36  | (0.06)                                                                                                  | -0.12  | (0.02)                                                                                             | a      | a                                                          | 0.09   | (0.03)                                               |        |
|                    | Second-generation           | -0.34             | (0.21)                                                                               | -0.21  | (0.22)                                                                                                  | -0.04  | (0.11)                                                                                             | a      | a                                                          | 0.03   | (0.08)                                               |        |
|                    | First-generation            | -0.62             | (0.24)                                                                               | 0.18   | (0.20)                                                                                                  | -0.14  | (0.10)                                                                                             | a      | a                                                          | 0.09   | (0.07)                                               |        |
| Partner countries  | Belgium (Flemish Community) | Native            | -0.58                                                                                | (0.2)  | -0.72                                                                                                   | (0.1)  | -0.64                                                                                              | (0.0)  | -0.54                                                      | (0.0)  | -0.21                                                | (0.0)  |
|                    |                             | Second-generation | -0.38                                                                                | (0.1)  | -0.19                                                                                                   | (0.1)  | -0.26                                                                                              | (0.0)  | -0.32                                                      | (0.1)  | -0.01                                                | (0.0)  |
|                    |                             | First-generation  | -0.36                                                                                | (0.0)  | -0.38                                                                                                   | (0.2)  | -0.33                                                                                              | (0.1)  | -0.59                                                      | (0.2)  | 0.07                                                 | (0.1)  |
|                    | Belgium (French Community)  | Native            | -0.01                                                                                | (0.1)  | -0.61                                                                                                   | (0.4)  | -0.13                                                                                              | (0.1)  | -0.37                                                      | (0.2)  | 0.10                                                 | (0.2)  |
|                    |                             | Second-generation | -1.16                                                                                | (0.7)  | -0.22                                                                                                   | (0.1)  | -0.18                                                                                              | (0.2)  | -0.29                                                      | (0.1)  | -0.14                                                | (0.1)  |
|                    |                             | First-generation  | 0.06                                                                                 | (0.2)  | 0.33                                                                                                    | (0.3)  | 0.39                                                                                               | (0.1)  | -0.16                                                      | (0.1)  | 0.11                                                 | (0.2)  |

Table 4.4  
Odds ratios of immigrant students expecting to complete a university-level programme (ISCED 5a, 6)  
compared to native students

|                             |                   | Meaning of one unit increase | Model 1     | Model 2     | Model 3     |
|-----------------------------|-------------------|------------------------------|-------------|-------------|-------------|
|                             |                   |                              | Odds        | Odds        | Odds        |
| Australia                   | Second-generation |                              | <b>2.03</b> | 2.46        | 2.92        |
|                             | First-generation  |                              | <b>2.39</b> | 2.97        | 3.16        |
|                             | Math. performance | 1 SD                         |             | 2.69        | 2.27        |
|                             | ESCS              | 1 SD                         |             |             | 2.10        |
| Austria                     | Second-generation |                              | 1.04        | <b>2.18</b> | <b>3.49</b> |
|                             | First-generation  |                              | <b>0.70</b> | 1.58        | 2.39        |
|                             | Math. performance | 1 SD                         |             | 3.71        | 2.94        |
|                             | ESCS              | 1 SD                         |             |             | 2.92        |
| Belgium                     | Second-generation |                              | <b>0.60</b> | 1.60        | 2.41        |
|                             | First-generation  |                              | <b>0.70</b> | 2.05        | 2.56        |
|                             | Math. performance | 1 SD                         |             | 3.32        | 2.64        |
|                             | ESCS              | 1 SD                         |             |             | 2.36        |
| Canada                      | Second-generation |                              | <b>2.29</b> | 2.39        | 2.77        |
|                             | First-generation  |                              | <b>3.22</b> | 4.06        | 3.90        |
|                             | Math. performance | 1 SD                         |             | 2.44        | 2.05        |
|                             | ESCS              | 1 SD                         |             |             | 2.25        |
| Denmark                     | Second-generation |                              | 1.77        | 3.78        | 6.23        |
|                             | First-generation  |                              | <b>2.23</b> | 4.81        | 6.96        |
|                             | Math. performance | 1 SD                         |             | 2.53        | 2.05        |
|                             | ESCS              | 1 SD                         |             |             | 2.18        |
| France                      | Second-generation |                              | 1.19        | 2.34        | <b>3.63</b> |
|                             | First-generation  |                              | 0.85        | 1.99        | 2.64        |
|                             | Math. performance | 1 SD                         |             | 3.63        | 2.97        |
|                             | ESCS              | 1 SD                         |             |             | 1.97        |
| Germany                     | Second-generation |                              | <b>0.58</b> | 1.68        | 3.16        |
|                             | First-generation  |                              | 0.70        | 1.58        | 3.03        |
|                             | Math. performance | 1 SD                         |             | 3.78        | 2.86        |
|                             | ESCS              | 1 SD                         |             |             | 2.56        |
| Luxembourg                  | Second-generation |                              | 1.02        | 1.58        | 2.34        |
|                             | First-generation  |                              | 1.01        | 1.90        | 3.35        |
|                             | Math. performance | 1 SD                         |             | 3.78        | 3.06        |
|                             | ESCS              | 1 SD                         |             |             | 2.05        |
| Netherlands                 | Second-generation |                              | 1.16        | 3.71        | 5.47        |
|                             | First-generation  |                              | 0.97        | 4.35        | 5.21        |
|                             | Math. performance | 1 SD                         |             | 5.70        | 4.85        |
|                             | ESCS              | 1 SD                         |             |             | 1.86        |
| New Zealand                 | Second-generation |                              | <b>1.75</b> | 2.56        | 3.19        |
|                             | First-generation  |                              | <b>2.36</b> | 2.83        | 2.77        |
|                             | Math. performance | 1 SD                         |             | 2.36        | 2.01        |
|                             | ESCS              | 1 SD                         |             |             | 1.72        |
| Norway                      | Second-generation |                              | <b>1.95</b> | 2.86        | 3.86        |
|                             | First-generation  |                              | 1.13        | 1.90        | 2.44        |
|                             | Math. performance | 1 SD                         |             | 2.23        | 1.77        |
|                             | ESCS              | 1 SD                         |             |             | 2.56        |
| Sweden                      | Second-generation |                              | <b>1.70</b> | 2.32        | 3.29        |
|                             | First-generation  |                              | <b>1.93</b> | 4.06        | 5.70        |
|                             | Math. performance | 1 SD                         |             | 2.03        | 1.67        |
|                             | ESCS              | 1 SD                         |             |             | 2.18        |
| Switzerland                 | Second-generation |                              | 0.87        | 1.84        | 2.66        |
|                             | First-generation  |                              | 0.90        | 2.51        | 3.67        |
|                             | Math. performance | 1 SD                         |             | 3.53        | 2.89        |
|                             | ESCS              | 1 SD                         |             |             | 3.13        |
| United States               | Second-generation |                              | 1.15        | 1.39        | 2.05        |
|                             | First-generation  |                              | <b>0.76</b> | 1.00        | 1.43        |
|                             | Math. performance | 1 SD                         |             | 2.05        | 1.60        |
|                             | ESCS              | 1 SD                         |             |             | 2.18        |
| Hong Kong-China             | Second-generation |                              | 1.06        | 0.90        | 1.12        |
|                             | First-generation  |                              | <b>0.74</b> | 1.09        | 1.49        |
|                             | Math. performance | 1 SD                         |             | 2.94        | 2.75        |
|                             | ESCS              | 1 SD                         |             |             | 1.88        |
| Macao-China                 | Second-generation |                              | 1.01        | 1.01        | 1.11        |
|                             | First-generation  |                              | 0.97        | 1.07        | 1.20        |
|                             | Math. performance | 1 SD                         |             | 2.12        | 2.03        |
|                             | ESCS              | 1 SD                         |             |             | 1.38        |
| Russian Federation          | Second-generation |                              | 0.83        | 0.90        | 0.90        |
|                             | First-generation  |                              | <b>0.73</b> | 0.86        | 0.83        |
|                             | Math. performance | 1 SD                         |             | 2.77        | 2.39        |
|                             | ESCS              | 1 SD                         |             |             | 3.03        |
| Belgium (Flemish Community) | Second-generation |                              | <b>0.52</b> | 2.44        | 4.66        |
|                             | First-generation  |                              | 0.80        | 2.92        | 3.39        |
|                             | Math. performance | 1 SD                         |             | 4.22        | 3.35        |
|                             | ESCS              | 1 SD                         |             |             | 2.56        |
| Belgium (French Community)  | Second-generation |                              | <b>0.70</b> | 1.15        | 1.62        |
|                             | First-generation  |                              | 0.70        | 1.46        | 1.93        |
|                             | Math. performance | 1 SD                         |             | 2.83        | 2.20        |
|                             | ESCS              | 1 SD                         |             |             | 2.12        |

Note: Values that are statistically significant are indicated in bold.





Table 4.5  
Index of self-concept in mathematics and student performance on the mathematics scale

Results based on students' self-reports

|                   |                             | Index of self-concept in mathematics |               |                            |               |                           |               |
|-------------------|-----------------------------|--------------------------------------|---------------|----------------------------|---------------|---------------------------|---------------|
|                   |                             | Native students                      |               | Second-generation students |               | First-generation students |               |
|                   |                             | Mean index                           | S.E.          | Mean index                 | S.E.          | Mean index                | S.E.          |
| OECD countries    | Australia                   | 0.10                                 | (0.02)        | <b>0.23</b>                | (0.03)        | <b>0.28</b>               | (0.03)        |
|                   | Austria                     | 0.07                                 | (0.02)        | 0.10                       | (0.07)        | 0.09                      | (0.06)        |
|                   | Belgium                     | -0.04                                | (0.02)        | 0.02                       | (0.04)        | 0.07                      | (0.05)        |
|                   | Canada                      | 0.16                                 | (0.01)        | 0.20                       | (0.05)        | <b>0.42</b>               | (0.05)        |
|                   | Denmark                     | 0.25                                 | (0.02)        | <b>0.03</b>                | (0.09)        | 0.21                      | (0.10)        |
|                   | France                      | -0.17                                | (0.02)        | -0.20                      | (0.06)        | 0.02                      | (0.10)        |
|                   | Germany                     | 0.12                                 | (0.02)        | 0.18                       | (0.07)        | <b>0.30</b>               | (0.05)        |
|                   | Luxembourg                  | 0.05                                 | (0.02)        | 0.05                       | (0.04)        | <b>0.17</b>               | (0.04)        |
|                   | Netherlands                 | -0.01                                | (0.03)        | 0.01                       | (0.07)        | 0.04                      | (0.10)        |
|                   | New Zealand                 | 0.12                                 | (0.02)        | 0.11                       | (0.05)        | <b>0.38</b>               | (0.04)        |
| Partner countries | Norway                      | -0.18                                | (0.02)        | 0.06                       | (0.14)        | -0.21                     | (0.08)        |
|                   | Sweden                      | 0.12                                 | (0.02)        | 0.12                       | (0.08)        | 0.22                      | (0.06)        |
|                   | Switzerland                 | 0.13                                 | (0.02)        | 0.09                       | (0.04)        | <b>0.26</b>               | (0.05)        |
|                   | United States               | 0.26                                 | (0.02)        | 0.27                       | (0.06)        | 0.33                      | (0.06)        |
|                   | <b>OECD average</b>         | <b>0.07</b>                          | <b>(0.01)</b> | <b>0.09</b>                | <b>(0.02)</b> | <b>0.23</b>               | <b>(0.02)</b> |
|                   | Hong Kong-China             | -0.27                                | (0.03)        | -0.24                      | (0.04)        | -0.25                     | (0.03)        |
|                   | Macao-China                 | -0.40                                | (0.06)        | <b>-0.16</b>               | (0.04)        | <b>-0.07</b>              | (0.07)        |
|                   | Russian Federation          | <b>0.14</b>                          | (0.02)        | <b>0.07</b>                | (0.04)        | <b>0.08</b>               | (0.05)        |
|                   | Belgium (Flemish Community) | -0.07                                | (0.02)        | -0.02                      | (0.06)        | 0.05                      | (0.08)        |
|                   | Belgium (French Community)  | 0.01                                 | (0.03)        | 0.04                       | (0.06)        | 0.08                      | (0.07)        |

|                   |                             | Change in the mathematics score per unit of the index of self-concept in mathematics |       |             |                            |        |            |                           |        |            |
|-------------------|-----------------------------|--------------------------------------------------------------------------------------|-------|-------------|----------------------------|--------|------------|---------------------------|--------|------------|
|                   |                             | Native students                                                                      |       |             | Second-generation students |        |            | First-generation students |        |            |
|                   |                             | Effect                                                                               | S.E.  | %           | Effect                     | S.E.   | %          | Effect                    | S.E.   | %          |
| OECD countries    | Australia                   | <b>43.0</b>                                                                          | (1.3) | 18.1        | <b>41.5</b>                | (4.1)  | 14.5       | <b>37.7</b>               | (3.0)  | 11.5       |
|                   | Austria                     | <b>28.1</b>                                                                          | (1.8) | 11.2        | <b>20.5</b>                | (4.6)  | 6.5        | 11.4                      | (5.9)  | 1.9        |
|                   | Belgium                     | <b>25.4</b>                                                                          | (1.5) | 6.2         | 7.4                        | (6.2)  | 0.5        | <b>16.0</b>               | (6.4)  | 2.3        |
|                   | Canada                      | <b>35.9</b>                                                                          | (0.8) | 20.5        | <b>39.7</b>                | (3.0)  | 24.2       | <b>33.9</b>               | (2.7)  | 16.0       |
|                   | Denmark                     | <b>46.7</b>                                                                          | (1.3) | 29.1        | <b>29.9</b>                | (7.7)  | 10.2       | <b>36.8</b>               | (10.3) | 15.1       |
|                   | France                      | <b>29.0</b>                                                                          | (1.8) | 11.3        | <b>23.4</b>                | (4.1)  | 8.2        | <b>37.4</b>               | (10.5) | 12.5       |
|                   | Germany                     | <b>23.2</b>                                                                          | (1.6) | 8.6         | <b>35.1</b>                | (5.6)  | 15.9       | <b>26.2</b>               | (4.9)  | 9.3        |
|                   | Luxembourg                  | <b>19.9</b>                                                                          | (1.5) | 6.8         | <b>20.3</b>                | (3.7)  | 5.4        | <b>21.6</b>               | (4.1)  | 5.2        |
|                   | Netherlands                 | <b>23.5</b>                                                                          | (1.7) | 7.2         | 12.8                       | (7.3)  | 2.0        | <b>20.4</b>               | (6.4)  | 7.3        |
|                   | New Zealand                 | <b>45.1</b>                                                                          | (1.8) | 17.8        | <b>45.6</b>                | (6.4)  | 15.5       | <b>44.8</b>               | (5.4)  | 15.9       |
| Partner countries | Norway                      | <b>47.4</b>                                                                          | (1.2) | 33.6        | <b>47.0</b>                | (5.6)  | 33.9       | <b>35.2</b>               | (7.5)  | 16.5       |
|                   | Sweden                      | <b>47.9</b>                                                                          | (1.6) | 27.9        | <b>54.7</b>                | (7.0)  | 27.9       | <b>35.2</b>               | (7.2)  | 11.2       |
|                   | Switzerland                 | <b>26.3</b>                                                                          | (1.7) | 9.7         | <b>12.6</b>                | (3.8)  | 1.8        | <b>21.6</b>               | (4.9)  | 4.7        |
|                   | United States               | <b>34.5</b>                                                                          | (1.6) | 15.0        | <b>42.4</b>                | (4.9)  | 20.1       | <b>33.9</b>               | (6.9)  | 10.7       |
|                   | <b>OECD average</b>         | <b>33.3</b>                                                                          | (0.5) | <b>14.1</b> | <b>30.2</b>                | (1.3)  | <b>9.8</b> | <b>30.6</b>               | (1.6)  | <b>9.1</b> |
|                   | Hong Kong-China             | <b>39.6</b>                                                                          | (2.3) | 14.0        | <b>39.6</b>                | (3.8)  | 14.5       | <b>29.8</b>               | (4.1)  | 6.3        |
|                   | Macao-China                 | <b>29.2</b>                                                                          | (5.5) | 9.9         | <b>34.4</b>                | (4.6)  | 13.8       | <b>32.7</b>               | (9.5)  | 10.2       |
|                   | Russian Federation          | <b>40.9</b>                                                                          | (1.9) | 11.6        | <b>17.9</b>                | (6.3)  | 2.9        | <b>29.7</b>               | (7.3)  | 5.6        |
|                   | Belgium (Flemish Community) | <b>32.3</b>                                                                          | (2.0) | 10.0        | 1.5                        | (10.3) | 0.1        | 7.0                       | (10.4) | 0.5        |
|                   | Belgium (French Community)  | <b>19.4</b>                                                                          | (2.4) | 4.3         | 9.7                        | (7.6)  | 0.9        | <b>19.6</b>               | (8.8)  | 3.7        |

|                   |                             | Regression estimate of the index of self-concept in mathematics |               |                           |               |                                        |               |                           |               |
|-------------------|-----------------------------|-----------------------------------------------------------------|---------------|---------------------------|---------------|----------------------------------------|---------------|---------------------------|---------------|
|                   |                             | Accounting for ESCS                                             |               |                           |               | Accounting for mathematics performance |               |                           |               |
|                   |                             | Second-generation students                                      |               | First-generation students |               | Second-generation students             |               | First-generation students |               |
|                   |                             | Coef.                                                           | S.E.          | Coef.                     | S.E.          | Coef.                                  | S.E.          | Coef.                     | S.E.          |
| OECD countries    | Australia                   | <b>0.16</b>                                                     | (0.04)        | <b>0.18</b>               | (0.03)        | <b>0.15</b>                            | (0.03)        | <b>0.19</b>               | (0.03)        |
|                   | Austria                     | 0.09                                                            | (0.07)        | 0.08                      | (0.07)        | <b>0.24</b>                            | (0.07)        | <b>0.26</b>               | (0.07)        |
|                   | Belgium                     | <b>0.09</b>                                                     | (0.04)        | <b>0.13</b>               | (0.06)        | <b>0.27</b>                            | (0.05)        | <b>0.32</b>               | (0.06)        |
|                   | Canada                      | 0.05                                                            | (0.05)        | <b>0.24</b>               | (0.05)        | 0.00                                   | (0.04)        | <b>0.30</b>               | (0.05)        |
|                   | Denmark                     | -0.01                                                           | (0.10)        | 0.11                      | (0.10)        | 0.21                                   | (0.11)        | <b>0.35</b>               | (0.10)        |
|                   | France                      | 0.06                                                            | (0.07)        | <b>0.29</b>               | (0.10)        | <b>0.14</b>                            | (0.07)        | <b>0.46</b>               | (0.09)        |
|                   | Germany                     | 0.14                                                            | (0.08)        | <b>0.28</b>               | (0.06)        | <b>0.41</b>                            | (0.07)        | <b>0.43</b>               | (0.06)        |
|                   | Luxembourg                  | 0.04                                                            | (0.05)        | <b>0.18</b>               | (0.05)        | <b>0.10</b>                            | (0.05)        | <b>0.26</b>               | (0.04)        |
|                   | Netherlands                 | 0.05                                                            | (0.08)        | 0.07                      | (0.10)        | <b>0.18</b>                            | (0.07)        | <b>0.29</b>               | (0.10)        |
|                   | New Zealand                 | 0.06                                                            | (0.06)        | <b>0.24</b>               | (0.04)        | <b>0.12</b>                            | (0.06)        | <b>0.27</b>               | (0.04)        |
| Partner countries | Norway                      | <b>0.38</b>                                                     | (0.12)        | 0.17                      | (0.09)        | <b>0.52</b>                            | (0.12)        | <b>0.40</b>               | (0.09)        |
|                   | Sweden                      | 0.12                                                            | (0.07)        | <b>0.25</b>               | (0.06)        | <b>0.19</b>                            | (0.06)        | <b>0.60</b>               | (0.06)        |
|                   | Switzerland                 | -0.02                                                           | (0.04)        | <b>0.16</b>               | (0.06)        | <b>0.16</b>                            | (0.04)        | <b>0.44</b>               | (0.06)        |
|                   | United States               | 0.10                                                            | (0.06)        | <b>0.18</b>               | (0.06)        | 0.10                                   | (0.06)        | <b>0.22</b>               | (0.06)        |
|                   | <b>OECD average</b>         | <b>0.10</b>                                                     | <b>(0.02)</b> | <b>0.23</b>               | <b>(0.02)</b> | <b>0.18</b>                            | <b>(0.02)</b> | <b>0.35</b>               | <b>(0.02)</b> |
|                   | Hong Kong-China             | 0.05                                                            | (0.03)        | 0.07                      | (0.04)        | -0.02                                  | (0.03)        | <b>0.15</b>               | (0.04)        |
|                   | Macao-China                 | <b>0.23</b>                                                     | (0.08)        | <b>0.33</b>               | (0.09)        | <b>0.22</b>                            | (0.07)        | <b>0.36</b>               | (0.08)        |
|                   | Russian Federation          | <b>-0.06</b>                                                    | <b>(0.05)</b> | <b>-0.05</b>              | <b>(0.05)</b> | <b>-0.03</b>                           | <b>(0.04)</b> | <b>0.00</b>               | <b>(0.05)</b> |
|                   | Belgium (Flemish Community) | <b>0.13</b>                                                     | (0.06)        | <b>0.18</b>               | (0.08)        | <b>0.41</b>                            | (0.07)        | <b>0.40</b>               | (0.09)        |
|                   | Belgium (French Community)  | 0.02                                                            | (0.07)        | 0.05                      | (0.08)        | 0.14                                   | (0.07)        | <b>0.22</b>               | (0.08)        |

Note: Values that are statistically significant are indicated in bold.

Table 4.6  
Index of self-efficacy in mathematics and student performance on the mathematics scale

Results based on students' self-reports

|                                                                                       |                             | Index of self-efficacy in mathematics                       |               |                            |                                                             |                                        |               |                                                             |               |                           |
|---------------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------|---------------|----------------------------|-------------------------------------------------------------|----------------------------------------|---------------|-------------------------------------------------------------|---------------|---------------------------|
|                                                                                       |                             | Native students                                             |               | Second-generation students |                                                             | First-generation students              |               |                                                             |               |                           |
|                                                                                       |                             | Mean index                                                  | S.E.          | Mean index                 | S.E.                                                        | Mean index                             | S.E.          |                                                             |               |                           |
| OECD countries                                                                        | Australia                   | 0.08                                                        | (0.02)        | <b>0.21</b>                | (0.04)                                                      | <b>0.24</b>                            | (0.04)        |                                                             |               |                           |
|                                                                                       | Austria                     | 0.20                                                        | (0.02)        | <b>-0.17</b>               | (0.09)                                                      | <b>-0.10</b>                           | (0.05)        |                                                             |               |                           |
|                                                                                       | Belgium                     | -0.04                                                       | (0.02)        | -0.03                      | (0.06)                                                      | <b>-0.19</b>                           | (0.06)        |                                                             |               |                           |
|                                                                                       | Canada                      | 0.24                                                        | (0.02)        | 0.23                       | (0.04)                                                      | <b>0.40</b>                            | (0.04)        |                                                             |               |                           |
|                                                                                       | Denmark                     | -0.06                                                       | (0.02)        | <b>-0.23</b>               | (0.07)                                                      | -0.10                                  | (0.07)        |                                                             |               |                           |
|                                                                                       | France                      | 0.01                                                        | (0.03)        | <b>-0.13</b>               | (0.05)                                                      | -0.09                                  | (0.11)        |                                                             |               |                           |
|                                                                                       | Germany                     | 0.19                                                        | (0.02)        | <b>-0.09</b>               | (0.07)                                                      | <b>0.01</b>                            | (0.06)        |                                                             |               |                           |
|                                                                                       | Luxembourg                  | 0.19                                                        | (0.02)        | <b>-0.05</b>               | (0.04)                                                      | <b>-0.07</b>                           | (0.04)        |                                                             |               |                           |
|                                                                                       | Netherlands                 | -0.08                                                       | (0.02)        | -0.15                      | (0.06)                                                      | -0.17                                  | (0.08)        |                                                             |               |                           |
|                                                                                       | New Zealand                 | -0.02                                                       | (0.02)        | -0.07                      | (0.05)                                                      | <b>0.23</b>                            | (0.04)        |                                                             |               |                           |
| Partner countries                                                                     | Norway                      | -0.04                                                       | (0.03)        | 0.13                       | (0.13)                                                      | -0.18                                  | (0.08)        |                                                             |               |                           |
|                                                                                       | Sweden                      | 0.03                                                        | (0.03)        | 0.16                       | (0.08)                                                      | -0.04                                  | (0.07)        |                                                             |               |                           |
|                                                                                       | Switzerland                 | 0.38                                                        | (0.03)        | <b>0.13</b>                | (0.04)                                                      | <b>0.13</b>                            | (0.04)        |                                                             |               |                           |
|                                                                                       | United States               | 0.29                                                        | (0.02)        | 0.22                       | (0.07)                                                      | 0.24                                   | (0.07)        |                                                             |               |                           |
|                                                                                       | <b>OECD average</b>         | <b>0.09</b>                                                 | <b>(0.01)</b> | <b>0.02</b>                | <b>(0.02)</b>                                               | <b>0.07</b>                            | <b>(0.02)</b> |                                                             |               |                           |
|                                                                                       | Hong Kong-China             | 0.15                                                        | (0.03)        | 0.18                       | (0.03)                                                      | <b>-0.05</b>                           | (0.03)        |                                                             |               |                           |
|                                                                                       | Macao-China                 | 0.00                                                        | (0.06)        | 0.09                       | (0.05)                                                      | 0.17                                   | (0.07)        |                                                             |               |                           |
|                                                                                       | Russian Federation          | -0.07                                                       | (0.02)        | <b>-0.14</b>               | (0.05)                                                      | <b>-0.13</b>                           | (0.05)        |                                                             |               |                           |
|                                                                                       | Belgium (Flemish Community) | -0.15                                                       | (0.02)        | -0.25                      | (0.06)                                                      | <b>-0.36</b>                           | (0.07)        |                                                             |               |                           |
|                                                                                       | Belgium (French Community)  | 0.13                                                        | (0.03)        | 0.08                       | (0.08)                                                      | <b>-0.11</b>                           | (0.09)        |                                                             |               |                           |
| Change in the mathematics score per unit of the index of self-efficacy in mathematics |                             |                                                             |               |                            |                                                             |                                        |               |                                                             |               |                           |
|                                                                                       |                             | Explained variance in student performance (r-squared x 100) |               |                            | Explained variance in student performance (r-squared x 100) |                                        |               | Explained variance in student performance (r-squared x 100) |               |                           |
|                                                                                       |                             | Native students                                             |               | Second-generation students |                                                             | First-generation students              |               | Native students                                             |               | First-generation students |
|                                                                                       |                             | Effect                                                      | S.E.          | Effect                     | S.E.                                                        | Effect                                 | S.E.          | Effect                                                      | S.E.          | Effect                    |
| OECD countries                                                                        | Australia                   | <b>49.5</b>                                                 | (1.2)         | <b>47.6</b>                | (3.3)                                                       | 24.2                                   | (3.7)         | <b>52.2</b>                                                 | (3.7)         | 29.2                      |
|                                                                                       | Austria                     | <b>45.7</b>                                                 | (1.8)         | <b>38.9</b>                | (6.8)                                                       | 18.8                                   | (5.9)         | <b>29.4</b>                                                 | (5.9)         | 9.3                       |
|                                                                                       | Belgium                     | <b>45.9</b>                                                 | (1.3)         | <b>39.2</b>                | (4.6)                                                       | 15.9                                   | (5.9)         | <b>34.8</b>                                                 | (5.9)         | 12.9                      |
|                                                                                       | Canada                      | <b>42.8</b>                                                 | (0.9)         | <b>47.5</b>                | (2.6)                                                       | 33.9                                   | (2.8)         | <b>48.1</b>                                                 | (2.8)         | 30.3                      |
|                                                                                       | Denmark                     | <b>50.7</b>                                                 | (1.9)         | <b>43.5</b>                | (9.8)                                                       | 15.3                                   | (10.9)        | <b>41.8</b>                                                 | (10.9)        | 14.8                      |
|                                                                                       | France                      | <b>46.1</b>                                                 | (1.6)         | <b>44.2</b>                | (5.1)                                                       | 22.7                                   | (9.0)         | <b>62.8</b>                                                 | (9.0)         | 31.0                      |
|                                                                                       | Germany                     | <b>48.2</b>                                                 | (1.8)         | <b>42.8</b>                | (6.2)                                                       | 23.8                                   | (6.1)         | <b>51.5</b>                                                 | (6.1)         | 26.1                      |
|                                                                                       | Luxembourg                  | <b>37.0</b>                                                 | (1.6)         | <b>40.8</b>                | (3.8)                                                       | 20.4                                   | (3.4)         | <b>49.0</b>                                                 | (3.4)         | 25.3                      |
|                                                                                       | Netherlands                 | <b>44.4</b>                                                 | (2.2)         | <b>36.2</b>                | (6.2)                                                       | 11.7                                   | (9.9)         | <b>45.4</b>                                                 | (9.9)         | 21.1                      |
|                                                                                       | New Zealand                 | <b>52.8</b>                                                 | (1.6)         | <b>57.4</b>                | (6.6)                                                       | 28.7                                   | (4.6)         | <b>46.4</b>                                                 | (4.6)         | 22.9                      |
| Partner countries                                                                     | Norway                      | <b>46.8</b>                                                 | (1.6)         | <b>49.0</b>                | (5.3)                                                       | 36.7                                   | (6.7)         | <b>41.1</b>                                                 | (6.7)         | 20.8                      |
|                                                                                       | Sweden                      | <b>53.7</b>                                                 | (1.7)         | <b>52.1</b>                | (6.0)                                                       | 29.6                                   | (6.1)         | <b>41.3</b>                                                 | (6.1)         | 22.0                      |
|                                                                                       | Switzerland                 | <b>50.7</b>                                                 | (2.2)         | <b>46.0</b>                | (5.9)                                                       | 21.8                                   | (5.2)         | <b>53.9</b>                                                 | (5.2)         | 24.3                      |
|                                                                                       | United States               | <b>45.9</b>                                                 | (1.4)         | <b>53.1</b>                | (4.5)                                                       | 37.7                                   | (5.2)         | <b>43.4</b>                                                 | (5.2)         | 22.6                      |
|                                                                                       | <b>OECD average</b>         | <b>45.9</b>                                                 | <b>(0.5)</b>  | <b>47.2</b>                | <b>(1.4)</b>                                                | <b>24.0</b>                            | <b>(1.5)</b>  | <b>49.8</b>                                                 | <b>(1.5)</b>  | <b>24.1</b>               |
|                                                                                       | Hong Kong-China             | <b>53.7</b>                                                 | (2.5)         | <b>51.5</b>                | (2.8)                                                       | 31.3                                   | (4.2)         | <b>52.6</b>                                                 | (4.2)         | 25.3                      |
|                                                                                       | Macao-China                 | <b>40.1</b>                                                 | (6.3)         | <b>43.4</b>                | (3.8)                                                       | 19.3                                   | (7.2)         | <b>45.8</b>                                                 | (7.2)         | 22.8                      |
|                                                                                       | Russian Federation          | <b>49.1</b>                                                 | (2.0)         | <b>28.5</b>                | (5.6)                                                       | 8.1                                    | (5.9)         | <b>39.3</b>                                                 | (5.9)         | 13.3                      |
|                                                                                       | Belgium (Flemish Community) | <b>54.1</b>                                                 | (1.8)         | <b>44.2</b>                | (11.7)                                                      | 11.8                                   | (11.2)        | <b>35.2</b>                                                 | (11.2)        | 11.0                      |
|                                                                                       | Belgium (French Community)  | <b>47.3</b>                                                 | (2.3)         | <b>37.8</b>                | (5.0)                                                       | 17.8                                   | (7.4)         | <b>36.6</b>                                                 | (7.4)         | 15.6                      |
| Regression estimate of the index of self-efficacy in mathematics                      |                             |                                                             |               |                            |                                                             |                                        |               |                                                             |               |                           |
|                                                                                       |                             | Accounting for ESCS                                         |               |                            |                                                             | Accounting for mathematics performance |               |                                                             |               |                           |
|                                                                                       |                             | Second-generation students                                  |               | First-generation students  |                                                             | Second-generation students             |               | First-generation students                                   |               |                           |
|                                                                                       |                             | Coef.                                                       | S.E.          | Coef.                      | S.E.                                                        | Coef.                                  | S.E.          | Coef.                                                       | S.E.          |                           |
| OECD countries                                                                        | Australia                   | <b>0.20</b>                                                 | (0.04)        | <b>0.17</b>                | (0.04)                                                      | <b>0.16</b>                            | (0.03)        | <b>0.17</b>                                                 | (0.03)        |                           |
|                                                                                       | Austria                     | <b>-0.17</b>                                                | (0.09)        | <b>-0.12</b>               | (0.05)                                                      | -0.07                                  | (0.08)        | 0.05                                                        | (0.06)        |                           |
|                                                                                       | Belgium                     | <b>0.28</b>                                                 | (0.05)        | 0.04                       | (0.06)                                                      | <b>0.39</b>                            | (0.05)        | <b>0.23</b>                                                 | (0.06)        |                           |
|                                                                                       | Canada                      | 0.01                                                        | (0.04)        | <b>0.13</b>                | (0.04)                                                      | -0.05                                  | (0.03)        | <b>0.20</b>                                                 | (0.03)        |                           |
|                                                                                       | Denmark                     | 0.08                                                        | (0.07)        | <b>0.15</b>                | (0.07)                                                      | <b>0.22</b>                            | (0.07)        | <b>0.31</b>                                                 | (0.07)        |                           |
|                                                                                       | France                      | <b>0.13</b>                                                 | (0.06)        | 0.16                       | (0.09)                                                      | <b>0.12</b>                            | (0.05)        | <b>0.29</b>                                                 | (0.07)        |                           |
|                                                                                       | Germany                     | 0.06                                                        | (0.08)        | <b>0.18</b>                | (0.06)                                                      | <b>0.24</b>                            | (0.06)        | <b>0.20</b>                                                 | (0.05)        |                           |
|                                                                                       | Luxembourg                  | <b>-0.11</b>                                                | (0.05)        | -0.06                      | (0.05)                                                      | <b>-0.08</b>                           | (0.04)        | -0.02                                                       | (0.04)        |                           |
|                                                                                       | Netherlands                 | <b>0.12</b>                                                 | (0.06)        | 0.05                       | (0.08)                                                      | <b>0.22</b>                            | (0.06)        | <b>0.30</b>                                                 | (0.08)        |                           |
|                                                                                       | New Zealand                 | 0.08                                                        | (0.05)        | <b>0.23</b>                | (0.04)                                                      | <b>0.12</b>                            | (0.05)        | <b>0.27</b>                                                 | (0.04)        |                           |
| Partner countries                                                                     | Norway                      | <b>0.32</b>                                                 | (0.11)        | 0.08                       | (0.08)                                                      | <b>0.43</b>                            | (0.09)        | <b>0.27</b>                                                 | (0.08)        |                           |
|                                                                                       | Sweden                      | <b>0.33</b>                                                 | (0.07)        | <b>0.17</b>                | (0.07)                                                      | <b>0.34</b>                            | (0.05)        | <b>0.51</b>                                                 | (0.07)        |                           |
|                                                                                       | Switzerland                 | -0.06                                                       | (0.05)        | -0.01                      | (0.04)                                                      | <b>0.11</b>                            | (0.05)        | <b>0.28</b>                                                 | (0.04)        |                           |
|                                                                                       | United States               | <b>0.13</b>                                                 | (0.06)        | <b>0.18</b>                | (0.06)                                                      | 0.06                                   | (0.05)        | <b>0.15</b>                                                 | (0.07)        |                           |
|                                                                                       | <b>OECD average</b>         | <b>0.12</b>                                                 | <b>(0.02)</b> | <b>0.13</b>                | <b>(0.02)</b>                                               | <b>0.15</b>                            | <b>(0.01)</b> | <b>0.23</b>                                                 | <b>(0.01)</b> |                           |
|                                                                                       | Hong Kong-China             | <b>0.12</b>                                                 | (0.03)        | -0.04                      | (0.04)                                                      | -0.04                                  | (0.04)        | 0.04                                                        | (0.03)        |                           |
|                                                                                       | Macao-China                 | 0.12                                                        | (0.08)        | <b>0.20</b>                | (0.08)                                                      | 0.07                                   | (0.07)        | <b>0.21</b>                                                 | (0.08)        |                           |
|                                                                                       | Russian Federation          | -0.06                                                       | (0.05)        | <b>-0.05</b>               | (0.05)                                                      | <b>-0.01</b>                           | (0.05)        | <b>0.03</b>                                                 | (0.04)        |                           |
|                                                                                       | Belgium (Flemish Community) | <b>0.17</b>                                                 | (0.06)        | -0.05                      | (0.08)                                                      | <b>0.41</b>                            | (0.05)        | <b>0.20</b>                                                 | (0.08)        |                           |
|                                                                                       | Belgium (French Community)  | <b>0.24</b>                                                 | (0.06)        | 0.00                       | (0.09)                                                      | <b>0.26</b>                            | (0.07)        | <b>0.16</b>                                                 | (0.08)        |                           |

Note: Values that are statistically significant are indicated in bold.



Table 4.7  
Index of anxiety in mathematics and student performance on the mathematics scale

Results based on students' self-reports

|                   |                             | Index of anxiety in mathematics |               |                            |               |                           |               |
|-------------------|-----------------------------|---------------------------------|---------------|----------------------------|---------------|---------------------------|---------------|
|                   |                             | Native students                 |               | Second-generation students |               | First-generation students |               |
|                   |                             | Mean index                      | S.E.          | Mean index                 | S.E.          | Mean index                | S.E.          |
| OECD countries    | Australia                   | -0.05                           | (0.01)        | -0.09                      | (0.03)        | -0.07                     | (0.03)        |
|                   | Austria                     | -0.29                           | (0.03)        | -0.21                      | (0.09)        | <b>-0.08</b>              | (0.06)        |
|                   | Belgium                     | 0.06                            | (0.02)        | <b>0.31</b>                | (0.05)        | <b>0.20</b>               | (0.05)        |
|                   | Canada                      | -0.05                           | (0.01)        | 0.01                       | (0.05)        | -0.12                     | (0.04)        |
|                   | Denmark                     | -0.48                           | (0.02)        | <b>-0.02</b>               | (0.08)        | <b>-0.21</b>              | (0.09)        |
|                   | France                      | 0.31                            | (0.02)        | <b>0.50</b>                | (0.05)        | 0.42                      | (0.11)        |
|                   | Germany                     | -0.28                           | (0.02)        | <b>-0.06</b>               | (0.08)        | -0.19                     | (0.06)        |
|                   | Luxembourg                  | -0.08                           | (0.02)        | <b>0.20</b>                | (0.05)        | <b>0.09</b>               | (0.04)        |
|                   | Netherlands                 | -0.42                           | (0.02)        | <b>-0.13</b>               | (0.06)        | <b>-0.13</b>              | (0.10)        |
|                   | New Zealand                 | -0.11                           | (0.02)        | <b>0.11</b>                | (0.07)        | -0.17                     | (0.04)        |
| Partner countries | Norway                      | -0.06                           | (0.02)        | -0.13                      | (0.13)        | <b>0.26</b>               | (0.09)        |
|                   | Sweden                      | -0.53                           | (0.02)        | <b>-0.25</b>               | (0.08)        | <b>-0.25</b>              | (0.07)        |
|                   | Switzerland                 | -0.35                           | (0.03)        | <b>-0.04</b>               | (0.05)        | <b>-0.12</b>              | (0.06)        |
|                   | United States               | -0.12                           | (0.02)        | -0.09                      | (0.06)        | 0.00                      | (0.07)        |
|                   | <b>OECD average</b>         | <b>-0.18</b>                    | <b>(0.01)</b> | <b>0.05</b>                | <b>(0.02)</b> | <b>-0.05</b>              | <b>(0.02)</b> |
|                   | Hong Kong-China             | 0.24                            | (0.02)        | 0.21                       | (0.04)        | 0.22                      | (0.03)        |
|                   | Macao-China                 | 0.48                            | (0.05)        | <b>0.20</b>                | (0.05)        | <b>0.02</b>               | (0.08)        |
|                   | Russian Federation          | 0.14                            | (0.02)        | 0.10                       | (0.05)        | 0.22                      | (0.04)        |
|                   | Belgium (Flemish Community) | 0.01                            | (0.02)        | <b>0.31</b>                | (0.08)        | 0.00                      | (0.06)        |
|                   | Belgium (French Community)  | 0.15                            | (0.03)        | <b>0.31</b>                | (0.06)        | <b>0.31</b>               | (0.06)        |

|                   |                             | Change in the mathematics score per unit of the index of anxiety in mathematics |              |                            |              |                           |               |
|-------------------|-----------------------------|---------------------------------------------------------------------------------|--------------|----------------------------|--------------|---------------------------|---------------|
|                   |                             | Native students                                                                 |              | Second-generation students |              | First-generation students |               |
|                   |                             | Effect                                                                          | S.E.         | Effect                     | S.E.         | Effect                    | S.E.          |
| OECD countries    | Australia                   | <b>-38.0</b>                                                                    | (1.5)        | <b>-33.0</b>               | (3.7)        | 9.6                       | (3.7)         |
|                   | Austria                     | <b>-24.5</b>                                                                    | (1.8)        | <b>-23.8</b>               | (4.6)        | 10.5                      | (5.1)         |
|                   | Belgium                     | <b>-24.0</b>                                                                    | (1.5)        | <b>-16.6</b>               | (5.6)        | 2.6                       | (4.1)         |
|                   | Canada                      | <b>-32.1</b>                                                                    | (0.8)        | <b>-32.8</b>               | (3.1)        | 17.2                      | (2.8)         |
|                   | Denmark                     | <b>-43.8</b>                                                                    | (1.5)        | <b>-33.8</b>               | (8.9)        | 11.7                      | (8.4)         |
|                   | France                      | <b>-23.1</b>                                                                    | (1.7)        | <b>-22.1</b>               | (6.1)        | 5.0                       | (8.3)         |
|                   | Germany                     | <b>-25.0</b>                                                                    | (1.3)        | <b>-33.7</b>               | (5.4)        | 15.1                      | (4.8)         |
|                   | Luxembourg                  | <b>-23.1</b>                                                                    | (1.5)        | <b>-26.7</b>               | (3.9)        | 9.0                       | (4.3)         |
|                   | Netherlands                 | <b>-20.9</b>                                                                    | (2.3)        | -16.5                      | (7.4)        | 2.6                       | (6.2)         |
|                   | New Zealand                 | <b>-46.6</b>                                                                    | (1.7)        | <b>-53.7</b>               | (5.7)        | 22.1                      | (4.9)         |
| Partner countries | Norway                      | <b>-42.6</b>                                                                    | (1.3)        | <b>-31.1</b>               | (7.4)        | 16.5                      | (7.2)         |
|                   | Sweden                      | <b>-41.2</b>                                                                    | (1.6)        | <b>-42.4</b>               | (7.4)        | 18.8                      | (6.0)         |
|                   | Switzerland                 | <b>-25.6</b>                                                                    | (2.0)        | <b>-20.7</b>               | (4.7)        | 4.6                       | (4.3)         |
|                   | United States               | <b>-32.4</b>                                                                    | (1.6)        | <b>-42.9</b>               | (4.6)        | 20.5                      | (6.2)         |
|                   | <b>OECD average</b>         | <b>-30.5</b>                                                                    | <b>(0.5)</b> | <b>-30.1</b>               | <b>(1.4)</b> | 9.7                       | <b>(1.4)</b>  |
|                   | Hong Kong-China             | <b>-30.4</b>                                                                    | (2.9)        | <b>-36.4</b>               | (3.8)        | 11.1                      | (4.3)         |
|                   | Macao-China                 | <b>-28.4</b>                                                                    | (5.2)        | <b>-30.1</b>               | (4.5)        | 12.7                      | <b>(10.2)</b> |
|                   | Russian Federation          | <b>-46.2</b>                                                                    | (1.8)        | <b>-20.7</b>               | (6.6)        | 4.3                       | <b>(7.3)</b>  |
|                   | Belgium (Flemish Community) | <b>-22.2</b>                                                                    | (1.9)        | <b>-22.5</b>               | (10.3)       | 4.2                       | (8.7)         |
|                   | Belgium (French Community)  | <b>-22.5</b>                                                                    | (2.8)        | <b>-13.9</b>               | (7.0)        | 2.0                       | (6.3)         |

|                   |                             | Regression estimate of the index of anxiety in mathematics |               |                           |               |                                        |               |                           |               |
|-------------------|-----------------------------|------------------------------------------------------------|---------------|---------------------------|---------------|----------------------------------------|---------------|---------------------------|---------------|
|                   |                             | Accounting for ESCS                                        |               |                           |               | Accounting for mathematics performance |               |                           |               |
|                   |                             | Second-generation students                                 |               | First-generation students |               | Second-generation students             |               | First-generation students |               |
|                   |                             | Coef.                                                      | S.E.          | Coef.                     | S.E.          | Coef.                                  | S.E.          | Coef.                     | S.E.          |
| OECD countries    | Australia                   | <b>-0.07</b>                                               | (0.03)        | -0.02                     | (0.03)        | -0.06                                  | (0.03)        | -0.02                     | (0.03)        |
|                   | Austria                     | 0.02                                                       | (0.09)        | <b>0.16</b>               | (0.06)        | -0.12                                  | (0.09)        | -0.03                     | (0.07)        |
|                   | Belgium                     | <b>0.23</b>                                                | (0.04)        | <b>0.12</b>               | (0.05)        | 0.06                                   | (0.05)        | -0.05                     | (0.04)        |
|                   | Canada                      | 0.05                                                       | (0.05)        | -0.07                     | (0.04)        | 0.09                                   | (0.05)        | <b>-0.11</b>              | (0.04)        |
|                   | Denmark                     | <b>0.23</b>                                                | (0.09)        | 0.10                      | (0.09)        | 0.04                                   | (0.09)        | -0.13                     | (0.09)        |
|                   | France                      | <b>0.14</b>                                                | (0.05)        | 0.05                      | (0.12)        | 0.07                                   | (0.05)        | -0.06                     | (0.10)        |
|                   | Germany                     | 0.08                                                       | (0.08)        | -0.06                     | (0.07)        | <b>-0.18</b>                           | (0.07)        | <b>-0.21</b>              | (0.06)        |
|                   | Luxembourg                  | <b>0.23</b>                                                | (0.05)        | 0.07                      | (0.05)        | <b>0.16</b>                            | (0.04)        | -0.01                     | (0.04)        |
|                   | Netherlands                 | <b>0.28</b>                                                | (0.06)        | <b>0.28</b>               | (0.10)        | <b>0.17</b>                            | (0.05)        | 0.11                      | (0.09)        |
|                   | New Zealand                 | <b>0.16</b>                                                | (0.07)        | -0.06                     | (0.04)        | 0.09                                   | (0.07)        | <b>-0.08</b>              | (0.04)        |
| Partner countries | Norway                      | -0.16                                                      | (0.13)        | 0.15                      | (0.08)        | <b>-0.30</b>                           | (0.12)        | -0.05                     | (0.07)        |
|                   | Sweden                      | <b>0.19</b>                                                | (0.07)        | <b>0.15</b>               | (0.07)        | 0.12                                   | (0.06)        | <b>-0.16</b>              | (0.05)        |
|                   | Switzerland                 | <b>0.29</b>                                                | (0.06)        | <b>0.21</b>               | (0.07)        | 0.11                                   | (0.06)        | -0.10                     | (0.08)        |
|                   | United States               | -0.06                                                      | (0.07)        | 0.00                      | (0.07)        | -0.06                                  | (0.06)        | -0.03                     | (0.07)        |
|                   | <b>OECD average</b>         | <b>0.16</b>                                                | <b>(0.02)</b> | <b>0.06</b>               | <b>(0.02)</b> | <b>0.08</b>                            | <b>(0.02)</b> | <b>-0.05</b>              | <b>(0.02)</b> |
|                   | Hong Kong-China             | -0.04                                                      | (0.04)        | -0.05                     | (0.04)        | 0.01                                   | (0.04)        | <b>-0.12</b>              | (0.04)        |
|                   | Macao-China                 | <b>-0.28</b>                                               | (0.07)        | <b>-0.44</b>              | (0.09)        | <b>-0.26</b>                           | (0.07)        | <b>-0.49</b>              | (0.10)        |
|                   | Russian Federation          | <b>-0.04</b>                                               | <b>(0.05)</b> | <b>0.08</b>               | <b>(0.05)</b> | <b>-0.08</b>                           | <b>(0.04)</b> | <b>0.02</b>               | <b>(0.05)</b> |
|                   | Belgium (Flemish Community) | <b>0.26</b>                                                | (0.08)        | -0.05                     | (0.06)        | 0.06                                   | (0.08)        | <b>-0.20</b>              | (0.06)        |
|                   | Belgium (French Community)  | <b>0.16</b>                                                | (0.05)        | <b>0.15</b>               | (0.06)        | 0.04                                   | (0.06)        | 0.01                      | (0.06)        |

Note: Values that are statistically significant are indicated in bold.

Table 4.8  
Index of attitudes towards school and student performance on the mathematics scale

Results based on students' self-reports

|                                                                                   |                             | Index of attitudes towards school                           |               |                            |                                                             |                                        |               |                                                             |               |                            |              |
|-----------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------|---------------|----------------------------|-------------------------------------------------------------|----------------------------------------|---------------|-------------------------------------------------------------|---------------|----------------------------|--------------|
|                                                                                   |                             | Native students                                             |               | Second-generation students |                                                             | First-generation students              |               |                                                             |               |                            |              |
|                                                                                   |                             | Mean index                                                  | S.E.          | Mean index                 | S.E.                                                        | Mean index                             | S.E.          |                                                             |               |                            |              |
| OECD countries                                                                    | Australia                   | 0.24                                                        | (0.02)        | <b>0.33</b>                | (0.03)                                                      | 0.29                                   | (0.04)        |                                                             |               |                            |              |
|                                                                                   | Austria                     | 0.09                                                        | (0.02)        | 0.20                       | (0.09)                                                      | <b>0.31</b>                            | (0.06)        |                                                             |               |                            |              |
|                                                                                   | Belgium                     | -0.21                                                       | (0.02)        | <b>-0.01</b>               | (0.05)                                                      | <b>0.03</b>                            | (0.08)        |                                                             |               |                            |              |
|                                                                                   | Canada                      | 0.02                                                        | (0.01)        | <b>0.14</b>                | (0.04)                                                      | <b>0.25</b>                            | (0.04)        |                                                             |               |                            |              |
|                                                                                   | Denmark                     | -0.04                                                       | (0.02)        | 0.09                       | (0.09)                                                      | 0.05                                   | (0.10)        |                                                             |               |                            |              |
|                                                                                   | France                      | 0.12                                                        | (0.02)        | <b>0.26</b>                | (0.06)                                                      | <b>0.35</b>                            | (0.08)        |                                                             |               |                            |              |
|                                                                                   | Germany                     | -0.12                                                       | (0.02)        | <b>0.08</b>                | (0.08)                                                      | <b>0.13</b>                            | (0.07)        |                                                             |               |                            |              |
|                                                                                   | Luxembourg                  | -0.33                                                       | (0.02)        | <b>-0.09</b>               | (0.04)                                                      | <b>0.05</b>                            | (0.04)        |                                                             |               |                            |              |
|                                                                                   | Netherlands                 | -0.22                                                       | (0.02)        | <b>-0.02</b>               | (0.06)                                                      | <b>0.19</b>                            | (0.08)        |                                                             |               |                            |              |
|                                                                                   | New Zealand                 | 0.05                                                        | (0.02)        | <b>0.39</b>                | (0.06)                                                      | <b>0.20</b>                            | (0.04)        |                                                             |               |                            |              |
| Partner countries                                                                 | Norway                      | -0.22                                                       | (0.02)        | -0.15                      | (0.16)                                                      | <b>0.04</b>                            | (0.09)        |                                                             |               |                            |              |
|                                                                                   | Sweden                      | 0.00                                                        | (0.02)        | 0.17                       | (0.08)                                                      | <b>0.27</b>                            | (0.06)        |                                                             |               |                            |              |
|                                                                                   | Switzerland                 | 0.00                                                        | (0.02)        | 0.13                       | (0.06)                                                      | <b>0.21</b>                            | (0.04)        |                                                             |               |                            |              |
|                                                                                   | United States               | 0.09                                                        | (0.02)        | 0.16                       | (0.05)                                                      | 0.17                                   | (0.08)        |                                                             |               |                            |              |
|                                                                                   | <b>OECD average</b>         | <b>-0.04</b>                                                | <b>(0.00)</b> | <b>0.13</b>                | <b>(0.02)</b>                                               | <b>0.18</b>                            | <b>(0.02)</b> |                                                             |               |                            |              |
|                                                                                   | Hong Kong-China             | -0.52                                                       | (0.02)        | -0.54                      | (0.02)                                                      | -0.50                                  | (0.02)        |                                                             |               |                            |              |
|                                                                                   | Macao-China                 | -0.35                                                       | (0.04)        | -0.37                      | (0.05)                                                      | -0.41                                  | (0.07)        |                                                             |               |                            |              |
|                                                                                   | Russian Federation          | 0.20                                                        | (0.03)        | 0.09                       | (0.05)                                                      | 0.18                                   | (0.05)        |                                                             |               |                            |              |
|                                                                                   | Belgium (Flemish Community) | -0.27                                                       | (0.02)        | <b>-0.03</b>               | (0.07)                                                      | -0.13                                  | (0.10)        |                                                             |               |                            |              |
|                                                                                   | Belgium (French Community)  | -0.11                                                       | (0.03)        | 0.00                       | (0.07)                                                      | 0.11                                   | (0.11)        |                                                             |               |                            |              |
| Change in the mathematics score per unit of the index of attitudes towards school |                             |                                                             |               |                            |                                                             |                                        |               |                                                             |               |                            |              |
|                                                                                   |                             | Explained variance in student performance (r-squared x 100) |               |                            | Explained variance in student performance (r-squared x 100) |                                        |               | Explained variance in student performance (r-squared x 100) |               |                            |              |
|                                                                                   |                             | Native students                                             |               | Second-generation students |                                                             | First-generation students              |               | Native students                                             |               | Second-generation students |              |
|                                                                                   |                             | Effect                                                      | S.E.          | Effect                     | S.E.                                                        | Effect                                 | S.E.          | Effect                                                      | S.E.          | Effect                     | S.E.         |
| OECD countries                                                                    | Australia                   | <b>15.4</b>                                                 | (1.2)         | <b>5.0</b>                 | (2.2)                                                       | 0.3                                    |               | <b>11.0</b>                                                 | (3.5)         | 1.4                        |              |
|                                                                                   | Austria                     | 0.6                                                         | (1.6)         | <b>-15.6</b>               | (6.9)                                                       | 4.8                                    |               | <b>-10.4</b>                                                | (5.1)         | 1.7                        |              |
|                                                                                   | Belgium                     | -1.3                                                        | (2.0)         | 0.0                        |                                                             | 0.4                                    |               | -0.6                                                        | (6.8)         | 0.0                        |              |
|                                                                                   | Canada                      | <b>8.2</b>                                                  | (0.9)         | 1.0                        |                                                             | <b>11.1</b>                            | (3.7)         | 1.8                                                         |               | -2.7                       | (3.3)        |
|                                                                                   | Denmark                     | <b>8.6</b>                                                  | (1.9)         | 0.8                        |                                                             | 10.1                                   | (12.4)        | 1.4                                                         |               | -12.1                      | (8.0)        |
|                                                                                   | France                      | <b>9.7</b>                                                  | (1.9)         | 1.2                        |                                                             | 1.2                                    | (4.8)         | 0.0                                                         |               | <b>-13.9</b>               | (6.6)        |
|                                                                                   | Germany                     | <b>-4.6</b>                                                 | (1.8)         | 0.3                        |                                                             | -7.8                                   | (7.0)         | 0.7                                                         |               | <b>-18.1</b>               | (5.8)        |
|                                                                                   | Luxembourg                  | <b>-4.9</b>                                                 | (1.9)         | 0.3                        |                                                             | <b>-9.2</b>                            | (4.1)         | 1.1                                                         |               | <b>-11.7</b>               | (3.6)        |
|                                                                                   | Netherlands                 | <b>9.0</b>                                                  | (2.6)         | 0.6                        |                                                             | -4.2                                   | (8.9)         | 0.2                                                         |               | -8.8                       | (7.4)        |
|                                                                                   | New Zealand                 | <b>16.8</b>                                                 | (1.8)         | 3.1                        |                                                             | 3.7                                    | (5.8)         | 0.2                                                         |               | <b>13.3</b>                | (5.2)        |
| Partner countries                                                                 | Norway                      | <b>17.0</b>                                                 | (1.9)         | 3.2                        |                                                             | 12.1                                   | (10.5)        | 2.3                                                         |               | <b>17.0</b>                | (7.8)        |
|                                                                                   | Sweden                      | <b>17.1</b>                                                 | (1.5)         | 3.3                        |                                                             | 4.1                                    | (9.4)         | 0.2                                                         |               | <b>16.4</b>                | (7.1)        |
|                                                                                   | Switzerland                 | <b>5.7</b>                                                  | (1.9)         | 0.4                        |                                                             | <b>-10.3</b>                           | (4.5)         | 1.3                                                         |               | -4.1                       | (6.1)        |
|                                                                                   | United States               | <b>5.7</b>                                                  | (1.4)         | 0.4                        |                                                             | -1.0                                   | (5.4)         | 0.0                                                         |               | <b>15.8</b>                | (7.2)        |
|                                                                                   | <b>OECD average</b>         | <b>7.2</b>                                                  | <b>(0.4)</b>  | <b>0.6</b>                 |                                                             | <b>0.1</b>                             | <b>(1.4)</b>  | <b>0.0</b>                                                  |               | <b>0.1</b>                 | <b>(1.6)</b> |
|                                                                                   | Hong Kong-China             | <b>11.4</b>                                                 | (3.3)         | 0.8                        |                                                             | <b>20.7</b>                            | (5.1)         | 2.6                                                         |               | <b>13.3</b>                | (4.4)        |
|                                                                                   | Macao-China                 | 4.6                                                         | (7.2)         | 0.2                        |                                                             | 2.1                                    | (7.0)         | 0.0                                                         |               | -2.5                       | (14.2)       |
|                                                                                   | Russian Federation          | <b>5.4</b>                                                  | (1.8)         | 0.3                        |                                                             | -0.5                                   | (5.6)         | 0.1                                                         |               | 3.1                        | (5.4)        |
|                                                                                   | Belgium (Flemish Community) | 0.7                                                         | (3.0)         | 0.0                        |                                                             | -8.3                                   | (8.6)         | 0.6                                                         |               | <b>-23.7</b>               | (10.0)       |
|                                                                                   | Belgium (French Community)  | 1.4                                                         | (2.5)         | 0.0                        |                                                             | -5.7                                   | (6.8)         | 0.3                                                         |               | 11.4                       | (9.0)        |
| Regression estimate of the index of attitudes towards school                      |                             |                                                             |               |                            |                                                             |                                        |               |                                                             |               |                            |              |
|                                                                                   |                             | Accounting for ESCS                                         |               |                            |                                                             | Accounting for mathematics performance |               |                                                             |               |                            |              |
|                                                                                   |                             | Second-generation students                                  |               | First-generation students  |                                                             | Second-generation students             |               | First-generation students                                   |               |                            |              |
|                                                                                   |                             | Coef.                                                       | S.E.          | Coef.                      | S.E.                                                        | Coef.                                  | S.E.          | Coef.                                                       | S.E.          |                            |              |
| OECD countries                                                                    | Australia                   | <b>0.13</b>                                                 | (0.03)        | 0.05                       | (0.04)                                                      | <b>0.09</b>                            | (0.03)        | 0.05                                                        | (0.04)        |                            |              |
|                                                                                   | Austria                     | 0.11                                                        | (0.09)        | <b>0.21</b>                | (0.07)                                                      | 0.11                                   | (0.09)        | <b>0.21</b>                                                 | (0.07)        |                            |              |
|                                                                                   | Belgium                     | <b>0.27</b>                                                 | (0.06)        | <b>0.30</b>                | (0.07)                                                      | <b>0.19</b>                            | (0.06)        | <b>0.23</b>                                                 | (0.07)        |                            |              |
|                                                                                   | Canada                      | <b>0.13</b>                                                 | (0.04)        | <b>0.22</b>                | (0.04)                                                      | <b>0.11</b>                            | (0.04)        | <b>0.24</b>                                                 | (0.04)        |                            |              |
|                                                                                   | Denmark                     | <b>0.24</b>                                                 | (0.10)        | 0.16                       | (0.10)                                                      | <b>0.20</b>                            | (0.09)        | 0.15                                                        | (0.10)        |                            |              |
|                                                                                   | France                      | <b>0.20</b>                                                 | (0.07)        | <b>0.30</b>                | (0.09)                                                      | <b>0.20</b>                            | (0.07)        | <b>0.31</b>                                                 | (0.10)        |                            |              |
|                                                                                   | Germany                     | <b>0.22</b>                                                 | (0.08)        | <b>0.26</b>                | (0.07)                                                      | <b>0.15</b>                            | (0.08)        | <b>0.21</b>                                                 | (0.07)        |                            |              |
|                                                                                   | Luxembourg                  | <b>0.21</b>                                                 | (0.05)        | <b>0.34</b>                | (0.05)                                                      | <b>0.22</b>                            | (0.05)        | <b>0.34</b>                                                 | (0.05)        |                            |              |
|                                                                                   | Netherlands                 | <b>0.24</b>                                                 | (0.06)        | <b>0.44</b>                | (0.09)                                                      | <b>0.23</b>                            | (0.06)        | <b>0.46</b>                                                 | (0.08)        |                            |              |
|                                                                                   | New Zealand                 | <b>0.40</b>                                                 | (0.07)        | <b>0.13</b>                | (0.05)                                                      | <b>0.39</b>                            | (0.07)        | <b>0.15</b>                                                 | (0.05)        |                            |              |
| Partner countries                                                                 | Norway                      | 0.13                                                        | (0.17)        | <b>0.37</b>                | (0.08)                                                      | 0.14                                   | (0.17)        | <b>0.37</b>                                                 | (0.09)        |                            |              |
|                                                                                   | Sweden                      | <b>0.28</b>                                                 | (0.09)        | <b>0.40</b>                | (0.06)                                                      | <b>0.23</b>                            | (0.09)        | <b>0.44</b>                                                 | (0.05)        |                            |              |
|                                                                                   | Switzerland                 | <b>0.19</b>                                                 | (0.07)        | <b>0.27</b>                | (0.05)                                                      | <b>0.16</b>                            | (0.07)        | <b>0.26</b>                                                 | (0.06)        |                            |              |
|                                                                                   | United States               | <b>0.15</b>                                                 | (0.06)        | 0.16                       | (0.09)                                                      | 0.09                                   | (0.05)        | 0.11                                                        | (0.08)        |                            |              |
|                                                                                   | <b>OECD average</b>         | <b>0.22</b>                                                 | <b>(0.02)</b> | <b>0.26</b>                | <b>(0.02)</b>                                               | <b>0.20</b>                            | <b>(0.02)</b> | <b>0.26</b>                                                 | <b>(0.02)</b> |                            |              |
|                                                                                   | Hong Kong-China             | 0.01                                                        | (0.03)        | <b>0.07</b>                | (0.03)                                                      | -0.03                                  | (0.03)        | 0.05                                                        | (0.03)        |                            |              |
|                                                                                   | Macao-China                 | -0.01                                                       | (0.06)        | -0.04                      | (0.09)                                                      | -0.01                                  | (0.06)        | -0.05                                                       | (0.08)        |                            |              |
|                                                                                   | Russian Federation          | <b>-0.11</b>                                                | <b>(0.06)</b> | <b>-0.02</b>               | <b>(0.05)</b>                                               | <b>-0.10</b>                           | <b>(0.06)</b> | <b>-0.01</b>                                                | <b>(0.05)</b> |                            |              |
|                                                                                   | Belgium (Flemish Community) | <b>0.29</b>                                                 | (0.08)        | 0.16                       | (0.10)                                                      | <b>0.25</b>                            | (0.08)        | 0.14                                                        | (0.10)        |                            |              |
|                                                                                   | Belgium (French Community)  | <b>0.20</b>                                                 | (0.07)        | <b>0.32</b>                | (0.10)                                                      | 0.12                                   | (0.07)        | <b>0.25</b>                                                 | (0.10)        |                            |              |

Note: Values that are statistically significant are indicated in bold.



Table 4.9  
Index of sense of belonging at school and student performance on the mathematics scale

Results based on students' self-reports

|                   |                             | Index of sense of belonging at school |               |                            |               |                           |               |
|-------------------|-----------------------------|---------------------------------------|---------------|----------------------------|---------------|---------------------------|---------------|
|                   |                             | Native students                       |               | Second-generation students |               | First-generation students |               |
|                   |                             | Mean index                            | S.E.          | Mean index                 | S.E.          | Mean index                | S.E.          |
| OECD countries    | Australia                   | 0.04                                  | (0.02)        | <b>0.20</b>                | (0.04)        | -0.04                     | (0.03)        |
|                   | Austria                     | 0.46                                  | (0.02)        | 0.29                       | (0.11)        | 0.36                      | (0.06)        |
|                   | Belgium                     | -0.28                                 | (0.01)        | -0.22                      | (0.04)        | -0.42                     | (0.08)        |
|                   | Canada                      | 0.02                                  | (0.01)        | 0.05                       | (0.04)        | -0.06                     | (0.04)        |
|                   | Denmark                     | 0.02                                  | (0.02)        | 0.03                       | (0.08)        | -0.11                     | (0.09)        |
|                   | France                      | -0.19                                 | (0.02)        | -0.10                      | (0.05)        | -0.13                     | (0.08)        |
|                   | Germany                     | 0.24                                  | (0.02)        | 0.38                       | (0.09)        | 0.12                      | (0.05)        |
|                   | Luxembourg                  | 0.36                                  | (0.02)        | <b>-0.01</b>               | (0.04)        | <b>-0.04</b>              | (0.04)        |
|                   | Netherlands                 | -0.05                                 | (0.02)        | -0.07                      | (0.07)        | -0.11                     | (0.08)        |
|                   | New Zealand                 | 0.01                                  | (0.02)        | <b>0.21</b>                | (0.06)        | <b>-0.21</b>              | (0.04)        |
| Partner countries | Norway                      | 0.25                                  | (0.02)        | 0.02                       | (0.12)        | 0.04                      | (0.11)        |
|                   | Sweden                      | 0.24                                  | (0.02)        | 0.22                       | (0.08)        | 0.30                      | (0.07)        |
|                   | Switzerland                 | 0.22                                  | (0.03)        | 0.14                       | (0.05)        | <b>0.09</b>               | (0.04)        |
|                   | United States               | m                                     | m             | m                          | m             | m                         | m             |
|                   | <b>OECD average</b>         | <b>0.10</b>                           | <b>(0.01)</b> | <b>0.07</b>                | <b>(0.02)</b> | <b>-0.01</b>              | <b>(0.02)</b> |
|                   | Hong Kong-China             | -0.57                                 | (0.02)        | -0.59                      | (0.02)        | <b>-0.70</b>              | (0.02)        |
|                   | Macao-China                 | -0.64                                 | (0.06)        | -0.57                      | (0.03)        | -0.71                     | (0.06)        |
|                   | Russian Federation          | -0.29                                 | (0.02)        | -0.31                      | (0.04)        | -0.22                     | (0.05)        |
|                   | Belgium (Flemish Community) | -0.27                                 | (0.01)        | -0.30                      | (0.08)        | -0.35                     | (0.09)        |
|                   | Belgium (French Community)  | -0.31                                 | (0.03)        | <b>-0.18</b>               | (0.04)        | -0.46                     | (0.11)        |

|                   |                             | Change in the mathematics score per unit of the index of sense of belonging at school |              |            |                            |              |            |                           |              |            |
|-------------------|-----------------------------|---------------------------------------------------------------------------------------|--------------|------------|----------------------------|--------------|------------|---------------------------|--------------|------------|
|                   |                             | Native students                                                                       |              |            | Second-generation students |              |            | First-generation students |              |            |
|                   |                             | Effect                                                                                | S.E.         | %          | Effect                     | S.E.         | %          | Effect                    | S.E.         | %          |
| OECD countries    | Australia                   | <b>3.7</b>                                                                            | (1.6)        | 0.2        | -5.9                       | (3.1)        | 0.4        | 3.8                       | (3.6)        | 0.2        |
|                   | Austria                     | 1.7                                                                                   | (1.5)        | 0.0        | 2.1                        | (6.7)        | 0.2        | 2.5                       | (5.3)        | 0.1        |
|                   | Belgium                     | <b>5.3</b>                                                                            | (1.7)        | 0.2        | 6.0                        | (4.8)        | 0.3        | 10.0                      | (8.8)        | 0.8        |
|                   | Canada                      | -0.6                                                                                  | (1.0)        | 0.0        | -2.2                       | (2.6)        | 0.1        | <b>-7.8</b>               | (2.9)        | 0.8        |
|                   | Denmark                     | 3.1                                                                                   | (1.9)        | 0.1        | 2.9                        | (11.1)       | 0.1        | 5.0                       | (8.6)        | 0.6        |
|                   | France                      | <b>3.3</b>                                                                            | (1.4)        | 0.1        | -5.1                       | (5.3)        | 0.4        | -5.9                      | (9.3)        | 0.4        |
|                   | Germany                     | -0.7                                                                                  | (1.9)        | 0.0        | -2.7                       | (6.1)        | 0.1        | -3.6                      | (7.0)        | 0.2        |
|                   | Luxembourg                  | 3.3                                                                                   | (1.7)        | 0.2        | 3.8                        | (3.7)        | 0.2        | 3.3                       | (4.3)        | 0.1        |
|                   | Netherlands                 | <b>7.9</b>                                                                            | (2.6)        | 0.6        | -5.2                       | (5.7)        | 0.3        | 3.8                       | (7.4)        | 0.2        |
|                   | New Zealand                 | 2.6                                                                                   | (1.6)        | 0.1        | -6.4                       | (5.7)        | 0.5        | <b>12.9</b>               | (4.9)        | 1.5        |
| Partner countries | Norway                      | -0.6                                                                                  | (1.6)        | 0.0        | -8.4                       | (9.0)        | 1.1        | 2.3                       | (6.2)        | 0.1        |
|                   | Sweden                      | -0.3                                                                                  | (1.5)        | 0.0        | -2.3                       | (9.2)        | 0.1        | <b>15.1</b>               | (6.3)        | 3.2        |
|                   | Switzerland                 | <b>6.7</b>                                                                            | (1.9)        | 0.6        | -0.3                       | (5.2)        | 0.0        | <b>14.5</b>               | (5.0)        | 2.3        |
|                   | United States               | m                                                                                     | m            | m          | m                          | m            | m          | m                         | m            | m          |
|                   | <b>OECD average</b>         | <b>0.7</b>                                                                            | <b>(0.5)</b> | <b>0.0</b> | <b>-1.4</b>                | <b>(1.5)</b> | <b>0.0</b> | <b>2.1</b>                | <b>(1.7)</b> | <b>0.0</b> |
|                   | Hong Kong-China             | <b>12.4</b>                                                                           | (2.8)        | 0.8        | <b>14.6</b>                | (4.4)        | 1.2        | <b>19.3</b>               | (5.3)        | 1.7        |
|                   | Macao-China                 | 12.4                                                                                  | (9.1)        | 1.2        | 8.4                        | (6.9)        | 0.6        | -8.2                      | (10.9)       | 0.6        |
|                   | Russian Federation          | <b>11.5</b>                                                                           | (1.5)        | 1.2        | 5.0                        | (6.4)        | 0.3        | 8.8                       | (5.4)        | 0.9        |
|                   | Belgium (Flemish Community) | 2.8                                                                                   | (1.9)        | 0.1        | 8.4                        | (7.7)        | 0.6        | 6.7                       | (8.6)        | 0.4        |
|                   | Belgium (French Community)  | <b>7.1</b>                                                                            | (2.8)        | 0.4        | 4.1                        | (5.4)        | 0.2        | 9.4                       | (11.0)       | 0.7        |

|                   |                             | Regression estimate of the index of sense of belonging at school |               |                           |               |                                        |               |                           |               |
|-------------------|-----------------------------|------------------------------------------------------------------|---------------|---------------------------|---------------|----------------------------------------|---------------|---------------------------|---------------|
|                   |                             | Accounting for ESCS                                              |               |                           |               | Accounting for mathematics performance |               |                           |               |
|                   |                             | Second-generation students                                       |               | First-generation students |               | Second-generation students             |               | First-generation students |               |
|                   |                             | Coef.                                                            | S.E.          | Coef.                     | S.E.          | Coef.                                  | S.E.          | Coef.                     | S.E.          |
| OECD countries    | Australia                   | <b>0.18</b>                                                      | (0.04)        | <b>-0.07</b>              | (0.04)        | <b>0.16</b>                            | (0.01)        | <b>-0.07</b>              | (0.01)        |
|                   | Austria                     | -0.11                                                            | (0.11)        | -0.06                     | (0.07)        | <b>-0.16</b>                           | (0.02)        | <b>-0.09</b>              | (0.01)        |
|                   | Belgium                     | <b>0.13</b>                                                      | (0.04)        | -0.09                     | (0.09)        | <b>0.10</b>                            | (0.01)        | <b>-0.09</b>              | (0.02)        |
|                   | Canada                      | 0.03                                                             | (0.04)        | <b>-0.09</b>              | (0.04)        | <b>0.03</b>                            | (0.01)        | <b>-0.08</b>              | (0.01)        |
|                   | Denmark                     | 0.11                                                             | (0.08)        | -0.06                     | (0.10)        | <b>0.04</b>                            | (0.02)        | <b>-0.10</b>              | (0.02)        |
|                   | France                      | <b>0.16</b>                                                      | (0.05)        | 0.14                      | (0.09)        | <b>0.10</b>                            | (0.01)        | <b>0.09</b>               | (0.02)        |
|                   | Germany                     | <b>0.22</b>                                                      | (0.09)        | -0.05                     | (0.06)        | <b>0.13</b>                            | (0.02)        | <b>-0.13</b>              | (0.01)        |
|                   | Luxembourg                  | <b>-0.32</b>                                                     | (0.04)        | <b>-0.33</b>              | (0.05)        | <b>-0.35</b>                           | (0.01)        | <b>-0.37</b>              | (0.01)        |
|                   | Netherlands                 | 0.05                                                             | (0.08)        | 0.00                      | (0.09)        | 0.02                                   | (0.02)        | 0.00                      | (0.02)        |
|                   | New Zealand                 | <b>0.26</b>                                                      | (0.06)        | <b>-0.21</b>              | (0.04)        | <b>0.21</b>                            | (0.01)        | <b>-0.21</b>              | (0.01)        |
| Partner countries | Norway                      | -0.20                                                            | (0.14)        | -0.15                     | (0.11)        | <b>-0.24</b>                           | (0.03)        | <b>-0.22</b>              | (0.03)        |
|                   | Sweden                      | 0.03                                                             | (0.08)        | 0.13                      | (0.07)        | -0.02                                  | (0.02)        | <b>0.07</b>               | (0.02)        |
|                   | Switzerland                 | 0.03                                                             | (0.08)        | -0.06                     | (0.05)        | <b>-0.03</b>                           | (0.01)        | <b>-0.04</b>              | (0.01)        |
|                   | United States               | m                                                                | m             | m                         | m             | m                                      | m             | m                         | m             |
|                   | <b>OECD average</b>         | <b>0.04</b>                                                      | <b>(0.02)</b> | <b>-0.05</b>              | <b>(0.02)</b> | <b>-0.02</b>                           | <b>(0.02)</b> | <b>-0.10</b>              | <b>(0.02)</b> |
|                   | Hong Kong-China             | 0.02                                                             | (0.03)        | <b>-0.07</b>              | (0.03)        | <b>-0.02</b>                           | (0.01)        | <b>-0.10</b>              | (0.01)        |
|                   | Macao-China                 | 0.09                                                             | (0.07)        | -0.06                     | (0.08)        | <b>0.07</b>                            | (0.02)        | <b>-0.07</b>              | (0.02)        |
|                   | Russian Federation          | <b>-0.02</b>                                                     | <b>(0.05)</b> | <b>0.06</b>               | <b>(0.05)</b> | <b>-0.01</b>                           | <b>(0.01)</b> | <b>0.08</b>               | <b>(0.01)</b> |
|                   | Belgium (Flemish Community) | 0.05                                                             | (0.09)        | -0.03                     | (0.09)        | 0.00                                   | (0.08)        | -0.06                     | (0.09)        |
|                   | Belgium (French Community)  | <b>0.19</b>                                                      | (0.06)        | -0.11                     | (0.12)        | <b>0.16</b>                            | (0.05)        | -0.10                     | (0.11)        |

Note: Values that are statistically significant are indicated in bold.



# Annex C

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**Annex C:** The development and implementation of PISA –  
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## READER'S GUIDE

### Data underlying the figures

The data referred to in Chapters 1, 2, 3, and 4 of this report are presented in Annex B. In these tables, as well as in data tables included in Chapter 5, the following 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 to provide reliable estimates (*i.e.* there are fewer than 3% of students for this cell or too few schools for valid inferences). However, these statistics were included in the calculation of cross-country averages.
- m* Data are not available. These data were collected but subsequently removed from the publication for technical reasons.
- n* Data are negligible *i.e.* they do not occur in any significant numbers.
- w* Data have been withdrawn at the request of the country concerned.

### Calculation of the OECD average

An OECD average was calculated for most indicators presented in this report. The OECD average takes the OECD countries as a single entity, to which each country contributes with equal weight. The OECD average corresponds to the arithmetic mean of the respective country statistics and for this report only applies to the selection of OECD *case countries* (see definition below).

### Rounding of 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. When standard errors in this publication have been rounded to one or two decimal places and the value 0.0 or 0.00 is shown, this does not imply that the standard error is zero, but that it is smaller than 0.05 or 0.005 respectively.

### Reporting of student data

The report uses “15-year-olds” as shorthand for the PISA target population. In practice, this refers to students who were aged between 15 years and 3 (complete) months and 16 years and 2 (complete) months at the beginning of the assessment period and who were enrolled in an educational institution, regardless of the grade level or type of institution, and of whether they were attending full-time or part-time.

### Abbreviations used in this report

The following abbreviations are used in this report:

ESCS Index of economic, social and cultural status (see Annex A1 for definition)

HISEI Highest international socio-economic index of occupational status (corresponds to the highest occupational status of either the mother or father)

ISCED International Standard Classification of Education (the ISCED levels are explained in Annex A1)

SE Standard error

SD Standard deviation

SOPEMI *Système d'Observation Permanente des Migrations* (Continuous Reporting System on Migration). This was established in 1973 by the OECD to provide its European member states a mechanism for sharing of information on international migration.

### Terminology used in this report

*Native students or non-immigrant students:* Students with at least one parent born in the country of assessment. Students born in the country who have one foreign-born parent (children of “combined” families) are included in the native category, as previous research indicates that these students perform similarly to native students.

*Immigrant students:* This group includes both *first-generation students* and *second-generation students* (see definitions below).

*First-generation students:* Students born outside of the country of assessment whose parents are also foreign-born.

*Second-generation students:* Students born in the country of assessment with foreign-born parents.

*Case countries:* This includes the 17 countries covered in this report. Fourteen OECD countries: Australia, Austria, Belgium, Canada, Denmark, France, Germany, Luxembourg, the Netherlands, New Zealand, Norway, Sweden, Switzerland and the United States; as well as three partner countries: Hong Kong-China, Macao-China and the Russian Federation.

### Further documentation

For further information on the PISA assessment instruments and the methods used in PISA, see the *PISA 2003 Technical Report* (OECD, 2005) and the PISA Web site ([www.pisa.oecd.org](http://www.pisa.oecd.org)).

# References

- Alba, R. and Nee, V.** (1997), "Rethinking assimilation theory for a new era of immigration. *International Migration Review*", Vol. 31, pp. 826-874.
- Abedi, J.** (2003), *Impact of Student Language Background on Content Based Performance: Analyses of Extant Data*, CRESST/University of California, Los Angeles, CA.
- Artelt, C.** (2000), *Strategisches Lernen*, Waxmann, Münster.
- Bandura, A.** (1994), *Self Efficacy: The Exercise of Control*, Freeman, New York, NY.
- Bankston, C. and Zhou, M.** (1995), "Effects of minority-language literacy on the academic achievement of Vietnamese youth In New Orleans", *Sociology of Education*, Vol. 68, pp. 1-17.
- Bauer, T., Lofstrom, M. and Zimmermann, K. F.** (2000), "Immigration policy, assimilation of immigrants, and natives' sentiments toward immigrants: Evidence from 12 OECD countries", *Swedish Economic Policy Review*, Vol. 7, pp. 11-53.
- Baumert, J. and Schümer, G.** (2001), "Familiäre Lebensverhältnisse, Bildungsbeteiligung und Kompetenzerwerb", in Baumert J, et al., *PISA 2000: Basiskompetenzen von Schülerinnen und Schülern im internationalen Vergleich*, pp. 159-200, Leske and Budrich, Opladen.
- Baumert, J., Stanat, P. and Watermann, R.** (eds.), (2006), *Herkunftsbedingte Disparitäten im Bildungswesen: Differenzielle Bildungsprozesse und Probleme der Verteilungsgerechtigkeit*, VS Verlag für Sozialwissenschaften, Wiesbaden.
- Becker, B. E. and Luthar, S. S.** (2002), "Social-emotional factors affecting achievement outcomes among disadvantaged students: Closing the achievement gap", *Educational Psychologist*, Vol. 37(4), pp. 197-214.
- Berry, J. W.** (1992), "Acculturation and adaptation in a new society", *International Migration Review*, Vol. 30, pp. 69-85.
- Betts, J. R. and Lofstrom, M.** (2000), "The educational attainment of immigrants: Trends and implications", in G. J. Borjas (ed.), *Issues in the Economics of Immigration*, pp. 51-115, The University of Chicago Press, Chicago, IL.
- Bialystok, E.** (2001), *Bilingualism in development. Language, literacy & cognition*, Cambridge: University Press.
- Blum, R. W. and Libbey, H. P.** (2004), "School connectedness. Strengthening health and educational outcomes for teens: Executive summary", *Journal of School Health*, Vol. 74(7), pp. 231-233.
- Borjas, G. J.** (1987), "Self-selection and the earnings of immigrants", *American Economic Review*, Vol. 77(4), pp. 531-553.
- Borjas, G. J.** (1999), *Heaven's Door: Immigration Policy and the American Economy*, Princeton University Press, Princeton.
- Bourhis, R. Y., et al.**, (1997), "Towards an interactive acculturation model: A social psychological approach", *International Journal of Psychology*, Vol. 32, pp. 369-386.

- Buchmann, C. and Parrado, E.** (2006), “Educational achievement of immigrant-origin and native students: A comparative analysis informed by institutional theory”, in D. P. Baker and A. W. Wiseman (eds.), *The Impact of Comparative Education Research on Institutional Theory*, Oxford, UK, Elsevier Science, forthcoming.
- Burgers, J.** (1998), “In the margin of the welfare state: Labour market position and housing conditions of undocumented immigrants in Rotterdam”, *Urban Studies*, Vol. 35(10), pp. 1855-1868.
- Castles, S.** (1995), “How nation-states respond to immigration and ethnic diversity”, *New community*, Vol. 21(3), pp. 293-308.
- Castles, S.** (2000), “International migration at the beginning of the twenty-first century: Global trends and issues”, *International Social Science Journal*, Vol. 52(165), pp. 269-281.
- Castles, S. and Miller, M. J.** (1993), *The Age of Migration: International Population Movements in the Modern World*, Palgrave Macmillan, Houndmills, UK.
- Castles, S. and Miller, M. J.** (2003), *The Age of Migration: International Population Movements in the Modern World* (3rd ed.), Guildford, New York, NY.
- Catalano, R., et al.** (2004), “The importance of bonding to school for healthy development: Findings from the Social Development Research Group”, *Journal of School Health*, Vol. 74(7), pp. 252-261.
- Chiquiar, D. and Hanson, G. H.** (2005), “International migration, self-selection, and the distribution of wages: Evidence from Mexico and the United States”, *Journal of Political Economy*, Vol. 113, pp. 239-281.
- Chiswick, B.** (1999), “Are immigrants favourably self-selected?” *American Economic Review, Papers and Proceedings*, Vol. 82(2), pp. 181-185.
- Chiswick, B. R.** (2000), “Are Immigrants Favorably Self-Selected? An Economic Analysis”, *IZA Discussion Paper No. 131*, Institute for the Study of Labor (IZA), Bonn.
- Chiswick, B. R. and Miller, P. W.** (2003), “The complementarity of language and other human capital: Immigrant earnings in Canada”, *Economics of Education Review*, Vol. 22, pp. 469-480.
- Christensen, G.** (2004), “What Matters for Immigrant Achievement Cross-Nationally? A Comparative Approach Examining Immigrant and Non-Immigrant Student Achievement”, Unpublished Dissertation, Stanford University, Stanford, CA.
- Cohen, J. and Cohen, P.** (1983), *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences* (2nd ed.), Hillsdale, Erlbaum, New Jersey.
- Coie, J. D. and Jacobs, M. R.** (1993), “The role of social context in the prevention of conduct disorder”, *Development and Psychopathology*, Vol. 5, pp. 263-275.
- Conchas, G.** (2001), “Structuring failure and success: Understanding the variability in Latino school engagement”, *Harvard Educational Review*, Vol. 71(3), pp. 475-504.
- Coradi Vellacott, et al.** (2003), *Soziale Integration und Leistungsförderung. Thematischer Bericht der Erhebung PISA 2000*, Bundesamt für Statistik (BFS)/Schweizerische Konferenz der kantonalen Erziehungsdirektoren (EDK), Neuchâtel.
- Cummins, J.** (1979a), “Cognitive/Academic language proficiency, linguistic interdependence, the optimum age question and some other matters”, *Working Papers on Bilingualism*, Vol. 19, pp. 121-129.

- Cummins, J.** (1979b), “Linguistic interdependence and the educational development of bilingual children”, *Review of Educational Research*, Vol. 49, pp. 222-251.
- Cummins, J.** (1981), “The role of primary language development in promoting educational success for language minority students”, in Office of Bilingual Bicultural Education (eds.), *Schooling and language minority students: A theoretical framework*, pp. 3-49, California State Department of Education, Los Angeles, CA.
- Deci, E. L. and Ryan, R. M.** (1985), *Intrinsic Motivation and Self-Determination in Human Behavior*. Plenum Press, New York, NY.
- Eccles, J. S. Wigfield, A. and Schiefele, U.** (1998), “Motivation to succeed”, in W. Damon and N. Eisenberg (eds.), *Handbook of child psychology* (Vol. 3, pp. 1017-1095), Wiley, New York, NY.
- Entorf, H. and Minoiu, N.** (2004), “PISA results: What a difference immigration law makes”, *IZA Discussion Paper No. 1021*, Institute for the Study of Labor (IZA), Bonn.
- Esser, H.** (2001), “Integration und ethnische Schichtung”, *Arbeitspapiere des Mannheimer Zentrums für Europäische Sozialforschung*, Vol. 40, MZES, Mannheim.
- Eurydice** (2004), *Integrating Immigrant Children into Schools in Europe*, Eurydice, Brussels.
- Fase, W.** (1994), *Ethnic Divisions in Western European Education*, Waxmann, Münster.
- Freeman, G. P.** (1995), “Modes of immigration politics in liberal democratic states”, *International Migration Review*, Vol. 29, pp. 881-902.
- Freeman, G. and Ögelman, N.** (1998), “Homeland citizenship policies and the status of third country nationals in the European Union”, *Journal of Ethnic and Migration Studies*, Vol. 24(4), pp. 769-789.
- Freeman, G. and Ögelman, N.** (2000), “State regulatory regimes and immigrant informal economic activity”, in J. Rath (eds.), *Immigrant Businesses: The Economic, Political and Social Environment* pp. 107-123, Palgrave Macmillan, Houndmills, UK.
- Freeman, G. P.** (2004), “Immigrant incorporation in Western democracies”, *International Migration Review*, Vol. 38(3), pp. 945-969.
- Fuligni, A. J.** (1997), “The academic achievement of adolescents from immigrant families: The roles of family background, attitudes, and behaviour”, *Child Development*, Vol. 68(2), pp. 351-363.
- Ganzeboom, H. B. G., De Graaf P. M. and Treiman D. J.** (1992), “A standard international socio-economic index of occupational status”, *Social Science Research*, Vol. 21(1), Elsevier Ltd., pp. 1-56.
- Gibson, M. A. and Ogbu, J. U.** (1991), *Minority Status and Schooling: A Comparative Study of Immigrant and Involuntary Minorities*, Garland, New York, NY.
- Glenn, C. L. and de Jong, E. J.** (1996), *Educating Immigrant Children: Schools and Language Minorities in Twelve Nations*, Garland, New York, NY.
- Gomolla, M. and Radtke, F. O.** (2002), *Institutionelle Diskriminierung. Die Herstellung ethnischer Differenz in der Schule*, Leske and Budrich, Opladen.
- Gonzalez, G. C.** (2002), “Family Background, Ethnicity, and Immigration Status: Predicting School Success for Asian and Latino Students”, Unpublished Dissertation, Harvard University, Cambridge, MA.



- Greene, J. P.** (1997), "A meta-analysis of the Rossell and Baker review of bilingual education research", *Bilingual Research Journal*, Vol. 21, pp. 103-122.
- Hakuta, K.** (1999), "The debate on bilingual education", *Developmental and Behavioral Pediatrics*, Vol. 20, pp. 36-37.
- Hawkins, J. D., Doueck, H. J. and Lishner, D. M.** (1988), "Changing teaching practices in mainstream classrooms to improve bonding and behavior of low achievers", *American Educational Research Journal*, Vol. 25(1), pp. 31-50.
- Jones, F. E.** (1987), "Age at immigration and education: Further explorations", *International Migration Review*, Vol. 21(1), pp. 70-85.
- Joppke, C. and Morawska, E.** (2003), "Integrating immigrants in liberal nation-states: Policies and practices," in C. Joppke and E. Morawska (eds.), *Toward assimilation and citizenship: Immigrants in liberal nation-states* pp. 1-36, Palgrave Macmillan, Houndmills, UK.
- Jungbluth, P.** (1999), "Lehrererwartungen und Ethnizität: Innerschulische Chancendeterminanten bei Migrantenkindern in den Niederlanden" (Teacher expectations and ethnicity: Within-school determinants of migrant students' chances in the Netherlands), *Zeitschrift für Pädagogik*, Vol. 40(1), pp. 113-125.
- Kao, G and Tienda, M.** (1995), "Optimism and achievement: The educational performance of immigrant youth", *Social Science Quarterly*, Vol. 76(1), pp. 1-19.
- Kao, G., Tienda, M. and Schneider, B.** (1996), "Racial and ethnic variation in academic performance research", *Sociology of Education and Socialization*, Vol. 11, pp. 263-297.
- Kennedy, E. and Park, H.** (1994), "Home language as a predictor of academic achievement: A comparative study of Mexican- and Asian-American youth", *Journal of Research and Development in Education*, Vol. 27, pp. 188-194.
- King, G.** (1997), *A Solution to the Ecological Inference Problem*, Princeton University Press, Princeton, NJ.
- Klieme, E. and Stanat, P.** (2002), "Zur Aussagekraft internationaler Schulleistungsvergleiche: Befunde und Erklärungsansätze am Beispiel von PISA" (The meaning of international comparisons of student performance: Findings and explanations using PISA as an example), *Bildung und Erziehung*, Vol. 55, pp. 25-44.
- Libbey, H. P.** (2004), "Measuring student relationship to school: Attachment, bonding, connectedness, and engagement", *Journal of School Health*, Vol. 74(7), pp. 274-283.
- Liebig, T. and Sousa-Poza, A.** (2004), "Migration, self-selection and income inequality: An international analysis", *KYKLOS*, Vol. 57, pp. 125-146.
- Limbird, C. and Stanat, P.** (2006), "Sprachförderung bei Schülerinnen und Schülern mit Migrationshintergrund: Ansätze und ihre Wirksamkeit", in J. Baumert, P. Stanat and R. Watermann (eds.), *Herkunftsbedingte Disparitäten im Bildungswesen: Differenzielle Bildungsprozesse und Probleme der Verteilungsgerechtigkeit* pp. 257-308. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Lonczak, H. S., et al.** (2002), "The effects of the Seattle Social Development Project: Behavior, pregnancy, birth, and sexually transmitted disease outcomes by age 21", *Archives of Pediatric Adolescent Health*, Vol. 156, pp. 438-447.



- Losen, D. and Orfield, G.** (eds.) (2002), *Minority Issues in Special Education*, The Civil Rights Project at Harvard University and Harvard Education Press, Cambridge, MA.
- Marsh, H. W.** (1986), "Verbal and math self-concepts: An internal/external frame of reference model", *American Educational Research Journal*, Vol. 23(1), pp. 129-149.
- Marsh, H. W.** (1993), "The multidimensional structure of academic self-concept: Invariance over gender and age", *American Educational Research Journal*, Vol. 30(4), pp. 841-860.
- Marsh, H. W., et al.** (2005), "Academic self-concept, interest, grades and standardized test scores: Reciprocal effects models of causal ordering", *Child Development*, Vol. 76, pp. 397-416.
- Massey, D. S., et al.** (1993), "Theories of international migration: A review and appraisal", *Population and Development Review*, Vol. 19(3), pp. 341-466.
- Meece, J. L., Wigfield, A. and Eccles, J. S.** (1990), Predictors of math anxiety and its influence on young adolescents' course enrolment intentions and performance in mathematics, *Journal of Educational Psychology*, Vol. 82(1), pp. 60-70.
- Meyers, E.** (2004), *International Immigration Policy: A Theoretical and Comparative Analysis*. Palgrave Macmillan, Houndmills, UK.
- Müller, A. G. and Stanat, P.** (2006), "Schulischer Erfolg von Schülerinnen und Schülern mit Migrationshintergrund: Analysen zur Situation von Zuwanderern aus der ehemaligen Sowjetunion und aus der Türkei", in **J. Baumert, P. Stanat and R. Watermann** (eds.), *Herkunftsbedingte Disparitäten im Bildungswesen: Differenzielle Bildungsprozesse und Probleme der Verteilungsgerechtigkeit*, VS Verlag für Sozialwissenschaften, Wiesbaden, forthcoming.
- OECD** (1999), *Classifying Educational Programmes: Manual for ISCED-97 Implementation in OECD Countries*, OECD, Paris.
- OECD** (2001a), *Trends in International Migration: SOPEMI 2000 Edition*, OECD, Paris.
- OECD** (2001b), *Knowledge and Skills for Life: First Results from the OECD Programme for International Student Assessment (PISA) 2000*, OECD, Paris.
- OECD** (2002), *PISA 2000 Technical Report*, OECD, Paris.
- OECD** (2003a), *The PISA 2003 Assessment Framework - Mathematics, Reading, Science and Problem Solving Knowledge and Skills*, OECD, Paris.
- OECD** (2003b), *Learners for Life: Student Approaches to Learning: Results from PISA 2000*, OECD, Paris.
- OECD** (2003c), *Student Engagement in School: A Sense of Belonging and Participation. Results from PISA 2000*, OECD, Paris.
- OECD** (2004a), *Learning for Tomorrow's World: First Results from PISA 2003*, OECD, Paris.
- OECD** (2004b), *Recent Trends in Migration Movements and Policies in Hong Kong, China*, OECD, Paris.
- OECD** (2005a), *Trends in International Migration: SOPEMI 2004 Edition*, OECD, Paris.
- OECD** (2005b), *PISA 2003 Technical Report*, OECD, Paris.
- Pajares, F. and Miller, M. D.** (1994), "The role of self-efficacy and self-concept beliefs in mathematical problem-solving: A path analysis", *Journal of Educational Psychology*, Vol. 86, pp. 193-203.

- Pajares, F. and Miller, M. D.** (1995), “Mathematics self-efficacy and mathematics outcomes: The need for specificity of assessment”, *Journal of Counseling Psychology*, Vol. 42, pp. 190-198.
- Passel, J., Capps, R. and Fix, M.** (2004), *Undocumented Immigrants: Facts and Figures*. The Urban Institute, Washington, DC.
- Pendakur, K. and Pendakur R.** (2002), “Language knowledge as human capital and ethnicity”, *International Migration Review*, Vol. 36(1).
- Pitkänen, P., Kalekin-Fishman and Verma, G. K.** (2002), *Education and Immigration. Settlement Policies and Current Challenges*, Routledge Falmer, London.
- Portes, A. and Hao, L.** (1998), “E pluribus unum: Bilingualism and loss of language in the second generation”, *Sociology of Education*, Vol. 71, pp. 269-94.
- Portes, A. and Hao, L.** (2004). “The Schooling of Children of Immigrants: Contextual Effects on the Educational Attainment of the Second Generation.” *Proceeding of National Academy of Science* Vol. 101(33) pp. 11920-27.
- Portes, A. and Rumbaut, R.** (2001), *Legacies. The Story of the Second Generation*, University of California Press, Berkeley, CA.
- Power, C., Manor, O. and Fox, J.** (1991), *Health and Class: The Early Years*, Chapman and Hall, London.
- Pulkkinen, L. and Tremblay, R. E.** (1992), “Adult life-styles and their precursors in the social behaviour of children and adolescents”, *European Journal of Personality*, Vol. 4(3), pp. 237-251.
- Ramirez, O. M. and Dockweiler, C. J.** (1987), “Mathematics anxiety: A systematic review, in R. Schwarzer and H. M. van der Ploeg and C. D. Spielberger (eds.), *Advances in Test Anxiety Research*, Vol. 5, pp. 157-175, Swets North America, Berwyn, PA.
- Reich, H. H., et al.** (2002), *Spracherwerb zweisprachig aufwachsender Kinder und Jugendlicher: Ein Überblick über den Stand der nationalen und internationalen Forschung*, Behörde für Bildung und Sport, Amt für Schule (BSJB), Hamburg.
- Rivera-Batiz, F. L.** (1999), “Undocumented workers in the labor market: An analysis of the earnings of legal and illegal Mexican immigrants in the United States”, *Journal of Population Economics*, Vol. 12(1), pp. 91-116.
- Robinson, W. S.** (1950), “Ecological correlations and the behavior of individuals”, *American Sociological Review*, Vol. 15(3), pp. 351-357.
- Rodgers, B.** (1990), “Behavior and personality in childhood as predictors of adult psychiatric disorder”, *Journal of Child Psychology and Psychiatry*, Vol. 31(3), pp. 393-414.
- Rossell, C. H. and Baker, K.** (1996), “The educational effectiveness of bilingual education”, *Research in the Teaching of English*, Vol. 30, pp. 7-74.
- Rüesch, P.** (1998), *Spielt die Schule eine Rolle? Schulische Bedingungen ungleicher Bildungschancen von Immigrantenkindern. Eine Mehrebenenanalyse*, Lang, Bern.
- Rumbaut, R.** (1995), “The new Californians: Comparative research findings on the educational progress of immigrant children”, in R. Rumbaut and W. Cornelius (eds.), *California’s Immigrant Children* (pp. 17-69), Center for U.S.-Mexican Studies, La Jolla, CA.

- Rumberger, R. W.** (1995), "Dropping out of middle school: A multi-level analysis of students and schools", *American Educational Research Journal*, Vol. 32(3), pp. 583-625.
- Schmid, C. L.** (2001), "Educational achievement, language-minority students, and the new second generation", *Sociology of Education (Extra Issue)*, pp. 71-87.
- Schneider, W.** (1996), "Zum Zusammenhang zwischen Metakognition und Motivation bei Lern- und Gedächtnisvorgängen", in C. Spiel, U. Kastner-Koller and P. Deimann (eds.), *Motivation und Lernen aus der Perspektive lebenslanger Entwicklung*, pp. 121-133, Waxmann, Münster.
- Schnepf, S. V.** (2005), "How different are immigrants? A cross-country and cross-survey analysis of educational achievement", in C. Parsons and T. Smeeding (eds.), *Immigration and the Transformation of Europe*, Cambridge University Press, Cambridge, UK.
- Schümer, G.** (2004), "Zur doppelten Benachteiligung von Schülern aus unterprivilegierten Gesellschaftsschichten im deutschen Schulwesen", in G. Schümer, K. J. Tillmann and M. Weiß (eds.), *Die Institution Schule und die Lebenswelt der Schüler: Vertiefende Analysen der PISA-2000-Daten zum Kontext von Schülerleistungen*, pp. 73-114, VS Verlag für Sozialwissenschaften, Wiesbaden.
- Schwarzer, R., Seipp, B. and Schwarzer, C.** (1989), "Mathematics performance and anxiety: A meta-analysis", in R. Schwarzer, H. M. van der Ploeg and C. D. Spielberger (eds.), *Advances in Test Anxiety Research*, Vol. 6, pp. 105-119, Swets North America, Berwyn, PA.
- Schwippert, K., Bos, W. and Lankes, E. M.** (2003), "Heterogenität und Chancengleichheit am Ende der vierten Jahrgangsstufe im internationalen Vergleich", in W. Bos *et al.* (eds.), *Erste Ergebnisse aus IGLU* pp. 265-302, Waxmann, Münster.
- Shajek, A., Lüdtke, O. and Stanat, P.** (2006), "Akademische Selbstkonzepte bei Jugendlichen mit Migrationshintergrund", *Unterrichtswissenschaft*, forthcoming.
- Shavit, Y. and Blossfeld, H.-P.** (1993), *Persistent inequality: Changing educational stratification in thirteen countries*, Boulder.
- Skeldon, R.** (1997), *Migration and Development: A Global Perspective*, Longman, London.
- Skolverket** (2005), *Reading literacy and students with a foreign background: Further analyses from the PISA 2000 results*, English summary of report p. 227, Skolverket, Stockholm.
- Slavin, R. E. and Cheung, A.** (2003), *Effective reading programs for English language learners. A best-evidence synthesis*, Johns Hopkins University, Baltimore.
- Stanat, P.** (2004), "The role of migration background for student performance: An international comparison", paper presented at the Annual Meeting of the American Educational Research Association (AERA), San Diego, USA.
- Stanat, P.** (2006), "Schulleistungen von Jugendlichen mit Migrationshintergrund: Die Rolle der Zusammensetzung der Schülerschaft", in J. Baumert, P. Stanat and R. Watermann (eds), *Herkunftsbedingte Disparitäten im Bildungswesen: Differenzielle Bildungsprozesse und Probleme der Verteilungsgerechtigkeit*, VS Verlag für Sozialwissenschaften, Wiesbaden.
- Steinberg, L.** (1996), *Beyond the classroom: Why school reform has failed and what parents need to do*, Simon and Shuster, New York, NY.
- Stevenson, H. W., Chen, C. and Lee, S.-Y.** (1993), "Mathematics achievement of Chinese, Japanese, and American children: Ten years later", *Science*, Vol. 259(1), pp. 53-58.

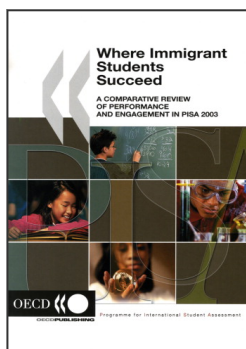
- Stevenson, H. W. and Stigler, J.** (1992), *The Learning Gap: Why our schools are failing and what we can learn from Japanese and Chinese education*, Summit Books, New York, NY.
- Suárez-Orozco, M. M.** (2001), "Globalization, immigration, and education: The research agenda", *Harvard Educational Review*, Vol. 71(3), pp. 345-365.
- Suárez-Orozco, M. M. and Suárez-Orozco, C.** (1995), *Transformations: Migration, Family Life, and Achievement Motivation Among Latino Adolescents*, Stanford University Press, Stanford, CA.
- Warm, T.A.** (1985), "Weighted maximum likelihood estimation of ability in Item Response Theory with tests of finite length", *Technical Report CGI-TR-85-08*, U.S. Coast Guard Institute, Oklahoma City.
- Waters, M.** (1999), *Black Identities: West Indian Immigrant Dreams and American Realities*, Harvard University Press, Cambridge, MA.
- Westerbeek, K.** (1999), *The colours of my classroom. A study into the effects of the ethnic composition of classrooms on the achievement of pupils from different ethnic backgrounds*, European University Institute, Florence.
- Wigfield, A., Eccles, J. S. and Rodriguez, D.** (1998), "The development of children's motivation in school contexts", *Review of Research in Education*, Vol. 23, pp. 73-118.
- Wigfield, A., and Meece, J. L.** (1988), "Math anxiety in elementary and secondary students", *Journal of Educational Psychology*, Vol. 80, pp. 210-216.
- Willig, A. C.** (1985), "A meta-analysis of selected studies on the effectiveness of bilingual education", *Review of Educational Research*, Vol. 55, pp. 269-317.
- Yeung, A. S. and McInerney, D. M.** (1999, February), "Students' perceived support from teachers: Impacts on academic achievement, interest in schoolwork, attendance, and self-esteem", paper presented at the International Conference on Teacher Education at the Hong Kong Institute of Education, Hong Kong, China.
- Yoshikawa, H.** (1994), "Prevention as cumulative protection: Effects of early family support and education on chronic delinquency and risks", *Psychological Bulletin*, Vol. 115(1), pp. 28-54.
- Zimmerman, B. J.** (1999), "Commentary: Toward a cyclically interactive view of self-regulated learning", *International Journal of Educational Research*, Vol. 31(6), pp. 545-551.
- Zimmerman, B. J.** (2000), "Self-efficacy: An essential motive to learn", *Contemporary Educational Psychology*, Vol. 25, pp. 82-91.

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