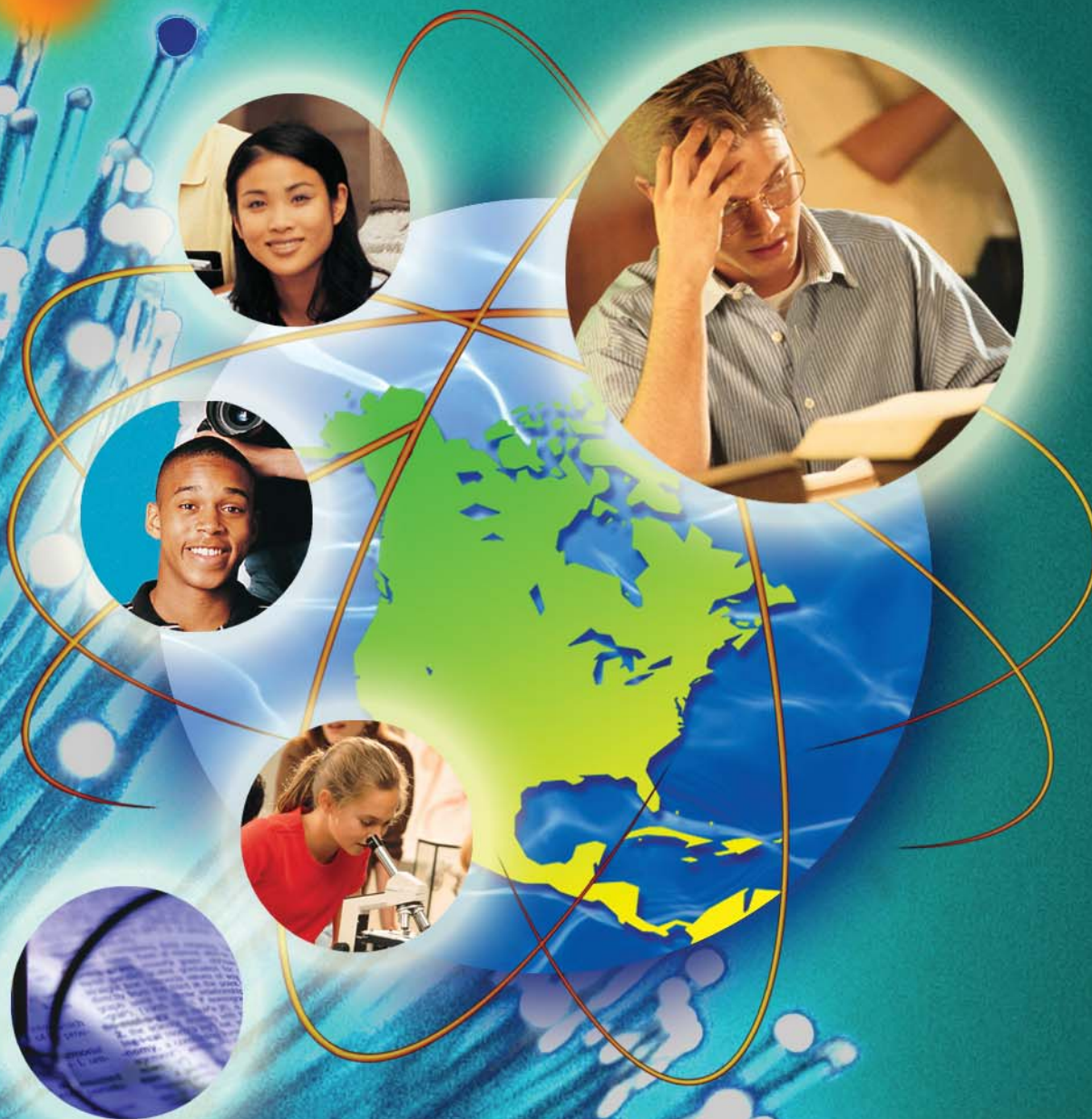


# Measuring up: Canadian Results of the OECD PISA Study

## The Performance of Canada's Youth in Reading, Mathematics and Science

2009 First Results for Canadians Aged 15



Human Resources and  
Skills Development Canada  
Statistique  
Canada

Ressources humaines et  
Développement des compétences Canada  
Statistique  
Canada



Council of  
Ministers  
of Education,  
Canada

Conseil des  
ministres  
de l'Éducation  
(Canada)



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### 2009 First Results for Canadians Aged 15

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## Acronyms

The following acronyms are used in this publication:

|      |                                                        |
|------|--------------------------------------------------------|
| OECD | Organisation for Economic Co-operation and Development |
| PISA | Programme for International Student Assessment         |
| PCAP | Pan-Canadian Assessment Program                        |
| YITS | Youth in Transition Survey                             |

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# Introduction

The skills and knowledge that individuals bring to their jobs, to further studies and to our society, play an important role in determining our economic success and our overall quality of life. The shift to a knowledge-based economy driven by advances in information and communication technologies, reduced trade barriers and the globalization of markets has precipitated changes in the type of knowledge and skills that the present and future economy requires. This includes a rising demand for a strong set of foundation skills upon which further learning is built.

Elementary and secondary education systems play a central role in laying a solid base upon which subsequent knowledge and skills can be developed. Students leaving secondary education without a strong foundation may experience difficulty accessing the postsecondary education system, the labour market and they may benefit less when learning opportunities are presented later in life. Without the tools needed to be effective learners throughout their lives, these individuals with limited skills risk economic and social marginalization.

Governments in industrialized countries have devoted large portions of their budgets to provide high quality schooling. Given these investments, they are interested in the relative effectiveness of their education systems. To address these issues, member countries of the Organisation for Economic Co-operation and Development (OECD) along with partner countries developed a common tool to improve their understanding of what makes young people—and education systems as a whole—successful. This tool is the Programme for International Student Assessment (PISA) which seeks

to measure the extent to which youth, at age 15, have acquired some of the knowledge and skills that are essential for full participation in modern societies.

PISA was first conducted in 2000 with an emphasis on reading skills and again in 2003 and 2006 with an emphasis on mathematics and science achievement respectively. The implementation of PISA 2009 marks the beginning of a new cycle returning to an emphasis on reading achievement. In 2009 students who were assessed in PISA entered primary school at about the time of the first PISA survey in 2000. As such, the 2009 results provide an opportunity to relate policy changes to changes in learning outcomes using the benchmarks set by the original 2000 survey.

## The Programme for International Student Assessment

The Programme for International Student Assessment (PISA) is a collaborative effort among member countries of the Organisation for Economic Co-operation and Development (OECD). PISA is designed to provide policy-oriented international indicators of the skills and knowledge of 15-year-old students<sup>1</sup> and sheds light on a range of factors that contribute to successful students, schools and education systems. It measures skills that are generally recognized as key outcomes of the educational process. The assessment focuses on young people's ability to use their knowledge and skills to meet real life challenges. These skills are believed to be prerequisites to efficient learning in adulthood and for full participation in society.

Information gathered through PISA enables a thorough comparative analysis of the performance of students near the end of their compulsory education. PISA also permits exploration of the ways that achievement varies across different social and economic groups and the factors that influence achievement within and among countries.

PISA has brought significant public and educational attention to international assessments and related studies by generating data to enhance the ability of policy makers to make decisions based on evidence. Canadian provinces have used information gathered from PISA along with other sources of information such as the Pan-Canadian Assessment Program<sup>2</sup> (PCAP) to inform various education-related initiatives. In Canada, PISA is carried out through a partnership consisting of Human Resources and Skills Development Canada, the Council of Ministers of Education, Canada and Statistics Canada.

The project began in 2000 and focuses on the capabilities of 15-year-olds as they near the end of compulsory education. It reports on reading literacy, mathematical literacy and scientific literacy every three years and provides a more detailed look at one of those domains in the years when it is the major focus. As was the case in 2000, reading was the major domain of PISA in 2009 when the focus was on both overall (or combined) reading literacy and the three reading sub-domains (reading retrieving, reading interpreting and reading reflecting). As minor domains in PISA 2009, only overall measures of mathematics and science are available.

## Why did Canada participate in PISA?

Canada's continued participation in PISA 2009 stems from many of the same questions motivating other participating countries. In Canada, provinces and territories responsible for education invest significant public resources in the provision of elementary and secondary education and Canadians are interested in the outcomes of compulsory education provided to their youth. How can expenditures be directed to the achievement of higher levels of knowledge and skills upon which lifelong learning is founded and to potentially reduce social inequality in life outcomes?

Elementary and secondary education systems play a key role in providing students with the knowledge and skills that form an essential foundation necessary to further develop human capital either through participation in the workforce, post-secondary education

or lifelong learning. Previous studies based on PISA data have shown the effects of strong skills at age 15 in later life. Youth with strong reading skills were much more likely to have finished high school, pursue post-secondary education and finish it. For example, results from the Youth in Transition Survey (YITS) show that there is a strong association between reading proficiency and education attainment. Canadian students in the bottom quartile of PISA reading scores were much more likely to drop out of secondary school and less likely to have completed a year of post-secondary education than those in the high quartile of reading score. In contrast, Canadian students in the top PISA level (Level 5) of reading performance were twenty times more likely to go to university than those in the lowest PISA level (at or below Level 1)<sup>3</sup>.

Questions about educational effectiveness can be partly answered with data on the average performance of Canada's youth in key subject areas. However, two other questions with respect to equity can only be answered by examining the distribution of competencies: Who are the students at the lowest levels? Do certain groups or regions appear to be at greater risk? These are important questions because, among other things, acquisition of knowledge and skills during compulsory schooling influences access to postsecondary education, eventual success in the labour market and the effectiveness of continuous, lifelong learning.

## What is PISA 2009?

Sixty-five countries and economies participated in PISA 2009, including all 33 OECD countries<sup>4</sup>. Between 5,000 and 10,000 students aged 15 from at least 150 schools were typically tested in each country. In Canada, approximately 23,000 15-year-olds from about 1,000 schools participated across the ten provinces<sup>5</sup>.

The large Canadian sample was required to produce reliable estimates representative of each province and for both French and English language school systems in Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Alberta and British Columbia. It should be noted that PISA was administered in English and in French according to the respective school system.

The 2009 PISA assessment was administered in schools, during regular school hours in April and May 2009. This assessment was a two hour paper-and-pencil test. Students also completed a 20-minute student background questionnaire providing information about themselves and their home and a 10-minute

questionnaire on information technology and communications, while school principals completed a 20-minute questionnaire about their schools. As part of PISA 2009, national options could also be implemented. Canada chose to add a 20-minute student questionnaire as a national component to collect more information on the school experiences of 15-year-olds, their work activities and their relationships with others.

## Objectives and organization of the report

This report is the first of two reports that provide the initial results from the PISA 2009 assessment for Canada and the provinces. This report provides the first pan-Canadian results of the PISA 2009 assessment of reading, mathematics and science by presenting the national and

provincial results in order to complement the information presented in the PISA 2009 International report<sup>6</sup>. Results are compared to other participating countries and across Canadian provinces.

Chapter 1 provides information on the performance of Canadian 15-year-old students on the PISA 2009 assessment in reading. Chapter 2 presents results on the performance of Canada and the provinces in the minor domains of mathematics and science. Finally, the major findings and opportunities for further study are discussed in the conclusion.

A second report will be released in the early Spring 2011 and will examine the relationship between student background characteristics, school factors, and student engagement with reading achievement.

Table 1

### Overview of PISA 2009

|                                                     | International                                                                                                                                                                                                                                                                                                                                                                                                                              | Canada                                                                                                                                                                                               |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Participating countries/provinces</b>            | <ul style="list-style-type: none"> <li>65 countries and economies</li> </ul>                                                                                                                                                                                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>10 provinces</li> </ul>                                                                                                                                       |
| <b>Population</b>                                   | <ul style="list-style-type: none"> <li>Youth aged 15</li> </ul>                                                                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>Same</li> </ul>                                                                                                                                               |
| <b>Number of participating students</b>             | <ul style="list-style-type: none"> <li>Between 5,000 and 10,000 per country with some exceptions for a total of around 470,000 students</li> </ul>                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>Approximately 23,000 students</li> </ul>                                                                                                                      |
| <b>Domains</b>                                      | <ul style="list-style-type: none"> <li>Major: reading</li> <li>Minor: mathematics and science</li> </ul>                                                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>Same</li> </ul>                                                                                                                                               |
| <b>Amount of testing time devoted to domains</b>    | <ul style="list-style-type: none"> <li>390 minutes of testing material organized into different combinations of test booklets 210 minutes in length               <ul style="list-style-type: none"> <li>120 minutes devoted to reading</li> <li>90 minutes devoted to mathematics</li> <li>90 minutes devoted to science</li> </ul> </li> </ul>                                                                                           | <ul style="list-style-type: none"> <li>Same</li> </ul>                                                                                                                                               |
| <b>Languages in which the test was administered</b> | <ul style="list-style-type: none"> <li>48 languages</li> </ul>                                                                                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>English and French</li> </ul>                                                                                                                                 |
| <b>International assessment</b>                     | <ul style="list-style-type: none"> <li>Two hours of direct assessments of reading, mathematics and science</li> <li>Twenty minute contextual questionnaire administered to youth</li> <li>A school questionnaire administered to school principals</li> </ul>                                                                                                                                                                              | <ul style="list-style-type: none"> <li>Same</li> </ul>                                                                                                                                               |
| <b>International options</b>                        | <ul style="list-style-type: none"> <li>Ten-minute optional questionnaire on information technology and communications administered to students</li> <li>Ten-minute optional questionnaire on educational career administered to students</li> <li>Twenty-minute optional questionnaire administered to parents</li> <li>One hour optional electronic reading assessment</li> <li>Grade-based sampling</li> <li>One-hour booklet</li> </ul> | <ul style="list-style-type: none"> <li>Ten-minute optional questionnaire on information technology and communications administered to students</li> </ul>                                            |
| <b>National options</b>                             | <ul style="list-style-type: none"> <li>Other options were undertaken in a limited number of countries</li> </ul>                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>Twenty minutes of additional questions administered to students regarding their school experiences, work activities and relationships with others.</li> </ul> |

## Notes

1. OECD (1999), *Measuring Student Knowledge and Skills: A New Framework for Assessment*, Paris.
  2. Council of Ministers of Education, Canada (2008). *PCAP-13 2007 Report on the Assessment of 13-year-olds in Reading, Mathematics, and Science*. Toronto.
  3. OECD (2010). *Pathways to Success: How knowledge and Skills at age 15 shape future lives in Canada*. Paris.
  4. OECD countries include Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States.
- Partner countries and economies are: Albania, Argentina, Azerbaijan, Brazil, Bulgaria, Chinese Taipei, Colombia, Croatia, Dubai (UAE), Estonia, Hong Kong – China, Indonesia, Jordan, Kazakhstan, Kyrgyz Republic, Latvia, Liechtenstein, Lithuania, Macao-China, Montenegro, Panama, Peru, Qatar, Romania, Russian Federation, Serbia, Shanghai-China, Singapore, Thailand, Trinidad and Tobago, Tunisia, and Uruguay.
5. No data were collected in the three territories and First Nations schools.
  6. The PISA 2009 International report is released in five volumes. Results presented in this report correspond to results presented in Volume 1, OECD (2010) *Tomorrow's skills today – Student performance in PISA 2009*. Paris and Volume 5, OECD (2010) *Learning Curves, From PISA 2000 to PISA 2009*. Paris.

# Chapter 1

## The performance of Canadian students in reading in an international context

This chapter presents results of the PISA 2009 assessment in the major domain of reading in terms of average scores, variation in performance, and proficiency levels. First, the performance of 15-year-old students across Canada and in the 10 provinces is compared to the performance of 15-year-olds from the other countries and economies that participated in PISA 2009. Next, results are presented on the performance of students enrolled in English-language and French-language schools for those provinces in which the two groups were sampled separately. Following this, gender differences in reading performance are examined. Lastly, change in reading performance over time is discussed.

### Defining reading

In the PISA context, the term “reading” is used for “reading literacy” which is meant to focus on the active, purposeful and functional application of reading in a range of situations and for various purposes: “Reading literacy is understanding, using, reflecting on and engaging with written texts, in order to achieve one’s goals, to develop one’s knowledge and potential, and to participate in society”.<sup>7</sup>

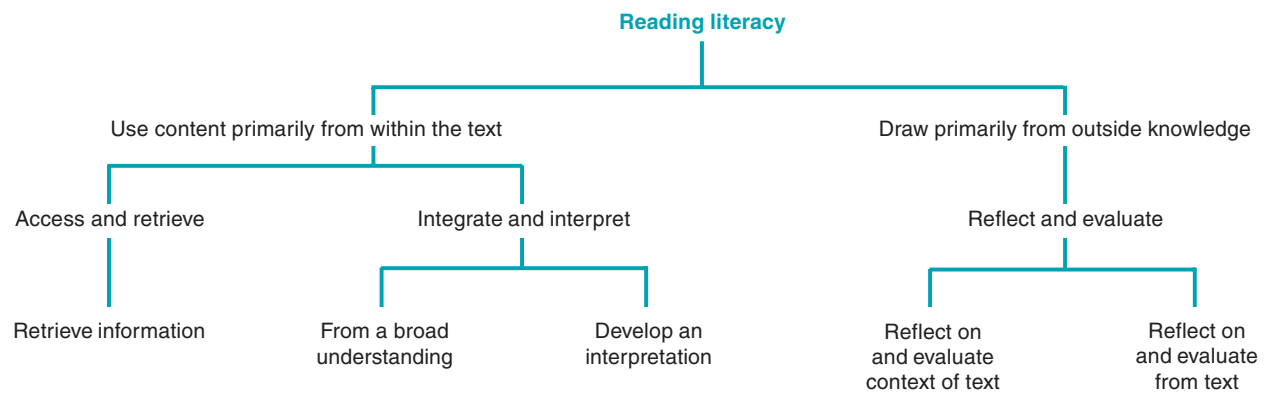
With reading being the first of the PISA domains to be reassessed as major domain, the reading framework developed in 2000 was revisited to account for changes in the domain in the past decade. Much of the substance

of the PISA 2000 reading framework has been retained in 2009, which allows reporting on trends in performance over time. However, two major modifications in the 2009 framework focus on the incorporation of reading of electronic texts and the elaboration of the constructs of reading engagement and metacognition. In 2009, the assessment of reading of electronic texts was implemented as an international option in which Canada elected not to participate. Therefore, this report presents the Canadian results for the core paper-and-pencil assessment of reading in which Canada, along with the other 65 countries and economies participated. Since the same reading scales are relevant to all PISA participating countries it is appropriate to compare the performance of countries involved in this assessment directly and to report on trends in performance between 2000 and 2009.

As was the case in PISA 2000, PISA 2009 reports results globally and for the three aspects identified in the framework (Accessing and Retrieving, Integrating and Interpreting, and Reflecting and Evaluating). Additionally it reports on two text formats used in PISA (Continuous texts and Non-continuous texts). The main features of the reading aspect scales are described in Figure 1.1. Further information is available in the PISA 2009 framework. Although there is a high correlation between these sub-scales, reporting results on each sub-scale may reveal interesting interactions which could be linked to curriculum and teaching methodology used.

Figure 1.1

## Main features of the reading subscales



**Accessing and retrieving** involves going to the information space provided and navigating in that space to locate and retrieve one or more distinct pieces of information.

**Integrating and interpreting** involves processing what is read to make internal sense of a text.

**Reflecting and evaluating** involves drawing upon knowledge, ideas or attitudes beyond the text in order to relate the information provided within the text to one's own conceptual and experiential frames of reference.

**Continuous texts** are formed by sentences organized into paragraphs. These include newspaper articles, essays, short stories, reviews or letters.

**Non-continuous texts** are documents that combine several text elements such as lists, tables, graphs, diagrams, advertisements, schedules, catalogues, indexes or forms.

In 2009, text formats also included mixed and multiple text formats but these were classified within the other two categories due to their relatively small number of items.

**Source:** OECD (2009). PISA 2009 Assessment Framework: Key competencies in reading, mathematics and science. Paris.

The PISA scores for reading are expressed on a scale with a mean of 500 points for the OECD countries and a standard deviation of 100. This average was established in 2000 when reading was first introduced as the major domain. This means that approximately two-thirds of all students in OECD countries scored between 400 and 600 (i.e. within one standard deviation of the average).

One way to summarize student performance and to compare the relative standing of countries is by examining their average test scores. However, simply ranking countries based on their average scores can be misleading because there is a margin of error associated with each score. This margin of error must be taken into account in order to identify whether significant differences in average scores exist when comparing countries (see text Box 1 'A note on statistical comparisons'). When interpreting average performances, only those differences between countries that are *statistically significant* should be taken into account.

## Box 1

## A note on statistical comparisons

The averages were computed from the scores of random samples of students from each country and not from the population of students in each country. Consequently, it cannot be said with certainty that a sample average has the same value as the population average that would have been obtained had all 15-year-old students been assessed. Additionally, a degree of error is associated with the scores describing student performance as these scores are estimated based on student responses to test items. A statistic, called the standard error, is used to express the degree of uncertainty associated with sampling error and measurement error. The standard error can be used to construct a confidence interval, which provides a means of making inferences about the population averages and proportions in a manner that reflects the uncertainty associated with sample estimates. A 95% confidence interval is used in this report and represents a range of plus or minus about two standard errors around the sample average. Using this confidence interval it can be inferred that the population mean or proportion would lie within the confidence interval in 95 out of 100 replications of the measurement, using different samples randomly drawn from the same population.

When comparing scores among countries, provinces, or population subgroups the degree of error in each average must be considered in order to determine if the true population averages are likely different from each other. Standard errors and confidence intervals may be used as the basis for performing these comparative statistical tests. Such tests can identify, with a known probability, whether there are actual differences in the populations being compared.

For example, when an observed difference is significant at the 0.05 level, it implies that the probability is less than 0.05 that the observed difference could have occurred because of sampling or measurement error. When comparing countries and provinces, extensive use is made of this type of statistical test to reduce the likelihood that differences due to sampling or measurement errors will be interpreted as real.

Only statistically significant differences at the 0.05 level are noted in this report, unless otherwise stated. Averages did not differ unless the 95% confidence intervals for the averages being compared did not overlap. Where confidence intervals overlapped slightly an additional t-test was conducted to confirm the statistical difference.

## Canadian students continue to perform well in reading in a global context

Overall, Canadian students continue to perform well compared with students in most other countries. As shown in Chart 1.1, Canada had a mean score of 524 on the combined reading scale, well above the OECD average of 496<sup>8</sup>, and was outperformed by only 4 countries. Listed in Table 1.1 are the countries<sup>9</sup> that performed significantly better than Canada or equally as well as Canada on the combined reading scale and for each of the sub-scales. This means that the average scores of all remaining countries that took part in PISA 2009 were statistically below that of Canada (see Appendix tables B.1.1 to B.1.6). In drawing comparisons with results from previous PISA cycles, it should be noted that Shanghai-China and Singapore participated for the first time in PISA 2009.

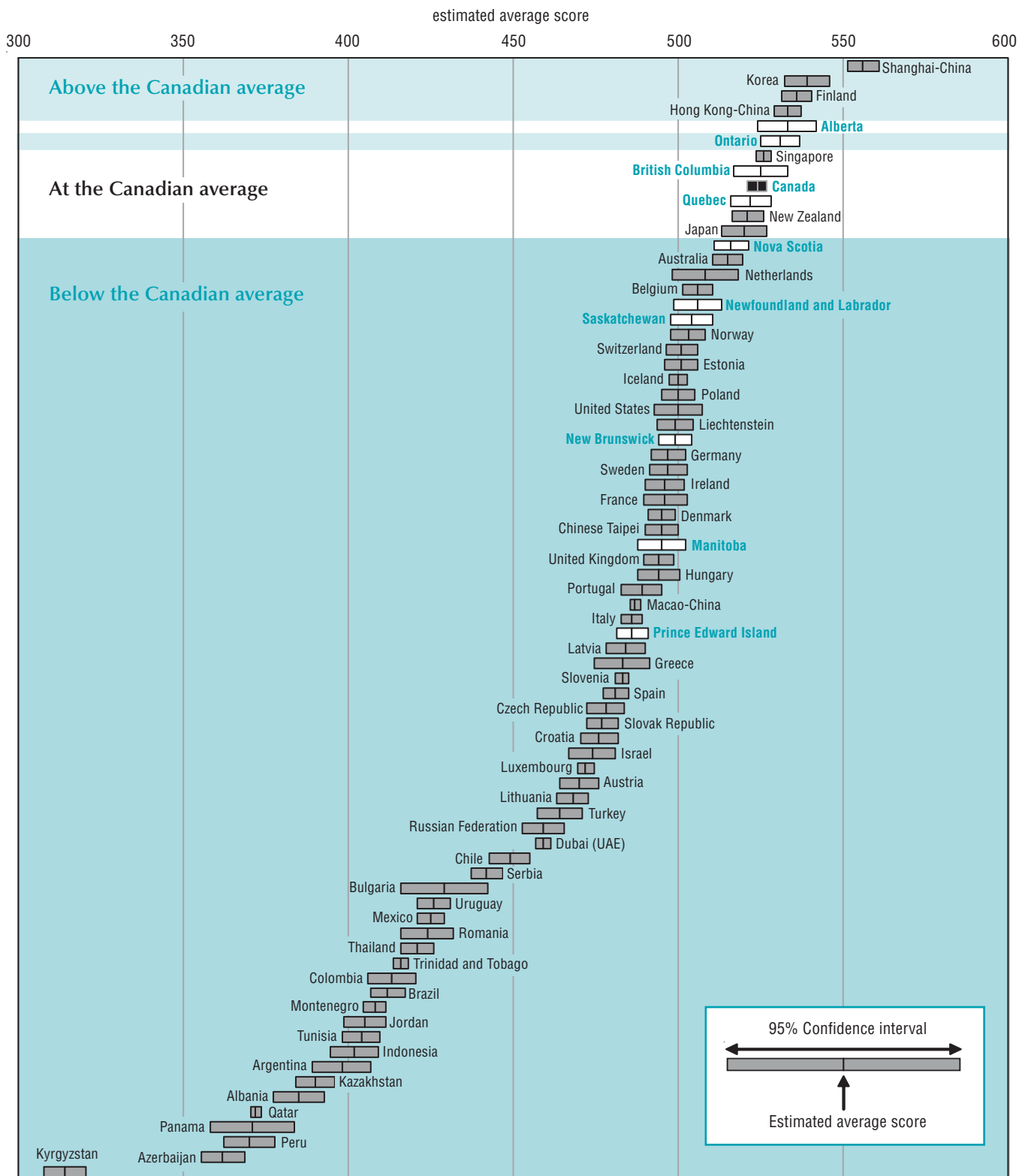
Table 1.1

### Countries performing better than, or the same as Canada

|                                               | Countries performing significantly better than Canada             | Countries performing as well as Canada               |
|-----------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------|
| <b>Reading – combined reading</b>             | Shanghai-China, Korea, Finland, Hong Kong-China                   | Singapore, New Zealand, Japan                        |
| <b>Reading aspect sub-scales</b>              |                                                                   |                                                      |
| <b>Reading – accessing and retrieving</b>     | Shanghai-China, Korea, Finland, Japan, Hong Kong-China, Singapore | New Zealand, Netherlands, Belgium, Australia, Norway |
| <b>Reading – integrating and interpreting</b> | Shanghai-China, Korea, Finland, Hong Kong-China                   | Singapore, Japan, New Zealand                        |
| <b>Reading – reflecting and evaluating</b>    | Shanghai-China, Korea                                             | Hong Kong-China, Finland, New Zealand                |
| <b>Text format sub-scales</b>                 |                                                                   |                                                      |
| <b>Reading – continuous texts</b>             | Shanghai-China, Korea, Hong Kong-China, Finland                   | Singapore, Japan                                     |
| <b>Reading – non-continuous texts</b>         | Korea, Singapore, Shanghai-China, Finland                         | New Zealand, Australia, Hong Kong-China              |

Chart 1.1

### Average scores and confidence intervals for provinces and countries: Combined reading



Note: The OECD average is 496 with a standard error of 0.6.

Among the 65 countries that participated in PISA 2009, only four countries outperformed Canada on the combined reading scale: Shanghai-China, Korea, Finland and Hong Kong-China while three countries had similar performance to Canada. Across the three reading aspect sub-scales, Canada was outperformed by six countries in Reading Accessing and Retrieving, four countries in Reading Integrating and Interpreting and two countries in Reading Reflecting and Evaluating. When analyzing results for the three aspects of reading, it should be noted that those aspects are not entirely separate and independent but that they can be considered semi-hierarchical: it is not possible to interpret and integrate information without having first retrieved it. Across the three reading aspects, Canadian students performed relatively better in the more encompassing aspect of Reading Reflecting and Evaluating with a mean score of 535 and had relatively lower performance in Reading Accessing and Retrieving with a mean score of 517.

When analyzing results for the two text formats, four countries performed better than Canada on both text format sub-scales with a Canadian mean score of 524 points on the continuous texts sub-scale and 527 points on the non-continuous texts sub-scale<sup>10</sup>.

## There is significant variation in performance between Canadian provinces in reading

At the provincial level, most 15-year-olds also performed well in reading. Students in nine of the Canadian provinces performed at or above the OECD average on the combined reading scale with only Prince Edward Island performing below the OECD mean. As shown in Table 1.2, provinces fell into one of three groups when compared to the Canadian averages for combined reading and the reading sub-scales. Ontario performed above the Canadian average for both the combined reading and reading sub-scales and Alberta performed above the Canadian average on four of the five reading sub-scales. Although Alberta and Ontario had similar performance on the combined reading and reading accessing and retrieving scale, Alberta's score was not significantly different than the Canadian average once the standard errors were considered<sup>11</sup>. British Columbia performed at the Canadian average for both the combined reading and reading sub-scales and Quebec performed at the Canadian average for the combined reading and four of the five reading sub-scales. Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Manitoba and Saskatchewan performed below the Canadian average for both the combined reading and reading sub-scales.

Table 1.2

### Provincial results in reading in relation to the Canadian average

|                                               | Provinces performing significantly better than Canada | Provinces performing the same as the Canadian average | Provinces performing significantly lower than the Canadian average                                          |
|-----------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Reading – combined</b>                     | Ontario                                               | Quebec, Alberta, British Columbia                     | Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Manitoba, Saskatchewan         |
| <b>Reading – accessing and retrieving</b>     | Ontario                                               | Quebec, Alberta, British Columbia                     | Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Manitoba, Saskatchewan         |
| <b>Reading – integrating and interpreting</b> | Ontario, Alberta                                      | Quebec, British Columbia                              | Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Manitoba, Saskatchewan         |
| <b>Reading – reflecting and evaluating</b>    | Ontario, Alberta                                      | British Columbia                                      | Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Manitoba, Saskatchewan |
| <b>Reading – continuous texts</b>             | Ontario, Alberta                                      | Quebec, British Columbia                              | Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Manitoba, Saskatchewan         |
| <b>Reading – non-continuous texts</b>         | Ontario, Alberta                                      | Quebec, British Columbia                              | Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Manitoba, Saskatchewan         |

**Note:** Provinces within each cell are ordered from east to west.

## Canada continues to demonstrate strong performance and high equity in reading performance

While mean performance is useful in assessing the overall performance of students, we can learn more about overall performance by looking at how the scores were distributed within each country or province since average scores can mask significant variation within a jurisdiction. Countries aim not only to encourage high performance but also to minimize disparities in performance which can be measured by the gap between the highest and lowest performing student. This is an important indicator of the equity of educational outcomes.

Canada is widely recognized as one of a few PISA countries that has both high performance and high equity. Equity in performance can be measured by examining the relative distribution of scores or the gap that exists between students with the highest and lowest

levels of performance within each jurisdiction. Chart 1.2 shows the difference in average scores between those in the lowest quarter (25th percentile) of student achievement and those in the highest quarter (75th percentile) of student achievement in reading. For Canada overall, those in the highest quarter scored 124 score points higher compared to those in the lowest quarter. This compares to 128 score points across all OECD countries. At the provincial level, the largest gap was in Alberta (133 points) and the smallest in Nova Scotia (117 points).

The amount of within-country variation in performance in reading varied widely among OECD countries (Appendix tables B.1.7 to B.1.12). Both Canada and the majority of the provinces were among the few jurisdictions with higher reading performance and lower variation in student performance (as measured by score point differences between the 75th and 25th percentile).

Chart 1.2

### Difference in average scores in reading between students who performed in the bottom quarter of performance and students who performed in the top quarter of performance

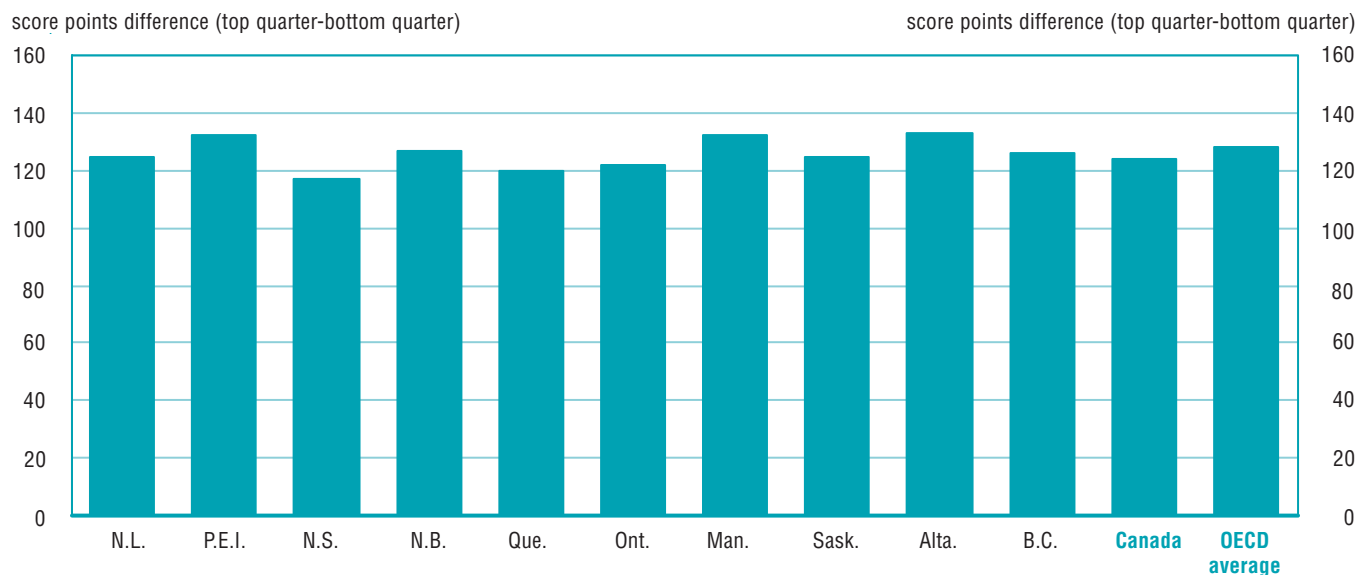


Table 1.3

## Summary descriptions for the seven levels of proficiency in reading

| Level     | Lower score limit | Percentage of students able to perform tasks at this level or above                                               | Characteristics of tasks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|-------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>6</b>  | 698.32            | 0.8% of students across the OECD and 1.8% in Canada can perform tasks at least at Level 6 on the reading scale    | <ul style="list-style-type: none"> <li>Requires the reader to make multiple inferences, comparisons and contrasts that are both detailed and precise.</li> <li>Requires demonstration of a full and detailed understanding of one or more texts and may involve integrating information from more than one text.</li> <li>May require the reader to deal with unfamiliar ideas, in the presence of prominent competing information, and to generate abstract categories for interpretations.</li> <li>Reflect and evaluate tasks may require the reader to hypothesize about or critically evaluate a complex text on an unfamiliar topic, taking into account multiple criteria or perspectives, and applying sophisticated understandings from beyond the text.</li> <li>Access and retrieve tasks: there is limited data about these tasks at this level, but it appears that a salient condition is precision of analysis and fine attention to detail that is inconspicuous in the texts.</li> </ul>                                                                                                                                             |
| <b>5</b>  | 625.61            | 7.7% of students across the OECD and 12.8% in Canada can perform tasks at least at Level 5 on the reading scale   | <ul style="list-style-type: none"> <li>For all aspects of reading, tasks at this level typically involve dealing with concepts that are contrary to expectations.</li> <li>Retrieving tasks require the reader to locate and organize several pieces of deeply embedded information, inferring which information in the text is relevant.</li> <li>Reflective tasks require critical evaluation or hypothesis, drawing on specialized knowledge. Both interpretative and reflective tasks require a full and detailed understanding of a text whose content or form is unfamiliar.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>4</b>  | 552.89            | 28.6% of students across the OECD and 39.6% in Canada can perform tasks at least at Level 4 on the reading scale  | <ul style="list-style-type: none"> <li>Retrieving information tasks require the reader to locate and organize several pieces of embedded information.</li> <li>Some interpretive tasks at this level require interpreting the meaning of nuances of language in a section of text by taking into account the text as a whole. Other interpretative tasks require understanding and applying categories in an unfamiliar context.</li> <li>Reflective tasks at this level require readers to use formal or public knowledge to hypothesize about or critically evaluate a text. Readers must demonstrate an accurate understanding of long or complex texts whose content or form may be unfamiliar.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>3</b>  | 480.18            | 57.4% of students across the OECD and 69.6% in Canada can perform tasks at least at Level 3 on the reading scale  | <ul style="list-style-type: none"> <li>Tasks at this level require the reader to locate, and in some cases recognize the relationship between, several pieces of information that must meet multiple conditions.</li> <li>Interpretative tasks at this level require the reader to integrate several parts of a text in order to identify a main idea, understand a relationship or construe the meaning of a word or phrase. They need to take into account many features in comparing, contrasting or categorizing. Often the required information is not prominent or there is much competing information; or there are other text obstacles, such as ideas that are contrary to expectation or negatively worded.</li> <li>Reflective tasks at this level may require connections, comparisons, and explanations, or they may require the reader to evaluate a feature of the text. Some reflective tasks require readers to demonstrate a fine understanding of the text in relation to familiar, everyday knowledge. Other tasks do not require detailed text comprehension but require the reader to draw on less common knowledge.</li> </ul> |
| <b>2</b>  | 407.47            | 81.4% of students across the OECD and 89.8% in Canada can perform tasks at least at Level 2 on the reading scale  | <ul style="list-style-type: none"> <li>Some tasks at this level require the reader to locate one or more pieces of information, which may need to be inferred and may need to meet several conditions.</li> <li>Others tasks require recognizing the main idea in a text, understanding relationships, or construing meaning within a limited part of the text when the information is not prominent and the reader must make low level inferences.</li> <li>Tasks at this level may involve comparisons or contrasts based on a single feature in the text.</li> <li>Typical reflective tasks at this level require readers to make a comparison or several connections between the text and outside knowledge, by drawing on personal experience and attitudes.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                          |
| <b>1a</b> | 334.75            | 94.4% of students across the OECD and 97.7% in Canada can perform tasks at least at Level 1a on the reading scale | <ul style="list-style-type: none"> <li>Tasks at this level require the reader to locate one or more independent pieces of explicitly stated information; to recognize the main theme or author's purpose in a text about a familiar topic, or to make a simple connection between information in the text and common, everyday knowledge.</li> <li>Typically the required information in the text is prominent and there is little, if any, competing information.</li> <li>The reader is explicitly directed to consider relevant factors in the task and in the text.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>1b</b> | 262.04            | 98.9% of students across the OECD and 99.7% in Canada can perform tasks at least at Level 1b on the reading scale | <ul style="list-style-type: none"> <li>Tasks at this level require the reader to locate a single piece of explicitly stated information in a prominent position in a short, syntactically simple text with a familiar context and text type, such as a narrative or a simple list.</li> <li>The text typically provides support to the reader, such as repetition of information, pictures or familiar symbols.</li> <li>There is minimal competing information. In tasks requiring interpretation the reader may need to make simple connections between adjacent pieces of information.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Canada had a larger proportion of high achievers and a smaller proportion of low achievers compared to the OECD average

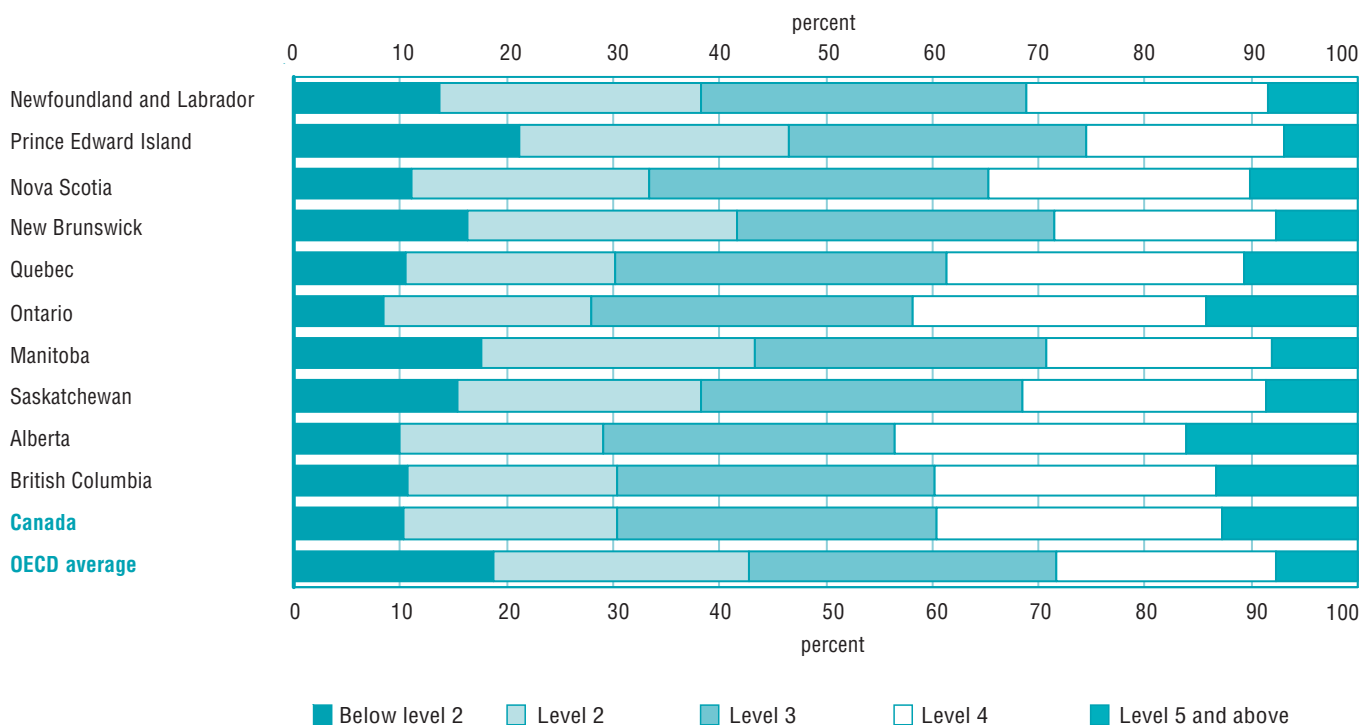
PISA also summarizes student performance on the reading scale by dividing it into levels based on the tasks that are located within each level. Descriptions are provided for each of these levels in order to provide an overall picture of students' accumulated knowledge and skills required to complete these tasks. Tasks at the lower end of the PISA reading scale are deemed easier and less complex than tasks at the higher end and this progression in task difficulty/complexity applies to both the combined reading scale and each aspect and text format sub-scale. As stated previously, the PISA 2009 Reading Literacy framework was very similar to the initial PISA 2000 reading framework with a few notable changes:

- The reading scale was divided into seven levels of proficiency rather than the 5 levels in 2000 (see Table 1.3). The PISA 2009 reading assessment included additional items at the lower and at the higher end so that performance on PISA could be more fully described at the lower and higher ends.
- The inclusion of an optional Electronic Reading Assessment in which Canada did not participate.

Appendix Table B.1.13 shows the distribution of students by proficiency level by country and for the Canadian provinces. Results for countries and provinces are presented in descending order according to the proportion of 15-year-olds who performed at level 2 or higher. According to the OECD, Level 2 can be considered a baseline level of proficiency, at which students begin to demonstrate the reading literacy competencies that will enable them to participate effectively and productively in life<sup>12</sup>.

Chart 1.3

### Distribution of students by proficiency level on the combined reading scale



On the other hand, students performing at the lowest levels (Below Level 2) can still accomplish some reading tasks successfully but they lack some fundamental skills preparing them to either enter the workforce or pursue post-secondary education. As shown in Chart 1.3, the proportion of Canadian students performing below Level 2 was 10%, almost half the proportion of the OECD average (19%). Only two countries (Shanghai-China, Korea) had a statistically smaller proportion of students below Level 2 and both of these countries also had higher average scores. In addition, the proportion of students below Level 2 in Shanghai-China and Korea was at least half of that observed for Canada (Appendix Table B.1.13). And while the proportion of Canadian students who performed below Level 2 was much lower compared to other participating countries, still one in ten Canadian students do not possess some of the fundamental skills in reading (below Level 2).

On the higher end of the reading scale, students proficient at Level 4 or above have acquired the level of literacy that is required to participate effectively and productively in life and are also capable of the moderately difficult reading tasks in PISA 2009<sup>13</sup>. Forty percent of Canadian students achieved Level 4 or above, compared to 29% at the OECD average.

And when further considering just the top performers (Level 5 and above), almost 13% of Canadian students performed at level 5 or above compared to 8% at the OECD average. Again, countries that outperformed Canada in reading tended to have a higher proportion of high achievers. In Shanghai-China almost one in five students performing at Level 5 or above and in New Zealand and Singapore almost 16% were high achievers.

As shown in Chart 1.3 the proportion of low achievers (Below Level 2) ranged from 9% in Ontario to 21% in Prince Edward Island. The proportion of students who performed Below Level 2 was not statistically different than the Canadian average in Newfoundland and Labrador, Nova Scotia, Quebec, Ontario, Alberta and British Columbia. In Prince Edward Island, New Brunswick, Manitoba and Saskatchewan, the proportion

of low achievers was significantly higher than the Canadian average yet was at or below the OECD average of 19%.

The proportion of high achievers (Level 5 or above) ranged from 7% in Prince Edward Island to 16% in Alberta. The proportion of high performing students was similar to the Canadian average in Nova Scotia, Quebec, Ontario, Alberta and British Columbia. Compared to the Canadian average, a lower proportion of students were at Level 5 and above in Newfoundland and Labrador, Prince Edward Island, New Brunswick, Manitoba and Saskatchewan; however the proportion at Level 5 or above in these provinces was statistically similar to the OECD average of eight percent.

### **In most Canadian provinces, students in minority-language school systems had lower reading performance than students in majority-language school systems**

PISA 2009 also examined the performance of students in English and French school systems for those Canadian provinces that sampled these population groups separately and where the sample was sufficiently large to allow for separate reporting. Reading performance was compared for students in the English-language school system and those in the French-language school system<sup>14</sup> for British Columbia, Alberta, Manitoba, Ontario, Quebec, New Brunswick, and Nova Scotia.

As can be seen in Table 1.4 at the Canada level, students in the English-language school systems outperformed students in the French-language school systems and in five provinces (British Columbia, Alberta, Ontario, New Brunswick and Nova Scotia) students in the English-language school systems outperformed students in the French-language school systems by 38 points or more on the combined reading scale, while in two provinces (Manitoba and Quebec) there were no significant differences between students in the two systems.

Table 1.4

**Estimated average scores and school-language system differences for  
combined reading and reading subscales, by province**

|                                     | English-language school system |                | French-language school system |                | Difference between the English-language and French-language school systems |                |
|-------------------------------------|--------------------------------|----------------|-------------------------------|----------------|----------------------------------------------------------------------------|----------------|
|                                     | average                        | standard error | average                       | standard error | difference                                                                 | standard error |
| <b>Combined reading</b>             |                                |                |                               |                |                                                                            |                |
| Nova Scotia                         | 517                            | (2.7)          | 479                           | (8.5)          | 38*                                                                        | (9.0) *        |
| New Brunswick                       | 511                            | (3.1)          | 469                           | (3.3)          | 41*                                                                        | (4.8) *        |
| Quebec                              | 520                            | (4.1)          | 522                           | (3.5)          | -2                                                                         | (5.4)          |
| Ontario                             | 533                            | (3.1)          | 475                           | (2.4)          | 58*                                                                        | (3.9) *        |
| Manitoba                            | 496                            | (3.6)          | 487                           | (9.2)          | 8                                                                          | (10.0)         |
| Alberta                             | 533                            | (4.6)          | 475                           | (7.0)          | 58*                                                                        | (8.5) *        |
| British Columbia                    | 525                            | (4.2)          | 475                           | (9.1)          | 49*                                                                        | (9.9) *        |
| <b>Canada</b>                       | <b>527</b>                     | <b>(1.8)</b>   | <b>517</b>                    | <b>(3.1)</b>   | <b>10*</b>                                                                 | <b>(3.6) *</b> |
| <b>Accessing and retrieving</b>     |                                |                |                               |                |                                                                            |                |
| Nova Scotia                         | 507                            | (3.4)          | 474                           | (8.4)          | 32*                                                                        | (9.1) *        |
| New Brunswick                       | 497                            | (4.1)          | 463                           | (3.3)          | 34*                                                                        | (5.4) *        |
| Quebec                              | 513                            | (4.3)          | 515                           | (4.0)          | -2                                                                         | (5.8)          |
| Ontario                             | 525                            | (3.2)          | 465                           | (2.9)          | 61*                                                                        | (4.3) *        |
| Manitoba                            | 497                            | (3.9)          | 485                           | (9.1)          | 12                                                                         | (10.1)         |
| Alberta                             | 523                            | (4.5)          | 456                           | (11.3)         | 66*                                                                        | (12.2) *       |
| British Columbia                    | 516                            | (4.5)          | 465                           | (9.0)          | 51*                                                                        | (10.2) *       |
| <b>Canada</b>                       | <b>519</b>                     | <b>(1.8)</b>   | <b>510</b>                    | <b>(3.6)</b>   | <b>9*</b>                                                                  | <b>(4.2) *</b> |
| <b>Integrating and interpreting</b> |                                |                |                               |                |                                                                            |                |
| Nova Scotia                         | 516                            | (2.9)          | 470                           | (8.4)          | 45*                                                                        | (8.8) *        |
| New Brunswick                       | 512                            | (3.4)          | 468                           | (3.0)          | 45*                                                                        | (4.8) *        |
| Quebec                              | 517                            | (3.7)          | 522                           | (3.7)          | -5                                                                         | (5.3)          |
| Ontario                             | 530                            | (3.1)          | 471                           | (2.6)          | 59*                                                                        | (4.0) *        |
| Manitoba                            | 493                            | (4.1)          | 486                           | (8.4)          | 7                                                                          | (9.3)          |
| Alberta                             | 532                            | (4.8)          | 476                           | (6.8)          | 56*                                                                        | (8.5) *        |
| British Columbia                    | 522                            | (4.7)          | 469                           | (8.9)          | 53*                                                                        | (10.3) *       |
| <b>Canada</b>                       | <b>524</b>                     | <b>(1.8)</b>   | <b>516</b>                    | <b>(3.3)</b>   | <b>8</b>                                                                   | <b>(3.8) *</b> |
| <b>Reflecting and evaluating</b>    |                                |                |                               |                |                                                                            |                |
| Nova Scotia                         | 527                            | (3.0)          | 491                           | (8.0)          | 37*                                                                        | (8.6) *        |
| New Brunswick                       | 517                            | (3.0)          | 476                           | (2.8)          | 41*                                                                        | (4.2) *        |
| Quebec                              | 527                            | (4.0)          | 525                           | (3.7)          | 3                                                                          | (5.4)          |
| Ontario                             | 548                            | (3.3)          | 493                           | (2.4)          | 55*                                                                        | (4.1) *        |
| Manitoba                            | 504                            | (4.1)          | 499                           | (10.1)         | 5                                                                          | (10.8)         |
| Alberta                             | 546                            | (4.4)          | 492                           | (6.8)          | 54*                                                                        | (8.1) *        |
| British Columbia                    | 536                            | (4.2)          | 497                           | (11.6)         | 39*                                                                        | (12.3) *       |
| <b>Canada</b>                       | <b>540</b>                     | <b>(2.0)</b>   | <b>521</b>                    | <b>(3.3)</b>   | <b>19</b>                                                                  | <b>(3.9) *</b> |
| <b>Continuous texts</b>             |                                |                |                               |                |                                                                            |                |
| Nova Scotia                         | 517                            | (2.9)          | 471                           | (8.8)          | 47*                                                                        | (9.4) *        |
| New Brunswick                       | 513                            | (3.2)          | 467                           | (2.9)          | 46*                                                                        | (4.5) *        |
| Quebec                              | 519                            | (3.9)          | 519                           | (3.6)          | 0                                                                          | (5.3)          |
| Ontario                             | 534                            | (3.2)          | 471                           | (2.6)          | 64*                                                                        | (3.9) *        |
| Manitoba                            | 497                            | (4.1)          | 485                           | (9.0)          | 12                                                                         | (10.1)         |
| Alberta                             | 534                            | (4.8)          | 472                           | (7.4)          | 61*                                                                        | (8.9) *        |
| British Columbia                    | 524                            | (4.5)          | 470                           | (10.5)         | 54*                                                                        | (11.4) *       |
| <b>Canada</b>                       | <b>528</b>                     | <b>(1.8)</b>   | <b>513</b>                    | <b>(3.2)</b>   | <b>14</b>                                                                  | <b>(3.7) *</b> |

Table 1.4 (concluded)

**Estimated average scores and school-language system differences for combined reading and reading subscales, by province**

|                             | English-language school system |                | French-language school system |                | Difference between the English-language and French-language school systems |                |
|-----------------------------|--------------------------------|----------------|-------------------------------|----------------|----------------------------------------------------------------------------|----------------|
|                             | average                        | standard error | average                       | standard error | difference                                                                 | standard error |
| <b>Non-continuous texts</b> |                                |                |                               |                |                                                                            |                |
| Nova Scotia                 | 519                            | (2.9)          | 499                           | (10.1)         | 20*                                                                        | (10.5) *       |
| New Brunswick               | 502                            | (3.2)          | 469                           | (2.8)          | 33*                                                                        | (4.4) *        |
| Quebec                      | 520                            | (4.1)          | 523                           | (3.9)          | -3                                                                         | (5.7)          |
| Ontario                     | 536                            | (3.4)          | 487                           | (2.9)          | 49*                                                                        | (4.4) *        |
| Manitoba                    | 498                            | (3.6)          | 494                           | (8.5)          | 3                                                                          | (9.4)          |
| Alberta                     | 539                            | (4.7)          | 480                           | (6.9)          | 59*                                                                        | (8.5) *        |
| British Columbia            | 531                            | (4.0)          | 490                           | (11.0)         | 41*                                                                        | (11.5) *       |
| <b>Canada</b>               | <b>530</b>                     | <b>(1.9)</b>   | <b>519</b>                    | <b>(3.4)</b>   | <b>12</b>                                                                  | <b>(4.0) *</b> |

\* Statistically significant differences.

A similar pattern was observed with respect to performance in the three reading aspects sub-scales. Across all three aspect sub-scales students enrolled in the English-language school system performed significantly better than those in the French-language school system for Canada overall and in Nova Scotia, New Brunswick, Ontario, Alberta and British Columbia while there was no statistical difference in Quebec and Manitoba.

Performance by text type also followed a similar pattern. Students in the English-language school system outperformed those in the French-language school systems on the continuous text sub-scale in Nova Scotia, New Brunswick, Ontario, Alberta and British Columbia while there were no statistical differences in Quebec and Manitoba. On non-continuous text sub-scale, results were higher in the English school system for New Brunswick, Ontario, Alberta and British Columbia and not statistically different in Nova Scotia, Quebec, and Manitoba.

## Females continue to outperform males in reading

Other provincial, national and international assessments, as well as past PISA assessments have established a clear pattern of significant gender differences in reading favouring females. This gender gap in performance continued in PISA 2009 among all Canadian provinces and in all countries participating in PISA.

In PISA 2009, Canadian females outperformed Canadian males in reading literacy by 34 points, which was similar to the average gap of 33 points in OECD countries. As presented in Appendix Table B.1.20, provincially, the gender gap ranged from 29 points in Nova Scotia to 48 points in Prince Edward Island. Although the gender gap persisted in all three aspects of the PISA reading literacy assessment, it was more pronounced in Accessing and Retrieving and in Reflecting and Evaluating (38 points) than in Integrating and Interpreting (30 points) with provincial gaps being very consistent across the three aspects.

Overall, females had higher mean scores than males in continuous texts (37 points) than in non-continuous texts (33 points). Provincial gaps ranged from 30 points in Nova Scotia to 51 points in Prince Edward Island for continuous texts. For non-continuous texts the gap ranged from 27 points in Nova Scotia and New Brunswick to over 47 points in Newfoundland and Labrador.

## Reading performance in five of the ten Canadian provinces decreased between 2000 and 2009

For the first time, PISA 2009 enables countries to compare their own performance over time from 2000 to 2009. This will provide important information to inform educational policy and instructional practices on the evolution of skills.

PISA 2009 provides the fourth assessment of reading and second full assessment of reading since 2000 when it was first introduced as the major domain. Consequently, it is possible to obtain detailed comparisons about how student performance in reading changed over this nine-year period. While this section looks at change over time, performance differences should be interpreted with caution for several reasons. First, while the measurement approach used in PISA is consistent across cycles, small refinements were made to the assessment framework so small changes should be interpreted prudently. Secondly, in order to allow for comparability over time, some common assessment items were used in each survey. However, because there are a limited number of common items, an additional measurement error must be taken into account for these comparisons over time. Consequently, only changes that are indicated as statistically significant should be considered. In this section data are reported for the 39 countries that participated in both the 2000 and 2009 PISA assessments.

Among OECD countries considered as a whole, reading performance remained unchanged. The OECD average for the 27 countries that participated in PISA in 2000 and 2009<sup>15</sup> of 495 points in reading in 2009 was not significantly different from the average score of 496 in 2000. However, changes in performance were observed across countries. Reading performance increased in 13

countries, remained unchanged in 21 countries and decreased in five countries. Although Canada's mean score in reading decreased from 534 in 2000 to 524 in 2009, this decrease was not statistically significant.

In order to understand how Canada's performance level has evolved, Canada's change in relative performance should be considered alongside with its overall performance. Canada was one of ten countries whose performance in reading was above the OECD average in both 2000 and 2009. However, because Canada did not improve its performance the number of countries that statistically outperformed Canada increased from one in 2000 to three in 2009<sup>16</sup>. Only Finland outperformed Canada in 2000 and although Finland saw a decrease in performance in 2009 its relative score remained higher than Canada. In contrast, Korea's performance increased between 2000 and 2009 leading it to outperform Canada in 2009 while Hong Kong-China outperformed Canada because it did not have a significant decrease in performance between 2000 and 2009.

As shown in Table 1.5 there was a significant decrease in reading scores between 2000 and 2009 in five of the ten provinces – Prince Edward Island, Quebec, Manitoba, Saskatchewan and Alberta. These decreases ranged from 14 score points in Quebec to 34 score points in Manitoba. Although reading performance decreased in Quebec, Saskatchewan and Alberta, reading performance in these provinces remained above the OECD average in PISA 2009. In contrast, as a result of its decrease in performance, Manitoba went from performing above the OECD average in 2000 to performing at the OECD average in 2009, while Prince Edward Island went from performing above the OECD average in 2000 to performing below the OECD average in 2009. Reading performance in the remaining five provinces was not significantly different between 2000 and 2009.

Table 1.5

**Comparison of performance in reading, PISA 2000, 2003, 2006 and 2009,  
Canada and the provinces**

|                           | PISA combined reading score |                |                  |                                   |                  |                                   |                  |                                   |
|---------------------------|-----------------------------|----------------|------------------|-----------------------------------|------------------|-----------------------------------|------------------|-----------------------------------|
|                           | 2000                        |                | 2003             |                                   | 2006             |                                   | 2009             |                                   |
|                           | average score               | standard error | average score    | standard error with linkage error | average score    | standard error with linkage error | average score    | standard error with linkage error |
| Newfoundland and Labrador | 517                         | (2.8)          | 521              | (4.9)                             | 514              | (5.4)                             | 506              | (6.2)                             |
| Prince Edward Island      | 517                         | (2.4)          | 495 <sup>1</sup> | (4.4)                             | 497 <sup>1</sup> | (5.1)                             | 486 <sup>1</sup> | (5.5)                             |
| Nova Scotia               | 521                         | (2.3)          | 513              | (4.4)                             | 505 <sup>1</sup> | (5.7)                             | 516              | (5.6)                             |
| New Brunswick             | 501                         | (1.8)          | 503              | (4.3)                             | 497              | (5.0)                             | 499              | (5.5)                             |
| Quebec                    | 536                         | (3.0)          | 525              | (5.7)                             | 522              | (6.7)                             | 522 <sup>1</sup> | (5.8) <sup>1</sup>                |
| Ontario                   | 533                         | (3.3)          | 530              | (5.1)                             | 534              | (6.4)                             | 531              | (5.8)                             |
| Manitoba                  | 529                         | (3.5)          | 520              | (5.0)                             | 516              | (5.7)                             | 495 <sup>1</sup> | (6.1) <sup>1</sup>                |
| Saskatchewan              | 529                         | (2.7)          | 512 <sup>1</sup> | (5.6) <sup>1</sup>                | 507 <sup>1</sup> | (6.3)                             | 504 <sup>1</sup> | (5.9) <sup>1</sup>                |
| Alberta                   | 550                         | (3.3)          | 543              | (5.7)                             | 535              | (6.1)                             | 533 <sup>1</sup> | (6.7) <sup>1</sup>                |
| British Columbia          | 538                         | (2.9)          | 535              | (4.5)                             | 528              | (7.1)                             | 525              | (6.5)                             |
| <b>Canada</b>             | <b>534</b>                  | <b>(1.6)</b>   | <b>528</b>       | <b>(4.1)</b>                      | <b>527</b>       | <b>(5.1)</b>                      | <b>524</b>       | <b>(5.2)</b>                      |

1. Statistically significant differences compared to PISA 2000.

**Note:** The linkage error is incorporated into the standard error for 2003 and 2006 and 2009.

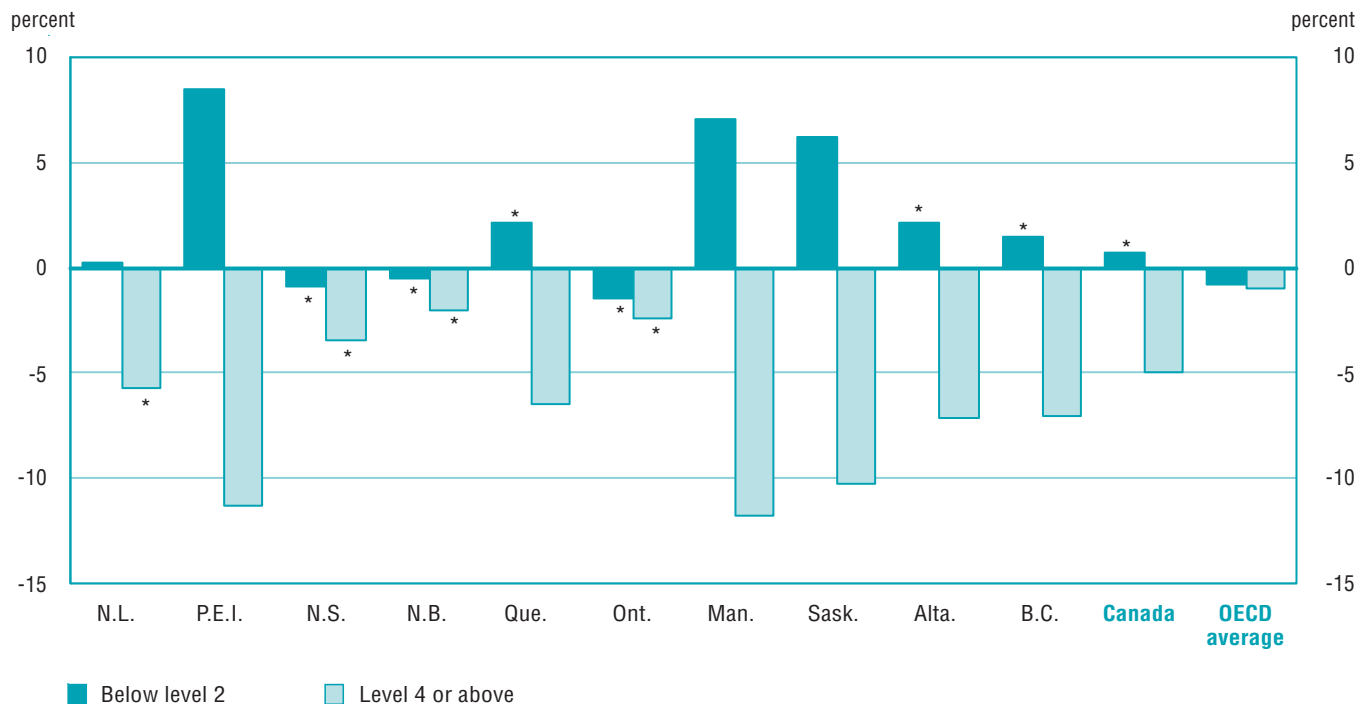
## Canada's proportion of high achievers in reading decreased between 2000 and 2009

Additional insight on Canada's reading performance over time can be provided by looking at the distribution of students by proficiency levels across the two cycles of PISA. As discussed previously in this chapter, Level 2 can be considered a baseline of proficiency at which students begin to demonstrate the required competencies to use reading for learning. However students at this level have not yet acquired the level of literacy that is required to participate effectively and productively in life. In contrast, students proficient at Level 4 or above have acquired the level of literacy that is required to participate effectively and productively in life and are also capable of the moderately difficult reading tasks in PISA 2009.

Among OECD countries considered as a whole, the proportion of students who were below Level 2 or at Level 4 and above remained stable between 2000 and 2009. As seen in Chart 1.4 and Appendix Table B.1.21, although Canada's mean score was not statistically different between 2000 and 2009, the proportion of high achievers (Level 4 and above) decreased from 45% in 2000 to 40% in 2009. When examined by province, the proportion of high achievers decreased in seven of the ten provinces by between five and 12 percentage points and remained unchanged in Nova Scotia, New Brunswick and Ontario. When considering the proportion of low achievers, the proportion remained stable in Canada overall and in seven of the ten provinces. In the three provinces where there was a significant decrease in performance, there was also an increase in the proportion of students who were low performers. In Prince Edward Island, Manitoba and Saskatchewan, the proportion of low achievers increased between 2000 and 2009 by between 6 and 8 percentage points.

Chart 1.4

**Change in the percentage of students below reading proficiency level 2 and at or above reading proficiency level 4 on the combined reading scale between PISA 2000 and PISA 2009, Canada and the provinces**



\* Are not statistically significant.

## Between 2000 and 2009 the gender gap remained stable in Canada and across nine provinces but was significantly reduced in New Brunswick

As shown previously in this chapter, females outperform males in reading in all countries participating in PISA 2009. Across OECD countries the average difference of 38 points in favour of females represented a significant increase from 32 points in 2000. Across Canada, the gender gap remained similar at 34 score points in 2009 and 32 score points in 2000 and in nine of the ten provinces there were no statistical changes in the magnitude of the reading gap favouring females (Appendix Table B.1.22). On the other hand, in New Brunswick, the reading gap favouring females decreased substantially from 48 score points to 32 score points

favouring females. As a result of this decrease, the gender gap in reading in New Brunswick went from being above the Canadian average in 2000 to being similar to the Canadian average in 2009.

## Summary

This chapter presented results for reading, the major domain in PISA 2009. Strong reading skills are not only a foundation for achievement in other subject areas within the educational system, but are also a prerequisite for successful participation in most areas of adult life<sup>17</sup>. Results from PISA 2009 corroborate the findings from previous PISA cycles: Canada performed among top-level countries in reading. Among 65 countries, only four countries outperformed Canada while three countries had similar performance to Canada. At the provincial level, most 15-year-olds also performed well in reading. Students in nine of the Canadian provinces performed

at or above the OECD average on the combined reading scale with only Prince Edward Island performing below the OECD mean. As with previous PISA results, females continue to outperform males in reading in Canada and across the provinces.

The PISA results show that Canada had both a high proportion of high achievers (Level 5 or above) and a low proportion of low achievers (below Level 2) compared to the OECD average. Yet one in ten Canadian students performed at a low reading level (Below Level 2) and lack some fundamental skills to prepare them to either enter the workforce or pursue post-secondary education.

In five of the seven provinces where performance was examined by school-language sector, students attending majority-language outperformed students attending minority-language schools by 38 score points or more with no statistical difference in Quebec and Manitoba. A similar pattern was also observed in the reading aspect sub-scales and the reading text format sub-scales.

Canada's change in overall mean performance in reading over time was not significantly different but its relative performance decreased. Among the countries that participated in both the 2000 and 2009 assessments, only one country outperformed Canada in reading in 2000 while three countries outperformed Canada in 2009. This suggests that in order to maintain its competitive edge in the future, Canada will need to improve at the rate of the top performing countries, rather than simply maintain its competencies in reading.

Across the provinces, reading performance decreased significantly in five of the ten provinces, Prince Edward Island, Quebec, Manitoba, Saskatchewan and Alberta. Although reading performance decreased in Quebec, Saskatchewan and Alberta, reading performance in these provinces remained above the OECD average in PISA 2009. In contrast, as a result of its decrease in performance, Manitoba went from performing above the OECD average in 2000 to performing at the OECD average in 2009, while Prince Edward Island went from performing above the OECD average in 2000 to performing below the OECD average in 2009.

## Notes

7. OECD (2009). PISA 2009 Assessment Framework: Key competencies in reading, mathematics and science. Paris.
8. The scores for reading and the reading sub-scales are expressed on a scale with an average or mean among OECD countries of 500 points and a standard deviation of 100 set in PISA 2000 when reading was first the major domain. Approximately two-thirds of the students scored between 400 and 600 (i.e. within one standard deviation of the average) for the OECD countries. Due to a change in performance over time, the OECD mean score in subsequent cycles may not necessarily be 500.
9. In this Canadian report, the term "countries" will also include "economies" which are economic or geographic entities participating in PISA. Also, although the OECD mean score will be used as a benchmark in this Canadian report, references will be made to non-OECD countries in the analyses.
10. It should be noted that continuous texts accounted for approximately 60% of the PISA 2009 reading tasks.
11. As will be discussed in the forthcoming second release of the Pan-Canadian results Alberta has higher variation in performance in reading compared to other provinces, this variation has an impact on increasing the standard error for this province.
12. OECD (2010) Volume 5: Learning Curves, From PISA 2000 to PISA 2009. Paris.
13. OECD (2010) Volume 5: Learning Curves, From PISA 2000 to PISA 2009. Paris.
14. In interpreting the results it should be noted that the proportion of French-speaking and English-speaking students attending French or English schools vary considerably across provinces.
15. Three OECD countries (The Netherlands, the Slovak Republic and Turkey) were not included in the PISA 2000 assessment.
16. Although Shanghai-China outperformed Canada in PISA 2009, it is not included in this comparison since it did not participate in PISA 2000.
17. OECD (2009). PISA 2009 Assessment Framework: Key competencies in reading, mathematics and science. Paris. p. 21.



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## Chapter 2

# Canadian results in mathematics and science

This chapter presents results of the PISA 2009 assessment in the minor domains of mathematics and science in terms of scores and variation in performance. First, the performance of 15-year-old students across Canada and in the 10 provinces is compared to the performance of 15-year-olds from the other countries and economies that participated in PISA 2009. Next, results are presented for males and females. This is followed by results on the performance of students enrolled in English-language and French-language schools for those provinces in which the two groups were sampled separately. Lastly, change in performance over time is discussed.

### Defining mathematics and science

Since mathematics and science were minor domains in the 2009 PISA assessment a smaller amount of assessment time was given to these two domains compared to the major domain of reading. Consequently, PISA 2009 allows only an update on overall performance and not on the sub-domains that were possible when mathematics was the major domain in 2003 and science was the major domain in 2006. Throughout this report, mathematics and science are used to signify mathematical and scientific literacy, which PISA defines as follows:

**Mathematical literacy:** The capacity to identify, to understand, and to engage in mathematics and make well-founded judgments about the role that mathematics

plays, as needed for individuals' current and future private life, occupational life, social life with peers and relatives and as a constructive, concerned and reflective citizen.<sup>18</sup>

**Scientific literacy:** The capacity to use scientific knowledge, to identify questions and to draw evidence-based conclusions in order to understand and help make decisions about the natural world and the changes made to it through human activity.<sup>19</sup>

The scores for mathematics and science are expressed on a scale with an average or mean among OECD countries of 500 points and a standard deviation of 100. This average was established in the year in which the domain became the main focus of the assessment - 2003 for mathematics and 2006 for science. Approximately two-thirds of the students scored between 400 and 600 (i.e. within one standard deviation of the average) for the OECD countries. Due to change in performance over time, the OECD average scores for mathematics and science in PISA 2009 differ slightly from 500.

One way to summarize student performance and to compare the relative standing of countries is by examining their average test scores. However, simply ranking countries based on their average scores can be misleading because there is a margin of error associated with each score. As discussed in Chapter 1, when interpreting average performances, only those differences between countries that are statistically significant should be noted.

## Canadian students performed well in mathematics and science

On average, Canadian 15-year olds performed well in mathematics and science (Chart 2.1 and 2.2). Canadian students had an average score of 527 in mathematics and 529 in science, well above the OECD average of 497 and 501 respectively in these two domains. Table 2.1 shows the countries that performed significantly better

than or the same as Canada in mathematics and science. The averages of the students in all of the remaining countries were significantly below those of Canada. Among the 65 countries that participated in PISA 2009, seven countries outperformed Canada in mathematics while six countries outperformed Canada in science. In drawing comparisons with results from previous PISA cycles, it should be noted that countries Shanghai-China, Singapore and Chinese Taipei participated for the first time in PISA 2009.

Table 2.1

### Countries performing better than, or the same as Canada

|                    | Countries performing significantly better than Canada                                     | Countries performing the same as Canada      |
|--------------------|-------------------------------------------------------------------------------------------|----------------------------------------------|
| <b>Mathematics</b> | Shanghai-China, Singapore, Hong Kong-China, Korea, Chinese Taipei, Finland, Liechtenstein | Switzerland, Japan, Netherlands, Macao-China |
| <b>Science</b>     | Shanghai-China, Finland, Hong Kong-China, Singapore, Japan, Korea                         | New Zealand, Estonia, Australia, Netherlands |

## Most provinces performed at or above the OECD average in mathematics and science

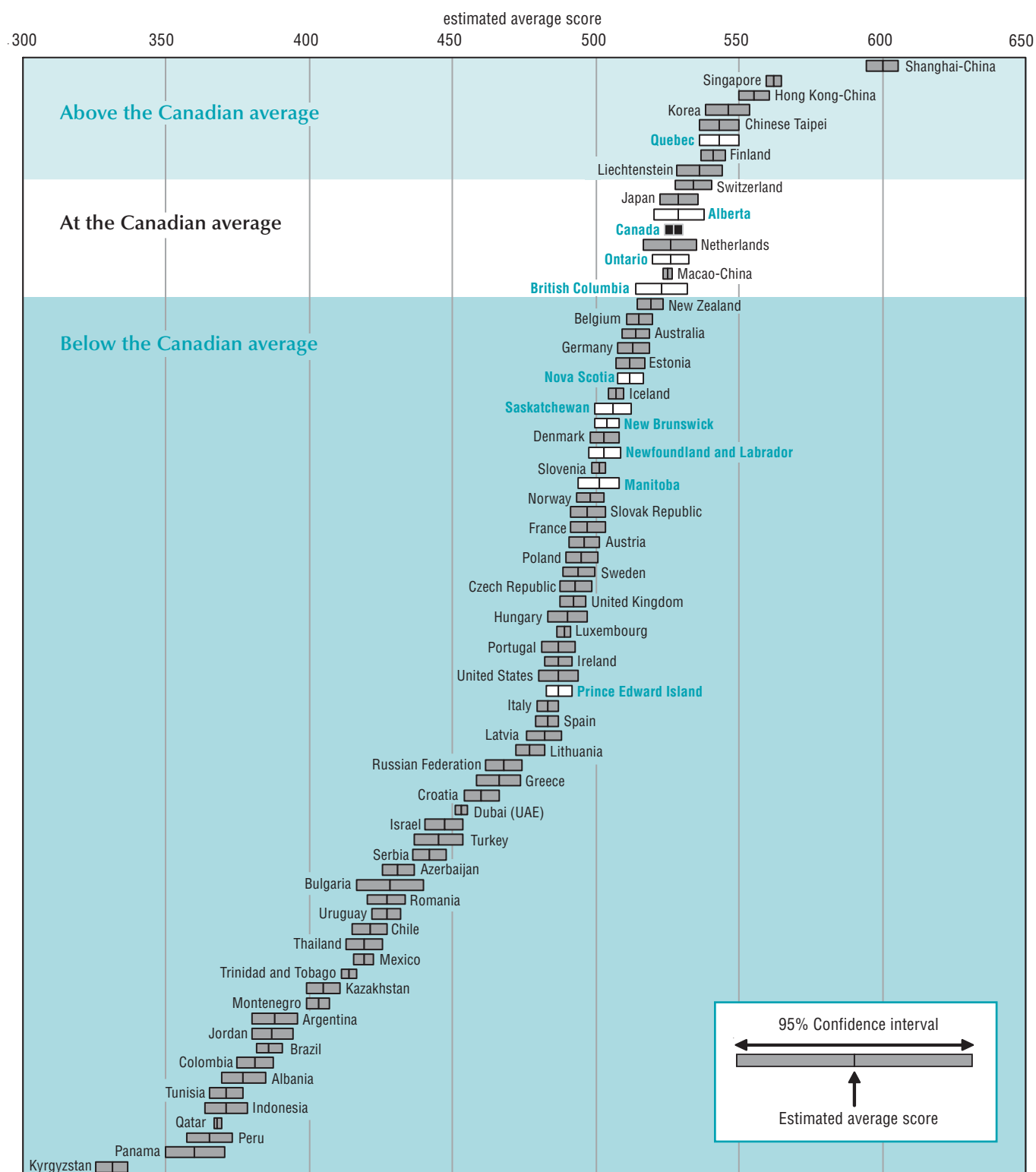
Across the two minor domains of PISA 2009, the performance of students in all provinces, with the exception of Prince Edward Island, was at or above the OECD average. As shown in Chart 2.1 students in Nova Scotia, New Brunswick, Quebec, Ontario, Saskatchewan, Alberta and British Columbia performed above the OECD average in mathematics. Students in Newfoundland and Labrador and Manitoba performed at the OECD average in mathematics while students in Prince Edward Island were below the OECD average. As shown in Chart 2.2, students in Newfoundland and Labrador, Nova Scotia, Quebec, Ontario, Saskatchewan, Alberta and British Columbia performed above the

OECD average in science. Students in New Brunswick and Manitoba performed at the OECD average in science, while students in Prince Edward Island were below the OECD average.

As shown in Table 2.2, students in Quebec performed above the Canadian average in mathematics and at the Canadian average in science while students in Alberta performed above the Canadian average in science and at the Canadian average in mathematics. Students in Ontario and British Columbia performed at the Canadian average in both mathematics and science while students in Nova Scotia performed at the Canadian average in science and below the Canadian average in mathematics. Students in Newfoundland and Labrador, Prince Edward Island, New Brunswick, Manitoba and Saskatchewan performed below the Canadian average in both domains.

Chart 2.1

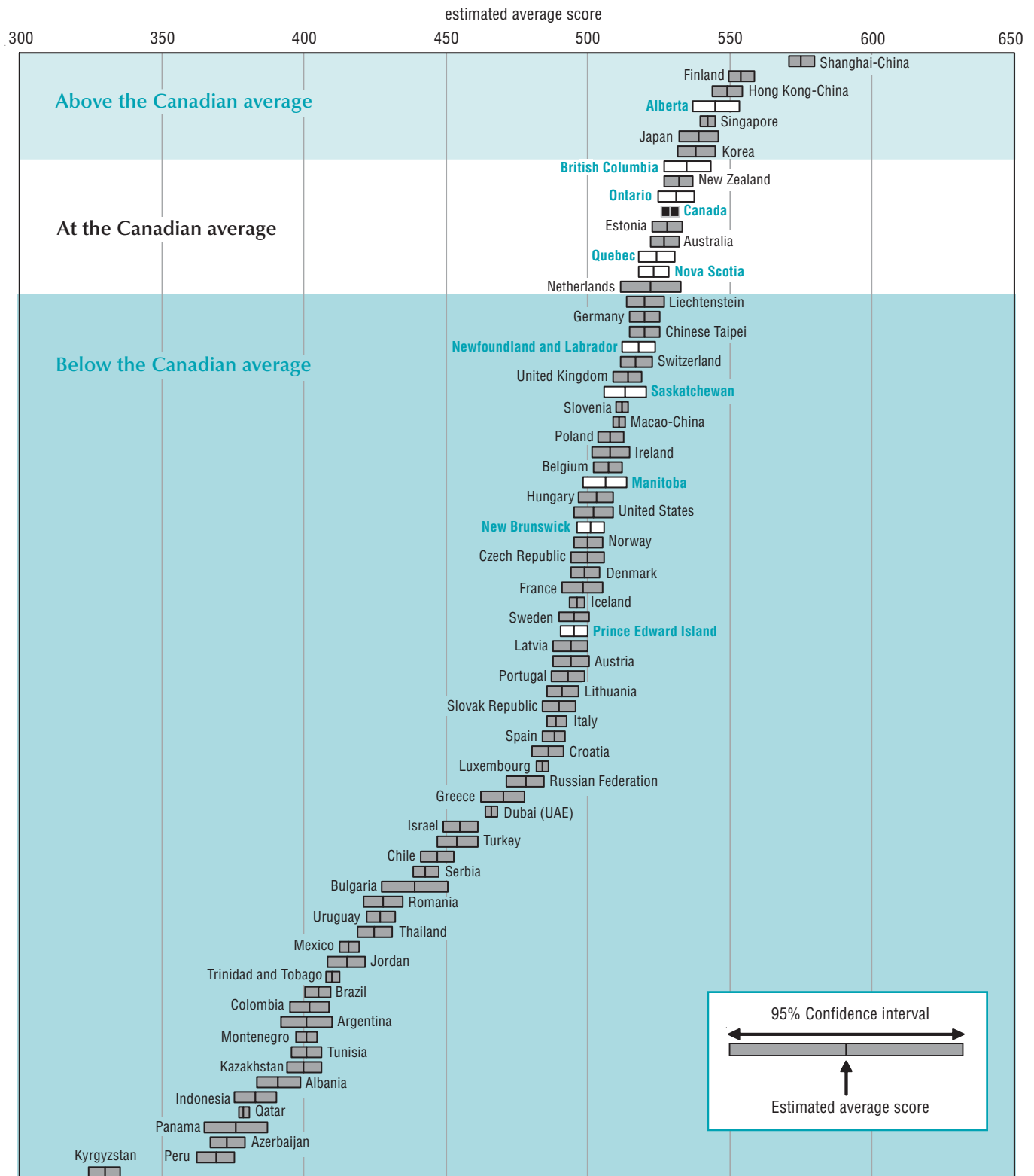
### Average scores and confidence intervals for provinces and countries: Mathematics



**Note:** The OECD average is 497 with a standard error of 0.5.

Chart 2.2

### Average scores and confidence intervals for provinces and countries: Science



**Note:** The OECD average is 501 with a standard error of 0.5.

Table 2.2

**Provincial results in mathematics and science in relation to the Canadian average**

|                    | Provinces performing significantly better than the Canadian average | Provinces performing the same as the Canadian average | Provinces performing significantly lower than the Canadian average                                  |
|--------------------|---------------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Mathematics</b> | Quebec                                                              | Ontario, Alberta, British Columbia                    | Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Manitoba, Saskatchewan |
| <b>Science</b>     | Alberta                                                             | Nova Scotia, Quebec, Ontario, British Columbia        | Newfoundland and Labrador, Prince Edward Island, New Brunswick, Manitoba, Saskatchewan              |

**Note:** Provinces within each cell are ordered from east to west.

## Canadian males outperformed females in mathematics and science

In mathematics, on average across OECD countries, males outperformed females by 12 score points. In Canada, males also outperformed females by 12 score points. This difference was much smaller than the gender difference favouring females in reading. As shown in Table 2.3 and Appendix table B.2.6, at the provincial level there were no significant gender differences in performance in Newfoundland and Labrador, Prince

Edward Island, Ontario, Manitoba and Saskatchewan. In contrast, males outperformed females by 16 to 18 score points in Nova Scotia, New Brunswick, Quebec, Alberta and British Columbia.

In science, on average across OECD countries, males and females had similar performance. However in Canada, males outperformed females by 5 score points. At the provincial level, gender differences were observed in New Brunswick and Quebec where males outperformed females by 12 and 10 score points respectively.

Table 2.3

**Summary of gender differences for Canada and the provinces for mathematics and science**

|                    | Males performed significantly higher than females                             | No significant differences between males and females                                                                     |
|--------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Mathematics</b> | <b>Canada</b> , Nova Scotia, New Brunswick, Quebec, Alberta, British Columbia | Newfoundland and Labrador, Prince Edward Island, Ontario, Manitoba, Saskatchewan                                         |
| <b>Science</b>     | <b>Canada</b> , New Brunswick, Quebec                                         | Newfoundland and Labrador, Prince Edward Island, Nova Scotia, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia |

## Canada has more equity in performance compared to most OECD countries

While mean performance is useful in assessing the overall performance of students, it can mask significant variation within a jurisdiction. Further light on the performance within jurisdictions can be shed by examining the relative distribution of scores or the gap that exists between students with the highest and lowest levels of performance within each jurisdiction. This is an important indicator of the equity of skills in mathematics and science which is a desirable result.

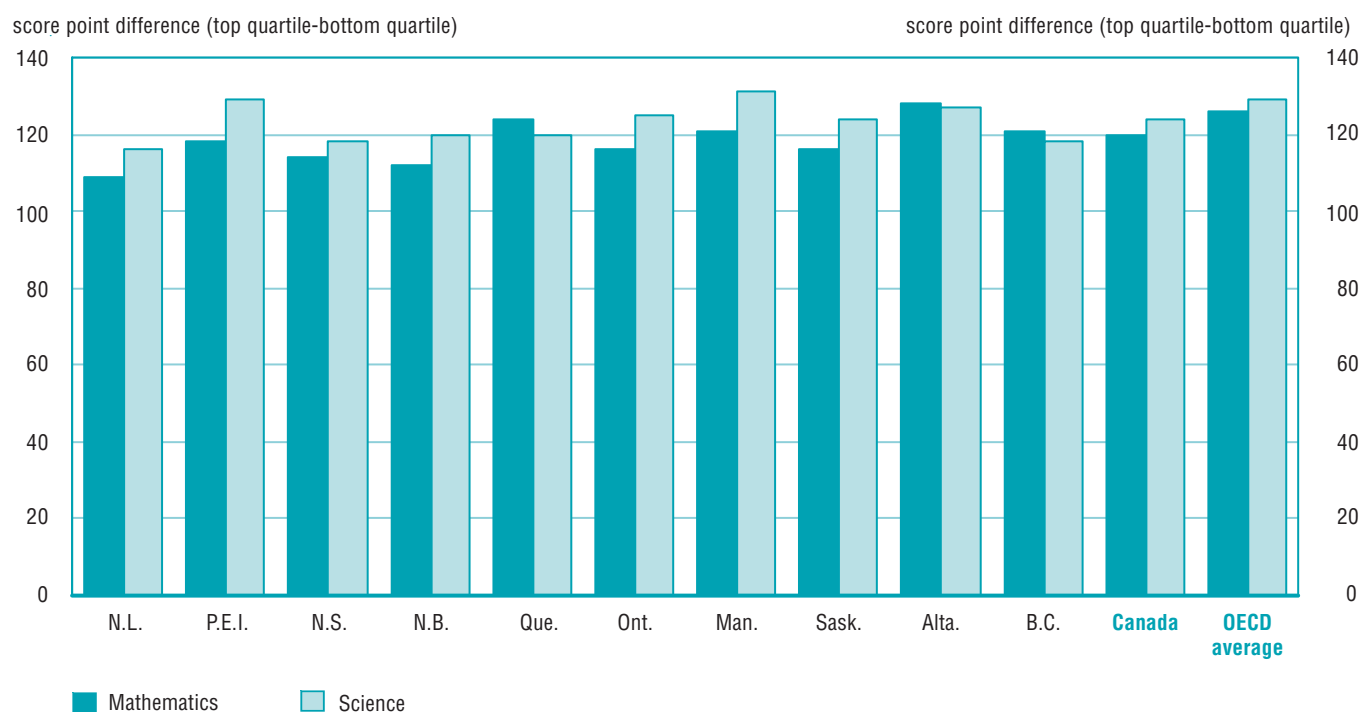
Chart 2.3 shows the difference in average scores between those in the lowest quarter (25th percentile) of student achievement and those in the highest quarter (75th percentile) of student achievement in mathematics and science. For Canada overall, those in the highest

quarter scored 120 points higher on mathematics and 124 points higher in science compared to those in the lowest quarter. This compares to 126 and 129 score points respectively for mathematics and science across all OECD countries. Across the provinces, differences between the lowest and highest quartiles ranged from 109 in Newfoundland and Labrador to 128 in Alberta for mathematics and from 116 in Newfoundland and Labrador to 131 in Manitoba for science.

The amount of within-country spread in performance in mathematics and science varied widely among countries (Appendix Tables B.2.3 and B.2.4). Canada was one of the few countries with high performance and relatively low disparity in student performance (as measured by score point differences between the 75th and 25th percentile) – both of these outcomes being desirable.

Chart 2.3

**Difference in average scores in mathematics and science between students who performed in the bottom quarter of performance and students who performed in the top quarter of performance**



## In most provinces students attending majority-language school systems outperformed students who attend minority language systems

This section examines the performance of students in the English-language and French-language school systems in seven provinces. The performance of the minority language group (students in French-language school systems in Nova Scotia, New Brunswick, Ontario, Manitoba, Alberta and British Columbia and students in the English-language school system in Quebec) are compared to the majority language groups.

As shown in Table 2.4, the performance of students in minority-language school systems compared to students in majority-language school systems varied across provinces and by domain. In mathematics, students in majority-language school systems outperformed their

counterparts attending minority-language school systems in five of the seven provinces. This point difference ranged from 11 score points favouring students attending French-language schools in Quebec to 41 score points favouring students attending English-language schools in British Columbia. In Nova Scotia and Manitoba, although there were differences in performance by school-language system, the differences were not statistically significant.

For science, students in majority-language school systems outperformed their counterparts attending minority-language school systems in five of the seven provinces. Compared to the differences observed for mathematics, the differences between school-language systems were more pronounced ranging from 34 score points in Nova Scotia to 64 score points in Alberta. In Quebec and Manitoba, the differences were not statistically significant.

Table 2.4

### Estimated average scores and school language system differences for mathematics and science by province

|                    | English-language school system |                | French-language school system |                | Difference between French-language and English-language school system |                |
|--------------------|--------------------------------|----------------|-------------------------------|----------------|-----------------------------------------------------------------------|----------------|
|                    | average                        | standard error | average                       | standard error | score difference                                                      | standard error |
| <b>Mathematics</b> |                                |                |                               |                |                                                                       |                |
| Nova Scotia        | 512                            | (2.3)          | 505                           | (7.2)          | 8                                                                     | (7.8)*         |
| New Brunswick      | 508                            | (3.2)          | 494                           | (3.1)          | 14*                                                                   | (5.0)*         |
| Quebec             | 533                            | (4.3)          | 544                           | (3.8)          | -11*                                                                  | (5.6)          |
| Ontario            | 527                            | (3.3)          | 500                           | (2.3)          | 27*                                                                   | (3.8)*         |
| Manitoba           | 501                            | (3.7)          | 508                           | (7.6)          | -6                                                                    | (8.6)          |
| Alberta            | 529                            | (4.4)          | 490                           | (7.1)          | 39*                                                                   | (8.3)*         |
| British Columbia   | 524                            | (4.6)          | 483                           | (11.1)         | 41*                                                                   | (12.0)*        |
| <b>Canada</b>      | <b>523</b>                     | <b>(1.8)</b>   | <b>539</b>                    | <b>(3.4)</b>   | <b>-16*</b>                                                           | <b>(3.8)*</b>  |
| <b>Science</b>     |                                |                |                               |                |                                                                       |                |
| Nova Scotia        | 524                            | (2.8)          | 490                           | (10.2)         | 34*                                                                   | (10.8)*        |
| New Brunswick      | 512                            | (3.2)          | 473                           | (2.9)          | 40*                                                                   | (4.8)*         |
| Quebec             | 521                            | (3.8)          | 525                           | (3.6)          | -4                                                                    | (5.3)          |
| Ontario            | 533                            | (3.4)          | 484                           | (2.3)          | 49*                                                                   | (4.1)*         |
| Manitoba           | 506                            | (4.0)          | 498                           | (6.1)          | 8                                                                     | (7.5)          |
| Alberta            | 545                            | (4.3)          | 481                           | (7.8)          | 64*                                                                   | (8.9)*         |
| British Columbia   | 535                            | (4.1)          | 482                           | (8.7)          | 53*                                                                   | (9.7)*         |
| <b>Canada</b>      | <b>532</b>                     | <b>(1.8)</b>   | <b>520</b>                    | <b>(3.2)</b>   | <b>12*</b>                                                            | <b>(3.6)*</b>  |

\* Statistically significant differences.

## Canadian students' performance in mathematics and science remained stable over time

PISA 2009 is the third assessment of mathematics since PISA 2003, when the first major assessment of mathematics took place, and the second assessment of science since 2006, when the first major assessment of science took place. Since comparisons over time can only be made from the point at which a major assessment of the domain took place, comparisons in mathematics and science are more limited since there have not yet been two full assessments of either area in the nine years of PISA testing. While this section looks at changes over time, performance differences should be interpreted with caution for several reasons. First, since data is available for three points in time for mathematics and two points in time for science it is not possible to determine the extent to which observed differences are indicative of longer-term changes. Secondly, in order to allow for comparability over time some common assessment items were used in each survey. However, because there are a limited number of common items, particularly when the domain was a minor focus, an additional measurement error must be taken into account for these comparisons over time. Consequently only changes that are indicated as statistically significant should be considered.

Across OECD countries as a whole, mathematics performance remained unchanged between PISA 2003 and PISA 2009. However there were changes in performance in some of the 40 countries that participated in both PISA 2003 and 2009. In eight countries mathematics performance improved, in 22 countries mathematics performance remained unchanged and in 10 countries mathematics performance was significantly lower. In Canada, performance in mathematics did not change significantly from 532 in 2003 to 527 in PISA 2006 and 2009.

Across OECD countries as a whole, science performance remained unchanged between PISA 2006 and PISA 2009, although changes in performance were observed in some of the 57 countries that participated in both PISA 2006 and 2009. Science performance increased in 11 countries, remained stable in 40 countries and decreased in six countries. In Canada, science performance remained stable between 2006 (532 score points) and 2009 (529 score points).

In order to understand how Canada's performance level in mathematics and science has evolved, Canada's change in performance should be considered alongside with its overall performance. Although Canada continues to have strong performance in mathematics, and experienced no significant change over time, the number of countries who statistically outperformed Canada increased from two in 2003 to four in 2009<sup>20</sup>. Finland and Hong-Kong China outperformed Canada in 2003 and continued to do so in PISA 2009. Additionally, Korea outperformed Canada in 2009 as a result of improved performance and Liechtenstein outperformed Canada because it did not have a significant change in performance between 2003 and 2009.

Canada's change in relative performance for science followed a similar pattern. When science was first included as a major domain in PISA 2006, two countries outperformed Canada in science compared to four countries in 2009<sup>21</sup>. Finland and Hong-Kong China outperformed Canada in science 2006 and continued to do so in 2009. Additionally, both Korea and Japan outperformed Canada in 2009 as a result of improved performance between 2006 and 2009.

As shown in Table 2.5 there was a significant decrease in mathematics scores between 2003 and 2009 in Newfoundland and Labrador, Prince Edward Island, New Brunswick, Manitoba, Alberta and British Columbia. Performance in the remaining four provinces was not statistically different. For science, performance decreased in Prince Edward Island and Manitoba, and remained stable in the remaining 8 provinces (Table 2.6).

Despite a decrease in performance in mathematics, Alberta and British Columbia continued to have strong performance in mathematics in 2009, performing above the OECD average. On the other hand, as a result of a decrease in performance in mathematics, Newfoundland and Labrador, New Brunswick and Manitoba went from performing above the OECD average in 2006 to performing at the OECD average in 2009. Additionally, as a result of a decrease in science performance, Manitoba went from performing above the OECD average in 2006 to performing at the OECD average in 2009. Due to its decrease in performance, Prince Edward Island went from performing at the OECD average in mathematics (in 2003) and above the OECD average in science (in 2006) to performing below the OECD average in 2009 in both minor domains. Mathematics performance in Nova Scotia, Quebec, Ontario and Saskatchewan did not change between 2003 and 2009 and remained above the OECD average.

Table 2.5

### Comparisons of performance in mathematics in PISA 2003, 2006 and 2009, Canada and the provinces

|                           | PISA mathematics score |                |               |                                   |               |                                   |
|---------------------------|------------------------|----------------|---------------|-----------------------------------|---------------|-----------------------------------|
|                           | 2003                   |                | 2006          |                                   | 2009          |                                   |
|                           | average score          | standard error | average score | standard error with linkage error | average score | standard error with linkage error |
| Newfoundland and Labrador | 517                    | (2.5)          | 507           | (3.1)                             | 503*          | (3.4)*                            |
| Prince Edward Island      | 500                    | (2.0)          | 501           | (2.7)                             | 487*          | (3.0)*                            |
| Nova Scotia               | 515                    | (2.2)          | 506           | (2.8)                             | 512           | (3.0)                             |
| New Brunswick             | 512                    | (1.8)          | 506           | (2.5)                             | 504*          | (3.0)*                            |
| Quebec                    | 537                    | (4.7)          | 540           | (4.4)                             | 543           | (3.9)                             |
| Ontario                   | 530                    | (3.6)          | 526           | (4.0)                             | 526           | (3.8)                             |
| Manitoba                  | 528                    | (3.1)          | 521           | (3.6)                             | 501*          | (4.1)*                            |
| Saskatchewan              | 516                    | (3.9)          | 507           | (3.7)                             | 506           | (3.8)                             |
| Alberta                   | 549                    | (4.3)          | 530*          | (4.0)*                            | 529*          | (4.8)*                            |
| British Columbia          | 538                    | (2.4)          | 523*          | (4.7)*                            | 523*          | (5.0)*                            |
| <b>Canada</b>             | <b>532</b>             | <b>(1.8)</b>   | <b>527</b>    | <b>(2.4)</b>                      | <b>527</b>    | <b>(2.6)</b>                      |

\* Statistically significant differences compared to PISA 2003

**Note:** The linkage error is incorporated into the standard error for 2006 and 2009.

Table 2.6

### Comparisons of performance in science in PISA 2006 and 2009, Canada and the provinces

|                           | PISA science score |                |               |                                   |
|---------------------------|--------------------|----------------|---------------|-----------------------------------|
|                           | 2006               |                | 2009          |                                   |
|                           | average score      | standard error | average score | standard error with linkage error |
| Newfoundland and Labrador | 526                | (2.5)          | 518           | (3.9)                             |
| Prince Edward Island      | 509                | (2.7)          | 495*          | (3.5)*                            |
| Nova Scotia               | 520                | (2.5)          | 523           | (3.7)                             |
| New Brunswick             | 506                | (2.3)          | 501           | (3.5)                             |
| Quebec                    | 531                | (4.2)          | 524           | (4.1)                             |
| Ontario                   | 537                | (4.2)          | 531           | (4.2)                             |
| Manitoba                  | 523                | (3.2)          | 506*          | (4.8)*                            |
| Saskatchewan              | 517                | (3.6)          | 513           | (4.5)                             |
| Alberta                   | 550                | (3.8)          | 545           | (4.9)                             |
| British Columbia          | 539                | (4.7)          | 535           | (4.8)                             |
| <b>Canada</b>             | <b>534</b>         | <b>(2.0)</b>   | <b>529</b>    | <b>(3.0)</b>                      |

\* Statistically significant differences.

**Note:** The linkage error is incorporated into the standard error for 2009.

## Summary

Because mathematics and science were considered to be minor domains in PISA 2009, a smaller proportion of students were assessed in those domains compared to the reading assessment, which was the major focus of the PISA 2009. Additionally, a smaller number of items were included in each of these assessments than were included in the reading assessment. Consequently, this chapter focuses on providing an update on overall performance in these two domains.

Canada continues to perform well internationally in both mathematics and science scoring well above the OECD average and being outperformed by seven countries in mathematics and six countries in science among 65 countries that participated in 2009. Across the provinces, students in Nova Scotia, New Brunswick, Quebec, Ontario, Saskatchewan, Alberta and British Columbia performed above the OECD average in mathematics. Students in Newfoundland and Labrador and Manitoba performed at the OECD average in mathematics while students in Prince Edward Island were below the OECD average. At the Canadian level, gender differences in performance existed with males outperforming females in both mathematics and science.

In five of the seven provinces where performance was examined by school-language sector, students attending majority-language schools generally outperformed students attending minority language schools in both mathematics and science. This performance gap was less pronounced in mathematics ranging from 11 to 41 score points compared to science ranging from 34 to 64 score points.

Canadian students' performance in mathematics and science remained stable over time. However, as a result of a lack of improvement in performance, coupled

with increased performance in other countries, more countries outperformed Canada in mathematics and science than in previous PISA assessments. Additionally, a few countries participating in PISA for the first time in 2009 outperformed Canada in mathematics and science.

Although Canada's performance in mathematics remained stable between 2003 and 2009, performance decreased in six of the ten provinces. Two of these provinces, Alberta and British Columbia, continued to have strong performance in PISA 2009, well above the OECD average. On the other hand, as a result of a decrease in performance in mathematics, Newfoundland and Labrador, New Brunswick and Manitoba performed at the OECD average in 2009 while Prince Edward Island performed below the OECD average. In addition, Manitoba and Prince Edward Island had a significant decrease in performance in science and consequently performed at and below the OECD average respectively in 2009.

## Notes

18. OECD (2009). PISA 2009 Assessment Framework: Key competencies in reading, mathematics and science. Paris.
19. OECD (2009). PISA 2009 Assessment Framework: Key competencies in reading, mathematics and science. Paris.
20. Although Shanghai-China, Chinese Taipei and Singapore outperformed Canada in mathematics in PISA 2009, they are not included in this comparison since they did not participate in PISA 2003.
21. Although Shanghai-China and Singapore outperformed Canada in science in PISA 2009, they are not included in this comparison since they did not participate in PISA 2006.

## Conclusion

Skills and knowledge play a crucial role in determining the economic success of societies and individuals and its importance is evident in today's global economic environment. Equipping young people with the necessary skills provides them with the foundation for full participation in adult life as productive members of society and the economy. As such, the skill levels of youth are an important determinant of a country's economic success. Governments around the world recognize the importance of skills and invest heavily in their education systems. The outcomes of these investments require monitoring and analysis to ensure that these outcomes are meeting countries' needs.

The Programme for International Student Assessment was developed to provide a picture of the extent to which youth have acquired some of the knowledge and skills that are essential for full participation in modern societies. Developed by the Organisation for Economic Co-operation and Development, PISA 2009 measures the skill levels of 15-year olds in 65 countries in three key subject areas – reading, mathematics and science.

In addition to providing information on skill levels of countries, PISA also enables countries to monitor change in their performance over time. Implemented every three years since 2000, the 2009 PISA marks the fourth time that a comprehensive set of information on skills of 15-year olds has been available. For Canada, not only does PISA provide insight on the skill levels of its 15-year olds in an international perspective, it also provides an opportunity for individual provinces to compare themselves nationally and internationally and to monitor their change in performance over time.

The 2009 PISA results revealed that Canadian 15-year olds have relatively strong sets of skills in reading, mathematics and science. That Canada's youth is equipped with a high skill level is an encouraging sign for the country's future economic prosperity. However,

although Canadian results remained statistically similar between 2000 and 2009, its relative ranking declined in all domains. This decline is attributable to improvements in other countries' performance and the introduction of new countries to PISA 2009 that had high performance. In reading, the major domain of PISA 2009, Canadian results also indicate a decrease in the proportion of high achievers between 2000 and 2009. In a global economy, this decrease may be one indication of potential loss of future competitiveness.

Although Canada's performance over time was not significantly different, several provinces experienced significant declines in their 15-year olds' skill levels, mostly in reading and in mathematics. In addition, over the same time period, there was not a significant increase in performance in the three domains in any province. The results also identified gender differences in performance as well as specific groups of 15-year olds who had significantly lower skill levels. Females continued to outperform males in reading, and males outperform females in mathematics and science although the gender gap is less pronounced in these two domains. Additionally, 15-year olds attending minority-language school systems tended to perform lower than those attending majority-language school systems in all three domains.

The results presented in this report are only a highlight of what is possible with a rich database such as PISA. A second Pan-Canadian report, with more detailed analyses of factors associated with student performance, will be published in early 2011. The array of sources of information on the skill levels of Canadians is growing. Along with results from other studies such as the Pan-Canadian Assessment Program, the Progress in International Reading Literacy Study and the forthcoming Programme for International Assessment of Adult Competencies, a more complete picture of competencies of Canadians is emerging. These data sources will help to better our understanding of the levels of skills in the country, as well as the context in which learning is taking place.



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## Appendix A

# PISA 2009 sampling procedures, exclusion rates and response rates

The accuracy of PISA survey results depends on the quality of the information on which the sample is based as well as the sampling procedures. The PISA 2009 sample for Canada was based on a two-stage stratified sample. The first stage consisted of sampling individual schools in which 15-year-old students were enrolled. Schools were sampled systematically with probabilities proportional to size, the measure of size being a function of the estimated number of eligible (15-year-old) students enrolled in the school. While a minimum of 150 schools were required to be selected in each country, in Canada, a much larger sample of schools was selected in order to produce reliable estimates for each province and for each of the English and French language school systems in these provinces: Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia.

The second stage of the selection process sampled students within sampled schools. Once schools were selected, a list of all 15-year-old students in each sampled school was prepared. From this list, up to 35 students were then selected with equal probability. All 15-year old students were selected if fewer than 35 were enrolled. Additionally, in Prince Edward Island, Nova Scotia and New Brunswick and in the French-language school systems in Manitoba, Alberta and Saskatchewan more than 35 students were selected where possible in order to meet sample size requirements.

Each country participating in PISA attempted to maximize the coverage of PISA's target population within the sampled schools. Within each sampled school, all eligible students, namely those 15 years of age, regardless of grade, were first listed. Sampled students who were to be excluded by the school had still to be included in the sampling documentation, and a list drawn up stating the reason for their exclusion. Tables A.1.1 and A.1.2 show the total number of excluded students by province which is further described and classified into specific categories. Students could be excluded based on these three international categories: i) students with an intellectual disability – student has a mental or emotional disability and is cognitively delayed such that he/she cannot perform in the PISA testing situation; ii) students with a functional disability – student has a moderate to severe permanent physical disability such that he/she cannot perform in the PISA testing situation; and iii) students with a limited proficiency in the assessment language – student is unable to read or speak any of the languages of the assessment in the country and would be unable to overcome the language barrier in the testing situation (typically a student who has received less than one year of instruction in the language of the assessment may be excluded).

The weighted student exclusion rate for Canada overall was 5.6% and this proportion ranged from 3.8% in Saskatchewan to 6.5% in Ontario. Across all provinces the vast majority of exclusions was a result of an intellectual disability.

Table A.1.1

## PISA 2009 student exclusion rate

|                           | Total number of eligible students sampled (participating, not participating and excluded) |                       | Total number of students excluded |                       | Student exclusion rate  |                       |
|---------------------------|-------------------------------------------------------------------------------------------|-----------------------|-----------------------------------|-----------------------|-------------------------|-----------------------|
|                           | Unweighted <sup>1</sup>                                                                   | Weighted <sup>2</sup> | Unweighted <sup>1</sup>           | Weighted <sup>2</sup> | Unweighted <sup>1</sup> | Weighted <sup>2</sup> |
|                           | number                                                                                    |                       | number                            |                       | percent                 |                       |
| Canada and the provinces  |                                                                                           |                       |                                   |                       |                         |                       |
| Newfoundland and Labrador | 1,808                                                                                     | 5,442                 | 103                               | 339                   | 5.7                     | 6.2                   |
| Prince Edward Island      | 1,795                                                                                     | 1,800                 | 103                               | 103                   | 5.7                     | 5.7                   |
| Nova Scotia               | 2,133                                                                                     | 11,591                | 92                                | 497                   | 4.3                     | 4.3                   |
| New Brunswick             | 2,355                                                                                     | 10,028                | 135                               | 633                   | 5.7                     | 6.3                   |
| Quebec                    | 6,283                                                                                     | 85,814                | 331                               | 4,288                 | 5.3                     | 5.0                   |
| Ontario                   | 5,526                                                                                     | 154,857               | 325                               | 10,129                | 5.9                     | 6.5                   |
| Manitoba                  | 2,553                                                                                     | 14,557                | 154                               | 908                   | 6.0                     | 6.2                   |
| Saskatchewan              | 2,527                                                                                     | 14,900                | 102                               | 563                   | 4.0                     | 3.8                   |
| Alberta                   | 3,239                                                                                     | 35,452                | 117                               | 1,573                 | 3.6                     | 4.4                   |
| British Columbia          | 3,094                                                                                     | 46,427                | 145                               | 2,216                 | 4.7                     | 4.8                   |
| <b>Canada</b>             | <b>31,313</b>                                                                             | <b>380,866</b>        | <b>1,607</b>                      | <b>21,249</b>         | <b>5.1</b>              | <b>5.6</b>            |

1. Based on students selected to participate.

2. Weighted based on student enrolment such that the total weighted value represents all 15-year olds enrolled in the province and not just those selected for PISA.

Table A.1.2

## PISA 2009 student exclusion rate by type of exclusion

|                           | Type of exclusion                                   |                       |                                                          |                       |                                                       |                       |
|---------------------------|-----------------------------------------------------|-----------------------|----------------------------------------------------------|-----------------------|-------------------------------------------------------|-----------------------|
|                           | Exclusion rate: Students with a physical disability |                       | Exclusion rate: Students with an intellectual disability |                       | Exclusion rate: Students with limited language skills |                       |
|                           | Unweighted <sup>1</sup>                             | Weighted <sup>2</sup> | Unweighted <sup>1</sup>                                  | Weighted <sup>2</sup> | Unweighted <sup>1</sup>                               | Weighted <sup>2</sup> |
| Canada and the provinces  | percent                                             |                       | percent                                                  |                       | percent                                               |                       |
| Newfoundland and Labrador | 5.6                                                 | 6.2                   | 0.0                                                      | 0.0                   | 0.1                                                   | 0.1                   |
| Prince Edward Island      | 4.2                                                 | 4.2                   | 0.6                                                      | 0.6                   | 1.0                                                   | 1.0                   |
| Nova Scotia               | 4.1                                                 | 4.0                   | 0.0                                                      | 0.1                   | 0.2                                                   | 0.2                   |
| New Brunswick             | 5.4                                                 | 5.8                   | 0.3                                                      | 0.3                   | 0.1                                                   | 0.2                   |
| Quebec                    | 4.7                                                 | 4.5                   | 0.2                                                      | 0.1                   | 0.4                                                   | 0.3                   |
| Ontario                   | 5.6                                                 | 6.2                   | 0.1                                                      | 0.1                   | 0.2                                                   | 0.3                   |
| Manitoba                  | 5.2                                                 | 5.1                   | 0.2                                                      | 0.3                   | 0.6                                                   | 0.8                   |
| Saskatchewan              | 3.3                                                 | 2.7                   | 0.3                                                      | 0.4                   | 0.5                                                   | 0.7                   |
| Alberta                   | 3.1                                                 | 3.4                   | 0.2                                                      | 0.1                   | 0.3                                                   | 0.9                   |
| British Columbia          | 4.7                                                 | 4.7                   | 0.0                                                      | 0.0                   | 0.0                                                   | 0.0                   |
| <b>Canada</b>             | <b>4.7</b>                                          | <b>5.1</b>            | <b>0.2</b>                                               | <b>0.1</b>            | <b>0.3</b>                                            | <b>0.4</b>            |

1. Based on students selected to participate.

2. Weighted based on student enrolment such that the total weighted value represents all 15-year olds enrolled in the province and not just those selected for PISA.

In order to minimize the potential for response bias, data quality standards in PISA require minimum participation rates for schools and students. At the national level, a minimum response rate of 85% was required for schools initially selected. School response rates were also considered acceptable where the initial school response rate was between 65% and 85% and replacement schools were selected to achieve a school response rate of 85% or higher. Schools with student participation rates between 25% and 50% were not counted as participating schools, but data for these schools were included in the database. Schools with student participation rates of less than 25% were not counted as participating and their data were excluded from the database.

PISA 2009 also requires a minimum student participation rate of 80% within all participating schools combined (original sample and replacements) at the national level.

Table A.2 shows the response rates for schools and students, before and after replacement for Canada and the 10 provinces. At the national level 1,079 schools were selected to participate in PISA 2009 and 963 of these initially selected schools participated. Rather than calculating school participation rates by dividing the number of participating schools by the total number of schools, school response rates were weighted based on 15-year-old enrolment numbers in each school.

At the provincial level, school response rates ranged from 69% in Quebec to 100% in Newfoundland and Labrador. It should be noted that Quebec had 245 schools that participated in PISA but 52 schools were treated as non-responding schools according to the PISA criteria, because the student participation rates in these schools was less than 50%.

At the student level Canada's response rate was 79.5% which fell short of the international standard set by PISA of 80%. Apart from Quebec, all provinces achieved a student response rate of 80% or higher. Quebec did not meet the required student response rate and this was primarily a result of the requirement in this province to obtain written parental consent in order for a student to participate in PISA.

Because Canada did not meet the international student response rates requirements (by less than 1%), it was required to conduct and submit to the PISA consortium a student non-response bias analysis in order to determine if the data were of acceptable quality for inclusion in the PISA dataset. This non-bias analysis

was undertaken for Quebec students only as this was the only province where student response rates were below the international standard.

Two measures related to student achievement were used for this analysis: a measure of the student's socioeconomic environment which was available for the entire PISA sample and scores in the provincial language assessment which was available only for students in grade 10 (representing approximately 59% of the student sample).<sup>22</sup>

Results from the analysis showed that non-responding students came from slightly less favourable socioeconomic environments and while the mean values on the index of socioeconomic environment differed significantly between responding and non responding students, the magnitude of the difference was not large (11.29 versus 12.02). Results from a logistic regression analysis revealed that the socioeconomic environment of students in Quebec was not statistically related to non-response when gender, private/public school status, school-language system and school size were taken into consideration.

Results from the provincial language assessment showed that responding students had slightly higher score on the provincial language assessment than non-responding students (74.9 versus 72.6 respectively on a 100 point scale based on unweighted data and 74.0 versus 71.9 based on weighted data). This difference was significant, although the gap is small, and performance on the provincial language assessment test remained significant when logistic regression analyses was done including school-language system, school size, socioeconomic environment, gender and the private/public school status in the model.

Based on the non-response analysis, the consortium judged that the Canadian data, including Quebec, was of suitable quality to be included fully in the PISA datasets without restrictions.

## Note

22. Internal analysis undertaken by the Quebec Ministry of Education, Recreation and Sports broke down non-response further by comparing those who did not participate because of parental refusal and those who did not participate for other reasons. Their results showed that students who did not participate because of parental refusal were more likely to come from more favourable socioeconomic neighbourhoods than both participating and other non-responding students.

Table A.2

## PISA 2009 school and student response rates

|                              | Total number<br>of selected<br>schools<br>(participating<br>and not<br>participating) | School<br>response<br>rate before<br>replacement |                        | School<br>response<br>rate after<br>replacement |                        | Total number<br>of eligible<br>students sampled<br>(participating and<br>not participating) |                | Total<br>number of<br>students<br>participating |                | Weighted<br>student<br>participation<br>rate after<br>replacement<br>(percent) |
|------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------|------------------------|-------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------|----------------|-------------------------------------------------|----------------|--------------------------------------------------------------------------------|
|                              |                                                                                       | number                                           | weighted<br>percentage | number                                          | weighted<br>percentage | un-<br>weighted                                                                             | weighted       | un-<br>weighted                                 | weighted       |                                                                                |
| Canada and<br>the provinces  |                                                                                       |                                                  |                        |                                                 |                        |                                                                                             |                |                                                 |                |                                                                                |
| Newfoundland<br>and Labrador | 64                                                                                    | 63                                               | 100.0                  | 63                                              | 100.0                  | 1,705                                                                                       | 5,103          | 1,412                                           | 4,292          | 84.1                                                                           |
| Prince Edward Island         | 26                                                                                    | 25                                               | 99.7                   | 25                                              | 99.7                   | 1,692                                                                                       | 1,696          | 1,443                                           | 1,447          | 85.3                                                                           |
| Nova Scotia                  | 72                                                                                    | 69                                               | 97.1                   | 70                                              | 98.1                   | 2,011                                                                                       | 10,979         | 1,634                                           | 8,788          | 80.0                                                                           |
| New Brunswick                | 60                                                                                    | 58                                               | 99.9                   | 58                                              | 99.9                   | 2,220                                                                                       | 9,395          | 1,927                                           | 8,267          | 88.0                                                                           |
| Quebec                       | 258                                                                                   | 193                                              | 68.8                   | 194                                             | 69.0                   | 4,317                                                                                       | 60,674         | 3,083                                           | 43,057         | 71.0                                                                           |
| Ontario                      | 182                                                                                   | 171                                              | 95.3                   | 171                                             | 95.3                   | 5,031                                                                                       | 139,963        | 4,083                                           | 112,412        | 80.3                                                                           |
| Manitoba                     | 91                                                                                    | 85                                               | 97.3                   | 85                                              | 97.3                   | 2,314                                                                                       | 13,288         | 1,928                                           | 10,955         | 82.5                                                                           |
| Saskatchewan                 | 102                                                                                   | 97                                               | 96.3                   | 99                                              | 97.7                   | 2,347                                                                                       | 13,952         | 1,965                                           | 11,686         | 83.8                                                                           |
| Alberta                      | 118                                                                                   | 101                                              | 95.1                   | 112                                             | 95.6                   | 3,081                                                                                       | 33,025         | 2,564                                           | 27,486         | 83.2                                                                           |
| British Columbia             | 106                                                                                   | 101                                              | 93.5                   | 101                                             | 93.5                   | 2,885                                                                                       | 43,219         | 2,344                                           | 35,072         | 81.2                                                                           |
| <b>Canada</b>                | <b>1,079</b>                                                                          | <b>963</b>                                       | <b>88.0</b>            | <b>978</b>                                      | <b>89.6</b>            | <b>27,603</b>                                                                               | <b>331,293</b> | <b>22,383</b>                                   | <b>263,460</b> | <b>79.5</b>                                                                    |

1. School response rates were weighted based on student enrolment.

# Appendix B

## Tables

The enclosed tables are based on the Organisation for Economic Co-operation and Development Programme for International Student Assessment, 2009.

The *standard error* associated with the estimates presented is included in parenthesis. The *confidence interval*, when presented, represents the range within which the score for the population is likely to fall, with 95% probability.

Only statistically significant differences at the 0.05 level are noted in this report, unless otherwise stated. This means averages did not differ when the 95% confidence intervals for the averages being compared do not overlap. **Where confidence intervals did overlap an additional t-test was conducted to test for differences.**

In some tables the performance of countries and provinces relative to Canada has been indicated as being higher, the same, or lower using the following legend.

■ Performed significantly higher than Canada

□ Performed the same as Canada

■ Performed significantly lower than Canada

**Note:** OECD countries include Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States.

Countries and economies participating in PISA for the first time in 2009 are Albania, Dubai (UAE), Panama, Shanghai-China, Singapore and Trinidad and Tobago.

Table B.1.1

**Estimated average scores and confidence intervals for countries, provinces and economies: Combined reading**

| Country, economy and province    | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|----------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Shanghai-China                   | 556                     | (2.4)          | 551                                   | 561                                   |
| Korea                            | 539                     | (3.5)          | 532                                   | 546                                   |
| Finland                          | 536                     | (2.3)          | 531                                   | 540                                   |
| Hong Kong-China                  | 533                     | (2.1)          | 529                                   | 537                                   |
| <b>Alberta</b>                   | <b>533</b>              | <b>(4.6)</b>   | <b>524</b>                            | <b>542</b>                            |
| <b>Ontario</b>                   | <b>531</b>              | <b>(3.0)</b>   | <b>525</b>                            | <b>536</b>                            |
| Singapore                        | 526                     | (1.1)          | 524                                   | 528                                   |
| <b>British Columbia</b>          | <b>525</b>              | <b>(4.2)</b>   | <b>516</b>                            | <b>533</b>                            |
| <b>Canada</b>                    | <b>524</b>              | <b>(1.5)</b>   | <b>521</b>                            | <b>527</b>                            |
| <b>Quebec</b>                    | <b>522</b>              | <b>(3.1)</b>   | <b>516</b>                            | <b>528</b>                            |
| New Zealand                      | 521                     | (2.4)          | 516                                   | 525                                   |
| Japan                            | 520                     | (3.5)          | 513                                   | 527                                   |
| <b>Nova Scotia</b>               | <b>516</b>              | <b>(2.7)</b>   | <b>510</b>                            | <b>521</b>                            |
| Australia                        | 515                     | (2.3)          | 510                                   | 519                                   |
| Netherlands                      | 508                     | (5.1)          | 498                                   | 518                                   |
| Belgium                          | 506                     | (2.3)          | 501                                   | 511                                   |
| <b>Newfoundland and Labrador</b> | <b>506</b>              | <b>(3.7)</b>   | <b>499</b>                            | <b>513</b>                            |
| <b>Saskatchewan</b>              | <b>504</b>              | <b>(3.3)</b>   | <b>498</b>                            | <b>511</b>                            |
| Norway                           | 503                     | (2.6)          | 498                                   | 508                                   |
| Switzerland                      | 501                     | (2.4)          | 496                                   | 505                                   |
| Estonia                          | 501                     | (2.6)          | 496                                   | 506                                   |
| Iceland                          | 500                     | (1.4)          | 498                                   | 503                                   |
| Poland                           | 500                     | (2.6)          | 495                                   | 506                                   |
| United States                    | 500                     | (3.7)          | 493                                   | 507                                   |
| Liechtenstein                    | 499                     | (2.8)          | 494                                   | 505                                   |
| <b>New Brunswick</b>             | <b>499</b>              | <b>(2.5)</b>   | <b>494</b>                            | <b>504</b>                            |
| Germany                          | 497                     | (2.7)          | 492                                   | 503                                   |
| Sweden                           | 497                     | (2.9)          | 492                                   | 503                                   |
| Ireland                          | 496                     | (3.0)          | 490                                   | 501                                   |
| France                           | 496                     | (3.4)          | 489                                   | 502                                   |
| Denmark                          | 495                     | (2.1)          | 491                                   | 499                                   |
| Chinese Taipei                   | 495                     | (2.6)          | 490                                   | 500                                   |
| <b>Manitoba</b>                  | <b>495</b>              | <b>(3.6)</b>   | <b>488</b>                            | <b>502</b>                            |
| United Kingdom                   | 494                     | (2.3)          | 490                                   | 499                                   |
| Hungary                          | 494                     | (3.2)          | 488                                   | 500                                   |
| Portugal                         | 489                     | (3.1)          | 483                                   | 495                                   |
| Macao-China                      | 487                     | (0.9)          | 485                                   | 488                                   |
| Italy                            | 486                     | (1.6)          | 483                                   | 489                                   |
| <b>Prince Edward Island</b>      | <b>486</b>              | <b>(2.4)</b>   | <b>481</b>                            | <b>490</b>                            |
| Latvia                           | 484                     | (3.0)          | 478                                   | 490                                   |
| Greece                           | 483                     | (4.3)          | 474                                   | 491                                   |
| Slovenia                         | 483                     | (1.0)          | 481                                   | 485                                   |
| Spain                            | 481                     | (2.0)          | 477                                   | 485                                   |
| Czech Republic                   | 478                     | (2.9)          | 473                                   | 484                                   |
| Slovak Republic                  | 477                     | (2.5)          | 472                                   | 482                                   |
| Croatia                          | 476                     | (2.9)          | 470                                   | 481                                   |
| Israel                           | 474                     | (3.6)          | 467                                   | 481                                   |
| Luxembourg                       | 472                     | (1.3)          | 470                                   | 475                                   |
| Austria                          | 470                     | (2.9)          | 465                                   | 476                                   |
| Lithuania                        | 468                     | (2.4)          | 464                                   | 473                                   |
| Turkey                           | 464                     | (3.5)          | 457                                   | 471                                   |

Table B.1.1 (concluded)

**Estimated average scores and confidence intervals for countries, provinces and economies: Combined reading**

| Country, economy and province | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|-------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Russian Federation            | 459                     | (3.3)          | 453                                   | 466                                   |
| Dubai (UAE)                   | 459                     | (1.1)          | 457                                   | 462                                   |
| Chile                         | 449                     | (3.1)          | 443                                   | 455                                   |
| Serbia                        | 442                     | (2.4)          | 437                                   | 447                                   |
| Bulgaria                      | 429                     | (6.7)          | 416                                   | 442                                   |
| Uruguay                       | 426                     | (2.6)          | 421                                   | 431                                   |
| Mexico                        | 425                     | (2.0)          | 421                                   | 429                                   |
| Romania                       | 424                     | (4.1)          | 416                                   | 432                                   |
| Thailand                      | 421                     | (2.6)          | 416                                   | 427                                   |
| Trinidad and Tobago           | 416                     | (1.2)          | 414                                   | 419                                   |
| Colombia                      | 413                     | (3.7)          | 406                                   | 421                                   |
| Brazil                        | 412                     | (2.7)          | 406                                   | 417                                   |
| Montenegro                    | 408                     | (1.7)          | 404                                   | 411                                   |
| Jordan                        | 405                     | (3.3)          | 399                                   | 411                                   |
| Tunisia                       | 404                     | (2.9)          | 398                                   | 409                                   |
| Indonesia                     | 402                     | (3.7)          | 394                                   | 409                                   |
| Argentina                     | 398                     | (4.6)          | 389                                   | 407                                   |
| Kazakhstan                    | 390                     | (3.1)          | 384                                   | 396                                   |
| Albania                       | 385                     | (4.0)          | 377                                   | 393                                   |
| Qatar                         | 372                     | (0.8)          | 370                                   | 373                                   |
| Panama                        | 371                     | (6.5)          | 358                                   | 384                                   |
| Peru                          | 370                     | (4.0)          | 362                                   | 377                                   |
| Azerbaijan                    | 362                     | (3.3)          | 355                                   | 368                                   |
| Kyrgyzstan                    | 314                     | (3.2)          | 308                                   | 320                                   |

Table B.1.2

**Estimated average scores and confidence intervals for countries, provinces and economies: Accessing and retrieving**

| Country, economy and province    | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|----------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Shanghai-China                   | 549                     | (2.9)          | 544                                   | 555                                   |
| Korea                            | 542                     | (3.6)          | 535                                   | 549                                   |
| Finland                          | 532                     | (2.7)          | 527                                   | 538                                   |
| Japan                            | 530                     | (3.8)          | 522                                   | 537                                   |
| Hong Kong-China                  | 530                     | (2.7)          | 524                                   | 535                                   |
| Singapore                        | 526                     | (1.4)          | 524                                   | 529                                   |
| <b>Ontario</b>                   | <b>523</b>              | <b>(3.1)</b>   | <b>517</b>                            | <b>529</b>                            |
| <b>Alberta</b>                   | <b>522</b>              | <b>(4.5)</b>   | <b>513</b>                            | <b>531</b>                            |
| New Zealand                      | 521                     | (2.4)          | 516                                   | 526                                   |
| Netherlands                      | 519                     | (5.1)          | 509                                   | 529                                   |
| <b>Canada</b>                    | <b>517</b>              | <b>(1.5)</b>   | <b>514</b>                            | <b>520</b>                            |
| <b>British Columbia</b>          | <b>516</b>              | <b>(4.5)</b>   | <b>507</b>                            | <b>524</b>                            |
| <b>Quebec</b>                    | <b>515</b>              | <b>(3.6)</b>   | <b>508</b>                            | <b>522</b>                            |
| Belgium                          | 513                     | (2.4)          | 509                                   | 518                                   |
| Australia                        | 513                     | (2.4)          | 509                                   | 518                                   |
| Norway                           | 512                     | (2.8)          | 506                                   | 517                                   |
| Liechtenstein                    | 508                     | (4.0)          | 500                                   | 515                                   |
| Iceland                          | 507                     | (1.6)          | 503                                   | 510                                   |
| <b>Nova Scotia</b>               | <b>506</b>              | <b>(3.3)</b>   | <b>499</b>                            | <b>513</b>                            |
| Switzerland                      | 505                     | (2.7)          | 500                                   | 511                                   |
| Sweden                           | 505                     | (2.9)          | 499                                   | 510                                   |
| Estonia                          | 503                     | (3.0)          | 497                                   | 509                                   |
| Denmark                          | 502                     | (2.6)          | 497                                   | 507                                   |
| Germany                          | 501                     | (3.5)          | 494                                   | 507                                   |
| Hungary                          | 501                     | (3.7)          | 494                                   | 509                                   |
| <b>Newfoundland and Labrador</b> | <b>501</b>              | <b>(3.8)</b>   | <b>493</b>                            | <b>508</b>                            |
| <b>Saskatchewan</b>              | <b>501</b>              | <b>(3.7)</b>   | <b>494</b>                            | <b>508</b>                            |
| Poland                           | 500                     | (2.8)          | 495                                   | 506                                   |
| Ireland                          | 498                     | (3.3)          | 492                                   | 505                                   |
| Chinese Taipei                   | 496                     | (2.8)          | 491                                   | 501                                   |
| <b>Manitoba</b>                  | <b>496</b>              | <b>(3.8)</b>   | <b>489</b>                            | <b>504</b>                            |
| Macao-China                      | 493                     | (1.2)          | 491                                   | 495                                   |
| Croatia                          | 492                     | (3.1)          | 485                                   | 498                                   |
| United States                    | 492                     | (3.6)          | 485                                   | 499                                   |
| France                           | 492                     | (3.8)          | 484                                   | 499                                   |
| United Kingdom                   | 491                     | (2.5)          | 486                                   | 496                                   |
| Slovak Republic                  | 491                     | (3.0)          | 485                                   | 497                                   |
| Slovenia                         | 489                     | (1.1)          | 487                                   | 491                                   |
| Portugal                         | 488                     | (3.3)          | 482                                   | 495                                   |
| <b>New Brunswick</b>             | <b>487</b>              | <b>(3.1)</b>   | <b>481</b>                            | <b>493</b>                            |
| Italy                            | 482                     | (1.8)          | 478                                   | 485                                   |
| <b>Prince Edward Island</b>      | <b>481</b>              | <b>(2.5)</b>   | <b>476</b>                            | <b>486</b>                            |
| Spain                            | 480                     | (2.1)          | 476                                   | 484                                   |
| Czech Republic                   | 479                     | (3.2)          | 473                                   | 485                                   |
| Austria                          | 477                     | (3.2)          | 471                                   | 484                                   |
| Lithuania                        | 476                     | (3.0)          | 471                                   | 482                                   |
| Latvia                           | 476                     | (3.6)          | 469                                   | 483                                   |
| Luxembourg                       | 471                     | (1.3)          | 468                                   | 473                                   |
| Russian Federation               | 469                     | (3.9)          | 461                                   | 476                                   |
| Greece                           | 468                     | (4.4)          | 459                                   | 477                                   |
| Turkey                           | 467                     | (4.1)          | 459                                   | 475                                   |

Table B.1.2 (concluded)

**Estimated average scores and confidence intervals for countries, provinces and economies: Accessing and retrieving**

| Country, economy and province | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|-------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Israel                        | 463                     | (4.1)          | 455                                   | 471                                   |
| Dubai (UAE)                   | 458                     | (1.4)          | 456                                   | 461                                   |
| Serbia                        | 449                     | (3.1)          | 443                                   | 455                                   |
| Chile                         | 444                     | (3.4)          | 437                                   | 451                                   |
| Mexico                        | 433                     | (2.1)          | 429                                   | 437                                   |
| Thailand                      | 431                     | (3.5)          | 424                                   | 438                                   |
| Bulgaria                      | 430                     | (8.3)          | 413                                   | 446                                   |
| Uruguay                       | 424                     | (2.9)          | 419                                   | 430                                   |
| Romania                       | 423                     | (4.7)          | 414                                   | 432                                   |
| Trinidad and Tobago           | 413                     | (1.6)          | 410                                   | 417                                   |
| Montenegro                    | 408                     | (2.3)          | 403                                   | 412                                   |
| Brazil                        | 407                     | (3.3)          | 400                                   | 413                                   |
| Colombia                      | 404                     | (3.7)          | 397                                   | 411                                   |
| Indonesia                     | 399                     | (4.7)          | 390                                   | 408                                   |
| Kazakhstan                    | 397                     | (3.7)          | 390                                   | 405                                   |
| Argentina                     | 394                     | (4.8)          | 385                                   | 403                                   |
| Jordan                        | 394                     | (4.0)          | 386                                   | 402                                   |
| Tunisia                       | 393                     | (3.3)          | 387                                   | 400                                   |
| Albania                       | 380                     | (4.7)          | 371                                   | 389                                   |
| Peru                          | 364                     | (4.3)          | 355                                   | 372                                   |
| Panama                        | 363                     | (7.7)          | 348                                   | 378                                   |
| Azerbaijan                    | 361                     | (4.5)          | 352                                   | 370                                   |
| Qatar                         | 354                     | (1.0)          | 352                                   | 356                                   |
| Kyrgyzstan                    | 299                     | (4.0)          | 291                                   | 307                                   |

Table B.1.3

**Estimated average scores and confidence intervals for countries, provinces and economies: Integrating and interpreting**

| Country, economy and province    | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|----------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Shanghai-China                   | 558                     | (2.5)          | 553                                   | 563                                   |
| Korea                            | 541                     | (3.4)          | 534                                   | 547                                   |
| Finland                          | 538                     | (2.3)          | 534                                   | 543                                   |
| <b>Alberta</b>                   | <b>532</b>              | <b>(4.8)</b>   | <b>522</b>                            | <b>541</b>                            |
| Hong Kong-China                  | 530                     | (2.2)          | 526                                   | 534                                   |
| <b>Ontario</b>                   | <b>528</b>              | <b>(3.0)</b>   | <b>522</b>                            | <b>533</b>                            |
| Singapore                        | 525                     | (1.2)          | 522                                   | 527                                   |
| <b>Canada</b>                    | <b>522</b>              | <b>(1.5)</b>   | <b>519</b>                            | <b>525</b>                            |
| <b>British Columbia</b>          | <b>522</b>              | <b>(4.6)</b>   | <b>513</b>                            | <b>531</b>                            |
| <b>Quebec</b>                    | <b>521</b>              | <b>(3.3)</b>   | <b>515</b>                            | <b>528</b>                            |
| Japan                            | 520                     | (3.5)          | 513                                   | 526                                   |
| New Zealand                      | 517                     | (2.4)          | 512                                   | 522                                   |
| <b>Nova Scotia</b>               | <b>514</b>              | <b>(2.9)</b>   | <b>509</b>                            | <b>520</b>                            |
| Australia                        | 513                     | (2.4)          | 508                                   | 517                                   |
| Netherlands                      | 504                     | (5.4)          | 494                                   | 515                                   |
| Belgium                          | 504                     | (2.5)          | 499                                   | 509                                   |
| Iceland                          | 503                     | (1.5)          | 500                                   | 505                                   |
| Poland                           | 503                     | (2.8)          | 498                                   | 508                                   |
| Norway                           | 502                     | (2.7)          | 497                                   | 507                                   |
| Switzerland                      | 502                     | (2.5)          | 497                                   | 507                                   |
| <b>Newfoundland and Labrador</b> | <b>502</b>              | <b>(3.7)</b>   | <b>495</b>                            | <b>509</b>                            |
| <b>Saskatchewan</b>              | <b>502</b>              | <b>(3.5)</b>   | <b>495</b>                            | <b>508</b>                            |
| Germany                          | 501                     | (2.8)          | 495                                   | 506                                   |
| Estonia                          | 500                     | (2.8)          | 495                                   | 506                                   |
| Chinese Taipei                   | 499                     | (2.5)          | 494                                   | 504                                   |
| <b>New Brunswick</b>             | <b>499</b>              | <b>(2.6)</b>   | <b>494</b>                            | <b>504</b>                            |
| Liechtenstein                    | 498                     | (4.0)          | 490                                   | 505                                   |
| France                           | 497                     | (3.6)          | 490                                   | 504                                   |
| Hungary                          | 496                     | (3.2)          | 490                                   | 502                                   |
| United States                    | 495                     | (3.7)          | 488                                   | 502                                   |
| Sweden                           | 494                     | (3.0)          | 488                                   | 500                                   |
| Ireland                          | 494                     | (3.0)          | 488                                   | 500                                   |
| <b>Manitoba</b>                  | <b>493</b>              | <b>(4.0)</b>   | <b>485</b>                            | <b>501</b>                            |
| Denmark                          | 492                     | (2.1)          | 488                                   | 496                                   |
| United Kingdom                   | 491                     | (2.4)          | 486                                   | 495                                   |
| Italy                            | 490                     | (1.6)          | 487                                   | 493                                   |
| Slovenia                         | 489                     | (1.1)          | 487                                   | 491                                   |
| Macao-China                      | 488                     | (0.8)          | 487                                   | 490                                   |
| Czech Republic                   | 488                     | (2.9)          | 482                                   | 493                                   |
| Portugal                         | 487                     | (3.0)          | 481                                   | 493                                   |
| Latvia                           | 484                     | (2.8)          | 479                                   | 490                                   |
| Greece                           | 484                     | (4.0)          | 477                                   | 492                                   |
| <b>Prince Edward Island</b>      | <b>482</b>              | <b>(2.3)</b>   | <b>477</b>                            | <b>486</b>                            |
| Spain                            | 481                     | (2.0)          | 477                                   | 485                                   |
| Slovak Republic                  | 481                     | (2.5)          | 476                                   | 486                                   |
| Luxembourg                       | 475                     | (1.1)          | 473                                   | 477                                   |
| Israel                           | 473                     | (3.4)          | 466                                   | 480                                   |
| Croatia                          | 472                     | (2.9)          | 467                                   | 478                                   |
| Austria                          | 471                     | (2.9)          | 466                                   | 477                                   |
| Lithuania                        | 469                     | (2.4)          | 464                                   | 473                                   |
| Russian Federation               | 467                     | (3.1)          | 461                                   | 473                                   |

Table B.1.3 (concluded)

**Estimated average scores and confidence intervals for countries, provinces and economies: Integrating and interpreting**

| Country, economy and province | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|-------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Turkey                        | 459                     | (3.3)          | 453                                   | 466                                   |
| Dubai (UAE)                   | 457                     | (1.3)          | 454                                   | 459                                   |
| Chile                         | 452                     | (3.1)          | 446                                   | 458                                   |
| Serbia                        | 445                     | (2.4)          | 440                                   | 450                                   |
| Bulgaria                      | 436                     | (6.4)          | 424                                   | 449                                   |
| Romania                       | 425                     | (4.0)          | 417                                   | 433                                   |
| Uruguay                       | 423                     | (2.6)          | 418                                   | 428                                   |
| Montenegro                    | 420                     | (1.6)          | 417                                   | 424                                   |
| Trinidad and Tobago           | 419                     | (1.4)          | 416                                   | 421                                   |
| Mexico                        | 418                     | (2.0)          | 415                                   | 422                                   |
| Thailand                      | 416                     | (2.6)          | 411                                   | 421                                   |
| Colombia                      | 411                     | (3.8)          | 404                                   | 418                                   |
| Jordan                        | 410                     | (3.1)          | 404                                   | 416                                   |
| Brazil                        | 406                     | (2.7)          | 401                                   | 412                                   |
| Argentina                     | 398                     | (4.7)          | 388                                   | 407                                   |
| Kazakhstan                    | 397                     | (3.0)          | 391                                   | 403                                   |
| Indonesia                     | 397                     | (3.5)          | 390                                   | 404                                   |
| Albania                       | 393                     | (3.8)          | 386                                   | 401                                   |
| Tunisia                       | 393                     | (2.7)          | 388                                   | 399                                   |
| Qatar                         | 379                     | (0.9)          | 377                                   | 380                                   |
| Azerbaijan                    | 373                     | (2.9)          | 367                                   | 379                                   |
| Panama                        | 372                     | (5.9)          | 361                                   | 384                                   |
| Peru                          | 371                     | (4.0)          | 363                                   | 379                                   |
| Kyrgyzstan                    | 327                     | (2.9)          | 321                                   | 333                                   |

Table B.1.4

**Estimated average scores and confidence intervals for countries, provinces and economies: Reflecting and evaluating**

| Country, economy and province    | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|----------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Shanghai-China                   | 557                     | (2.4)          | 552                                   | 561                                   |
| <b>Ontario</b>                   | <b>546</b>              | <b>(3.2)</b>   | <b>540</b>                            | <b>552</b>                            |
| <b>Alberta</b>                   | <b>546</b>              | <b>(4.4)</b>   | <b>537</b>                            | <b>554</b>                            |
| Korea                            | 542                     | (3.9)          | 534                                   | 550                                   |
| Hong Kong-China                  | 540                     | (2.5)          | 535                                   | 544                                   |
| Finland                          | 536                     | (2.2)          | 531                                   | 540                                   |
| <b>British Columbia</b>          | <b>536</b>              | <b>(4.2)</b>   | <b>528</b>                            | <b>544</b>                            |
| <b>Canada</b>                    | <b>535</b>              | <b>(1.6)</b>   | <b>532</b>                            | <b>538</b>                            |
| New Zealand                      | 531                     | (2.5)          | 526                                   | 536                                   |
| Singapore                        | 529                     | (1.1)          | 527                                   | 531                                   |
| <b>Nova Scotia</b>               | <b>527</b>              | <b>(3.0)</b>   | <b>521</b>                            | <b>532</b>                            |
| <b>Quebec</b>                    | <b>525</b>              | <b>(3.3)</b>   | <b>518</b>                            | <b>531</b>                            |
| Australia                        | 523                     | (2.5)          | 518                                   | 528                                   |
| Japan                            | 521                     | (3.9)          | 513                                   | 528                                   |
| <b>Newfoundland and Labrador</b> | <b>519</b>              | <b>(3.3)</b>   | <b>512</b>                            | <b>525</b>                            |
| <b>Saskatchewan</b>              | <b>517</b>              | <b>(3.5)</b>   | <b>510</b>                            | <b>524</b>                            |
| United States                    | 512                     | (4.0)          | 504                                   | 520                                   |
| Netherlands                      | 510                     | (5.0)          | 501                                   | 520                                   |
| Norway                           | 505                     | (2.7)          | 500                                   | 510                                   |
| Belgium                          | 505                     | (2.5)          | 501                                   | 510                                   |
| <b>New Brunswick</b>             | <b>505</b>              | <b>(2.3)</b>   | <b>500</b>                            | <b>509</b>                            |
| <b>Manitoba</b>                  | <b>504</b>              | <b>(4.0)</b>   | <b>496</b>                            | <b>512</b>                            |
| United Kingdom                   | 503                     | (2.4)          | 498                                   | 508                                   |
| Estonia                          | 503                     | (2.6)          | 497                                   | 508                                   |
| Sweden                           | 502                     | (3.0)          | 496                                   | 508                                   |
| Ireland                          | 502                     | (3.1)          | 496                                   | 509                                   |
| Liechtenstein                    | 498                     | (3.2)          | 491                                   | 504                                   |
| Poland                           | 498                     | (2.8)          | 492                                   | 503                                   |
| Switzerland                      | 497                     | (2.7)          | 492                                   | 503                                   |
| <b>Prince Edward Island</b>      | <b>497</b>              | <b>(2.3)</b>   | <b>492</b>                            | <b>501</b>                            |
| Iceland                          | 496                     | (1.4)          | 493                                   | 499                                   |
| Portugal                         | 496                     | (3.3)          | 490                                   | 503                                   |
| France                           | 495                     | (3.4)          | 488                                   | 502                                   |
| Denmark                          | 493                     | (2.6)          | 488                                   | 498                                   |
| Chinese Taipei                   | 493                     | (2.8)          | 487                                   | 498                                   |
| Latvia                           | 492                     | (3.0)          | 486                                   | 498                                   |
| Germany                          | 491                     | (2.8)          | 486                                   | 496                                   |
| Greece                           | 489                     | (4.9)          | 480                                   | 499                                   |
| Hungary                          | 489                     | (3.3)          | 482                                   | 495                                   |
| Israel                           | 483                     | (4.0)          | 475                                   | 491                                   |
| Spain                            | 483                     | (2.2)          | 479                                   | 488                                   |
| Italy                            | 482                     | (1.8)          | 478                                   | 485                                   |
| Macao-China                      | 481                     | (0.8)          | 479                                   | 482                                   |
| Turkey                           | 473                     | (4.0)          | 465                                   | 480                                   |
| Croatia                          | 471                     | (3.5)          | 464                                   | 478                                   |
| Luxembourg                       | 471                     | (1.1)          | 469                                   | 473                                   |
| Slovenia                         | 470                     | (1.2)          | 468                                   | 473                                   |
| Dubai (UAE)                      | 466                     | (1.1)          | 463                                   | 468                                   |
| Slovak Republic                  | 466                     | (2.9)          | 460                                   | 472                                   |
| Lithuania                        | 463                     | (2.5)          | 458                                   | 468                                   |
| Austria                          | 463                     | (3.4)          | 456                                   | 470                                   |

Table B.1.4 (concluded)

**Estimated average scores and confidence intervals for countries, provinces and economies: Reflecting and evaluating**

| Country, economy and province | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|-------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Czech Republic                | 462                     | (3.1)          | 456                                   | 468                                   |
| Chile                         | 452                     | (3.2)          | 446                                   | 459                                   |
| Russian Federation            | 441                     | (3.7)          | 433                                   | 448                                   |
| Uruguay                       | 436                     | (2.9)          | 430                                   | 441                                   |
| Mexico                        | 432                     | (1.9)          | 428                                   | 436                                   |
| Serbia                        | 430                     | (2.6)          | 425                                   | 435                                   |
| Tunisia                       | 427                     | (3.0)          | 421                                   | 433                                   |
| Romania                       | 426                     | (4.5)          | 418                                   | 435                                   |
| Brazil                        | 424                     | (2.7)          | 418                                   | 429                                   |
| Colombia                      | 422                     | (4.2)          | 413                                   | 430                                   |
| Thailand                      | 420                     | (2.8)          | 415                                   | 426                                   |
| Bulgaria                      | 417                     | (7.1)          | 403                                   | 431                                   |
| Trinidad and Tobago           | 413                     | (1.3)          | 411                                   | 416                                   |
| Indonesia                     | 409                     | (3.8)          | 401                                   | 416                                   |
| Jordan                        | 407                     | (3.4)          | 400                                   | 414                                   |
| Argentina                     | 402                     | (4.8)          | 393                                   | 412                                   |
| Montenegro                    | 383                     | (1.9)          | 379                                   | 387                                   |
| Panama                        | 377                     | (6.3)          | 365                                   | 389                                   |
| Albania                       | 376                     | (4.6)          | 367                                   | 385                                   |
| Qatar                         | 376                     | (1.0)          | 374                                   | 378                                   |
| Kazakhstan                    | 373                     | (3.4)          | 366                                   | 380                                   |
| Peru                          | 368                     | (4.2)          | 360                                   | 376                                   |
| Azerbaijan                    | 335                     | (3.8)          | 327                                   | 342                                   |
| Kyrgyzstan                    | 300                     | (4.0)          | 292                                   | 308                                   |

Table B.1.5

**Estimated average scores and confidence intervals for countries, provinces and economies: Continuous texts**

| Country, economy and province    | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|----------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Shanghai-China                   | 564                     | (2.5)          | 559                                   | 569                                   |
| Korea                            | 538                     | (3.5)          | 531                                   | 545                                   |
| Hong Kong-China                  | 538                     | (2.3)          | 534                                   | 543                                   |
| Finland                          | 535                     | (2.3)          | 531                                   | 540                                   |
| <b>Alberta</b>                   | <b>533</b>              | <b>(4.7)</b>   | <b>524</b>                            | <b>543</b>                            |
| <b>Ontario</b>                   | <b>532</b>              | <b>(3.1)</b>   | <b>526</b>                            | <b>538</b>                            |
| <b>Canada</b>                    | <b>524</b>              | <b>(1.5)</b>   | <b>521</b>                            | <b>527</b>                            |
| <b>British Columbia</b>          | <b>524</b>              | <b>(4.5)</b>   | <b>515</b>                            | <b>533</b>                            |
| Singapore                        | 522                     | (1.1)          | 520                                   | 524                                   |
| Japan                            | 520                     | (3.6)          | 513                                   | 528                                   |
| <b>Quebec</b>                    | <b>519</b>              | <b>(3.2)</b>   | <b>512</b>                            | <b>525</b>                            |
| New Zealand                      | 518                     | (2.4)          | 513                                   | 523                                   |
| <b>Nova Scotia</b>               | <b>516</b>              | <b>(2.9)</b>   | <b>511</b>                            | <b>522</b>                            |
| Australia                        | 513                     | (2.5)          | 508                                   | 518                                   |
| <b>Newfoundland and Labrador</b> | <b>508</b>              | <b>(3.8)</b>   | <b>501</b>                            | <b>516</b>                            |
| Netherlands                      | 506                     | (5.0)          | 497                                   | 516                                   |
| <b>Saskatchewan</b>              | <b>506</b>              | <b>(3.2)</b>   | <b>500</b>                            | <b>512</b>                            |
| Norway                           | 505                     | (2.6)          | 500                                   | 510                                   |
| Belgium                          | 504                     | (2.4)          | 500                                   | 509                                   |
| Poland                           | 502                     | (2.7)          | 497                                   | 507                                   |
| Iceland                          | 501                     | (1.6)          | 497                                   | 504                                   |
| United States                    | 500                     | (3.7)          | 492                                   | 507                                   |
| <b>New Brunswick</b>             | <b>500</b>              | <b>(2.5)</b>   | <b>495</b>                            | <b>505</b>                            |
| Sweden                           | 499                     | (3.0)          | 493                                   | 505                                   |
| Switzerland                      | 498                     | (2.5)          | 493                                   | 503                                   |
| Hungary                          | 497                     | (3.3)          | 490                                   | 503                                   |
| Estonia                          | 497                     | (2.7)          | 492                                   | 503                                   |
| Ireland                          | 497                     | (3.3)          | 490                                   | 503                                   |
| <b>Manitoba</b>                  | <b>497</b>              | <b>(4.0)</b>   | <b>489</b>                            | <b>505</b>                            |
| Germany                          | 496                     | (2.7)          | 491                                   | 501                                   |
| Denmark                          | 496                     | (2.1)          | 492                                   | 501                                   |
| Chinese Taipei                   | 496                     | (2.6)          | 491                                   | 502                                   |
| Liechtenstein                    | 495                     | (3.0)          | 489                                   | 500                                   |
| United Kingdom                   | 492                     | (2.4)          | 487                                   | 496                                   |
| Portugal                         | 492                     | (3.2)          | 486                                   | 498                                   |
| France                           | 492                     | (3.5)          | 485                                   | 499                                   |
| Italy                            | 489                     | (1.6)          | 486                                   | 492                                   |
| Macao-China                      | 488                     | (0.9)          | 486                                   | 490                                   |
| Greece                           | 487                     | (4.3)          | 478                                   | 495                                   |
| <b>Prince Edward Island</b>      | <b>486</b>              | <b>(2.4)</b>   | <b>481</b>                            | <b>490</b>                            |
| Latvia                           | 484                     | (3.0)          | 478                                   | 490                                   |
| Spain                            | 484                     | (2.1)          | 480                                   | 489                                   |
| Slovenia                         | 484                     | (1.1)          | 482                                   | 486                                   |
| Czech Republic                   | 479                     | (2.9)          | 473                                   | 485                                   |
| Slovak Republic                  | 479                     | (2.6)          | 474                                   | 484                                   |
| Croatia                          | 478                     | (2.9)          | 472                                   | 484                                   |
| Israel                           | 477                     | (3.6)          | 470                                   | 484                                   |
| Luxembourg                       | 471                     | (1.2)          | 469                                   | 474                                   |
| Lithuania                        | 470                     | (2.5)          | 465                                   | 475                                   |
| Austria                          | 470                     | (2.9)          | 464                                   | 476                                   |
| Turkey                           | 466                     | (3.5)          | 459                                   | 473                                   |

Table B.1.5 (concluded)

**Estimated average scores and confidence intervals for countries, provinces and economies: Continuous texts**

| Country, economy and province | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|-------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Russian Federation            | 461                     | (3.1)          | 455                                   | 467                                   |
| Dubai (UAE)                   | 461                     | (1.2)          | 458                                   | 463                                   |
| Chile                         | 453                     | (3.1)          | 447                                   | 459                                   |
| Serbia                        | 444                     | (2.3)          | 439                                   | 448                                   |
| Bulgaria                      | 433                     | (6.8)          | 419                                   | 446                                   |
| Uruguay                       | 429                     | (2.7)          | 424                                   | 434                                   |
| Mexico                        | 426                     | (2.0)          | 422                                   | 430                                   |
| Thailand                      | 423                     | (2.8)          | 418                                   | 428                                   |
| Romania                       | 423                     | (4.0)          | 415                                   | 431                                   |
| Trinidad and Tobago           | 418                     | (1.3)          | 415                                   | 420                                   |
| Jordan                        | 417                     | (3.2)          | 410                                   | 423                                   |
| Colombia                      | 415                     | (3.7)          | 408                                   | 422                                   |
| Brazil                        | 414                     | (2.8)          | 409                                   | 420                                   |
| Montenegro                    | 411                     | (1.8)          | 408                                   | 415                                   |
| Tunisia                       | 408                     | (2.9)          | 402                                   | 413                                   |
| Indonesia                     | 405                     | (3.7)          | 398                                   | 413                                   |
| Argentina                     | 400                     | (4.6)          | 391                                   | 409                                   |
| Kazakhstan                    | 399                     | (3.1)          | 393                                   | 405                                   |
| Albania                       | 392                     | (4.1)          | 384                                   | 400                                   |
| Qatar                         | 375                     | (0.9)          | 374                                   | 377                                   |
| Peru                          | 374                     | (3.9)          | 367                                   | 382                                   |
| Panama                        | 373                     | (6.7)          | 360                                   | 387                                   |
| Azerbaijan                    | 362                     | (3.3)          | 355                                   | 368                                   |
| Kyrgyzstan                    | 319                     | (3.2)          | 313                                   | 325                                   |

Table B.1.6

**Estimated average scores and confidence intervals for countries, provinces and economies: Non-continuous texts**

| Country, economy and province    | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|----------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Korea                            | 542                     | (3.6)          | 535                                   | 549                                   |
| Singapore                        | 539                     | (1.1)          | 536                                   | 541                                   |
| Shanghai-China                   | 539                     | (2.4)          | 535                                   | 544                                   |
| <b>Alberta</b>                   | <b>539</b>              | <b>(4.7)</b>   | <b>529</b>                            | <b>548</b>                            |
| Finland                          | 535                     | (2.4)          | 530                                   | 540                                   |
| <b>Ontario</b>                   | <b>534</b>              | <b>(3.3)</b>   | <b>527</b>                            | <b>540</b>                            |
| New Zealand                      | 532                     | (2.3)          | 528                                   | 537                                   |
| <b>British Columbia</b>          | <b>531</b>              | <b>(4.0)</b>   | <b>523</b>                            | <b>538</b>                            |
| <b>Canada</b>                    | <b>527</b>              | <b>(1.6)</b>   | <b>524</b>                            | <b>530</b>                            |
| Australia                        | 524                     | (2.3)          | 520                                   | 529                                   |
| <b>Quebec</b>                    | <b>523</b>              | <b>(3.5)</b>   | <b>516</b>                            | <b>529</b>                            |
| Hong Kong-China                  | 522                     | (2.3)          | 518                                   | 527                                   |
| Japan                            | 518                     | (3.5)          | 511                                   | 524                                   |
| <b>Nova Scotia</b>               | <b>518</b>              | <b>(2.8)</b>   | <b>513</b>                            | <b>524</b>                            |
| Netherlands                      | 514                     | (5.1)          | 505                                   | 524                                   |
| Estonia                          | 512                     | (2.7)          | 507                                   | 517                                   |
| Belgium                          | 511                     | (2.2)          | 507                                   | 515                                   |
| <b>Newfoundland and Labrador</b> | <b>511</b>              | <b>(3.8)</b>   | <b>503</b>                            | <b>518</b>                            |
| Liechtenstein                    | 506                     | (3.2)          | 500                                   | 512                                   |
| United Kingdom                   | 506                     | (2.3)          | 501                                   | 510                                   |
| <b>Saskatchewan</b>              | <b>506</b>              | <b>(3.5)</b>   | <b>500</b>                            | <b>513</b>                            |
| Switzerland                      | 505                     | (2.5)          | 500                                   | 510                                   |
| United States                    | 503                     | (3.5)          | 496                                   | 510                                   |
| Chinese Taipei                   | 500                     | (2.8)          | 495                                   | 506                                   |
| Iceland                          | 499                     | (1.5)          | 496                                   | 502                                   |
| Norway                           | 498                     | (2.6)          | 492                                   | 503                                   |
| Sweden                           | 498                     | (2.8)          | 492                                   | 503                                   |
| France                           | 498                     | (3.4)          | 492                                   | 505                                   |
| <b>Manitoba</b>                  | <b>498</b>              | <b>(3.5)</b>   | <b>491</b>                            | <b>504</b>                            |
| Germany                          | 497                     | (2.8)          | 492                                   | 503                                   |
| Poland                           | 496                     | (2.8)          | 490                                   | 501                                   |
| Ireland                          | 496                     | (3.0)          | 490                                   | 502                                   |
| Denmark                          | 493                     | (2.3)          | 488                                   | 497                                   |
| <b>New Brunswick</b>             | <b>492</b>              | <b>(2.4)</b>   | <b>487</b>                            | <b>497</b>                            |
| <b>Prince Edward Island</b>      | <b>490</b>              | <b>(2.4)</b>   | <b>485</b>                            | <b>494</b>                            |
| Portugal                         | 488                     | (3.2)          | 482                                   | 494                                   |
| Latvia                           | 487                     | (3.4)          | 480                                   | 494                                   |
| Hungary                          | 487                     | (3.3)          | 481                                   | 494                                   |
| Macao-China                      | 481                     | (1.1)          | 478                                   | 483                                   |
| Italy                            | 476                     | (1.7)          | 473                                   | 480                                   |
| Slovenia                         | 476                     | (1.1)          | 474                                   | 478                                   |
| Czech Republic                   | 474                     | (3.4)          | 468                                   | 481                                   |
| Spain                            | 473                     | (2.1)          | 468                                   | 477                                   |
| Croatia                          | 472                     | (3.0)          | 466                                   | 478                                   |
| Luxembourg                       | 472                     | (1.2)          | 469                                   | 474                                   |
| Austria                          | 472                     | (3.2)          | 466                                   | 479                                   |
| Greece                           | 472                     | (4.3)          | 464                                   | 480                                   |
| Slovak Republic                  | 471                     | (2.8)          | 466                                   | 477                                   |
| Israel                           | 467                     | (3.9)          | 459                                   | 475                                   |
| Lithuania                        | 462                     | (2.6)          | 457                                   | 467                                   |
| Turkey                           | 461                     | (3.8)          | 454                                   | 468                                   |

Table B.1.6 (concluded)

**Estimated average scores and confidence intervals for countries, provinces and economies: Non-continuous texts**

| Country, economy and province | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|-------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Dubai (UAE)                   | 460                     | (1.3)          | 457                                   | 462                                   |
| Russian Federation            | 452                     | (3.9)          | 445                                   | 460                                   |
| Chile                         | 444                     | (3.2)          | 437                                   | 450                                   |
| Serbia                        | 438                     | (2.9)          | 432                                   | 443                                   |
| Romania                       | 424                     | (4.5)          | 416                                   | 433                                   |
| Mexico                        | 424                     | (2.0)          | 421                                   | 428                                   |
| Thailand                      | 423                     | (2.7)          | 418                                   | 428                                   |
| Bulgaria                      | 421                     | (7.2)          | 407                                   | 435                                   |
| Uruguay                       | 421                     | (2.7)          | 416                                   | 426                                   |
| Trinidad and Tobago           | 417                     | (1.4)          | 414                                   | 420                                   |
| Colombia                      | 409                     | (4.1)          | 401                                   | 417                                   |
| Brazil                        | 408                     | (2.8)          | 403                                   | 414                                   |
| Indonesia                     | 399                     | (4.5)          | 390                                   | 407                                   |
| Montenegro                    | 398                     | (1.9)          | 394                                   | 401                                   |
| Tunisia                       | 393                     | (3.3)          | 386                                   | 399                                   |
| Argentina                     | 391                     | (5.2)          | 381                                   | 401                                   |
| Jordan                        | 387                     | (4.1)          | 379                                   | 395                                   |
| Kazakhstan                    | 371                     | (3.9)          | 363                                   | 378                                   |
| Albania                       | 366                     | (4.6)          | 357                                   | 375                                   |
| Qatar                         | 361                     | (0.9)          | 360                                   | 363                                   |
| Panama                        | 359                     | (6.5)          | 346                                   | 372                                   |
| Peru                          | 356                     | (4.4)          | 348                                   | 365                                   |
| Azerbaijan                    | 351                     | (4.2)          | 342                                   | 359                                   |
| Kyrgyzstan                    | 293                     | (3.7)          | 285                                   | 300                                   |

Table B.1.7

## Variation in performance: Combined reading

| Country, economy<br>and province | Percentile |                   |       |                   |       |                   |       |                   |       |                   |       |                   | Difference<br>in score<br>points<br>between<br>the 75th<br>and 25th<br>percentile |
|----------------------------------|------------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-----------------------------------------------------------------------------------|
|                                  | 5th        |                   | 10th  |                   | 25th  |                   | 75th  |                   | 90th  |                   | 95th  |                   |                                                                                   |
|                                  | score      | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error |                                                                                   |
| Indonesia                        | 291        | (5.8)             | 315   | (5.0)             | 357   | (4.1)             | 447   | (4.6)             | 487   | (5.0)             | 510   | (5.8)             | 90                                                                                |
| Thailand                         | 305        | (4.9)             | 331   | (3.8)             | 373   | (3.2)             | 469   | (2.6)             | 514   | (4.0)             | 542   | (5.4)             | 96                                                                                |
| Azerbaijan                       | 235        | (5.7)             | 263   | (4.8)             | 311   | (4.3)             | 413   | (4.0)             | 458   | (4.4)             | 485   | (6.2)             | 102                                                                               |
| Macao-China                      | 357        | (2.7)             | 388   | (1.9)             | 437   | (1.4)             | 540   | (1.4)             | 582   | (1.8)             | 608   | (1.8)             | 103                                                                               |
| Korea                            | 400        | (7.6)             | 435   | (5.9)             | 490   | (4.1)             | 595   | (3.4)             | 635   | (3.0)             | 658   | (3.8)             | 105                                                                               |
| Shanghai-China                   | 417        | (5.2)             | 450   | (4.8)             | 504   | (3.5)             | 613   | (2.8)             | 654   | (2.7)             | 679   | (3.3)             | 109                                                                               |
| Hong Kong-China                  | 380        | (5.5)             | 418   | (4.5)             | 482   | (3.0)             | 592   | (2.5)             | 634   | (2.9)             | 659   | (3.1)             | 110                                                                               |
| Latvia                           | 348        | (6.3)             | 379   | (4.2)             | 429   | (3.8)             | 541   | (3.3)             | 584   | (3.2)             | 610   | (4.3)             | 112                                                                               |
| Turkey                           | 325        | (5.1)             | 356   | (4.3)             | 409   | (3.8)             | 522   | (4.5)             | 569   | (5.2)             | 596   | (5.4)             | 113                                                                               |
| Chile                            | 310        | (5.1)             | 342   | (5.0)             | 393   | (4.1)             | 506   | (3.3)             | 556   | (3.6)             | 584   | (5.1)             | 113                                                                               |
| Estonia                          | 359        | (5.3)             | 392   | (4.4)             | 446   | (3.3)             | 559   | (2.8)             | 605   | (3.6)             | 633   | (4.1)             | 113                                                                               |
| Serbia                           | 299        | (4.9)             | 331   | (3.8)             | 388   | (3.2)             | 501   | (2.5)             | 547   | (2.7)             | 572   | (3.3)             | 113                                                                               |
| Denmark                          | 350        | (3.8)             | 383   | (3.7)             | 440   | (2.9)             | 554   | (2.8)             | 599   | (3.0)             | 624   | (2.9)             | 114                                                                               |
| Tunisia                          | 258        | (4.4)             | 293   | (3.8)             | 348   | (3.4)             | 462   | (3.4)             | 510   | (4.8)             | 538   | (5.2)             | 114                                                                               |
| Mexico                           | 281        | (3.9)             | 314   | (2.9)             | 370   | (2.4)             | 485   | (1.9)             | 531   | (2.2)             | 557   | (2.4)             | 115                                                                               |
| Chinese Taipei                   | 343        | (4.6)             | 380   | (3.9)             | 439   | (3.2)             | 555   | (2.9)             | 600   | (4.6)             | 627   | (6.3)             | 116                                                                               |
| Finland                          | 382        | (3.4)             | 419   | (3.6)             | 481   | (2.7)             | 597   | (2.2)             | 642   | (2.6)             | 666   | (2.6)             | 116                                                                               |
| Spain                            | 326        | (4.2)             | 364   | (3.5)             | 426   | (3.3)             | 543   | (2.0)             | 588   | (2.0)             | 613   | (2.4)             | 117                                                                               |
| Nova Scotia                      | 364        | (7.4)             | 401   | (5.7)             | 459   | (4.4)             | 576   | (3.9)             | 627   | (4.7)             | 656   | (5.5)             | 117                                                                               |
| Jordan                           | 243        | (6.6)             | 284   | (5.0)             | 350   | (4.1)             | 468   | (3.5)             | 515   | (3.9)             | 542   | (4.7)             | 118                                                                               |
| Colombia                         | 269        | (6.4)             | 302   | (5.2)             | 355   | (4.4)             | 473   | (3.9)             | 524   | (4.1)             | 554   | (4.0)             | 118                                                                               |
| Liechtenstein                    | 356        | (11.8)            | 385   | (10.6)            | 442   | (6.5)             | 560   | (4.7)             | 599   | (7.9)             | 624   | (11.5)            | 118                                                                               |
| Russian Federation               | 310        | (5.8)             | 344   | (5.5)             | 401   | (3.6)             | 519   | (3.2)             | 572   | (4.5)             | 607   | (5.6)             | 119                                                                               |
| Portugal                         | 338        | (4.9)             | 373   | (4.9)             | 432   | (4.4)             | 551   | (3.4)             | 599   | (3.5)             | 624   | (3.6)             | 119                                                                               |
| Quebec                           | 369        | (7.5)             | 405   | (6.2)             | 465   | (4.2)             | 585   | (3.2)             | 628   | (3.3)             | 654   | (4.3)             | 120                                                                               |
| Lithuania                        | 324        | (4.5)             | 353   | (4.2)             | 409   | (3.3)             | 530   | (3.1)             | 580   | (3.4)             | 608   | (4.1)             | 120                                                                               |
| Ontario                          | 378        | (5.9)             | 417   | (4.8)             | 472   | (3.6)             | 594   | (3.5)             | 642   | (3.8)             | 667   | (4.6)             | 122                                                                               |
| Croatia                          | 327        | (4.9)             | 359   | (3.6)             | 416   | (4.5)             | 539   | (3.1)             | 586   | (3.5)             | 611   | (3.8)             | 123                                                                               |
| Romania                          | 271        | (6.9)             | 304   | (5.7)             | 365   | (6.0)             | 488   | (4.7)             | 537   | (4.0)             | 564   | (4.6)             | 123                                                                               |
| Poland                           | 346        | (5.6)             | 382   | (4.2)             | 441   | (3.4)             | 565   | (3.2)             | 613   | (3.3)             | 640   | (3.6)             | 123                                                                               |
| Canada                           | 368        | (2.9)             | 406   | (2.7)             | 464   | (1.9)             | 588   | (1.7)             | 637   | (1.9)             | 664   | (2.1)             | 124                                                                               |
| Kazakhstan                       | 245        | (3.8)             | 275   | (3.8)             | 327   | (3.1)             | 452   | (4.2)             | 513   | (5.0)             | 545   | (5.2)             | 125                                                                               |
| Hungary                          | 332        | (7.4)             | 371   | (6.9)             | 435   | (4.3)             | 559   | (3.6)             | 607   | (3.5)             | 632   | (4.0)             | 125                                                                               |
| Newfoundland and Labrador        | 356        | (8.7)             | 389   | (6.3)             | 445   | (5.7)             | 570   | (4.8)             | 618   | (6.0)             | 651   | (8.2)             | 125                                                                               |
| Saskatchewan                     | 346        | (7.5)             | 382   | (7.6)             | 444   | (5.8)             | 569   | (3.8)             | 620   | (5.4)             | 649   | (5.9)             | 125                                                                               |
| Norway                           | 346        | (4.5)             | 382   | (4.0)             | 443   | (3.6)             | 568   | (2.9)             | 619   | (3.9)             | 647   | (4.4)             | 125                                                                               |
| British Columbia                 | 367        | (8.4)             | 404   | (5.7)             | 464   | (5.9)             | 590   | (4.3)             | 639   | (4.2)             | 666   | (5.8)             | 126                                                                               |
| Slovak Republic                  | 324        | (6.1)             | 358   | (5.2)             | 416   | (4.1)             | 543   | (2.7)             | 594   | (3.2)             | 621   | (4.3)             | 126                                                                               |
| Brazil                           | 262        | (3.0)             | 293   | (3.2)             | 348   | (2.7)             | 474   | (3.9)             | 537   | (4.2)             | 572   | (4.6)             | 127                                                                               |
| Ireland                          | 330        | (7.8)             | 373   | (4.7)             | 435   | (3.9)             | 562   | (2.8)             | 611   | (2.8)             | 638   | (3.2)             | 127                                                                               |
| New Brunswick                    | 346        | (6.1)             | 382   | (5.9)             | 436   | (3.9)             | 563   | (3.7)             | 614   | (4.8)             | 645   | (6.4)             | 127                                                                               |
| Montenegro                       | 254        | (4.2)             | 288   | (3.8)             | 345   | (2.6)             | 473   | (2.4)             | 526   | (2.7)             | 558   | (4.2)             | 128                                                                               |
| Iceland                          | 332        | (5.0)             | 371   | (4.1)             | 439   | (2.9)             | 567   | (2.0)             | 619   | (2.6)             | 648   | (3.9)             | 128                                                                               |
| Kyrgyzstan                       | 155        | (5.6)             | 190   | (4.7)             | 249   | (4.1)             | 377   | (4.2)             | 441   | (6.4)             | 483   | (7.5)             | 128                                                                               |
| Sweden                           | 326        | (5.3)             | 368   | (5.5)             | 437   | (3.3)             | 565   | (3.2)             | 620   | (3.7)             | 651   | (3.9)             | 129                                                                               |
| Greece                           | 318        | (7.8)             | 355   | (8.0)             | 420   | (6.3)             | 550   | (3.1)             | 601   | (3.7)             | 630   | (3.7)             | 129                                                                               |
| Slovenia                         | 326        | (2.9)             | 359   | (2.1)             | 421   | (1.9)             | 550   | (1.7)             | 598   | (2.9)             | 623   | (3.9)             | 129                                                                               |
| United Kingdom                   | 334        | (4.1)             | 370   | (3.1)             | 430   | (2.8)             | 561   | (3.2)             | 616   | (2.6)             | 646   | (3.7)             | 131                                                                               |
| Switzerland                      | 337        | (4.1)             | 374   | (4.0)             | 437   | (3.6)             | 569   | (3.0)             | 617   | (3.3)             | 645   | (4.5)             | 131                                                                               |
| Panama                           | 209        | (12.0)            | 246   | (10.0)            | 304   | (7.4)             | 436   | (7.7)             | 502   | (9.3)             | 540   | (10.0)            | 131                                                                               |
| Czech Republic                   | 325        | (4.8)             | 357   | (4.9)             | 413   | (4.2)             | 545   | (3.3)             | 598   | (3.2)             | 627   | (3.6)             | 131                                                                               |
| Japan                            | 339        | (9.8)             | 386   | (7.1)             | 459   | (4.8)             | 590   | (3.0)             | 639   | (3.6)             | 667   | (4.6)             | 131                                                                               |
| Prince Edward Island             | 319        | (5.5)             | 357   | (5.2)             | 422   | (3.5)             | 554   | (3.4)             | 608   | (4.4)             | 638   | (3.6)             | 132                                                                               |
| Manitoba                         | 334        | (7.9)             | 372   | (7.6)             | 432   | (5.2)             | 564   | (4.6)             | 617   | (4.9)             | 644   | (5.0)             | 132                                                                               |
| Alberta                          | 372        | (7.4)             | 408   | (7.1)             | 466   | (5.7)             | 599   | (5.1)             | 652   | (6.8)             | 685   | (9.9)             | 133                                                                               |
| Netherlands                      | 365        | (4.7)             | 390   | (5.0)             | 442   | (6.1)             | 575   | (5.4)             | 625   | (4.6)             | 650   | (4.0)             | 134                                                                               |
| Italy                            | 320        | (3.7)             | 358   | (2.6)             | 422   | (2.3)             | 556   | (1.7)             | 604   | (1.7)             | 631   | (2.1)             | 134                                                                               |

Table B.1.7 (concluded)

## Variation in performance: Combined reading

| Country, economy and province | Percentile |                |       |                |       |                |       |                |       |                |       |                | Difference in score points between the 75th and 25th percentile |
|-------------------------------|------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-----------------------------------------------------------------|
|                               | 5th        |                | 10th  |                | 25th  |                | 75th  |                | 90th  |                | 95th  |                |                                                                 |
|                               | score      | standard error | score | standard error | score | standard error | score | standard error | score | standard error | score | standard error |                                                                 |
| Australia                     | 343        | (3.8)          | 384   | (3.1)          | 450   | (2.9)          | 584   | (2.7)          | 638   | (3.2)          | 668   | (3.9)          | 134                                                             |
| Germany                       | 333        | (4.8)          | 367   | (5.1)          | 432   | (4.5)          | 567   | (2.8)          | 615   | (3.2)          | 640   | (3.1)          | 135                                                             |
| Peru                          | 209        | (5.0)          | 241   | (3.9)          | 302   | (4.3)          | 437   | (5.2)          | 496   | (6.4)          | 530   | (7.0)          | 135                                                             |
| Uruguay                       | 257        | (5.2)          | 297   | (4.2)          | 359   | (3.5)          | 495   | (3.1)          | 552   | (3.3)          | 584   | (4.5)          | 136                                                             |
| United States                 | 339        | (4.2)          | 372   | (3.9)          | 433   | (4.0)          | 569   | (4.6)          | 625   | (5.0)          | 656   | (5.8)          | 136                                                             |
| Singapore                     | 357        | (3.4)          | 394   | (3.1)          | 460   | (2.0)          | 597   | (2.1)          | 648   | (2.8)          | 676   | (2.7)          | 137                                                             |
| Albania                       | 212        | (6.9)          | 254   | (5.4)          | 319   | (4.9)          | 458   | (4.8)          | 509   | (4.9)          | 538   | (5.5)          | 139                                                             |
| France                        | 305        | (8.2)          | 352   | (7.0)          | 429   | (4.7)          | 572   | (4.0)          | 624   | (3.9)          | 651   | (4.6)          | 143                                                             |
| Luxembourg                    | 288        | (3.7)          | 332   | (3.6)          | 403   | (2.4)          | 547   | (1.7)          | 600   | (2.0)          | 630   | (3.6)          | 143                                                             |
| New Zealand                   | 344        | (5.8)          | 383   | (4.5)          | 452   | (3.1)          | 595   | (2.8)          | 649   | (2.7)          | 678   | (3.7)          | 143                                                             |
| Argentina                     | 209        | (11.3)         | 257   | (8.3)          | 329   | (5.8)          | 473   | (6.3)          | 535   | (7.1)          | 568   | (6.7)          | 144                                                             |
| Austria                       | 299        | (5.8)          | 335   | (4.9)          | 399   | (4.3)          | 545   | (3.3)          | 596   | (4.0)          | 624   | (4.3)          | 146                                                             |
| Belgium                       | 326        | (6.1)          | 368   | (4.3)          | 436   | (3.8)          | 583   | (2.2)          | 631   | (2.7)          | 657   | (2.9)          | 147                                                             |
| Dubai (UAE)                   | 277        | (3.5)          | 317   | (2.8)          | 386   | (2.4)          | 536   | (2.3)          | 596   | (2.6)          | 628   | (3.1)          | 149                                                             |
| Israel                        | 277        | (8.8)          | 322   | (7.8)          | 401   | (4.4)          | 554   | (3.4)          | 611   | (4.0)          | 643   | (4.3)          | 153                                                             |
| Trinidad and Tobago           | 220        | (5.8)          | 265   | (3.9)          | 339   | (2.5)          | 496   | (2.3)          | 559   | (2.5)          | 594   | (3.0)          | 157                                                             |
| Bulgaria                      | 234        | (8.4)          | 276   | (7.8)          | 351   | (8.6)          | 512   | (6.5)          | 572   | (7.3)          | 603   | (6.7)          | 161                                                             |
| Qatar                         | 196        | (2.4)          | 228   | (2.2)          | 288   | (1.4)          | 450   | (1.4)          | 529   | (2.1)          | 573   | (2.8)          | 162                                                             |

**Note:** Countries, economies and provinces in ascending order by the difference in score points between the 75th and 25th percentiles.

Table B.1.8

## Variation in performance: Accessing and retrieving

| Country, economy and province | Percentile |                |       |                |       |                |       |                |       |                |       |                | Difference in score points between the 75th and 25th percentile |
|-------------------------------|------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-----------------------------------------------------------------|
|                               | 5th        |                | 10th  |                | 25th  |                | 75th  |                | 90th  |                | 95th  |                |                                                                 |
|                               | score      | standard error | score | standard error | score | standard error | score | standard error | score | standard error | score | standard error |                                                                 |
| Thailand                      | 290        | (6.5)          | 322   | (5.5)          | 374   | (3.8)          | 488   | (3.4)          | 540   | (4.6)          | 573   | (5.5)          | 114                                                             |
| Korea                         | 391        | (7.8)          | 429   | (6.3)          | 486   | (4.2)          | 602   | (3.6)          | 650   | (3.7)          | 677   | (4.8)          | 116                                                             |
| Macao-China                   | 342        | (3.3)          | 379   | (2.0)          | 435   | (2.3)          | 554   | (1.5)          | 603   | (2.3)          | 630   | (2.3)          | 119                                                             |
| Chile                         | 290        | (6.5)          | 328   | (5.7)          | 384   | (4.3)          | 506   | (3.7)          | 559   | (4.3)          | 591   | (4.5)          | 122                                                             |
| Ontario                       | 365        | (6.7)          | 404   | (5.9)          | 465   | (3.6)          | 587   | (3.5)          | 636   | (4.1)          | 664   | (4.5)          | 122                                                             |
| Indonesia                     | 248        | (7.6)          | 281   | (6.1)          | 338   | (5.6)          | 461   | (5.3)          | 515   | (7.0)          | 547   | (7.3)          | 122                                                             |
| Colombia                      | 251        | (6.8)          | 286   | (6.3)          | 344   | (4.5)          | 467   | (3.9)          | 522   | (3.7)          | 553   | (4.4)          | 123                                                             |
| Quebec                        | 354        | (7.2)          | 392   | (6.0)          | 457   | (4.6)          | 580   | (3.9)          | 631   | (4.7)          | 660   | (5.2)          | 123                                                             |
| Estonia                       | 345        | (4.8)          | 381   | (4.0)          | 444   | (3.6)          | 567   | (3.6)          | 617   | (4.0)          | 647   | (4.1)          | 123                                                             |
| Portugal                      | 326        | (6.2)          | 367   | (5.5)          | 430   | (4.3)          | 553   | (3.6)          | 602   | (4.5)          | 631   | (4.6)          | 124                                                             |
| Mexico                        | 271        | (4.4)          | 311   | (3.4)          | 373   | (2.6)          | 498   | (2.0)          | 548   | (2.3)          | 577   | (2.7)          | 124                                                             |
| Hong Kong-China               | 361        | (5.9)          | 404   | (4.8)          | 471   | (3.4)          | 596   | (2.7)          | 642   | (3.5)          | 669   | (5.2)          | 125                                                             |
| Nova Scotia                   | 345        | (9.6)          | 382   | (6.2)          | 447   | (4.4)          | 572   | (4.4)          | 624   | (5.8)          | 653   | (6.4)          | 125                                                             |
| Latvia                        | 319        | (6.7)          | 356   | (5.4)          | 416   | (4.7)          | 542   | (3.8)          | 590   | (4.0)          | 617   | (4.3)          | 125                                                             |
| Serbia                        | 284        | (6.4)          | 324   | (5.6)          | 389   | (3.8)          | 515   | (3.2)          | 567   | (3.9)          | 595   | (3.9)          | 126                                                             |
| Liechtenstein                 | 344        | (22.0)         | 386   | (10.3)         | 448   | (10.0)         | 574   | (6.5)          | 620   | (8.2)          | 649   | (12.2)         | 126                                                             |
| Newfoundland and Labrador     | 340        | (9.0)          | 377   | (8.4)          | 439   | (6.0)          | 565   | (4.5)          | 620   | (6.8)          | 650   | (6.2)          | 126                                                             |
| Canada                        | 353        | (3.2)          | 393   | (2.7)          | 456   | (2.0)          | 583   | (2.0)          | 634   | (2.3)          | 664   | (2.7)          | 127                                                             |
| Turkey                        | 303        | (7.9)          | 343   | (5.6)          | 407   | (4.2)          | 534   | (4.8)          | 586   | (4.8)          | 614   | (6.0)          | 127                                                             |
| Ireland                       | 321        | (9.7)          | 372   | (5.4)          | 439   | (4.1)          | 567   | (2.8)          | 616   | (4.0)          | 643   | (4.1)          | 128                                                             |
| Shanghai-China                | 382        | (5.9)          | 423   | (5.3)          | 489   | (3.8)          | 617   | (3.0)          | 666   | (3.4)          | 695   | (4.1)          | 128                                                             |

Table B.1.8 (concluded)

## Variation in performance: Accessing and retrieving

| Country, economy<br>and province | Percentile |                   |       |                   |       |                   |       |                   |       |                   |       |                   | Difference<br>in score<br>points<br>between<br>the 75th<br>and 25th<br>percentile |
|----------------------------------|------------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-----------------------------------------------------------------------------------|
|                                  | 5th        |                   | 10th  |                   | 25th  |                   | 75th  |                   | 90th  |                   | 95th  |                   |                                                                                   |
|                                  | score      | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error |                                                                                   |
| Denmark                          | 339        | (5.6)             | 376   | (4.3)             | 440   | (3.5)             | 569   | (3.1)             | 619   | (3.1)             | 648   | (4.8)             | 129                                                                               |
| Norway                           | 340        | (5.2)             | 382   | (4.4)             | 449   | (3.5)             | 580   | (3.4)             | 634   | (3.6)             | 665   | (4.1)             | 130                                                                               |
| Spain                            | 303        | (4.3)             | 350   | (3.4)             | 419   | (2.8)             | 549   | (2.3)             | 602   | (2.5)             | 632   | (2.7)             | 130                                                                               |
| British Columbia                 | 350        | (10.0)            | 391   | (6.7)             | 453   | (5.1)             | 584   | (4.4)             | 637   | (4.7)             | 668   | (5.4)             | 131                                                                               |
| Australia                        | 337        | (4.5)             | 381   | (3.5)             | 451   | (2.7)             | 583   | (2.6)             | 635   | (3.4)             | 665   | (3.6)             | 132                                                                               |
| Finland                          | 357        | (5.6)             | 401   | (4.0)             | 470   | (3.6)             | 602   | (2.9)             | 653   | (3.1)             | 682   | (3.7)             | 132                                                                               |
| Switzerland                      | 331        | (5.3)             | 375   | (4.6)             | 443   | (4.2)             | 576   | (2.9)             | 625   | (3.8)             | 653   | (4.1)             | 133                                                                               |
| Russian Federation               | 297        | (7.7)             | 339   | (6.1)             | 403   | (4.7)             | 536   | (4.4)             | 599   | (4.6)             | 636   | (6.1)             | 133                                                                               |
| New Brunswick                    | 328        | (6.9)             | 360   | (5.0)             | 422   | (5.1)             | 556   | (4.2)             | 608   | (5.4)             | 639   | (6.5)             | 134                                                                               |
| Poland                           | 326        | (5.0)             | 369   | (4.0)             | 435   | (3.6)             | 569   | (2.9)             | 626   | (3.9)             | 660   | (4.2)             | 135                                                                               |
| United Kingdom                   | 321        | (4.6)             | 361   | (4.4)             | 426   | (3.3)             | 561   | (2.8)             | 617   | (3.5)             | 650   | (4.2)             | 135                                                                               |
| Slovenia                         | 314        | (4.0)             | 355   | (2.7)             | 426   | (2.2)             | 561   | (1.8)             | 610   | (3.2)             | 635   | (3.3)             | 135                                                                               |
| Netherlands                      | 364        | (6.7)             | 396   | (5.2)             | 453   | (5.8)             | 588   | (5.5)             | 634   | (5.0)             | 661   | (6.3)             | 136                                                                               |
| United States                    | 325        | (5.0)             | 363   | (4.6)             | 425   | (4.0)             | 561   | (4.4)             | 618   | (4.4)             | 650   | (5.4)             | 136                                                                               |
| Saskatchewan                     | 324        | (11.0)            | 372   | (7.9)             | 436   | (6.6)             | 572   | (3.7)             | 627   | (5.6)             | 661   | (7.9)             | 136                                                                               |
| Sweden                           | 321        | (5.9)             | 368   | (4.7)             | 440   | (3.5)             | 577   | (3.1)             | 631   | (4.7)             | 664   | (3.9)             | 136                                                                               |
| Tunisia                          | 221        | (5.7)             | 263   | (5.0)             | 327   | (4.1)             | 463   | (4.3)             | 523   | (5.1)             | 559   | (6.7)             | 136                                                                               |
| Croatia                          | 318        | (5.8)             | 359   | (5.3)             | 427   | (4.5)             | 563   | (3.4)             | 616   | (3.3)             | 646   | (4.8)             | 136                                                                               |
| Alberta                          | 349        | (8.9)             | 390   | (6.4)             | 455   | (6.4)             | 592   | (5.2)             | 647   | (5.2)             | 680   | (7.8)             | 137                                                                               |
| Romania                          | 243        | (8.6)             | 287   | (6.9)             | 357   | (6.2)             | 494   | (4.8)             | 548   | (4.7)             | 576   | (5.7)             | 137                                                                               |
| Azerbaijan                       | 189        | (7.6)             | 227   | (7.2)             | 293   | (5.5)             | 432   | (5.1)             | 493   | (5.4)             | 528   | (6.0)             | 138                                                                               |
| Czech Republic                   | 309        | (6.2)             | 349   | (5.6)             | 412   | (4.3)             | 551   | (3.5)             | 605   | (3.7)             | 635   | (3.6)             | 139                                                                               |
| Hungary                          | 315        | (11.0)            | 362   | (8.6)             | 437   | (5.0)             | 576   | (4.0)             | 627   | (4.0)             | 654   | (4.4)             | 139                                                                               |
| Greece                           | 285        | (9.5)             | 330   | (8.5)             | 401   | (6.3)             | 540   | (4.0)             | 595   | (3.8)             | 627   | (3.6)             | 139                                                                               |
| Prince Edward Island             | 307        | (7.0)             | 346   | (4.5)             | 413   | (5.0)             | 552   | (4.1)             | 609   | (5.2)             | 639   | (9.9)             | 139                                                                               |
| Lithuania                        | 303        | (5.8)             | 343   | (5.5)             | 408   | (4.1)             | 548   | (3.1)             | 605   | (3.7)             | 637   | (3.7)             | 139                                                                               |
| Slovak Republic                  | 312        | (8.6)             | 353   | (7.0)             | 423   | (4.0)             | 563   | (3.3)             | 619   | (3.7)             | 648   | (4.6)             | 140                                                                               |
| Singapore                        | 345        | (5.2)             | 388   | (3.4)             | 459   | (2.5)             | 599   | (1.6)             | 651   | (3.5)             | 680   | (3.6)             | 140                                                                               |
| Jordan                           | 195        | (7.6)             | 249   | (6.2)             | 328   | (4.8)             | 469   | (4.4)             | 529   | (4.7)             | 564   | (5.0)             | 140                                                                               |
| Japan                            | 333        | (10.4)            | 386   | (7.9)             | 464   | (4.8)             | 605   | (3.3)             | 658   | (4.7)             | 691   | (4.9)             | 141                                                                               |
| Iceland                          | 319        | (5.4)             | 363   | (3.8)             | 439   | (3.4)             | 580   | (2.7)             | 639   | (3.0)             | 672   | (4.2)             | 141                                                                               |
| Chinese Taipei                   | 312        | (6.0)             | 358   | (4.1)             | 429   | (3.9)             | 570   | (3.6)             | 625   | (3.8)             | 656   | (4.4)             | 141                                                                               |
| Italy                            | 295        | (4.7)             | 341   | (3.2)             | 415   | (2.6)             | 557   | (1.7)             | 609   | (1.7)             | 639   | (2.1)             | 142                                                                               |
| Peru                             | 184        | (6.6)             | 226   | (5.2)             | 293   | (4.5)             | 436   | (4.7)             | 497   | (6.8)             | 534   | (8.0)             | 143                                                                               |
| Brazil                           | 232        | (4.6)             | 270   | (4.2)             | 334   | (3.3)             | 478   | (4.6)             | 546   | (5.5)             | 587   | (6.1)             | 144                                                                               |
| New Zealand                      | 338        | (4.9)             | 381   | (4.4)             | 452   | (3.4)             | 597   | (2.8)             | 650   | (3.0)             | 680   | (3.3)             | 144                                                                               |
| Manitoba                         | 323        | (10.0)            | 362   | (8.0)             | 426   | (6.0)             | 571   | (4.3)             | 625   | (5.5)             | 656   | (5.8)             | 145                                                                               |
| Belgium                          | 323        | (6.2)             | 368   | (4.6)             | 444   | (3.5)             | 591   | (2.8)             | 643   | (3.0)             | 673   | (3.4)             | 148                                                                               |
| Germany                          | 318        | (7.2)             | 358   | (6.0)             | 429   | (5.3)             | 578   | (4.0)             | 630   | (4.1)             | 658   | (4.5)             | 148                                                                               |
| France                           | 298        | (9.5)             | 347   | (7.6)             | 422   | (4.7)             | 571   | (4.5)             | 625   | (4.6)             | 656   | (5.0)             | 149                                                                               |
| Uruguay                          | 235        | (6.4)             | 280   | (5.0)             | 352   | (3.9)             | 502   | (3.2)             | 563   | (4.2)             | 599   | (4.7)             | 150                                                                               |
| Kazakhstan                       | 218        | (6.2)             | 257   | (4.8)             | 321   | (4.3)             | 473   | (4.9)             | 542   | (6.7)             | 580   | (6.4)             | 152                                                                               |
| Argentina                        | 193        | (10.9)            | 242   | (7.0)             | 321   | (5.7)             | 474   | (6.1)             | 539   | (6.2)             | 574   | (6.4)             | 153                                                                               |
| Albania                          | 182        | (8.2)             | 232   | (6.7)             | 307   | (5.7)             | 461   | (5.4)             | 520   | (5.8)             | 550   | (6.6)             | 154                                                                               |
| Luxembourg                       | 266        | (5.7)             | 318   | (3.2)             | 396   | (2.9)             | 553   | (2.3)             | 612   | (2.4)             | 645   | (3.9)             | 157                                                                               |
| Austria                          | 286        | (6.6)             | 326   | (5.1)             | 400   | (4.8)             | 558   | (4.1)             | 618   | (4.2)             | 650   | (5.1)             | 158                                                                               |
| Panama                           | 167        | (12.5)            | 211   | (12.7)            | 283   | (7.9)             | 443   | (8.6)             | 521   | (10.8)            | 565   | (11.4)            | 160                                                                               |
| Montenegro                       | 206        | (5.9)             | 253   | (4.5)             | 328   | (4.0)             | 490   | (3.0)             | 558   | (3.8)             | 597   | (4.2)             | 162                                                                               |
| Israel                           | 247        | (12.1)            | 299   | (8.7)             | 386   | (5.5)             | 548   | (3.7)             | 610   | (4.1)             | 643   | (4.8)             | 162                                                                               |
| Kyrgyzstan                       | 95         | (7.7)             | 143   | (5.7)             | 218   | (4.9)             | 380   | (5.2)             | 457   | (7.0)             | 503   | (8.7)             | 163                                                                               |
| Dubai (UAE)                      | 258        | (5.3)             | 304   | (2.7)             | 380   | (2.5)             | 543   | (2.2)             | 606   | (2.9)             | 639   | (3.6)             | 164                                                                               |
| Trinidad and Tobago              | 192        | (4.8)             | 246   | (4.4)             | 332   | (3.3)             | 501   | (3.0)             | 567   | (3.2)             | 607   | (3.6)             | 169                                                                               |
| Qatar                            | 140        | (2.5)             | 181   | (2.9)             | 258   | (2.0)             | 445   | (2.1)             | 536   | (2.6)             | 586   | (4.2)             | 188                                                                               |
| Bulgaria                         | 183        | (10.1)            | 239   | (12.7)            | 339   | (10.3)            | 530   | (8.1)             | 599   | (8.8)             | 637   | (9.8)             | 191                                                                               |

**Note:** Countries, economies and provinces in ascending order by the difference in score points between the 75th and 25th percentiles.

Table B.1.9

## Variation in performance: Integrating and interpreting

| Country, economy and province | Percentile |                |       |                |       |                |       |                |       |                |       |                | Difference in score points between the 75th and 25th percentile |
|-------------------------------|------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-----------------------------------------------------------------|
|                               | 5th        |                | 10th  |                | 25th  |                | 75th  |                | 90th  |                | 95th  |                |                                                                 |
|                               | score      | standard error | score | standard error | score | standard error | score | standard error | score | standard error | score | standard error |                                                                 |
| Indonesia                     | 291        | (4.4)          | 313   | (3.7)          | 352   | (3.7)          | 442   | (4.3)          | 482   | (5.5)          | 505   | (5.2)          | 90                                                              |
| Azerbaijan                    | 260        | (4.5)          | 285   | (4.1)          | 327   | (3.6)          | 420   | (3.1)          | 460   | (4.2)          | 483   | (4.6)          | 93                                                              |
| Thailand                      | 301        | (4.4)          | 326   | (3.8)          | 367   | (2.9)          | 465   | (2.8)          | 508   | (3.9)          | 537   | (6.0)          | 98                                                              |
| Macao-China                   | 357        | (2.7)          | 388   | (2.2)          | 436   | (1.6)          | 542   | (1.4)          | 588   | (2.1)          | 613   | (2.1)          | 106                                                             |
| Tunisia                       | 258        | (4.3)          | 287   | (3.5)          | 341   | (3.2)          | 449   | (3.4)          | 495   | (4.2)          | 523   | (5.1)          | 108                                                             |
| Korea                         | 398        | (8.6)          | 435   | (5.8)          | 489   | (4.3)          | 598   | (3.5)          | 639   | (3.5)          | 664   | (3.7)          | 109                                                             |
| Jordan                        | 264        | (5.9)          | 300   | (5.1)          | 358   | (4.0)          | 468   | (3.5)          | 513   | (3.7)          | 538   | (4.5)          | 110                                                             |
| Turkey                        | 330        | (4.5)          | 358   | (3.3)          | 405   | (3.3)          | 515   | (4.3)          | 562   | (5.1)          | 588   | (5.7)          | 110                                                             |
| Latvia                        | 352        | (5.6)          | 381   | (4.1)          | 430   | (3.6)          | 541   | (3.3)          | 585   | (3.5)          | 611   | (3.4)          | 111                                                             |
| Shanghai-China                | 417        | (5.7)          | 449   | (4.3)          | 504   | (3.4)          | 617   | (2.8)          | 659   | (3.0)          | 684   | (3.5)          | 112                                                             |
| Serbia                        | 304        | (4.6)          | 334   | (4.0)          | 389   | (3.1)          | 504   | (2.9)          | 551   | (3.2)          | 577   | (3.1)          | 115                                                             |
| Estonia                       | 358        | (5.3)          | 389   | (4.0)          | 444   | (3.5)          | 559   | (3.0)          | 605   | (3.9)          | 634   | (4.3)          | 115                                                             |
| Denmark                       | 348        | (4.9)          | 381   | (3.7)          | 437   | (2.7)          | 552   | (2.3)          | 597   | (3.1)          | 623   | (3.6)          | 115                                                             |
| Chile                         | 310        | (5.2)          | 342   | (4.7)          | 395   | (4.0)          | 510   | (3.4)          | 562   | (4.3)          | 593   | (4.8)          | 115                                                             |
| Kyrgyzstan                    | 183        | (4.7)          | 215   | (4.6)          | 269   | (3.5)          | 384   | (3.8)          | 440   | (5.1)          | 475   | (5.6)          | 115                                                             |
| Spain                         | 329        | (4.2)          | 366   | (3.6)          | 425   | (2.8)          | 541   | (1.9)          | 588   | (1.9)          | 614   | (2.3)          | 117                                                             |
| Croatia                       | 331        | (5.2)          | 362   | (4.0)          | 415   | (4.2)          | 532   | (3.3)          | 577   | (3.0)          | 602   | (3.9)          | 117                                                             |
| Lithuania                     | 331        | (4.4)          | 358   | (3.7)          | 410   | (3.4)          | 528   | (2.8)          | 578   | (3.3)          | 607   | (3.4)          | 118                                                             |
| Hong Kong-China               | 372        | (5.1)          | 412   | (4.6)          | 474   | (2.9)          | 592   | (2.9)          | 639   | (3.3)          | 666   | (3.8)          | 119                                                             |
| Chinese Taipei                | 349        | (4.4)          | 383   | (3.8)          | 441   | (3.2)          | 560   | (3.3)          | 607   | (5.0)          | 635   | (5.6)          | 119                                                             |
| Finland                       | 385        | (3.7)          | 421   | (3.6)          | 482   | (2.7)          | 601   | (2.7)          | 647   | (2.9)          | 674   | (3.2)          | 119                                                             |
| Mexico                        | 272        | (3.5)          | 305   | (2.7)          | 360   | (2.3)          | 479   | (2.1)          | 529   | (2.5)          | 558   | (3.0)          | 120                                                             |
| Kazakhstan                    | 260        | (3.4)          | 287   | (3.0)          | 336   | (3.9)          | 456   | (4.2)          | 513   | (4.9)          | 544   | (5.0)          | 120                                                             |
| Romania                       | 279        | (5.8)          | 310   | (6.0)          | 366   | (5.3)          | 486   | (4.9)          | 535   | (4.6)          | 563   | (5.3)          | 120                                                             |
| Russian Federation            | 319        | (5.1)          | 352   | (4.4)          | 408   | (3.7)          | 527   | (3.8)          | 582   | (5.0)          | 616   | (5.7)          | 120                                                             |
| Montenegro                    | 276        | (3.7)          | 308   | (3.2)          | 361   | (2.2)          | 481   | (2.5)          | 533   | (2.8)          | 564   | (3.5)          | 120                                                             |
| Colombia                      | 265        | (7.4)          | 299   | (5.1)          | 351   | (4.7)          | 472   | (3.7)          | 525   | (4.4)          | 556   | (5.3)          | 120                                                             |
| Portugal                      | 340        | (4.3)          | 371   | (4.1)          | 427   | (4.1)          | 548   | (3.2)          | 599   | (3.7)          | 627   | (3.5)          | 121                                                             |
| Nova Scotia                   | 361        | (8.2)          | 399   | (5.0)          | 456   | (4.3)          | 578   | (3.7)          | 627   | (5.8)          | 658   | (5.8)          | 122                                                             |
| Poland                        | 349        | (4.6)          | 383   | (4.1)          | 442   | (3.3)          | 567   | (3.5)          | 617   | (3.3)          | 648   | (3.6)          | 125                                                             |
| Slovak Republic               | 332        | (5.4)          | 366   | (4.6)          | 419   | (3.4)          | 545   | (3.0)          | 596   | (3.6)          | 625   | (4.3)          | 125                                                             |
| Hungary                       | 343        | (6.7)          | 376   | (5.6)          | 435   | (4.7)          | 560   | (3.9)          | 609   | (3.7)          | 634   | (4.4)          | 125                                                             |
| Panama                        | 221        | (9.6)          | 254   | (8.5)          | 309   | (7.4)          | 434   | (7.3)          | 496   | (9.5)          | 531   | (9.0)          | 126                                                             |
| Newfoundland and Labrador     | 351        | (11.0)         | 384   | (5.7)          | 441   | (7.0)          | 567   | (4.5)          | 618   | (6.7)          | 648   | (7.7)          | 126                                                             |
| Liechtenstein                 | 337        | (12.8)         | 374   | (10.8)         | 436   | (7.5)          | 563   | (6.1)          | 610   | (7.8)          | 632   | (16.8)         | 127                                                             |
| Brazil                        | 258        | (2.8)          | 289   | (2.9)          | 341   | (2.7)          | 468   | (3.8)          | 532   | (4.3)          | 568   | (5.2)          | 127                                                             |
| Norway                        | 341        | (4.3)          | 377   | (4.3)          | 440   | (3.1)          | 567   | (3.4)          | 622   | (3.6)          | 652   | (4.4)          | 128                                                             |
| Quebec                        | 360        | (6.8)          | 397   | (6.4)          | 459   | (4.5)          | 588   | (3.2)          | 637   | (3.7)          | 663   | (4.6)          | 129                                                             |
| Ireland                       | 328        | (7.9)          | 367   | (5.3)          | 432   | (4.3)          | 562   | (2.9)          | 613   | (3.3)          | 641   | (3.9)          | 130                                                             |
| Ontario                       | 374        | (6.1)          | 406   | (5.2)          | 464   | (4.3)          | 594   | (3.9)          | 646   | (3.6)          | 674   | (4.6)          | 130                                                             |
| Saskatchewan                  | 344        | (7.0)          | 379   | (5.5)          | 438   | (6.0)          | 568   | (3.8)          | 619   | (4.4)          | 650   | (6.5)          | 130                                                             |
| Greece                        | 328        | (6.5)          | 362   | (7.6)          | 421   | (5.4)          | 551   | (3.6)          | 602   | (3.5)          | 631   | (3.6)          | 130                                                             |
| Slovenia                      | 335        | (3.4)          | 366   | (2.0)          | 425   | (2.3)          | 555   | (2.3)          | 605   | (2.4)          | 631   | (4.8)          | 130                                                             |
| Uruguay                       | 260        | (6.5)          | 297   | (3.8)          | 358   | (3.4)          | 489   | (3.0)          | 547   | (3.6)          | 580   | (3.5)          | 131                                                             |
| New Brunswick                 | 347        | (4.8)          | 379   | (4.6)          | 434   | (4.2)          | 565   | (5.4)          | 619   | (5.6)          | 651   | (8.1)          | 131                                                             |
| Italy                         | 328        | (3.6)          | 365   | (2.6)          | 427   | (2.1)          | 558   | (1.8)          | 607   | (1.9)          | 635   | (2.1)          | 131                                                             |
| Canada                        | 363        | (3.2)          | 398   | (2.9)          | 458   | (1.9)          | 590   | (1.8)          | 642   | (2.1)          | 670   | (3.0)          | 132                                                             |
| British Columbia              | 361        | (7.0)          | 396   | (6.7)          | 458   | (5.6)          | 590   | (5.2)          | 642   | (5.0)          | 670   | (5.5)          | 132                                                             |
| Iceland                       | 333        | (4.9)          | 372   | (3.1)          | 438   | (3.2)          | 571   | (2.3)          | 625   | (3.0)          | 654   | (2.8)          | 133                                                             |
| Czech Republic                | 334        | (4.7)          | 365   | (4.7)          | 421   | (4.0)          | 555   | (3.6)          | 610   | (3.2)          | 639   | (3.3)          | 134                                                             |
| Albania                       | 226        | (6.4)          | 265   | (5.9)          | 329   | (4.5)          | 463   | (5.3)          | 517   | (5.1)          | 547   | (4.7)          | 134                                                             |
| United Kingdom                | 330        | (4.0)          | 364   | (3.2)          | 424   | (3.0)          | 558   | (2.8)          | 615   | (3.2)          | 650   | (3.4)          | 134                                                             |
| Sweden                        | 319        | (6.0)          | 362   | (4.7)          | 429   | (3.5)          | 564   | (3.5)          | 624   | (3.9)          | 655   | (4.2)          | 136                                                             |
| Peru                          | 207        | (5.8)          | 243   | (4.9)          | 302   | (4.3)          | 439   | (5.4)          | 500   | (7.3)          | 539   | (8.1)          | 136                                                             |
| Japan                         | 340        | (9.0)          | 384   | (7.0)          | 455   | (4.8)          | 591   | (3.2)          | 642   | (4.3)          | 672   | (5.1)          | 137                                                             |
| Switzerland                   | 334        | (4.5)          | 372   | (3.9)          | 436   | (2.8)          | 572   | (2.9)          | 623   | (3.7)          | 652   | (3.9)          | 137                                                             |
| Prince Edward Island          | 310        | (7.1)          | 351   | (5.8)          | 415   | (4.4)          | 552   | (3.5)          | 607   | (4.6)          | 637   | (6.9)          | 137                                                             |

Table B.1.9 (concluded)

## Variation in performance: Integrating and interpreting

| Country, economy<br>and province | Percentile |                   |       |                   |       |                   |       |                   |       |                   |       |                   | Difference<br>in score<br>points<br>between<br>the 75th<br>and 25th<br>percentile |
|----------------------------------|------------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-----------------------------------------------------------------------------------|
|                                  | 5th        |                   | 10th  |                   | 25th  |                   | 75th  |                   | 90th  |                   | 95th  |                   |                                                                                   |
|                                  | score      | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error |                                                                                   |
| Manitoba                         | 333        | (8.7)             | 369   | (6.6)             | 426   | (5.5)             | 563   | (4.5)             | 617   | (5.4)             | 647   | (6.9)             | 137                                                                               |
| Alberta                          | 365        | (6.2)             | 403   | (5.5)             | 463   | (5.3)             | 600   | (5.0)             | 656   | (7.4)             | 690   | (8.5)             | 137                                                                               |
| Germany                          | 335        | (5.2)             | 371   | (4.4)             | 433   | (4.3)             | 572   | (3.1)             | 621   | (3.0)             | 649   | (3.7)             | 139                                                                               |
| Australia                        | 337        | (3.6)             | 377   | (3.1)             | 444   | (2.9)             | 584   | (2.5)             | 641   | (3.6)             | 673   | (4.5)             | 140                                                                               |
| United States                    | 331        | (3.9)             | 364   | (3.8)             | 425   | (4.1)             | 565   | (4.6)             | 626   | (5.3)             | 660   | (6.0)             | 140                                                                               |
| Austria                          | 307        | (4.8)             | 341   | (4.6)             | 402   | (4.2)             | 543   | (3.1)             | 596   | (3.6)             | 624   | (4.5)             | 141                                                                               |
| Netherlands                      | 353        | (5.6)             | 381   | (5.0)             | 432   | (6.2)             | 575   | (6.2)             | 630   | (5.0)             | 658   | (4.9)             | 142                                                                               |
| Singapore                        | 351        | (3.6)             | 389   | (3.3)             | 455   | (1.9)             | 598   | (1.8)             | 652   | (2.2)             | 683   | (2.9)             | 143                                                                               |
| Qatar                            | 221        | (2.4)             | 249   | (2.1)             | 303   | (1.5)             | 449   | (1.6)             | 522   | (2.7)             | 565   | (2.9)             | 146                                                                               |
| Argentina                        | 210        | (10.8)            | 256   | (8.0)             | 326   | (5.4)             | 473   | (5.9)             | 536   | (7.2)             | 571   | (7.1)             | 146                                                                               |
| Luxembourg                       | 294        | (4.2)             | 336   | (2.8)             | 404   | (2.2)             | 551   | (1.9)             | 606   | (2.2)             | 637   | (3.3)             | 147                                                                               |
| New Zealand                      | 338        | (5.8)             | 379   | (4.7)             | 445   | (3.3)             | 593   | (3.3)             | 652   | (3.6)             | 681   | (5.5)             | 148                                                                               |
| Dubai (UAE)                      | 279        | (3.2)             | 318   | (2.4)             | 383   | (2.6)             | 532   | (2.1)             | 594   | (2.9)             | 627   | (3.8)             | 149                                                                               |
| Trinidad and Tobago              | 232        | (3.8)             | 274   | (3.5)             | 344   | (2.2)             | 494   | (2.3)             | 558   | (3.5)             | 595   | (4.3)             | 150                                                                               |
| France                           | 300        | (8.9)             | 348   | (6.8)             | 426   | (5.2)             | 577   | (4.3)             | 634   | (5.0)             | 664   | (4.7)             | 151                                                                               |
| Israel                           | 281        | (7.8)             | 324   | (6.8)             | 399   | (4.9)             | 552   | (3.3)             | 609   | (3.6)             | 641   | (4.1)             | 153                                                                               |
| Belgium                          | 320        | (5.5)             | 360   | (4.6)             | 430   | (3.5)             | 584   | (2.3)             | 635   | (2.8)             | 662   | (3.4)             | 154                                                                               |
| Bulgaria                         | 256        | (7.9)             | 293   | (7.8)             | 360   | (8.6)             | 514   | (6.9)             | 572   | (6.5)             | 604   | (6.5)             | 154                                                                               |

**Note:** Countries, economies and provinces in ascending order by the difference in score points between the 75th and 25th percentiles.

Table B.1.10

## Variation in performance: Reflecting and evaluating

| Country, economy and province | Percentile |                |       |                |       |                |       |                |       |                |       |                | Difference in score points between the 75th and 25th percentile |
|-------------------------------|------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-----------------------------------------------------------------|
|                               | 5th        |                | 10th  |                | 25th  |                | 75th  |                | 90th  |                | 95th  |                |                                                                 |
|                               | score      | standard error | score | standard error | score | standard error | score | standard error | score | standard error | score | standard error |                                                                 |
| Indonesia                     | 294        | (6.4)          | 321   | (5.0)          | 363   | (3.9)          | 455   | (4.6)          | 497   | (5.2)          | 521   | (5.5)          | 92                                                              |
| Macao-China                   | 345        | (2.6)          | 377   | (2.4)          | 429   | (1.4)          | 536   | (1.5)          | 580   | (1.9)          | 605   | (2.4)          | 107                                                             |
| Thailand                      | 290        | (5.4)          | 318   | (4.4)          | 365   | (3.6)          | 475   | (3.0)          | 522   | (3.7)          | 552   | (5.1)          | 110                                                             |
| Latvia                        | 353        | (6.7)          | 386   | (4.6)          | 439   | (3.7)          | 549   | (3.7)          | 594   | (3.5)          | 619   | (3.2)          | 110                                                             |
| Quebec                        | 377        | (8.7)          | 414   | (6.0)          | 472   | (4.5)          | 584   | (3.5)          | 627   | (4.0)          | 651   | (3.4)          | 112                                                             |
| Hong Kong-China               | 381        | (6.5)          | 421   | (4.9)          | 487   | (3.8)          | 600   | (2.8)          | 645   | (2.9)          | 669   | (3.1)          | 113                                                             |
| Korea                         | 392        | (8.9)          | 429   | (6.1)          | 489   | (4.9)          | 602   | (4.1)          | 646   | (4.0)          | 671   | (4.3)          | 113                                                             |
| Shanghai-China                | 408        | (5.8)          | 445   | (4.3)          | 502   | (3.3)          | 616   | (2.8)          | 661   | (2.9)          | 686   | (3.4)          | 114                                                             |
| Estonia                       | 355        | (5.7)          | 391   | (4.7)          | 447   | (3.8)          | 562   | (2.8)          | 611   | (3.5)          | 637   | (4.5)          | 115                                                             |
| Nova Scotia                   | 372        | (8.9)          | 415   | (5.7)          | 472   | (4.0)          | 588   | (4.4)          | 637   | (4.8)          | 665   | (5.0)          | 116                                                             |
| Chile                         | 310        | (5.6)          | 342   | (4.8)          | 396   | (4.4)          | 512   | (3.2)          | 559   | (3.8)          | 586   | (3.9)          | 116                                                             |
| Finland                       | 384        | (5.0)          | 419   | (3.4)          | 480   | (3.1)          | 597   | (2.8)          | 642   | (2.4)          | 668   | (3.4)          | 117                                                             |
| New Brunswick                 | 362        | (4.9)          | 393   | (4.6)          | 448   | (3.9)          | 565   | (4.3)          | 613   | (4.3)          | 640   | (6.7)          | 117                                                             |
| Chinese Taipei                | 338        | (5.3)          | 376   | (3.8)          | 437   | (3.5)          | 554   | (3.1)          | 599   | (3.9)          | 625   | (4.7)          | 117                                                             |
| Tunisia                       | 269        | (5.4)          | 307   | (4.1)          | 370   | (3.9)          | 489   | (3.5)          | 540   | (4.5)          | 569   | (5.3)          | 119                                                             |
| Denmark                       | 343        | (4.8)          | 377   | (3.6)          | 435   | (3.0)          | 555   | (3.2)          | 603   | (3.6)          | 631   | (3.5)          | 119                                                             |
| Mexico                        | 282        | (4.2)          | 318   | (2.8)          | 375   | (2.4)          | 494   | (1.9)          | 541   | (1.9)          | 568   | (2.0)          | 120                                                             |
| Ontario                       | 391        | (8.0)          | 429   | (5.7)          | 487   | (4.1)          | 608   | (4.1)          | 659   | (3.6)          | 685   | (4.4)          | 121                                                             |
| Poland                        | 340        | (4.7)          | 379   | (3.8)          | 440   | (3.1)          | 562   | (3.1)          | 611   | (3.5)          | 639   | (3.5)          | 122                                                             |
| Canada                        | 377        | (3.0)          | 416   | (2.8)          | 476   | (2.3)          | 598   | (1.8)          | 649   | (2.2)          | 677   | (2.3)          | 122                                                             |

Table B.1.10 (concluded)

## Variation in performance: Reflecting and evaluating

| Country, economy and province | Percentile |                |       |                |       |                |       |                |       |                |       |                | Difference in score points between the 75th and 25th percentile |
|-------------------------------|------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-----------------------------------------------------------------|
|                               | 5th        |                | 10th  |                | 25th  |                | 75th  |                | 90th  |                | 95th  |                |                                                                 |
|                               | score      | standard error | score | standard error | score | standard error | score | standard error | score | standard error | score | standard error |                                                                 |
| Newfoundland and Labrador     | 363        | (10.0)         | 399   | (7.1)          | 459   | (5.3)          | 581   | (4.0)          | 634   | (5.8)          | 664   | (7.8)          | 122                                                             |
| Liechtenstein                 | 337        | (12.9)         | 374   | (13.7)         | 440   | (6.8)          | 562   | (7.8)          | 605   | (7.2)          | 631   | (8.3)          | 122                                                             |
| Azerbaijan                    | 181        | (8.6)          | 217   | (7.3)          | 273   | (4.7)          | 397   | (4.1)          | 452   | (5.2)          | 483   | (5.4)          | 125                                                             |
| Colombia                      | 273        | (7.7)          | 305   | (6.3)          | 360   | (5.6)          | 484   | (4.8)          | 538   | (4.0)          | 570   | (4.9)          | 125                                                             |
| Serbia                        | 277        | (5.2)          | 311   | (4.2)          | 369   | (3.0)          | 494   | (2.6)          | 544   | (3.4)          | 572   | (3.3)          | 125                                                             |
| British Columbia              | 370        | (8.3)          | 411   | (6.4)          | 475   | (5.8)          | 600   | (4.4)          | 652   | (4.9)          | 680   | (6.2)          | 125                                                             |
| Lithuania                     | 311        | (5.2)          | 344   | (4.1)          | 402   | (3.4)          | 527   | (3.0)          | 577   | (3.9)          | 607   | (4.7)          | 125                                                             |
| Spain                         | 312        | (5.0)          | 356   | (3.9)          | 425   | (3.1)          | 550   | (2.2)          | 598   | (2.3)          | 625   | (2.5)          | 125                                                             |
| Iceland                       | 329        | (4.5)          | 370   | (3.8)          | 437   | (2.6)          | 562   | (2.4)          | 611   | (2.8)          | 638   | (3.5)          | 125                                                             |
| Brazil                        | 273        | (3.9)          | 306   | (3.5)          | 360   | (3.0)          | 486   | (3.4)          | 544   | (4.2)          | 577   | (4.5)          | 125                                                             |
| Norway                        | 343        | (4.3)          | 381   | (3.9)          | 445   | (3.7)          | 571   | (3.1)          | 621   | (3.5)          | 650   | (3.5)          | 126                                                             |
| Jordan                        | 236        | (7.9)          | 279   | (6.3)          | 348   | (4.2)          | 474   | (3.7)          | 525   | (3.7)          | 555   | (4.4)          | 126                                                             |
| Netherlands                   | 370        | (5.0)          | 397   | (5.9)          | 447   | (6.5)          | 575   | (4.9)          | 624   | (3.9)          | 649   | (3.9)          | 128                                                             |
| Portugal                      | 335        | (4.6)          | 372   | (4.5)          | 434   | (4.5)          | 562   | (3.3)          | 614   | (3.4)          | 642   | (3.7)          | 129                                                             |
| Sweden                        | 326        | (7.0)          | 372   | (5.4)          | 442   | (3.5)          | 571   | (3.5)          | 626   | (4.2)          | 658   | (4.2)          | 129                                                             |
| Russian Federation            | 277        | (6.6)          | 316   | (6.3)          | 377   | (4.2)          | 506   | (3.7)          | 563   | (4.6)          | 597   | (4.8)          | 129                                                             |
| Turkey                        | 315        | (6.1)          | 349   | (4.8)          | 409   | (4.7)          | 539   | (4.9)          | 591   | (4.7)          | 621   | (5.7)          | 130                                                             |
| Hungary                       | 327        | (7.6)          | 363   | (6.6)          | 425   | (4.8)          | 556   | (3.7)          | 607   | (3.7)          | 634   | (3.8)          | 131                                                             |
| Saskatchewan                  | 348        | (8.2)          | 388   | (9.3)          | 453   | (6.1)          | 584   | (3.3)          | 637   | (4.7)          | 665   | (4.9)          | 131                                                             |
| Romania                       | 259        | (7.9)          | 298   | (6.8)          | 363   | (6.0)          | 495   | (5.2)          | 547   | (5.4)          | 576   | (5.9)          | 132                                                             |
| Prince Edward Island          | 330        | (6.4)          | 369   | (5.4)          | 433   | (4.0)          | 565   | (3.7)          | 617   | (5.0)          | 644   | (5.5)          | 132                                                             |
| Alberta                       | 381        | (7.0)          | 416   | (7.3)          | 481   | (4.9)          | 613   | (5.3)          | 669   | (6.2)          | 697   | (8.0)          | 132                                                             |
| Ireland                       | 330        | (7.9)          | 371   | (5.6)          | 439   | (4.0)          | 572   | (3.0)          | 624   | (3.3)          | 652   | (3.2)          | 133                                                             |
| Switzerland                   | 327        | (6.1)          | 368   | (5.0)          | 433   | (3.7)          | 566   | (3.3)          | 616   | (3.7)          | 645   | (4.8)          | 133                                                             |
| Germany                       | 316        | (7.6)          | 357   | (6.1)          | 429   | (4.6)          | 562   | (2.8)          | 609   | (2.8)          | 635   | (3.4)          | 133                                                             |
| United Kingdom                | 338        | (3.7)          | 375   | (3.3)          | 437   | (3.0)          | 572   | (3.2)          | 628   | (3.3)          | 661   | (3.1)          | 135                                                             |
| Panama                        | 218        | (11.5)         | 251   | (9.3)          | 308   | (7.5)          | 444   | (7.4)          | 513   | (8.4)          | 551   | (9.7)          | 136                                                             |
| Slovak Republic               | 297        | (7.3)          | 335   | (6.3)          | 400   | (4.3)          | 537   | (3.0)          | 590   | (3.6)          | 619   | (3.9)          | 136                                                             |
| Manitoba                      | 329        | (13.0)         | 374   | (7.8)          | 438   | (6.1)          | 575   | (4.7)          | 629   | (4.3)          | 659   | (7.1)          | 137                                                             |
| Singapore                     | 355        | (3.7)          | 394   | (2.7)          | 462   | (2.1)          | 601   | (1.6)          | 654   | (2.5)          | 684   | (4.1)          | 138                                                             |
| Czech Republic                | 294        | (5.6)          | 331   | (5.3)          | 394   | (3.9)          | 533   | (3.7)          | 591   | (4.4)          | 623   | (3.7)          | 139                                                             |
| Montenegro                    | 216        | (4.0)          | 253   | (3.4)          | 314   | (3.4)          | 453   | (2.5)          | 510   | (3.1)          | 547   | (5.0)          | 139                                                             |
| United States                 | 347        | (5.7)          | 382   | (5.1)          | 444   | (4.2)          | 583   | (4.8)          | 637   | (5.5)          | 668   | (5.8)          | 139                                                             |
| Australia                     | 344        | (3.9)          | 387   | (3.2)          | 455   | (2.8)          | 595   | (2.8)          | 650   | (3.7)          | 681   | (4.6)          | 140                                                             |
| Kazakhstan                    | 213        | (4.6)          | 245   | (3.9)          | 302   | (3.5)          | 442   | (4.5)          | 508   | (5.6)          | 543   | (6.0)          | 140                                                             |
| Croatia                       | 301        | (6.4)          | 337   | (5.7)          | 402   | (4.9)          | 543   | (3.5)          | 598   | (3.5)          | 628   | (4.4)          | 141                                                             |
| Greece                        | 306        | (11.4)         | 350   | (10.2)         | 423   | (7.1)          | 563   | (3.5)          | 617   | (3.6)          | 649   | (3.8)          | 141                                                             |
| Peru                          | 197        | (7.2)          | 236   | (5.8)          | 298   | (4.4)          | 439   | (5.3)          | 500   | (6.3)          | 536   | (7.4)          | 141                                                             |
| Uruguay                       | 260        | (5.7)          | 299   | (5.3)          | 366   | (3.8)          | 508   | (2.9)          | 569   | (4.0)          | 603   | (5.0)          | 141                                                             |
| Slovenia                      | 296        | (3.7)          | 335   | (2.9)          | 401   | (2.0)          | 544   | (2.0)          | 596   | (3.5)          | 624   | (4.0)          | 143                                                             |
| Italy                         | 298        | (4.8)          | 342   | (3.2)          | 413   | (2.4)          | 558   | (1.9)          | 610   | (2.0)          | 638   | (2.2)          | 144                                                             |
| Luxembourg                    | 283        | (4.3)          | 329   | (3.2)          | 402   | (2.2)          | 546   | (1.9)          | 602   | (2.6)          | 631   | (3.3)          | 144                                                             |
| Japan                         | 323        | (11.6)         | 375   | (8.1)          | 453   | (5.7)          | 598   | (3.4)          | 653   | (3.3)          | 686   | (3.9)          | 145                                                             |
| Kyrgyzstan                    | 120        | (6.2)          | 161   | (5.5)          | 225   | (4.7)          | 372   | (4.9)          | 448   | (7.3)          | 495   | (7.5)          | 146                                                             |
| France                        | 301        | (8.2)          | 349   | (6.7)          | 427   | (4.9)          | 573   | (4.0)          | 627   | (4.4)          | 654   | (4.3)          | 146                                                             |
| Albania                       | 188        | (8.9)          | 233   | (7.6)          | 308   | (5.9)          | 454   | (5.2)          | 511   | (5.9)          | 541   | (4.9)          | 147                                                             |
| Belgium                       | 312        | (6.6)          | 357   | (4.7)          | 436   | (4.1)          | 584   | (2.6)          | 634   | (2.6)          | 661   | (3.5)          | 148                                                             |
| Argentina                     | 209        | (9.8)          | 257   | (7.9)          | 330   | (5.1)          | 480   | (5.8)          | 542   | (6.1)          | 576   | (7.8)          | 150                                                             |
| New Zealand                   | 343        | (6.9)          | 385   | (5.4)          | 458   | (3.6)          | 609   | (2.6)          | 666   | (3.0)          | 696   | (3.6)          | 151                                                             |
| Dubai (UAE)                   | 281        | (3.2)          | 323   | (2.4)          | 392   | (2.2)          | 544   | (2.1)          | 605   | (2.9)          | 636   | (2.9)          | 152                                                             |
| Austria                       | 269        | (9.3)          | 311   | (7.5)          | 389   | (5.5)          | 543   | (3.4)          | 595   | (3.8)          | 624   | (5.0)          | 154                                                             |
| Israel                        | 275        | (9.4)          | 324   | (8.5)          | 410   | (5.5)          | 566   | (3.5)          | 623   | (3.9)          | 655   | (4.3)          | 156                                                             |
| Trinidad and Tobago           | 210        | (5.0)          | 254   | (4.5)          | 332   | (2.7)          | 497   | (2.4)          | 561   | (2.9)          | 596   | (3.4)          | 165                                                             |
| Bulgaria                      | 206        | (10.8)         | 252   | (9.9)          | 336   | (10.3)         | 505   | (6.7)          | 568   | (5.3)          | 602   | (5.1)          | 168                                                             |
| Qatar                         | 185        | (2.2)          | 221   | (1.7)          | 285   | (1.7)          | 461   | (1.9)          | 543   | (2.5)          | 591   | (3.3)          | 176                                                             |

**Note:** Countries, economies and provinces in ascending order by the difference in score points between the 75th and 25th percentiles.

Table B.1.11

## Variation in performance: Continuous texts

| Country, economy and province | Percentile |                |       |                |       |                |       |                |       |                |       |                | Difference in score points between the 75th and 25th percentile |
|-------------------------------|------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-----------------------------------------------------------------|
|                               | 5th        |                | 10th  |                | 25th  |                | 75th  |                | 90th  |                | 95th  |                |                                                                 |
|                               | score      | standard error | score | standard error | score | standard error | score | standard error | score | standard error | score | standard error |                                                                 |
| Indonesia                     | 292        | (5.4)          | 317   | (5.0)          | 359   | (3.8)          | 452   | (4.6)          | 493   | (5.4)          | 519   | (6.1)          | 93                                                              |
| Thailand                      | 304        | (4.8)          | 329   | (3.7)          | 373   | (3.4)          | 472   | (3.1)          | 517   | (4.0)          | 544   | (5.4)          | 99                                                              |
| Azerbaijan                    | 235        | (4.7)          | 262   | (4.5)          | 310   | (4.0)          | 413   | (3.5)          | 459   | (4.4)          | 487   | (5.2)          | 103                                                             |
| Korea                         | 395        | (7.4)          | 431   | (6.1)          | 489   | (3.9)          | 595   | (3.4)          | 635   | (3.5)          | 658   | (3.9)          | 106                                                             |
| Macao-China                   | 352        | (2.4)          | 382   | (2.1)          | 434   | (1.5)          | 543   | (1.4)          | 590   | (1.7)          | 617   | (2.4)          | 109                                                             |
| Estonia                       | 359        | (4.9)          | 391   | (4.9)          | 443   | (3.6)          | 553   | (2.8)          | 599   | (3.6)          | 626   | (3.8)          | 110                                                             |
| Latvia                        | 347        | (6.6)          | 378   | (4.6)          | 430   | (4.2)          | 541   | (3.8)          | 584   | (3.1)          | 608   | (4.4)          | 111                                                             |
| Shanghai-China                | 422        | (5.6)          | 456   | (4.7)          | 511   | (3.5)          | 623   | (2.9)          | 665   | (2.8)          | 689   | (3.0)          | 112                                                             |
| Serbia                        | 302        | (4.8)          | 336   | (3.9)          | 389   | (3.4)          | 502   | (2.6)          | 547   | (3.0)          | 573   | (3.6)          | 113                                                             |
| Tunisia                       | 260        | (4.9)          | 296   | (4.2)          | 353   | (3.5)          | 467   | (3.1)          | 512   | (3.9)          | 538   | (4.3)          | 114                                                             |
| Turkey                        | 326        | (5.5)          | 357   | (4.3)          | 409   | (3.7)          | 525   | (4.2)          | 573   | (4.8)          | 599   | (5.4)          | 116                                                             |
| Chile                         | 308        | (5.2)          | 340   | (4.6)          | 395   | (4.1)          | 512   | (3.3)          | 563   | (3.9)          | 592   | (4.8)          | 117                                                             |
| Finland                       | 384        | (5.2)          | 419   | (3.7)          | 480   | (2.8)          | 597   | (2.3)          | 641   | (2.3)          | 665   | (2.9)          | 117                                                             |
| Hong Kong-China               | 379        | (6.4)          | 421   | (5.0)          | 483   | (3.4)          | 600   | (2.5)          | 644   | (2.7)          | 671   | (2.9)          | 117                                                             |
| Russian Federation            | 312        | (5.9)          | 347   | (4.4)          | 403   | (3.7)          | 520   | (3.4)          | 573   | (4.1)          | 605   | (4.8)          | 117                                                             |
| Mexico                        | 276        | (4.2)          | 311   | (3.0)          | 369   | (2.7)          | 487   | (1.9)          | 534   | (1.9)          | 560   | (2.3)          | 118                                                             |
| Denmark                       | 348        | (4.3)          | 381   | (3.2)          | 439   | (2.8)          | 557   | (2.6)          | 605   | (2.7)          | 632   | (3.4)          | 118                                                             |
| Chinese Taipei                | 341        | (4.8)          | 379   | (4.3)          | 440   | (3.2)          | 558   | (3.5)          | 604   | (4.9)          | 631   | (5.2)          | 119                                                             |
| Colombia                      | 271        | (6.2)          | 302   | (5.8)          | 356   | (4.7)          | 475   | (4.2)          | 525   | (4.5)          | 556   | (5.1)          | 119                                                             |
| Spain                         | 324        | (3.6)          | 363   | (3.5)          | 428   | (3.1)          | 548   | (1.8)          | 595   | (1.9)          | 622   | (2.2)          | 120                                                             |
| Jordan                        | 252        | (6.0)          | 294   | (5.4)          | 361   | (4.3)          | 481   | (3.2)          | 528   | (3.6)          | 554   | (3.8)          | 120                                                             |
| Kazakhstan                    | 255        | (3.5)          | 286   | (3.7)          | 338   | (3.5)          | 459   | (4.5)          | 516   | (4.6)          | 548   | (4.6)          | 121                                                             |
| Lithuania                     | 325        | (5.5)          | 357   | (4.3)          | 410   | (3.6)          | 531   | (2.8)          | 580   | (3.1)          | 607   | (4.8)          | 121                                                             |
| Nova Scotia                   | 363        | (7.4)          | 401   | (6.2)          | 457   | (3.7)          | 578   | (3.5)          | 629   | (4.8)          | 659   | (7.9)          | 121                                                             |
| Quebec                        | 364        | (7.6)          | 400   | (7.1)          | 461   | (4.6)          | 582   | (3.2)          | 627   | (3.5)          | 653   | (4.3)          | 121                                                             |
| Portugal                      | 336        | (4.0)          | 372   | (5.0)          | 432   | (4.4)          | 555   | (3.4)          | 605   | (3.4)          | 632   | (3.6)          | 123                                                             |
| Poland                        | 349        | (4.6)          | 384   | (3.6)          | 442   | (3.5)          | 566   | (3.0)          | 615   | (3.5)          | 643   | (3.5)          | 124                                                             |
| Romania                       | 265        | (6.3)          | 300   | (5.8)          | 362   | (5.4)          | 488   | (4.3)          | 536   | (4.7)          | 566   | (4.7)          | 125                                                             |
| Croatia                       | 324        | (4.6)          | 358   | (4.1)          | 417   | (3.9)          | 543   | (3.2)          | 591   | (3.6)          | 618   | (4.2)          | 126                                                             |
| Liechtenstein                 | 345        | (13.6)         | 379   | (9.1)          | 431   | (7.8)          | 558   | (6.2)          | 603   | (8.3)          | 625   | (11.0)         | 126                                                             |
| Slovak Republic               | 326        | (5.5)          | 359   | (5.5)          | 417   | (4.0)          | 544   | (2.9)          | 595   | (3.3)          | 623   | (3.7)          | 127                                                             |
| Hungary                       | 335        | (6.9)          | 370   | (7.2)          | 436   | (4.8)          | 563   | (3.6)          | 613   | (3.6)          | 639   | (3.6)          | 128                                                             |
| Canada                        | 363        | (3.7)          | 401   | (2.7)          | 462   | (2.2)          | 590   | (1.9)          | 642   | (2.2)          | 671   | (2.4)          | 128                                                             |
| Ontario                       | 375        | (6.7)          | 411   | (5.5)          | 469   | (3.7)          | 597   | (4.2)          | 649   | (4.4)          | 677   | (4.6)          | 128                                                             |
| Newfoundland and Labrador     | 346        | (12.0)         | 384   | (8.0)          | 445   | (6.3)          | 574   | (4.6)          | 628   | (6.1)          | 659   | (7.0)          | 129                                                             |
| Montenegro                    | 256        | (2.9)          | 289   | (3.3)          | 347   | (2.5)          | 476   | (3.1)          | 532   | (3.1)          | 566   | (4.8)          | 130                                                             |
| Ireland                       | 324        | (7.8)          | 368   | (6.2)          | 435   | (4.1)          | 565   | (3.5)          | 616   | (4.0)          | 645   | (3.6)          | 130                                                             |
| New Brunswick                 | 343        | (6.0)          | 381   | (4.8)          | 435   | (5.2)          | 565   | (4.3)          | 619   | (4.4)          | 648   | (7.4)          | 130                                                             |
| Brazil                        | 258        | (3.6)          | 292   | (3.1)          | 348   | (2.7)          | 478   | (3.9)          | 541   | (4.2)          | 576   | (5.3)          | 130                                                             |
| British Columbia              | 354        | (10.0)         | 397   | (7.0)          | 461   | (5.6)          | 592   | (5.3)          | 645   | (4.8)          | 676   | (5.8)          | 131                                                             |
| Iceland                       | 327        | (5.1)          | 367   | (3.4)          | 438   | (2.7)          | 569   | (2.2)          | 623   | (3.4)          | 652   | (4.2)          | 131                                                             |
| Norway                        | 341        | (4.7)          | 378   | (4.2)          | 442   | (2.8)          | 574   | (3.2)          | 625   | (3.2)          | 653   | (3.8)          | 131                                                             |
| Czech Republic                | 326        | (5.3)          | 358   | (4.9)          | 413   | (3.6)          | 544   | (3.2)          | 601   | (3.5)          | 632   | (3.5)          | 132                                                             |
| Kyrgyzstan                    | 154        | (5.0)          | 192   | (4.5)          | 252   | (4.1)          | 384   | (4.4)          | 448   | (6.0)          | 487   | (6.4)          | 132                                                             |
| Saskatchewan                  | 342        | (8.0)          | 380   | (7.7)          | 441   | (5.2)          | 573   | (3.1)          | 624   | (4.2)          | 657   | (5.4)          | 132                                                             |
| Netherlands                   | 363        | (4.6)          | 390   | (5.0)          | 440   | (6.2)          | 573   | (5.4)          | 623   | (4.7)          | 650   | (5.0)          | 133                                                             |
| Sweden                        | 323        | (6.0)          | 368   | (5.0)          | 435   | (3.8)          | 569   | (3.4)          | 626   | (3.5)          | 657   | (3.9)          | 133                                                             |
| Switzerland                   | 332        | (4.6)          | 370   | (4.3)          | 434   | (3.8)          | 567   | (2.9)          | 616   | (3.6)          | 644   | (4.1)          | 133                                                             |
| United Kingdom                | 329        | (4.1)          | 365   | (3.2)          | 425   | (3.4)          | 560   | (3.1)          | 617   | (3.0)          | 649   | (4.1)          | 135                                                             |
| Germany                       | 329        | (5.5)          | 366   | (5.1)          | 431   | (4.2)          | 566   | (2.9)          | 613   | (2.9)          | 641   | (3.1)          | 135                                                             |
| Panama                        | 205        | (13.4)         | 246   | (10.2)         | 307   | (7.6)          | 441   | (7.3)          | 505   | (9.1)          | 543   | (9.2)          | 135                                                             |
| Slovenia                      | 323        | (2.3)          | 355   | (2.5)          | 418   | (2.2)          | 553   | (2.2)          | 605   | (2.8)          | 631   | (2.7)          | 136                                                             |
| Italy                         | 320        | (3.7)          | 358   | (3.1)          | 424   | (2.4)          | 560   | (1.8)          | 609   | (1.7)          | 636   | (2.0)          | 136                                                             |
| Japan                         | 332        | (10.6)         | 382   | (8.2)          | 457   | (5.1)          | 594   | (2.9)          | 644   | (3.5)          | 672   | (3.4)          | 136                                                             |
| Greece                        | 317        | (8.5)          | 355   | (7.6)          | 420   | (6.5)          | 557   | (3.6)          | 610   | (3.5)          | 639   | (3.8)          | 137                                                             |
| Peru                          | 208        | (6.6)          | 244   | (4.9)          | 306   | (4.3)          | 444   | (5.0)          | 502   | (6.2)          | 536   | (7.4)          | 138                                                             |
| Singapore                     | 347        | (4.0)          | 386   | (3.8)          | 455   | (2.1)          | 594   | (1.7)          | 648   | (2.8)          | 677   | (3.2)          | 139                                                             |

Table B.1.11 (concluded)

## Variation in performance: Continuous texts

| Country, economy and province | Percentile |                |       |                |       |                |       |                |       |                |       |                | Difference in score points between the 75th and 25th percentile |
|-------------------------------|------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-----------------------------------------------------------------|
|                               | 5th        |                | 10th  |                | 25th  |                | 75th  |                | 90th  |                | 95th  |                |                                                                 |
|                               | score      | standard error | score | standard error | score | standard error | score | standard error | score | standard error | score | standard error |                                                                 |
| Manitoba                      | 327        | (8.6)          | 368   | (8.4)          | 431   | (6.1)          | 570   | (4.6)          | 624   | (5.1)          | 652   | (5.2)          | 139                                                             |
| Uruguay                       | 255        | (7.0)          | 295   | (6.0)          | 361   | (3.3)          | 501   | (3.5)          | 559   | (3.8)          | 592   | (4.7)          | 139                                                             |
| Australia                     | 336        | (4.0)          | 377   | (3.4)          | 446   | (2.6)          | 585   | (2.8)          | 641   | (3.8)          | 671   | (4.5)          | 140                                                             |
| Alberta                       | 368        | (6.4)          | 403   | (5.2)          | 464   | (5.7)          | 604   | (5.9)          | 659   | (6.0)          | 692   | (7.0)          | 140                                                             |
| Prince Edward Island          | 314        | (5.8)          | 354   | (5.6)          | 417   | (4.6)          | 558   | (4.0)          | 613   | (4.3)          | 644   | (6.4)          | 141                                                             |
| Albania                       | 216        | (6.6)          | 257   | (6.4)          | 325   | (4.8)          | 467   | (5.0)          | 520   | (4.9)          | 550   | (6.2)          | 141                                                             |
| United States                 | 334        | (4.1)          | 368   | (4.8)          | 430   | (4.0)          | 571   | (4.6)          | 632   | (5.8)          | 664   | (5.2)          | 141                                                             |
| Austria                       | 301        | (6.4)          | 335   | (4.8)          | 400   | (4.0)          | 544   | (3.1)          | 596   | (3.4)          | 625   | (4.7)          | 145                                                             |
| Luxembourg                    | 284        | (4.4)          | 327   | (3.4)          | 402   | (2.7)          | 548   | (2.2)          | 602   | (2.7)          | 631   | (3.0)          | 146                                                             |
| Argentina                     | 204        | (9.3)          | 256   | (8.6)          | 330   | (5.6)          | 477   | (5.8)          | 537   | (6.7)          | 571   | (6.4)          | 147                                                             |
| New Zealand                   | 336        | (5.9)          | 377   | (4.6)          | 447   | (3.3)          | 594   | (2.6)          | 650   | (3.2)          | 680   | (3.5)          | 147                                                             |
| Belgium                       | 326        | (5.6)          | 365   | (4.4)          | 433   | (3.9)          | 582   | (2.3)          | 631   | (2.4)          | 657   | (2.7)          | 148                                                             |
| Dubai (UAE)                   | 277        | (3.7)          | 317   | (3.8)          | 388   | (2.2)          | 537   | (2.3)          | 598   | (3.4)          | 632   | (3.3)          | 149                                                             |
| France                        | 297        | (8.6)          | 344   | (7.0)          | 422   | (5.0)          | 571   | (4.3)          | 625   | (4.2)          | 654   | (4.7)          | 150                                                             |
| Israel                        | 278        | (8.7)          | 325   | (7.6)          | 405   | (4.8)          | 557   | (3.4)          | 614   | (3.6)          | 646   | (4.2)          | 152                                                             |
| Trinidad and Tobago           | 215        | (5.4)          | 262   | (3.5)          | 340   | (2.6)          | 500   | (2.1)          | 563   | (3.0)          | 600   | (3.4)          | 160                                                             |
| Bulgaria                      | 230        | (7.9)          | 276   | (9.9)          | 354   | (8.2)          | 517   | (6.7)          | 578   | (6.3)          | 611   | (7.2)          | 164                                                             |
| Qatar                         | 192        | (2.1)          | 225   | (1.8)          | 288   | (1.7)          | 458   | (1.7)          | 535   | (1.9)          | 578   | (2.4)          | 170                                                             |

**Note:** Countries, economies and provinces in ascending order by the difference in score points between the 75th and 25th percentiles.

Table B.1.12

## Variation in performance: Non-continuous texts

| Country, economy and province | Percentile |                |       |                |       |                |       |                |       |                |       |                | Difference in score points between the 75th and 25th percentile |
|-------------------------------|------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-----------------------------------------------------------------|
|                               | 5th        |                | 10th  |                | 25th  |                | 75th  |                | 90th  |                | 95th  |                |                                                                 |
|                               | score      | standard error | score | standard error | score | standard error | score | standard error | score | standard error | score | standard error |                                                                 |
| Thailand                      | 302        | (4.3)          | 328   | (4.0)          | 372   | (3.6)          | 472   | (2.9)          | 519   | (4.2)          | 549   | (4.8)          | 100                                                             |
| Macao-China                   | 352        | (2.5)          | 381   | (2.3)          | 431   | (2.0)          | 533   | (1.4)          | 576   | (2.0)          | 600   | (2.8)          | 102                                                             |
| Indonesia                     | 266        | (6.6)          | 295   | (5.7)          | 346   | (4.8)          | 453   | (5.3)          | 500   | (6.1)          | 529   | (6.5)          | 107                                                             |
| Korea                         | 399        | (6.5)          | 436   | (6.1)          | 491   | (4.7)          | 599   | (3.6)          | 643   | (3.6)          | 666   | (3.9)          | 108                                                             |
| Shanghai-China                | 394        | (6.2)          | 429   | (4.6)          | 486   | (3.0)          | 598   | (2.3)          | 643   | (3.4)          | 668   | (3.6)          | 112                                                             |
| Hong Kong-China               | 372        | (4.9)          | 409   | (4.7)          | 471   | (3.3)          | 583   | (2.6)          | 625   | (2.8)          | 649   | (3.3)          | 112                                                             |
| Chile                         | 298        | (5.3)          | 333   | (4.7)          | 387   | (4.4)          | 502   | (3.3)          | 552   | (4.0)          | 580   | (5.4)          | 115                                                             |
| Denmark                       | 347        | (5.3)          | 381   | (3.9)          | 436   | (2.8)          | 552   | (2.6)          | 599   | (3.1)          | 625   | (3.6)          | 116                                                             |
| Nova Scotia                   | 366        | (9.9)          | 404   | (5.5)          | 462   | (3.9)          | 579   | (4.2)          | 628   | (4.9)          | 657   | (5.6)          | 117                                                             |
| Mexico                        | 278        | (3.5)          | 311   | (2.9)          | 367   | (2.4)          | 485   | (2.0)          | 533   | (2.4)          | 560   | (2.4)          | 118                                                             |
| Turkey                        | 313        | (6.1)          | 347   | (5.2)          | 404   | (4.1)          | 522   | (4.8)          | 570   | (5.1)          | 596   | (6.4)          | 118                                                             |
| Norway                        | 344        | (5.4)          | 381   | (4.3)          | 440   | (2.9)          | 560   | (3.3)          | 608   | (3.7)          | 636   | (3.9)          | 120                                                             |
| Estonia                       | 357        | (7.0)          | 394   | (4.9)          | 454   | (3.7)          | 573   | (2.8)          | 624   | (3.2)          | 654   | (3.4)          | 120                                                             |
| Finland                       | 378        | (4.4)          | 417   | (3.8)          | 478   | (2.9)          | 598   | (3.0)          | 645   | (2.9)          | 670   | (2.9)          | 120                                                             |
| Ontario                       | 379        | (7.3)          | 418   | (5.2)          | 476   | (4.1)          | 596   | (4.0)          | 645   | (4.7)          | 674   | (4.4)          | 120                                                             |
| Portugal                      | 333        | (5.6)          | 370   | (4.7)          | 430   | (4.2)          | 550   | (3.4)          | 601   | (3.6)          | 628   | (4.4)          | 121                                                             |
| Latvia                        | 337        | (5.3)          | 371   | (4.8)          | 428   | (4.3)          | 549   | (3.4)          | 596   | (3.9)          | 624   | (4.3)          | 122                                                             |
| Slovenia                      | 320        | (2.9)          | 358   | (2.6)          | 418   | (2.1)          | 540   | (1.7)          | 584   | (2.4)          | 609   | (2.4)          | 122                                                             |
| Newfoundland and Labrador     | 348        | (14.0)         | 391   | (7.2)          | 452   | (6.3)          | 574   | (4.9)          | 624   | (5.1)          | 655   | (8.6)          | 122                                                             |
| Canada                        | 367        | (3.3)          | 407   | (2.9)          | 468   | (2.1)          | 591   | (2.0)          | 641   | (2.2)          | 671   | (2.8)          | 123                                                             |

Table B.1.12 (concluded)

## Variation in performance: Non-continuous texts

| Country, economy<br>and province | Percentile |                   |       |                   |       |                   |       |                   |       |                   |       |                   | Difference<br>in score<br>points<br>between<br>the 75th<br>and 25th<br>percentile |
|----------------------------------|------------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-----------------------------------------------------------------------------------|
|                                  | 5th        |                   | 10th  |                   | 25th  |                   | 75th  |                   | 90th  |                   | 95th  |                   |                                                                                   |
|                                  | score      | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error |                                                                                   |
| Quebec                           | 357        | (6.3)             | 397   | (7.6)             | 464   | (5.6)             | 587   | (3.7)             | 636   | (3.9)             | 665   | (5.3)             | 123                                                                               |
| Croatia                          | 319        | (5.0)             | 354   | (4.2)             | 412   | (4.4)             | 536   | (3.4)             | 584   | (3.6)             | 613   | (4.3)             | 124                                                                               |
| Saskatchewan                     | 348        | (9.5)             | 386   | (7.6)             | 446   | (5.3)             | 570   | (3.9)             | 620   | (4.6)             | 649   | (5.2)             | 124                                                                               |
| British Columbia                 | 373        | (7.9)             | 413   | (5.6)             | 471   | (5.7)             | 595   | (4.2)             | 644   | (4.2)             | 672   | (5.3)             | 124                                                                               |
| Spain                            | 306        | (5.1)             | 348   | (3.6)             | 414   | (2.5)             | 538   | (2.1)             | 586   | (2.4)             | 614   | (2.5)             | 124                                                                               |
| Lithuania                        | 310        | (6.1)             | 343   | (4.2)             | 401   | (3.5)             | 525   | (3.0)             | 579   | (3.4)             | 607   | (4.5)             | 125                                                                               |
| Manitoba                         | 334        | (8.5)             | 375   | (7.7)             | 438   | (5.2)             | 563   | (4.3)             | 615   | (5.3)             | 645   | (4.8)             | 125                                                                               |
| Ireland                          | 327        | (8.1)             | 372   | (5.9)             | 438   | (4.1)             | 563   | (3.0)             | 611   | (3.6)             | 638   | (4.5)             | 125                                                                               |
| Chinese Taipei                   | 337        | (6.1)             | 377   | (5.4)             | 440   | (3.9)             | 566   | (3.3)             | 615   | (4.1)             | 642   | (4.7)             | 126                                                                               |
| Sweden                           | 330        | (5.2)             | 372   | (4.1)             | 439   | (3.5)             | 564   | (3.3)             | 618   | (3.5)             | 647   | (4.3)             | 126                                                                               |
| New Brunswick                    | 336        | (7.7)             | 372   | (5.5)             | 431   | (3.8)             | 557   | (3.6)             | 613   | (6.1)             | 640   | (5.6)             | 126                                                                               |
| Alberta                          | 376        | (8.0)             | 415   | (6.3)             | 476   | (5.5)             | 602   | (5.3)             | 656   | (7.9)             | 689   | (8.8)             | 126                                                                               |
| Azerbaijan                       | 193        | (7.1)             | 229   | (6.6)             | 288   | (5.4)             | 414   | (4.3)             | 469   | (4.6)             | 501   | (5.2)             | 126                                                                               |
| Slovak Republic                  | 314        | (6.5)             | 350   | (5.2)             | 410   | (3.9)             | 537   | (3.1)             | 586   | (3.7)             | 615   | (4.0)             | 126                                                                               |
| Iceland                          | 331        | (5.5)             | 371   | (4.1)             | 439   | (2.8)             | 566   | (1.7)             | 616   | (3.4)             | 645   | (4.2)             | 127                                                                               |
| Liechtenstein                    | 354        | (13.2)            | 391   | (8.0)             | 446   | (7.3)             | 572   | (6.5)             | 608   | (7.7)             | 631   | (11.2)            | 127                                                                               |
| Greece                           | 303        | (11.3)            | 344   | (9.2)             | 412   | (6.1)             | 539   | (2.9)             | 588   | (2.7)             | 615   | (3.2)             | 127                                                                               |
| Colombia                         | 252        | (8.1)             | 286   | (6.7)             | 346   | (5.4)             | 474   | (4.1)             | 530   | (3.9)             | 561   | (4.7)             | 127                                                                               |
| Hungary                          | 326        | (9.5)             | 363   | (7.2)             | 427   | (4.6)             | 554   | (3.5)             | 600   | (4.0)             | 625   | (4.4)             | 127                                                                               |
| Tunisia                          | 234        | (4.8)             | 271   | (4.3)             | 330   | (3.4)             | 457   | (4.0)             | 511   | (6.1)             | 543   | (7.5)             | 127                                                                               |
| Poland                           | 333        | (6.7)             | 372   | (4.0)             | 434   | (3.6)             | 562   | (3.2)             | 614   | (3.8)             | 645   | (3.4)             | 128                                                                               |
| Singapore                        | 373        | (3.1)             | 410   | (3.2)             | 477   | (2.0)             | 605   | (1.9)             | 656   | (2.3)             | 684   | (3.3)             | 128                                                                               |
| Serbia                           | 275        | (5.2)             | 313   | (4.5)             | 375   | (4.3)             | 503   | (3.4)             | 555   | (3.5)             | 585   | (5.2)             | 128                                                                               |
| Prince Edward Island             | 322        | (8.1)             | 362   | (5.9)             | 428   | (4.6)             | 557   | (3.7)             | 610   | (3.8)             | 639   | (5.9)             | 129                                                                               |
| Switzerland                      | 342        | (4.8)             | 378   | (4.3)             | 443   | (3.2)             | 572   | (3.3)             | 622   | (3.9)             | 650   | (4.2)             | 129                                                                               |
| Japan                            | 339        | (10.3)            | 388   | (7.1)             | 457   | (4.5)             | 587   | (3.1)             | 636   | (4.2)             | 665   | (5.0)             | 129                                                                               |
| Czech Republic                   | 308        | (8.0)             | 350   | (6.4)             | 412   | (4.7)             | 543   | (3.9)             | 597   | (3.9)             | 627   | (4.4)             | 130                                                                               |
| Brazil                           | 253        | (3.6)             | 287   | (2.9)             | 342   | (2.9)             | 473   | (4.1)             | 536   | (4.6)             | 572   | (5.6)             | 131                                                                               |
| Russian Federation               | 288        | (7.2)             | 327   | (6.0)             | 387   | (4.4)             | 519   | (4.0)             | 577   | (4.7)             | 612   | (5.8)             | 132                                                                               |
| Romania                          | 261        | (7.2)             | 298   | (7.1)             | 360   | (6.1)             | 492   | (5.1)             | 544   | (4.6)             | 573   | (6.1)             | 132                                                                               |
| United States                    | 344        | (5.2)             | 379   | (4.2)             | 438   | (4.1)             | 570   | (4.1)             | 624   | (4.2)             | 654   | (4.1)             | 133                                                                               |
| Australia                        | 352        | (3.5)             | 394   | (3.5)             | 461   | (2.5)             | 594   | (2.7)             | 647   | (3.4)             | 677   | (4.0)             | 133                                                                               |
| Netherlands                      | 364        | (5.1)             | 395   | (5.5)             | 449   | (6.4)             | 582   | (5.4)             | 632   | (4.9)             | 659   | (5.5)             | 133                                                                               |
| United Kingdom                   | 339        | (3.7)             | 379   | (3.0)             | 440   | (2.9)             | 574   | (3.1)             | 630   | (3.8)             | 663   | (5.0)             | 134                                                                               |
| Montenegro                       | 230        | (4.2)             | 270   | (4.1)             | 333   | (3.0)             | 468   | (2.6)             | 522   | (3.5)             | 553   | (4.4)             | 135                                                                               |
| France                           | 311        | (9.7)             | 360   | (7.3)             | 435   | (5.2)             | 572   | (3.8)             | 621   | (4.0)             | 649   | (5.0)             | 137                                                                               |
| Germany                          | 319        | (6.2)             | 361   | (4.7)             | 432   | (4.5)             | 570   | (3.3)             | 618   | (2.6)             | 643   | (3.2)             | 138                                                                               |
| Italy                            | 299        | (4.2)             | 342   | (3.3)             | 410   | (2.1)             | 550   | (1.7)             | 601   | (1.9)             | 630   | (2.0)             | 139                                                                               |
| Luxembourg                       | 289        | (4.1)             | 334   | (3.5)             | 405   | (2.7)             | 546   | (2.0)             | 597   | (2.2)             | 626   | (2.3)             | 140                                                                               |
| Panama                           | 189        | (10.1)            | 227   | (9.1)             | 287   | (7.2)             | 429   | (8.0)             | 500   | (10.1)            | 541   | (10.0)            | 142                                                                               |
| Uruguay                          | 244        | (6.6)             | 284   | (4.5)             | 351   | (3.3)             | 494   | (3.4)             | 553   | (4.3)             | 587   | (5.0)             | 142                                                                               |
| New Zealand                      | 354        | (5.6)             | 394   | (4.1)             | 462   | (3.5)             | 607   | (3.0)             | 662   | (3.2)             | 690   | (3.7)             | 145                                                                               |
| Peru                             | 184        | (4.5)             | 220   | (4.3)             | 283   | (4.6)             | 428   | (5.6)             | 490   | (7.1)             | 528   | (8.3)             | 145                                                                               |
| Belgium                          | 321        | (6.9)             | 368   | (4.2)             | 443   | (3.6)             | 588   | (2.4)             | 637   | (2.7)             | 663   | (3.2)             | 146                                                                               |
| Kyrgyzstan                       | 113        | (6.1)             | 154   | (5.5)             | 218   | (4.4)             | 364   | (4.3)             | 434   | (6.2)             | 479   | (7.0)             | 146                                                                               |
| Albania                          | 178        | (7.2)             | 223   | (6.8)             | 296   | (5.5)             | 444   | (5.2)             | 501   | (5.7)             | 534   | (5.5)             | 148                                                                               |
| Jordan                           | 185        | (7.4)             | 237   | (6.7)             | 316   | (5.0)             | 465   | (4.1)             | 528   | (5.3)             | 562   | (6.0)             | 149                                                                               |
| Austria                          | 285        | (7.5)             | 326   | (8.2)             | 400   | (5.9)             | 552   | (3.0)             | 602   | (2.9)             | 629   | (3.8)             | 151                                                                               |
| Kazakhstan                       | 185        | (5.1)             | 227   | (4.3)             | 295   | (4.6)             | 448   | (4.7)             | 520   | (6.0)             | 559   | (6.7)             | 153                                                                               |
| Argentina                        | 194        | (9.5)             | 240   | (7.9)             | 316   | (5.3)             | 472   | (6.5)             | 538   | (7.0)             | 574   | (7.3)             | 155                                                                               |
| Trinidad and Tobago              | 219        | (4.8)             | 265   | (4.3)             | 341   | (3.2)             | 498   | (2.4)             | 561   | (2.6)             | 597   | (4.1)             | 157                                                                               |
| Dubai (UAE)                      | 270        | (2.9)             | 311   | (2.4)             | 383   | (1.9)             | 541   | (2.5)             | 602   | (2.9)             | 634   | (3.5)             | 158                                                                               |
| Israel                           | 255        | (9.9)             | 305   | (8.0)             | 388   | (5.7)             | 553   | (3.8)             | 615   | (4.1)             | 649   | (4.5)             | 165                                                                               |
| Qatar                            | 171        | (3.4)             | 208   | (1.9)             | 273   | (1.5)             | 443   | (2.1)             | 532   | (2.3)             | 581   | (2.5)             | 170                                                                               |
| Bulgaria                         | 204        | (9.2)             | 255   | (10.2)            | 339   | (10.4)            | 511   | (6.6)             | 573   | (6.6)             | 609   | (6.8)             | 172                                                                               |

**Note:** Countries, economies and provinces in ascending order by the difference in score points between the 75th and 25th percentiles.

Table B.1.13

Percent of students at each level for countries, provinces and economies:  
Combined reading

| Country, economy<br>and province | Proficiency levels                                            |       |                                                                           |       |                                                                           |       |                                                                          |       |                                                                          |       |                                                                          |       |                                                             |       |                                                 |       |
|----------------------------------|---------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|-------------------------------------------------------------|-------|-------------------------------------------------|-------|
|                                  | Below<br>Level 1b<br>(less than<br>262.04<br>score<br>points) |       | Level 1b<br>(from<br>262.04 to<br>less than<br>334.75<br>score<br>points) |       | Level 1a<br>(from<br>334.75 to<br>less than<br>407.47<br>score<br>points) |       | Level 2<br>(from<br>407.47 to<br>less than<br>480.18<br>score<br>points) |       | Level 3<br>(from<br>480.18 to<br>less than<br>552.89<br>score<br>points) |       | Level 4<br>(from<br>552.89 to<br>less than<br>625.61<br>score<br>points) |       | Level 5<br>(from<br>625.61 to<br>698.32<br>score<br>points) |       | Level 6<br>(above<br>698.32<br>score<br>points) |       |
|                                  | %                                                             | S.E.  | %                                                                         | S.E.  | %                                                                         | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                           | S.E.  | %                                               | S.E.  |
| Shanghai-China                   | 0.1                                                           | (0.0) | 0.6                                                                       | (0.1) | 3.4                                                                       | (0.5) | 13.3                                                                     | (0.9) | 28.5                                                                     | (1.2) | 34.7                                                                     | (1.0) | 17.0                                                        | (1.0) | 2.4                                             | (0.5) |
| Korea                            | 0.2                                                           | (0.2) | 0.9                                                                       | (0.3) | 4.7                                                                       | (0.6) | 15.4                                                                     | (1.0) | 33.0                                                                     | (1.2) | 32.9                                                                     | (1.4) | 11.9                                                        | (1.0) | 1.1                                             | (0.2) |
| Finland                          | 0.2                                                           | (0.1) | 1.5                                                                       | (0.2) | 6.4                                                                       | (0.4) | 16.7                                                                     | (0.6) | 30.1                                                                     | (0.9) | 30.6                                                                     | (0.9) | 12.9                                                        | (0.7) | 1.6                                             | (0.2) |
| Hong Kong-China                  | 0.2                                                           | (0.1) | 1.5                                                                       | (0.3) | 6.6                                                                       | (0.6) | 16.1                                                                     | (0.8) | 31.4                                                                     | (0.9) | 31.8                                                                     | (0.9) | 11.2                                                        | (0.7) | 1.2                                             | (0.3) |
| Ontario                          | 0.3                                                           | (0.2) | 1.6                                                                       | (0.3) | 6.6                                                                       | (0.6) | 19.6                                                                     | (1.1) | 30.1                                                                     | (1.3) | 27.7                                                                     | (1.2) | 12.3                                                        | (0.9) | 1.9                                             | (0.4) |
| Alberta                          | 0.3                                                           | (0.2) | 1.7                                                                       | (0.6) | 8.1                                                                       | (1.1) | 19.0                                                                     | (1.3) | 27.5                                                                     | (1.2) | 27.3                                                                     | (1.4) | 12.6                                                        | (1.2) | 3.5                                             | (0.9) |
| Canada                           | 0.4                                                           | (0.1) | 2.0                                                                       | (0.2) | 7.9                                                                       | (0.3) | 20.2                                                                     | (0.6) | 30.0                                                                     | (0.7) | 26.8                                                                     | (0.6) | 11.0                                                        | (0.4) | 1.8                                             | (0.2) |
| Quebec                           | 0.4                                                           | (0.1) | 1.9                                                                       | (0.4) | 8.1                                                                       | (0.8) | 19.8                                                                     | (1.1) | 31.2                                                                     | (1.3) | 27.9                                                                     | (1.1) | 9.6                                                         | (0.8) | 1.2                                             | (0.3) |
| British Columbia                 | 0.4                                                           | (0.2) | 2.2                                                                       | (0.5) | 8.2                                                                       | (0.9) | 19.7                                                                     | (1.2) | 29.8                                                                     | (1.3) | 26.4                                                                     | (1.2) | 11.4                                                        | (1.1) | 1.9                                             | (0.5) |
| Nova Scotia                      | 0.6                                                           | (0.3) | 2.2                                                                       | (0.5) | 8.3                                                                       | (1.0) | 22.3                                                                     | (1.4) | 31.9                                                                     | (1.5) | 24.5                                                                     | (1.5) | 8.7                                                         | (0.8) | 1.5                                             | (0.4) |
| Singapore                        | 0.4                                                           | (0.1) | 2.7                                                                       | (0.3) | 9.3                                                                       | (0.5) | 18.5                                                                     | (0.6) | 27.6                                                                     | (0.8) | 25.7                                                                     | (0.7) | 13.1                                                        | (0.5) | 2.6                                             | (0.3) |
| Estonia                          | 0.3                                                           | (0.1) | 2.4                                                                       | (0.4) | 10.6                                                                      | (0.9) | 25.6                                                                     | (1.3) | 33.8                                                                     | (1.0) | 21.2                                                                     | (0.8) | 5.4                                                         | (0.5) | 0.7                                             | (0.2) |
| Japan                            | 1.3                                                           | (0.4) | 3.4                                                                       | (0.5) | 8.9                                                                       | (0.7) | 18.0                                                                     | (0.8) | 28.0                                                                     | (0.9) | 27.0                                                                     | (1.0) | 11.5                                                        | (0.7) | 1.9                                             | (0.4) |
| Newfoundland and<br>Labrador     | 0.4                                                           | (0.3) | 2.6                                                                       | (0.7) | 10.8                                                                      | (1.5) | 24.5                                                                     | (2.1) | 30.7                                                                     | (2.0) | 22.6                                                                     | (1.9) | 7.4                                                         | (1.1) | 1.1                                             | (0.6) |
| Australia                        | 1.0                                                           | (0.1) | 3.3                                                                       | (0.3) | 10.0                                                                      | (0.4) | 20.4                                                                     | (0.6) | 28.5                                                                     | (0.7) | 24.1                                                                     | (0.7) | 10.7                                                        | (0.5) | 2.1                                             | (0.3) |
| New Zealand                      | 0.9                                                           | (0.2) | 3.2                                                                       | (0.4) | 10.2                                                                      | (0.6) | 19.3                                                                     | (0.8) | 25.8                                                                     | (0.8) | 24.8                                                                     | (0.8) | 12.9                                                        | (0.8) | 2.9                                             | (0.4) |
| Netherlands                      | 0.1                                                           | (0.1) | 1.8                                                                       | (0.3) | 12.5                                                                      | (1.4) | 24.7                                                                     | (1.5) | 27.6                                                                     | (1.2) | 23.5                                                                     | (1.7) | 9.1                                                         | (1.0) | 0.8                                             | (0.2) |
| Macao-China                      | 0.3                                                           | (0.1) | 2.6                                                                       | (0.3) | 12.0                                                                      | (0.4) | 30.6                                                                     | (0.6) | 34.8                                                                     | (0.7) | 16.9                                                                     | (0.5) | 2.8                                                         | (0.3) | 0.1                                             | (0.1) |
| Poland                           | 0.6                                                           | (0.2) | 3.1                                                                       | (0.4) | 11.3                                                                      | (0.7) | 24.5                                                                     | (1.1) | 31.0                                                                     | (1.0) | 22.3                                                                     | (1.0) | 6.5                                                         | (0.6) | 0.7                                             | (0.2) |
| Norway                           | 0.5                                                           | (0.1) | 3.4                                                                       | (0.4) | 11.0                                                                      | (0.7) | 23.6                                                                     | (0.8) | 30.9                                                                     | (0.9) | 22.1                                                                     | (1.2) | 7.6                                                         | (0.9) | 0.8                                             | (0.2) |
| Denmark                          | 0.4                                                           | (0.1) | 3.1                                                                       | (0.3) | 11.7                                                                      | (0.7) | 26.0                                                                     | (0.9) | 33.1                                                                     | (1.2) | 20.9                                                                     | (1.1) | 4.4                                                         | (0.5) | 0.3                                             | (0.1) |
| Saskatchewan                     | 0.8                                                           | (0.3) | 3.2                                                                       | (0.6) | 11.5                                                                      | (1.1) | 22.9                                                                     | (1.5) | 30.1                                                                     | (1.6) | 22.8                                                                     | (1.8) | 7.8                                                         | (1.1) | 0.9                                             | (0.4) |
| Chinese Taipei                   | 0.7                                                           | (0.2) | 3.5                                                                       | (0.4) | 11.4                                                                      | (0.6) | 24.6                                                                     | (0.8) | 33.5                                                                     | (1.1) | 21.0                                                                     | (1.0) | 4.8                                                         | (0.8) | 0.4                                             | (0.2) |
| Liechtenstein                    | 0.0                                                           | (0.0) | 2.8                                                                       | (1.2) | 12.8                                                                      | (1.8) | 24.0                                                                     | (2.9) | 31.1                                                                     | (2.8) | 24.6                                                                     | (2.3) | 4.2                                                         | (1.4) | 0.0                                             | (0.0) |
| New Brunswick                    | 0.4                                                           | (0.2) | 3.5                                                                       | (0.5) | 12.3                                                                      | (0.9) | 25.5                                                                     | (1.3) | 29.8                                                                     | (1.6) | 20.8                                                                     | (1.3) | 6.6                                                         | (0.8) | 1.1                                             | (0.5) |
| Iceland                          | 1.1                                                           | (0.2) | 4.2                                                                       | (0.4) | 11.5                                                                      | (0.7) | 22.2                                                                     | (0.8) | 30.6                                                                     | (0.9) | 21.9                                                                     | (0.8) | 7.5                                                         | (0.6) | 1.0                                             | (0.2) |
| Switzerland                      | 0.7                                                           | (0.2) | 4.1                                                                       | (0.4) | 12.1                                                                      | (0.6) | 22.7                                                                     | (0.7) | 29.7                                                                     | (0.8) | 22.6                                                                     | (0.8) | 7.4                                                         | (0.7) | 0.7                                             | (0.2) |
| Ireland                          | 1.5                                                           | (0.4) | 3.9                                                                       | (0.5) | 11.8                                                                      | (0.7) | 23.3                                                                     | (1.0) | 30.6                                                                     | (0.9) | 21.9                                                                     | (0.9) | 6.3                                                         | (0.5) | 0.7                                             | (0.2) |
| Sweden                           | 1.5                                                           | (0.3) | 4.3                                                                       | (0.4) | 11.7                                                                      | (0.7) | 23.5                                                                     | (1.0) | 29.8                                                                     | (1.0) | 20.3                                                                     | (0.9) | 7.7                                                         | (0.6) | 1.3                                             | (0.3) |
| Hungary                          | 0.6                                                           | (0.2) | 4.7                                                                       | (0.8) | 12.3                                                                      | (1.0) | 23.8                                                                     | (1.2) | 31.0                                                                     | (1.3) | 21.6                                                                     | (1.1) | 5.8                                                         | (0.7) | 0.3                                             | (0.1) |
| United States                    | 0.6                                                           | (0.1) | 4.0                                                                       | (0.5) | 13.1                                                                      | (0.8) | 24.4                                                                     | (0.9) | 27.6                                                                     | (0.8) | 20.6                                                                     | (0.9) | 8.4                                                         | (0.8) | 1.5                                             | (0.4) |
| Portugal                         | 0.6                                                           | (0.1) | 4.0                                                                       | (0.4) | 13.0                                                                      | (1.0) | 26.4                                                                     | (1.1) | 31.6                                                                     | (1.1) | 19.6                                                                     | (0.9) | 4.6                                                         | (0.5) | 0.2                                             | (0.1) |
| Manitoba                         | 0.9                                                           | (0.3) | 4.1                                                                       | (0.8) | 12.6                                                                      | (1.2) | 25.7                                                                     | (1.6) | 27.4                                                                     | (1.8) | 21.2                                                                     | (1.4) | 7.1                                                         | (0.8) | 1.0                                             | (0.3) |
| Latvia                           | 0.4                                                           | (0.2) | 3.3                                                                       | (0.6) | 13.9                                                                      | (1.0) | 28.8                                                                     | (1.5) | 33.5                                                                     | (1.2) | 17.2                                                                     | (1.0) | 2.9                                                         | (0.4) | 0.0                                             | (0.0) |
| Belgium                          | 1.2                                                           | (0.3) | 4.7                                                                       | (0.5) | 11.9                                                                      | (0.6) | 20.3                                                                     | (0.7) | 25.8                                                                     | (0.9) | 24.9                                                                     | (0.8) | 10.1                                                        | (0.5) | 1.1                                             | (0.2) |
| United Kingdom                   | 1.0                                                           | (0.2) | 4.1                                                                       | (0.4) | 13.4                                                                      | (0.6) | 24.9                                                                     | (0.7) | 28.8                                                                     | (0.8) | 19.8                                                                     | (0.8) | 7.0                                                         | (0.5) | 1.0                                             | (0.2) |
| Germany                          | 0.8                                                           | (0.2) | 4.4                                                                       | (0.5) | 13.3                                                                      | (0.8) | 22.2                                                                     | (0.9) | 28.8                                                                     | (1.1) | 22.8                                                                     | (0.9) | 7.0                                                         | (0.6) | 0.6                                             | (0.2) |
| Spain                            | 1.2                                                           | (0.2) | 4.7                                                                       | (0.4) | 13.6                                                                      | (0.6) | 26.8                                                                     | (0.8) | 32.6                                                                     | (1.0) | 17.7                                                                     | (0.7) | 3.2                                                         | (0.3) | 0.2                                             | (0.1) |
| France                           | 2.3                                                           | (0.5) | 5.6                                                                       | (0.5) | 11.8                                                                      | (0.8) | 21.1                                                                     | (1.0) | 27.2                                                                     | (1.0) | 22.4                                                                     | (1.1) | 8.5                                                         | (0.8) | 1.1                                             | (0.3) |
| Italy                            | 1.4                                                           | (0.2) | 5.2                                                                       | (0.3) | 14.4                                                                      | (0.5) | 24.0                                                                     | (0.5) | 28.9                                                                     | (0.6) | 20.2                                                                     | (0.5) | 5.4                                                         | (0.3) | 0.4                                             | (0.1) |
| Prince Edward Island             | 1.2                                                           | (0.4) | 5.6                                                                       | (0.8) | 14.4                                                                      | (1.1) | 25.3                                                                     | (1.4) | 27.9                                                                     | (1.4) | 18.7                                                                     | (1.2) | 6.0                                                         | (0.6) | 0.9                                             | (0.4) |
| Greece                           | 1.4                                                           | (0.4) | 5.6                                                                       | (0.9) | 14.3                                                                      | (1.1) | 25.6                                                                     | (1.1) | 29.3                                                                     | (1.2) | 18.2                                                                     | (1.0) | 5.0                                                         | (0.5) | 0.6                                             | (0.2) |
| Slovenia                         | 0.8                                                           | (0.1) | 5.2                                                                       | (0.3) | 15.2                                                                      | (0.5) | 25.6                                                                     | (0.7) | 29.2                                                                     | (0.9) | 19.3                                                                     | (0.8) | 4.3                                                         | (0.5) | 0.3                                             | (0.1) |
| Slovak Republic                  | 0.8                                                           | (0.3) | 5.6                                                                       | (0.6) | 15.9                                                                      | (0.8) | 28.1                                                                     | (1.0) | 28.5                                                                     | (1.1) | 16.7                                                                     | (0.8) | 4.2                                                         | (0.5) | 0.3                                             | (0.1) |
| Croatia                          | 1.0                                                           | (0.2) | 5.0                                                                       | (0.5) | 16.5                                                                      | (1.0) | 27.4                                                                     | (1.0) | 30.6                                                                     | (1.2) | 16.4                                                                     | (1.0) | 3.1                                                         | (0.4) | 0.1                                             | (0.1) |
| Czech Republic                   | 0.8                                                           | (0.3) | 5.5                                                                       | (0.6) | 16.8                                                                      | (1.1) | 27.4                                                                     | (1.0) | 27.0                                                                     | (1.0) | 17.4                                                                     | (1.0) | 4.7                                                         | (0.5) | 0.4                                             | (0.1) |
| Lithuania                        | 0.9                                                           | (0.3) | 5.5                                                                       | (0.6) | 17.9                                                                      | (0.9) | 30.0                                                                     | (1.0) | 28.6                                                                     | (0.9) | 14.1                                                                     | (0.8) | 2.8                                                         | (0.4) | 0.2                                             | (0.1) |
| Turkey                           | 0.8                                                           | (0.2) | 5.6                                                                       | (0.6) | 18.1                                                                      | (1.0) | 32.2                                                                     | (1.2) | 29.1                                                                     | (1.1) | 12.4                                                                     | (1.1) | 1.8                                                         | (0.4) | 0.0                                             | (0.0) |
| Luxembourg                       | 3.1                                                           | (0.3) | 7.3                                                                       | (0.5) | 15.7                                                                      | (0.6) | 24.0                                                                     | (0.7) | 27.0                                                                     | (0.7) | 17.3                                                                     | (0.6) | 5.2                                                         | (0.4) | 0.5                                             | (0.2) |
| Israel                           | 3.9                                                           | (0.7) | 8.0                                                                       | (0.7) | 14.7                                                                      | (0.6) | 22.5                                                                     | (1.0) | 25.5                                                                     | (1.0) | 18.1                                                                     | (0.7) | 6.4                                                         | (0.5) | 1.0                                             | (0.2) |

Table B.1.13 (concluded)

**Percent of students at each level for countries, provinces and economies:  
Combined reading**

| Country, economy<br>and province | Proficiency levels                                            |       |                                                                           |       |                                                                           |       |                                                                          |       |                                                                          |       |                                                                          |       |                                                                          |       |                                                 |       |
|----------------------------------|---------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|-------------------------------------------------|-------|
|                                  | Below<br>Level 1b<br>(less than<br>262.04<br>score<br>points) |       | Level 1b<br>(from<br>262.04 to<br>less than<br>334.75<br>score<br>points) |       | Level 1a<br>(from<br>334.75 to<br>less than<br>407.47<br>score<br>points) |       | Level 2<br>(from<br>407.47 to<br>less than<br>480.18<br>score<br>points) |       | Level 3<br>(from<br>480.18 to<br>less than<br>552.89<br>score<br>points) |       | Level 4<br>(from<br>552.89 to<br>less than<br>625.61<br>score<br>points) |       | Level 5<br>(from<br>625.61 to<br>less than<br>698.32<br>score<br>points) |       | Level 6<br>(above<br>698.32<br>score<br>points) |       |
|                                  | %                                                             | S.E.  | %                                                                         | S.E.  | %                                                                         | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                               | S.E.  |
| Russian Federation               | 1.6                                                           | (0.4) | 6.8                                                                       | (0.6) | 19.0                                                                      | (0.8) | 31.6                                                                     | (1.0) | 26.8                                                                     | (0.9) | 11.1                                                                     | (0.7) | 2.8                                                                      | (0.4) | 0.3                                             | (0.1) |
| Austria                          | 1.9                                                           | (0.4) | 8.1                                                                       | (0.8) | 17.5                                                                      | (1.0) | 24.1                                                                     | (1.0) | 26.0                                                                     | (0.9) | 17.4                                                                     | (0.9) | 4.5                                                                      | (0.5) | 0.4                                             | (0.1) |
| Chile                            | 1.3                                                           | (0.2) | 7.3                                                                       | (0.8) | 22.0                                                                      | (1.0) | 33.2                                                                     | (1.1) | 25.6                                                                     | (1.2) | 9.3                                                                      | (0.7) | 1.3                                                                      | (0.3) | 0.0                                             | (0.0) |
| Dubai (UAE)                      | 3.7                                                           | (0.2) | 9.4                                                                       | (0.5) | 17.9                                                                      | (0.5) | 25.4                                                                     | (0.7) | 23.5                                                                     | (0.8) | 14.8                                                                     | (0.7) | 4.8                                                                      | (0.5) | 0.5                                             | (0.2) |
| Serbia                           | 2.0                                                           | (0.4) | 8.7                                                                       | (0.7) | 22.1                                                                      | (0.9) | 33.2                                                                     | (1.0) | 25.3                                                                     | (1.0) | 7.9                                                                      | (0.6) | 0.8                                                                      | (0.2) | 0.0                                             | (0.0) |
| Mexico                           | 3.2                                                           | (0.3) | 11.4                                                                      | (0.5) | 25.5                                                                      | (0.6) | 33.0                                                                     | (0.6) | 21.2                                                                     | (0.6) | 5.3                                                                      | (0.4) | 0.4                                                                      | (0.1) | 0.0                                             | (0.0) |
| Romania                          | 4.1                                                           | (0.7) | 12.7                                                                      | (1.1) | 23.6                                                                      | (1.3) | 31.6                                                                     | (1.3) | 21.2                                                                     | (1.3) | 6.1                                                                      | (0.7) | 0.7                                                                      | (0.2) | 0.0                                             | (0.0) |
| Bulgaria                         | 8.1                                                           | (1.1) | 12.8                                                                      | (1.4) | 20.1                                                                      | (1.4) | 23.4                                                                     | (1.2) | 21.8                                                                     | (1.4) | 11.0                                                                     | (1.1) | 2.6                                                                      | (0.5) | 0.2                                             | (0.1) |
| Uruguay                          | 5.5                                                           | (0.6) | 12.5                                                                      | (0.7) | 23.9                                                                      | (0.7) | 28.0                                                                     | (0.7) | 20.3                                                                     | (0.7) | 8.1                                                                      | (0.5) | 1.7                                                                      | (0.3) | 0.1                                             | (0.1) |
| Thailand                         | 1.2                                                           | (0.3) | 9.9                                                                       | (0.8) | 31.7                                                                      | (1.1) | 36.8                                                                     | (1.2) | 16.7                                                                     | (0.8) | 3.3                                                                      | (0.5) | 0.3                                                                      | (0.2) | 0.0                                             | (0.0) |
| Trinidad and Tobago              | 9.6                                                           | (0.5) | 14.2                                                                      | (0.6) | 21.0                                                                      | (0.8) | 25.0                                                                     | (0.9) | 19.0                                                                     | (0.9) | 8.9                                                                      | (0.5) | 2.1                                                                      | (0.3) | 0.2                                             | (0.1) |
| Colombia                         | 4.2                                                           | (0.7) | 13.9                                                                      | (1.0) | 29.0                                                                      | (1.2) | 30.6                                                                     | (1.1) | 17.1                                                                     | (1.0) | 4.6                                                                      | (0.5) | 0.5                                                                      | (0.2) | 0.0                                             | (0.0) |
| Jordan                           | 6.9                                                           | (0.6) | 13.5                                                                      | (0.8) | 27.6                                                                      | (1.0) | 31.8                                                                     | (1.0) | 16.5                                                                     | (1.0) | 3.5                                                                      | (0.4) | 0.2                                                                      | (0.1) | 0.0                                             | (0.0) |
| Brazil                           | 5.0                                                           | (0.4) | 16.0                                                                      | (0.7) | 28.6                                                                      | (0.8) | 27.1                                                                     | (0.8) | 15.9                                                                     | (0.9) | 6.1                                                                      | (0.5) | 1.2                                                                      | (0.2) | 0.1                                             | (0.1) |
| Montenegro                       | 5.9                                                           | (0.5) | 15.8                                                                      | (0.8) | 27.8                                                                      | (0.8) | 28.0                                                                     | (0.9) | 16.8                                                                     | (0.9) | 5.0                                                                      | (0.5) | 0.6                                                                      | (0.2) | 0.0                                             | (0.0) |
| Tunisia                          | 5.5                                                           | (0.5) | 15.0                                                                      | (0.8) | 29.6                                                                      | (1.1) | 31.5                                                                     | (1.2) | 15.1                                                                     | (1.0) | 3.1                                                                      | (0.5) | 0.2                                                                      | (0.1) | 0.0                                             | (0.0) |
| Argentina                        | 10.7                                                          | (1.1) | 15.8                                                                      | (1.3) | 25.1                                                                      | (1.3) | 25.4                                                                     | (1.2) | 16.0                                                                     | (1.0) | 6.0                                                                      | (0.8) | 0.9                                                                      | (0.2) | 0.1                                             | (0.1) |
| Indonesia                        | 1.7                                                           | (0.4) | 14.1                                                                      | (1.3) | 37.6                                                                      | (1.6) | 34.3                                                                     | (1.4) | 11.2                                                                     | (1.4) | 1.0                                                                      | (0.3) | 0.0                                                                      | (0.0) | 0.0                                             | (0.0) |
| Albania                          | 11.3                                                          | (0.9) | 18.7                                                                      | (1.3) | 26.7                                                                      | (1.2) | 25.6                                                                     | (1.3) | 14.4                                                                     | (1.2) | 3.1                                                                      | (0.5) | 0.2                                                                      | (0.1) | 0.0                                             | (0.0) |
| Kazakhstan                       | 7.5                                                           | (0.7) | 20.4                                                                      | (1.0) | 30.8                                                                      | (0.9) | 24.1                                                                     | (0.9) | 13.1                                                                     | (0.9) | 3.7                                                                      | (0.5) | 0.4                                                                      | (0.1) | 0.0                                             | (0.0) |
| Qatar                            | 17.8                                                          | (0.3) | 22.4                                                                      | (0.5) | 23.2                                                                      | (0.6) | 18.3                                                                     | (0.4) | 11.1                                                                     | (0.5) | 5.4                                                                      | (0.3) | 1.5                                                                      | (0.2) | 0.2                                             | (0.1) |
| Peru                             | 14.1                                                          | (0.9) | 22.0                                                                      | (1.0) | 28.7                                                                      | (1.1) | 22.1                                                                     | (0.9) | 10.1                                                                     | (0.9) | 2.6                                                                      | (0.5) | 0.5                                                                      | (0.2) | 0.0                                             | (0.0) |
| Panama                           | 13.2                                                          | (1.8) | 23.1                                                                      | (1.8) | 28.9                                                                      | (1.8) | 20.7                                                                     | (1.4) | 10.1                                                                     | (1.4) | 3.4                                                                      | (0.7) | 0.5                                                                      | (0.2) | 0.0                                             | (0.0) |
| Azerbaijan                       | 9.7                                                           | (1.1) | 26.1                                                                      | (1.1) | 37.0                                                                      | (1.2) | 21.5                                                                     | (1.2) | 5.3                                                                      | (0.8) | 0.5                                                                      | (0.2) | 0.0                                                                      | (0.0) | 0.0                                             | (0.0) |
| Kyrgyzstan                       | 29.8                                                          | (1.3) | 29.7                                                                      | (0.9) | 23.8                                                                      | (0.9) | 11.5                                                                     | (0.8) | 4.2                                                                      | (0.6) | 1.0                                                                      | (0.3) | 0.1                                                                      | (0.1) | 0.0                                             | (0.0) |

0 true zero or a value rounded to zero

S.E. Standard error

Table B.1.14

Percent of students at each level for countries, provinces and economies:  
Accessing and retrieving

| Country, economy<br>and province | Proficiency levels                                            |       |                                                                           |       |                                                                           |       |                                                                          |       |                                                                          |       |                                                                          |       |                                                             |       |                                                 |       |
|----------------------------------|---------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|-------------------------------------------------------------|-------|-------------------------------------------------|-------|
|                                  | Below<br>Level 1b<br>(less than<br>262.04<br>score<br>points) |       | Level 1b<br>(from<br>262.04 to<br>less than<br>334.75<br>score<br>points) |       | Level 1a<br>(from<br>334.75 to<br>less than<br>407.47<br>score<br>points) |       | Level 2<br>(from<br>407.47 to<br>less than<br>480.18<br>score<br>points) |       | Level 3<br>(from<br>480.18 to<br>less than<br>552.89<br>score<br>points) |       | Level 4<br>(from<br>552.89 to<br>less than<br>625.61<br>score<br>points) |       | Level 5<br>(from<br>625.61 to<br>698.32<br>score<br>points) |       | Level 6<br>(above<br>698.32<br>score<br>points) |       |
|                                  | %                                                             | S.E.  | %                                                                         | S.E.  | %                                                                         | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                           | S.E.  | %                                               | S.E.  |
| Korea                            | 0.3                                                           | (0.1) | 1.2                                                                       | (0.3) | 5.6                                                                       | (0.7) | 15.9                                                                     | (1.0) | 30.1                                                                     | (1.0) | 30.3                                                                     | (1.2) | 13.9                                                        | (1.1) | 2.7                                             | (0.4) |
| Shanghai-China                   | 0.5                                                           | (0.1) | 1.5                                                                       | (0.3) | 5.7                                                                       | (0.6) | 14.8                                                                     | (0.8) | 26.1                                                                     | (0.9) | 29.5                                                                     | (1.1) | 17.3                                                        | (0.9) | 4.6                                             | (0.5) |
| Ontario                          | 0.7                                                           | (0.2) | 2.1                                                                       | (0.4) | 7.7                                                                       | (0.7) | 20.2                                                                     | (1.2) | 30.6                                                                     | (1.4) | 26.4                                                                     | (1.1) | 10.8                                                        | (0.8) | 1.6                                             | (0.4) |
| Hong Kong-China                  | 0.8                                                           | (0.2) | 2.3                                                                       | (0.3) | 7.5                                                                       | (0.6) | 17.5                                                                     | (0.7) | 28.3                                                                     | (0.9) | 29.5                                                                     | (0.9) | 12.2                                                        | (0.7) | 2.1                                             | (0.4) |
| Finland                          | 0.8                                                           | (0.2) | 2.5                                                                       | (0.3) | 7.8                                                                       | (0.5) | 17.2                                                                     | (1.0) | 27.0                                                                     | (0.9) | 27.4                                                                     | (0.8) | 14.2                                                        | (0.7) | 3.1                                             | (0.4) |
| Netherlands                      | 0.2                                                           | (0.1) | 2.1                                                                       | (0.4) | 10.0                                                                      | (1.0) | 21.4                                                                     | (1.7) | 27.4                                                                     | (1.3) | 26.7                                                                     | (1.5) | 10.8                                                        | (1.2) | 1.4                                             | (0.3) |
| Canada                           | 0.9                                                           | (0.1) | 2.7                                                                       | (0.2) | 9.1                                                                       | (0.4) | 20.7                                                                     | (0.6) | 29.8                                                                     | (0.6) | 24.9                                                                     | (0.5) | 10.1                                                        | (0.4) | 1.8                                             | (0.2) |
| Quebec                           | 0.9                                                           | (0.3) | 2.6                                                                       | (0.5) | 9.4                                                                       | (0.9) | 20.5                                                                     | (1.0) | 30.7                                                                     | (1.5) | 24.8                                                                     | (1.1) | 9.6                                                         | (1.0) | 1.5                                             | (0.3) |
| British Columbia                 | 1.1                                                           | (0.3) | 2.9                                                                       | (0.6) | 9.0                                                                       | (1.1) | 21.4                                                                     | (1.3) | 29.3                                                                     | (1.3) | 24.1                                                                     | (1.4) | 10.3                                                        | (0.9) | 2.0                                             | (0.4) |
| Japan                            | 1.9                                                           | (0.4) | 3.2                                                                       | (0.5) | 8.0                                                                       | (0.7) | 16.2                                                                     | (0.7) | 25.4                                                                     | (1.0) | 27.0                                                                     | (1.0) | 14.1                                                        | (0.7) | 4.2                                             | (0.5) |
| Singapore                        | 0.9                                                           | (0.2) | 3.3                                                                       | (0.4) | 9.0                                                                       | (0.6) | 17.7                                                                     | (1.0) | 25.8                                                                     | (0.7) | 26.8                                                                     | (0.9) | 13.5                                                        | (0.6) | 3.0                                             | (0.3) |
| Alberta                          | 0.9                                                           | (0.3) | 3.0                                                                       | (0.5) | 9.3                                                                       | (1.1) | 19.1                                                                     | (1.2) | 27.5                                                                     | (1.3) | 25.2                                                                     | (1.8) | 11.5                                                        | (1.0) | 3.3                                             | (0.6) |
| Liechtenstein                    | 0.5                                                           | (0.5) | 3.9                                                                       | (1.1) | 9.8                                                                       | (1.9) | 23.0                                                                     | (2.9) | 28.5                                                                     | (3.0) | 25.3                                                                     | (2.5) | 7.8                                                         | (1.5) | 1.3                                             | (0.7) |
| Australia                        | 1.3                                                           | (0.1) | 3.5                                                                       | (0.3) | 9.7                                                                       | (0.5) | 19.8                                                                     | (0.6) | 29.0                                                                     | (0.6) | 24.5                                                                     | (0.6) | 10.2                                                        | (0.6) | 2.0                                             | (0.3) |
| New Zealand                      | 1.4                                                           | (0.2) | 3.4                                                                       | (0.4) | 10.0                                                                      | (0.6) | 18.4                                                                     | (0.7) | 26.0                                                                     | (0.8) | 24.6                                                                     | (0.8) | 13.3                                                        | (0.7) | 3.0                                             | (0.3) |
| Nova Scotia                      | 1.2                                                           | (0.4) | 3.0                                                                       | (0.6) | 10.4                                                                      | (1.1) | 22.5                                                                     | (1.3) | 30.7                                                                     | (1.4) | 22.3                                                                     | (1.4) | 8.7                                                         | (1.2) | 1.1                                             | (0.4) |
| Norway                           | 1.0                                                           | (0.2) | 3.5                                                                       | (0.4) | 10.2                                                                      | (0.6) | 20.5                                                                     | (0.8) | 29.6                                                                     | (0.8) | 23.4                                                                     | (0.9) | 9.9                                                         | (0.6) | 1.9                                             | (0.3) |
| Estonia                          | 0.6                                                           | (0.2) | 3.3                                                                       | (0.5) | 11.4                                                                      | (0.8) | 23.5                                                                     | (1.0) | 31.0                                                                     | (1.2) | 21.7                                                                     | (0.9) | 7.5                                                         | (0.7) | 0.9                                             | (0.3) |
| Denmark                          | 1.0                                                           | (0.2) | 3.7                                                                       | (0.4) | 11.6                                                                      | (0.6) | 22.4                                                                     | (0.7) | 30.4                                                                     | (1.0) | 22.6                                                                     | (1.2) | 7.3                                                         | (0.6) | 1.1                                             | (0.3) |
| Switzerland                      | 1.0                                                           | (0.2) | 4.3                                                                       | (0.4) | 11.0                                                                      | (0.6) | 21.1                                                                     | (0.7) | 29.1                                                                     | (0.8) | 23.8                                                                     | (0.7) | 8.6                                                         | (0.9) | 1.1                                             | (0.3) |
| Newfoundland and<br>Labrador     | 0.8                                                           | (0.4) | 3.9                                                                       | (0.8) | 11.6                                                                      | (1.6) | 24.1                                                                     | (1.8) | 29.9                                                                     | (1.8) | 20.8                                                                     | (1.6) | 7.6                                                         | (0.9) | 1.3                                             | (0.6) |
| Sweden                           | 1.8                                                           | (0.3) | 4.4                                                                       | (0.5) | 10.3                                                                      | (0.7) | 21.5                                                                     | (0.8) | 28.6                                                                     | (0.8) | 22.3                                                                     | (1.1) | 9.2                                                         | (0.9) | 1.9                                             | (0.3) |
| Ireland                          | 2.2                                                           | (0.5) | 3.7                                                                       | (0.4) | 10.6                                                                      | (0.7) | 22.6                                                                     | (0.9) | 30.2                                                                     | (1.0) | 22.6                                                                     | (1.1) | 7.2                                                         | (0.8) | 0.9                                             | (0.2) |
| Macao-China                      | 0.8                                                           | (0.1) | 3.7                                                                       | (0.3) | 12.1                                                                      | (0.5) | 26.3                                                                     | (0.6) | 31.7                                                                     | (0.8) | 19.6                                                                     | (0.5) | 5.3                                                         | (0.3) | 0.5                                             | (0.1) |
| Belgium                          | 1.7                                                           | (0.3) | 4.3                                                                       | (0.4) | 10.9                                                                      | (0.6) | 18.6                                                                     | (0.6) | 25.5                                                                     | (0.8) | 24.7                                                                     | (0.7) | 11.9                                                        | (0.6) | 2.5                                             | (0.3) |
| Saskatchewan                     | 1.8                                                           | (0.5) | 4.0                                                                       | (0.7) | 11.3                                                                      | (1.2) | 23.2                                                                     | (1.7) | 28.2                                                                     | (1.7) | 21.2                                                                     | (1.3) | 8.3                                                         | (1.1) | 2.0                                             | (0.5) |
| Hungary                          | 2.1                                                           | (0.5) | 4.7                                                                       | (0.6) | 10.9                                                                      | (0.8) | 21.0                                                                     | (0.9) | 27.6                                                                     | (1.2) | 23.6                                                                     | (1.1) | 9.0                                                         | (0.8) | 1.2                                             | (0.3) |
| Iceland                          | 2.0                                                           | (0.2) | 4.5                                                                       | (0.3) | 11.2                                                                      | (0.7) | 19.6                                                                     | (0.8) | 28.1                                                                     | (0.9) | 22.1                                                                     | (1.1) | 10.3                                                        | (0.8) | 2.3                                             | (0.3) |
| Poland                           | 1.5                                                           | (0.3) | 4.3                                                                       | (0.4) | 11.9                                                                      | (0.7) | 22.7                                                                     | (0.8) | 28.6                                                                     | (0.8) | 21.0                                                                     | (0.8) | 8.3                                                         | (0.5) | 1.8                                             | (0.3) |
| Portugal                         | 1.2                                                           | (0.2) | 4.6                                                                       | (0.5) | 12.8                                                                      | (0.8) | 25.7                                                                     | (1.2) | 30.5                                                                     | (1.3) | 19.3                                                                     | (1.1) | 5.3                                                         | (0.6) | 0.5                                             | (0.2) |
| Manitoba                         | 1.8                                                           | (0.4) | 4.5                                                                       | (0.7) | 13.3                                                                      | (1.1) | 23.0                                                                     | (1.3) | 26.9                                                                     | (1.4) | 20.8                                                                     | (1.3) | 8.4                                                         | (0.9) | 1.5                                             | (0.4) |
| Chinese Taipei                   | 2.0                                                           | (0.3) | 5.0                                                                       | (0.5) | 12.4                                                                      | (0.6) | 22.2                                                                     | (0.8) | 27.3                                                                     | (1.0) | 21.2                                                                     | (0.8) | 8.3                                                         | (0.7) | 1.6                                             | (0.3) |
| Germany                          | 1.5                                                           | (0.3) | 5.4                                                                       | (0.6) | 12.8                                                                      | (0.8) | 20.6                                                                     | (1.0) | 26.1                                                                     | (1.0) | 22.7                                                                     | (1.0) | 9.4                                                         | (0.8) | 1.6                                             | (0.3) |
| United States                    | 1.2                                                           | (0.3) | 4.9                                                                       | (0.5) | 13.8                                                                      | (0.8) | 24.8                                                                     | (0.8) | 27.5                                                                     | (1.0) | 19.2                                                                     | (0.9) | 7.2                                                         | (0.7) | 1.3                                             | (0.3) |
| Croatia                          | 1.7                                                           | (0.3) | 5.1                                                                       | (0.5) | 13.2                                                                      | (0.8) | 23.6                                                                     | (1.0) | 27.8                                                                     | (1.3) | 20.6                                                                     | (1.0) | 7.1                                                         | (0.6) | 1.0                                             | (0.2) |
| Slovenia                         | 1.8                                                           | (0.1) | 5.5                                                                       | (0.4) | 12.8                                                                      | (0.7) | 23.3                                                                     | (0.7) | 28.6                                                                     | (0.9) | 21.3                                                                     | (0.8) | 6.2                                                         | (0.5) | 0.4                                             | (0.2) |
| United Kingdom                   | 1.7                                                           | (0.3) | 4.8                                                                       | (0.4) | 13.6                                                                      | (0.6) | 23.4                                                                     | (0.9) | 28.3                                                                     | (0.9) | 19.8                                                                     | (0.9) | 7.1                                                         | (0.6) | 1.2                                             | (0.2) |
| New Brunswick                    | 1.2                                                           | (0.3) | 4.4                                                                       | (0.6) | 14.6                                                                      | (1.5) | 26.1                                                                     | (1.8) | 27.5                                                                     | (1.6) | 19.4                                                                     | (1.5) | 6.0                                                         | (0.8) | 0.8                                             | (0.4) |
| Slovak Republic                  | 1.8                                                           | (0.4) | 5.6                                                                       | (0.6) | 13.1                                                                      | (0.7) | 23.2                                                                     | (1.0) | 28.0                                                                     | (1.2) | 19.6                                                                     | (0.9) | 7.5                                                         | (0.6) | 1.3                                             | (0.3) |
| France                           | 3.0                                                           | (0.6) | 5.5                                                                       | (0.6) | 12.5                                                                      | (0.9) | 21.8                                                                     | (1.0) | 26.3                                                                     | (1.2) | 20.9                                                                     | (1.2) | 8.5                                                         | (0.9) | 1.4                                             | (0.3) |
| Spain                            | 2.5                                                           | (0.3) | 5.5                                                                       | (0.4) | 13.7                                                                      | (0.6) | 25.4                                                                     | (0.7) | 29.2                                                                     | (0.7) | 17.7                                                                     | (0.6) | 5.2                                                         | (0.4) | 0.7                                             | (0.1) |
| Latvia                           | 1.6                                                           | (0.3) | 5.2                                                                       | (0.6) | 15.4                                                                      | (1.0) | 27.0                                                                     | (1.0) | 30.2                                                                     | (1.2) | 16.7                                                                     | (1.1) | 3.5                                                         | (0.5) | 0.3                                             | (0.1) |
| Italy                            | 2.8                                                           | (0.3) | 6.4                                                                       | (0.3) | 13.9                                                                      | (0.4) | 22.9                                                                     | (0.5) | 27.6                                                                     | (0.5) | 19.7                                                                     | (0.5) | 6.1                                                         | (0.3) | 0.7                                             | (0.1) |
| Prince Edward Island             | 1.9                                                           | (0.4) | 6.4                                                                       | (0.8) | 15.3                                                                      | (1.2) | 23.8                                                                     | (1.6) | 28.0                                                                     | (1.6) | 17.7                                                                     | (1.2) | 5.9                                                         | (0.8) | 1.0                                             | (0.4) |
| Czech Republic                   | 1.6                                                           | (0.4) | 6.3                                                                       | (0.7) | 15.7                                                                      | (0.8) | 25.8                                                                     | (0.9) | 26.3                                                                     | (0.8) | 17.9                                                                     | (1.0) | 5.6                                                         | (0.5) | 0.7                                             | (0.2) |
| Lithuania                        | 2.1                                                           | (0.3) | 6.7                                                                       | (0.6) | 16.0                                                                      | (0.8) | 25.1                                                                     | (0.9) | 26.7                                                                     | (0.9) | 16.9                                                                     | (0.8) | 5.6                                                         | (0.5) | 0.9                                             | (0.2) |
| Turkey                           | 2.3                                                           | (0.5) | 6.4                                                                       | (0.6) | 16.6                                                                      | (0.9) | 28.8                                                                     | (1.1) | 27.3                                                                     | (1.0) | 14.9                                                                     | (1.1) | 3.4                                                         | (0.6) | 0.3                                             | (0.2) |

Table B.1.14 (concluded)

**Percent of students at each level for countries, provinces and economies:  
Accessing and retrieving**

| Country, economy<br>and province | Proficiency levels                                            |       |                                                                           |       |                                                                           |       |                                                                          |       |                                                                          |       |                                                                          |       |                                                             |       |                                                 |       |
|----------------------------------|---------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|-------------------------------------------------------------|-------|-------------------------------------------------|-------|
|                                  | Below<br>Level 1b<br>(less than<br>262.04<br>score<br>points) |       | Level 1b<br>(from<br>262.04 to<br>less than<br>334.75<br>score<br>points) |       | Level 1a<br>(from<br>334.75 to<br>less than<br>407.47<br>score<br>points) |       | Level 2<br>(from<br>407.47 to<br>less than<br>480.18<br>score<br>points) |       | Level 3<br>(from<br>480.18 to<br>less than<br>552.89<br>score<br>points) |       | Level 4<br>(from<br>552.89 to<br>less than<br>625.61<br>score<br>points) |       | Level 5<br>(from<br>625.61 to<br>698.32<br>score<br>points) |       | Level 6<br>(above<br>698.32<br>score<br>points) |       |
|                                  | %                                                             | S.E.  | %                                                                         | S.E.  | %                                                                         | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                           | S.E.  | %                                               | S.E.  |
| Russian Federation               | 2.6                                                           | (0.4) | 6.8                                                                       | (0.7) | 16.9                                                                      | (1.0) | 27.7                                                                     | (0.9) | 25.8                                                                     | (0.8) | 14.0                                                                     | (0.8) | 5.0                                                         | (0.5) | 1.1                                             | (0.3) |
| Austria                          | 2.7                                                           | (0.4) | 8.2                                                                       | (0.7) | 15.7                                                                      | (1.1) | 22.5                                                                     | (1.2) | 24.5                                                                     | (1.0) | 18.1                                                                     | (0.9) | 7.2                                                         | (0.7) | 1.0                                             | (0.3) |
| Greece                           | 3.3                                                           | (0.7) | 7.4                                                                       | (0.8) | 16.1                                                                      | (0.8) | 25.3                                                                     | (0.8) | 27.0                                                                     | (1.1) | 15.6                                                                     | (0.9) | 4.6                                                         | (0.4) | 0.6                                             | (0.1) |
| Luxembourg                       | 4.7                                                           | (0.4) | 7.6                                                                       | (0.4) | 15.6                                                                      | (0.6) | 22.4                                                                     | (0.9) | 24.9                                                                     | (0.8) | 17.1                                                                     | (0.7) | 6.7                                                         | (0.4) | 1.1                                             | (0.2) |
| Israel                           | 6.2                                                           | (0.9) | 8.8                                                                       | (0.6) | 15.2                                                                      | (0.8) | 21.8                                                                     | (0.9) | 24.3                                                                     | (0.8) | 16.3                                                                     | (0.7) | 6.2                                                         | (0.5) | 1.1                                             | (0.2) |
| Serbia                           | 3.2                                                           | (0.5) | 8.5                                                                       | (0.6) | 19.3                                                                      | (0.9) | 29.9                                                                     | (1.2) | 26.0                                                                     | (0.9) | 11.0                                                                     | (0.9) | 2.1                                                         | (0.3) | 0.1                                             | (0.1) |
| Dubai (UAE)                      | 5.3                                                           | (0.4) | 9.8                                                                       | (0.8) | 17.1                                                                      | (0.5) | 23.1                                                                     | (0.8) | 22.3                                                                     | (0.8) | 15.5                                                                     | (0.6) | 6.0                                                         | (0.4) | 0.8                                             | (0.2) |
| Chile                            | 2.7                                                           | (0.5) | 8.6                                                                       | (0.8) | 22.2                                                                      | (1.2) | 31.6                                                                     | (1.0) | 23.5                                                                     | (1.0) | 9.3                                                                      | (0.7) | 1.9                                                         | (0.3) | 0.1                                             | (0.1) |
| Mexico                           | 4.3                                                           | (0.4) | 10.3                                                                      | (0.4) | 22.8                                                                      | (0.6) | 30.7                                                                     | (0.6) | 23.0                                                                     | (0.6) | 7.6                                                                      | (0.4) | 1.2                                                         | (0.1) | 0.1                                             | (0.0) |
| Thailand                         | 2.6                                                           | (0.5) | 10.2                                                                      | (0.9) | 26.1                                                                      | (1.1) | 33.0                                                                     | (1.1) | 20.5                                                                     | (1.1) | 6.5                                                                      | (0.7) | 1.1                                                         | (0.3) | 0.1                                             | (0.1) |
| Bulgaria                         | 12.6                                                          | (1.5) | 11.5                                                                      | (0.9) | 16.7                                                                      | (1.1) | 20.1                                                                     | (1.2) | 20.0                                                                     | (1.3) | 12.9                                                                     | (1.2) | 5.0                                                         | (0.7) | 1.2                                             | (0.3) |
| Romania                          | 6.7                                                           | (0.9) | 12.3                                                                      | (1.1) | 22.5                                                                      | (1.1) | 28.3                                                                     | (1.1) | 21.1                                                                     | (1.2) | 7.8                                                                      | (0.8) | 1.1                                                         | (0.3) | 0.1                                             | (0.1) |
| Uruguay                          | 7.6                                                           | (0.6) | 12.8                                                                      | (0.8) | 22.2                                                                      | (1.0) | 25.7                                                                     | (0.8) | 19.9                                                                     | (0.8) | 9.2                                                                      | (0.6) | 2.4                                                         | (0.3) | 0.3                                             | (0.1) |
| Trinidad and Tobago              | 12.1                                                          | (0.6) | 13.7                                                                      | (0.7) | 19.7                                                                      | (0.9) | 23.1                                                                     | (0.7) | 18.8                                                                     | (0.6) | 9.3                                                                      | (0.5) | 2.8                                                         | (0.3) | 0.5                                             | (0.1) |
| Montenegro                       | 11.2                                                          | (0.7) | 15.7                                                                      | (1.0) | 21.7                                                                      | (0.7) | 23.8                                                                     | (0.7) | 16.8                                                                     | (0.7) | 8.0                                                                      | (0.5) | 2.4                                                         | (0.3) | 0.4                                             | (0.2) |
| Brazil                           | 8.7                                                           | (0.6) | 16.5                                                                      | (0.6) | 25.4                                                                      | (0.9) | 24.9                                                                     | (0.8) | 15.4                                                                     | (0.7) | 6.9                                                                      | (0.6) | 1.9                                                         | (0.3) | 0.3                                             | (0.1) |
| Colombia                         | 6.3                                                           | (0.8) | 15.5                                                                      | (1.0) | 29.3                                                                      | (1.1) | 28.4                                                                     | (1.0) | 15.6                                                                     | (0.9) | 4.3                                                                      | (0.5) | 0.6                                                         | (0.2) | 0.1                                             | (0.1) |
| Argentina                        | 12.9                                                          | (1.1) | 16.0                                                                      | (1.0) | 24.0                                                                      | (1.3) | 23.8                                                                     | (1.2) | 15.6                                                                     | (1.2) | 6.4                                                                      | (0.8) | 1.2                                                         | (0.3) | 0.1                                             | (0.1) |
| Jordan                           | 11.7                                                          | (0.8) | 15.2                                                                      | (0.8) | 26.1                                                                      | (1.0) | 25.4                                                                     | (0.8) | 15.2                                                                     | (0.8) | 5.2                                                                      | (0.5) | 1.0                                                         | (0.2) | 0.2                                             | (0.1) |
| Indonesia                        | 6.8                                                           | (0.9) | 17.0                                                                      | (1.2) | 29.3                                                                      | (1.3) | 28.4                                                                     | (1.1) | 14.1                                                                     | (1.1) | 3.9                                                                      | (0.7) | 0.5                                                         | (0.2) | 0.0                                             | (0.0) |
| Kazakhstan                       | 10.8                                                          | (0.8) | 18.1                                                                      | (0.9) | 25.0                                                                      | (0.9) | 23.0                                                                     | (0.9) | 14.9                                                                     | (0.8) | 6.5                                                                      | (0.7) | 1.5                                                         | (0.3) | 0.3                                             | (0.1) |
| Tunisia                          | 9.9                                                           | (0.7) | 17.7                                                                      | (1.0) | 27.4                                                                      | (1.0) | 25.1                                                                     | (1.0) | 14.3                                                                     | (1.0) | 4.7                                                                      | (0.6) | 0.9                                                         | (0.2) | 0.1                                             | (0.1) |
| Albania                          | 14.8                                                          | (1.2) | 17.8                                                                      | (1.3) | 24.6                                                                      | (1.1) | 23.4                                                                     | (1.1) | 14.7                                                                     | (1.2) | 4.3                                                                      | (0.7) | 0.4                                                         | (0.2) | 0.0                                             | (0.0) |
| Panama                           | 19.4                                                          | (2.2) | 21.3                                                                      | (1.7) | 24.2                                                                      | (1.5) | 18.4                                                                     | (1.2) | 10.6                                                                     | (1.3) | 4.7                                                                      | (0.9) | 1.1                                                         | (0.3) | 0.2                                             | (0.1) |
| Peru                             | 16.8                                                          | (1.1) | 21.7                                                                      | (1.2) | 26.8                                                                      | (1.1) | 21.4                                                                     | (1.1) | 9.8                                                                      | (0.9) | 2.7                                                                      | (0.5) | 0.6                                                         | (0.2) | 0.1                                             | (0.1) |
| Qatar                            | 26.0                                                          | (0.5) | 19.8                                                                      | (0.5) | 19.9                                                                      | (0.6) | 16.1                                                                     | (0.6) | 10.2                                                                     | (0.4) | 5.5                                                                      | (0.2) | 2.0                                                         | (0.2) | 0.5                                             | (0.1) |
| Azerbaijan                       | 16.9                                                          | (1.4) | 22.5                                                                      | (1.1) | 27.6                                                                      | (1.0) | 20.7                                                                     | (1.0) | 9.3                                                                      | (0.7) | 2.6                                                                      | (0.4) | 0.4                                                         | (0.2) | 0.0                                             | (0.0) |
| Kyrgyzstan                       | 38.1                                                          | (1.3) | 23.7                                                                      | (0.9) | 19.7                                                                      | (0.8) | 11.4                                                                     | (0.8) | 5.0                                                                      | (0.6) | 1.7                                                                      | (0.3) | 0.4                                                         | (0.2) | 0.1                                             | (0.0) |

0 true zero or a value rounded to zero

S.E. Standard error

**Note:** Countries, economies and provinces have been sorted by the total percentage of students who attained level 2 or higher.

Table B.1.15

Percent of students at each level for countries, provinces and economies:  
Integrating and interpreting

| Country, economy<br>and province | Proficiency levels                                            |       |                                                                           |       |                                                                           |       |                                                                          |       |                                                                          |       |                                                                          |       |                                                             |       |                                                 |       |
|----------------------------------|---------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|-------------------------------------------------------------|-------|-------------------------------------------------|-------|
|                                  | Below<br>Level 1b<br>(less than<br>262.04<br>score<br>points) |       | Level 1b<br>(from<br>262.04 to<br>less than<br>334.75<br>score<br>points) |       | Level 1a<br>(from<br>334.75 to<br>less than<br>407.47<br>score<br>points) |       | Level 2<br>(from<br>407.47 to<br>less than<br>480.18<br>score<br>points) |       | Level 3<br>(from<br>480.18 to<br>less than<br>552.89<br>score<br>points) |       | Level 4<br>(from<br>552.89 to<br>less than<br>625.61<br>score<br>points) |       | Level 5<br>(from<br>625.61 to<br>698.32<br>score<br>points) |       | Level 6<br>(above<br>698.32<br>score<br>points) |       |
|                                  | %                                                             | S.E.  | %                                                                         | S.E.  | %                                                                         | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                           | S.E.  | %                                               | S.E.  |
| Shanghai-China                   | 0.0                                                           | (0.0) | 0.5                                                                       | (0.2) | 3.4                                                                       | (0.5) | 13.3                                                                     | (0.8) | 28.3                                                                     | (1.2) | 33.2                                                                     | (0.9) | 18.0                                                        | (0.9) | 3.1                                             | (0.4) |
| Korea                            | 0.2                                                           | (0.1) | 0.9                                                                       | (0.4) | 4.8                                                                       | (0.6) | 15.7                                                                     | (1.1) | 31.7                                                                     | (1.1) | 32.4                                                                     | (1.3) | 12.9                                                        | (1.2) | 1.4                                             | (0.2) |
| Finland                          | 0.2                                                           | (0.1) | 1.3                                                                       | (0.2) | 6.3                                                                       | (0.4) | 16.8                                                                     | (0.7) | 29.7                                                                     | (0.8) | 30.0                                                                     | (0.9) | 13.6                                                        | (0.7) | 2.2                                             | (0.3) |
| Hong Kong-China                  | 0.4                                                           | (0.2) | 2.0                                                                       | (0.3) | 7.0                                                                       | (0.6) | 17.8                                                                     | (0.9) | 30.2                                                                     | (1.0) | 29.3                                                                     | (1.2) | 11.5                                                        | (0.7) | 1.8                                             | (0.2) |
| Ontario                          | 0.3                                                           | (0.2) | 1.8                                                                       | (0.4) | 8.2                                                                       | (0.7) | 20.2                                                                     | (1.2) | 29.3                                                                     | (1.2) | 25.3                                                                     | (1.0) | 12.6                                                        | (0.9) | 2.4                                             | (0.4) |
| Alberta                          | 0.2                                                           | (0.1) | 2.0                                                                       | (0.5) | 8.6                                                                       | (1.1) | 19.9                                                                     | (1.4) | 26.3                                                                     | (1.2) | 25.9                                                                     | (1.5) | 13.0                                                        | (1.1) | 4.1                                             | (0.9) |
| Nova Scotia                      | 0.6                                                           | (0.3) | 2.3                                                                       | (0.5) | 9.0                                                                       | (0.8) | 22.6                                                                     | (1.7) | 31.1                                                                     | (2.0) | 24.1                                                                     | (1.4) | 9.0                                                         | (1.2) | 1.5                                             | (0.4) |
| Quebec                           | 0.5                                                           | (0.1) | 2.4                                                                       | (0.5) | 9.0                                                                       | (0.9) | 20.1                                                                     | (1.1) | 29.2                                                                     | (1.0) | 26.2                                                                     | (1.1) | 10.8                                                        | (0.8) | 1.9                                             | (0.4) |
| Canada                           | 0.4                                                           | (0.1) | 2.3                                                                       | (0.2) | 9.1                                                                       | (0.4) | 20.7                                                                     | (0.6) | 28.8                                                                     | (0.6) | 25.0                                                                     | (0.5) | 11.4                                                        | (0.4) | 2.3                                             | (0.2) |
| British Columbia                 | 0.3                                                           | (0.2) | 2.6                                                                       | (0.5) | 9.2                                                                       | (1.0) | 20.2                                                                     | (1.3) | 28.7                                                                     | (1.3) | 25.1                                                                     | (1.3) | 11.7                                                        | (1.1) | 2.2                                             | (0.6) |
| Singapore                        | 0.6                                                           | (0.1) | 3.1                                                                       | (0.3) | 9.9                                                                       | (0.5) | 19.2                                                                     | (0.7) | 26.2                                                                     | (0.7) | 24.8                                                                     | (0.9) | 12.9                                                        | (0.6) | 3.5                                             | (0.3) |
| Japan                            | 1.2                                                           | (0.3) | 3.4                                                                       | (0.5) | 9.3                                                                       | (0.7) | 18.9                                                                     | (0.8) | 27.1                                                                     | (0.9) | 26.2                                                                     | (1.1) | 11.3                                                        | (0.7) | 2.6                                             | (0.5) |
| Estonia                          | 0.2                                                           | (0.1) | 2.4                                                                       | (0.4) | 11.6                                                                      | (0.8) | 25.4                                                                     | (1.1) | 33.2                                                                     | (1.1) | 20.9                                                                     | (0.9) | 5.6                                                         | (0.5) | 0.7                                             | (0.2) |
| Macao-China                      | 0.2                                                           | (0.1) | 2.5                                                                       | (0.2) | 12.4                                                                      | (0.5) | 30.4                                                                     | (0.7) | 33.7                                                                     | (0.7) | 17.5                                                                     | (0.5) | 3.3                                                         | (0.3) | 0.1                                             | (0.1) |
| Poland                           | 0.5                                                           | (0.1) | 3.1                                                                       | (0.4) | 11.5                                                                      | (0.7) | 24.5                                                                     | (0.9) | 29.9                                                                     | (1.0) | 22.0                                                                     | (0.9) | 7.5                                                         | (0.6) | 1.0                                             | (0.2) |
| Chinese Taipei                   | 0.4                                                           | (0.2) | 3.2                                                                       | (0.4) | 11.6                                                                      | (0.6) | 24.5                                                                     | (0.9) | 32.7                                                                     | (1.0) | 21.3                                                                     | (0.9) | 5.9                                                         | (0.7) | 0.5                                             | (0.2) |
| Newfoundland and<br>Labrador     | 0.4                                                           | (0.4) | 3.1                                                                       | (0.6) | 11.7                                                                      | (1.5) | 25.2                                                                     | (1.5) | 29.8                                                                     | (1.6) | 21.1                                                                     | (1.4) | 7.7                                                         | (0.9) | 1.0                                             | (0.5) |
| New Zealand                      | 1.0                                                           | (0.3) | 3.6                                                                       | (0.5) | 10.9                                                                      | (0.6) | 20.3                                                                     | (0.7) | 25.2                                                                     | (0.8) | 23.3                                                                     | (0.8) | 12.5                                                        | (0.8) | 3.1                                             | (0.4) |
| Australia                        | 1.0                                                           | (0.1) | 3.8                                                                       | (0.3) | 10.9                                                                      | (0.5) | 20.7                                                                     | (0.5) | 27.6                                                                     | (0.7) | 22.9                                                                     | (0.6) | 10.5                                                        | (0.5) | 2.7                                             | (0.4) |
| Denmark                          | 0.5                                                           | (0.1) | 3.1                                                                       | (0.4) | 12.3                                                                      | (0.6) | 26.8                                                                     | (0.9) | 33.0                                                                     | (0.9) | 19.8                                                                     | (0.9) | 4.4                                                         | (0.5) | 0.2                                             | (0.1) |
| Norway                           | 0.6                                                           | (0.2) | 3.7                                                                       | (0.5) | 11.9                                                                      | (0.7) | 23.7                                                                     | (1.1) | 30.0                                                                     | (1.1) | 20.9                                                                     | (1.0) | 8.2                                                         | (0.6) | 1.1                                             | (0.2) |
| Saskatchewan                     | 0.7                                                           | (0.3) | 3.4                                                                       | (0.6) | 12.5                                                                      | (1.4) | 23.7                                                                     | (1.9) | 29.2                                                                     | (1.7) | 21.8                                                                     | (1.8) | 7.5                                                         | (0.8) | 1.2                                             | (0.3) |
| Netherlands                      | 0.1                                                           | (0.1) | 2.7                                                                       | (0.4) | 14.1                                                                      | (1.5) | 24.4                                                                     | (1.2) | 26.2                                                                     | (1.2) | 21.7                                                                     | (1.7) | 9.6                                                         | (0.9) | 1.3                                             | (0.3) |
| Liechtenstein                    | 0.0                                                           | (0.0) | 4.4                                                                       | (1.2) | 12.2                                                                      | (2.1) | 23.5                                                                     | (2.5) | 30.5                                                                     | (3.2) | 23.2                                                                     | (2.7) | 5.2                                                         | (1.8) | 0.8                                             | (0.6) |
| Hungary                          | 0.5                                                           | (0.2) | 3.7                                                                       | (0.6) | 12.8                                                                      | (0.9) | 24.3                                                                     | (1.3) | 30.7                                                                     | (1.2) | 21.7                                                                     | (1.2) | 6.0                                                         | (0.7) | 0.4                                             | (0.1) |
| New Brunswick                    | 0.6                                                           | (0.2) | 3.2                                                                       | (0.5) | 13.1                                                                      | (1.3) | 24.7                                                                     | (1.8) | 29.2                                                                     | (1.6) | 20.4                                                                     | (1.6) | 7.3                                                         | (0.8) | 1.4                                             | (0.5) |
| Iceland                          | 1.1                                                           | (0.2) | 4.1                                                                       | (0.5) | 11.9                                                                      | (0.8) | 21.5                                                                     | (0.7) | 29.4                                                                     | (0.9) | 22.2                                                                     | (0.8) | 8.5                                                         | (0.6) | 1.3                                             | (0.3) |
| Latvia                           | 0.4                                                           | (0.1) | 2.7                                                                       | (0.5) | 14.2                                                                      | (1.0) | 29.8                                                                     | (1.2) | 32.7                                                                     | (1.1) | 17.1                                                                     | (1.0) | 3.0                                                         | (0.4) | 0.1                                             | (0.1) |
| Switzerland                      | 0.8                                                           | (0.2) | 4.3                                                                       | (0.4) | 12.5                                                                      | (0.7) | 22.4                                                                     | (0.7) | 28.0                                                                     | (0.9) | 22.7                                                                     | (1.0) | 8.2                                                         | (0.7) | 1.3                                             | (0.3) |
| Germany                          | 0.7                                                           | (0.2) | 4.2                                                                       | (0.4) | 12.9                                                                      | (0.8) | 22.4                                                                     | (0.9) | 27.9                                                                     | (1.2) | 22.7                                                                     | (1.2) | 8.3                                                         | (0.7) | 0.9                                             | (0.2) |
| Ireland                          | 1.5                                                           | (0.4) | 4.1                                                                       | (0.6) | 12.6                                                                      | (0.8) | 24.0                                                                     | (0.9) | 29.3                                                                     | (1.1) | 20.9                                                                     | (0.9) | 6.9                                                         | (0.6) | 0.8                                             | (0.2) |
| Portugal                         | 0.5                                                           | (0.2) | 3.9                                                                       | (0.4) | 14.4                                                                      | (0.9) | 27.2                                                                     | (0.9) | 30.6                                                                     | (1.2) | 18.1                                                                     | (0.8) | 4.8                                                         | (0.6) | 0.4                                             | (0.2) |
| Sweden                           | 1.9                                                           | (0.3) | 4.6                                                                       | (0.6) | 12.7                                                                      | (0.9) | 23.4                                                                     | (1.0) | 28.5                                                                     | (1.0) | 19.4                                                                     | (1.0) | 8.1                                                         | (0.6) | 1.5                                             | (0.3) |
| Belgium                          | 1.4                                                           | (0.3) | 5.1                                                                       | (0.4) | 12.6                                                                      | (0.6) | 20.5                                                                     | (0.7) | 24.9                                                                     | (0.7) | 23.3                                                                     | (0.8) | 10.6                                                        | (0.6) | 1.5                                             | (0.3) |
| Manitoba                         | 0.8                                                           | (0.3) | 4.3                                                                       | (0.8) | 14.3                                                                      | (1.5) | 26.1                                                                     | (1.5) | 26.3                                                                     | (1.6) | 19.8                                                                     | (1.3) | 7.4                                                         | (1.1) | 1.0                                             | (0.3) |
| Italy                            | 1.1                                                           | (0.2) | 4.6                                                                       | (0.3) | 13.9                                                                      | (0.4) | 24.4                                                                     | (0.6) | 29.2                                                                     | (0.6) | 20.4                                                                     | (0.5) | 5.9                                                         | (0.3) | 0.6                                             | (0.1) |
| Spain                            | 1.1                                                           | (0.2) | 4.5                                                                       | (0.5) | 14.0                                                                      | (0.7) | 27.5                                                                     | (0.7) | 32.2                                                                     | (0.9) | 17.2                                                                     | (0.6) | 3.3                                                         | (0.2) | 0.2                                             | (0.1) |
| Slovenia                         | 0.4                                                           | (0.1) | 4.5                                                                       | (0.4) | 15.0                                                                      | (0.7) | 25.2                                                                     | (1.0) | 29.2                                                                     | (0.9) | 20.0                                                                     | (0.8) | 5.4                                                         | (0.5) | 0.4                                             | (0.1) |
| United States                    | 0.7                                                           | (0.2) | 4.7                                                                       | (0.5) | 14.5                                                                      | (0.8) | 24.9                                                                     | (0.8) | 26.0                                                                     | (0.8) | 19.1                                                                     | (0.9) | 8.2                                                         | (0.7) | 1.8                                             | (0.4) |
| United Kingdom                   | 1.0                                                           | (0.2) | 4.5                                                                       | (0.4) | 14.6                                                                      | (0.7) | 25.0                                                                     | (0.8) | 28.1                                                                     | (0.8) | 18.5                                                                     | (0.7) | 7.1                                                         | (0.5) | 1.2                                             | (0.2) |
| Czech Republic                   | 0.6                                                           | (0.2) | 4.5                                                                       | (0.5) | 15.5                                                                      | (0.9) | 26.3                                                                     | (1.1) | 27.3                                                                     | (1.1) | 18.7                                                                     | (1.2) | 6.4                                                         | (0.6) | 0.7                                             | (0.2) |
| France                           | 2.6                                                           | (0.5) | 5.8                                                                       | (0.6) | 12.3                                                                      | (0.8) | 20.4                                                                     | (1.0) | 25.7                                                                     | (1.1) | 21.6                                                                     | (1.0) | 9.9                                                         | (0.8) | 1.8                                             | (0.3) |
| Greece                           | 1.0                                                           | (0.3) | 5.0                                                                       | (0.7) | 14.7                                                                      | (1.1) | 26.5                                                                     | (0.9) | 28.5                                                                     | (1.1) | 18.5                                                                     | (1.1) | 5.1                                                         | (0.5) | 0.6                                             | (0.2) |
| Slovak Republic                  | 0.6                                                           | (0.3) | 4.7                                                                       | (0.6) | 16.0                                                                      | (0.8) | 28.1                                                                     | (1.0) | 28.6                                                                     | (1.2) | 17.2                                                                     | (0.9) | 4.5                                                         | (0.5) | 0.4                                             | (0.1) |
| Croatia                          | 0.6                                                           | (0.2) | 4.9                                                                       | (0.6) | 17.0                                                                      | (1.1) | 29.3                                                                     | (1.0) | 30.9                                                                     | (1.1) | 15.0                                                                     | (1.0) | 2.2                                                         | (0.3) | 0.1                                             | (0.1) |
| Prince Edward Island             | 1.4                                                           | (0.4) | 6.2                                                                       | (0.8) | 15.1                                                                      | (1.3) | 25.4                                                                     | (1.9) | 27.0                                                                     | (1.5) | 18.1                                                                     | (1.3) | 5.9                                                         | (0.7) | 0.9                                             | (0.4) |
| Lithuania                        | 0.8                                                           | (0.2) | 4.9                                                                       | (0.5) | 18.5                                                                      | (0.9) | 31.2                                                                     | (1.3) | 27.7                                                                     | (1.0) | 13.8                                                                     | (0.8) | 2.9                                                         | (0.4) | 0.1                                             | (0.1) |

Table B.1.15 (concluded)

**Percent of students at each level for countries, provinces and economies:  
Integrating and interpreting**

| Country, economy<br>and province | Proficiency levels                                            |       |                                                                           |       |                                                                           |       |                                                                          |       |                                                                          |       |                                                                          |       |                                                             |       |                                                 |       |
|----------------------------------|---------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|-------------------------------------------------------------|-------|-------------------------------------------------|-------|
|                                  | Below<br>Level 1b<br>(less than<br>262.04<br>score<br>points) |       | Level 1b<br>(from<br>262.04 to<br>less than<br>334.75<br>score<br>points) |       | Level 1a<br>(from<br>334.75 to<br>less than<br>407.47<br>score<br>points) |       | Level 2<br>(from<br>407.47 to<br>less than<br>480.18<br>score<br>points) |       | Level 3<br>(from<br>480.18 to<br>less than<br>552.89<br>score<br>points) |       | Level 4<br>(from<br>552.89 to<br>less than<br>625.61<br>score<br>points) |       | Level 5<br>(from<br>625.61 to<br>698.32<br>score<br>points) |       | Level 6<br>(above<br>698.32<br>score<br>points) |       |
|                                  | %                                                             | S.E.  | %                                                                         | S.E.  | %                                                                         | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                           | S.E.  | %                                               | S.E.  |
| Russian Federation               | 1.2                                                           | (0.3) | 6.0                                                                       | (0.6) | 17.9                                                                      | (0.9) | 31.0                                                                     | (1.0) | 27.0                                                                     | (1.1) | 13.0                                                                     | (1.0) | 3.6                                                         | (0.5) | 0.4                                             | (0.1) |
| Luxembourg                       | 2.6                                                           | (0.3) | 7.1                                                                       | (0.4) | 16.2                                                                      | (0.6) | 23.8                                                                     | (0.8) | 26.0                                                                     | (0.8) | 17.7                                                                     | (0.6) | 5.9                                                         | (0.4) | 0.7                                             | (0.2) |
| Turkey                           | 0.4                                                           | (0.1) | 5.3                                                                       | (0.6) | 20.5                                                                      | (1.0) | 33.8                                                                     | (1.1) | 27.8                                                                     | (1.2) | 11.0                                                                     | (1.1) | 1.2                                                         | (0.3) | 0.0                                             | (0.0) |
| Israel                           | 3.5                                                           | (0.6) | 8.2                                                                       | (0.7) | 15.3                                                                      | (0.7) | 22.9                                                                     | (1.0) | 25.4                                                                     | (1.0) | 17.7                                                                     | (0.7) | 6.3                                                         | (0.5) | 0.9                                             | (0.2) |
| Austria                          | 1.8                                                           | (0.3) | 7.5                                                                       | (0.6) | 17.6                                                                      | (0.9) | 25.2                                                                     | (1.3) | 25.7                                                                     | (1.0) | 17.1                                                                     | (1.0) | 4.7                                                         | (0.5) | 0.4                                             | (0.1) |
| Chile                            | 1.3                                                           | (0.2) | 7.5                                                                       | (0.7) | 21.2                                                                      | (1.1) | 32.6                                                                     | (1.2) | 25.5                                                                     | (1.0) | 9.9                                                                      | (0.8) | 1.9                                                         | (0.4) | 0.1                                             | (0.1) |
| Serbia                           | 1.7                                                           | (0.3) | 8.4                                                                       | (0.6) | 22.3                                                                      | (0.9) | 32.7                                                                     | (0.8) | 25.4                                                                     | (0.8) | 8.4                                                                      | (0.6) | 1.1                                                         | (0.2) | 0.0                                             | (0.0) |
| Dubai (UAE)                      | 3.5                                                           | (0.3) | 9.6                                                                       | (0.6) | 19.4                                                                      | (0.6) | 25.5                                                                     | (0.9) | 22.7                                                                     | (0.8) | 14.1                                                                     | (0.6) | 4.6                                                         | (0.5) | 0.6                                             | (0.2) |
| Bulgaria                         | 5.6                                                           | (0.8) | 12.7                                                                      | (1.3) | 20.5                                                                      | (1.4) | 24.9                                                                     | (1.4) | 21.8                                                                     | (1.5) | 11.4                                                                     | (1.1) | 2.7                                                         | (0.5) | 0.3                                             | (0.1) |
| Romania                          | 3.4                                                           | (0.5) | 12.4                                                                      | (1.0) | 25.1                                                                      | (1.3) | 32.2                                                                     | (1.3) | 20.6                                                                     | (1.3) | 5.7                                                                      | (0.7) | 0.7                                                         | (0.2) | 0.0                                             | (0.0) |
| Uruguay                          | 5.1                                                           | (0.6) | 13.1                                                                      | (0.8) | 24.9                                                                      | (0.9) | 29.0                                                                     | (0.9) | 19.1                                                                     | (0.7) | 7.3                                                                      | (0.5) | 1.5                                                         | (0.3) | 0.1                                             | (0.1) |
| Mexico                           | 4.1                                                           | (0.4) | 13.0                                                                      | (0.6) | 26.9                                                                      | (0.6) | 31.3                                                                     | (0.6) | 19.1                                                                     | (0.6) | 5.1                                                                      | (0.4) | 0.5                                                         | (0.1) | 0.0                                             | (0.0) |
| Montenegro                       | 3.7                                                           | (0.3) | 12.8                                                                      | (0.7) | 27.8                                                                      | (0.9) | 30.6                                                                     | (0.8) | 18.8                                                                     | (0.7) | 5.7                                                                      | (0.4) | 0.7                                                         | (0.3) | 0.0                                             | (0.0) |
| Trinidad and Tobago              | 8.2                                                           | (0.6) | 14.3                                                                      | (0.6) | 22.0                                                                      | (0.8) | 25.9                                                                     | (1.0) | 18.5                                                                     | (0.8) | 8.6                                                                      | (0.6) | 2.2                                                         | (0.3) | 0.2                                             | (0.1) |
| Jordan                           | 4.8                                                           | (0.6) | 12.9                                                                      | (0.9) | 28.3                                                                      | (1.1) | 33.9                                                                     | (1.0) | 17.1                                                                     | (1.0) | 3.0                                                                      | (0.4) | 0.1                                                         | (0.1) | 0.0                                             | (0.0) |
| Thailand                         | 1.4                                                           | (0.3) | 11.1                                                                      | (0.9) | 33.6                                                                      | (1.1) | 35.6                                                                     | (1.2) | 15.2                                                                     | (0.8) | 3.0                                                                      | (0.5) | 0.2                                                         | (0.1) | 0.0                                             | (0.0) |
| Colombia                         | 4.7                                                           | (0.8) | 14.7                                                                      | (1.1) | 28.9                                                                      | (1.2) | 29.8                                                                     | (1.1) | 16.5                                                                     | (1.0) | 4.7                                                                      | (0.5) | 0.6                                                         | (0.2) | 0.0                                             | (0.0) |
| Argentina                        | 10.8                                                          | (1.1) | 16.4                                                                      | (1.0) | 25.0                                                                      | (1.1) | 25.0                                                                     | (1.3) | 15.5                                                                     | (1.1) | 6.0                                                                      | (0.8) | 1.2                                                         | (0.3) | 0.1                                             | (0.1) |
| Brazil                           | 5.5                                                           | (0.4) | 17.4                                                                      | (0.7) | 29.3                                                                      | (0.8) | 26.3                                                                     | (0.8) | 14.7                                                                     | (0.8) | 5.5                                                                      | (0.5) | 1.1                                                         | (0.2) | 0.1                                             | (0.1) |
| Albania                          | 9.6                                                           | (0.8) | 17.4                                                                      | (1.0) | 26.7                                                                      | (1.4) | 27.1                                                                     | (1.0) | 15.1                                                                     | (1.2) | 3.9                                                                      | (0.5) | 0.3                                                         | (0.1) | 0.0                                             | (0.0) |
| Tunisia                          | 5.6                                                           | (0.6) | 17.2                                                                      | (1.0) | 32.9                                                                      | (1.3) | 30.3                                                                     | (1.3) | 11.9                                                                     | (0.8) | 1.9                                                                      | (0.4) | 0.1                                                         | (0.1) | 0.0                                             | (0.0) |
| Indonesia                        | 1.8                                                           | (0.4) | 15.4                                                                      | (1.3) | 39.1                                                                      | (1.6) | 33.3                                                                     | (1.5) | 9.5                                                                      | (1.2) | 0.9                                                                      | (0.3) | 0.0                                                         | (0.0) | 0.0                                             | (0.0) |
| Kazakhstan                       | 5.2                                                           | (0.4) | 19.3                                                                      | (1.3) | 31.8                                                                      | (1.1) | 26.0                                                                     | (0.9) | 13.7                                                                     | (0.9) | 3.6                                                                      | (0.5) | 0.4                                                         | (0.1) | 0.0                                             | (0.0) |
| Qatar                            | 12.9                                                          | (0.4) | 23.7                                                                      | (0.6) | 26.3                                                                      | (0.6) | 19.6                                                                     | (0.7) | 11.3                                                                     | (0.3) | 4.8                                                                      | (0.3) | 1.2                                                         | (0.2) | 0.1                                             | (0.1) |
| Peru                             | 14.0                                                          | (1.0) | 22.3                                                                      | (1.1) | 27.9                                                                      | (1.1) | 21.9                                                                     | (0.9) | 10.1                                                                     | (0.8) | 3.1                                                                      | (0.5) | 0.6                                                         | (0.2) | 0.1                                             | (0.1) |
| Panama                           | 11.3                                                          | (1.6) | 23.7                                                                      | (1.9) | 30.8                                                                      | (1.8) | 21.2                                                                     | (1.6) | 9.9                                                                      | (1.4) | 2.7                                                                      | (0.6) | 0.4                                                         | (0.1) | 0.0                                             | (0.0) |
| Azerbaijan                       | 5.3                                                           | (0.7) | 23.4                                                                      | (1.4) | 40.1                                                                      | (1.2) | 25.8                                                                     | (1.4) | 5.1                                                                      | (0.7) | 0.3                                                                      | (0.2) | 0.0                                                         | (0.0) | 0.0                                             | (0.0) |
| Kyrgyzstan                       | 22.4                                                          | (1.3) | 32.0                                                                      | (1.4) | 28.1                                                                      | (0.9) | 13.0                                                                     | (0.8) | 3.7                                                                      | (0.4) | 0.7                                                                      | (0.2) | 0.0                                                         | (0.0) | 0.0                                             | (0.0) |

0 true zero or a value rounded to zero

S.E. Standard error

**Note:** Countries, economies and provinces have been sorted by the total percentage of students who attained level 2 or higher.

Table B.1.16

Percent of students at each level for countries, provinces and economies:  
Reflecting and evaluating

| Country, economy<br>and province | Proficiency levels                                            |       |                                                                           |       |                                                                           |       |                                                                          |       |                                                                          |       |                                                                          |       |                                                             |       |                                                 |       |
|----------------------------------|---------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|-------------------------------------------------------------|-------|-------------------------------------------------|-------|
|                                  | Below<br>Level 1b<br>(less than<br>262.04<br>score<br>points) |       | Level 1b<br>(from<br>262.04 to<br>less than<br>334.75<br>score<br>points) |       | Level 1a<br>(from<br>334.75 to<br>less than<br>407.47<br>score<br>points) |       | Level 2<br>(from<br>407.47 to<br>less than<br>480.18<br>score<br>points) |       | Level 3<br>(from<br>480.18 to<br>less than<br>552.89<br>score<br>points) |       | Level 4<br>(from<br>552.89 to<br>less than<br>625.61<br>score<br>points) |       | Level 5<br>(from<br>625.61 to<br>698.32<br>score<br>points) |       | Level 6<br>(above<br>698.32<br>score<br>points) |       |
|                                  | %                                                             | S.E.  | %                                                                         | S.E.  | %                                                                         | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                           | S.E.  | %                                               | S.E.  |
| Shanghai-China                   | 0.2                                                           | (0.1) | 0.6                                                                       | (0.2) | 4.2                                                                       | (0.5) | 13.2                                                                     | (0.7) | 27.6                                                                     | (0.9) | 32.9                                                                     | (0.8) | 17.9                                                        | (0.8) | 3.4                                             | (0.4) |
| Korea                            | 0.3                                                           | (0.1) | 1.1                                                                       | (0.4) | 5.3                                                                       | (0.7) | 15.5                                                                     | (1.1) | 30.1                                                                     | (1.4) | 31.7                                                                     | (1.3) | 14.0                                                        | (1.1) | 2.0                                             | (0.4) |
| Ontario                          | 0.3                                                           | (0.1) | 1.2                                                                       | (0.3) | 5.2                                                                       | (0.6) | 16.1                                                                     | (1.0) | 28.1                                                                     | (1.2) | 29.9                                                                     | (1.4) | 15.7                                                        | (0.9) | 3.4                                             | (0.6) |
| Finland                          | 0.4                                                           | (0.1) | 1.3                                                                       | (0.2) | 6.3                                                                       | (0.6) | 16.9                                                                     | (0.7) | 30.5                                                                     | (0.9) | 30.0                                                                     | (0.9) | 12.8                                                        | (0.7) | 1.8                                             | (0.3) |
| Hong Kong-China                  | 0.2                                                           | (0.1) | 1.6                                                                       | (0.3) | 6.2                                                                       | (0.5) | 14.7                                                                     | (0.7) | 29.9                                                                     | (1.3) | 32.0                                                                     | (1.2) | 13.5                                                        | (0.9) | 1.9                                             | (0.2) |
| Canada                           | 0.3                                                           | (0.1) | 1.8                                                                       | (0.1) | 6.5                                                                       | (0.4) | 17.6                                                                     | (0.5) | 29.4                                                                     | (0.6) | 28.5                                                                     | (0.6) | 13.2                                                        | (0.4) | 2.7                                             | (0.3) |
| Alberta                          | 0.2                                                           | (0.1) | 1.5                                                                       | (0.4) | 7.0                                                                       | (1.1) | 16.0                                                                     | (1.3) | 26.6                                                                     | (1.1) | 27.9                                                                     | (1.2) | 15.9                                                        | (1.4) | 4.9                                             | (0.9) |
| Nova Scotia                      | 0.4                                                           | (0.2) | 2.2                                                                       | (0.4) | 6.1                                                                       | (0.8) | 19.6                                                                     | (1.7) | 32.1                                                                     | (2.0) | 27.2                                                                     | (1.4) | 10.5                                                        | (1.0) | 1.9                                             | (0.4) |
| Quebec                           | 0.3                                                           | (0.1) | 1.9                                                                       | (0.4) | 6.5                                                                       | (0.8) | 18.9                                                                     | (1.0) | 32.8                                                                     | (1.3) | 29.2                                                                     | (1.4) | 9.5                                                         | (0.8) | 0.8                                             | (0.2) |
| British Columbia                 | 0.4                                                           | (0.2) | 1.9                                                                       | (0.4) | 7.1                                                                       | (0.8) | 17.1                                                                     | (1.4) | 28.5                                                                     | (1.6) | 28.1                                                                     | (1.7) | 13.9                                                        | (1.2) | 3.0                                             | (0.5) |
| Newfoundland and<br>Labrador     | 0.5                                                           | (0.4) | 2.0                                                                       | (0.8) | 9.1                                                                       | (1.5) | 21.2                                                                     | (1.6) | 30.4                                                                     | (2.2) | 24.7                                                                     | (1.5) | 10.6                                                        | (1.1) | 1.5                                             | (0.6) |
| Singapore                        | 0.6                                                           | (0.1) | 2.8                                                                       | (0.3) | 9.0                                                                       | (0.6) | 18.0                                                                     | (0.8) | 27.3                                                                     | (0.8) | 25.3                                                                     | (0.9) | 13.6                                                        | (0.7) | 3.5                                             | (0.5) |
| Netherlands                      | 0.1                                                           | (0.1) | 1.6                                                                       | (0.3) | 11.2                                                                      | (1.4) | 24.8                                                                     | (1.5) | 29.1                                                                     | (1.3) | 23.7                                                                     | (1.7) | 8.8                                                         | (0.8) | 0.7                                             | (0.2) |
| New Brunswick                    | 0.3                                                           | (0.1) | 2.3                                                                       | (0.4) | 10.8                                                                      | (1.1) | 25.4                                                                     | (1.5) | 31.3                                                                     | (1.5) | 22.6                                                                     | (1.4) | 6.6                                                         | (0.8) | 0.8                                             | (0.4) |
| Australia                        | 1.0                                                           | (0.2) | 3.2                                                                       | (0.3) | 9.4                                                                       | (0.5) | 18.9                                                                     | (0.6) | 26.8                                                                     | (0.6) | 25.0                                                                     | (0.6) | 12.6                                                        | (0.6) | 3.2                                             | (0.5) |
| Estonia                          | 0.4                                                           | (0.2) | 2.7                                                                       | (0.4) | 10.4                                                                      | (0.7) | 25.3                                                                     | (1.1) | 32.4                                                                     | (1.2) | 21.9                                                                     | (1.1) | 6.1                                                         | (0.5) | 0.7                                             | (0.2) |
| Saskatchewan                     | 0.6                                                           | (0.3) | 3.2                                                                       | (0.6) | 9.7                                                                       | (1.2) | 19.8                                                                     | (1.4) | 29.4                                                                     | (1.8) | 25.0                                                                     | (1.5) | 10.3                                                        | (0.9) | 2.0                                             | (0.4) |
| New Zealand                      | 0.9                                                           | (0.3) | 3.4                                                                       | (0.4) | 9.5                                                                       | (0.6) | 17.5                                                                     | (0.6) | 24.0                                                                     | (0.7) | 25.0                                                                     | (0.7) | 14.9                                                        | (0.8) | 4.7                                             | (0.5) |
| Latvia                           | 0.4                                                           | (0.2) | 2.9                                                                       | (0.5) | 11.6                                                                      | (0.9) | 27.6                                                                     | (1.2) | 34.1                                                                     | (1.3) | 19.2                                                                     | (1.3) | 4.0                                                         | (0.4) | 0.2                                             | (0.1) |
| United States                    | 0.5                                                           | (0.1) | 3.3                                                                       | (0.5) | 11.1                                                                      | (1.1) | 22.2                                                                     | (1.2) | 27.4                                                                     | (0.9) | 23.1                                                                     | (1.0) | 10.2                                                        | (0.9) | 2.2                                             | (0.4) |
| Japan                            | 1.9                                                           | (0.5) | 3.9                                                                       | (0.5) | 9.1                                                                       | (0.7) | 17.8                                                                     | (0.8) | 25.9                                                                     | (0.9) | 25.0                                                                     | (0.9) | 12.7                                                        | (0.7) | 3.6                                             | (0.4) |
| Norway                           | 0.7                                                           | (0.2) | 3.6                                                                       | (0.5) | 11.0                                                                      | (0.6) | 22.6                                                                     | (0.8) | 30.7                                                                     | (0.8) | 22.4                                                                     | (0.9) | 8.1                                                         | (0.6) | 1.1                                             | (0.3) |
| Poland                           | 0.9                                                           | (0.2) | 3.6                                                                       | (0.4) | 11.4                                                                      | (0.8) | 24.3                                                                     | (0.9) | 31.3                                                                     | (0.7) | 21.4                                                                     | (0.9) | 6.5                                                         | (0.6) | 0.6                                             | (0.2) |
| Chinese Taipei                   | 0.9                                                           | (0.2) | 3.8                                                                       | (0.4) | 11.7                                                                      | (0.8) | 24.8                                                                     | (1.1) | 33.2                                                                     | (1.2) | 20.7                                                                     | (0.9) | 4.5                                                         | (0.6) | 0.4                                             | (0.2) |
| Manitoba                         | 1.2                                                           | (0.5) | 4.1                                                                       | (0.9) | 11.0                                                                      | (1.3) | 22.7                                                                     | (1.8) | 28.6                                                                     | (1.3) | 21.5                                                                     | (1.4) | 9.5                                                         | (1.0) | 1.4                                             | (0.4) |
| Sweden                           | 1.5                                                           | (0.3) | 4.2                                                                       | (0.4) | 10.8                                                                      | (0.7) | 22.6                                                                     | (0.8) | 29.6                                                                     | (0.8) | 21.2                                                                     | (0.9) | 8.5                                                         | (0.7) | 1.6                                             | (0.3) |
| Denmark                          | 0.7                                                           | (0.2) | 3.4                                                                       | (0.4) | 12.6                                                                      | (0.7) | 25.7                                                                     | (0.9) | 31.9                                                                     | (0.8) | 20.0                                                                     | (1.0) | 5.3                                                         | (0.5) | 0.5                                             | (0.1) |
| Liechtenstein                    | 0.0                                                           | (0.0) | 4.4                                                                       | (1.3) | 12.1                                                                      | (2.1) | 23.0                                                                     | (3.2) | 31.5                                                                     | (3.1) | 22.9                                                                     | (2.4) | 5.7                                                         | (1.4) | 0.0                                             | (0.0) |
| United Kingdom                   | 0.9                                                           | (0.2) | 3.8                                                                       | (0.4) | 12.2                                                                      | (0.6) | 23.5                                                                     | (0.8) | 28.2                                                                     | (0.7) | 20.9                                                                     | (1.1) | 8.8                                                         | (0.6) | 1.8                                             | (0.3) |
| Ireland                          | 1.3                                                           | (0.3) | 4.2                                                                       | (0.6) | 11.5                                                                      | (0.7) | 21.5                                                                     | (0.8) | 29.2                                                                     | (1.0) | 22.8                                                                     | (1.0) | 8.5                                                         | (0.7) | 1.1                                             | (0.3) |
| Portugal                         | 0.7                                                           | (0.2) | 4.2                                                                       | (0.5) | 12.5                                                                      | (0.9) | 23.7                                                                     | (0.9) | 30.2                                                                     | (0.9) | 20.9                                                                     | (0.9) | 7.1                                                         | (0.6) | 0.7                                             | (0.2) |
| Iceland                          | 1.1                                                           | (0.2) | 4.5                                                                       | (0.4) | 12.0                                                                      | (0.7) | 22.8                                                                     | (0.7) | 31.4                                                                     | (0.9) | 21.1                                                                     | (0.8) | 6.4                                                         | (0.5) | 0.7                                             | (0.2) |
| Macao-China                      | 0.4                                                           | (0.1) | 3.4                                                                       | (0.3) | 13.9                                                                      | (0.6) | 30.6                                                                     | (0.8) | 33.6                                                                     | (0.9) | 15.6                                                                     | (0.8) | 2.4                                                         | (0.3) | 0.1                                             | (0.1) |
| Prince Edward Island             | 1.0                                                           | (0.3) | 4.5                                                                       | (0.6) | 12.3                                                                      | (1.0) | 23.6                                                                     | (1.3) | 29.1                                                                     | (1.6) | 21.3                                                                     | (1.7) | 7.2                                                         | (0.9) | 1.0                                             | (0.5) |
| Switzerland                      | 1.0                                                           | (0.2) | 4.7                                                                       | (0.5) | 12.4                                                                      | (0.7) | 23.0                                                                     | (0.8) | 29.1                                                                     | (0.9) | 21.7                                                                     | (1.0) | 7.1                                                         | (0.6) | 1.1                                             | (0.3) |
| Belgium                          | 2.2                                                           | (0.3) | 4.9                                                                       | (0.4) | 11.3                                                                      | (0.7) | 18.8                                                                     | (0.8) | 25.9                                                                     | (0.8) | 24.9                                                                     | (0.8) | 10.7                                                        | (0.6) | 1.4                                             | (0.3) |
| Germany                          | 1.6                                                           | (0.3) | 5.5                                                                       | (0.6) | 12.6                                                                      | (0.7) | 22.6                                                                     | (0.9) | 29.3                                                                     | (1.1) | 22.0                                                                     | (0.9) | 6.0                                                         | (0.5) | 0.5                                             | (0.2) |
| Hungary                          | 0.9                                                           | (0.3) | 4.9                                                                       | (0.7) | 14.1                                                                      | (1.1) | 24.4                                                                     | (1.4) | 29.7                                                                     | (1.1) | 19.7                                                                     | (1.0) | 5.9                                                         | (0.6) | 0.5                                             | (0.2) |
| Spain                            | 1.9                                                           | (0.3) | 5.3                                                                       | (0.4) | 13.0                                                                      | (0.7) | 24.9                                                                     | (0.7) | 30.9                                                                     | (0.8) | 19.1                                                                     | (0.7) | 4.5                                                         | (0.3) | 0.4                                             | (0.1) |
| France                           | 2.4                                                           | (0.5) | 5.8                                                                       | (0.6) | 12.0                                                                      | (0.9) | 21.0                                                                     | (1.1) | 26.7                                                                     | (1.0) | 21.8                                                                     | (1.0) | 9.1                                                         | (0.8) | 1.1                                             | (0.3) |
| Greece                           | 2.2                                                           | (0.6) | 5.9                                                                       | (0.9) | 13.0                                                                      | (0.8) | 22.7                                                                     | (0.8) | 27.7                                                                     | (1.0) | 20.2                                                                     | (0.9) | 7.0                                                         | (0.5) | 1.3                                             | (0.2) |
| Italy                            | 2.6                                                           | (0.3) | 6.3                                                                       | (0.3) | 14.5                                                                      | (0.5) | 22.8                                                                     | (0.5) | 27.1                                                                     | (0.6) | 19.7                                                                     | (0.6) | 6.2                                                         | (0.4) | 0.7                                             | (0.1) |
| Israel                           | 4.1                                                           | (0.7) | 7.3                                                                       | (0.6) | 13.0                                                                      | (0.7) | 21.4                                                                     | (0.8) | 25.1                                                                     | (1.0) | 19.5                                                                     | (0.9) | 8.0                                                         | (0.7) | 1.6                                             | (0.3) |
| Turkey                           | 1.4                                                           | (0.3) | 6.0                                                                       | (0.7) | 17.3                                                                      | (1.0) | 27.5                                                                     | (1.2) | 27.5                                                                     | (1.1) | 15.8                                                                     | (1.1) | 4.0                                                         | (0.5) | 0.5                                             | (0.2) |
| Croatia                          | 2.1                                                           | (0.5) | 7.4                                                                       | (0.7) | 17.0                                                                      | (1.0) | 25.6                                                                     | (1.2) | 26.4                                                                     | (1.1) | 16.2                                                                     | (0.9) | 4.8                                                         | (0.5) | 0.5                                             | (0.1) |
| Luxembourg                       | 3.5                                                           | (0.3) | 7.5                                                                       | (0.5) | 15.5                                                                      | (0.7) | 23.9                                                                     | (0.8) | 26.8                                                                     | (0.7) | 16.9                                                                     | (0.8) | 5.3                                                         | (0.5) | 0.5                                             | (0.1) |
| Slovenia                         | 2.3                                                           | (0.2) | 7.6                                                                       | (0.5) | 16.9                                                                      | (0.6) | 24.2                                                                     | (0.9) | 27.2                                                                     | (1.2) | 17.0                                                                     | (1.0) | 4.4                                                         | (0.6) | 0.4                                             | (0.2) |

Table B.1.16 (concluded)

**Percent of students at each level for countries, provinces and economies:  
Reflecting and evaluating**

| Country, economy<br>and province | Proficiency levels                                            |       |                                                                           |       |                                                                           |       |                                                                          |       |                                                                          |       |                                                                          |       |                                                             |       |                                                 |       |
|----------------------------------|---------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|-------------------------------------------------------------|-------|-------------------------------------------------|-------|
|                                  | Below<br>Level 1b<br>(less than<br>262.04<br>score<br>points) |       | Level 1b<br>(from<br>262.04 to<br>less than<br>334.75<br>score<br>points) |       | Level 1a<br>(from<br>334.75 to<br>less than<br>407.47<br>score<br>points) |       | Level 2<br>(from<br>407.47 to<br>less than<br>480.18<br>score<br>points) |       | Level 3<br>(from<br>480.18 to<br>less than<br>552.89<br>score<br>points) |       | Level 4<br>(from<br>552.89 to<br>less than<br>625.61<br>score<br>points) |       | Level 5<br>(from<br>625.61 to<br>698.32<br>score<br>points) |       | Level 6<br>(above<br>698.32<br>score<br>points) |       |
|                                  | %                                                             | S.E.  | %                                                                         | S.E.  | %                                                                         | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                           | S.E.  | %                                               | S.E.  |
| Lithuania                        | 1.4                                                           | (0.3) | 6.9                                                                       | (0.6) | 18.7                                                                      | (0.8) | 29.3                                                                     | (1.2) | 27.3                                                                     | (1.0) | 13.5                                                                     | (0.7) | 2.8                                                         | (0.5) | 0.2                                             | (0.1) |
| Slovak Republic                  | 2.1                                                           | (0.4) | 7.8                                                                       | (0.7) | 17.5                                                                      | (0.8) | 26.6                                                                     | (1.2) | 26.4                                                                     | (1.2) | 15.4                                                                     | (0.9) | 3.9                                                         | (0.4) | 0.4                                             | (0.1) |
| Chile                            | 1.3                                                           | (0.3) | 7.4                                                                       | (0.7) | 20.7                                                                      | (0.9) | 32.4                                                                     | (1.0) | 26.8                                                                     | (1.0) | 10.0                                                                     | (0.7) | 1.4                                                         | (0.3) | 0.0                                             | (0.0) |
| Czech Republic                   | 2.6                                                           | (0.4) | 8.0                                                                       | (0.7) | 18.9                                                                      | (0.9) | 26.7                                                                     | (1.0) | 24.8                                                                     | (1.0) | 14.4                                                                     | (0.9) | 4.2                                                         | (0.4) | 0.4                                             | (0.1) |
| Dubai (UAE)                      | 3.6                                                           | (0.3) | 8.4                                                                       | (0.5) | 17.8                                                                      | (0.7) | 23.8                                                                     | (0.8) | 24.2                                                                     | (0.7) | 16.0                                                                     | (0.6) | 5.7                                                         | (0.4) | 0.7                                             | (0.2) |
| Austria                          | 4.2                                                           | (0.6) | 9.0                                                                       | (0.7) | 16.5                                                                      | (0.8) | 22.7                                                                     | (1.0) | 26.2                                                                     | (1.1) | 16.7                                                                     | (0.8) | 4.3                                                         | (0.5) | 0.4                                             | (0.1) |
| Russian Federation               | 3.6                                                           | (0.6) | 10.1                                                                      | (0.7) | 22.1                                                                      | (1.0) | 29.7                                                                     | (1.1) | 22.5                                                                     | (0.9) | 9.5                                                                      | (0.7) | 2.2                                                         | (0.4) | 0.3                                             | (0.1) |
| Mexico                           | 3.3                                                           | (0.3) | 10.3                                                                      | (0.4) | 23.8                                                                      | (0.6) | 31.9                                                                     | (0.6) | 23.2                                                                     | (0.6) | 6.8                                                                      | (0.4) | 0.7                                                         | (0.1) | 0.0                                             | (0.0) |
| Uruguay                          | 5.2                                                           | (0.6) | 11.9                                                                      | (0.7) | 21.8                                                                      | (1.0) | 26.9                                                                     | (0.8) | 21.1                                                                     | (0.7) | 10.3                                                                     | (0.9) | 2.6                                                         | (0.4) | 0.3                                             | (0.1) |
| Serbia                           | 3.5                                                           | (0.5) | 11.4                                                                      | (0.6) | 24.3                                                                      | (0.9) | 30.3                                                                     | (1.0) | 22.3                                                                     | (1.0) | 7.2                                                                      | (0.6) | 1.0                                                         | (0.2) | 0.0                                             | (0.0) |
| Tunisia                          | 4.3                                                           | (0.5) | 11.0                                                                      | (0.9) | 24.0                                                                      | (1.1) | 32.2                                                                     | (1.1) | 21.0                                                                     | (1.0) | 6.5                                                                      | (0.7) | 0.9                                                         | (0.3) | 0.1                                             | (0.1) |
| Romania                          | 5.3                                                           | (0.8) | 12.2                                                                      | (1.0) | 22.7                                                                      | (1.2) | 29.5                                                                     | (1.4) | 21.6                                                                     | (1.3) | 7.4                                                                      | (0.9) | 1.2                                                         | (0.3) | 0.1                                             | (0.0) |
| Colombia                         | 4.0                                                           | (0.8) | 13.1                                                                      | (1.0) | 26.3                                                                      | (1.0) | 30.1                                                                     | (1.3) | 19.2                                                                     | (1.2) | 6.3                                                                      | (0.7) | 0.9                                                         | (0.2) | 0.0                                             | (0.0) |
| Brazil                           | 3.8                                                           | (0.4) | 13.1                                                                      | (0.7) | 26.6                                                                      | (0.8) | 29.6                                                                     | (0.8) | 18.5                                                                     | (0.9) | 7.0                                                                      | (0.6) | 1.4                                                         | (0.2) | 0.1                                             | (0.1) |
| Thailand                         | 2.1                                                           | (0.4) | 12.3                                                                      | (0.8) | 29.3                                                                      | (0.9) | 33.3                                                                     | (1.1) | 18.0                                                                     | (0.8) | 4.3                                                                      | (0.5) | 0.5                                                         | (0.2) | 0.0                                             | (0.0) |
| Bulgaria                         | 11.3                                                          | (1.4) | 13.4                                                                      | (1.1) | 19.4                                                                      | (1.2) | 23.0                                                                     | (1.1) | 19.9                                                                     | (1.4) | 10.0                                                                     | (1.0) | 2.6                                                         | (0.4) | 0.4                                             | (0.2) |
| Trinidad and Tobago              | 11.1                                                          | (0.7) | 14.6                                                                      | (0.7) | 20.0                                                                      | (0.8) | 24.1                                                                     | (1.0) | 18.9                                                                     | (1.0) | 8.7                                                                      | (0.5) | 2.4                                                         | (0.3) | 0.3                                             | (0.1) |
| Jordan                           | 7.6                                                           | (0.7) | 13.4                                                                      | (0.9) | 26.3                                                                      | (1.1) | 29.8                                                                     | (0.9) | 17.6                                                                     | (0.9) | 4.7                                                                      | (0.5) | 0.5                                                         | (0.2) | 0.0                                             | (0.0) |
| Indonesia                        | 1.9                                                           | (0.5) | 12.2                                                                      | (1.1) | 35.1                                                                      | (1.5) | 35.8                                                                     | (1.3) | 13.3                                                                     | (1.3) | 1.7                                                                      | (0.4) | 0.0                                                         | (0.0) | 0.0                                             | (0.0) |
| Argentina                        | 10.7                                                          | (1.1) | 15.6                                                                      | (1.1) | 23.5                                                                      | (1.2) | 25.2                                                                     | (1.1) | 17.0                                                                     | (1.1) | 6.6                                                                      | (0.8) | 1.3                                                         | (0.3) | 0.1                                             | (0.1) |
| Montenegro                       | 11.7                                                          | (0.6) | 20.2                                                                      | (1.0) | 26.3                                                                      | (0.8) | 24.8                                                                     | (0.9) | 12.6                                                                     | (0.9) | 3.9                                                                      | (0.5) | 0.5                                                         | (0.2) | 0.0                                             | (0.0) |
| Albania                          | 14.6                                                          | (1.2) | 18.6                                                                      | (1.0) | 26.2                                                                      | (1.0) | 23.6                                                                     | (1.1) | 13.2                                                                     | (1.1) | 3.3                                                                      | (0.5) | 0.3                                                         | (0.1) | 0.0                                             | (0.0) |
| Qatar                            | 19.0                                                          | (0.5) | 20.7                                                                      | (0.5) | 21.6                                                                      | (0.5) | 17.9                                                                     | (0.5) | 12.1                                                                     | (0.3) | 6.1                                                                      | (0.3) | 2.2                                                         | (0.2) | 0.4                                             | (0.1) |
| Panama                           | 11.9                                                          | (1.8) | 23.1                                                                      | (2.0) | 27.9                                                                      | (2.0) | 21.5                                                                     | (1.8) | 10.8                                                                     | (1.4) | 4.1                                                                      | (0.7) | 0.7                                                         | (0.2) | 0.0                                             | (0.0) |
| Kazakhstan                       | 13.5                                                          | (0.9) | 23.0                                                                      | (0.9) | 27.5                                                                      | (1.2) | 20.6                                                                     | (1.0) | 11.3                                                                     | (0.9) | 3.6                                                                      | (0.5) | 0.4                                                         | (0.1) | 0.0                                             | (0.0) |
| Peru                             | 15.2                                                          | (1.1) | 22.5                                                                      | (1.2) | 27.0                                                                      | (1.2) | 21.4                                                                     | (0.8) | 10.7                                                                     | (0.9) | 2.8                                                                      | (0.5) | 0.4                                                         | (0.2) | 0.0                                             | (0.0) |
| Azerbaijan                       | 21.4                                                          | (1.5) | 28.1                                                                      | (1.0) | 28.9                                                                      | (1.1) | 16.2                                                                     | (0.9) | 4.6                                                                      | (0.6) | 0.7                                                                      | (0.2) | 0.1                                                         | (0.1) | 0.0                                             | (0.0) |
| Kyrgyzstan                       | 37.1                                                          | (1.6) | 26.8                                                                      | (1.2) | 19.2                                                                      | (0.9) | 10.5                                                                     | (0.7) | 4.8                                                                      | (0.6) | 1.3                                                                      | (0.3) | 0.2                                                         | (0.1) | 0.0                                             | (0.0) |

0 true zero or a value rounded to zero

S.E. Standard error

**Note:** Countries, economies and provinces have been sorted by the total percentage of students who attained level 2 or higher.

Table B.1.17

Percent of students at each level for countries, provinces and economies:  
Continuous texts

| Country, economy<br>and province | Proficiency levels                                            |       |                                                                           |       |                                                                           |       |                                                                          |       |                                                                          |       |                                                                          |       |                                                             |       |                                                 |       |
|----------------------------------|---------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|-------------------------------------------------------------|-------|-------------------------------------------------|-------|
|                                  | Below<br>Level 1b<br>(less than<br>262.04<br>score<br>points) |       | Level 1b<br>(from<br>262.04 to<br>less than<br>334.75<br>score<br>points) |       | Level 1a<br>(from<br>334.75 to<br>less than<br>407.47<br>score<br>points) |       | Level 2<br>(from<br>407.47 to<br>less than<br>480.18<br>score<br>points) |       | Level 3<br>(from<br>480.18 to<br>less than<br>552.89<br>score<br>points) |       | Level 4<br>(from<br>552.89 to<br>less than<br>625.61<br>score<br>points) |       | Level 5<br>(from<br>625.61 to<br>698.32<br>score<br>points) |       | Level 6<br>(above<br>698.32<br>score<br>points) |       |
|                                  | %                                                             | S.E.  | %                                                                         | S.E.  | %                                                                         | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                           | S.E.  | %                                               | S.E.  |
| Shanghai-China                   | 0.1                                                           | (0.1) | 0.5                                                                       | (0.1) | 3.1                                                                       | (0.4) | 11.9                                                                     | (0.7) | 26.5                                                                     | (1.1) | 34.2                                                                     | (1.0) | 20.1                                                        | (1.0) | 3.6                                             | (0.4) |
| Korea                            | 0.3                                                           | (0.1) | 1.0                                                                       | (0.3) | 5.1                                                                       | (0.7) | 15.5                                                                     | (1.0) | 32.5                                                                     | (1.2) | 32.7                                                                     | (1.2) | 11.9                                                        | (1.0) | 1.0                                             | (0.2) |
| Hong Kong-China                  | 0.3                                                           | (0.1) | 1.8                                                                       | (0.3) | 6.0                                                                       | (0.5) | 16.0                                                                     | (0.8) | 29.4                                                                     | (1.3) | 31.2                                                                     | (1.0) | 13.4                                                        | (0.7) | 2.0                                             | (0.3) |
| Finland                          | 0.2                                                           | (0.1) | 1.5                                                                       | (0.2) | 6.4                                                                       | (0.5) | 17.0                                                                     | (0.9) | 30.2                                                                     | (0.8) | 30.2                                                                     | (0.8) | 13.1                                                        | (0.7) | 1.4                                             | (0.2) |
| Ontario                          | 0.3                                                           | (0.1) | 2.0                                                                       | (0.3) | 7.0                                                                       | (0.8) | 19.2                                                                     | (1.2) | 28.7                                                                     | (1.1) | 26.9                                                                     | (1.2) | 13.1                                                        | (1.1) | 2.8                                             | (0.4) |
| Alberta                          | 0.2                                                           | (0.1) | 2.1                                                                       | (0.4) | 8.7                                                                       | (1.1) | 19.2                                                                     | (1.3) | 26.2                                                                     | (1.1) | 25.8                                                                     | (1.3) | 13.6                                                        | (1.4) | 4.2                                             | (0.7) |
| Canada                           | 0.4                                                           | (0.1) | 2.4                                                                       | (0.2) | 8.3                                                                       | (0.4) | 20.2                                                                     | (0.7) | 28.9                                                                     | (0.7) | 25.9                                                                     | (0.7) | 11.5                                                        | (0.5) | 2.4                                             | (0.2) |
| Quebec                           | 0.4                                                           | (0.1) | 2.3                                                                       | (0.4) | 8.5                                                                       | (0.9) | 20.8                                                                     | (1.1) | 30.6                                                                     | (1.1) | 27.0                                                                     | (1.3) | 9.3                                                         | (0.8) | 1.2                                             | (0.3) |
| Nova Scotia                      | 0.6                                                           | (0.3) | 2.2                                                                       | (0.6) | 8.4                                                                       | (0.9) | 21.7                                                                     | (1.4) | 31.4                                                                     | (1.8) | 24.6                                                                     | (1.8) | 9.6                                                         | (1.3) | 1.4                                             | (0.5) |
| British Columbia                 | 0.7                                                           | (0.3) | 2.9                                                                       | (0.6) | 8.2                                                                       | (0.9) | 19.3                                                                     | (1.4) | 29.2                                                                     | (1.3) | 25.1                                                                     | (1.4) | 12.1                                                        | (1.0) | 2.6                                             | (0.6) |
| Japan                            | 1.7                                                           | (0.4) | 3.5                                                                       | (0.6) | 8.6                                                                       | (0.7) | 17.9                                                                     | (0.8) | 27.1                                                                     | (0.9) | 26.7                                                                     | (0.9) | 12.2                                                        | (0.8) | 2.4                                             | (0.3) |
| Singapore                        | 0.6                                                           | (0.1) | 3.3                                                                       | (0.3) | 9.9                                                                       | (0.5) | 18.8                                                                     | (0.7) | 27.2                                                                     | (0.7) | 25.0                                                                     | (1.0) | 12.4                                                        | (0.6) | 2.8                                             | (0.3) |
| Estonia                          | 0.3                                                           | (0.2) | 2.3                                                                       | (0.4) | 11.5                                                                      | (0.9) | 26.0                                                                     | (1.3) | 34.8                                                                     | (1.1) | 20.0                                                                     | (0.9) | 4.7                                                         | (0.5) | 0.4                                             | (0.2) |
| Newfoundland and<br>Labrador     | 0.4                                                           | (0.3) | 3.5                                                                       | (0.9) | 10.3                                                                      | (1.5) | 23.2                                                                     | (1.6) | 30.5                                                                     | (1.8) | 21.6                                                                     | (1.5) | 9.1                                                         | (1.1) | 1.5                                             | (0.6) |
| Netherlands                      | 0.1                                                           | (0.1) | 2.0                                                                       | (0.4) | 12.3                                                                      | (1.3) | 25.5                                                                     | (1.5) | 27.7                                                                     | (1.1) | 22.8                                                                     | (1.7) | 8.6                                                         | (0.9) | 0.8                                             | (0.2) |
| Poland                           | 0.7                                                           | (0.2) | 3.0                                                                       | (0.4) | 11.1                                                                      | (0.6) | 24.4                                                                     | (0.9) | 30.9                                                                     | (0.8) | 22.0                                                                     | (1.0) | 7.2                                                         | (0.6) | 0.8                                             | (0.2) |
| Australia                        | 1.1                                                           | (0.1) | 3.8                                                                       | (0.3) | 10.4                                                                      | (0.5) | 20.6                                                                     | (0.6) | 27.3                                                                     | (0.6) | 23.4                                                                     | (0.5) | 11.0                                                        | (0.5) | 2.4                                             | (0.4) |
| New Zealand                      | 1.2                                                           | (0.3) | 3.7                                                                       | (0.4) | 10.7                                                                      | (0.6) | 19.4                                                                     | (0.8) | 25.4                                                                     | (0.8) | 23.8                                                                     | (0.8) | 12.8                                                        | (0.7) | 3.0                                             | (0.4) |
| Denmark                          | 0.5                                                           | (0.2) | 3.3                                                                       | (0.4) | 11.9                                                                      | (0.6) | 25.4                                                                     | (0.9) | 32.4                                                                     | (0.8) | 20.8                                                                     | (0.8) | 5.4                                                         | (0.5) | 0.5                                             | (0.1) |
| Saskatchewan                     | 0.8                                                           | (0.3) | 3.4                                                                       | (0.7) | 11.4                                                                      | (1.2) | 22.4                                                                     | (1.8) | 29.0                                                                     | (1.6) | 23.2                                                                     | (1.4) | 8.1                                                         | (0.8) | 1.7                                             | (0.4) |
| Norway                           | 0.8                                                           | (0.2) | 3.6                                                                       | (0.4) | 11.2                                                                      | (0.6) | 22.4                                                                     | (0.7) | 29.4                                                                     | (0.9) | 22.8                                                                     | (1.0) | 8.5                                                         | (0.6) | 1.3                                             | (0.2) |
| Chinese Taipei                   | 0.7                                                           | (0.2) | 3.8                                                                       | (0.4) | 11.3                                                                      | (0.7) | 24.3                                                                     | (1.0) | 33.0                                                                     | (1.2) | 21.2                                                                     | (0.9) | 5.2                                                         | (0.7) | 0.6                                             | (0.2) |
| Macao-China                      | 0.3                                                           | (0.1) | 3.0                                                                       | (0.3) | 12.8                                                                      | (0.4) | 28.9                                                                     | (0.7) | 33.8                                                                     | (0.8) | 17.4                                                                     | (0.8) | 3.7                                                         | (0.4) | 0.2                                             | (0.1) |
| New Brunswick                    | 0.4                                                           | (0.2) | 3.7                                                                       | (0.6) | 12.3                                                                      | (1.0) | 24.7                                                                     | (1.5) | 29.6                                                                     | (1.7) | 20.6                                                                     | (1.6) | 7.3                                                         | (0.8) | 1.4                                             | (0.5) |
| Iceland                          | 1.5                                                           | (0.3) | 4.3                                                                       | (0.5) | 11.6                                                                      | (0.6) | 21.4                                                                     | (0.7) | 30.4                                                                     | (1.0) | 21.6                                                                     | (1.1) | 8.0                                                         | (0.6) | 1.3                                             | (0.3) |
| Hungary                          | 0.8                                                           | (0.3) | 4.1                                                                       | (0.7) | 12.4                                                                      | (0.9) | 23.5                                                                     | (1.1) | 30.1                                                                     | (1.1) | 21.7                                                                     | (1.0) | 6.7                                                         | (0.7) | 0.6                                             | (0.2) |
| Portugal                         | 0.6                                                           | (0.2) | 4.2                                                                       | (0.4) | 12.7                                                                      | (0.9) | 26.0                                                                     | (0.9) | 30.6                                                                     | (1.2) | 19.9                                                                     | (1.0) | 5.6                                                         | (0.5) | 0.4                                             | (0.2) |
| Latvia                           | 0.3                                                           | (0.2) | 3.4                                                                       | (0.6) | 13.8                                                                      | (1.0) | 29.3                                                                     | (1.3) | 33.1                                                                     | (1.1) | 17.3                                                                     | (1.1) | 2.7                                                         | (0.4) | 0.1                                             | (0.0) |
| Sweden                           | 1.7                                                           | (0.3) | 4.3                                                                       | (0.4) | 11.5                                                                      | (0.8) | 23.1                                                                     | (1.1) | 28.9                                                                     | (1.1) | 20.3                                                                     | (1.0) | 8.6                                                         | (0.6) | 1.6                                             | (0.3) |
| Switzerland                      | 0.8                                                           | (0.1) | 4.5                                                                       | (0.4) | 12.5                                                                      | (0.7) | 23.0                                                                     | (0.8) | 29.0                                                                     | (1.0) | 22.2                                                                     | (0.9) | 7.2                                                         | (0.7) | 0.9                                             | (0.2) |
| Ireland                          | 1.8                                                           | (0.4) | 4.2                                                                       | (0.5) | 11.8                                                                      | (0.7) | 22.6                                                                     | (0.9) | 29.8                                                                     | (0.9) | 21.6                                                                     | (1.0) | 7.4                                                         | (0.8) | 0.8                                             | (0.2) |
| Liechtenstein                    | 0.0                                                           | (0.0) | 3.9                                                                       | (1.3) | 13.9                                                                      | (2.8) | 23.2                                                                     | (2.9) | 32.1                                                                     | (3.4) | 22.1                                                                     | (3.4) | 4.3                                                         | (1.7) | 0.0                                             | (0.0) |
| Belgium                          | 1.3                                                           | (0.3) | 4.7                                                                       | (0.5) | 12.5                                                                      | (0.6) | 20.6                                                                     | (0.8) | 25.4                                                                     | (0.7) | 24.3                                                                     | (0.7) | 10.2                                                        | (0.5) | 1.1                                             | (0.2) |
| Germany                          | 0.9                                                           | (0.3) | 4.7                                                                       | (0.5) | 12.9                                                                      | (0.8) | 22.9                                                                     | (1.3) | 28.4                                                                     | (1.2) | 22.8                                                                     | (0.9) | 6.7                                                         | (0.5) | 0.6                                             | (0.2) |
| Manitoba                         | 1.1                                                           | (0.3) | 4.6                                                                       | (0.7) | 12.9                                                                      | (1.4) | 24.7                                                                     | (1.4) | 26.4                                                                     | (1.4) | 20.7                                                                     | (1.2) | 8.1                                                         | (1.0) | 1.5                                             | (0.4) |
| United States                    | 0.8                                                           | (0.2) | 4.3                                                                       | (0.5) | 13.6                                                                      | (0.8) | 23.7                                                                     | (0.9) | 26.5                                                                     | (0.8) | 20.0                                                                     | (0.9) | 9.1                                                         | (0.9) | 1.9                                             | (0.3) |
| Spain                            | 1.3                                                           | (0.2) | 4.8                                                                       | (0.4) | 13.2                                                                      | (0.6) | 25.8                                                                     | (0.6) | 31.7                                                                     | (0.7) | 18.7                                                                     | (0.6) | 4.1                                                         | (0.3) | 0.3                                             | (0.1) |
| United Kingdom                   | 1.1                                                           | (0.2) | 4.5                                                                       | (0.4) | 14.2                                                                      | (0.7) | 25.0                                                                     | (0.8) | 27.9                                                                     | (0.7) | 18.9                                                                     | (0.9) | 7.2                                                         | (0.5) | 1.2                                             | (0.2) |
| Italy                            | 1.4                                                           | (0.2) | 5.2                                                                       | (0.3) | 13.9                                                                      | (0.5) | 23.1                                                                     | (0.5) | 28.8                                                                     | (0.5) | 21.0                                                                     | (0.5) | 6.0                                                         | (0.3) | 0.5                                             | (0.1) |
| Greece                           | 1.4                                                           | (0.4) | 5.5                                                                       | (0.8) | 14.5                                                                      | (1.0) | 24.3                                                                     | (0.9) | 27.8                                                                     | (1.0) | 19.5                                                                     | (1.0) | 6.1                                                         | (0.6) | 0.9                                             | (0.2) |
| France                           | 2.7                                                           | (0.5) | 6.2                                                                       | (0.6) | 12.5                                                                      | (0.9) | 21.4                                                                     | (1.2) | 25.9                                                                     | (1.1) | 21.4                                                                     | (1.0) | 8.5                                                         | (0.8) | 1.4                                             | (0.4) |
| Prince Edward Island             | 1.4                                                           | (0.5) | 6.1                                                                       | (0.8) | 14.4                                                                      | (1.0) | 25.3                                                                     | (1.4) | 26.1                                                                     | (1.7) | 19.2                                                                     | (1.2) | 6.6                                                         | (0.8) | 0.9                                             | (0.4) |
| Slovenia                         | 0.9                                                           | (0.1) | 5.6                                                                       | (0.3) | 15.3                                                                      | (0.6) | 24.8                                                                     | (0.9) | 28.2                                                                     | (0.8) | 19.1                                                                     | (0.8) | 5.6                                                         | (0.6) | 0.4                                             | (0.2) |
| Croatia                          | 0.9                                                           | (0.2) | 5.4                                                                       | (0.5) | 15.7                                                                      | (1.0) | 27.1                                                                     | (1.1) | 29.5                                                                     | (1.3) | 17.3                                                                     | (0.9) | 3.7                                                         | (0.4) | 0.3                                             | (0.1) |
| Slovak Republic                  | 0.9                                                           | (0.3) | 5.1                                                                       | (0.6) | 16.2                                                                      | (0.9) | 27.3                                                                     | (0.9) | 28.7                                                                     | (1.2) | 17.2                                                                     | (1.1) | 4.2                                                         | (0.5) | 0.5                                             | (0.2) |
| Czech Republic                   | 0.7                                                           | (0.2) | 5.4                                                                       | (0.6) | 17.0                                                                      | (0.9) | 27.3                                                                     | (1.0) | 27.4                                                                     | (1.0) | 16.4                                                                     | (0.9) | 5.3                                                         | (0.4) | 0.6                                             | (0.2) |
| Lithuania                        | 0.9                                                           | (0.3) | 5.3                                                                       | (0.6) | 17.9                                                                      | (0.8) | 29.4                                                                     | (0.9) | 29.1                                                                     | (0.9) | 14.4                                                                     | (0.8) | 2.9                                                         | (0.4) | 0.2                                             | (0.1) |

Table B.1.17 (concluded)

**Percent of students at each level for countries, provinces and economies:  
Continuous texts**

| Country, economy<br>and province | Proficiency levels                                            |       |                                                                           |       |                                                                           |       |                                                                          |       |                                                                          |       |                                                                          |       |                                                             |       |                                                 |       |
|----------------------------------|---------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|-------------------------------------------------------------|-------|-------------------------------------------------|-------|
|                                  | Below<br>Level 1b<br>(less than<br>262.04<br>score<br>points) |       | Level 1b<br>(from<br>262.04 to<br>less than<br>334.75<br>score<br>points) |       | Level 1a<br>(from<br>334.75 to<br>less than<br>407.47<br>score<br>points) |       | Level 2<br>(from<br>407.47 to<br>less than<br>480.18<br>score<br>points) |       | Level 3<br>(from<br>480.18 to<br>less than<br>552.89<br>score<br>points) |       | Level 4<br>(from<br>552.89 to<br>less than<br>625.61<br>score<br>points) |       | Level 5<br>(from<br>625.61 to<br>698.32<br>score<br>points) |       | Level 6<br>(above<br>698.32<br>score<br>points) |       |
|                                  | %                                                             | S.E.  | %                                                                         | S.E.  | %                                                                         | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                           | S.E.  | %                                               | S.E.  |
| Turkey                           | 0.9                                                           | (0.2) | 5.2                                                                       | (0.6) | 18.3                                                                      | (1.0) | 31.3                                                                     | (1.4) | 28.9                                                                     | (1.2) | 13.2                                                                     | (1.2) | 2.1                                                         | (0.5) | 0.1                                             | (0.1) |
| Israel                           | 3.7                                                           | (0.7) | 7.5                                                                       | (0.7) | 14.6                                                                      | (0.8) | 22.2                                                                     | (1.1) | 25.7                                                                     | (0.9) | 18.5                                                                     | (0.8) | 6.8                                                         | (0.5) | 1.1                                             | (0.2) |
| Luxembourg                       | 3.3                                                           | (0.3) | 7.8                                                                       | (0.5) | 15.4                                                                      | (0.9) | 23.8                                                                     | (0.8) | 26.5                                                                     | (0.7) | 17.4                                                                     | (0.9) | 5.3                                                         | (0.5) | 0.5                                             | (0.1) |
| Russian Federation               | 1.4                                                           | (0.3) | 6.5                                                                       | (0.8) | 18.9                                                                      | (1.1) | 31.7                                                                     | (1.0) | 27.1                                                                     | (0.9) | 11.4                                                                     | (0.7) | 2.8                                                         | (0.4) | 0.3                                             | (0.1) |
| Austria                          | 1.9                                                           | (0.4) | 7.9                                                                       | (0.7) | 17.9                                                                      | (0.9) | 24.5                                                                     | (0.9) | 25.8                                                                     | (1.0) | 17.1                                                                     | (0.8) | 4.6                                                         | (0.6) | 0.4                                             | (0.1) |
| Chile                            | 1.5                                                           | (0.3) | 7.4                                                                       | (0.7) | 20.8                                                                      | (1.0) | 31.8                                                                     | (1.0) | 26.3                                                                     | (1.2) | 10.3                                                                     | (0.9) | 1.9                                                         | (0.3) | 0.1                                             | (0.1) |
| Dubai (UAE)                      | 3.9                                                           | (0.3) | 9.1                                                                       | (0.5) | 17.7                                                                      | (0.7) | 24.9                                                                     | (0.7) | 23.8                                                                     | (0.7) | 14.7                                                                     | (0.6) | 5.2                                                         | (0.4) | 0.7                                             | (0.2) |
| Serbia                           | 1.8                                                           | (0.3) | 7.9                                                                       | (0.7) | 22.3                                                                      | (1.3) | 33.7                                                                     | (1.2) | 25.6                                                                     | (0.9) | 7.8                                                                      | (0.7) | 0.9                                                         | (0.2) | 0.1                                             | (0.1) |
| Mexico                           | 3.7                                                           | (0.4) | 11.4                                                                      | (0.5) | 24.3                                                                      | (0.6) | 32.7                                                                     | (0.7) | 21.8                                                                     | (0.6) | 5.7                                                                      | (0.4) | 0.4                                                         | (0.1) | 0.0                                             | (0.0) |
| Bulgaria                         | 8.1                                                           | (1.2) | 12.4                                                                      | (1.2) | 19.7                                                                      | (1.4) | 22.9                                                                     | (1.2) | 21.5                                                                     | (1.3) | 11.9                                                                     | (1.3) | 3.2                                                         | (0.7) | 0.4                                             | (0.1) |
| Uruguay                          | 5.7                                                           | (0.6) | 12.1                                                                      | (0.7) | 23.0                                                                      | (1.0) | 27.6                                                                     | (1.2) | 20.4                                                                     | (0.8) | 9.0                                                                      | (0.8) | 2.1                                                         | (0.3) | 0.2                                             | (0.1) |
| Romania                          | 4.7                                                           | (0.7) | 12.7                                                                      | (1.1) | 23.5                                                                      | (1.2) | 31.0                                                                     | (1.3) | 21.2                                                                     | (1.2) | 6.2                                                                      | (0.7) | 0.7                                                         | (0.2) | 0.0                                             | (0.0) |
| Thailand                         | 1.3                                                           | (0.3) | 10.1                                                                      | (0.9) | 30.5                                                                      | (1.1) | 36.3                                                                     | (1.4) | 17.9                                                                     | (1.0) | 3.6                                                                      | (0.6) | 0.3                                                         | (0.2) | 0.0                                             | (0.0) |
| Jordan                           | 6.0                                                           | (0.6) | 11.9                                                                      | (0.7) | 24.4                                                                      | (0.9) | 32.3                                                                     | (0.8) | 20.3                                                                     | (1.0) | 4.8                                                                      | (0.5) | 0.3                                                         | (0.1) | 0.0                                             | (0.0) |
| Trinidad and Tobago              | 10.0                                                          | (0.5) | 13.8                                                                      | (0.8) | 20.6                                                                      | (0.8) | 24.4                                                                     | (0.9) | 19.2                                                                     | (0.6) | 9.3                                                                      | (0.4) | 2.5                                                         | (0.3) | 0.3                                             | (0.1) |
| Colombia                         | 4.1                                                           | (0.6) | 13.8                                                                      | (1.1) | 27.9                                                                      | (1.2) | 31.0                                                                     | (1.1) | 17.9                                                                     | (1.1) | 4.7                                                                      | (0.5) | 0.6                                                         | (0.2) | 0.0                                             | (0.0) |
| Montenegro                       | 5.8                                                           | (0.4) | 15.5                                                                      | (0.6) | 26.5                                                                      | (0.9) | 28.6                                                                     | (1.0) | 17.2                                                                     | (1.0) | 5.7                                                                      | (0.6) | 0.8                                                         | (0.2) | 0.0                                             | (0.0) |
| Tunisia                          | 5.2                                                           | (0.5) | 13.8                                                                      | (0.9) | 28.7                                                                      | (1.1) | 32.4                                                                     | (1.5) | 16.5                                                                     | (1.0) | 3.1                                                                      | (0.5) | 0.2                                                         | (0.1) | 0.0                                             | (0.0) |
| Brazil                           | 5.5                                                           | (0.4) | 15.1                                                                      | (0.7) | 27.8                                                                      | (0.8) | 27.1                                                                     | (0.7) | 16.6                                                                     | (0.7) | 6.5                                                                      | (0.5) | 1.4                                                         | (0.3) | 0.2                                             | (0.1) |
| Argentina                        | 10.8                                                          | (1.1) | 15.4                                                                      | (1.0) | 24.4                                                                      | (1.3) | 25.4                                                                     | (1.0) | 16.5                                                                     | (1.1) | 6.3                                                                      | (0.8) | 1.1                                                         | (0.3) | 0.0                                             | (0.0) |
| Indonesia                        | 1.9                                                           | (0.4) | 13.3                                                                      | (1.2) | 36.3                                                                      | (1.7) | 34.4                                                                     | (1.3) | 12.7                                                                     | (1.4) | 1.4                                                                      | (0.4) | 0.0                                                         | (0.0) | 0.0                                             | (0.0) |
| Albania                          | 10.8                                                          | (1.0) | 17.3                                                                      | (1.1) | 25.7                                                                      | (1.3) | 25.7                                                                     | (1.2) | 15.9                                                                     | (1.1) | 4.4                                                                      | (0.7) | 0.3                                                         | (0.1) | 0.0                                             | (0.0) |
| Kazakhstan                       | 5.9                                                           | (0.5) | 18.0                                                                      | (1.1) | 30.8                                                                      | (1.0) | 26.5                                                                     | (1.1) | 14.4                                                                     | (1.1) | 4.0                                                                      | (0.6) | 0.3                                                         | (0.1) | 0.0                                             | (0.0) |
| Qatar                            | 18.0                                                          | (0.4) | 21.0                                                                      | (0.6) | 22.3                                                                      | (0.5) | 18.9                                                                     | (0.5) | 12.2                                                                     | (0.4) | 5.6                                                                      | (0.4) | 1.7                                                         | (0.2) | 0.3                                             | (0.1) |
| Peru                             | 13.5                                                          | (1.0) | 21.2                                                                      | (0.9) | 27.8                                                                      | (1.1) | 22.7                                                                     | (1.0) | 11.1                                                                     | (0.8) | 3.0                                                                      | (0.5) | 0.5                                                         | (0.2) | 0.0                                             | (0.0) |
| Panama                           | 13.3                                                          | (2.0) | 22.0                                                                      | (1.8) | 27.9                                                                      | (1.7) | 22.3                                                                     | (1.6) | 10.3                                                                     | (1.2) | 3.5                                                                      | (0.7) | 0.6                                                         | (0.2) | 0.0                                             | (0.0) |
| Azerbaijan                       | 10.0                                                          | (1.1) | 26.2                                                                      | (1.1) | 36.2                                                                      | (1.2) | 21.6                                                                     | (1.3) | 5.4                                                                      | (0.7) | 0.5                                                                      | (0.2) | 0.0                                                         | (0.0) | 0.0                                             | (0.0) |
| Kyrgyzstan                       | 28.2                                                          | (1.2) | 28.9                                                                      | (1.0) | 24.5                                                                      | (0.9) | 12.7                                                                     | (0.8) | 4.6                                                                      | (0.5) | 1.1                                                                      | (0.3) | 0.1                                                         | (0.0) | 0.0                                             | (0.0) |

0 true zero or a value rounded to zero

S.E. Standard error

**Note:** Countries, economies and provinces have been sorted by the total percentage of students who attained level 2 or higher.

Table B.1.18

Percent of students at each level for countries, provinces and economies:  
Non-continuous texts

| Country, economy<br>and province | Proficiency levels                                            |       |                                                                           |       |                                                                           |       |                                                                          |       |                                                                          |       |                                                                          |       |                                                             |       |                                                 |       |
|----------------------------------|---------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|-------------------------------------------------------------|-------|-------------------------------------------------|-------|
|                                  | Below<br>Level 1b<br>(less than<br>262.04<br>score<br>points) |       | Level 1b<br>(from<br>262.04 to<br>less than<br>334.75<br>score<br>points) |       | Level 1a<br>(from<br>334.75 to<br>less than<br>407.47<br>score<br>points) |       | Level 2<br>(from<br>407.47 to<br>less than<br>480.18<br>score<br>points) |       | Level 3<br>(from<br>480.18 to<br>less than<br>552.89<br>score<br>points) |       | Level 4<br>(from<br>552.89 to<br>less than<br>625.61<br>score<br>points) |       | Level 5<br>(from<br>625.61 to<br>698.32<br>score<br>points) |       | Level 6<br>(above<br>698.32<br>score<br>points) |       |
|                                  | %                                                             | S.E.  | %                                                                         | S.E.  | %                                                                         | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                           | S.E.  | %                                               | S.E.  |
| Korea                            | 0.4                                                           | (0.2) | 0.9                                                                       | (0.3) | 4.8                                                                       | (0.7) | 15.2                                                                     | (1.0) | 30.8                                                                     | (1.1) | 33.1                                                                     | (1.3) | 13.3                                                        | (1.1) | 1.6                                             | (0.3) |
| Shanghai-China                   | 0.2                                                           | (0.1) | 1.2                                                                       | (0.3) | 5.2                                                                       | (0.5) | 16.2                                                                     | (0.7) | 31.2                                                                     | (0.9) | 31.4                                                                     | (1.2) | 12.8                                                        | (0.7) | 1.9                                             | (0.3) |
| Ontario                          | 0.4                                                           | (0.1) | 1.6                                                                       | (0.3) | 6.4                                                                       | (0.6) | 18.0                                                                     | (1.0) | 30.4                                                                     | (1.2) | 28.3                                                                     | (1.1) | 12.5                                                        | (1.0) | 2.4                                             | (0.4) |
| Finland                          | 0.3                                                           | (0.1) | 1.7                                                                       | (0.2) | 6.5                                                                       | (0.5) | 17.3                                                                     | (0.6) | 29.6                                                                     | (0.8) | 29.6                                                                     | (0.9) | 12.9                                                        | (0.8) | 2.1                                             | (0.3) |
| Alberta                          | 0.2                                                           | (0.1) | 1.7                                                                       | (0.4) | 6.7                                                                       | (0.9) | 17.7                                                                     | (1.3) | 28.0                                                                     | (1.2) | 28.1                                                                     | (1.4) | 13.5                                                        | (1.1) | 4.0                                             | (0.9) |
| British Columbia                 | 0.3                                                           | (0.2) | 2.0                                                                       | (0.4) | 6.9                                                                       | (0.7) | 19.1                                                                     | (1.3) | 29.4                                                                     | (1.6) | 27.5                                                                     | (1.3) | 12.5                                                        | (1.1) | 2.3                                             | (0.5) |
| Singapore                        | 0.3                                                           | (0.1) | 2.0                                                                       | (0.2) | 7.3                                                                       | (0.5) | 16.5                                                                     | (0.6) | 27.8                                                                     | (0.8) | 28.0                                                                     | (0.9) | 14.8                                                        | (0.7) | 3.5                                             | (0.5) |
| Hong Kong-China                  | 0.4                                                           | (0.1) | 1.8                                                                       | (0.3) | 7.5                                                                       | (0.6) | 18.9                                                                     | (0.9) | 33.1                                                                     | (0.9) | 28.3                                                                     | (0.9) | 9.2                                                         | (0.7) | 0.8                                             | (0.2) |
| Canada                           | 0.5                                                           | (0.1) | 2.1                                                                       | (0.2) | 7.5                                                                       | (0.4) | 19.0                                                                     | (0.5) | 30.2                                                                     | (0.6) | 26.9                                                                     | (0.6) | 11.6                                                        | (0.5) | 2.3                                             | (0.2) |
| Nova Scotia                      | 0.7                                                           | (0.3) | 2.3                                                                       | (0.6) | 7.5                                                                       | (0.8) | 21.0                                                                     | (1.3) | 32.7                                                                     | (1.5) | 25.3                                                                     | (1.6) | 9.2                                                         | (1.1) | 1.4                                             | (0.5) |
| Quebec                           | 0.6                                                           | (0.2) | 2.6                                                                       | (0.5) | 8.4                                                                       | (0.9) | 18.6                                                                     | (1.2) | 30.9                                                                     | (1.4) | 26.2                                                                     | (1.2) | 10.9                                                        | (0.9) | 1.9                                             | (0.4) |
| Australia                        | 0.9                                                           | (0.1) | 2.8                                                                       | (0.3) | 8.6                                                                       | (0.5) | 18.9                                                                     | (0.6) | 28.3                                                                     | (0.7) | 25.6                                                                     | (0.6) | 12.2                                                        | (0.6) | 2.8                                             | (0.4) |
| New Zealand                      | 0.9                                                           | (0.2) | 2.6                                                                       | (0.3) | 8.9                                                                       | (0.5) | 17.7                                                                     | (0.7) | 25.2                                                                     | (1.0) | 25.7                                                                     | (0.8) | 15.0                                                        | (0.7) | 4.1                                             | (0.4) |
| Estonia                          | 0.6                                                           | (0.2) | 2.5                                                                       | (0.4) | 9.6                                                                       | (0.7) | 22.0                                                                     | (1.2) | 31.8                                                                     | (1.2) | 23.9                                                                     | (1.0) | 8.2                                                         | (0.6) | 1.4                                             | (0.3) |
| Netherlands                      | 0.2                                                           | (0.1) | 2.1                                                                       | (0.4) | 10.8                                                                      | (1.1) | 23.2                                                                     | (1.5) | 27.6                                                                     | (1.3) | 24.6                                                                     | (1.5) | 10.2                                                        | (1.1) | 1.4                                             | (0.4) |
| Newfoundland and<br>Labrador     | 0.4                                                           | (0.2) | 3.6                                                                       | (1.0) | 9.2                                                                       | (1.2) | 22.7                                                                     | (1.5) | 31.5                                                                     | (1.8) | 23.0                                                                     | (1.7) | 8.6                                                         | (1.2) | 1.1                                             | (0.4) |
| Japan                            | 1.4                                                           | (0.4) | 3.3                                                                       | (0.5) | 8.5                                                                       | (0.8) | 19.2                                                                     | (0.8) | 29.0                                                                     | (1.0) | 26.2                                                                     | (1.0) | 10.5                                                        | (0.7) | 2.0                                             | (0.4) |
| Liechtenstein                    | 0.0                                                           | (0.0) | 2.8                                                                       | (1.2) | 10.6                                                                      | (1.7) | 22.7                                                                     | (2.5) | 29.1                                                                     | (2.6) | 28.8                                                                     | (2.9) | 5.4                                                         | (1.6) | 0.0                                             | (0.0) |
| Saskatchewan                     | 0.8                                                           | (0.4) | 3.1                                                                       | (0.7) | 10.4                                                                      | (1.0) | 22.6                                                                     | (1.5) | 30.6                                                                     | (1.7) | 23.7                                                                     | (1.6) | 7.7                                                         | (1.0) | 1.1                                             | (0.4) |
| Switzerland                      | 0.7                                                           | (0.1) | 3.8                                                                       | (0.5) | 11.1                                                                      | (0.8) | 21.9                                                                     | (1.0) | 30.1                                                                     | (1.1) | 23.2                                                                     | (0.8) | 8.2                                                         | (0.8) | 0.9                                             | (0.2) |
| Norway                           | 0.7                                                           | (0.2) | 3.4                                                                       | (0.4) | 11.7                                                                      | (0.7) | 24.7                                                                     | (1.1) | 32.0                                                                     | (0.8) | 20.9                                                                     | (1.0) | 6.1                                                         | (0.5) | 0.6                                             | (0.2) |
| Chinese Taipei                   | 1.0                                                           | (0.2) | 3.8                                                                       | (0.4) | 11.1                                                                      | (0.7) | 22.8                                                                     | (0.9) | 31.1                                                                     | (1.2) | 22.4                                                                     | (1.0) | 7.0                                                         | (0.7) | 0.8                                             | (0.2) |
| United Kingdom                   | 1.1                                                           | (0.2) | 3.5                                                                       | (0.4) | 11.7                                                                      | (0.7) | 22.5                                                                     | (0.7) | 28.6                                                                     | (0.8) | 21.8                                                                     | (0.8) | 9.0                                                         | (0.6) | 1.9                                             | (0.3) |
| United States                    | 0.5                                                           | (0.1) | 3.7                                                                       | (0.4) | 11.9                                                                      | (0.8) | 24.0                                                                     | (1.0) | 28.6                                                                     | (0.9) | 21.5                                                                     | (1.0) | 8.5                                                         | (0.8) | 1.2                                             | (0.2) |
| Denmark                          | 0.5                                                           | (0.1) | 3.4                                                                       | (0.4) | 12.3                                                                      | (0.6) | 26.5                                                                     | (0.9) | 32.8                                                                     | (0.8) | 19.6                                                                     | (0.9) | 4.6                                                         | (0.5) | 0.3                                             | (0.1) |
| Manitoba                         | 1.0                                                           | (0.4) | 4.0                                                                       | (0.9) | 11.6                                                                      | (1.3) | 24.7                                                                     | (1.5) | 30.0                                                                     | (1.4) | 20.9                                                                     | (1.4) | 6.7                                                         | (0.8) | 1.1                                             | (0.3) |
| Iceland                          | 1.4                                                           | (0.2) | 4.0                                                                       | (0.4) | 11.4                                                                      | (0.6) | 22.7                                                                     | (0.7) | 31.0                                                                     | (0.9) | 21.7                                                                     | (0.8) | 7.1                                                         | (0.6) | 0.9                                             | (0.3) |
| Sweden                           | 1.5                                                           | (0.2) | 3.9                                                                       | (0.4) | 11.3                                                                      | (0.8) | 23.5                                                                     | (0.9) | 30.7                                                                     | (0.8) | 20.6                                                                     | (0.8) | 7.4                                                         | (0.6) | 1.1                                             | (0.3) |
| Macao-China                      | 0.4                                                           | (0.1) | 2.8                                                                       | (0.2) | 13.6                                                                      | (0.5) | 31.8                                                                     | (0.7) | 34.2                                                                     | (0.8) | 15.0                                                                     | (0.8) | 2.1                                                         | (0.2) | 0.1                                             | (0.1) |
| Ireland                          | 1.7                                                           | (0.4) | 4.1                                                                       | (0.5) | 11.2                                                                      | (0.7) | 22.9                                                                     | (1.0) | 31.0                                                                     | (1.0) | 22.0                                                                     | (1.0) | 6.5                                                         | (0.5) | 0.6                                             | (0.2) |
| Belgium                          | 1.6                                                           | (0.3) | 4.6                                                                       | (0.4) | 10.8                                                                      | (0.5) | 18.5                                                                     | (0.8) | 26.0                                                                     | (0.8) | 25.6                                                                     | (0.8) | 11.3                                                        | (0.6) | 1.6                                             | (0.3) |
| Poland                           | 1.1                                                           | (0.2) | 4.1                                                                       | (0.5) | 12.3                                                                      | (0.7) | 24.5                                                                     | (0.8) | 30.0                                                                     | (0.8) | 20.4                                                                     | (0.8) | 6.8                                                         | (0.7) | 1.0                                             | (0.2) |
| France                           | 2.1                                                           | (0.4) | 5.0                                                                       | (0.6) | 11.3                                                                      | (0.8) | 21.1                                                                     | (1.1) | 28.4                                                                     | (1.2) | 23.1                                                                     | (1.2) | 8.0                                                         | (0.8) | 1.1                                             | (0.3) |
| Latvia                           | 0.7                                                           | (0.2) | 4.0                                                                       | (0.6) | 13.8                                                                      | (1.0) | 26.5                                                                     | (1.1) | 31.4                                                                     | (1.1) | 18.9                                                                     | (1.0) | 4.4                                                         | (0.5) | 0.3                                             | (0.1) |
| New Brunswick                    | 0.8                                                           | (0.3) | 4.0                                                                       | (0.7) | 13.6                                                                      | (1.3) | 26.2                                                                     | (1.9) | 28.9                                                                     | (1.7) | 18.9                                                                     | (1.2) | 6.8                                                         | (1.0) | 0.8                                             | (0.3) |
| Portugal                         | 0.9                                                           | (0.2) | 4.4                                                                       | (0.6) | 13.2                                                                      | (0.9) | 26.6                                                                     | (1.0) | 30.9                                                                     | (1.0) | 18.7                                                                     | (0.9) | 4.9                                                         | (0.5) | 0.5                                             | (0.2) |
| Germany                          | 1.4                                                           | (0.3) | 5.1                                                                       | (0.6) | 12.2                                                                      | (0.8) | 21.4                                                                     | (1.1) | 28.6                                                                     | (1.0) | 23.1                                                                     | (0.9) | 7.4                                                         | (0.6) | 0.8                                             | (0.2) |
| Prince Edward Island             | 1.4                                                           | (0.4) | 4.8                                                                       | (0.7) | 13.1                                                                      | (1.0) | 25.0                                                                     | (1.8) | 29.4                                                                     | (1.6) | 19.5                                                                     | (1.6) | 6.0                                                         | (0.9) | 0.9                                             | (0.3) |
| Hungary                          | 1.2                                                           | (0.4) | 4.8                                                                       | (0.8) | 13.5                                                                      | (0.9) | 24.5                                                                     | (1.3) | 30.7                                                                     | (1.2) | 20.4                                                                     | (1.1) | 4.6                                                         | (0.5) | 0.3                                             | (0.1) |
| Slovenia                         | 1.3                                                           | (0.2) | 5.4                                                                       | (0.5) | 14.9                                                                      | (0.7) | 27.0                                                                     | (0.9) | 31.5                                                                     | (0.8) | 17.1                                                                     | (0.8) | 2.7                                                         | (0.4) | 0.1                                             | (0.1) |
| Spain                            | 2.3                                                           | (0.3) | 5.9                                                                       | (0.4) | 14.8                                                                      | (0.6) | 26.8                                                                     | (0.7) | 30.7                                                                     | (0.8) | 16.1                                                                     | (0.7) | 3.2                                                         | (0.2) | 0.2                                             | (0.1) |
| Croatia                          | 1.3                                                           | (0.3) | 5.7                                                                       | (0.5) | 16.6                                                                      | (1.0) | 28.0                                                                     | (0.9) | 29.8                                                                     | (1.1) | 15.2                                                                     | (0.9) | 3.2                                                         | (0.4) | 0.2                                             | (0.1) |
| Czech Republic                   | 2.1                                                           | (0.5) | 5.7                                                                       | (0.7) | 15.8                                                                      | (1.1) | 27.6                                                                     | (1.0) | 27.1                                                                     | (1.1) | 16.5                                                                     | (0.9) | 4.7                                                         | (0.5) | 0.4                                             | (0.1) |
| Greece                           | 2.2                                                           | (0.5) | 6.5                                                                       | (0.9) | 14.9                                                                      | (0.9) | 27.0                                                                     | (0.9) | 29.3                                                                     | (1.3) | 16.4                                                                     | (0.8) | 3.4                                                         | (0.4) | 0.3                                             | (0.1) |
| Slovak Republic                  | 1.5                                                           | (0.4) | 6.1                                                                       | (0.6) | 16.5                                                                      | (0.9) | 28.0                                                                     | (1.0) | 28.6                                                                     | (1.0) | 15.6                                                                     | (0.9) | 3.4                                                         | (0.5) | 0.3                                             | (0.2) |
| Italy                            | 2.6                                                           | (0.3) | 6.4                                                                       | (0.3) | 15.2                                                                      | (0.4) | 24.5                                                                     | (0.6) | 27.6                                                                     | (0.7) | 18.1                                                                     | (0.5) | 5.1                                                         | (0.3) | 0.5                                             | (0.1) |
| Luxembourg                       | 3.1                                                           | (0.3) | 7.1                                                                       | (0.7) | 15.4                                                                      | (0.6) | 24.5                                                                     | (0.7) | 27.2                                                                     | (0.8) | 17.6                                                                     | (0.7) | 4.8                                                         | (0.3) | 0.4                                             | (0.1) |

Table B.1.18 (concluded)

**Percent of students at each level for countries, provinces and economies:  
Non-continuous texts**

| Country, economy<br>and province | Proficiency levels                                            |       |                                                                           |       |                                                                           |       |                                                                          |       |                                                                          |       |                                                                          |       |                                                             |       |                                                 |       |
|----------------------------------|---------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|---------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------------|-------|-------------------------------------------------------------|-------|-------------------------------------------------|-------|
|                                  | Below<br>Level 1b<br>(less than<br>262.04<br>score<br>points) |       | Level 1b<br>(from<br>262.04 to<br>less than<br>334.75<br>score<br>points) |       | Level 1a<br>(from<br>334.75 to<br>less than<br>407.47<br>score<br>points) |       | Level 2<br>(from<br>407.47 to<br>less than<br>480.18<br>score<br>points) |       | Level 3<br>(from<br>480.18 to<br>less than<br>552.89<br>score<br>points) |       | Level 4<br>(from<br>552.89 to<br>less than<br>625.61<br>score<br>points) |       | Level 5<br>(from<br>625.61 to<br>698.32<br>score<br>points) |       | Level 6<br>(above<br>698.32<br>score<br>points) |       |
|                                  | %                                                             | S.E.  | %                                                                         | S.E.  | %                                                                         | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                                        | S.E.  | %                                                           | S.E.  | %                                               | S.E.  |
| Turkey                           | 1.4                                                           | (0.3) | 6.5                                                                       | (0.6) | 18.5                                                                      | (1.1) | 30.8                                                                     | (1.4) | 28.4                                                                     | (1.2) | 12.4                                                                     | (1.1) | 2.0                                                         | (0.5) | 0.1                                             | (0.0) |
| Austria                          | 3.2                                                           | (0.5) | 8.6                                                                       | (0.8) | 15.3                                                                      | (0.8) | 22.4                                                                     | (1.1) | 26.2                                                                     | (1.1) | 18.5                                                                     | (0.9) | 5.4                                                         | (0.6) | 0.5                                             | (0.2) |
| Lithuania                        | 1.5                                                           | (0.3) | 6.9                                                                       | (0.6) | 19.0                                                                      | (0.8) | 29.3                                                                     | (1.1) | 26.9                                                                     | (1.1) | 13.4                                                                     | (0.8) | 2.8                                                         | (0.5) | 0.2                                             | (0.1) |
| Israel                           | 5.5                                                           | (0.8) | 8.9                                                                       | (0.6) | 15.1                                                                      | (0.9) | 21.9                                                                     | (0.9) | 23.6                                                                     | (0.7) | 16.8                                                                     | (0.7) | 6.9                                                         | (0.6) | 1.3                                             | (0.2) |
| Dubai (UAE)                      | 4.4                                                           | (0.3) | 9.8                                                                       | (0.4) | 17.6                                                                      | (0.5) | 23.6                                                                     | (0.7) | 23.3                                                                     | (0.7) | 15.4                                                                     | (0.7) | 5.3                                                         | (0.4) | 0.7                                             | (0.2) |
| Russian Federation               | 2.9                                                           | (0.5) | 8.4                                                                       | (0.7) | 20.7                                                                      | (1.0) | 28.8                                                                     | (0.8) | 24.3                                                                     | (1.0) | 11.3                                                                     | (0.7) | 3.1                                                         | (0.4) | 0.6                                             | (0.2) |
| Chile                            | 2.1                                                           | (0.3) | 8.2                                                                       | (0.7) | 22.7                                                                      | (1.0) | 32.6                                                                     | (1.1) | 24.7                                                                     | (1.2) | 8.5                                                                      | (0.8) | 1.2                                                         | (0.4) | 0.1                                             | (0.0) |
| Serbia                           | 3.9                                                           | (0.5) | 10.5                                                                      | (0.6) | 21.4                                                                      | (1.0) | 30.2                                                                     | (1.1) | 23.7                                                                     | (1.0) | 8.9                                                                      | (0.6) | 1.4                                                         | (0.3) | 0.1                                             | (0.1) |
| Mexico                           | 3.5                                                           | (0.3) | 11.8                                                                      | (0.5) | 25.5                                                                      | (0.5) | 32.2                                                                     | (0.6) | 20.9                                                                     | (0.6) | 5.6                                                                      | (0.3) | 0.6                                                         | (0.1) | 0.0                                             | (0.0) |
| Romania                          | 5.1                                                           | (0.7) | 12.8                                                                      | (1.0) | 23.4                                                                      | (1.2) | 29.0                                                                     | (1.3) | 21.6                                                                     | (1.4) | 7.1                                                                      | (0.8) | 1.0                                                         | (0.3) | 0.1                                             | (0.0) |
| Thailand                         | 1.5                                                           | (0.3) | 10.1                                                                      | (0.9) | 30.5                                                                      | (1.0) | 36.2                                                                     | (1.1) | 17.3                                                                     | (0.9) | 4.0                                                                      | (0.5) | 0.4                                                         | (0.2) | 0.0                                             | (0.1) |
| Bulgaria                         | 11.0                                                          | (1.3) | 13.1                                                                      | (1.2) | 19.0                                                                      | (1.3) | 22.7                                                                     | (1.1) | 20.1                                                                     | (1.4) | 10.8                                                                     | (1.1) | 2.8                                                         | (0.6) | 0.4                                             | (0.2) |
| Uruguay                          | 6.9                                                           | (0.7) | 13.7                                                                      | (0.8) | 22.8                                                                      | (0.8) | 27.2                                                                     | (0.7) | 19.4                                                                     | (0.8) | 8.0                                                                      | (0.6) | 1.8                                                         | (0.3) | 0.2                                             | (0.1) |
| Trinidad and Tobago              | 9.7                                                           | (0.5) | 14.0                                                                      | (0.8) | 21.3                                                                      | (0.7) | 24.4                                                                     | (0.8) | 19.2                                                                     | (0.7) | 9.0                                                                      | (0.4) | 2.2                                                         | (0.3) | 0.3                                             | (0.1) |
| Colombia                         | 6.3                                                           | (0.9) | 14.9                                                                      | (1.1) | 27.8                                                                      | (1.1) | 28.3                                                                     | (1.1) | 16.8                                                                     | (1.1) | 5.1                                                                      | (0.5) | 0.8                                                         | (0.2) | 0.1                                             | (0.1) |
| Brazil                           | 6.1                                                           | (0.4) | 16.5                                                                      | (0.6) | 27.8                                                                      | (0.9) | 26.8                                                                     | (0.8) | 15.5                                                                     | (0.8) | 6.1                                                                      | (0.5) | 1.2                                                         | (0.2) | 0.1                                             | (0.0) |
| Montenegro                       | 8.7                                                           | (0.6) | 16.9                                                                      | (0.8) | 27.0                                                                      | (1.0) | 26.4                                                                     | (0.9) | 16.1                                                                     | (0.8) | 4.4                                                                      | (0.5) | 0.6                                                         | (0.2) | 0.0                                             | (0.0) |
| Indonesia                        | 4.6                                                           | (0.7) | 16.2                                                                      | (1.3) | 33.0                                                                      | (1.5) | 31.0                                                                     | (1.4) | 12.8                                                                     | (1.3) | 2.3                                                                      | (0.6) | 0.1                                                         | (0.1) | 0.0                                             | (0.0) |
| Argentina                        | 13.3                                                          | (1.2) | 17.0                                                                      | (1.1) | 23.7                                                                      | (1.2) | 23.6                                                                     | (1.1) | 14.7                                                                     | (1.3) | 6.5                                                                      | (0.8) | 1.2                                                         | (0.3) | 0.1                                             | (0.1) |
| Jordan                           | 13.7                                                          | (1.0) | 16.5                                                                      | (1.0) | 24.4                                                                      | (0.9) | 25.0                                                                     | (0.9) | 14.4                                                                     | (0.8) | 5.1                                                                      | (0.5) | 1.0                                                         | (0.3) | 0.1                                             | (0.1) |
| Tunisia                          | 8.6                                                           | (0.7) | 18.0                                                                      | (0.8) | 28.6                                                                      | (0.9) | 27.1                                                                     | (1.0) | 13.9                                                                     | (0.9) | 3.4                                                                      | (0.6) | 0.4                                                         | (0.2) | 0.0                                             | (0.0) |
| Albania                          | 16.7                                                          | (1.3) | 20.3                                                                      | (1.1) | 25.9                                                                      | (0.9) | 22.6                                                                     | (1.4) | 11.6                                                                     | (1.2) | 2.7                                                                      | (0.4) | 0.3                                                         | (0.1) | 0.0                                             | (0.0) |
| Kazakhstan                       | 16.8                                                          | (1.0) | 20.8                                                                      | (1.1) | 25.4                                                                      | (0.9) | 20.1                                                                     | (0.9) | 11.3                                                                     | (0.7) | 4.6                                                                      | (0.6) | 1.0                                                         | (0.3) | 0.1                                             | (0.1) |
| Qatar                            | 22.1                                                          | (0.4) | 21.9                                                                      | (0.5) | 22.2                                                                      | (0.5) | 16.2                                                                     | (0.5) | 10.0                                                                     | (0.3) | 5.5                                                                      | (0.3) | 1.8                                                         | (0.2) | 0.4                                             | (0.1) |
| Peru                             | 19.0                                                          | (1.1) | 23.0                                                                      | (1.0) | 26.5                                                                      | (1.0) | 19.7                                                                     | (1.0) | 8.9                                                                      | (0.9) | 2.5                                                                      | (0.5) | 0.5                                                         | (0.2) | 0.1                                             | (0.1) |
| Panama                           | 17.8                                                          | (2.0) | 24.5                                                                      | (1.6) | 26.3                                                                      | (1.5) | 18.4                                                                     | (1.5) | 9.0                                                                      | (1.2) | 3.5                                                                      | (0.7) | 0.5                                                         | (0.2) | 0.0                                             | (0.0) |
| Azerbaijan                       | 17.3                                                          | (1.5) | 25.3                                                                      | (1.0) | 29.8                                                                      | (1.0) | 19.7                                                                     | (1.2) | 6.7                                                                      | (0.7) | 1.1                                                                      | (0.3) | 0.1                                                         | (0.1) | 0.0                                             | (0.0) |
| Kyrgyzstan                       | 39.1                                                          | (1.4) | 26.6                                                                      | (1.0) | 19.7                                                                      | (0.9) | 9.7                                                                      | (0.8) | 3.8                                                                      | (0.5) | 0.9                                                                      | (0.2) | 0.2                                                         | (0.1) | 0.0                                             | (0.0) |

0 true zero or a value rounded to zero

S.E. Standard error

**Note:** Countries, economies and provinces have been sorted by the total percentage of students who attained level 2 or higher.

Table B.1.19

**Estimated average scores and school-language system differences for  
combined reading and reading subscales, by province**

| Province                            | English-language school system |                | French-language school system |                | Difference between the English-language and French-language school systems |                |
|-------------------------------------|--------------------------------|----------------|-------------------------------|----------------|----------------------------------------------------------------------------|----------------|
|                                     | average                        | standard error | average                       | standard error | difference                                                                 | standard error |
| <b>Combined reading</b>             |                                |                |                               |                |                                                                            |                |
| <b>Canada</b>                       | <b>527</b>                     | <b>(1.8)</b>   | <b>517</b>                    | <b>(3.1)</b>   | <b>10*</b>                                                                 | <b>(3.6)*</b>  |
| Nova Scotia                         | 517                            | (2.7)          | 479                           | (8.5)          | 38*                                                                        | (9.0)*         |
| New Brunswick                       | 511                            | (3.1)          | 469                           | (3.3)          | 41*                                                                        | (4.8)*         |
| Quebec                              | 520                            | (4.1)          | 522                           | (3.5)          | -2                                                                         | (5.4)          |
| Ontario                             | 533                            | (3.1)          | 475                           | (2.4)          | 58*                                                                        | (3.9)*         |
| Manitoba                            | 496                            | (3.6)          | 487                           | (9.2)          | 8                                                                          | (10.0)         |
| Alberta                             | 533                            | (4.6)          | 475                           | (7.0)          | 58*                                                                        | (8.5)*         |
| British Columbia                    | 525                            | (4.2)          | 475                           | (9.1)          | 49*                                                                        | (9.9)*         |
| <b>Accessing and retrieving</b>     |                                |                |                               |                |                                                                            |                |
| <b>Canada</b>                       | <b>519</b>                     | <b>(1.8)</b>   | <b>510</b>                    | <b>(3.6)</b>   | <b>9*</b>                                                                  | <b>(4.2)*</b>  |
| Nova Scotia                         | 507                            | (3.4)          | 474                           | (8.4)          | 32*                                                                        | (9.1)*         |
| New Brunswick                       | 497                            | (4.1)          | 463                           | (3.3)          | 34*                                                                        | (5.4)*         |
| Quebec                              | 513                            | (4.3)          | 515                           | (4.0)          | -2                                                                         | (5.8)          |
| Ontario                             | 525                            | (3.2)          | 465                           | (2.9)          | 61*                                                                        | (4.3)*         |
| Manitoba                            | 497                            | (3.9)          | 485                           | (9.1)          | 12                                                                         | (10.1)         |
| Alberta                             | 523                            | (4.5)          | 456                           | (11.3)         | 66*                                                                        | (12.2)*        |
| British Columbia                    | 516                            | (4.5)          | 465                           | (9.0)          | 51*                                                                        | (10.2)*        |
| <b>Integrating and interpreting</b> |                                |                |                               |                |                                                                            |                |
| <b>Canada</b>                       | <b>524</b>                     | <b>(1.8)</b>   | <b>516</b>                    | <b>(3.3)</b>   | <b>8</b>                                                                   | <b>(3.8)*</b>  |
| Nova Scotia                         | 516                            | (2.9)          | 470                           | (8.4)          | 45*                                                                        | (8.8)*         |
| New Brunswick                       | 512                            | (3.4)          | 468                           | (3.0)          | 45*                                                                        | (4.8)*         |
| Quebec                              | 517                            | (3.7)          | 522                           | (3.7)          | -5                                                                         | (5.3)          |
| Ontario                             | 530                            | (3.1)          | 471                           | (2.6)          | 59*                                                                        | (4.0)*         |
| Manitoba                            | 493                            | (4.1)          | 486                           | (8.4)          | 7                                                                          | (9.3)          |
| Alberta                             | 532                            | (4.8)          | 476                           | (6.8)          | 56*                                                                        | (8.5)*         |
| British Columbia                    | 522                            | (4.7)          | 469                           | (8.9)          | 53*                                                                        | (10.3)*        |
| <b>Reflecting and evaluating</b>    |                                |                |                               |                |                                                                            |                |
| <b>Canada</b>                       | <b>540</b>                     | <b>(2.0)</b>   | <b>521</b>                    | <b>(3.3)</b>   | <b>19</b>                                                                  | <b>(3.9)*</b>  |
| Nova Scotia                         | 527                            | (3.0)          | 491                           | (8.0)          | 37*                                                                        | (8.6)*         |
| New Brunswick                       | 517                            | (3.0)          | 476                           | (2.8)          | 41*                                                                        | (4.2)*         |
| Quebec                              | 527                            | (4.0)          | 525                           | (3.7)          | 3                                                                          | (5.4)          |
| Ontario                             | 548                            | (3.3)          | 493                           | (2.4)          | 55*                                                                        | (4.1)*         |
| Manitoba                            | 504                            | (4.1)          | 499                           | (10.1)         | 5                                                                          | (10.8)         |
| Alberta                             | 546                            | (4.4)          | 492                           | (6.8)          | 54*                                                                        | (8.1)*         |
| British Columbia                    | 536                            | (4.2)          | 497                           | (11.6)         | 39*                                                                        | (12.3)*        |
| <b>Continuous texts</b>             |                                |                |                               |                |                                                                            |                |
| <b>Canada</b>                       | <b>528</b>                     | <b>(1.8)</b>   | <b>513</b>                    | <b>(3.2)</b>   | <b>14</b>                                                                  | <b>(3.7)*</b>  |
| Nova Scotia                         | 517                            | (2.9)          | 471                           | (8.8)          | 47*                                                                        | (9.4)*         |
| New Brunswick                       | 513                            | (3.2)          | 467                           | (2.9)          | 46*                                                                        | (4.5)*         |
| Quebec                              | 519                            | (3.9)          | 519                           | (3.6)          | 0                                                                          | (5.3)          |
| Ontario                             | 534                            | (3.2)          | 471                           | (2.6)          | 64*                                                                        | (3.9)*         |
| Manitoba                            | 497                            | (4.1)          | 485                           | (9.0)          | 12                                                                         | (10.1)         |
| Alberta                             | 534                            | (4.8)          | 472                           | (7.4)          | 61*                                                                        | (8.9)*         |
| British Columbia                    | 524                            | (4.5)          | 470                           | (10.5)         | 54*                                                                        | (11.4)*        |

Table B.1.19 (concluded)

**Estimated average scores and school-language system differences for  
combined reading and reading subscales, by province**

| Province                    | English-language school system |                | French-language school system |                | Difference between the English-language and French-language school systems |                |
|-----------------------------|--------------------------------|----------------|-------------------------------|----------------|----------------------------------------------------------------------------|----------------|
|                             | average                        | standard error | average                       | standard error | difference                                                                 | standard error |
| <b>Non-continuous texts</b> |                                |                |                               |                |                                                                            |                |
| <b>Canada</b>               | <b>530</b>                     | <b>(1.9)</b>   | <b>519</b>                    | <b>(3.4)</b>   | <b>12</b>                                                                  | <b>(4.0)*</b>  |
| Nova Scotia                 | 519                            | (2.9)          | 499                           | (10.1)         | 20*                                                                        | (10.5)*        |
| New Brunswick               | 502                            | (3.2)          | 469                           | (2.8)          | 33*                                                                        | (4.4)*         |
| Quebec                      | 520                            | (4.1)          | 523                           | (3.9)          | -3                                                                         | (5.7)          |
| Ontario                     | 536                            | (3.4)          | 487                           | (2.9)          | 49*                                                                        | (4.4)*         |
| Manitoba                    | 498                            | (3.6)          | 494                           | (8.5)          | 3                                                                          | (9.4)          |
| Alberta                     | 539                            | (4.7)          | 480                           | (6.9)          | 59*                                                                        | (8.5)*         |
| British Columbia            | 531                            | (4.0)          | 490                           | (11.0)         | 41*                                                                        | (11.5)*        |

0 true zero or a value rounded to zero

\* Statistically significant differences.

Table B.1.20

**Estimated average scores and gender differences in student performance:  
Combined reading and reading subscales**

| Province                        | Gender differences |                |            |                |                                    |                |
|---------------------------------|--------------------|----------------|------------|----------------|------------------------------------|----------------|
|                                 | Females            |                | Males      |                | Difference between female and male |                |
|                                 | mean score         | standard error | mean score | standard error | score difference                   | standard error |
| <b>Combined reading</b>         |                    |                |            |                |                                    |                |
| <b>Canada</b>                   | <b>542</b>         | <b>(1.7)</b>   | <b>507</b> | <b>(1.8)</b>   | <b>34*</b>                         | <b>(1.9)*</b>  |
| Newfoundland and Labrador       | 529                | (4.5)          | 483        | (4.7)          | 45*                                | (5.3)*         |
| Prince Edward Island            | 510                | (3.3)          | 462        | (4.0)          | 48*                                | (5.5)*         |
| Nova Scotia                     | 530                | (3.2)          | 501        | (3.9)          | 29*                                | (4.7)*         |
| New Brunswick                   | 515                | (2.9)          | 483        | (3.6)          | 32*                                | (4.4)*         |
| Quebec                          | 537                | (3.3)          | 506        | (3.9)          | 31*                                | (3.9)*         |
| Ontario                         | 549                | (3.3)          | 513        | (3.6)          | 36*                                | (3.9)*         |
| Manitoba                        | 511                | (5.4)          | 479        | (4.6)          | 32*                                | (7.2)*         |
| Saskatchewan                    | 524                | (3.2)          | 486        | (4.5)          | 37*                                | (4.6)*         |
| Alberta                         | 549                | (5.7)          | 517        | (4.6)          | 32*                                | (4.9)*         |
| British Columbia                | 543                | (4.1)          | 507        | (5.4)          | 36*                                | (4.5)*         |
| <b>Accessing and retrieving</b> |                    |                |            |                |                                    |                |
| <b>Canada</b>                   | <b>536</b>         | <b>(1.6)</b>   | <b>498</b> | <b>(1.9)</b>   | <b>38*</b>                         | <b>(2.0)*</b>  |
| Newfoundland and Labrador       | 524                | (4.9)          | 477        | (5.3)          | 47*                                | (6.4)*         |
| Prince Edward Island            | 506                | (3.4)          | 457        | (4.1)          | 49*                                | (5.7)*         |
| Nova Scotia                     | 522                | (3.8)          | 491        | (4.9)          | 31*                                | (5.6)*         |
| New Brunswick                   | 504                | (3.4)          | 470        | (4.3)          | 34*                                | (5.0)*         |
| Quebec                          | 532                | (3.8)          | 499        | (4.3)          | 33*                                | (4.0)*         |
| Ontario                         | 542                | (3.2)          | 504        | (4.0)          | 38*                                | (4.0)*         |
| Manitoba                        | 517                | (5.2)          | 476        | (5.6)          | 41*                                | (7.7)*         |
| Saskatchewan                    | 528                | (3.2)          | 478        | (5.1)          | 50*                                | (5.0)*         |
| Alberta                         | 540                | (5.3)          | 504        | (4.9)          | 37*                                | (5.0)*         |
| British Columbia                | 537                | (4.3)          | 496        | (5.9)          | 42*                                | (5.0)*         |

Table B.1.20 (concluded)

**Estimated average scores and gender differences in student performance:  
Combined reading and reading subscales**

| Province                            | Gender differences |                |            |                |                                    |                |
|-------------------------------------|--------------------|----------------|------------|----------------|------------------------------------|----------------|
|                                     | Females            |                | Males      |                | Difference between female and male |                |
|                                     | mean score         | standard error | mean score | standard error | score difference                   | standard error |
| <b>Integrating and interpreting</b> |                    |                |            |                |                                    |                |
| <b>Canada</b>                       | <b>537</b>         | <b>(1.8)</b>   | <b>507</b> | <b>(1.9)</b>   | <b>30*</b>                         | <b>(2.2)*</b>  |
| Newfoundland and Labrador           | 524                | (5.1)          | 479        | (4.6)          | 45*                                | (6.0)*         |
| Prince Edward Island                | 505                | (3.3)          | 459        | (4.0)          | 46*                                | (5.6)*         |
| Nova Scotia                         | 529                | (3.8)          | 500        | (3.8)          | 29*                                | (5.0)*         |
| New Brunswick                       | 513                | (2.9)          | 485        | (4.2)          | 28*                                | (5.0)*         |
| Quebec                              | 535                | (3.7)          | 507        | (4.2)          | 27*                                | (4.5)*         |
| Ontario                             | 542                | (3.5)          | 513        | (3.6)          | 30*                                | (4.2)*         |
| Manitoba                            | 506                | (5.9)          | 479        | (4.9)          | 28*                                | (7.5)*         |
| Saskatchewan                        | 519                | (3.5)          | 486        | (4.7)          | 33*                                | (4.8)*         |
| Alberta                             | 547                | (6.0)          | 517        | (4.7)          | 30*                                | (5.0)*         |
| British Columbia                    | 539                | (4.6)          | 506        | (5.8)          | 32*                                | (4.7)*         |
| <b>Reflecting and evaluating</b>    |                    |                |            |                |                                    |                |
| <b>Canada</b>                       | <b>555</b>         | <b>(1.9)</b>   | <b>516</b> | <b>(1.9)</b>   | <b>38*</b>                         | <b>(2.0)*</b>  |
| Newfoundland and Labrador           | 541                | (4.3)          | 496        | (4.3)          | 44*                                | (5.3)*         |
| Prince Edward Island                | 520                | (3.1)          | 474        | (3.8)          | 46*                                | (5.3)*         |
| Nova Scotia                         | 541                | (3.6)          | 513        | (4.2)          | 28*                                | (5.1)*         |
| New Brunswick                       | 524                | (2.6)          | 486        | (3.8)          | 37*                                | (4.6)*         |
| Quebec                              | 543                | (3.4)          | 506        | (4.0)          | 37*                                | (3.5)*         |
| Ontario                             | 567                | (3.6)          | 525        | (3.8)          | 43*                                | (4.1)*         |
| Manitoba                            | 520                | (5.9)          | 487        | (5.1)          | 34*                                | (7.8)*         |
| Saskatchewan                        | 537                | (3.5)          | 498        | (4.6)          | 39*                                | (4.7)*         |
| Alberta                             | 563                | (5.9)          | 529        | (4.2)          | 33*                                | (5.5)*         |
| British Columbia                    | 554                | (4.1)          | 519        | (5.4)          | 35*                                | (4.7)*         |
| <b>Continuous texts</b>             |                    |                |            |                |                                    |                |
| <b>Canada</b>                       | <b>543</b>         | <b>(1.7)</b>   | <b>506</b> | <b>(1.9)</b>   | <b>37*</b>                         | <b>(2.1)*</b>  |
| Newfoundland and Labrador           | 533                | (4.5)          | 483        | (5.1)          | 50*                                | (5.6)*         |
| Prince Edward Island                | 512                | (3.3)          | 461        | (4.0)          | 51*                                | (5.5)*         |
| Nova Scotia                         | 531                | (3.7)          | 502        | (4.1)          | 30*                                | (5.3)*         |
| New Brunswick                       | 517                | (3.0)          | 482        | (3.6)          | 35*                                | (4.4)*         |
| Quebec                              | 536                | (3.4)          | 501        | (3.9)          | 35*                                | (3.8)*         |
| Ontario                             | 551                | (3.4)          | 513        | (3.9)          | 38*                                | (4.3)*         |
| Manitoba                            | 514                | (6.0)          | 479        | (5.0)          | 35*                                | (7.6)*         |
| Saskatchewan                        | 527                | (3.2)          | 488        | (4.5)          | 39*                                | (5.0)*         |
| Alberta                             | 550                | (5.7)          | 516        | (4.7)          | 34*                                | (4.8)*         |
| British Columbia                    | 543                | (4.6)          | 505        | (5.8)          | 38*                                | (5.3)*         |
| <b>Non-continuous texts</b>         |                    |                |            |                |                                    |                |
| <b>Canada</b>                       | <b>544</b>         | <b>(1.9)</b>   | <b>511</b> | <b>(1.8)</b>   | <b>33*</b>                         | <b>(2.0)*</b>  |
| Newfoundland and Labrador           | 534                | (4.8)          | 487        | (4.7)          | 47*                                | (5.4)*         |
| Prince Edward Island                | 512                | (3.1)          | 468        | (4.0)          | 44*                                | (5.3)*         |
| Nova Scotia                         | 532                | (3.7)          | 505        | (4.3)          | 27*                                | (5.6)*         |
| New Brunswick                       | 505                | (2.8)          | 479        | (3.7)          | 27*                                | (4.6)*         |
| Quebec                              | 536                | (3.7)          | 509        | (4.1)          | 28*                                | (3.9)*         |
| Ontario                             | 552                | (3.7)          | 516        | (3.8)          | 36*                                | (4.1)*         |
| Manitoba                            | 513                | (4.9)          | 481        | (4.8)          | 32*                                | (6.7)*         |
| Saskatchewan                        | 526                | (3.5)          | 489        | (4.6)          | 38*                                | (4.9)*         |
| Alberta                             | 553                | (5.7)          | 524        | (4.8)          | 30*                                | (4.9)*         |
| British Columbia                    | 549                | (4.1)          | 513        | (5.1)          | 36*                                | (4.5)*         |

\* Statistically significant differences.

Table B.1.21

**Proportion of students who performed below Level 2 and at Level 4 and above on the combined reading scale, PISA 2000 and PISA 2009, Canada and the provinces**

| Canada and provinces      | Below level 2 |                |             |                |                                  |                | Level 4 and above |                |             |                |                                  |                |
|---------------------------|---------------|----------------|-------------|----------------|----------------------------------|----------------|-------------------|----------------|-------------|----------------|----------------------------------|----------------|
|                           | 2000          |                | 2009        |                | Difference between 2000 and 2009 |                | 2000              |                | 2009        |                | Difference between 2000 and 2009 |                |
|                           |               |                |             |                |                                  |                |                   |                |             |                |                                  |                |
|                           | percent       | standard error | percent     | standard error | score difference                 | standard error | percent           | standard error | percent     | standard error | score difference                 | standard error |
| <b>Canada</b>             | <b>9.6</b>    | <b>(0.4)</b>   | <b>10.3</b> | <b>(0.5)</b>   | <b>0.7</b>                       | <b>(0.6)</b>   | <b>44.5</b>       | <b>(0.7)</b>   | <b>39.5</b> | <b>(0.8)</b>   | <b>-5.0*</b>                     | <b>(1.0)*</b>  |
| Newfoundland and Labrador | 13.7          | (0.9)          | 13.7        | (1.6)          | 0.0                              | (1.8)          | 36.8              | (1.3)          | 31.0        | (1.9)          | -5.8*                            | (2.3)*         |
| Prince Edward Island      | 12.7          | (1.1)          | 21.2        | (1.1)          | 8.4*                             | (1.5)          | 37.0              | (1.2)          | 25.6        | (1.3)          | -11.3*                           | (1.8)*         |
| Nova Scotia               | 12.0          | (0.9)          | 11.1        | (1.1)          | -0.9                             | (1.4)          | 38.2              | (1.4)          | 34.7        | (1.5)          | -3.5                             | (2.0)          |
| New Brunswick             | 16.7          | (0.8)          | 16.2        | (1.0)          | -0.5                             | (1.3)          | 30.5              | (1.0)          | 28.5        | (1.4)          | -2.0                             | (1.7)          |
| Quebec                    | 8.3           | (0.8)          | 10.4        | (1.0)          | 2.1                              | (1.3)          | 45.0              | (1.4)          | 38.6        | (1.5)          | -6.4*                            | (2.1)*         |
| Ontario                   | 9.9           | (0.9)          | 8.4         | (0.8)          | -1.4                             | (1.2)          | 44.3              | (1.4)          | 41.9        | (1.6)          | -2.4                             | (2.2)          |
| Manitoba                  | 10.5          | (1.0)          | 17.6        | (1.4)          | 7.1*                             | (1.7)          | 41.1              | (1.7)          | 29.3        | (1.5)          | -11.8*                           | (2.3)*         |
| Saskatchewan              | 9.2           | (0.7)          | 15.4        | (1.5)          | 6.2*                             | (1.6)          | 41.8              | (1.6)          | 31.6        | (1.5)          | -10.2*                           | (2.2)*         |
| Alberta                   | 7.8           | (0.9)          | 10.0        | (1.2)          | 2.2                              | (1.5)          | 50.7              | (1.4)          | 43.5        | (2.1)          | -7.2*                            | (2.5)*         |
| British Columbia          | 9.3           | (0.8)          | 10.7        | (1.1)          | 1.5                              | (1.3)          | 46.8              | (1.3)          | 39.8        | (1.9)          | -7.0*                            | (2.3)*         |

0 true zero or a value rounded to zero

\* Statistically significant differences.

Table B.1.22

**Score point difference favouring females on the combined reading scale, PISA 2000 and PISA 2009, Canada and the provinces**

| Canada and provinces      | 2000             |                | 2009             |                |
|---------------------------|------------------|----------------|------------------|----------------|
|                           | score difference | standard error | score difference | standard error |
| <b>Canada</b>             | <b>32</b>        | <b>(1.6)</b>   | <b>34</b>        | <b>(1.9)</b>   |
| Newfoundland and Labrador | 42               | (4.3)          | 45               | (5.3)          |
| Prince Edward Island      | 35               | (4.6)          | 48               | (5.5)          |
| Nova Scotia               | 32               | (4.2)          | 29               | (4.7)          |
| New Brunswick             | 48*              | (3.5)*         | 32*              | (4.4)*         |
| Quebec                    | 32               | (3.2)          | 31               | (3.9)          |
| Ontario                   | 30               | (3.4)          | 36               | (3.9)          |
| Manitoba                  | 35               | (4.0)          | 32               | (7.2)          |
| Saskatchewan              | 36               | (3.7)          | 37               | (4.6)          |
| Alberta                   | 38               | (4.2)          | 32               | (4.9)          |
| British Columbia          | 31               | (4.6)          | 36               | (4.5)          |

\* Statistically significant differences.

Table B.2.1

**Estimated average scores and confidence intervals for countries, provinces and economies: Mathematics**

| Country, economy and province    | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|----------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Shanghai-China                   | 600                     | (2.8)          | 595                                   | 606                                   |
| Singapore                        | 562                     | (1.4)          | 559                                   | 565                                   |
| Hong Kong-China                  | 555                     | (2.7)          | 549                                   | 560                                   |
| Korea                            | 546                     | (4.0)          | 538                                   | 554                                   |
| Chinese Taipei                   | 543                     | (3.4)          | 537                                   | 550                                   |
| <b>Quebec</b>                    | <b>543</b>              | <b>(3.4)</b>   | <b>536</b>                            | <b>550</b>                            |
| Finland                          | 541                     | (2.2)          | 536                                   | 545                                   |
| Liechtenstein                    | 536                     | (4.1)          | 528                                   | 544                                   |
| Switzerland                      | 534                     | (3.3)          | 527                                   | 540                                   |
| Japan                            | 529                     | (3.3)          | 522                                   | 536                                   |
| <b>Alberta</b>                   | <b>529</b>              | <b>(4.4)</b>   | <b>520</b>                            | <b>538</b>                            |
| <b>Canada</b>                    | <b>527</b>              | <b>(1.6)</b>   | <b>524</b>                            | <b>530</b>                            |
| Netherlands                      | 526                     | (4.7)          | 517                                   | 535                                   |
| <b>Ontario</b>                   | <b>526</b>              | <b>(3.2)</b>   | <b>519</b>                            | <b>532</b>                            |
| Macao-China                      | 525                     | (0.9)          | 523                                   | 527                                   |
| <b>British Columbia</b>          | <b>523</b>              | <b>(4.6)</b>   | <b>514</b>                            | <b>532</b>                            |
| New Zealand                      | 519                     | (2.3)          | 515                                   | 524                                   |
| Belgium                          | 515                     | (2.3)          | 511                                   | 520                                   |
| Australia                        | 514                     | (2.5)          | 509                                   | 519                                   |
| Germany                          | 513                     | (2.9)          | 507                                   | 518                                   |
| Estonia                          | 512                     | (2.6)          | 507                                   | 517                                   |
| <b>Nova Scotia</b>               | <b>512</b>              | <b>(2.3)</b>   | <b>508</b>                            | <b>517</b>                            |
| Iceland                          | 507                     | (1.4)          | 504                                   | 509                                   |
| <b>Saskatchewan</b>              | <b>506</b>              | <b>(3.2)</b>   | <b>499</b>                            | <b>512</b>                            |
| <b>New Brunswick</b>             | <b>504</b>              | <b>(2.2)</b>   | <b>499</b>                            | <b>508</b>                            |
| Denmark                          | 503                     | (2.6)          | 498                                   | 508                                   |
| <b>Newfoundland and Labrador</b> | <b>503</b>              | <b>(2.8)</b>   | <b>497</b>                            | <b>508</b>                            |
| Slovenia                         | 501                     | (1.2)          | 499                                   | 504                                   |
| <b>Manitoba</b>                  | <b>501</b>              | <b>(3.6)</b>   | <b>494</b>                            | <b>509</b>                            |
| Norway                           | 498                     | (2.4)          | 493                                   | 503                                   |
| Slovak Republic                  | 497                     | (3.1)          | 491                                   | 503                                   |
| France                           | 497                     | (3.1)          | 491                                   | 503                                   |
| Austria                          | 496                     | (2.7)          | 491                                   | 501                                   |
| Poland                           | 495                     | (2.8)          | 489                                   | 500                                   |
| Sweden                           | 494                     | (2.9)          | 489                                   | 500                                   |
| Czech Republic                   | 493                     | (2.8)          | 487                                   | 498                                   |
| United Kingdom                   | 492                     | (2.4)          | 488                                   | 497                                   |
| Hungary                          | 490                     | (3.5)          | 483                                   | 497                                   |
| Luxembourg                       | 489                     | (1.2)          | 487                                   | 491                                   |
| Portugal                         | 487                     | (2.9)          | 481                                   | 493                                   |
| Ireland                          | 487                     | (2.5)          | 482                                   | 492                                   |
| United States                    | 487                     | (3.6)          | 480                                   | 494                                   |
| <b>Prince Edward Island</b>      | <b>487</b>              | <b>(2.3)</b>   | <b>483</b>                            | <b>492</b>                            |
| Italy                            | 483                     | (1.9)          | 479                                   | 487                                   |
| Spain                            | 483                     | (2.1)          | 479                                   | 488                                   |
| Latvia                           | 482                     | (3.1)          | 476                                   | 488                                   |
| Lithuania                        | 477                     | (2.6)          | 471                                   | 482                                   |
| Russian Federation               | 468                     | (3.3)          | 461                                   | 474                                   |
| Greece                           | 466                     | (3.9)          | 458                                   | 474                                   |
| Croatia                          | 460                     | (3.1)          | 454                                   | 466                                   |
| Dubai (UAE)                      | 453                     | (1.1)          | 450                                   | 455                                   |
| Israel                           | 447                     | (3.3)          | 440                                   | 453                                   |

Table B.2.1 (concluded)

**Estimated average scores and confidence intervals for countries, provinces and economies: Mathematics**

| Country, economy and province | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|-------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Turkey                        | 445                     | (4.4)          | 437                                   | 454                                   |
| Serbia                        | 442                     | (2.9)          | 437                                   | 448                                   |
| Azerbaijan                    | 431                     | (2.8)          | 426                                   | 436                                   |
| Bulgaria                      | 428                     | (5.9)          | 417                                   | 440                                   |
| Romania                       | 427                     | (3.4)          | 420                                   | 434                                   |
| Uruguay                       | 427                     | (2.6)          | 422                                   | 432                                   |
| Chile                         | 421                     | (3.1)          | 415                                   | 427                                   |
| Thailand                      | 419                     | (3.2)          | 412                                   | 425                                   |
| Mexico                        | 419                     | (1.8)          | 415                                   | 422                                   |
| Trinidad and Tobago           | 414                     | (1.3)          | 412                                   | 417                                   |
| Kazakhstan                    | 405                     | (3.0)          | 399                                   | 411                                   |
| Montenegro                    | 403                     | (2.0)          | 399                                   | 406                                   |
| Argentina                     | 388                     | (4.1)          | 380                                   | 396                                   |
| Jordan                        | 387                     | (3.7)          | 379                                   | 394                                   |
| Brazil                        | 386                     | (2.4)          | 381                                   | 390                                   |
| Colombia                      | 381                     | (3.2)          | 374                                   | 387                                   |
| Albania                       | 377                     | (4.0)          | 370                                   | 385                                   |
| Tunisia                       | 371                     | (3.0)          | 366                                   | 377                                   |
| Indonesia                     | 371                     | (3.7)          | 364                                   | 379                                   |
| Qatar                         | 368                     | (0.7)          | 367                                   | 369                                   |
| Peru                          | 365                     | (4.0)          | 357                                   | 373                                   |
| Panama                        | 360                     | (5.2)          | 349                                   | 370                                   |
| Kyrgyzstan                    | 331                     | (2.9)          | 326                                   | 337                                   |

Table B.2.2

**Estimated average scores and confidence intervals for countries, provinces and economies: Science**

| Country, economy and province    | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|----------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Shanghai-China                   | 575                     | (2.3)          | 570                                   | 579                                   |
| Finland                          | 554                     | (2.3)          | 550                                   | 559                                   |
| Hong Kong-China                  | 549                     | (2.8)          | 544                                   | 554                                   |
| <b>Alberta</b>                   | <b>545</b>              | <b>(4.2)</b>   | <b>536</b>                            | <b>553</b>                            |
| Singapore                        | 542                     | (1.4)          | 539                                   | 544                                   |
| Japan                            | 539                     | (3.4)          | 533                                   | 546                                   |
| Korea                            | 538                     | (3.4)          | 531                                   | 545                                   |
| <b>British Columbia</b>          | <b>535</b>              | <b>(4.1)</b>   | <b>527</b>                            | <b>543</b>                            |
| New Zealand                      | 532                     | (2.6)          | 527                                   | 537                                   |
| <b>Ontario</b>                   | <b>531</b>              | <b>(3.3)</b>   | <b>525</b>                            | <b>538</b>                            |
| <b>Canada</b>                    | <b>529</b>              | <b>(1.6)</b>   | <b>526</b>                            | <b>532</b>                            |
| Estonia                          | 528                     | (2.7)          | 523                                   | 533                                   |
| Australia                        | 527                     | (2.5)          | 522                                   | 532                                   |
| <b>Quebec</b>                    | <b>524</b>              | <b>(3.2)</b>   | <b>518</b>                            | <b>531</b>                            |
| <b>Nova Scotia</b>               | <b>523</b>              | <b>(2.7)</b>   | <b>518</b>                            | <b>529</b>                            |
| Netherlands                      | 522                     | (5.4)          | 512                                   | 533                                   |
| Liechtenstein                    | 520                     | (3.4)          | 513                                   | 527                                   |
| Germany                          | 520                     | (2.8)          | 515                                   | 526                                   |
| Chinese Taipei                   | 520                     | (2.6)          | 515                                   | 526                                   |
| <b>Newfoundland and Labrador</b> | <b>518</b>              | <b>(3.0)</b>   | <b>512</b>                            | <b>524</b>                            |
| Switzerland                      | 517                     | (2.8)          | 511                                   | 522                                   |
| United Kingdom                   | 514                     | (2.5)          | 509                                   | 519                                   |
| <b>Saskatchewan</b>              | <b>513</b>              | <b>(3.7)</b>   | <b>506</b>                            | <b>520</b>                            |
| Slovenia                         | 512                     | (1.1)          | 510                                   | 514                                   |
| Macao-China                      | 511                     | (1.0)          | 509                                   | 513                                   |
| Poland                           | 508                     | (2.4)          | 503                                   | 513                                   |
| Ireland                          | 508                     | (3.3)          | 502                                   | 514                                   |
| Belgium                          | 507                     | (2.5)          | 502                                   | 512                                   |
| <b>Manitoba</b>                  | <b>506</b>              | <b>(4.0)</b>   | <b>498</b>                            | <b>514</b>                            |
| Hungary                          | 503                     | (3.1)          | 496                                   | 509                                   |
| United States                    | 502                     | (3.6)          | 495                                   | 509                                   |
| <b>New Brunswick</b>             | <b>501</b>              | <b>(2.4)</b>   | <b>496</b>                            | <b>505</b>                            |
| Norway                           | 500                     | (2.6)          | 495                                   | 505                                   |
| Czech Republic                   | 500                     | (3.0)          | 495                                   | 506                                   |
| Denmark                          | 499                     | (2.5)          | 494                                   | 504                                   |
| France                           | 498                     | (3.6)          | 491                                   | 505                                   |
| Iceland                          | 496                     | (1.4)          | 493                                   | 498                                   |
| Sweden                           | 495                     | (2.7)          | 490                                   | 500                                   |
| <b>Prince Edward Island</b>      | <b>495</b>              | <b>(2.4)</b>   | <b>490</b>                            | <b>499</b>                            |
| Latvia                           | 494                     | (3.1)          | 488                                   | 500                                   |
| Austria                          | 494                     | (3.2)          | 488                                   | 501                                   |
| Portugal                         | 493                     | (2.9)          | 487                                   | 499                                   |
| Lithuania                        | 491                     | (2.9)          | 486                                   | 497                                   |
| Slovak Republic                  | 490                     | (3.0)          | 484                                   | 496                                   |
| Italy                            | 489                     | (1.8)          | 485                                   | 492                                   |
| Spain                            | 488                     | (2.1)          | 484                                   | 492                                   |
| Croatia                          | 486                     | (2.8)          | 481                                   | 492                                   |
| Luxembourg                       | 484                     | (1.2)          | 482                                   | 486                                   |
| Russian Federation               | 478                     | (3.3)          | 472                                   | 485                                   |
| Greece                           | 470                     | (4.0)          | 462                                   | 478                                   |
| Dubai (UAE)                      | 466                     | (1.2)          | 464                                   | 469                                   |
| Israel                           | 455                     | (3.1)          | 449                                   | 461                                   |

Table B.2.2 (concluded)

**Estimated average scores and confidence intervals for countries, provinces and economies: Science**

| Country, economy and province | estimated average score | standard error | confidence interval – 95% lower limit | confidence interval – 95% upper limit |
|-------------------------------|-------------------------|----------------|---------------------------------------|---------------------------------------|
| Turkey                        | 454                     | (3.6)          | 447                                   | 461                                   |
| Chile                         | 447                     | (2.9)          | 442                                   | 453                                   |
| Serbia                        | 443                     | (2.4)          | 438                                   | 447                                   |
| Bulgaria                      | 439                     | (5.9)          | 428                                   | 451                                   |
| Romania                       | 428                     | (3.4)          | 422                                   | 435                                   |
| Uruguay                       | 427                     | (2.6)          | 422                                   | 432                                   |
| Thailand                      | 425                     | (3.0)          | 419                                   | 431                                   |
| Mexico                        | 416                     | (1.8)          | 412                                   | 419                                   |
| Jordan                        | 415                     | (3.5)          | 408                                   | 422                                   |
| Trinidad and Tobago           | 410                     | (1.2)          | 408                                   | 413                                   |
| Brazil                        | 405                     | (2.4)          | 401                                   | 410                                   |
| Colombia                      | 402                     | (3.6)          | 395                                   | 409                                   |
| Argentina                     | 401                     | (4.6)          | 392                                   | 410                                   |
| Montenegro                    | 401                     | (2.0)          | 397                                   | 405                                   |
| Tunisia                       | 401                     | (2.7)          | 395                                   | 406                                   |
| Kazakhstan                    | 400                     | (3.1)          | 394                                   | 407                                   |
| Albania                       | 391                     | (3.9)          | 383                                   | 398                                   |
| Indonesia                     | 383                     | (3.8)          | 375                                   | 390                                   |
| Qatar                         | 379                     | (0.9)          | 378                                   | 381                                   |
| Panama                        | 376                     | (5.7)          | 365                                   | 387                                   |
| Azerbaijan                    | 373                     | (3.1)          | 367                                   | 379                                   |
| Peru                          | 369                     | (3.5)          | 363                                   | 376                                   |
| Kyrgyzstan                    | 330                     | (2.9)          | 324                                   | 335                                   |

Table B.2.3

## Variation in performance: Mathematics

| Country, economy and province | Percentile |                |       |                |       |                |       |                |       |                |       |                | Difference in score points between the 75th and 25th percentile |
|-------------------------------|------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-----------------------------------------------------------------|
|                               | 5th        |                | 10th  |                | 25th  |                | 75th  |                | 90th  |                | 95th  |                |                                                                 |
|                               | score      | standard error | score | standard error | score | standard error | score | standard error | score | standard error | score | standard error |                                                                 |
| Azerbaijan                    | 334        | (3.0)          | 354   | (2.7)          | 387   | (2.9)          | 469   | (3.2)          | 512   | (5.2)          | 541   | (7.0)          | 82                                                              |
| Indonesia                     | 260        | (4.9)          | 284   | (4.6)          | 324   | (3.7)          | 416   | (4.6)          | 462   | (6.4)          | 493   | (8.6)          | 92                                                              |
| Colombia                      | 259        | (5.8)          | 286   | (5.1)          | 330   | (4.0)          | 431   | (3.4)          | 479   | (4.2)          | 509   | (4.2)          | 101                                                             |
| Panama                        | 235        | (8.2)          | 261   | (7.0)          | 306   | (5.6)          | 408   | (6.8)          | 466   | (8.6)          | 503   | (8.8)          | 102                                                             |
| Thailand                      | 295        | (4.5)          | 321   | (4.2)          | 365   | (3.5)          | 469   | (3.7)          | 522   | (5.4)          | 554   | (6.8)          | 104                                                             |
| Brazil                        | 261        | (3.0)          | 287   | (2.7)          | 331   | (2.3)          | 435   | (3.3)          | 493   | (4.7)          | 531   | (5.9)          | 104                                                             |
| Kyrgyzstan                    | 204        | (4.9)          | 231   | (3.9)          | 278   | (3.2)          | 382   | (3.8)          | 436   | (5.3)          | 473   | (7.0)          | 104                                                             |
| Tunisia                       | 247        | (4.8)          | 273   | (4.3)          | 318   | (3.7)          | 423   | (3.4)          | 471   | (4.9)          | 499   | (6.6)          | 105                                                             |
| Mexico                        | 289        | (3.2)          | 318   | (2.6)          | 366   | (2.2)          | 472   | (2.1)          | 520   | (2.8)          | 547   | (3.3)          | 106                                                             |
| Chile                         | 293        | (4.7)          | 322   | (3.8)          | 366   | (3.1)          | 473   | (4.2)          | 527   | (5.1)          | 559   | (5.8)          | 107                                                             |
| Newfoundland and Labrador     | 368        | (7.5)          | 397   | (7.2)          | 449   | (3.6)          | 558   | (4.2)          | 606   | (5.1)          | 634   | (6.0)          | 109                                                             |
| Liechtenstein                 | 385        | (19.0)         | 421   | (9.4)          | 484   | (7.9)          | 593   | (5.5)          | 637   | (12.0)         | 669   | (15.0)         | 109                                                             |
| Romania                       | 299        | (4.4)          | 326   | (4.1)          | 372   | (4.0)          | 481   | (3.6)          | 530   | (5.4)          | 560   | (6.5)          | 109                                                             |
| Estonia                       | 378        | (6.0)          | 409   | (3.5)          | 458   | (3.7)          | 567   | (2.7)          | 616   | (3.6)          | 643   | (3.6)          | 109                                                             |
| Latvia                        | 352        | (4.9)          | 379   | (4.5)          | 427   | (3.7)          | 537   | (3.8)          | 584   | (3.8)          | 612   | (3.7)          | 110                                                             |
| Jordan                        | 249        | (7.8)          | 281   | (4.8)          | 333   | (3.5)          | 443   | (4.4)          | 490   | (5.5)          | 520   | (6.9)          | 110                                                             |
| Kazakhstan                    | 276        | (4.3)          | 303   | (3.3)          | 347   | (3.5)          | 458   | (4.3)          | 514   | (5.3)          | 548   | (7.0)          | 111                                                             |
| New Brunswick                 | 363        | (6.9)          | 396   | (5.4)          | 447   | (4.5)          | 559   | (4.1)          | 614   | (5.6)          | 644   | (5.2)          | 112                                                             |
| Montenegro                    | 263        | (4.0)          | 295   | (4.4)          | 346   | (2.8)          | 458   | (2.2)          | 509   | (2.7)          | 543   | (3.9)          | 112                                                             |
| Finland                       | 399        | (4.4)          | 431   | (3.7)          | 487   | (3.0)          | 599   | (2.5)          | 644   | (2.6)          | 669   | (3.6)          | 112                                                             |
| Russian Federation            | 329        | (5.1)          | 360   | (4.5)          | 411   | (4.2)          | 524   | (3.8)          | 576   | (5.3)          | 609   | (7.2)          | 113                                                             |
| Nova Scotia                   | 371        | (7.4)          | 405   | (5.8)          | 456   | (3.4)          | 570   | (3.7)          | 620   | (5.2)          | 649   | (5.2)          | 114                                                             |
| Ontario                       | 383        | (7.0)          | 416   | (4.7)          | 469   | (3.9)          | 585   | (3.8)          | 631   | (3.9)          | 657   | (4.2)          | 116                                                             |
| Saskatchewan                  | 358        | (10.0)         | 393   | (7.4)          | 450   | (5.1)          | 566   | (3.9)          | 613   | (5.1)          | 640   | (6.0)          | 116                                                             |
| Norway                        | 354        | (4.1)          | 387   | (3.6)          | 441   | (3.2)          | 557   | (2.9)          | 608   | (3.4)          | 636   | (4.0)          | 116                                                             |
| Macao-China                   | 383        | (2.7)          | 415   | (2.7)          | 468   | (1.5)          | 584   | (1.3)          | 634   | (1.6)          | 663   | (2.5)          | 116                                                             |
| Ireland                       | 338        | (5.8)          | 376   | (4.4)          | 432   | (3.1)          | 548   | (2.8)          | 591   | (3.1)          | 617   | (4.3)          | 116                                                             |
| Prince Edward Island          | 339        | (7.5)          | 374   | (4.8)          | 431   | (4.2)          | 549   | (3.6)          | 595   | (4.7)          | 625   | (6.2)          | 118                                                             |
| United Kingdom                | 348        | (3.5)          | 380   | (3.1)          | 434   | (3.0)          | 552   | (3.2)          | 606   | (3.9)          | 635   | (3.2)          | 118                                                             |
| Denmark                       | 358        | (4.4)          | 390   | (4.0)          | 445   | (3.1)          | 564   | (3.3)          | 614   | (3.4)          | 644   | (4.6)          | 119                                                             |
| Canada                        | 379        | (3.0)          | 413   | (2.7)          | 468   | (2.0)          | 588   | (1.9)          | 638   | (2.2)          | 665   | (2.2)          | 120                                                             |
| Lithuania                     | 332        | (5.3)          | 363   | (4.2)          | 417   | (3.0)          | 537   | (3.1)          | 590   | (4.0)          | 621   | (5.4)          | 120                                                             |
| Manitoba                      | 361        | (6.6)          | 387   | (6.6)          | 442   | (5.7)          | 563   | (3.7)          | 610   | (4.6)          | 637   | (6.1)          | 121                                                             |
| British Columbia              | 375        | (8.0)          | 408   | (5.8)          | 465   | (5.2)          | 586   | (4.9)          | 635   | (5.0)          | 664   | (5.5)          | 121                                                             |
| Peru                          | 222        | (4.5)          | 252   | (4.0)          | 303   | (3.7)          | 424   | (5.2)          | 480   | (6.4)          | 516   | (9.0)          | 121                                                             |
| Albania                       | 226        | (7.0)          | 261   | (5.0)          | 317   | (5.2)          | 438   | (4.8)          | 493   | (5.7)          | 526   | (6.4)          | 121                                                             |
| Greece                        | 319        | (7.3)          | 352   | (5.9)          | 406   | (4.4)          | 527   | (3.6)          | 580   | (4.1)          | 613   | (4.4)          | 121                                                             |
| Iceland                       | 352        | (4.0)          | 388   | (3.5)          | 447   | (2.0)          | 569   | (2.0)          | 623   | (2.8)          | 652   | (3.3)          | 122                                                             |
| Croatia                       | 315        | (4.8)          | 347   | (4.1)          | 399   | (3.5)          | 521   | (3.8)          | 574   | (5.4)          | 606   | (5.6)          | 122                                                             |
| Spain                         | 328        | (4.1)          | 364   | (2.9)          | 424   | (2.5)          | 546   | (2.3)          | 597   | (2.3)          | 625   | (2.9)          | 122                                                             |
| Poland                        | 348        | (5.2)          | 380   | (3.8)          | 434   | (3.3)          | 557   | (3.2)          | 609   | (4.1)          | 638   | (4.6)          | 123                                                             |
| Korea                         | 397        | (8.4)          | 430   | (6.8)          | 486   | (5.3)          | 609   | (4.3)          | 659   | (4.6)          | 689   | (6.5)          | 123                                                             |
| Quebec                        | 387        | (7.5)          | 425   | (5.9)          | 484   | (5.2)          | 608   | (3.3)          | 655   | (3.3)          | 681   | (5.1)          | 124                                                             |
| Argentina                     | 231        | (7.9)          | 271   | (6.0)          | 327   | (4.3)          | 451   | (5.0)          | 509   | (7.1)          | 543   | (7.0)          | 124                                                             |
| Serbia                        | 295        | (4.8)          | 327   | (4.3)          | 380   | (3.7)          | 504   | (3.2)          | 560   | (4.3)          | 592   | (5.3)          | 124                                                             |
| Qatar                         | 227        | (2.3)          | 255   | (1.5)          | 300   | (1.3)          | 425   | (1.5)          | 506   | (2.4)          | 557   | (3.5)          | 125                                                             |
| Uruguay                       | 278        | (3.9)          | 310   | (4.0)          | 364   | (3.4)          | 490   | (3.1)          | 546   | (4.1)          | 578   | (4.5)          | 126                                                             |
| Hungary                       | 334        | (8.4)          | 370   | (7.1)          | 428   | (4.6)          | 554   | (4.5)          | 608   | (5.6)          | 637   | (5.6)          | 126                                                             |
| United States                 | 337        | (4.3)          | 368   | (4.3)          | 425   | (3.9)          | 551   | (4.9)          | 607   | (4.6)          | 637   | (5.9)          | 126                                                             |
| Japan                         | 370        | (6.4)          | 407   | (5.4)          | 468   | (4.4)          | 595   | (3.7)          | 648   | (4.8)          | 677   | (5.4)          | 127                                                             |
| Portugal                      | 335        | (3.8)          | 367   | (3.5)          | 424   | (3.4)          | 551   | (3.4)          | 605   | (4.3)          | 635   | (5.1)          | 127                                                             |
| Alberta                       | 380        | (8.3)          | 410   | (6.0)          | 466   | (5.2)          | 594   | (5.8)          | 645   | (5.6)          | 672   | (6.4)          | 128                                                             |
| Italy                         | 330        | (3.1)          | 363   | (2.4)          | 420   | (1.9)          | 548   | (2.5)          | 602   | (2.5)          | 632   | (2.8)          | 128                                                             |
| Sweden                        | 339        | (4.4)          | 374   | (4.2)          | 432   | (3.1)          | 560   | (3.3)          | 613   | (3.9)          | 643   | (4.1)          | 128                                                             |
| Turkey                        | 304        | (5.2)          | 331   | (3.6)          | 378   | (3.8)          | 506   | (6.3)          | 574   | (9.0)          | 613   | (12.0)         | 128                                                             |
| Czech Republic                | 342        | (5.6)          | 374   | (4.3)          | 428   | (3.5)          | 557   | (3.8)          | 615   | (4.3)          | 649   | (4.6)          | 129                                                             |
| Slovak Republic               | 342        | (6.3)          | 376   | (4.7)          | 432   | (3.7)          | 561   | (3.8)          | 621   | (5.4)          | 654   | (6.4)          | 129                                                             |

Table B.2.3 (concluded)

## Variation in performance: Mathematics

| Country, economy<br>and province | Percentile |                   |       |                   |       |                   |       |                   |       |                   |       |                   | Difference<br>in score<br>points<br>between<br>the 75th<br>and 25th<br>percentile |
|----------------------------------|------------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-----------------------------------------------------------------------------------|
|                                  | 5th        |                   | 10th  |                   | 25th  |                   | 75th  |                   | 90th  |                   | 95th  |                   |                                                                                   |
|                                  | score      | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error | score | standard<br>error |                                                                                   |
| Australia                        | 357        | (3.3)             | 393   | (2.8)             | 451   | (2.5)             | 580   | (3.1)             | 634   | (3.9)             | 665   | (5.0)             | 129                                                                               |
| Hong Kong-China                  | 390        | (5.1)             | 428   | (4.9)             | 492   | (3.5)             | 622   | (3.1)             | 673   | (3.9)             | 703   | (4.7)             | 130                                                                               |
| Netherlands                      | 378        | (5.6)             | 406   | (5.6)             | 460   | (6.8)             | 593   | (4.4)             | 640   | (4.4)             | 665   | (3.9)             | 133                                                                               |
| Slovenia                         | 345        | (3.6)             | 379   | (2.4)             | 435   | (2.5)             | 569   | (2.3)             | 628   | (3.6)             | 659   | (3.6)             | 134                                                                               |
| New Zealand                      | 355        | (4.9)             | 392   | (4.4)             | 454   | (2.8)             | 589   | (3.1)             | 642   | (3.9)             | 671   | (3.4)             | 135                                                                               |
| Switzerland                      | 363        | (4.8)             | 401   | (3.6)             | 468   | (4.2)             | 604   | (3.9)             | 658   | (4.1)             | 689   | (4.8)             | 136                                                                               |
| Bulgaria                         | 269        | (6.9)             | 302   | (5.8)             | 359   | (6.2)             | 496   | (6.6)             | 555   | (9.0)             | 593   | (12.0)            | 137                                                                               |
| Luxembourg                       | 324        | (3.9)             | 360   | (3.1)             | 423   | (1.7)             | 560   | (2.2)             | 613   | (2.5)             | 643   | (2.5)             | 137                                                                               |
| Dubai (UAE)                      | 294        | (3.1)             | 326   | (2.5)             | 382   | (2.3)             | 523   | (2.1)             | 584   | (3.3)             | 619   | (3.6)             | 141                                                                               |
| Austria                          | 338        | (6.6)             | 370   | (4.4)             | 425   | (3.5)             | 566   | (3.5)             | 620   | (3.5)             | 650   | (3.5)             | 141                                                                               |
| France                           | 321        | (5.8)             | 361   | (6.3)             | 429   | (4.8)             | 570   | (3.7)             | 622   | (3.9)             | 652   | (5.4)             | 141                                                                               |
| Germany                          | 347        | (5.0)             | 380   | (4.7)             | 443   | (4.4)             | 585   | (3.1)             | 638   | (3.5)             | 666   | (3.7)             | 142                                                                               |
| Trinidad and Tobago              | 252        | (4.0)             | 287   | (2.7)             | 342   | (2.5)             | 484   | (2.5)             | 545   | (1.8)             | 580   | (2.4)             | 142                                                                               |
| Shanghai-China                   | 421        | (7.1)             | 462   | (5.0)             | 531   | (4.0)             | 674   | (3.2)             | 726   | (4.2)             | 757   | (4.6)             | 143                                                                               |
| Israel                           | 272        | (6.7)             | 310   | (6.1)             | 374   | (4.6)             | 520   | (4.2)             | 581   | (5.2)             | 614   | (5.2)             | 146                                                                               |
| Chinese Taipei                   | 366        | (5.0)             | 405   | (3.8)             | 471   | (3.6)             | 618   | (4.6)             | 675   | (5.4)             | 709   | (6.6)             | 147                                                                               |
| Singapore                        | 383        | (3.0)             | 422   | (4.1)             | 490   | (2.9)             | 638   | (2.0)             | 693   | (2.5)             | 725   | (3.8)             | 148                                                                               |
| Belgium                          | 335        | (5.3)             | 373   | (4.9)             | 444   | (3.1)             | 593   | (2.4)             | 646   | (3.0)             | 675   | (3.2)             | 149                                                                               |

**Note:** Countries, economies and provinces in ascending order by the difference in score points between the 75th and 25th percentiles.

Table B.2.4

## Variation in performance: Science

| Country, economy and province | Percentile |                |       |                |       |                |       |                |       |                |       |                | Difference in score points between the 75th and 25th percentile |
|-------------------------------|------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-----------------------------------------------------------------|
|                               | 5th        |                | 10th  |                | 25th  |                | 75th  |                | 90th  |                | 95th  |                |                                                                 |
|                               | score      | standard error | score | standard error | score | standard error | score | standard error | score | standard error | score | standard error |                                                                 |
| Macao-China                   | 381        | (2.6)          | 411   | (1.9)          | 461   | (2.0)          | 564   | (1.7)          | 608   | (2.5)          | 632   | (3.2)          | 103                                                             |
| Thailand                      | 297        | (5.6)          | 326   | (4.8)          | 373   | (3.2)          | 477   | (3.3)          | 527   | (4.1)          | 559   | (5.7)          | 104                                                             |
| Latvia                        | 365        | (5.7)          | 392   | (4.5)          | 440   | (4.1)          | 548   | (3.2)          | 593   | (4.0)          | 619   | (3.3)          | 108                                                             |
| Colombia                      | 268        | (6.6)          | 298   | (6.2)          | 348   | (4.7)          | 457   | (3.6)          | 506   | (3.6)          | 536   | (4.1)          | 109                                                             |
| Romania                       | 301        | (5.0)          | 327   | (4.2)          | 373   | (4.4)          | 483   | (4.0)          | 530   | (4.2)          | 558   | (4.2)          | 110                                                             |
| Brazil                        | 275        | (3.5)          | 302   | (3.1)          | 348   | (2.3)          | 458   | (3.4)          | 517   | (4.0)          | 554   | (4.8)          | 110                                                             |
| Turkey                        | 322        | (5.0)          | 350   | (4.2)          | 397   | (3.3)          | 510   | (4.6)          | 560   | (5.8)          | 587   | (6.4)          | 113                                                             |
| Lithuania                     | 351        | (6.1)          | 382   | (4.9)          | 434   | (3.7)          | 549   | (3.2)          | 600   | (3.9)          | 630   | (3.7)          | 115                                                             |
| Newfoundland and Labrador     | 373        | (9.4)          | 410   | (5.4)          | 461   | (4.6)          | 577   | (5.5)          | 630   | (6.4)          | 660   | (9.1)          | 116                                                             |
| Kazakhstan                    | 262        | (4.9)          | 293   | (4.3)          | 342   | (3.4)          | 458   | (3.8)          | 515   | (5.1)          | 549   | (6.1)          | 116                                                             |
| Croatia                       | 348        | (4.7)          | 377   | (4.0)          | 429   | (3.7)          | 546   | (3.5)          | 595   | (4.0)          | 624   | (5.0)          | 117                                                             |
| Chinese Taipei                | 370        | (4.4)          | 404   | (3.6)          | 464   | (3.1)          | 581   | (3.3)          | 628   | (4.3)          | 654   | (4.4)          | 117                                                             |
| Nova Scotia                   | 376        | (7.4)          | 412   | (5.7)          | 466   | (4.5)          | 584   | (4.6)          | 633   | (5.1)          | 663   | (6.0)          | 118                                                             |
| British Columbia              | 382        | (7.6)          | 417   | (6.8)          | 478   | (5.5)          | 596   | (4.5)          | 646   | (5.2)          | 674   | (5.6)          | 118                                                             |
| Peru                          | 225        | (5.3)          | 256   | (4.5)          | 310   | (3.7)          | 428   | (4.2)          | 484   | (6.4)          | 519   | (7.8)          | 118                                                             |
| Montenegro                    | 258        | (4.9)          | 290   | (4.1)          | 343   | (3.0)          | 461   | (1.9)          | 512   | (3.0)          | 543   | (3.9)          | 118                                                             |
| Kyrgyzstan                    | 183        | (4.9)          | 215   | (4.7)          | 269   | (3.9)          | 388   | (3.4)          | 444   | (5.0)          | 482   | (6.1)          | 119                                                             |
| New Brunswick                 | 359        | (5.8)          | 390   | (4.9)          | 439   | (4.0)          | 559   | (3.5)          | 615   | (7.1)          | 647   | (5.7)          | 120                                                             |
| Quebec                        | 374        | (8.1)          | 410   | (5.9)          | 467   | (4.1)          | 587   | (3.3)          | 634   | (4.2)          | 659   | (3.5)          | 120                                                             |
| Russian Federation            | 331        | (5.8)          | 364   | (4.7)          | 418   | (4.0)          | 539   | (3.5)          | 594   | (4.6)          | 628   | (5.2)          | 121                                                             |
| Panama                        | 232        | (7.5)          | 260   | (7.9)          | 315   | (7.6)          | 436   | (6.7)          | 495   | (8.0)          | 527   | (6.2)          | 121                                                             |
| Finland                       | 400        | (4.2)          | 437   | (4.2)          | 496   | (3.3)          | 617   | (2.9)          | 665   | (3.0)          | 694   | (3.6)          | 121                                                             |
| Norway                        | 346        | (4.4)          | 382   | (3.4)          | 440   | (3.0)          | 563   | (2.9)          | 615   | (3.7)          | 644   | (4.0)          | 123                                                             |

Table B.2.4 (concluded)

## Variation in performance: Science

| Country, economy and province | Percentile |                |       |                |       |                |       |                |       |                |       |                | Difference in score points between the 75th and 25th percentile |
|-------------------------------|------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-----------------------------------------------------------------|
|                               | 5th        |                | 10th  |                | 25th  |                | 75th  |                | 90th  |                | 95th  |                |                                                                 |
|                               | score      | standard error | score | standard error | score | standard error | score | standard error | score | standard error | score | standard error |                                                                 |
| Albania                       | 242        | (5.4)          | 276   | (4.7)          | 331   | (4.5)          | 454   | (4.8)          | 504   | (4.9)          | 532   | (4.8)          | 123                                                             |
| Canada                        | 377        | (2.8)          | 412   | (2.7)          | 469   | (2.0)          | 593   | (1.7)          | 642   | (1.7)          | 669   | (2.6)          | 124                                                             |
| Saskatchewan                  | 362        | (7.5)          | 395   | (6.4)          | 453   | (5.6)          | 577   | (5.1)          | 627   | (5.6)          | 658   | (6.1)          | 124                                                             |
| Ontario                       | 379        | (6.0)          | 416   | (4.9)          | 471   | (4.2)          | 596   | (3.8)          | 644   | (3.7)          | 671   | (5.6)          | 125                                                             |
| Liechtenstein                 | 374        | (10.0)         | 403   | (9.6)          | 458   | (7.4)          | 583   | (6.0)          | 631   | (9.3)          | 658   | (8.2)          | 125                                                             |
| Iceland                       | 330        | (4.3)          | 370   | (4.3)          | 435   | (2.6)          | 561   | (2.2)          | 616   | (2.9)          | 647   | (4.4)          | 126                                                             |
| Denmark                       | 343        | (4.1)          | 379   | (3.9)          | 438   | (3.1)          | 564   | (2.9)          | 615   | (3.7)          | 645   | (3.8)          | 126                                                             |
| Alberta                       | 392        | (6.5)          | 424   | (6.2)          | 482   | (4.8)          | 609   | (5.1)          | 660   | (5.9)          | 689   | (6.7)          | 127                                                             |
| Prince Edward Island          | 339        | (5.1)          | 373   | (4.5)          | 431   | (3.8)          | 560   | (4.0)          | 611   | (5.0)          | 642   | (6.4)          | 129                                                             |
| Manitoba                      | 345        | (9.4)          | 383   | (6.9)          | 443   | (5.8)          | 574   | (5.2)          | 625   | (5.1)          | 652   | (5.1)          | 131                                                             |
| Uruguay                       | 268        | (5.2)          | 303   | (3.6)          | 362   | (3.4)          | 493   | (3.5)          | 551   | (3.8)          | 584   | (4.2)          | 131                                                             |
| Japan                         | 361        | (8.7)          | 405   | (7.3)          | 477   | (4.8)          | 610   | (3.2)          | 659   | (3.5)          | 686   | (4.1)          | 133                                                             |
| Italy                         | 325        | (3.8)          | 362   | (2.6)          | 424   | (2.3)          | 557   | (2.0)          | 609   | (2.0)          | 639   | (2.3)          | 133                                                             |
| Switzerland                   | 352        | (4.2)          | 388   | (3.6)          | 452   | (3.5)          | 585   | (3.4)          | 637   | (3.8)          | 666   | (4.3)          | 133                                                             |
| Sweden                        | 327        | (4.7)          | 367   | (4.6)          | 429   | (3.8)          | 564   | (3.4)          | 622   | (3.9)          | 654   | (4.8)          | 135                                                             |
| United Kingdom                | 348        | (4.3)          | 385   | (3.6)          | 447   | (3.7)          | 583   | (3.1)          | 640   | (3.3)          | 672   | (3.9)          | 136                                                             |
| Argentina                     | 228        | (11.0)         | 271   | (7.6)          | 334   | (5.5)          | 471   | (5.5)          | 530   | (6.6)          | 564   | (7.9)          | 137                                                             |
| Netherlands                   | 362        | (6.9)          | 395   | (7.0)          | 453   | (7.6)          | 594   | (5.1)          | 645   | (4.8)          | 673   | (4.9)          | 141                                                             |
| Germany                       | 345        | (7.0)          | 383   | (6.2)          | 452   | (4.1)          | 594   | (3.3)          | 645   | (3.5)          | 675   | (3.8)          | 142                                                             |
| Luxembourg                    | 304        | (4.5)          | 345   | (3.2)          | 415   | (3.1)          | 558   | (2.2)          | 615   | (2.2)          | 646   | (4.0)          | 143                                                             |
| Belgium                       | 321        | (6.2)          | 364   | (4.8)          | 438   | (3.6)          | 583   | (2.8)          | 634   | (3.1)          | 661   | (3.2)          | 145                                                             |
| Austria                       | 321        | (6.9)          | 358   | (6.2)          | 424   | (4.8)          | 569   | (3.6)          | 623   | (3.3)          | 653   | (3.4)          | 145                                                             |
| Singapore                     | 362        | (3.5)          | 401   | (3.1)          | 471   | (2.0)          | 617   | (2.0)          | 673   | (3.0)          | 704   | (4.1)          | 146                                                             |
| Bulgaria                      | 263        | (7.7)          | 302   | (7.0)          | 367   | (7.6)          | 514   | (6.8)          | 575   | (5.7)          | 607   | (7.0)          | 147                                                             |
| Israel                        | 275        | (8.1)          | 314   | (5.5)          | 382   | (4.5)          | 531   | (3.3)          | 590   | (4.0)          | 623   | (4.2)          | 149                                                             |
| Dubai (UAE)                   | 295        | (2.4)          | 330   | (2.5)          | 391   | (1.6)          | 542   | (1.9)          | 606   | (3.0)          | 638   | (3.3)          | 151                                                             |
| Poland                        | 364        | (3.9)          | 396   | (3.3)          | 448   | (2.7)          | 569   | (2.7)          | 621   | (2.9)          | 650   | (3.8)          | 121                                                             |
| Portugal                      | 354        | (4.0)          | 384   | (3.7)          | 436   | (3.7)          | 551   | (3.0)          | 601   | (3.3)          | 627   | (3.8)          | 115                                                             |
| Spain                         | 338        | (3.5)          | 373   | (3.2)          | 431   | (3.0)          | 549   | (2.2)          | 597   | (2.2)          | 625   | (2.3)          | 118                                                             |
| Mexico                        | 291        | (2.8)          | 318   | (2.1)          | 364   | (1.7)          | 468   | (2.1)          | 517   | (2.8)          | 544   | (2.8)          | 104                                                             |
| Greece                        | 318        | (7.6)          | 353   | (6.3)          | 409   | (5.3)          | 535   | (3.8)          | 586   | (3.6)          | 616   | (3.4)          | 126                                                             |
| Hungary                       | 348        | (11.0)         | 388   | (7.6)          | 446   | (4.6)          | 564   | (3.7)          | 609   | (3.6)          | 636   | (4.4)          | 118                                                             |
| Korea                         | 399        | (6.5)          | 431   | (5.2)          | 485   | (4.2)          | 595   | (3.7)          | 640   | (3.7)          | 665   | (4.8)          | 110                                                             |
| Czech Republic                | 338        | (6.5)          | 375   | (5.6)          | 437   | (3.9)          | 568   | (3.4)          | 624   | (4.0)          | 657   | (4.4)          | 131                                                             |
| Slovak Republic               | 335        | (6.0)          | 371   | (4.9)          | 427   | (3.9)          | 556   | (3.4)          | 612   | (4.1)          | 643   | (4.6)          | 129                                                             |
| Hong Kong-China               | 393        | (7.3)          | 432   | (4.9)          | 494   | (3.9)          | 610   | (2.9)          | 655   | (2.9)          | 681   | (3.3)          | 116                                                             |
| Tunisia                       | 265        | (4.1)          | 296   | (3.6)          | 345   | (3.2)          | 458   | (3.3)          | 504   | (4.5)          | 531   | (5.4)          | 113                                                             |
| Estonia                       | 388        | (5.0)          | 419   | (4.7)          | 472   | (3.8)          | 586   | (3.1)          | 635   | (3.5)          | 665   | (4.4)          | 114                                                             |
| Jordan                        | 264        | (6.2)          | 301   | (5.4)          | 357   | (4.4)          | 477   | (3.9)          | 526   | (4.4)          | 556   | (5.0)          | 120                                                             |
| Qatar                         | 228        | (2.4)          | 257   | (1.7)          | 306   | (1.5)          | 443   | (1.7)          | 524   | (2.5)          | 572   | (2.8)          | 137                                                             |
| Ireland                       | 341        | (8.3)          | 382   | (4.9)          | 445   | (3.7)          | 576   | (3.3)          | 627   | (4.0)          | 656   | (4.4)          | 131                                                             |
| Chile                         | 315        | (4.3)          | 343   | (4.1)          | 392   | (3.5)          | 502   | (3.6)          | 553   | (3.8)          | 583   | (5.0)          | 110                                                             |
| United States                 | 341        | (4.8)          | 374   | (4.5)          | 433   | (3.9)          | 572   | (4.7)          | 629   | (5.1)          | 662   | (6.7)          | 139                                                             |
| Azerbaijan                    | 257        | (4.9)          | 281   | (4.0)          | 321   | (3.6)          | 421   | (3.7)          | 471   | (5.1)          | 502   | (5.6)          | 100                                                             |
| France                        | 314        | (8.1)          | 358   | (7.1)          | 433   | (5.6)          | 572   | (3.8)          | 624   | (4.2)          | 653   | (4.6)          | 139                                                             |
| New Zealand                   | 348        | (5.6)          | 390   | (4.3)          | 461   | (4.1)          | 608   | (3.0)          | 667   | (3.3)          | 697   | (3.6)          | 147                                                             |
| Indonesia                     | 272        | (5.4)          | 296   | (4.0)          | 336   | (3.7)          | 428   | (4.6)          | 472   | (6.2)          | 499   | (5.4)          | 92                                                              |
| Shanghai-China                | 430        | (4.9)          | 467   | (4.3)          | 523   | (3.0)          | 632   | (2.8)          | 674   | (3.4)          | 700   | (3.3)          | 109                                                             |
| Serbia                        | 302        | (5.0)          | 334   | (4.4)          | 387   | (3.1)          | 501   | (3.0)          | 548   | (3.3)          | 579   | (3.2)          | 114                                                             |
| Slovenia                      | 355        | (2.9)          | 387   | (2.3)          | 446   | (2.0)          | 580   | (2.3)          | 633   | (3.0)          | 661   | (4.1)          | 134                                                             |
| Trinidad and Tobago           | 234        | (3.6)          | 271   | (3.2)          | 335   | (3.1)          | 484   | (2.9)          | 552   | (2.6)          | 592   | (3.2)          | 149                                                             |
| Australia                     | 355        | (4.0)          | 395   | (4.0)          | 461   | (2.8)          | 597   | (2.8)          | 655   | (3.9)          | 688   | (5.0)          | 136                                                             |

**Note:** Countries, economies and provinces in ascending order by the difference in score points between the 75th and 25th percentiles.

Table B.2.5

**Estimated average scores and school language system differences for  
mathematics and science by province**

| Province           | English-language<br>school system |                   | French-language<br>school system |                   | Difference between the<br>English-language and French-<br>language school systems |                   |
|--------------------|-----------------------------------|-------------------|----------------------------------|-------------------|-----------------------------------------------------------------------------------|-------------------|
|                    | average                           | standard<br>error | average                          | standard<br>error | score<br>difference                                                               | standard<br>error |
| <b>Mathematics</b> |                                   |                   |                                  |                   |                                                                                   |                   |
| Nova Scotia        | 512                               | (2.3)             | 505                              | 7.2               | 8                                                                                 | (7.8)             |
| New Brunswick      | 508                               | (3.2)             | 494                              | 3.1               | 14*                                                                               | (5.0)*            |
| Quebec             | 533                               | (4.3)             | 544                              | 3.8               | -11*                                                                              | (5.6)*            |
| Ontario            | 527                               | (3.3)             | 500                              | 2.3               | 27*                                                                               | (3.8)*            |
| Manitoba           | 501                               | (3.7)             | 508                              | 7.6               | -6                                                                                | (8.6)             |
| Alberta            | 529                               | (4.4)             | 490                              | 7.1               | 39*                                                                               | (8.3)*            |
| British Columbia   | 524                               | (4.6)             | 483                              | 11.1              | 41*                                                                               | (12.0)*           |
| <b>Canada</b>      | <b>523</b>                        | <b>(1.8)</b>      | <b>539</b>                       | <b>(3.4)</b>      | <b>-16*</b>                                                                       | <b>(3.8)*</b>     |
| <b>Science</b>     |                                   |                   |                                  |                   |                                                                                   |                   |
| Nova Scotia        | 524                               | (2.8)             | 490                              | 10.2              | 34*                                                                               | (10.8)*           |
| New Brunswick      | 512                               | (3.2)             | 473                              | 2.9               | 40*                                                                               | (4.8)*            |
| Quebec             | 521                               | (3.8)             | 525                              | 3.6               | -4                                                                                | (5.3)             |
| Ontario            | 533                               | (3.4)             | 484                              | 2.3               | 49*                                                                               | (4.1)*            |
| Manitoba           | 506                               | (4.0)             | 498                              | 6.1               | 8                                                                                 | (7.5)             |
| Alberta            | 545                               | (4.3)             | 481                              | 7.8               | 64*                                                                               | (8.9)*            |
| British Columbia   | 535                               | (4.1)             | 482                              | 8.7               | 53*                                                                               | (9.7)*            |
| <b>Canada</b>      | <b>532</b>                        | <b>(1.8)</b>      | <b>520</b>                       | <b>(3.2)</b>      | <b>12*</b>                                                                        | <b>(3.6)*</b>     |

\* Statistically significant differences.

Table B.2.6

**Estimated average scores and gender differences in student performance:  
Mathematics and science**

|                           | Gender differences |                |            |                |                                    |                |
|---------------------------|--------------------|----------------|------------|----------------|------------------------------------|----------------|
|                           | Females            |                | Males      |                | Difference between female and male |                |
|                           | mean score         | standard error | mean score | standard error | score difference                   | standard error |
| Canada and provinces      |                    |                |            |                |                                    |                |
| <b>Mathematics</b>        |                    |                |            |                |                                    |                |
| Newfoundland and Labrador | 501                | (3.7)          | 504        | (3.9)          | -4                                 | (4.9)          |
| Prince Edward Island      | 485                | (3.5)          | 490        | (3.9)          | -4                                 | (5.8)          |
| Nova Scotia               | 504                | (3.0)          | 520        | (3.4)          | -17 *                              | (4.5) *        |
| New Brunswick             | 495                | (3.1)          | 513        | (3.2)          | -18 *                              | (4.4) *        |
| Quebec                    | 534                | (3.7)          | 552        | (4.3)          | -17 *                              | (3.8) *        |
| Ontario                   | 522                | (3.4)          | 529        | (4.0)          | -7                                 | (3.7)          |
| Manitoba                  | 497                | (4.9)          | 506        | (4.4)          | -9                                 | (6.0)          |
| Saskatchewan              | 503                | (3.8)          | 508        | (3.9)          | -5                                 | (4.1)          |
| Alberta                   | 521                | (5.3)          | 537        | (4.5)          | -17 *                              | (4.5) *        |
| British Columbia          | 515                | (4.7)          | 531        | (5.4)          | -16 *                              | (4.5) *        |
| <b>Canada</b>             | <b>521</b>         | <b>(1.7)</b>   | <b>533</b> | <b>(2.0)</b>   | <b>-12 *</b>                       | <b>(1.8) *</b> |
| <b>Science</b>            |                    |                |            |                |                                    |                |
| Newfoundland and Labrador | 520                | (4.0)          | 516        | (4.2)          | 3                                  | (5.5)          |
| Prince Edward Island      | 498                | (3.5)          | 491        | (3.9)          | 6                                  | (5.7)          |
| Nova Scotia               | 520                | (3.2)          | 526        | (3.9)          | -6                                 | (4.7)          |
| New Brunswick             | 495                | (2.9)          | 507        | (3.4)          | -12 *                              | (4.1) *        |
| Quebec                    | 519                | (3.5)          | 529        | (4.1)          | -10 *                              | (3.9) *        |
| Ontario                   | 530                | (3.9)          | 533        | (3.7)          | -3                                 | (3.9)          |
| Manitoba                  | 503                | (5.2)          | 509        | (5.2)          | -6                                 | (6.9)          |
| Saskatchewan              | 512                | (3.7)          | 515        | (4.9)          | -3                                 | (4.9)          |
| Alberta                   | 543                | (5.4)          | 547        | (4.2)          | -4                                 | (4.8)          |
| British Columbia          | 534                | (4.0)          | 535        | (5.4)          | -1                                 | (5.0)          |
| <b>Canada</b>             | <b>526</b>         | <b>(1.9)</b>   | <b>531</b> | <b>(1.9)</b>   | <b>-5 *</b>                        | <b>(1.9) *</b> |

\* Statistically significant differences.



# **Measuring up: Canadian Results of the OECD PISA Study**

## **The Performance of Canada's Youth in Reading, Mathematics and Science**

**2009 First Results for Canadians Aged 15**

The Program for International Student Assessment (PISA) is a collaborative effort among member countries of the Organisation for Economic Co-operation and Development. In Canada, PISA is administered through a partnership of the Council of Ministers of Education, Canada, Human Resources and Skills Development Canada and Statistics Canada.

This program is designed to assess, on a regular basis, the achievement of 15-year-olds in reading, mathematical and scientific literacy through a common international test. Canada and 64 other countries and economies participated in PISA 2009, which had a special focus on reading. About 23,000 15-year-olds from more than 1,000 schools took part in Canada.

This report provides results of the PISA 2009 assessment of student performance in reading, mathematics and science at the provincial level and compares the achievement of Canadian students to that of students internationally.

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