CO3.6: Percentage of immigrant students and their educational outcomes

Definitions and methodology

This indicator presents information on the proportion of students with an immigrant background and their performance on educational tests. The indicator is based on data from the OECD's *Programme for International Student Assessment* (PISA). PISA classifies students into several categories based on their country of birth and the country of birth of their parents:

- *Non-immigrant students* are students whose mother or father (or both) was/were born in the country or economy where they sat the PISA test, regardless of whether the student himself or herself was born in that country or economy. In this indicator, these students are also referred to as "*students without an immigrant background*".
- *Immigrant students* are students whose mother and father were both born in a country/economy other than that where the student sat the PISA test. In this chapter, they are also referred to as "*students with an immigrant background*". Among immigrant students, a distinction is made between those born in the country/economy of assessment and those born abroad:
  - *First-generation immigrant students* are foreign-born students whose parents are also both foreign-born.
  - *Second-generation immigrant students* are students born in the country/economy where they sat the PISA test and whose parents are both foreign-born.

PISA evaluates the knowledge and skills of 15-year-old students across the OECD and other partner countries, including all the covered Asia/Pacific countries.

Key findings

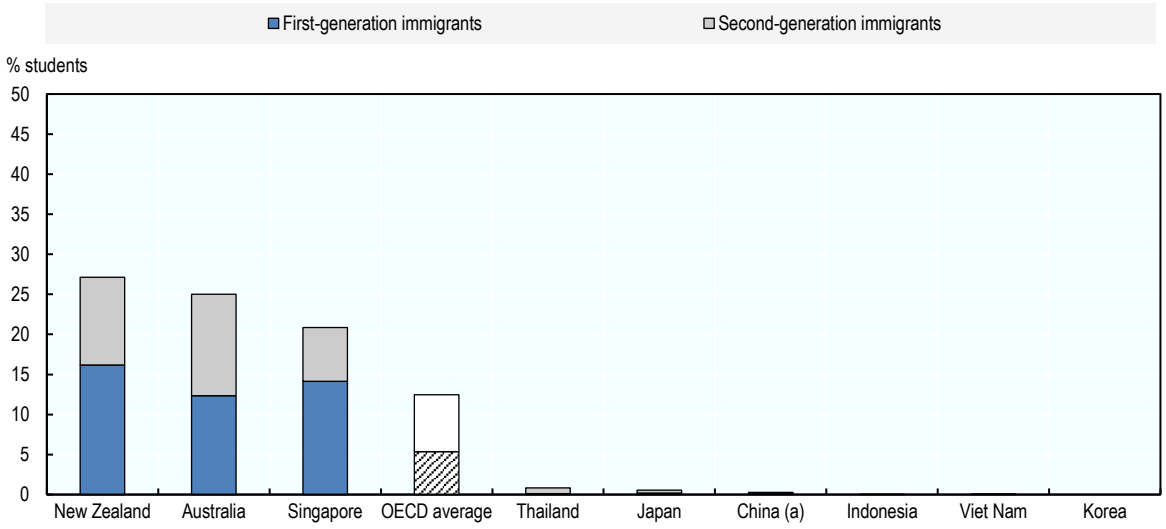
The share of students with an immigrant background differs drastically across the covered Asia/Pacific countries (Chart CO3.6.A). In Australia, New Zealand and Singapore, the share of students with an immigrant background is relatively high – in each of these countries, more than 20% of students are either a first- or second-generation migrant, which is well above the average share in OECD countries (12.5%), for example. In the remaining covered Asia/Pacific countries, however, the share of students with an immigrant background is extremely low. In each of China (Beijing, Shanghai, Jiangsu and Guangdong), Indonesia, Japan, Korea, Thailand, and Viet Nam, less than 1% of students have an immigrant background, with this falling as low as 0.1% in Korea and Viet Nam.

Several of the covered Asia/Pacific countries see significant differences in reading performance between non-immigrant students and immigrant students, but the direction of the difference varies from country to country (Chart CO3.6.B). In Japan and especially China (Beijing, Shanghai, Jiangsu and Guangdong), students with an immigrant background

Other relevant indicators: CO3.1 Educational attainment by gender; CO3.3 Literacy scores by gender at age 10; CO3.4 Literacy scores by gender at age 15

perform significantly worse on the PISA reading tests than non-immigrant students. However, in Australia and Singapore the opposite is true – in these two countries, students with an immigrant background significantly outperform non-immigrant students on the PISA reading tests.

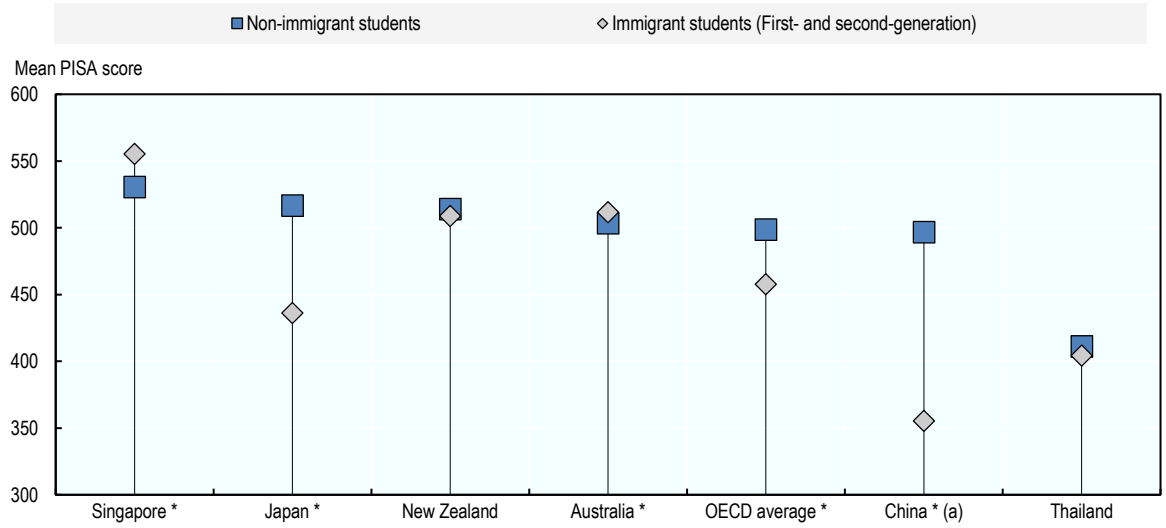
Chart CO3.6.A. **Students with an immigrant background, 2015**
Proportion (%) of students with an immigrant background, by type, 15-year-olds



a) Data for China refers to the four PISA-participating China provinces: Beijing, Shanghai, Jiangsu and Guangdong.

Sources: OECD Programme for International Student Assessment (PISA)

Chart CO3.6.B. **Students' performance on reading scores by immigrant status, 2015**
Mean PISA reading scores by immigrant background, 15-year-olds



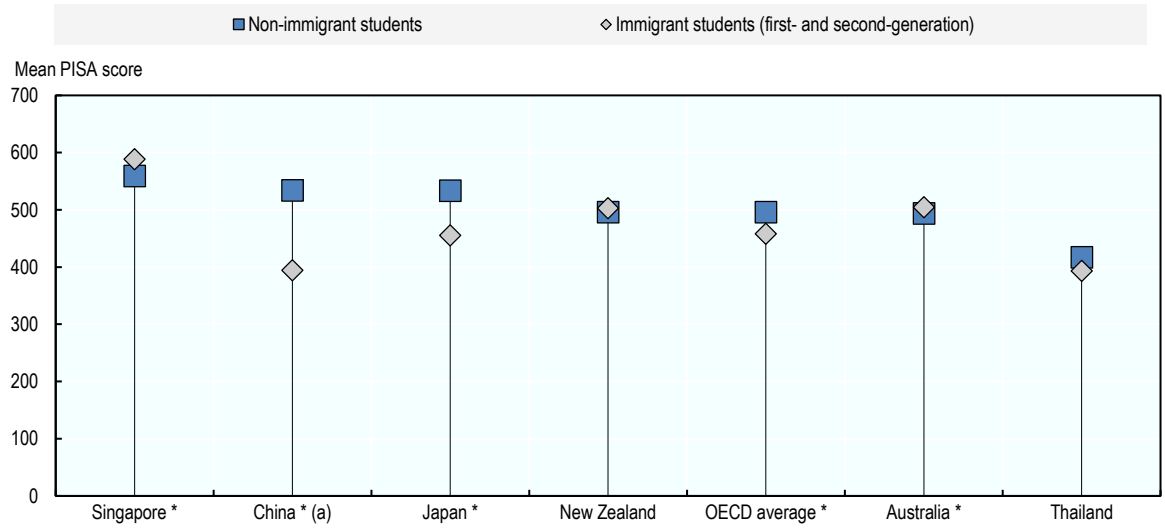
Note: In countries marked with an *, the difference between non-immigrant students and immigrants students (first- and second-generation) is statistically significant at p<0.05.
a) Data for China refers to the four PISA-participating China provinces: Beijing, Shanghai, Jiangsu and Guangdong.

Sources: OECD Programme for International Student Assessment (PISA)

It is similar story for differences between non-immigrant students and immigrant students on the PISA mathematics tests (Chart CO3.6.C). In Japan and particularly China (Beijing, Shanghai, Jiangsu and Guangdong), mean mathematics scores for students with an immigrant background are significantly lower than those for students without an immigrant background. In Australia and Singapore, mean scores are significantly *higher* for students with an immigrant background.

Chart CO3.6.C. **Students' performance in mathematics by immigrant status, PISA 2015**

Mean PISA mathematics scores by immigrant background, 15-year-olds



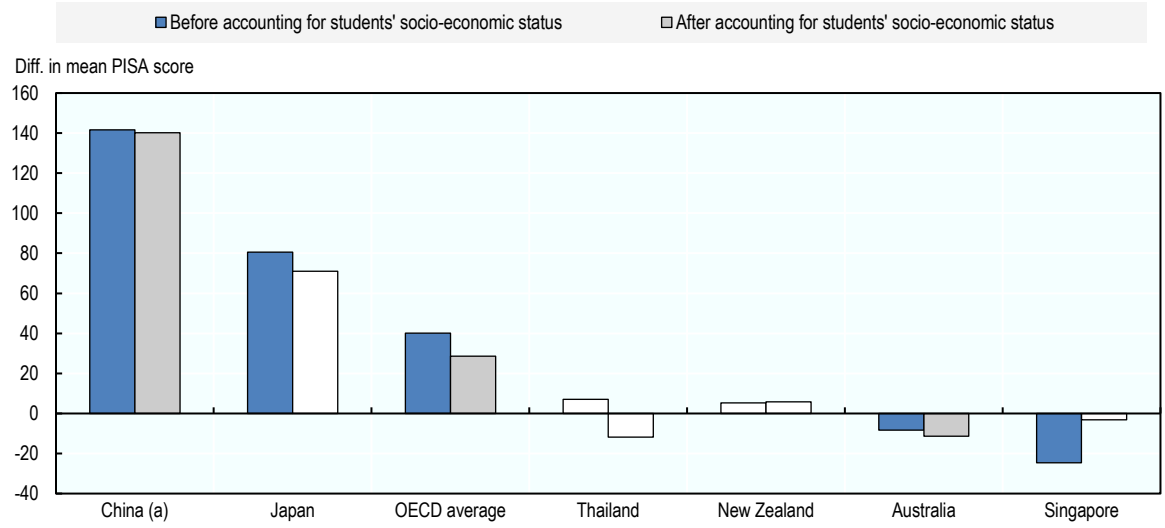
Note: In countries marked with an *, the difference between non-immigrant students and immigrants students (first- and second-generation) is statistically significant at p<0.05.
a) Data for China refers to the four PISA-participating China provinces: Beijing, Shanghai, Jiangsu and Guangdong.

Sources: OECD Programme for International Student Assessment (PISA)

To some extent, gaps in student performance between those with and without an immigrant background may be explained by differences in the socio-economic make-up of the respective populations. This is illustrated by Chart CO3.6.D, which shows differences in PISA reading scores between non-immigrant students and immigrant students before and *after* accounting for socio-economic background. In several of the covered Asia/Pacific countries, differences in scores between students with and without an immigrant background disappear once socio-economic backgrounds are taken into account. In Japan, for example, the gap in reading scores between immigrant and non-immigrant students declines in size slightly and falls out of significance after accounting for socio-economic background, while in Singapore any differences in reading performance disappear almost entirely. However, in both China (Beijing, Shanghai, Jiangsu and Guangdong) and Australia, differences in performance remain significant even after socio-economic backgrounds are taken into account.

Chart CO3.6.D. **Gaps in reading performance between native students and students with an immigrant background before and after accounting for socio-economic background, 2015**

Difference in PISA reading scores between non-immigrant students and immigrant students before and after accounting for socio-economic background, 15-year-olds



Note: Shaded markers represent statistically significant differences at p<0.05.
a) Data for China refers to the four PISA-participating China provinces: Beijing, Shanghai, Jiangsu and Guangdong.

Sources: OECD Programme for International Student Assessment (PISA)

Comparability and data issues

The OECD PISA assessment programme devotes substantial efforts and resources to achieving cultural and linguistic balance in the assessment materials, so as to provide students with equal chances of successful performance. Stringent quality assurance mechanisms are applied in translation and data collection, and sample sizes are large – more than 540,000 students across 72 countries were assessed for the 2015 wave. If countries fail to meet sampling size requirements they are omitted from the published international comparisons (e.g., the Netherlands in 2000 and the United Kingdom in 2003). For a more detailed discussion of the methodology used, see OECD (2016) and the OECD PISA website.

It is important to note that the data collected by PISA for China refer to the four PISA-participating China provinces and municipalities (Beijing, Shanghai, Jiangsu and Guangdong) only, and not to the whole country. As a consequence, results for China (Beijing, Shanghai, Jiangsu and Guangdong) should be taken as representative for students in these four provinces and municipalities only, and not be as representative for 15-year-old students across the country as a whole.

Sources and further reading: OECD (2016), *PISA 2015 Assessment and Analytical Framework: Science, Reading, Mathematic and Financial Literacy*, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/9789264255425-en; OECD (2016), *PISA 2015 Results (Volume I): Excellence and Equity in Education*, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/9789264266490-en