Umræðufundur um PISA 2009

Námsmatsstofnun

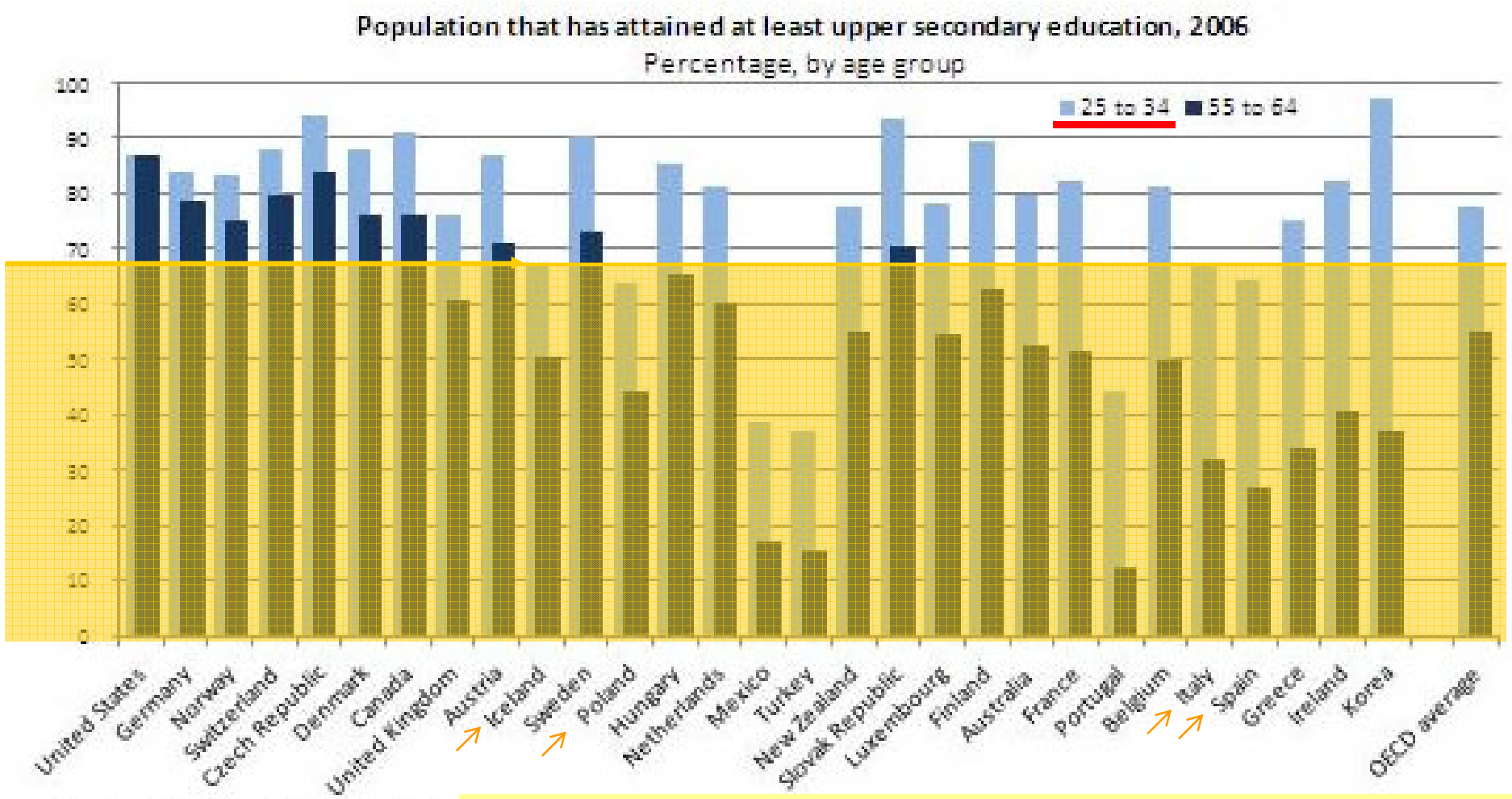
22. febrúar 2011

Almar Miðvík Halldórsson

Staða íslenskra grunnskóla og grunnskólanemenda samkvæmt skýrslu OECD um PISA 2009 (2)

II. bindi

Hlutfall landsmanna sem hafa útskrifast með framhaldsskólapróf



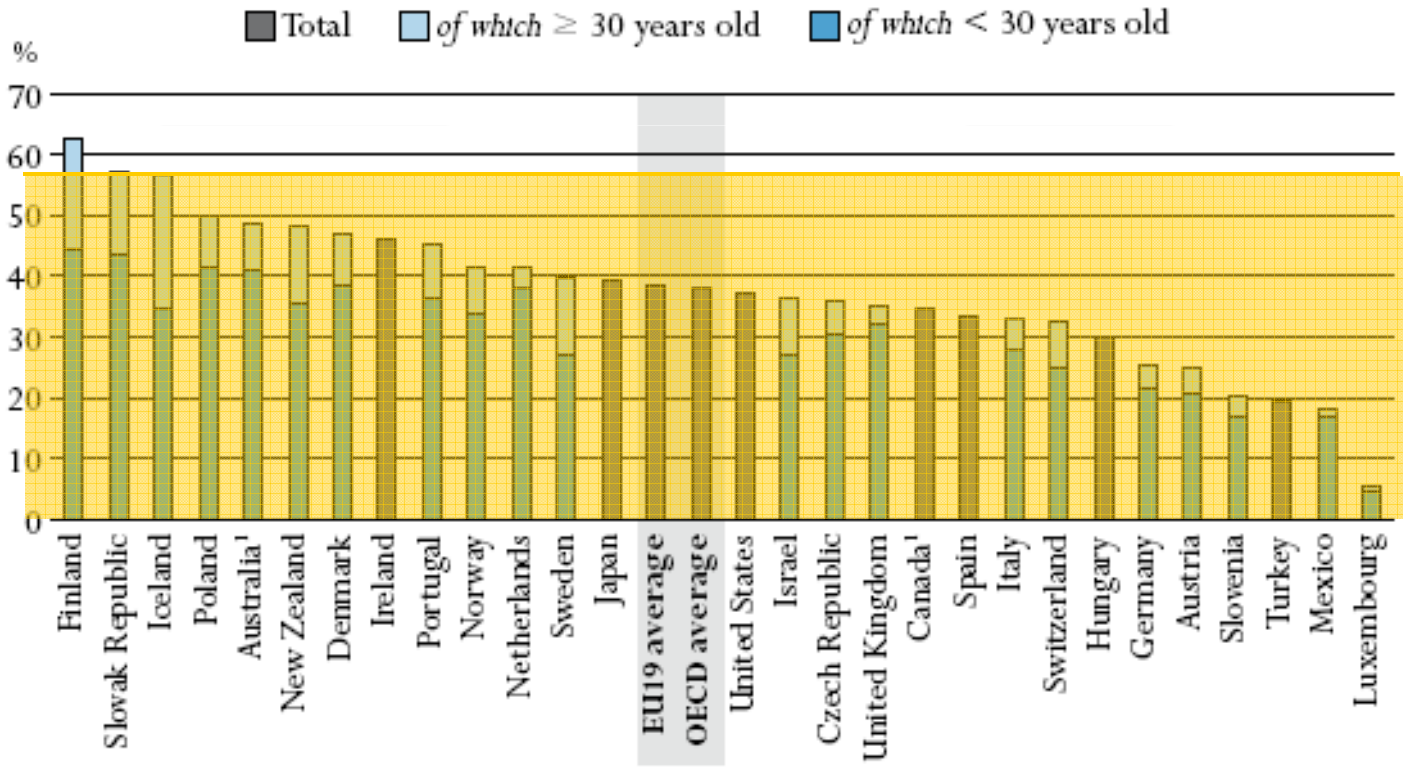
Source: *Education at a Glance 2008.*

Í **22 af 29** löndum er hlutfallið **hærra** en hér meðal ungs fólks

Chart A3.1. Tertiary-type A graduation rates in 2008 (first-time graduation)

The chart shows the estimated percentage of a 2008 age cohort that will complete, for the first time, tertiary-type A education (based on current patterns of graduation); it also indicates how many young adults complete tertiary-type A education outside of the typical age of graduation.

Based on current patterns of graduation, on average 38% of an age cohort in 2008 is estimated to complete tertiary-type A education in the 26 OECD countries with comparable data. The proportion of students who complete tertiary-type A education outside the typical age of graduation is high in Finland, Iceland, New Zealand, Sweden and the partner country Israel, where graduation rates for students aged over 30 account for one-quarter or more of the total graduation rate.



1. Year of reference 2007.

Niðurstöður PISA 2009

Niðurstöður gefnar út af OECD í sex bindum:

- **I. bindi:** What Students Know and Can Do: Student Performance in Reading, Mathematics and Science
- **II. bindi: Overcoming Social Background: Equity in Learning Opportunities and Outcomes**
- **III. bindi:** Learning to Learn: Student Engagement, Strategies and Practices
- **IV. bindi:** What Makes a School Successful? Resources, Policies and Practices
- **V. bindi:** Learning Trends: Changes in Student Performance Since 2000
- **VI bindi:** Digital Readers: Performance in reading digital texts *(Kemur út í júní 2011)*

pisa.oecd.org

Skjöl af umræðufundum Námsmatsstofnunar

namsmat.is

Ný fundaröð hófst 27. janúar 2009

með umræðufundi um rafræn skólapróf.
Fundirnir eru haldnir í sal Námsmatsstofnunar, Borgartúni 7A.

Hér fyrir neðan eru skyggnur úr fundaröðinni.

Umræðufundur PISA 22. jan 08

0. Hvað skýrir árangur
0. Hvað skýrir árangur - Dreifildi (6 skyggnur á síðu)

1. Færni nemenda í náttúrufræði tengd við þjóðfélagsstöðu þeirra
1. Færni nemenda í náttúrufræði tengd við þjóðfélagsstöðu þeirra - Dreifildi (6 skyggnur á síðu)

2. Fyrri fyrirspurnir
2. Fyrri fyrirspurnir - Dreifildi (6 skyggnur á síðu)

Percentage of enrolled population of 15-year-olds at Grade 7 or above

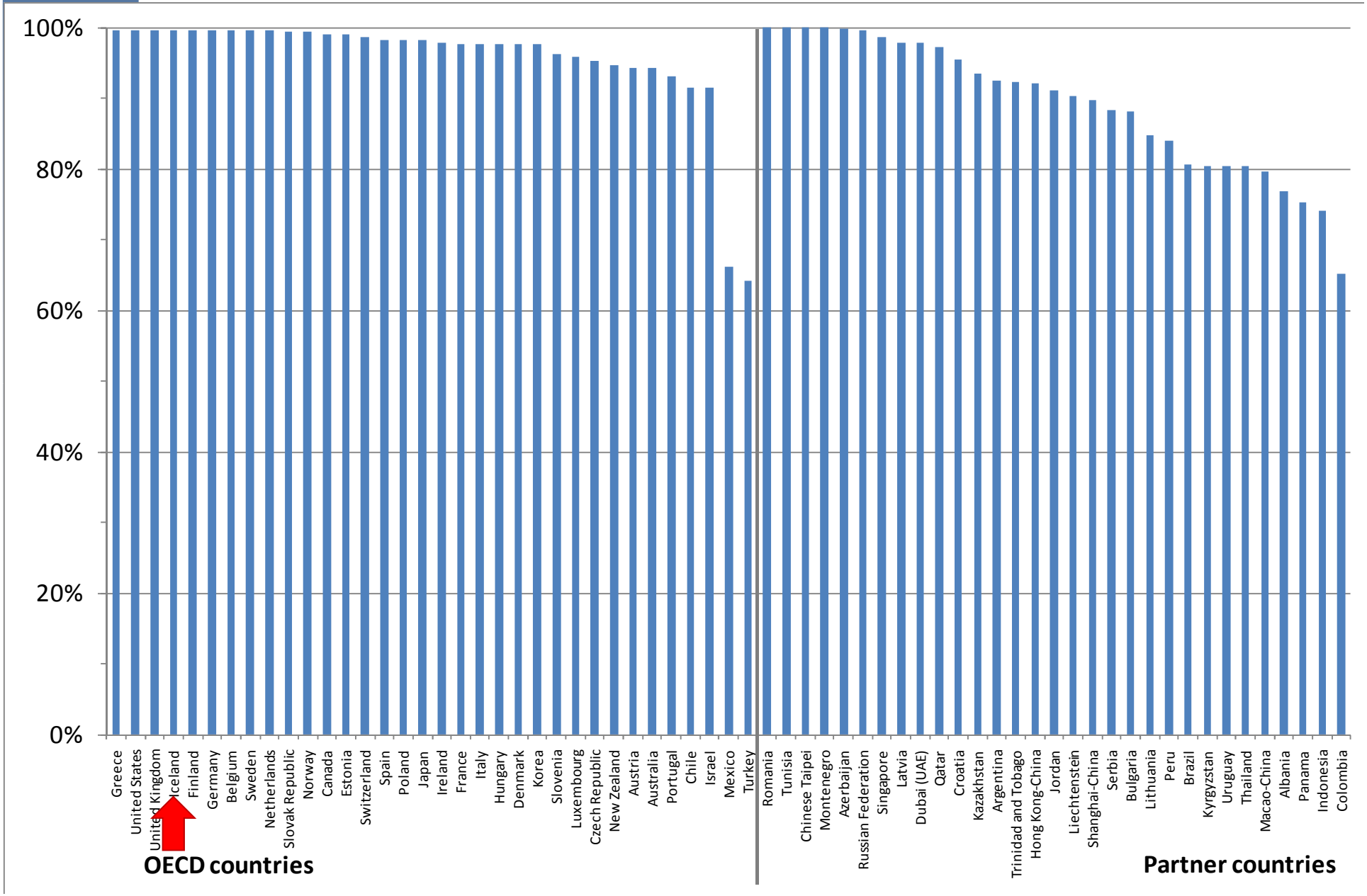
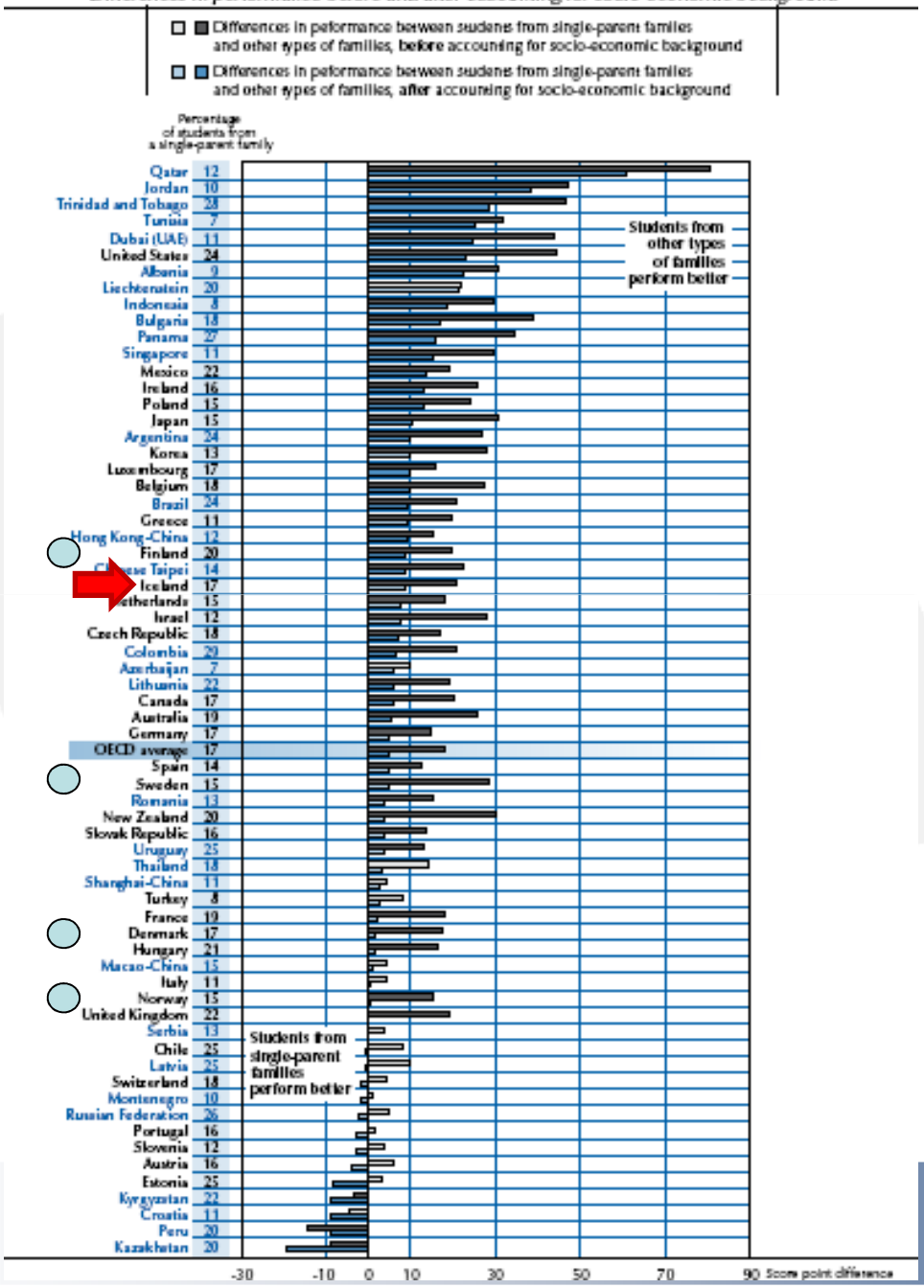


Figure II.2.5

Reading performance difference between students from single-parent families and those from other types of families

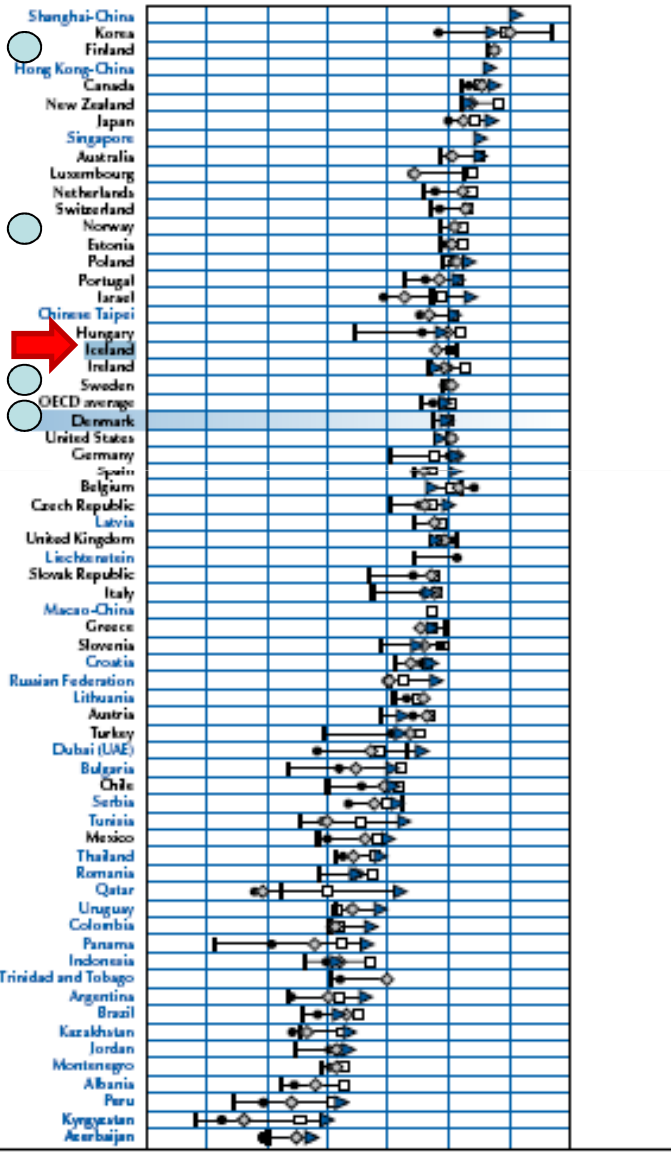
Differences in performance before and after accounting for socio-economic background

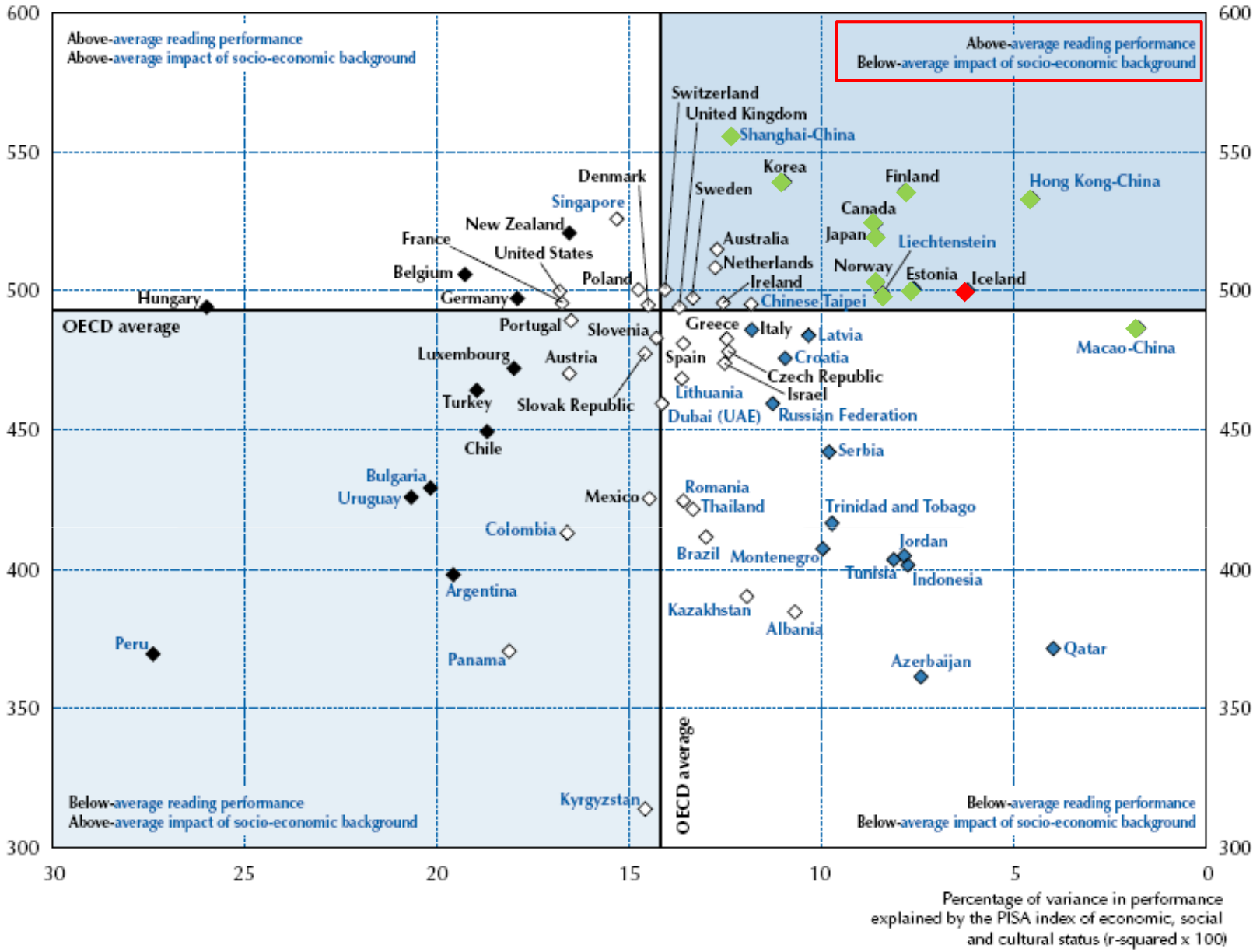


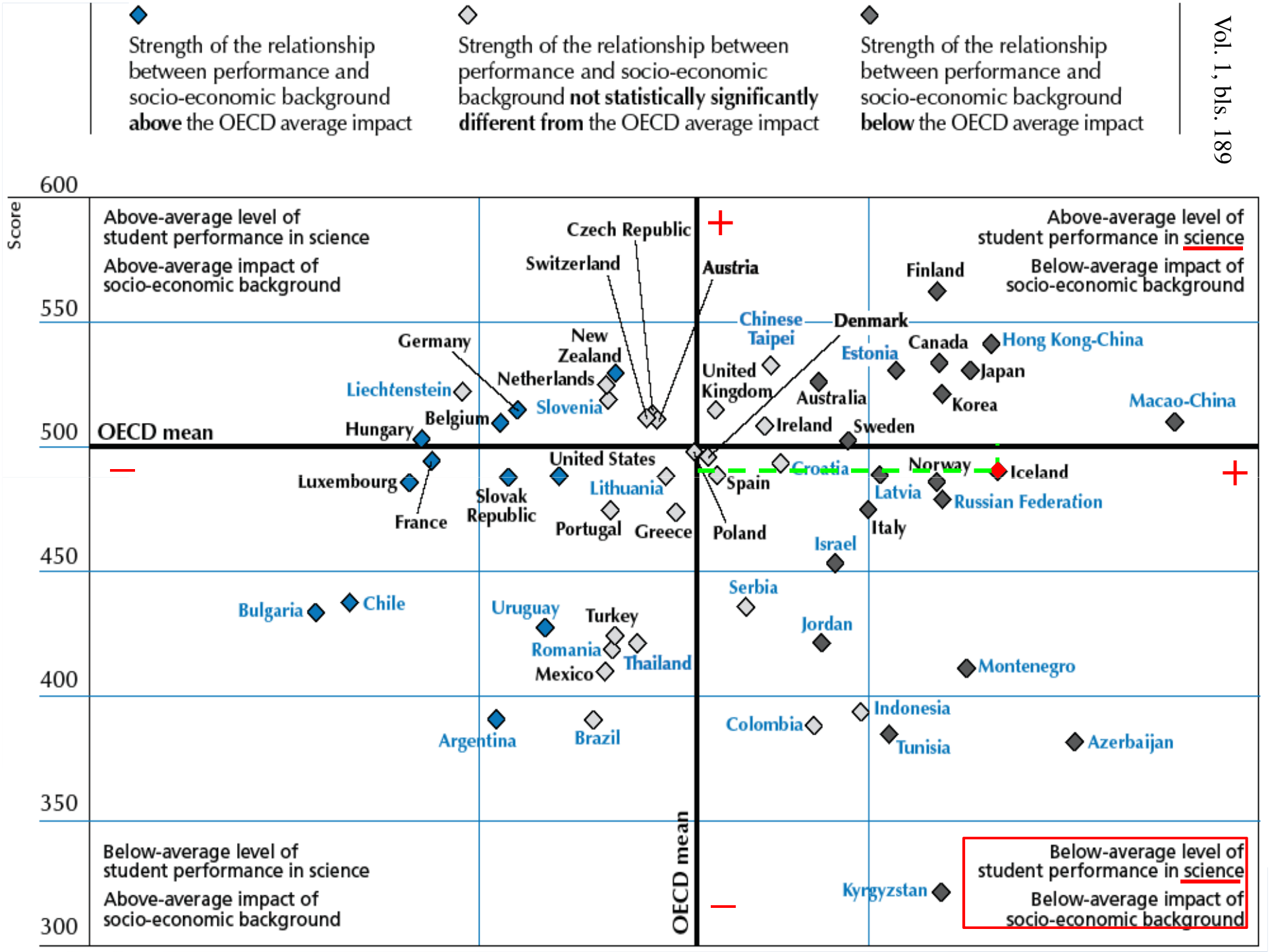
■ Figure II.2.6 ■

Reading performance, by school location

Mean scores after accounting for socio-economic background



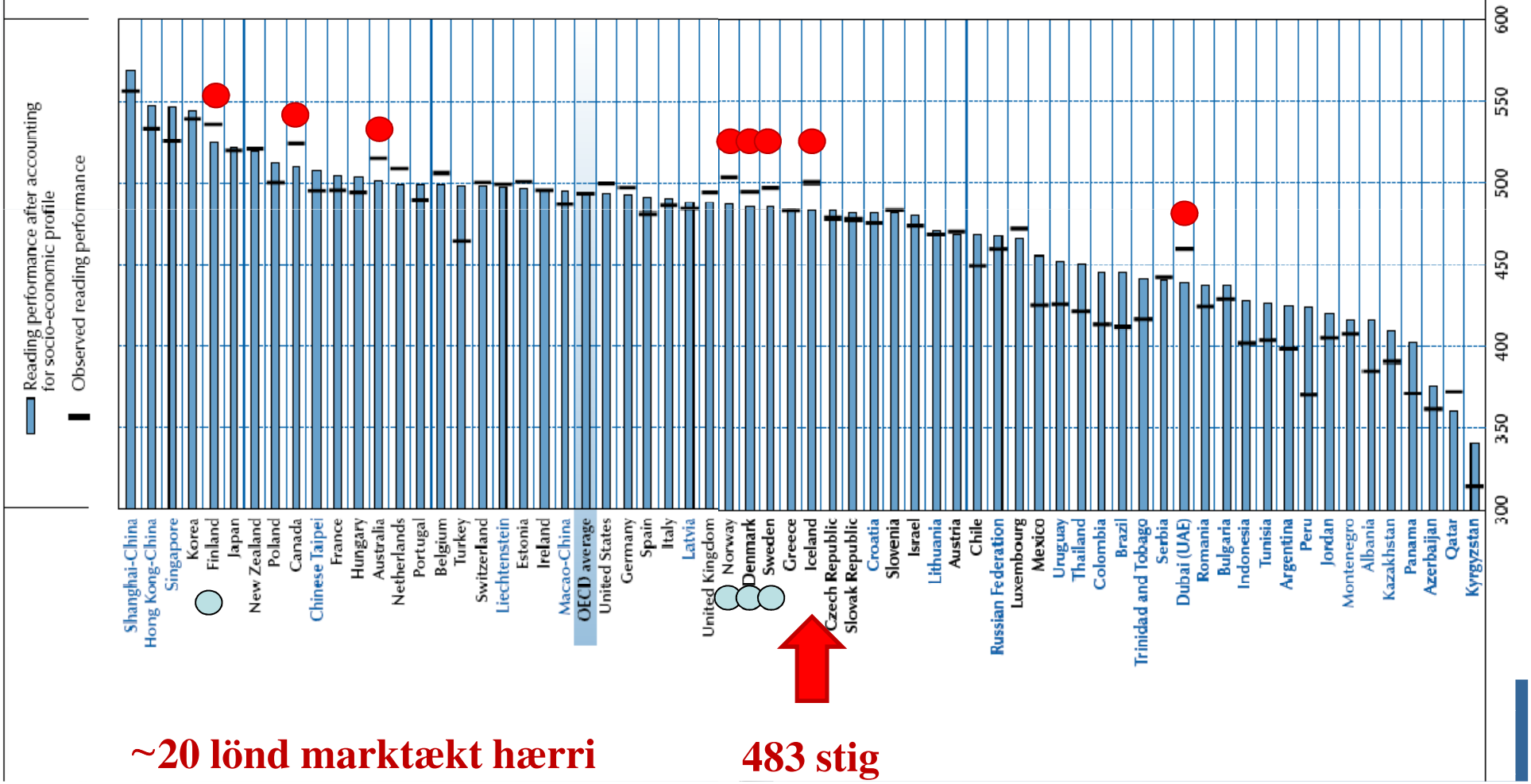

Above-average reading performance
Above-average impact of socio-economic background
Above-average reading performance
Below-average impact of socio-economic background
Below-average reading performance
Above-average impact of socio-economic background
Below-average reading performance
Below-average impact of socio-economic background
OECD average
OECD average
Switzerland
United Kingdom
Shanghai-China
Korea
Finland
Hong Kong-China
Denmark
Sweden
Singapore
Canada
New Zealand
Japan
Liechtenstein
France
Australia
United States
Netherlands
Norway
Estonia
Iceland
Belgium
Poland
Ireland
Hungary
Germany
Chinese Taipei
Portugal
Slovenia
Greece
Italy
Latvia
Macao-China
Luxembourg
Austria
Spain
Croatia
Czech Republic
Lithuania
Israel
Turkey
Slovak Republic
Dubai (UAE)
Russian Federation
Chile
Serbia
Bulgaria
Romania
Uruguay
Mexico
Thailand
Trinidad and Tobago
Colombia
Brazil
Montenegro
Jordan
Tunisia
Indonesia
Argentina
Kazakhstan
Albania
Peru
Qatar
Panama
Azerbaijan
Kyrgyzstan
600
550
500
450
400
350
300
30
25
20
15
10
5
0
Percentage of variance in performance explained by the PISA index of economic, social and cultural status (r-squared x 100)


Strength of the relationship between performance and socio-economic background above the OECD average impact
Strength of the relationship between performance and socio-economic background not statistically significantly different from the OECD average impact
Strength of the relationship between performance and socio-economic background below the OECD average impact
Score
600
550
500
450
400
350
300
OECD mean
OECD mean
Above-average level of student performance in science
Above-average impact of socio-economic background
Above-average level of student performance in science
Below-average impact of socio-economic background
Below-average level of student performance in science
Above-average impact of socio-economic background
Below-average level of student performance in science
Below-average impact of socio-economic background
Czech Republic
Switzerland
Austria
Finland
Chinese Taipei
Denmark
Germany
New Zealand
Canada
Hong Kong-China
Estonia
Netherlands
United Kingdom
Japan
Liechtenstein
Australia
Korea
Slovenia
Belgium
Macao-China
Hungary
Ireland
Sweden
United States
Croatia
Norway
Iceland
Luxembourg
Spain
Latvia
Russian Federation
Slovak Republic
Lithuania
Italy
France
Portugal
Greece
Poland
Israel
Serbia
Bulgaria
Chile
Uruguay
Turkey
Jordan
Romania
Thailand
Montenegro
Mexico
Indonesia
Colombia
Argentina
Brazil
Tunisia
Azerbaijan
Kyrgyzstan

- Canada, Finland and Korea, together with the partner economy Hong Kong-China, Japan and Shanghai-China display high student performance in reading and, at the same time, a below-average impact of economic, social and cultural status on student performance.
- With mean performance closer to the OECD average, Estonia and **Iceland** also appear among the countries with relatively gentle and weak relationships between socio-economic background and performance.

- These school systems can be considered worthwhile cases for analysis inasmuch as they succeed in having both high levels of equity and high levels of performance.
- *Volume IV, What Makes a School Successful?*, delves into the organisational characteristics of these successful school systems.

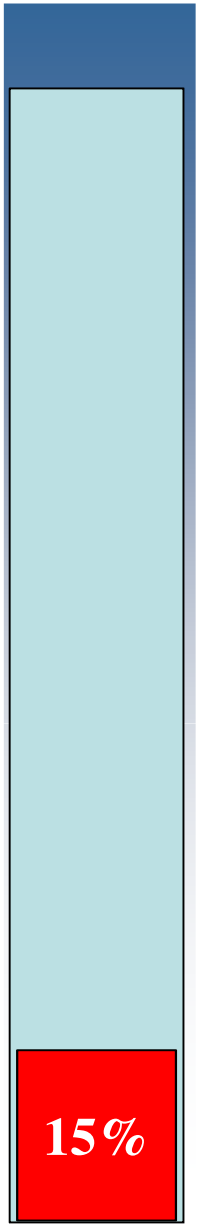
- Figure II.3.5 shows the average scores before and after accounting for countries' socio-economic profile. This hypothetical adjustment assumes that all countries have the same average PISA index of economic, socio-economic and cultural status, equal to that of the OECD average.
- The difference between the observed performance and the adjusted performance reflects the extent to which performance differences are driven by the average socio-economic background of the student population.



~20 lönd marktækt hærri

483 stig

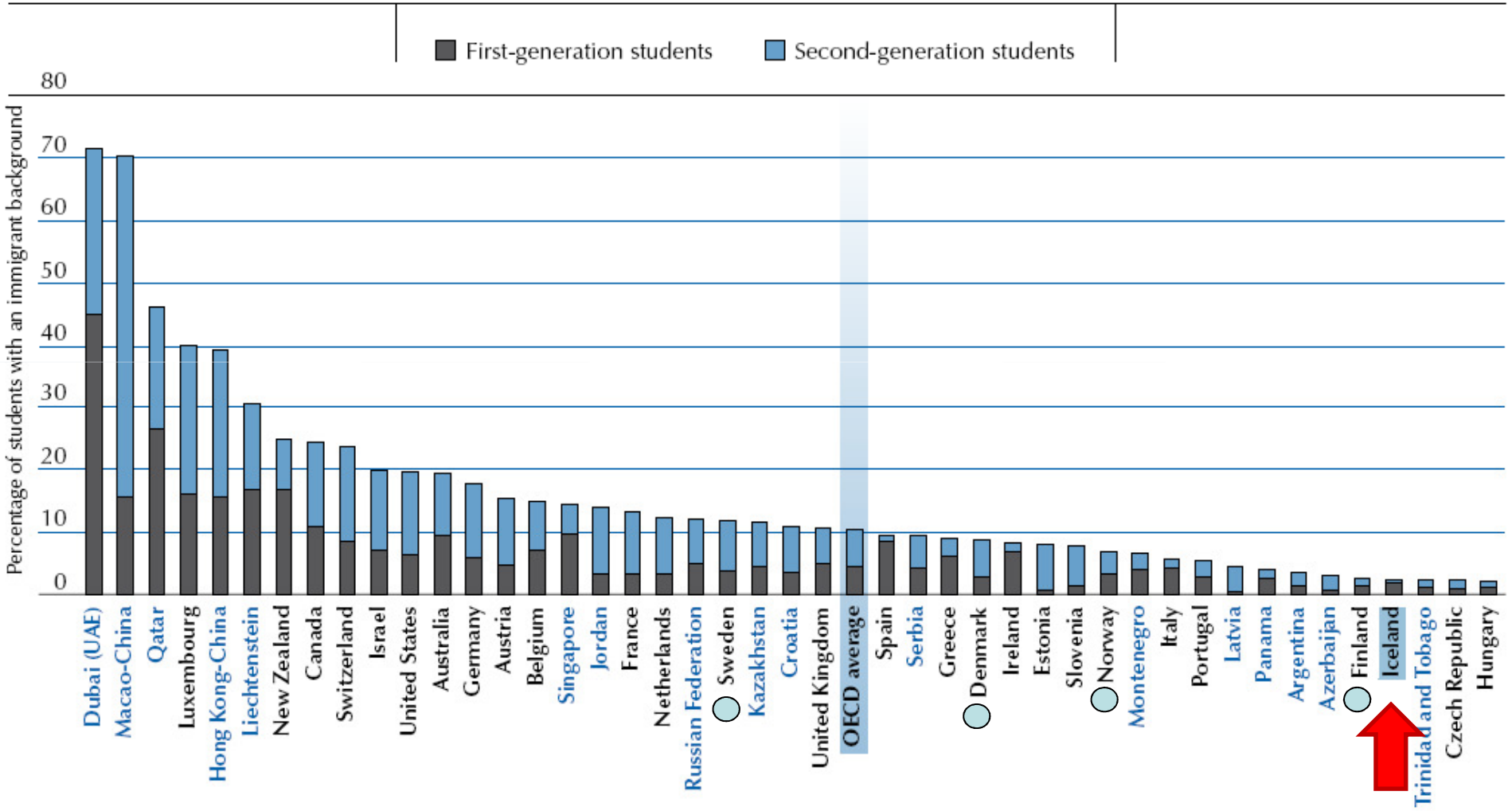
- With such an adjustment, Spain and Italy would move from a below-average unadjusted score to an adjusted score around the OECD average. Turkey, Portugal and Macao-China would move from below the OECD average to above.
- The adjustment also improves scores for Mexico by 30 score points and reduces **Iceland's** mean performance from 500 to 483 score points.
- Among the partner countries and economies, the adjustment raises the performance score by more than *25 score points* in Thailand, Kyrgyzstan, Uruguay, Indonesia and Argentina; more than *30 score points* in Brazil, Colombia, Panama and Albania; and more than *50 score points* in Peru. The score for Dubai (UAE) decreases by 21 score points and that of Qatar by 12 score points.



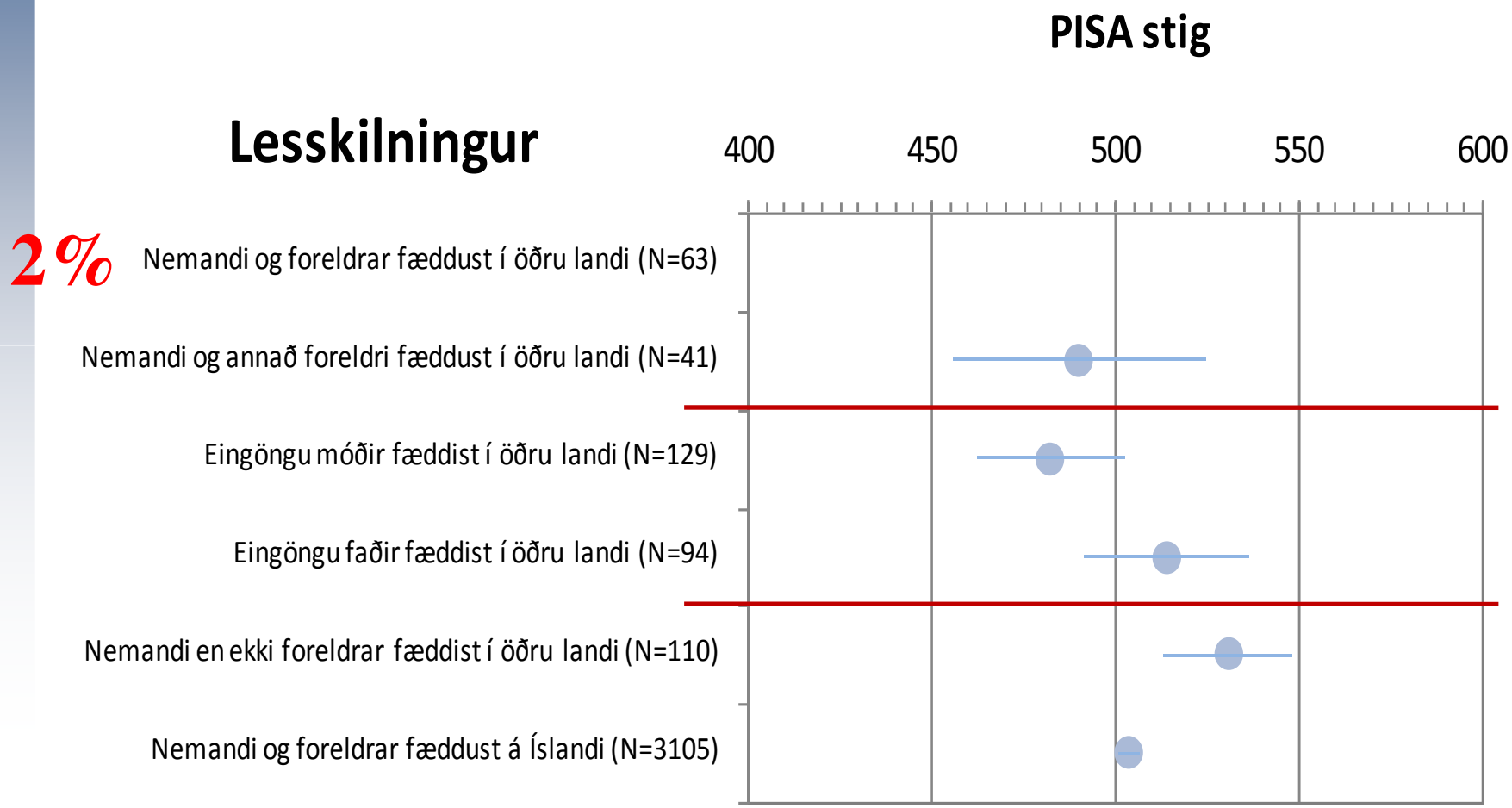
- For countries whose average socio-economic background is relatively disadvantaged, and which have a large dispersion of socio-economic characteristics, it is particularly difficult to meet the needs of disadvantaged students: Not only are there many disadvantaged students, but many disadvantaged students show very low levels of socioeconomic background.
  - For example, in Mexico, Turkey and the partner countries Brazil and Colombia, more than 50% of all students come from a socio-economic background below that of the least-advantaged 15% of students in the OECD countries and in Indonesia, Peru and Thailand, more than 60% of students do so.
  - In contrast, in Norway, Australia, **Iceland**, Canada and Finland, less than 5% of students have a socio-economic background below that of the least advantaged 15% of students in the OECD countries.

Figure II.4.1

Percentage of students with an immigrant background

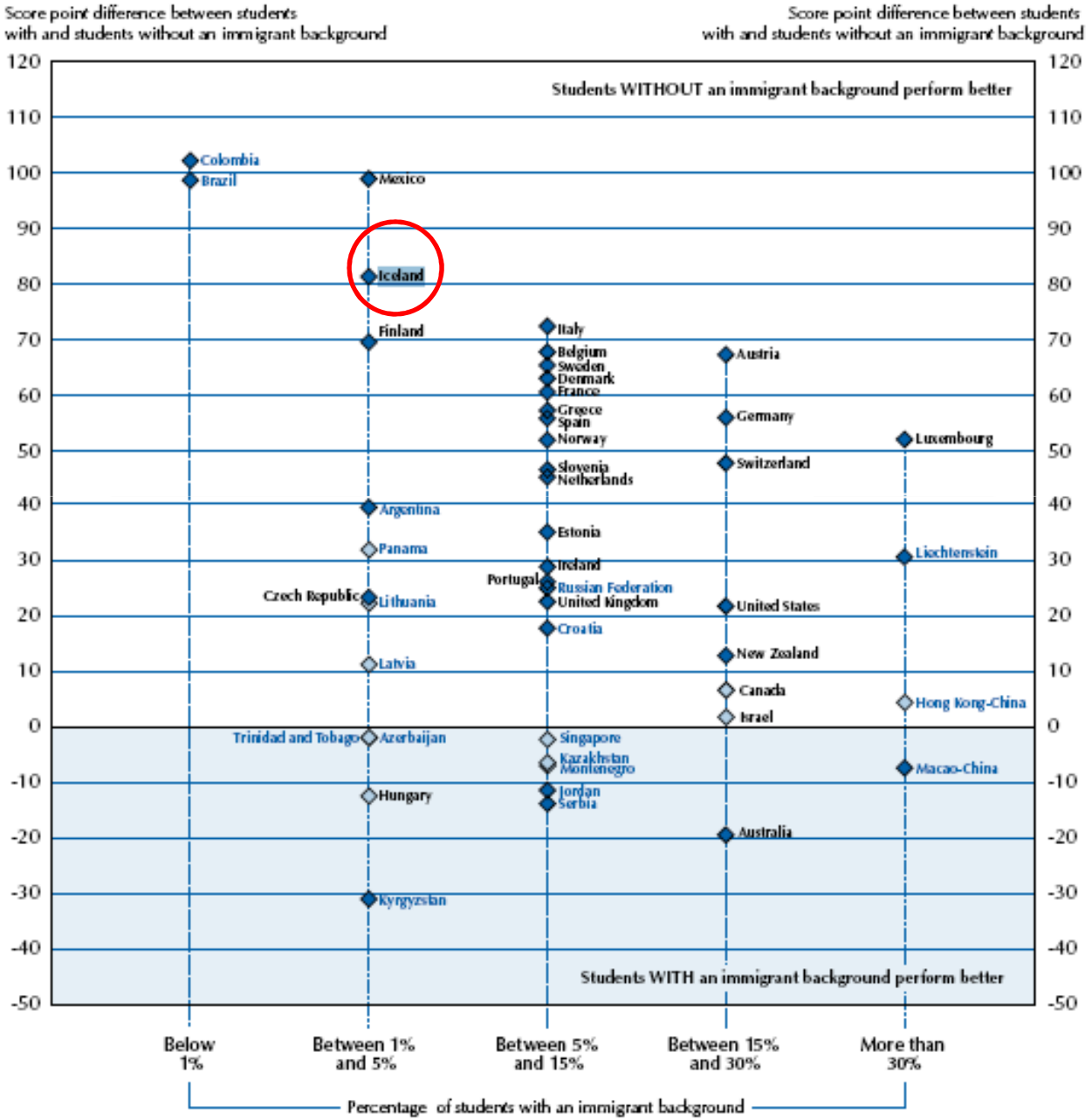


Staða aðfluttra nemenda og nemenda sem eiga aðflutta foreldra miðað við innfædda nemendur á Íslandi samkvæmt PISA 2009



■ Figure II.4.3 ■

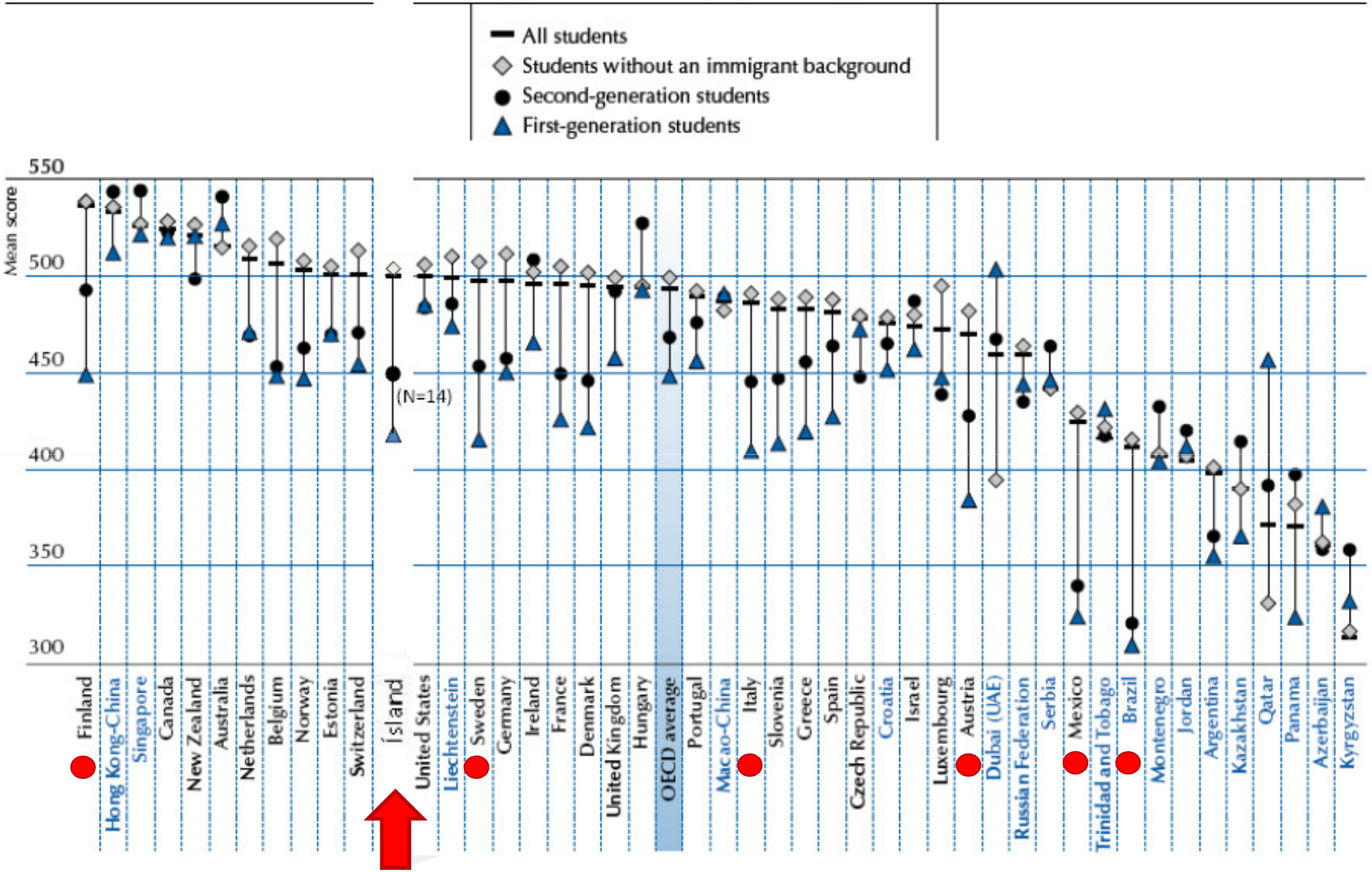
Performance difference between students with and without an immigrant background, by percentage of students with an immigrant background



- Hve vel tekst menntakerfum að veita aðfluttum börnum þá þjónustu sem þau þurfa til að eiga tækifæri til grunnmenntunar á við innfædda í því landi sem þau búa?
  - Það er einmitt vegna þess að mikill munur er á lesskilningi aðfluttra og innfæddra nemenda hér á landi sem leggja þarf áherslu á að hlúa sérstaklega að þessum hópi.
  - Hann er fámennur en staða hans er óvenjulega slæm miðað við aðra nemendur, samanborið við stöðuna í öðrum löndum.

■ Figure II.4.4 ■

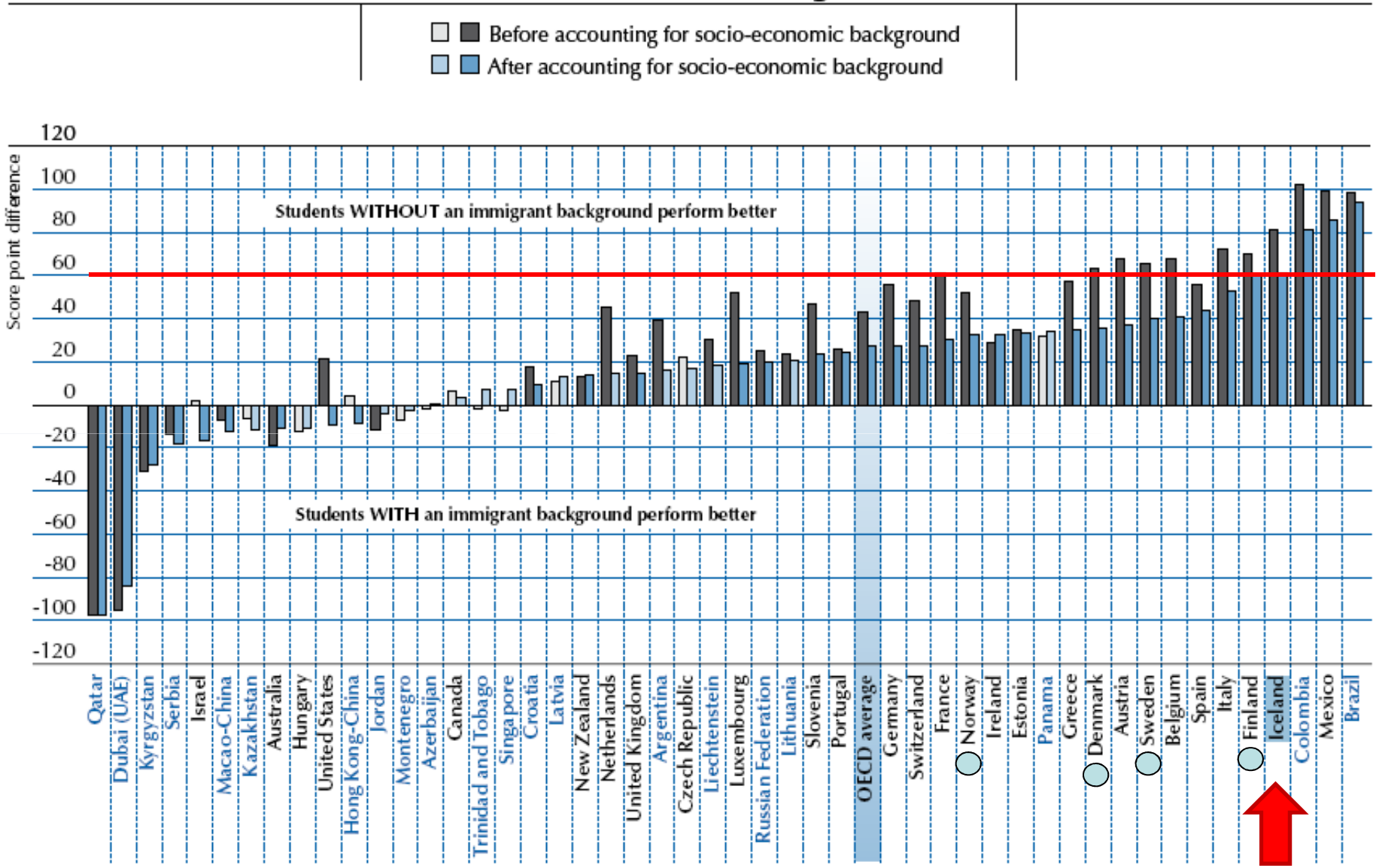
Reading performance, by immigrant status



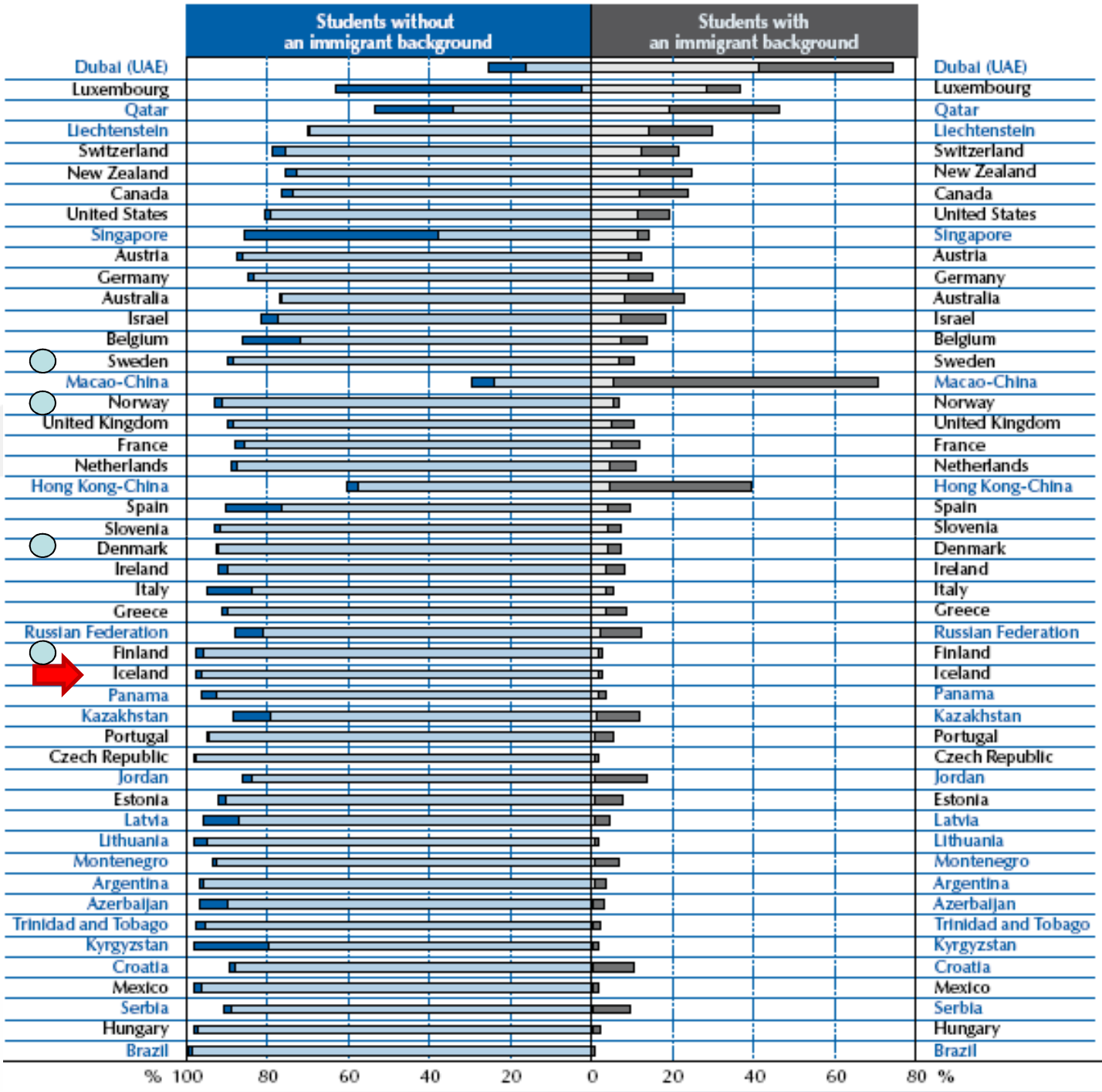
- On average across OECD countries, students with an immigrant background tend to have a socio-economic background that is 0.4 of a standard deviation lower than that of their non-immigrant peers.
- This relationship is particularly strong in Luxembourg, the Netherlands, **Iceland**, Denmark, Austria, Germany and the United States.

Figure II.4.5

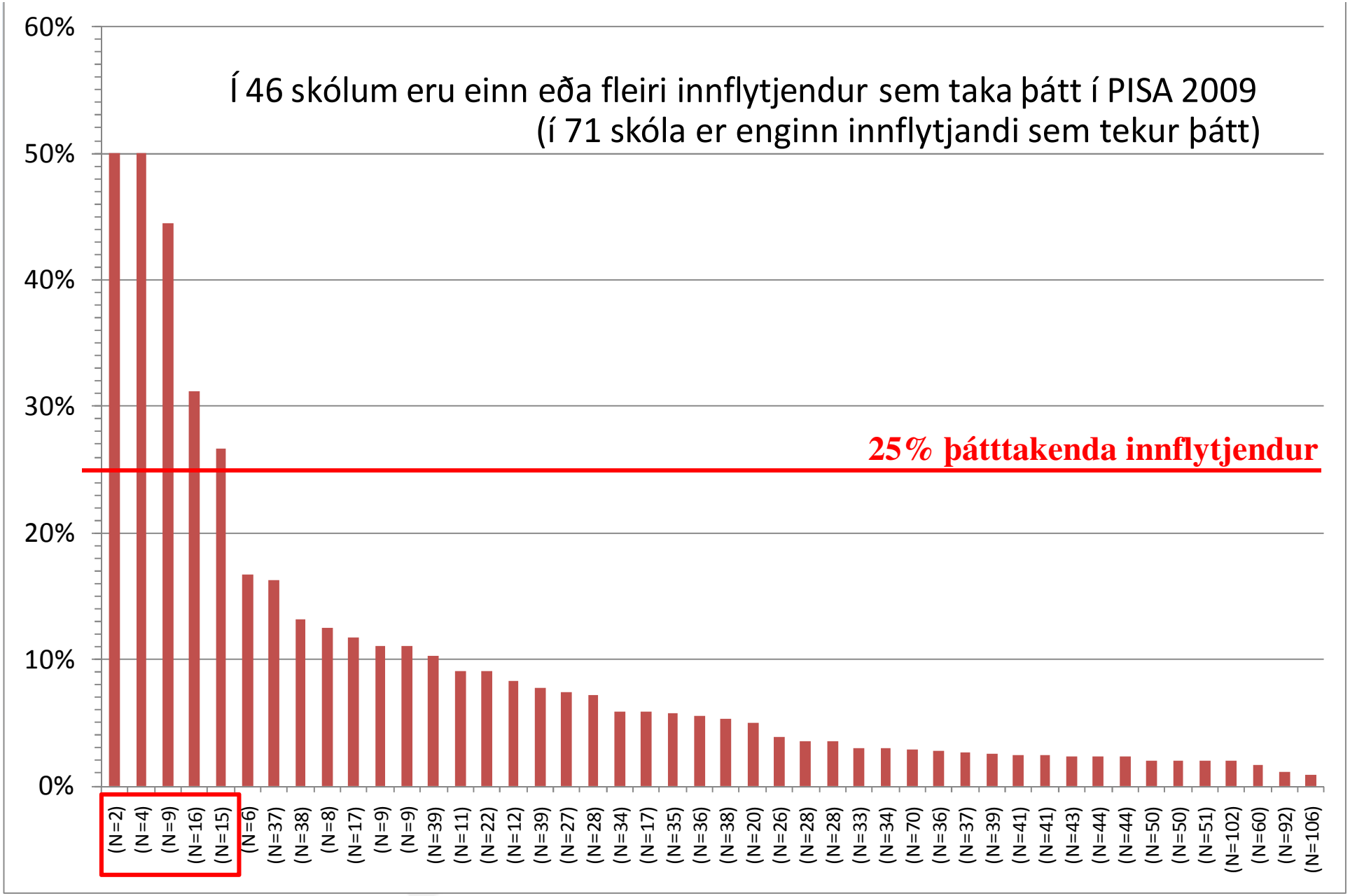
Reading performance by immigrant status, before and after accounting for socio-economic background



- Across countries, it is common for students with an immigrant background not to speak the language of assessment at home.
- Students with an immigrant background are more likely to speak a language different than that of the assessment at home in the United States, Sweden, Austria, Norway, Denmark, Australia, New Zealand, Germany and **Iceland**.
- Foreign language at home in Iceland:
  - Natives: 1%
  - Second generation immigrants: 53%
  - First generation immigrants: 82%


Students without an immigrant background
Students with an immigrant background
Dubai (UAE)
Luxembourg
Qatar
Liechtenstein
Switzerland
New Zealand
Canada
United States
Singapore
Austria
Germany
Australia
Israel
Belgium
Sweden
Macao-China
Norway
United Kingdom
France
Netherlands
Hong Kong-China
Spain
Slovenia
Denmark
Ireland
Italy
Greece
Russian Federation
Finland
Iceland
Panama
Kazakhstan
Portugal
Czech Republic
Jordan
Estonia
Latvia
Lithuania
Montenegro
Argentina
Azerbaijan
Trinidad and Tobago
Kyrgyzstan
Croatia
Mexico
Serbia
Hungary
Brazil
% 100 80 60 40 20 0 20 40 60 80 %

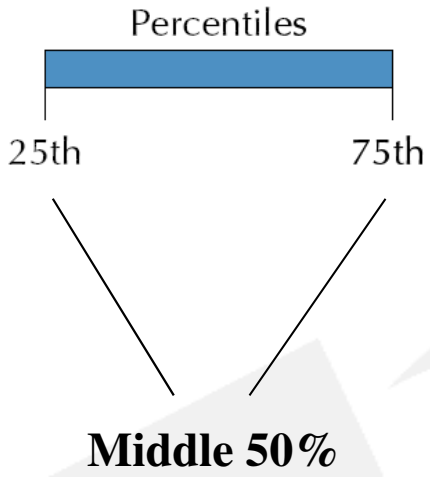
- Differences in the quality of resources for education between schools attended by students with and without an immigrant background tend to be small, on average across the OECD area (Figure II.4.13).
- In Mexico, Belgium, Germany, **Iceland**, Luxembourg and Switzerland, however, students with an immigrant background attend schools in which principals more frequently report that the low quality of educational resources hinders learning.
- In most countries, schools attended by students with and without an immigrant background tend to be comparable in terms of human resources. However, among OECD countries, in **Iceland**, the United Kingdom, Israel, Portugal, Spain, the Netherlands, Denmark, Austria and Ireland is the student-teacher ratio higher in schools attended by students without an immigrant background.


Í 46 skólum eru einn eða fleiri innflytjendur sem taka þátt í PISA 2009
(í 71 skóla er enginn innflytjandi sem tekur þátt)
25% þátttakenda innflytjendur
60%
50%
40%
30%
20%
10%
0%
(N=2)
(N=4)
(N=9)
(N=16)
(N=15)
(N=6)
(N=37)
(N=38)
(N=8)
(N=17)
(N=9)
(N=9)
(N=39)
(N=11)
(N=22)
(N=12)
(N=39)
(N=27)
(N=28)
(N=34)
(N=17)
(N=35)
(N=36)
(N=38)
(N=20)
(N=26)
(N=28)
(N=28)
(N=33)
(N=34)
(N=70)
(N=36)
(N=37)
(N=39)
(N=41)
(N=41)
(N=43)
(N=44)
(N=44)
(N=50)
(N=50)
(N=51)
(N=102)
(N=60)
(N=92)
(N=106)

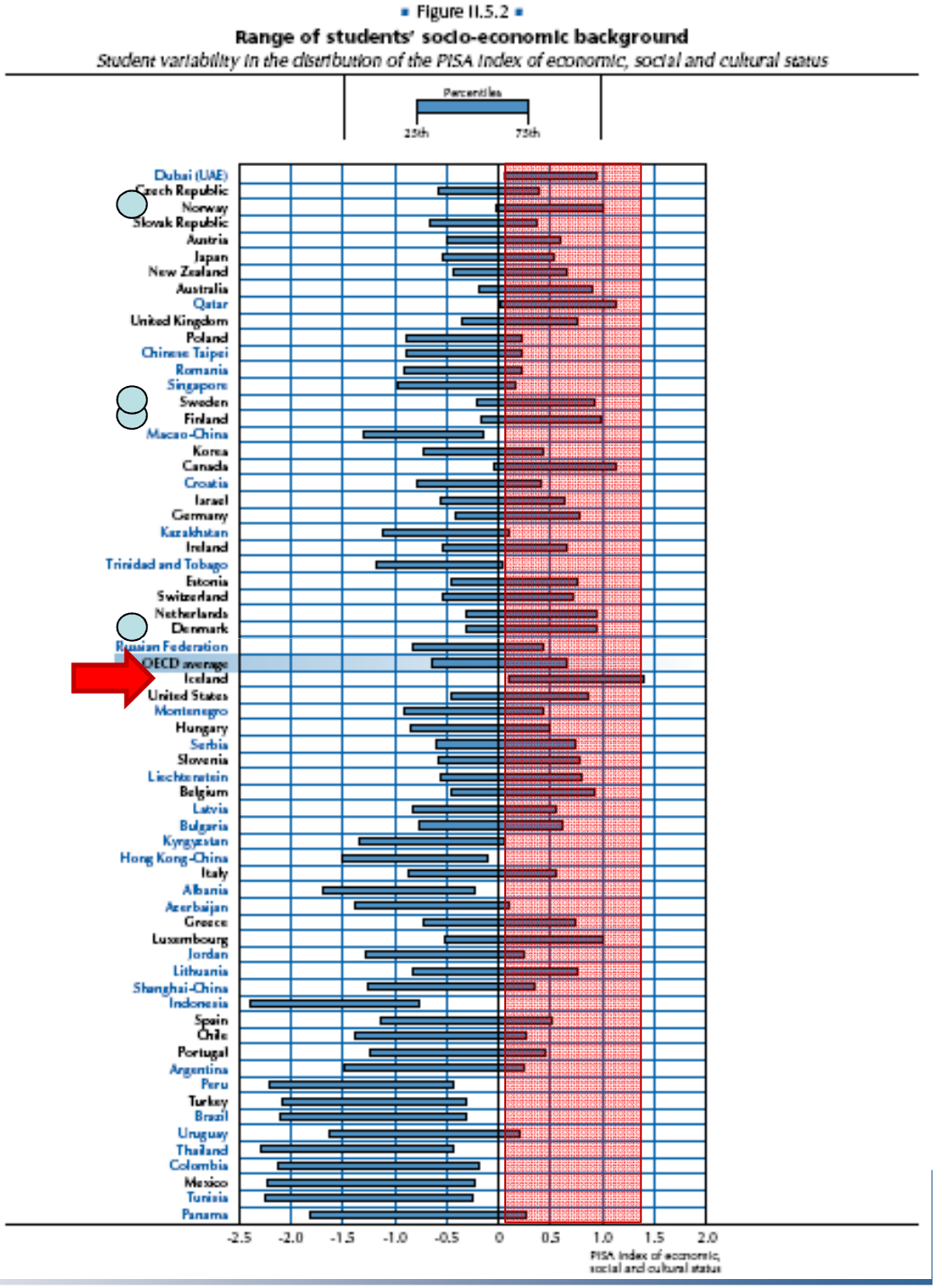
- In Belgium, for example, where the overall variance is 20% above the OECD average, the proportion of the total variance that is attributed to between-school differences is higher than the OECD average, but the within-school variance is lower than the OECD average.
- The same holds for Germany, Italy, Austria, Greece and Japan, among OECD countries with higher variance between schools, but lower within school variance than the OECD average.
- In contrast, in Sweden, New Zealand, **Iceland**, Australia, Ireland, the United Kingdom and Switzerland, the above-average total variation is driven by large performance differences within schools.

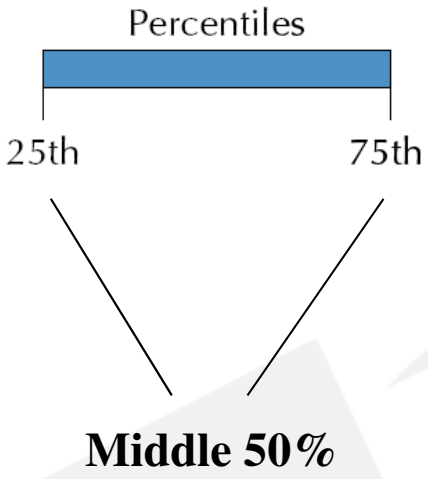
- **Every OECD country with academic and social inclusion above the OECD average, except Spain, has a mean performance at or above the OECD average (Tables II.5.1 and II.5.2).**
  - These countries include Australia, Canada, Denmark, Estonia, Finland, **Iceland**, Ireland, New Zealand, Norway, Sweden, Switzerland and the United Kingdom.

- Schools in the OECD countries Chile, Hungary, Mexico, Turkey, Greece, Austria, Belgium and Italy show below-average levels of both academic and social inclusion.
  - This signals a school system in which students of similar socio-economic background and academic performance generally attend the same schools.

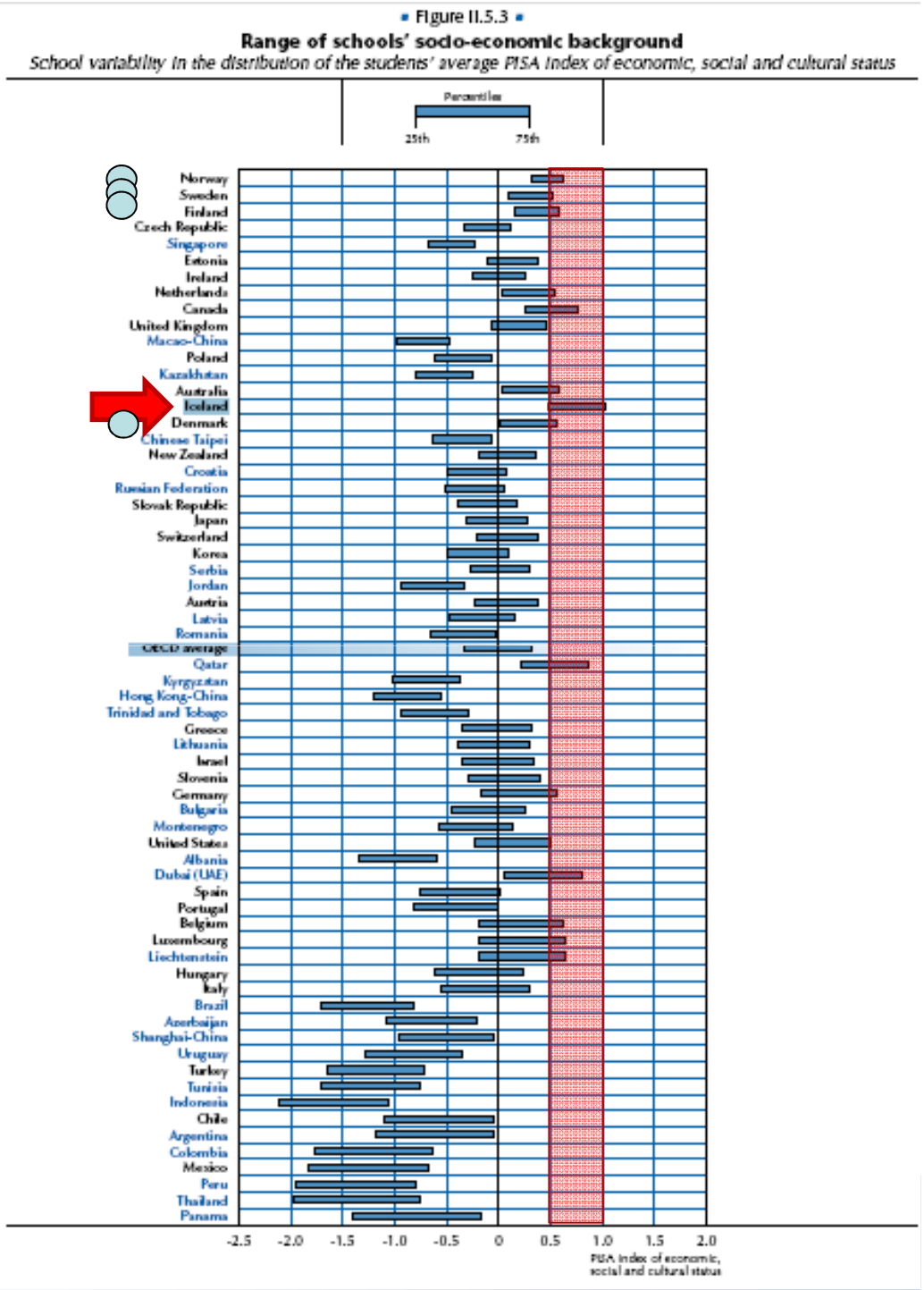


- Range of students' socio-economic background





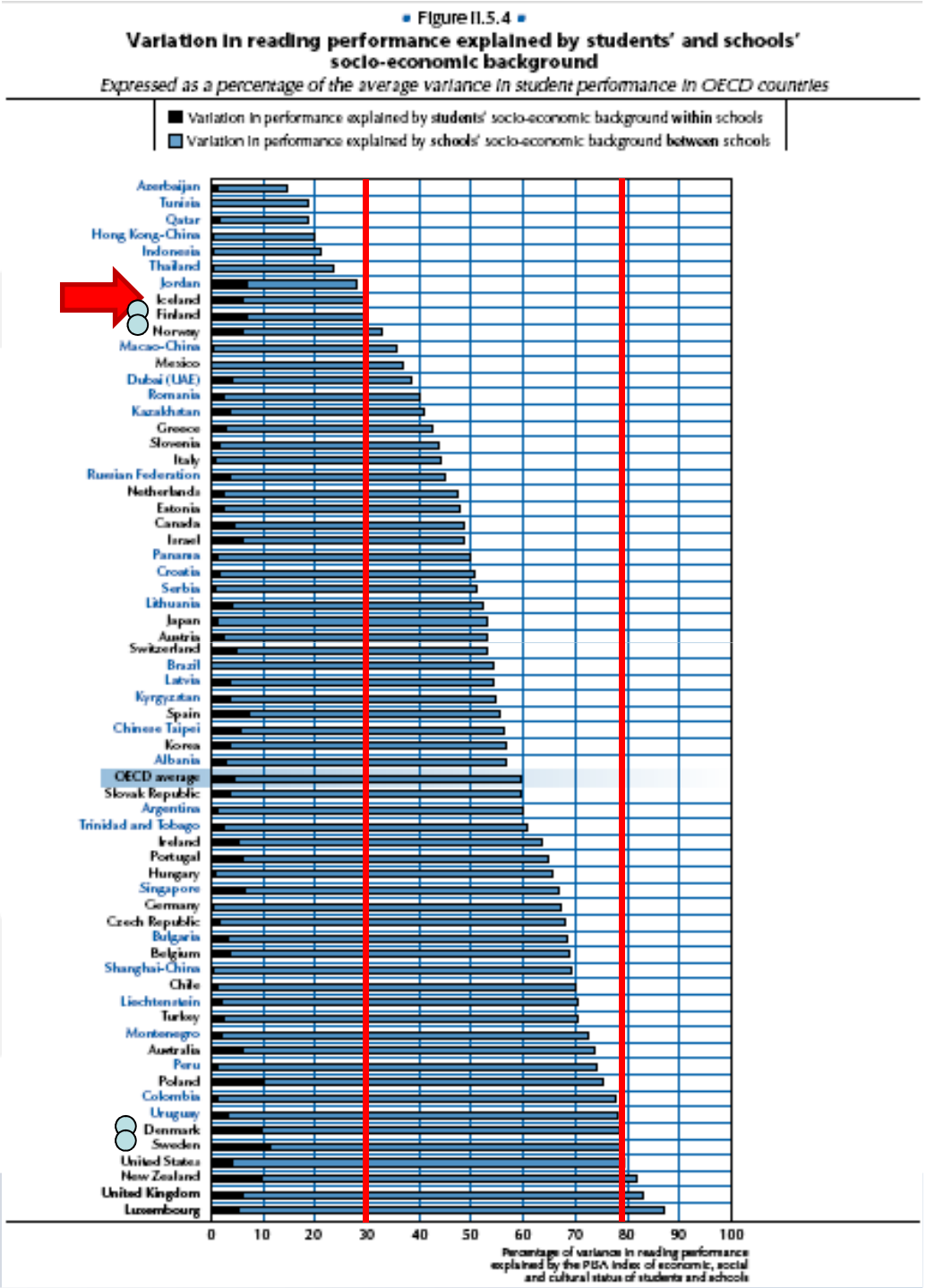
- Range of schools' socio-economic background
- "Icelandic students are seriously well off"
  - Even more so than in Dubai, Qatar, Canada



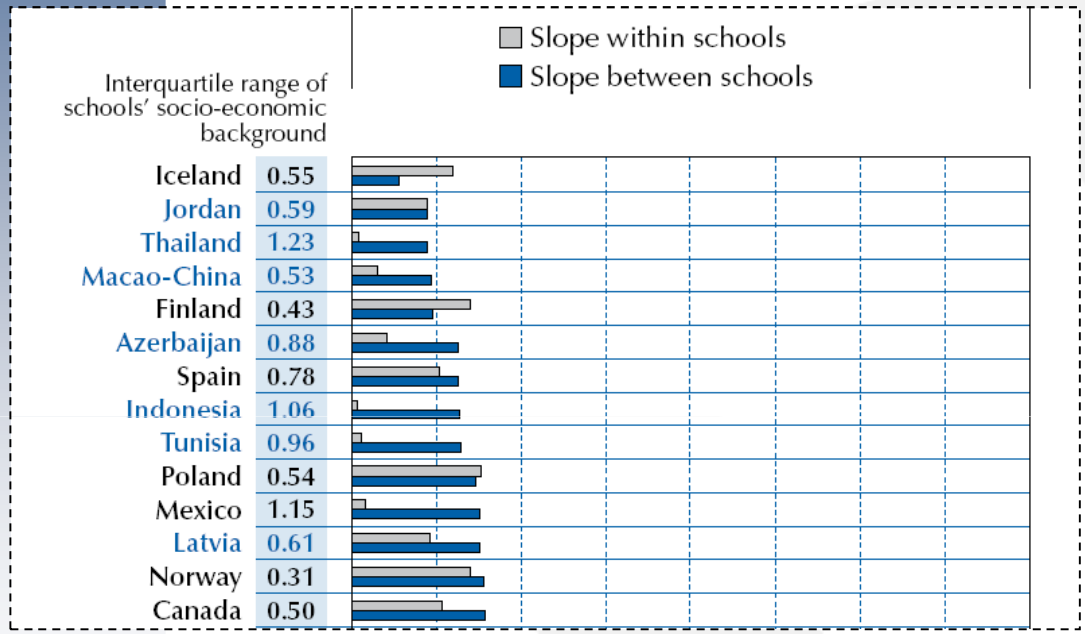
- Across OECD countries, differences in the socio-economic backgrounds of students account for 57% of the performance differences between schools.
- However, this proportion varies considerably across countries.
  - In Finland, **Iceland** and Norway, differences in the socio-economic background of schools account for less than 30% of the already-small performance differences between schools.

Variation in reading performance explained by students' and schools' socio-economic background

- Iceland, Finland, Norway: 30%
- Denmark, Sweden: 80%



- Within-school differences in socio-economic background across students display a gentler relationship with performance than the between-school differences.
- Consider the case of two students in the same country living with families whose different economic, social and cultural status gives them scores on the index that are ¼ standard deviation above, and ¼ below the mean.
- If these students attend the same school, with an average socio-economic profile, the predicted performance gap is smaller: on average across OECD countries it stands at 9 score points.
- It is between 10 and 18 score points in New Zealand, Sweden, Poland, Australia, Finland, Norway, Denmark, Ireland, the United Kingdom, **Iceland**, the United States, Canada, Spain, Luxembourg and Switzerland, and in the partner countries Singapore, Chinese Taipei and the Russian Federation
- (grey bar in Figure II.5.5).


Slope within schools
Slope between schools
Interquartile range of schools' socio-economic background
Iceland 0.55
Jordan 0.59
Thailand 1.23
Macao-China 0.53
Finland 0.43
Azerbaijan 0.88
Spain 0.78
Indonesia 1.06
Tunisia 0.96
Poland 0.54
Mexico 1.15
Latvia 0.61
Norway 0.31
Canada 0.50

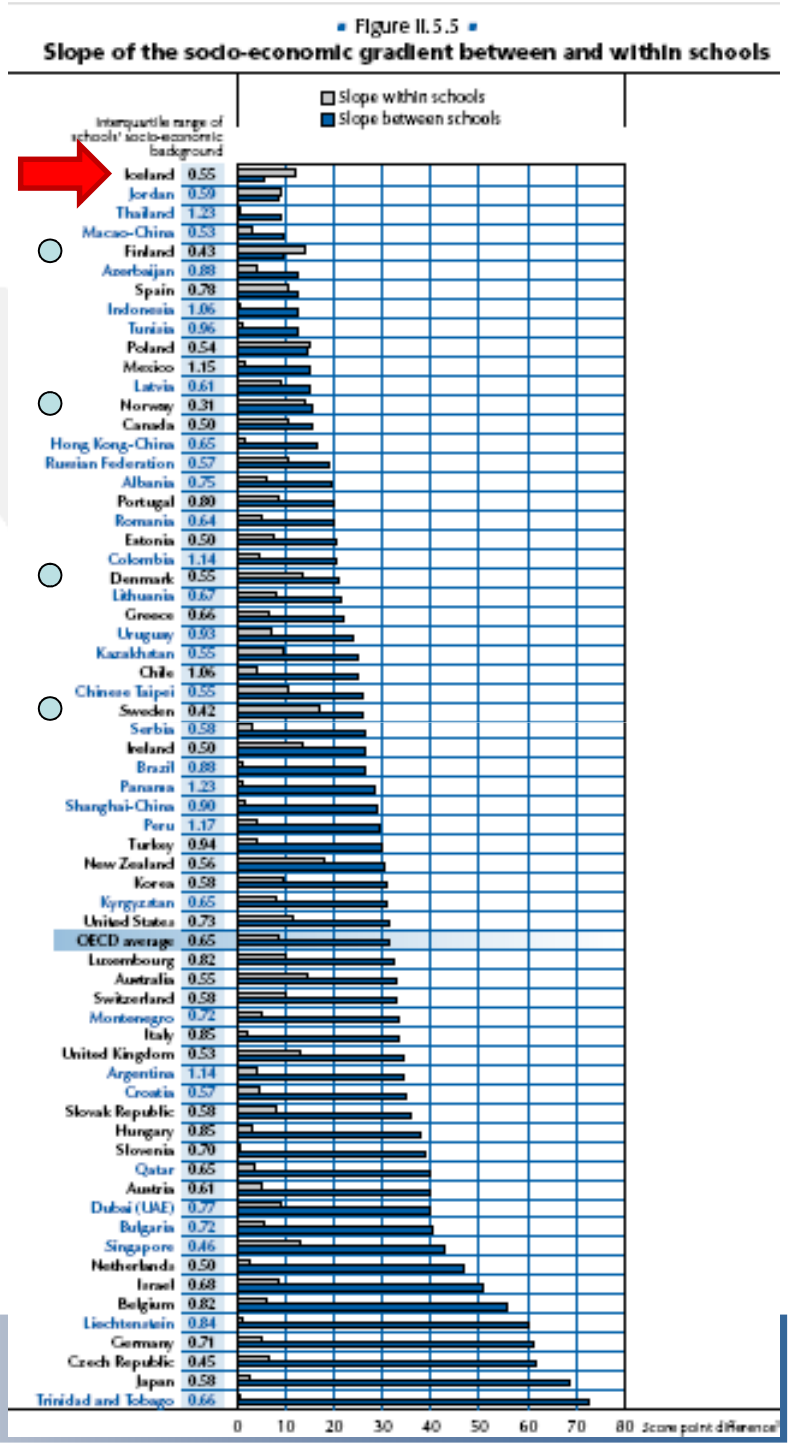


Figure II.5.5
Slope of the socio-economic gradient between and within schools
Slope within schools
Slope between schools
Interquartile range of schools' socio-economic background
Iceland 0.55
Jordan 0.59
Thailand 1.23
Macao-China 0.53
Finland 0.43
Azerbaijan 0.88
Spain 0.78
Indonesia 1.06
Tunisia 0.96
Poland 0.54
Mexico 1.15
Latvia 0.61
Norway 0.31
Canada 0.50
Hong Kong-China 0.65
Russian Federation 0.57
Albania 0.75
Portugal 0.80
Romania 0.64
Estonia 0.50
Colombia 1.14
Denmark 0.55
Lithuania 0.67
Greece 0.66
Uruguay 0.93
Kazakhstan 0.55
Chile 1.06
Chinese Taipei 0.55
Sweden 0.42
Serbia 0.58
Ireland 0.50
Brazil 0.88
Panama 1.23
Shanghai-China 0.90
Peru 1.17
Turkey 0.94
New Zealand 0.56
Korea 0.58
Kyrgyzstan 0.65
United States 0.73
OECD average 0.65
Luxembourg 0.82
Australia 0.55
Switzerland 0.58
Montenegro 0.72
Italy 0.85
United Kingdom 0.53
Argentina 1.14
Croatia 0.57
Slovak Republic 0.58
Hungary 0.85
Slovenia 0.70
Qatar 0.65
Austria 0.61
Dubai (UAE) 0.77
Bulgaria 0.72
Singapore 0.46
Netherlands 0.50
Israel 0.68
Belgium 0.82
Liechtenstein 0.84
Germany 0.71
Czech Republic 0.45
Japan 0.58
Trinidad and Tobago 0.66
0 10 20 30 40 50 60 70 80
Score point difference

Pre-primary education

- On average across OECD countries, 72% of the 15-year-old students assessed by PISA reported that they had attended more than one year of pre-primary education when they were children.
- According to students' responses, more than one year of pre-primary education is practically universal in Japan, the Netherlands, Hungary, Belgium, **Iceland** and France, where over 90% of 15-year-olds reported that they had attended pre-primary education for more than one year.

Figure II.5.9

Performance difference between students who had attended pre-primary school for more than one year and those who had not