

1

Organisation for Economic Co-operation and Development (OECD)

Education

# Where immigrant students succeed

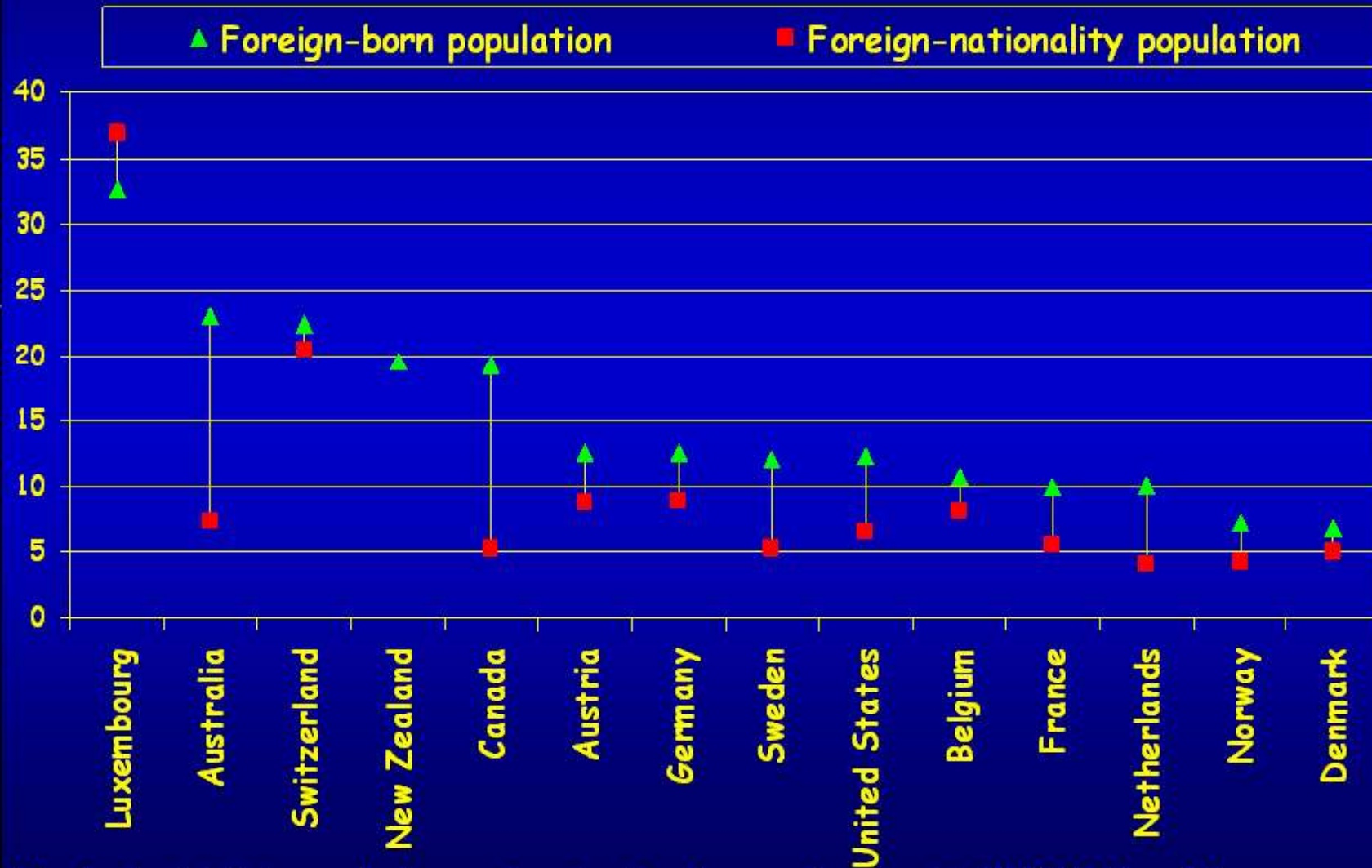
A comparative review of performance and engagement in PISA 2003

End of embargo: 15 May 2005 11:00 Paris time

OECD Directorate for Education

OECD  OCDE

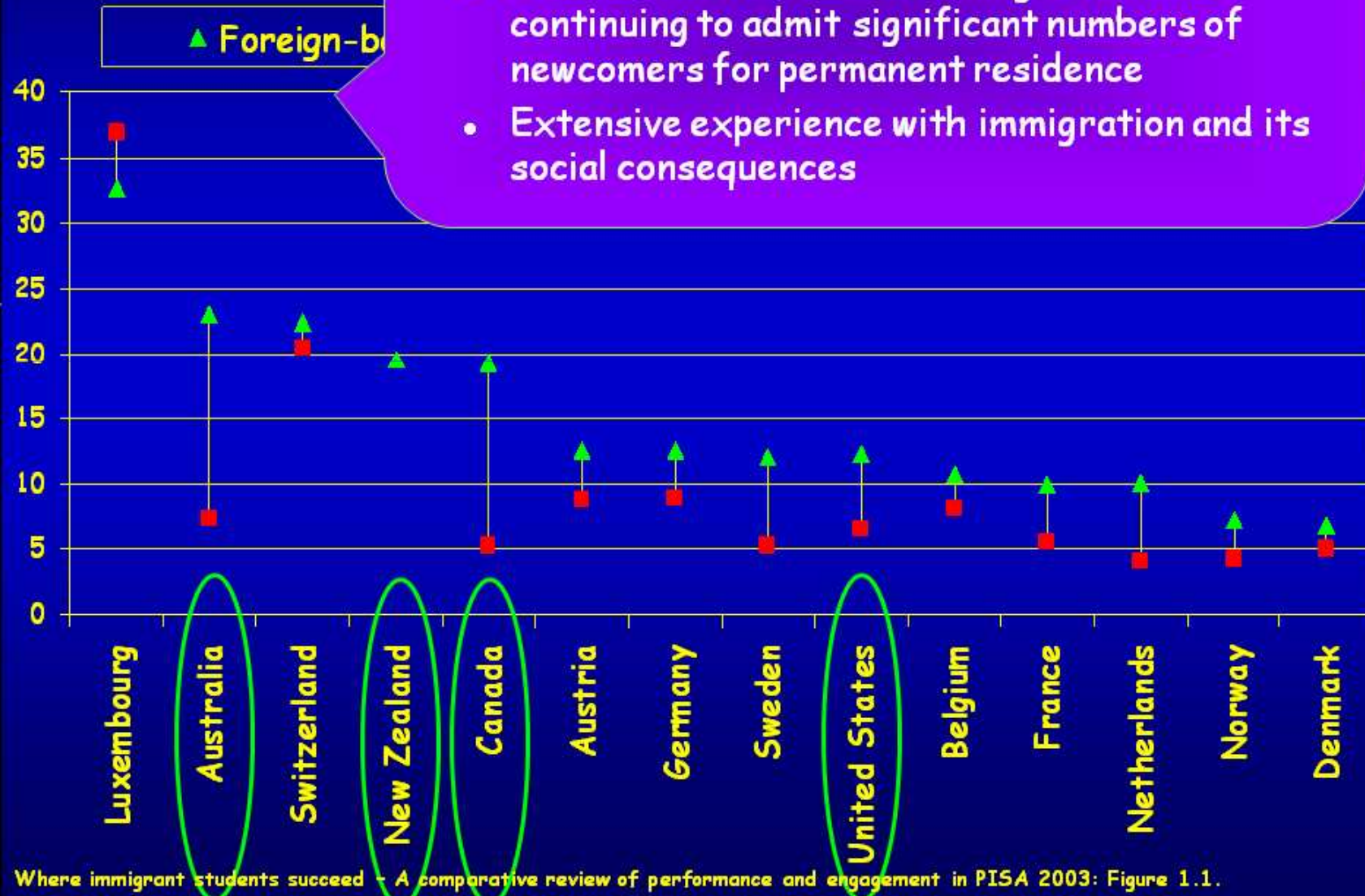
# Different histories



Where immigrant students succeed - A comparative review of performance and engagement in PISA 2003: Figure 1.1.

## The traditional settlement countries

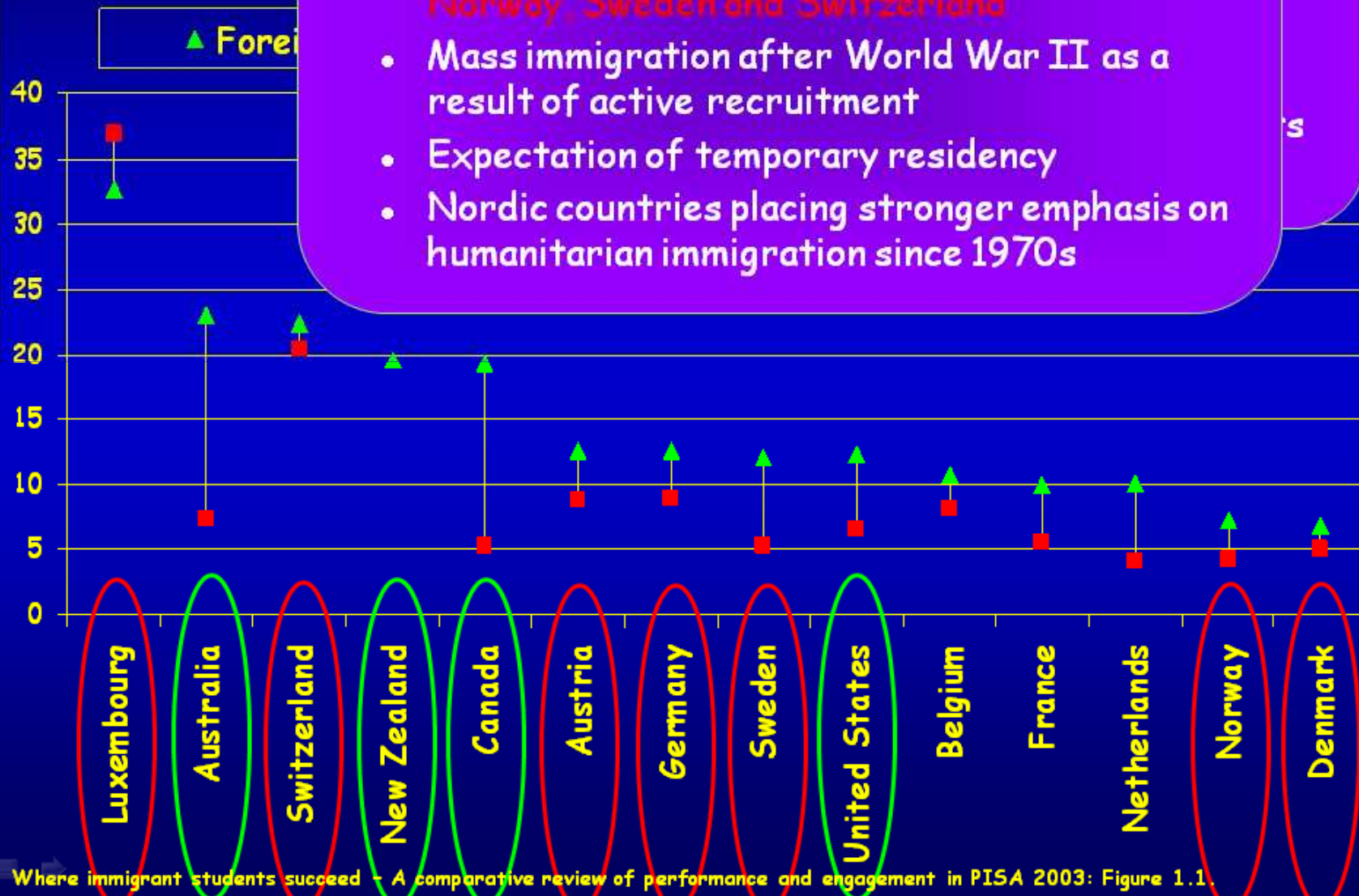
- Australia, Canada, New Zealand, United States
- Founded on the basis of immigration and continuing to admit significant numbers of newcomers for permanent residence
- Extensive experience with immigration and its social consequences



Where immigrant students succeed - A comparative review of performance and engagement in PISA 2003: Figure 1.1.

## European countries with post-war labour recruitment

- Austria, Denmark, Germany, Luxembourg, Norway, Sweden and Switzerland
- Mass immigration after World War II as a result of active recruitment
- Expectation of temporary residency
- Nordic countries placing stronger emphasis on humanitarian immigration since 1970s



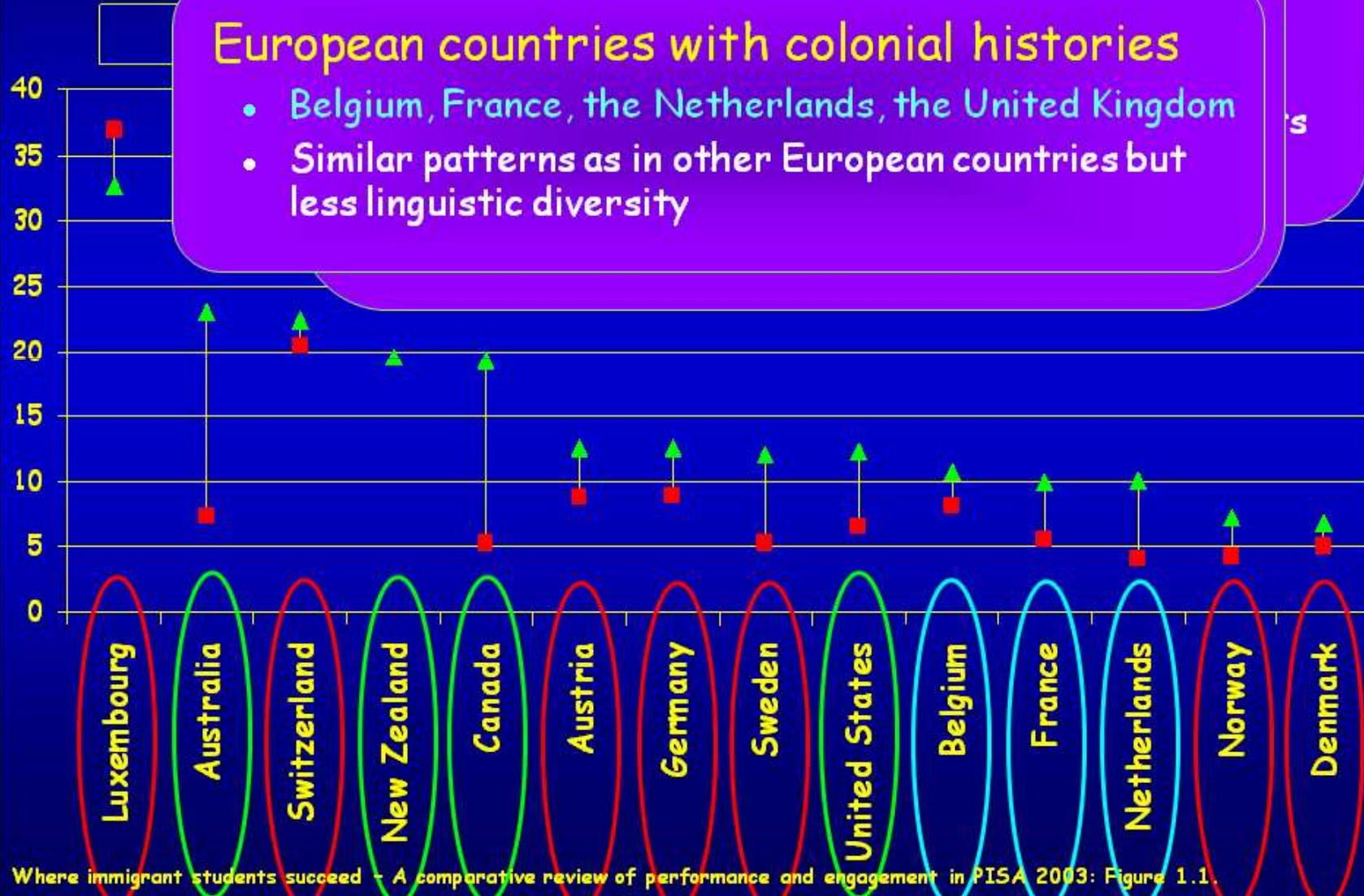
Where immigrant students succeed - A comparative review of performance and engagement in PISA 2003: Figure 1.1.

## European countries with post-war labour recruitment

- Austria, Denmark, Germany, Luxembourg

## European countries with colonial histories

- Belgium, France, the Netherlands, the United Kingdom
- Similar patterns as in other European countries but less linguistic diversity



Where immigrant students succeed - A comparative review of performance and engagement in PISA 2003: Figure 1.1.

# Key Issues

- ❑ Policy attention is shifting from managing and containing migration inflows to addressing challenges of integration
  - ❑ Schools can play a central role in integration processes
    - Preparation for school-work transitions
    - Overcoming language barriers
    - Transmission of norms and values
  - ❑ PISA provides first-time comparative data on cognitive and non-cognitive learning outcomes of immigrant students...
    - Comparison with native peers
    - Comparison with immigrant student populations across countries
- ... and thus provides an opportunities to review policies and practices in this area

# This report

- The report compares three student populations...
    - Native students are students who were born in the country of assessment or who had at least one parent born in that country
    - **Second-generation immigrant students** are students who were born in the country of assessment, but whose parents were born in another country, *i.e.* students who have followed their entire school career in the country of assessment
    - **First-generation immigrant students** are students who were not born in the country of assessment and whose parents were also born in another country
- ... also taking into account their socio-economic composition

# Key features of PISA 2003

## □ Information collected

- Volume of the tests
  - 3½ hours of mathematics assessment
  - 1 hour for each of reading, science and problem solving
- Each student
  - 2 hours on paper-and-pencil tasks (subset of all questions)
  - ½ hour for questionnaire on background, learning habits, learning environment, engagement and motivation, computer use
- School principals
  - questionnaire (school demography, learning environment quality)

## □ Coverage

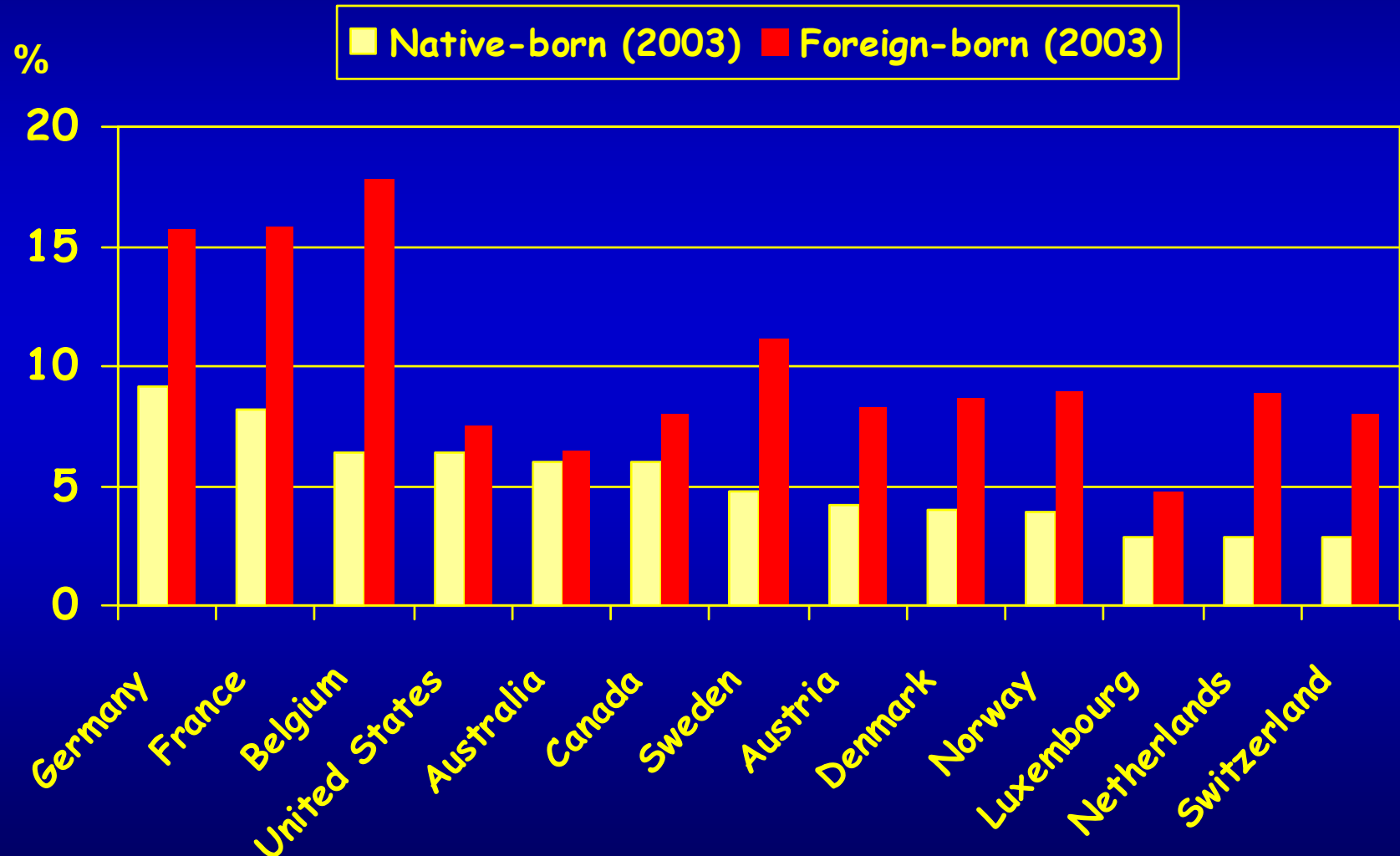
- PISA covers roughly nine tens of the world economy
- Representative samples of between 3,500 and 50,000 students



## □ Key findings

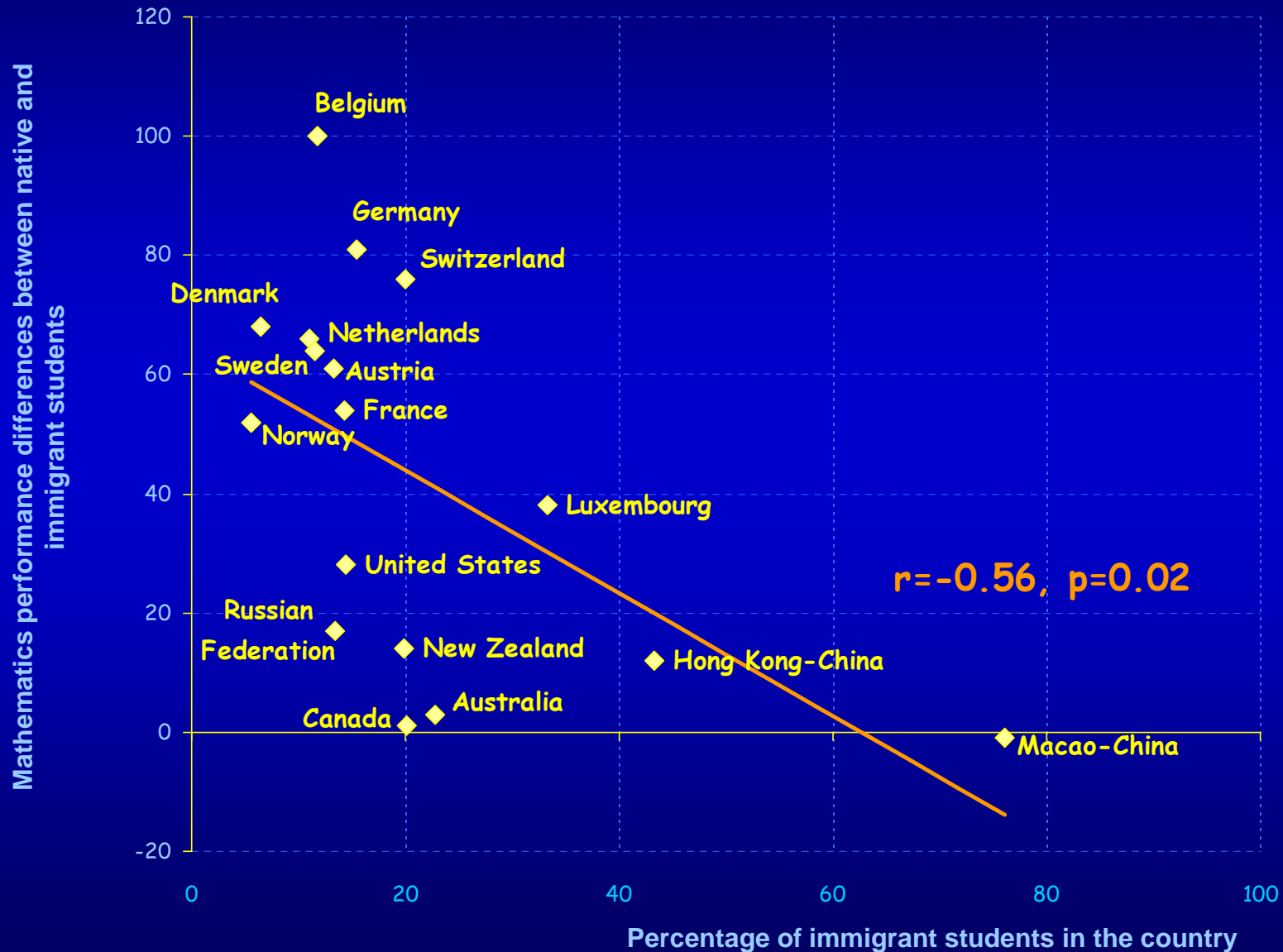
- On average across the 17 countries, 15-year-old first-generation immigrants score in mathematics more than one school year behind their native counterparts
- The performance disadvantage varies widely across countries from negligible amounts to...
  - ...more than 90 score points in Belgium and Sweden for first-generation students
  - ...more than 90 score points in Belgium and Germany for second-generation students
- The performance of immigrant students also varies in absolute terms
  - ...with second-generation immigrants in Canada outperforming their German counterparts by 111 score points, almost equivalent to three school years

## Unemployment rates by immigration background



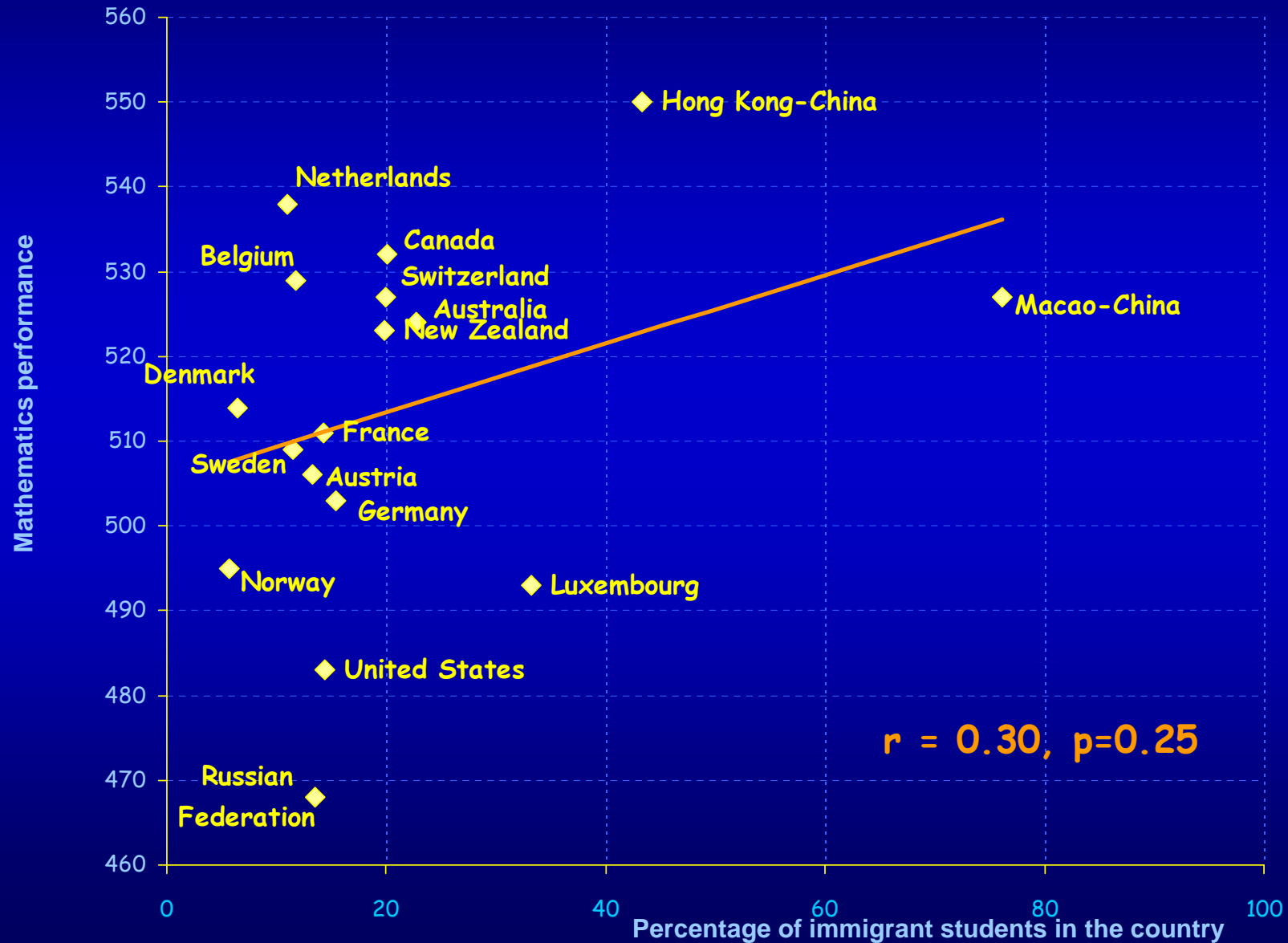
Where immigrant students succeed - A comparative review of performance and engagement in PISA 2003: Table 1.4.

# Larger immigrant populations do not imply a larger performance disadvantage for immigrants



Where immigrant students succeed – A comparative review of performance and engagement in PISA 2003: Figure 3.8.

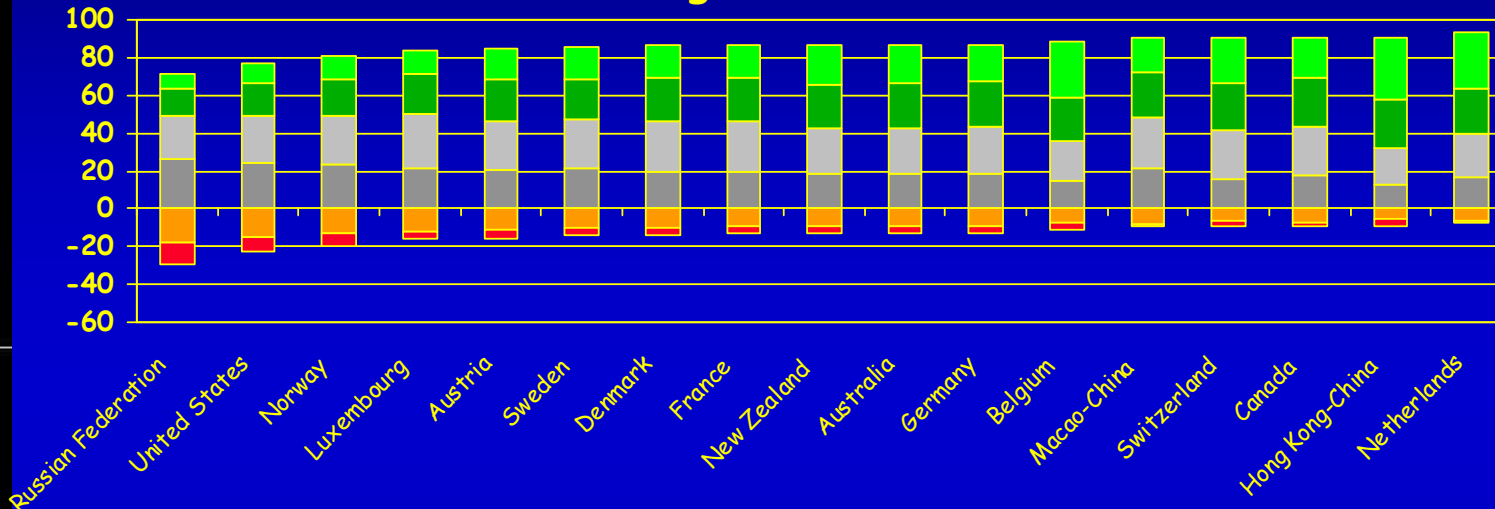
# Larger immigrant populations do not imply lower overall performance



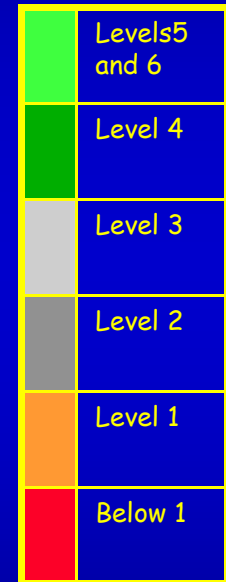
# Mathematics performance by proficiency levels

In PISA Level 2 demonstrates an essential foundation of mathematics skills

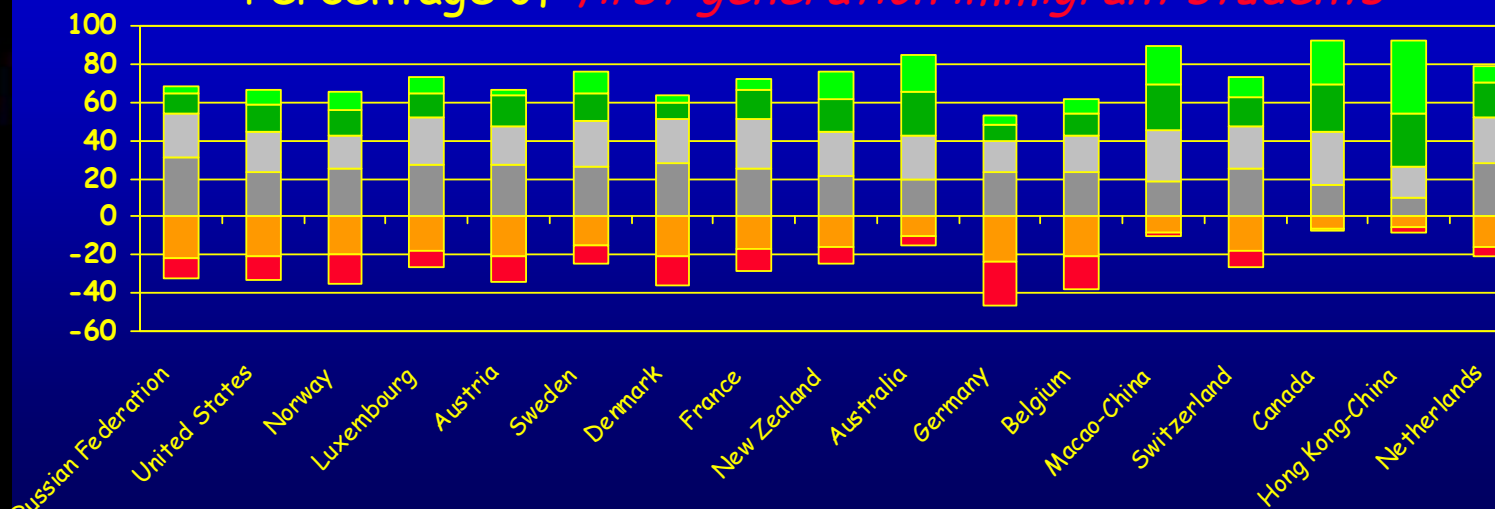
Percentage of *native students*



PISA Proficiency Levels



Percentage of *first-generation immigrant students*

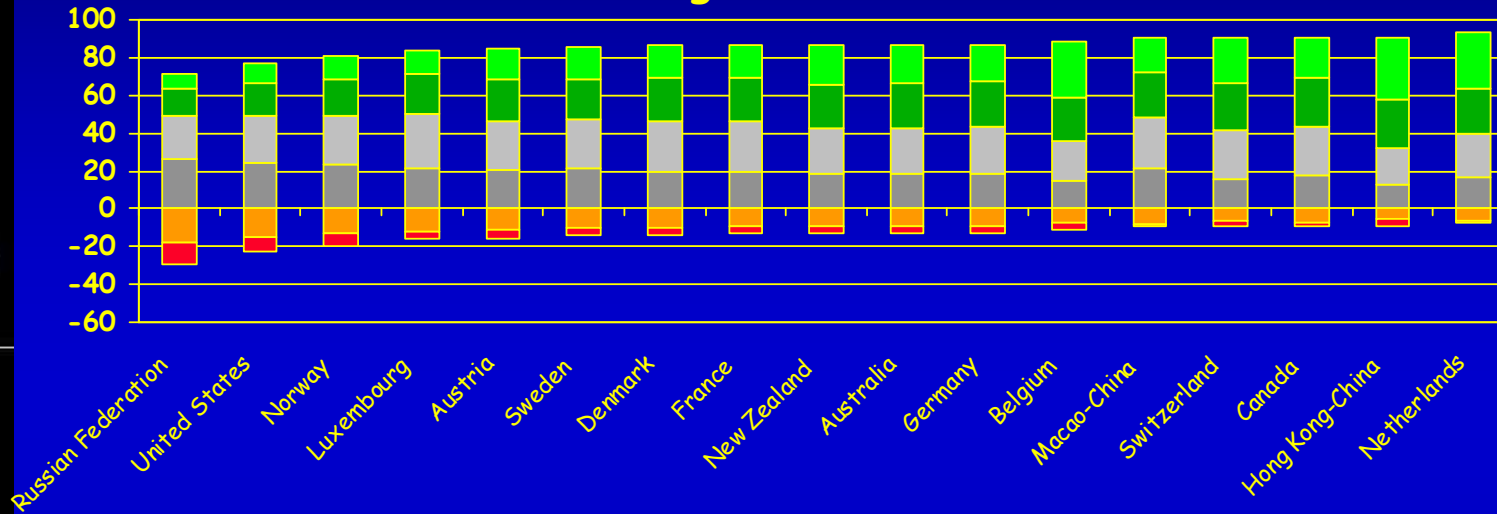


Where immigrant students succeed - A comparative review of performance and engagement in PISA 2003: Figure 2.4a.

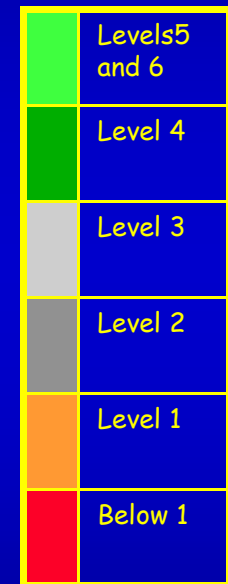
# Mathematics performance by proficiency levels

In PISA Level 2 demonstrates an essential foundation of mathematics skills

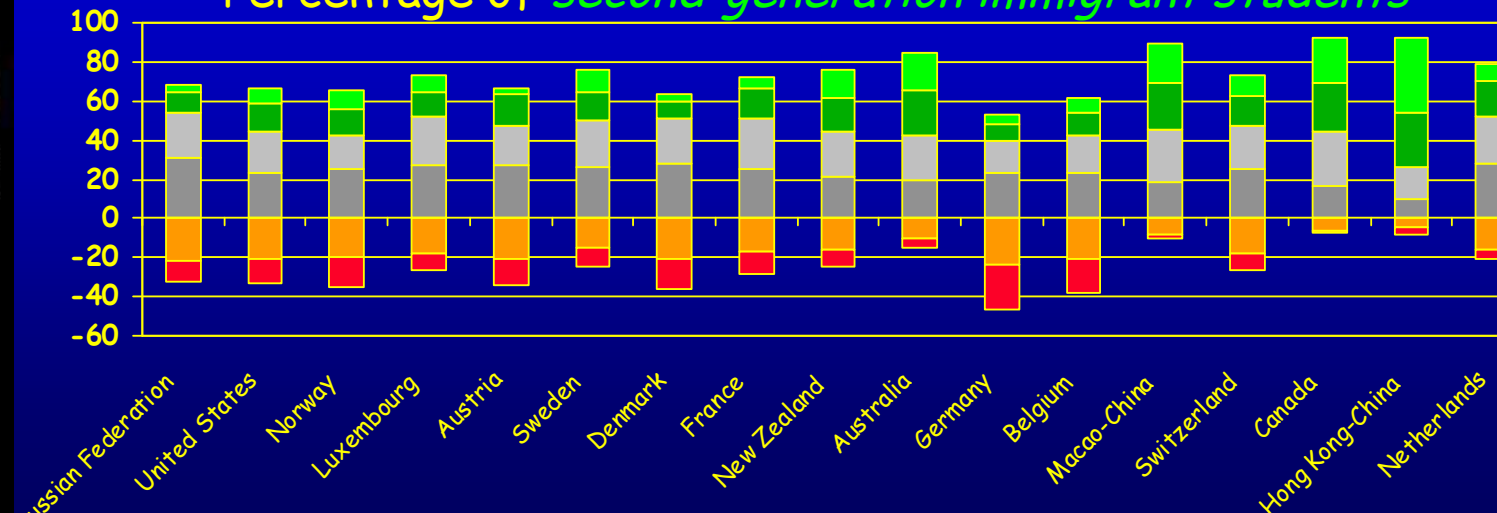
Percentage of *native students*



PISA Proficiency Levels



Percentage of *second-generation immigrant students*



Where immigrant students succeed - A comparative review of performance and engagement in PISA 2003: Figure 2.4a.

# Students' interest in and enjoyment of mathematics (OECD average)

	Native students	Second-generation immigrant students	First-generation immigrant students
I enjoy reading about mathematics.	28	35	41
I look forward to my mathematics lessons.	31	40	47
I do mathematics because I enjoy it.	38	43	48
I am interested in the things I learn in mathematics.	52	59	64

Stronger in 9 countries  
Effect size 0.16

Stronger in 14 countries  
Effect size 0.32

# Students' instrumental motivation in learning mathematics (OECD average)

	Native students	Second-generation immigrant students	First-generation immigrant students
Making an effort in mathematics is worth it because it will help me in work I want to do later.	74	76	79
Learning mathematics is worthwhile because it will improve my career prospects.	76	80	81
Mathematics is an important subject because I need it for what I want to study later on.	62	67	71
I will learn many things in mathematics that will help me get a job.	69	73	76

Stronger in 10 countries  
Effect size 0.14

Stronger in 12 countries  
Effect size 0.25

Where immigrant students succeed – A comparative review of performance and engagement in PISA 2003: Figures 4.5a and 4.9.  
(not significant)



# The likelihood of immigrant students expecting to complete a university-level programme (ISCED 5a, 6) compared to native students

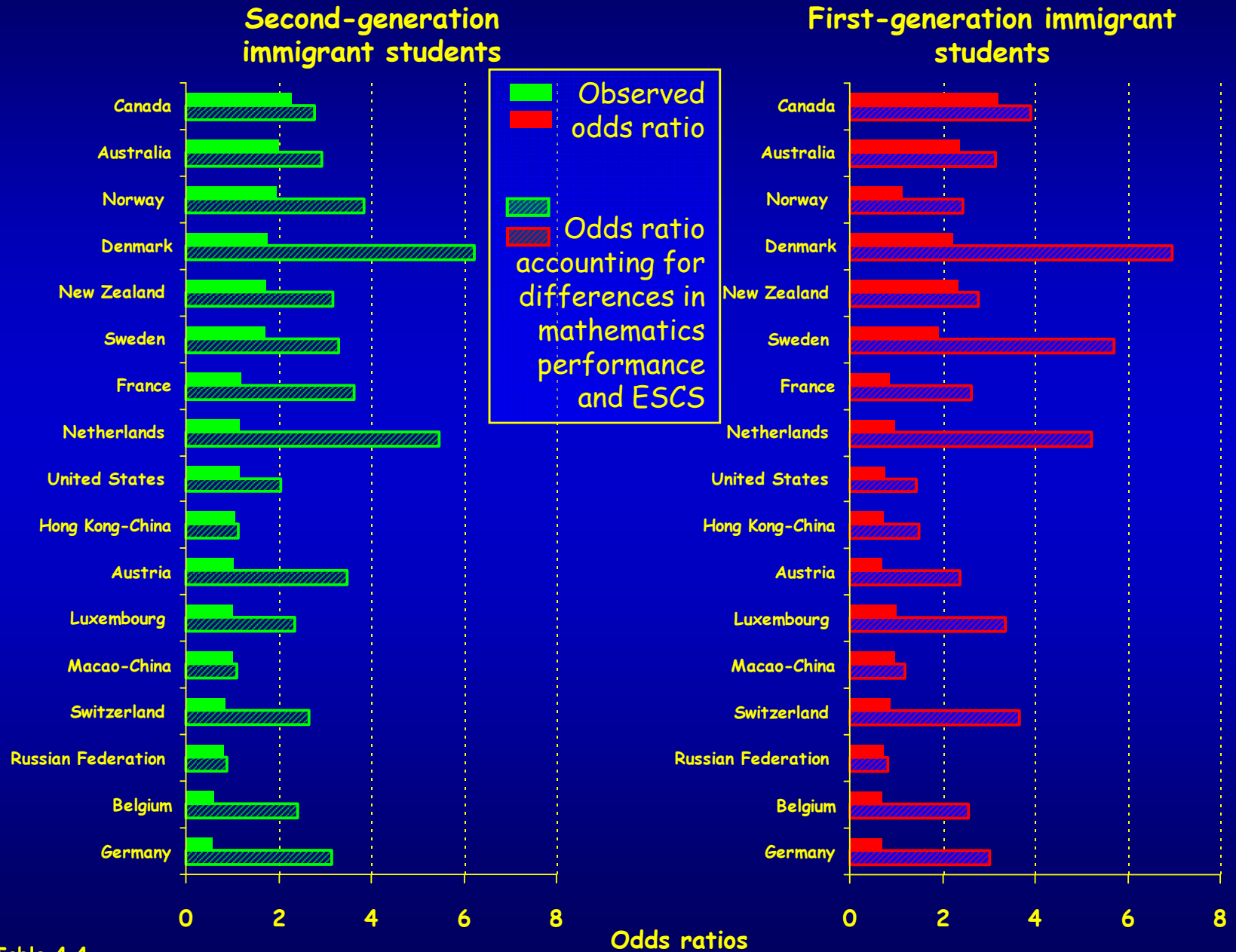


Table 4.4.

# Students' anxiety in mathematics (OECD average)

	Native students	Second-generation immigrant students	First-generation immigrant students
I often worry that it will be difficult for me in mathematics classes.	48	57	54
I get very tense when I have to do mathematics homework.	28	34	31
I get very nervous doing mathematics problems.	22	30	29
I feel helpless when doing a mathematics problem.	23	28	26
I worry that I will get poor marks in mathematics.	52	62	58

Weaker in 9 countries  
Effect size -0.24

Weaker in 8 countries  
Effect size -0.11

# Students' attitudes towards school (OECD average)

	Native students	Second-generation immigrant students	First-generation immigrant students
School has done little to prepare me for adult life when I leave school.	30	29	33
School has been a waste of time.	9	7	8
School helped give me confidence to make decisions.	70	75	77
School has taught me things which could be useful in a job.	89	91	91

Stronger in 8 countries  
Effect size 0.17

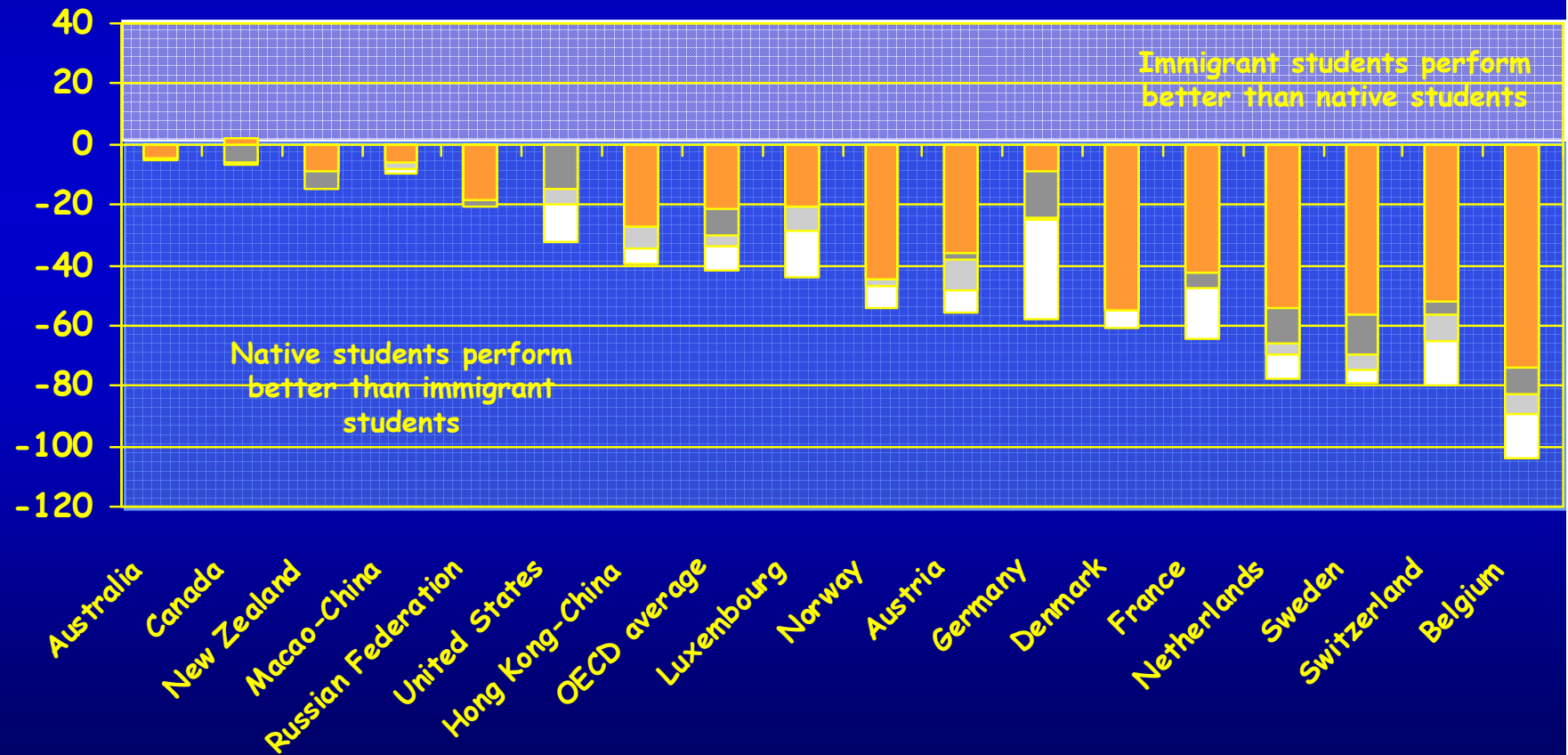
Stronger in 11 countries  
Effect size 0.23

# Performance differences in mathematics

Native students versus first-generation immigrant students

PISA score point difference

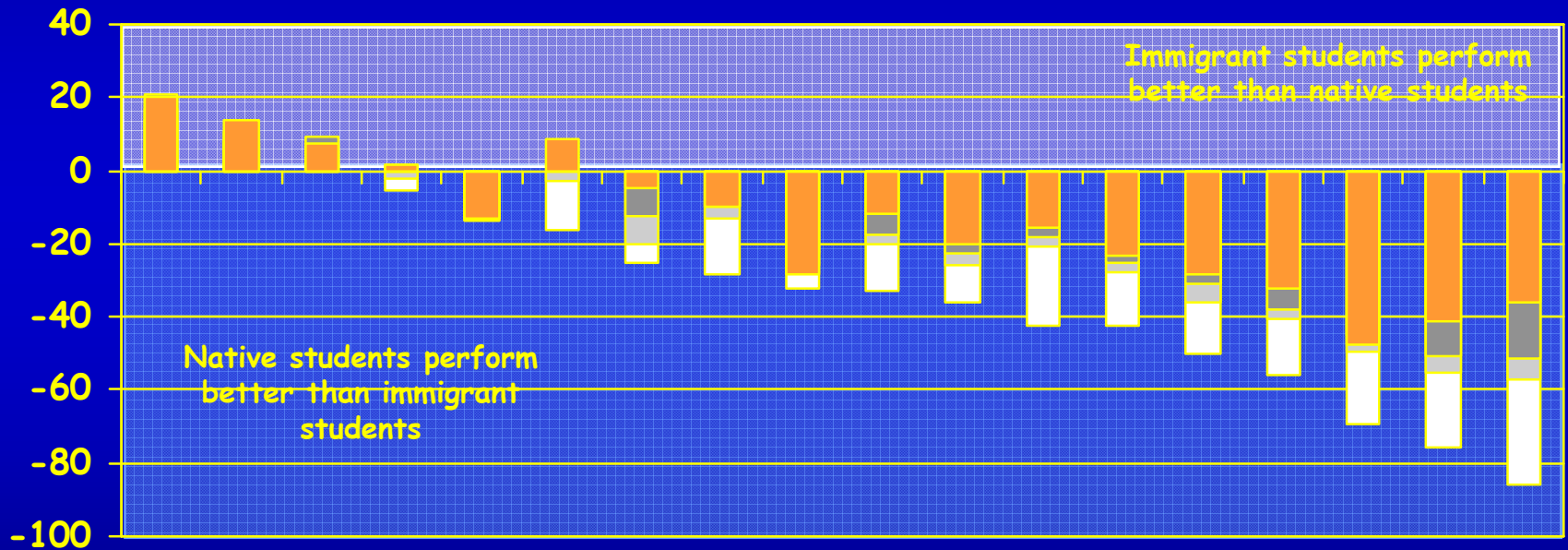
- Mathematics performance difference
- Parental education (in years of schooling)
- Parents' occupational status
- Foreign language spoken at home



# Performance differences in mathematics

Native students versus second-generation immigrant students

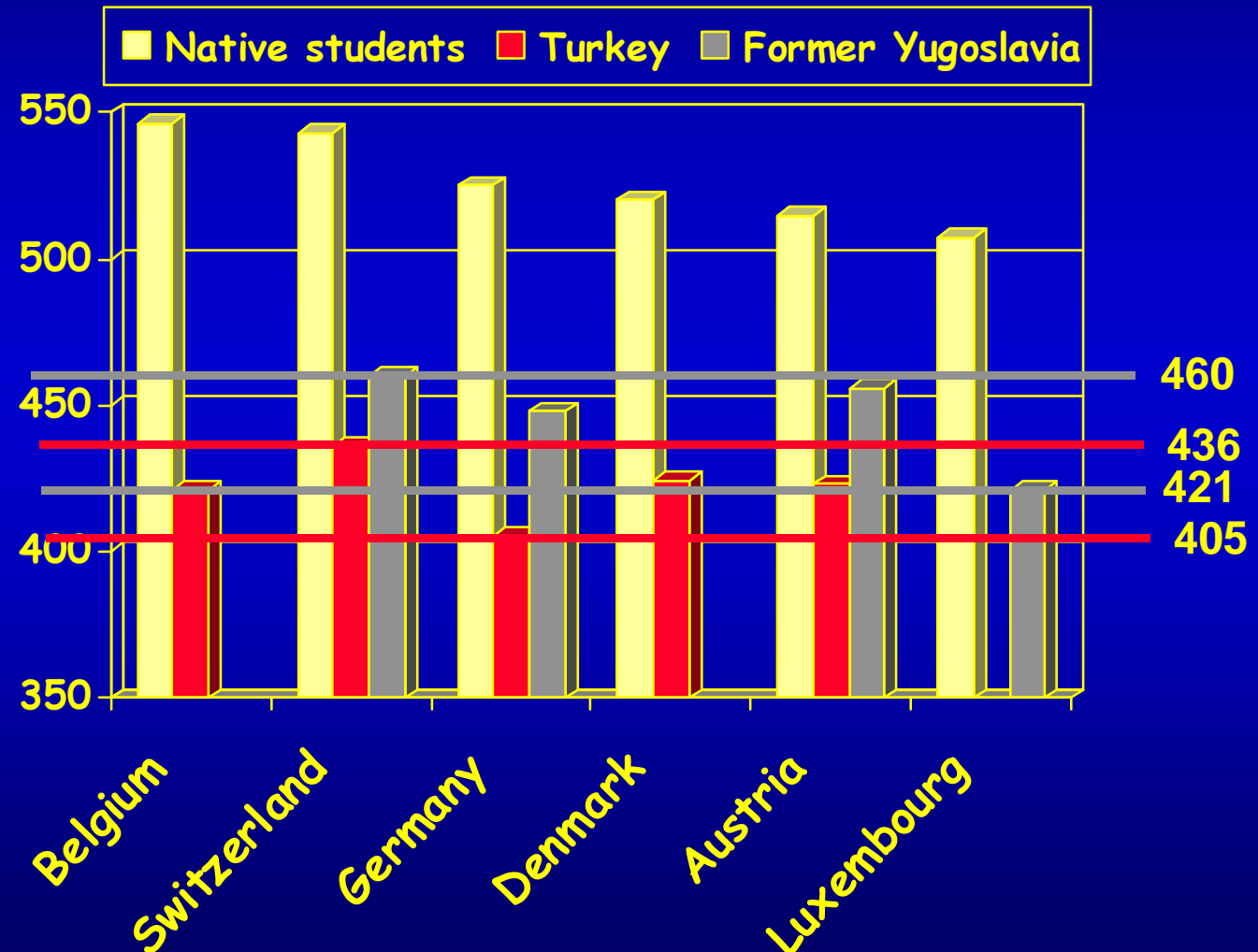
PISA score point difference



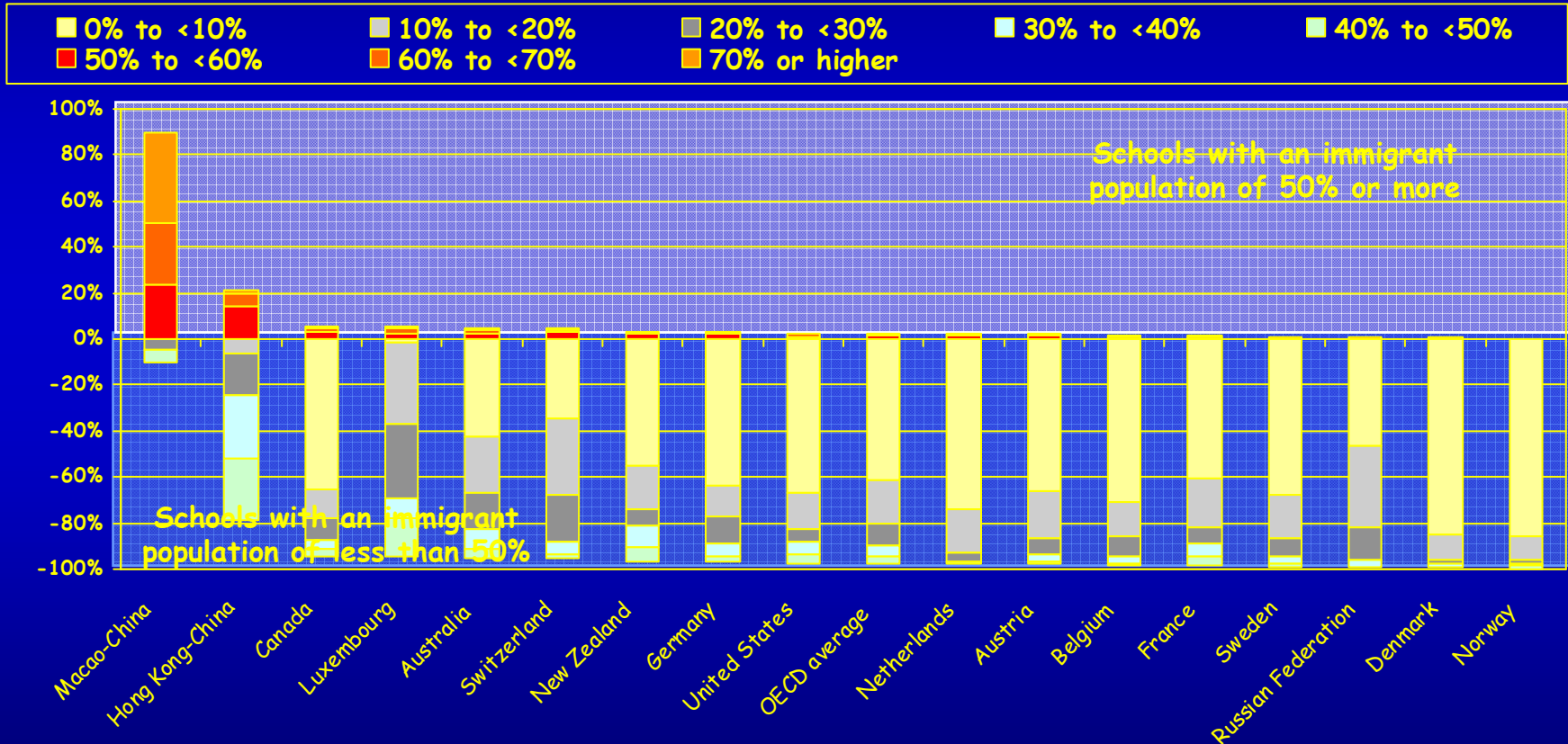
Where immigrant students succeed - A comparative review of performance and engagement in PISA 2003: Table 3.5.

# Performance of immigrant students whose families came from Turkey or the former Yugoslavia

Performance on the PISA mathematics scale

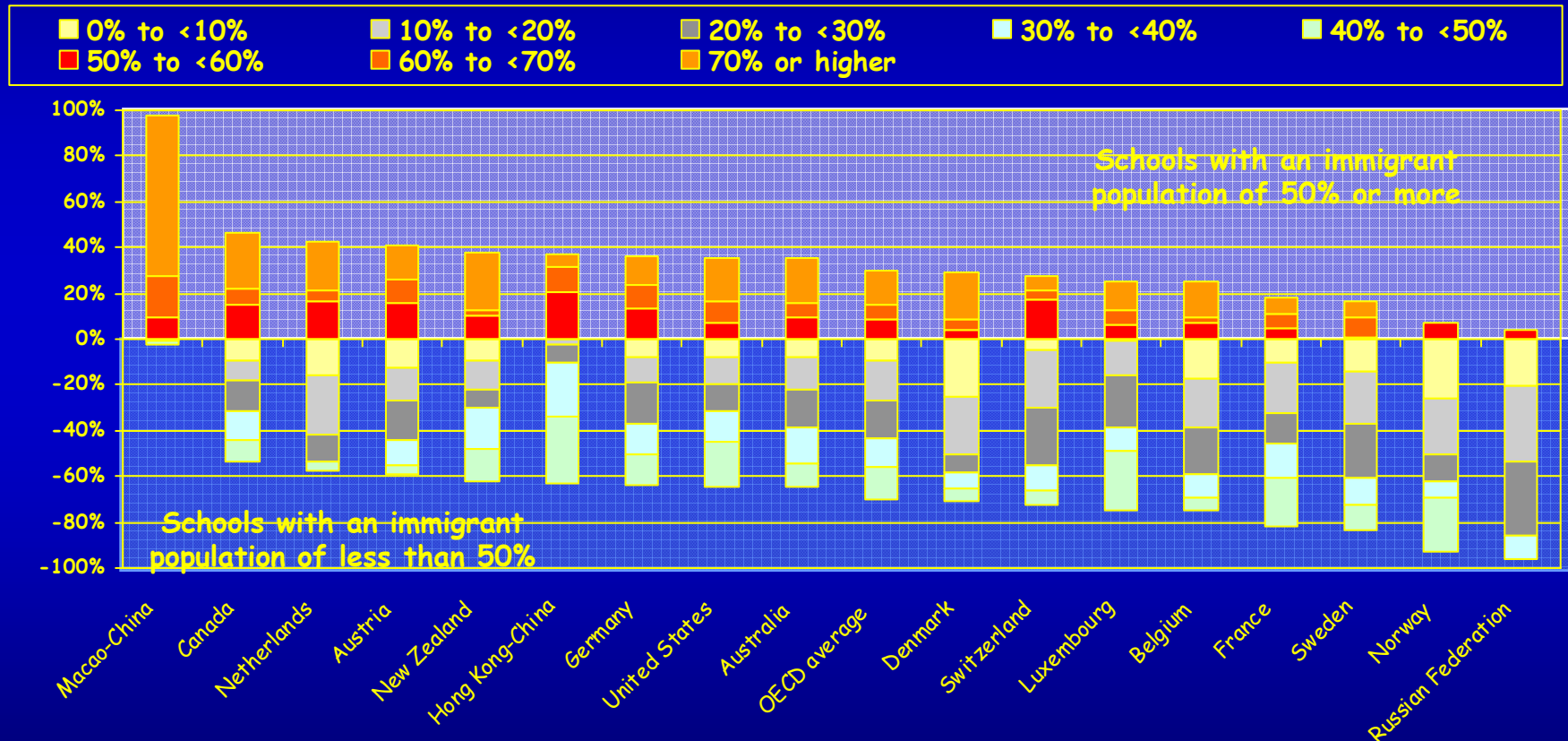


# Percentage of native students in schools with different proportions of immigrant students



Where immigrant students succeed – A comparative review of performance and engagement in PISA 2003: Table 3.7c.

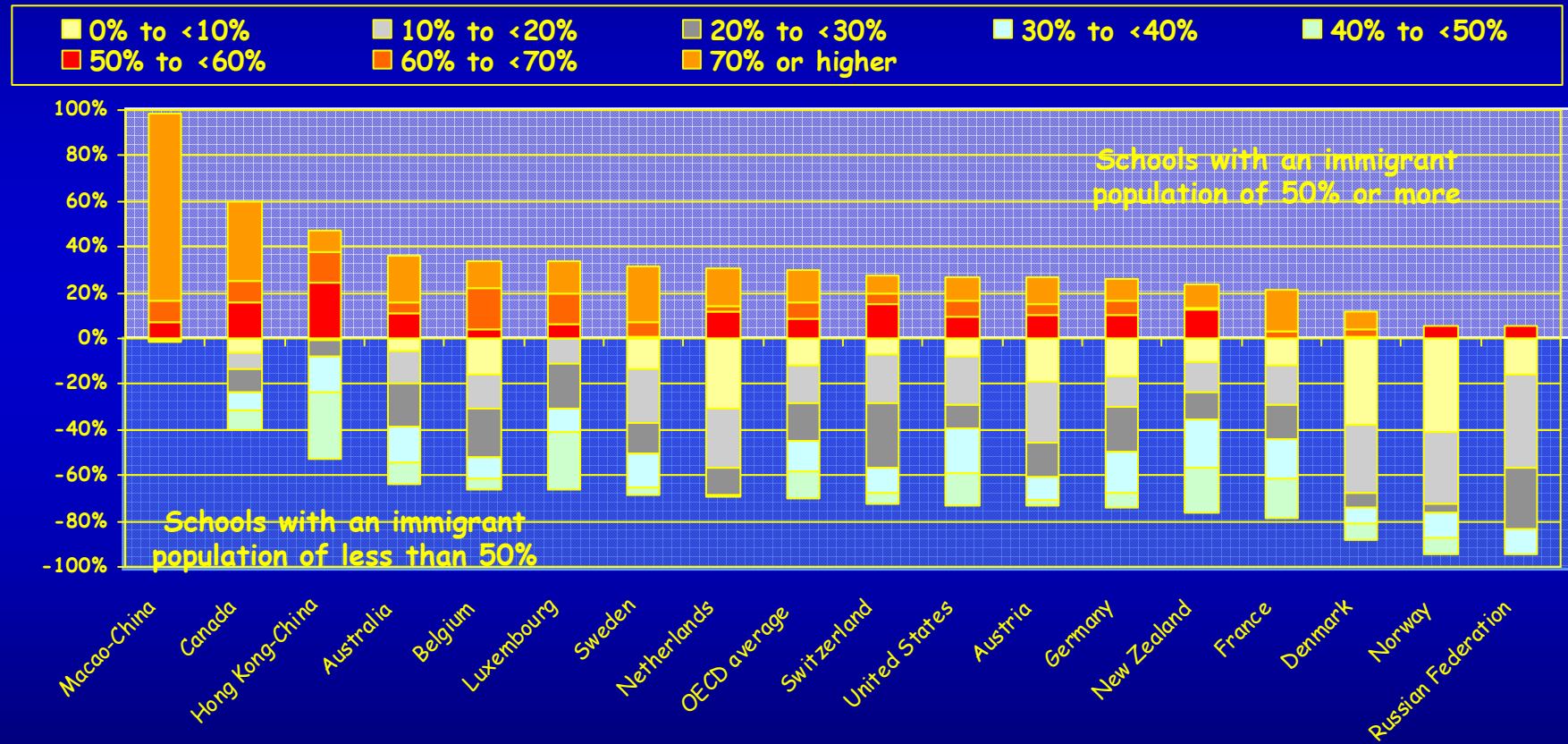
# Percentage of **second-generation immigrant students** in schools with different proportions of immigrant students



Where immigrant students succeed – A comparative review of performance and engagement in PISA 2003: Table 3.7a.

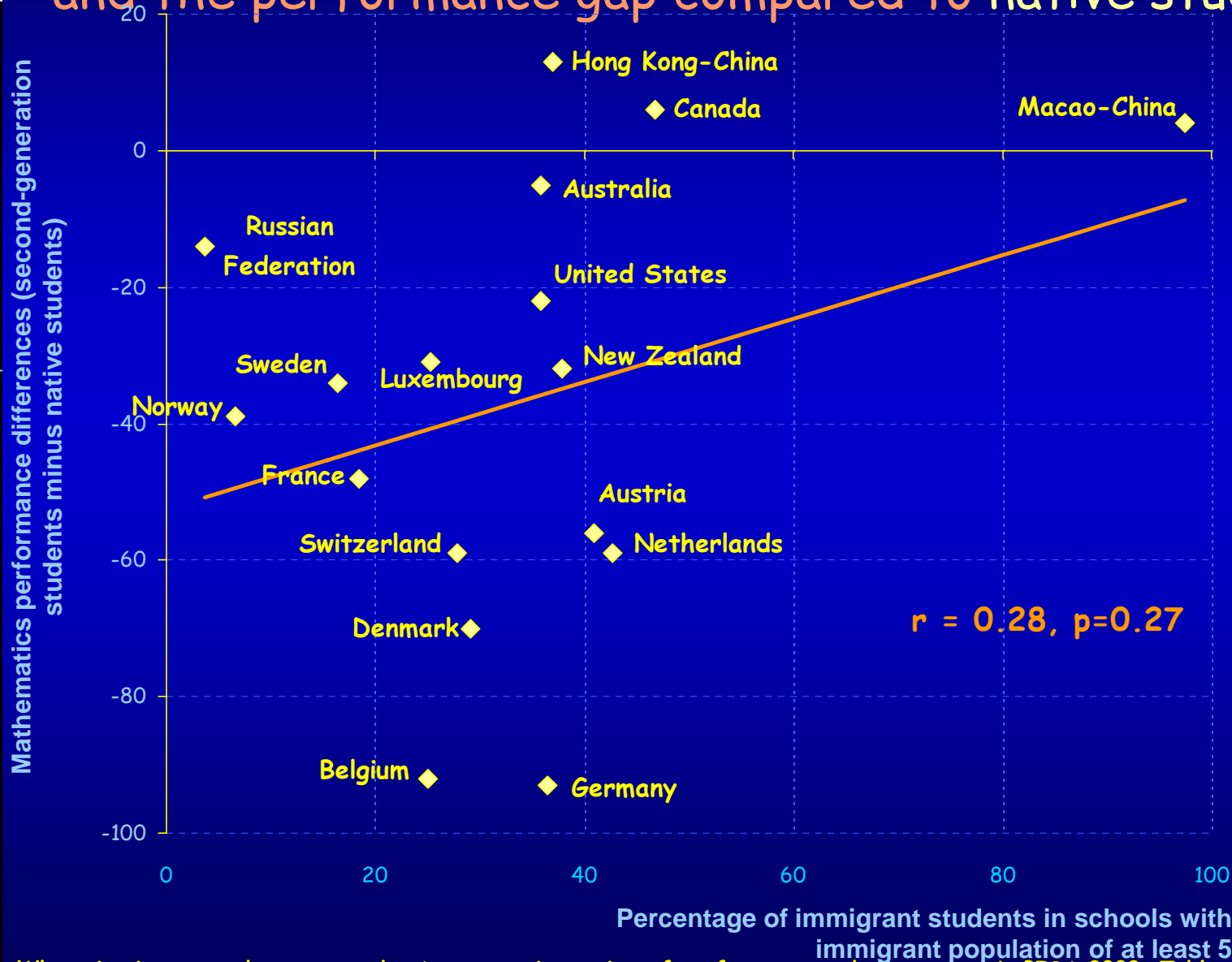


# Percentage of first-generation immigrant students in schools with different proportions of immigrant students



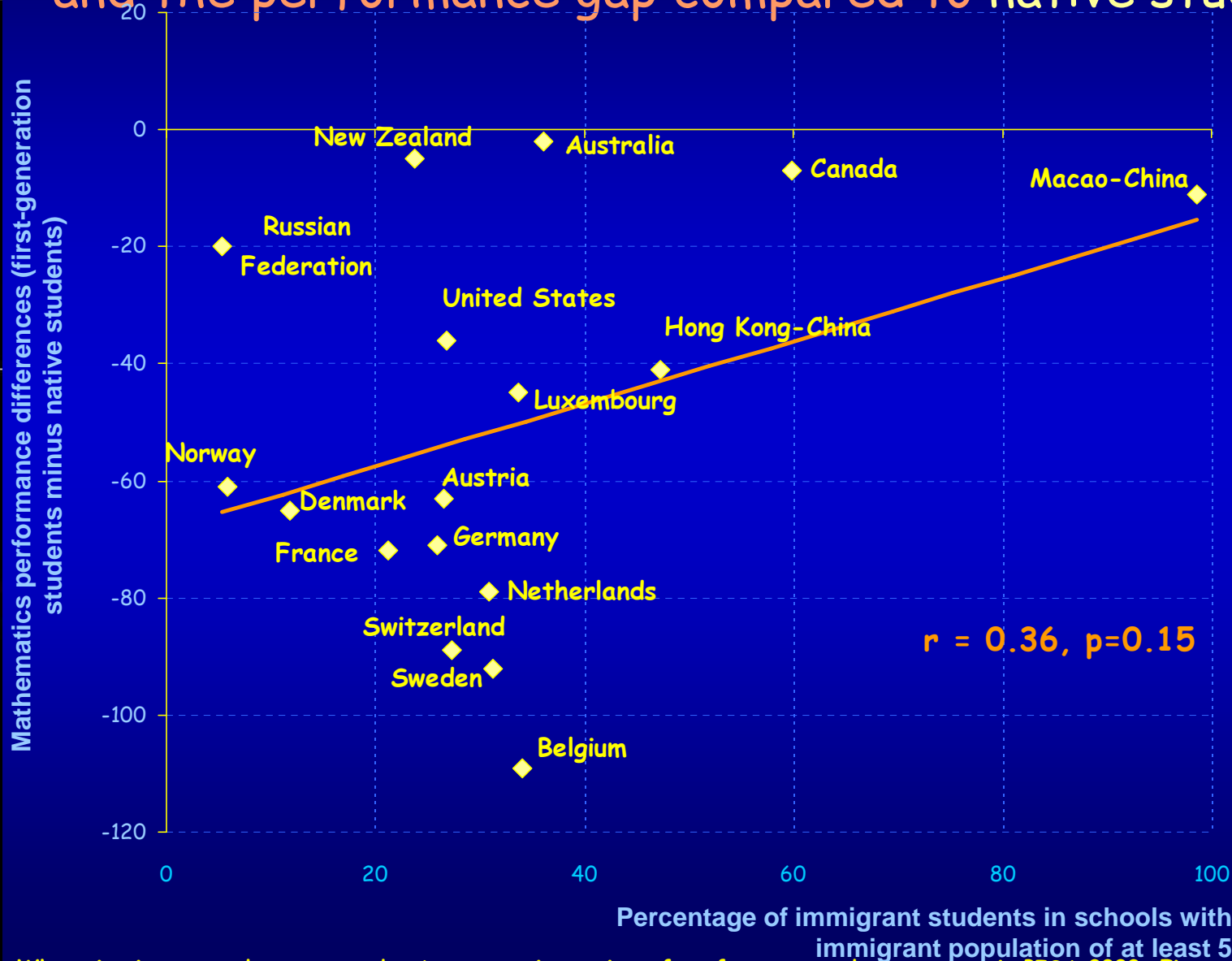
Where immigrant students succeed – A comparative review of performance and engagement in PISA 2003: Table 3.7b.

## Second-generation immigrant students in schools with an immigrant population of at least 50% and the performance gap compared to native students



Where immigrant students succeed - A comparative review of performance and engagement in PISA 2003: Tables 2.1a and 3.7c.

# First-generation immigrant students in schools with an immigrant population of at least 50% and the performance gap compared to native students



Where immigrant students succeed - A comparative review of performance and engagement in PISA 2003: Figure 3.8.

# Characteristics of schools attended by immigrant students compared to schools attended by native students

	School ESCS	Student-related factors	Teacher-related factors	Disciplinary climate	Teacher morale and commitment	School's physical infrastructure	Teacher shortage	Student/teacher ratio	School's educational resources	Teacher support
Australia	0	0	0	0	0	0	0	0	0	0
Austria	--	--	--	--	--	0	0	0	-	0
Belgium	--	--	--	--	--	0	--	++	0	+
Canada	++	0	-	0	0	-	++	0	0	0
Denmark	--	--	--	0	--	0	0	0	0	--
France	--	w	w	-	w	w	w	w	w	0
Germany	--	--	0	--	0	0	0	0	0	++
Luxembourg	--	--	--	--	++	--	++	--	++	++
Netherlands	--	--	-	--	0	0	--	+	0	0
New Zealand	0	++	0	+	+	0	0	--	++	0
Norway	0	0	0	0	0	0	0	0	0	--
Sweden	--	--	--	--	0	0	0	++	-	0
Switzerland	--	--	-	--	--	0	--	0	0	++
United States	--	--	0	-	0	-	0	--	0	0
Hong Kong-China	--	0	0	0	0	0	0	0	0	0
Macao-China	--	--	--	++	0	++	0	++	++	++
Russian Federation	0	0	0	-	0	0	0	0	0	0

Table 3.9.

# Language of instruction support in primary education

## Immersion with systematic language support in the language of instruction

>80	Australia - New South Wales and Queensland, Austria - Vienna, Denmark, England, Netherlands, Norway, Switzerland - Canton Geneva, Hong Kong-China, Macao-China
65-80	Canada - Ontario
50-80	Germany
50-64	Finland, Sweden
35-49	Australia - Victoria, Canada - British Columbia
20-34	Luxembourg, Switzerland - Canton Zurich
Negligible	Belgium - French Community, Spain

Immigrant students attend regular classes to learn all standard academic programmes, but also receive targeted instruction to develop their skills in the language of instruction. This is also the most common approach in lower secondary education.

## Submersion/ Immersion

>80	Belgium - French Community, Spain
65-80	Luxembourg
20-34	Switzerland - Canton Zurich
5-19	Australia - New South Wales and Queensland, Germany
<5	Norway

## Immersion with a preparatory phase in the language of instruction

50-64	Australia - Victoria
35-49	Sweden
20-34	Finland
<5	Australia - Queensland, Belgium - French Community, Denmark, Norway, Switzerland - Canton Zurich and Canton Berne, Hong Kong

Immigrant students attend programmes to develop their language skills before they make the transition to regular classes. This is more common in lower secondary education than in primary education.

# Further information

- [www.pisa.oecd.org](http://www.pisa.oecd.org)
  - All national and international publications
  - The complete micro-level database
- email: [pisa@oecd.org](mailto:pisa@oecd.org)
- [Andreas.Schleicher@OECD.org](mailto:Andreas.Schleicher@OECD.org)

... and remember:

Without data, you are just another person with an opinion