
December 7, 2019

PISA 2018: Summary of results for Canada

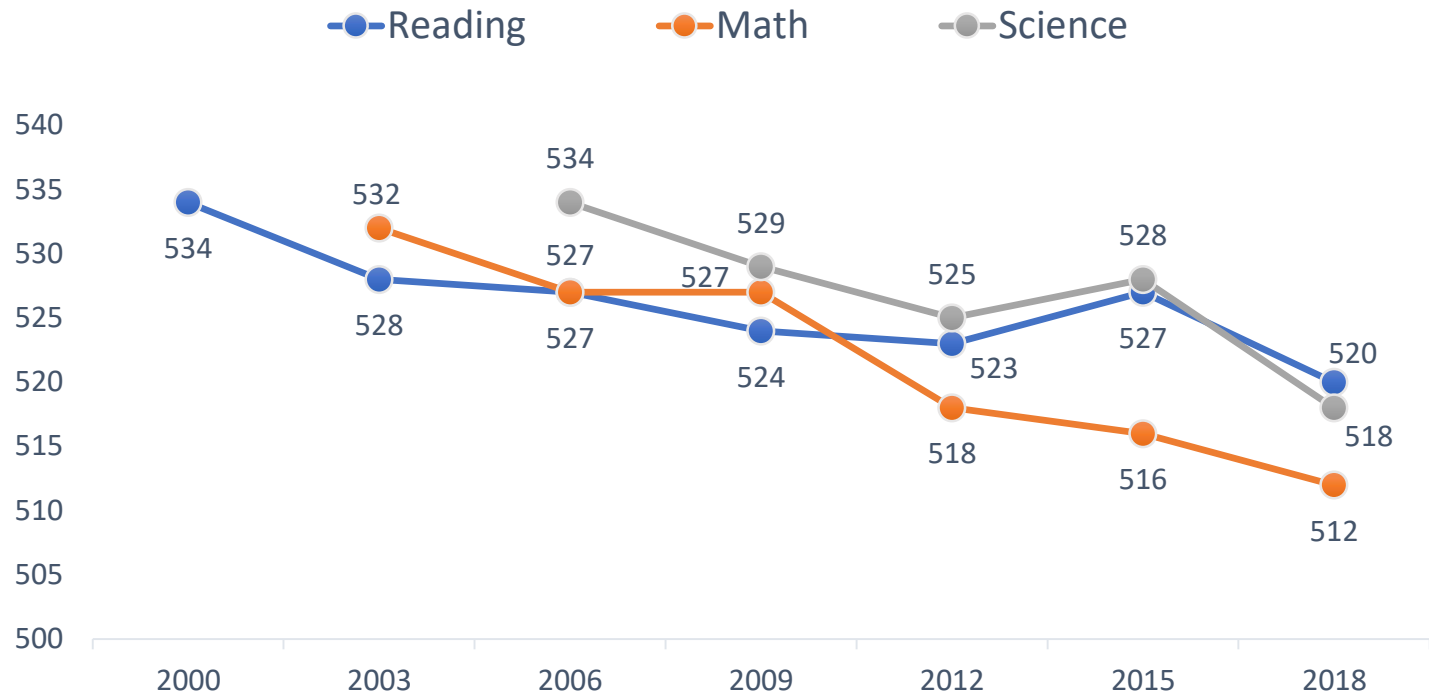
(Last update: December 7; minor corrections January 6)

Dr. Andrew Parkin
Executive Director
Environics Institute for Survey Research



Trends in PISA Mean Scores for Each Domain, Canada (2000-2015)

2000-18



Source: CMEC, *Measuring Up* (2019)

PISA 2018: Summary of results for Canada



Snapshot of performance in reading, mathematics and science (2018)

Yellow = significantly above Canada

Blue = significantly below Canada

| Reading | | Math | | Science | |
|-------------------|------------|-------------------|------------|---------------------|------------|
| B-S-J-Z (China) | 555 | B-S-J-Z (China) | 591 | B-S-J-Z (China) | 590 |
| Singapore | 549 | Singapore | 569 | Singapore | 551 |
| Macao (China) | 525 | Macao (China) | 558 | Macao (China) | 544 |
| Hong Kong (China) | 524 | Hong Kong (China) | 551 | Viet Nam | 543 |
| Estonia | 523 | Chinese Taipei | 531 | Estonia | 530 |
| Canada | 520 | Japan | 527 | Japan | 529 |
| Finland | 520 | Korea | 526 | Finland | 522 |
| Ireland | 518 | Estonia | 523 | Korea | 519 |
| Korea | 514 | Netherlands | 519 | Canada | 518 |
| Poland | 512 | Poland | 516 | Hong Kong (China) | 517 |
| Sweden | 506 | Switzerland | 515 | Chinese Taipei | 516 |
| New Zealand | 506 | Canada | 512 | Poland | 511 |
| United States | 505 | Denmark | 509 | New Zealand | 508 |
| Viet Nam | 505 | Slovenia | 509 | Slovenia | 507 |
| United Kingdom | 504 | Belgium | 508 | United Kingdom | 505 |
| Japan | 504 | Finland | 507 | Netherlands | 503 |
| Australia | 503 | Sweden | 502 | Germany | 503 |
| Chinese Taipei | 503 | United Kingdom | 502 | Australia | 503 |
| Denmark | 501 | Norway | 501 | United States | 502 |
| Norway | 499 | Germany | 500 | Sweden | 499 |
| Germany | 498 | Ireland | 500 | Belgium | 499 |
| Slovenia | 495 | Czech Republic | 499 | Czech Republic | 497 |
| Belgium | 493 | Austria | 499 | Ireland | 496 |
| France | 493 | Latvia | 496 | Switzerland | 495 |
| Portugal | 492 | Viet Nam | 496 | France | 493 |
| Czech Republic | 490 | France | 495 | Denmark | 493 |
| OECD average | 487 | Iceland | 495 | Portugal | 492 |
| Netherlands | 485 | New Zealand | 494 | Norway | 490 |
| Austria | 484 | Portugal | 492 | Austria | 490 |
| Switzerland | 484 | Australia | 491 | OECD average | 489 |
| Croatia | 479 | OECD average | 489 | Latvia | 487 |



Canada's Performance in Comparative Perspective

2018

| | Reading | Math | Science |
|-------------------------------------|---|--|---|
| Those performing better than Canada | B-S-J-Z (China), Singapore, Macao (China) | B-S-J-Z (China), Singapore, Macao (China), Hong Kong (China), Chinese Taipei, Japan, Korea, Estonia, Netherlands | B-S-J-Z (China), Singapore, Macao (China), Viet Nam, Estonia, Japan |
| Those performing as well as Canada | Hong Kong (China), Estonia, Finland, Ireland, Korea | Poland, Switzerland, Denmark, Slovenia, Belgium, Finland | Finland, Korea, Hong Kong, Chinese Taipei |

Countries/economies in red have moved ahead of Canada

Countries/economies in blue have caught up to Canada

PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I); CMEC, Measuring Up (2019)



Rank of OECD countries that place in top five (among OECD countries) in at least two of three subjects

2018

| | Reading | Math | Science |
|---------|---------|------|---------|
| Estonia | 1 | 3 | 1 |
| Korea | 5 | 2 | 4 |
| Canada | 2 | 7 | 5 |
| Japan | 11 | 1 | 2 |
| Finland | 3 | 11 | 3 |

Places in top five among OECD countries in all three domains

PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)



Rank of OECD countries that place in top ten (among OECD countries) in at least two of three subjects

2018

| | Reading | Math | Science |
|-------------|---------|------|---------|
| Estonia | 1 | 3 | 1 |
| Korea | 5 | 2 | 4 |
| Canada | 2 | 7 | 5 |
| Japan | 11 | 1 | 2 |
| Finland | 3 | 11 | 3 |
| Poland | 6 | 5 | 6 |
| UK | 10 | 13 | 9 |
| Slovenia | 16 | 9 | 8 |
| Netherlands | 21 | 4 | 10 |
| New Zealand | 8 | 22 | 7 |

Places in top ten among OECD countries in all three domains

PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)

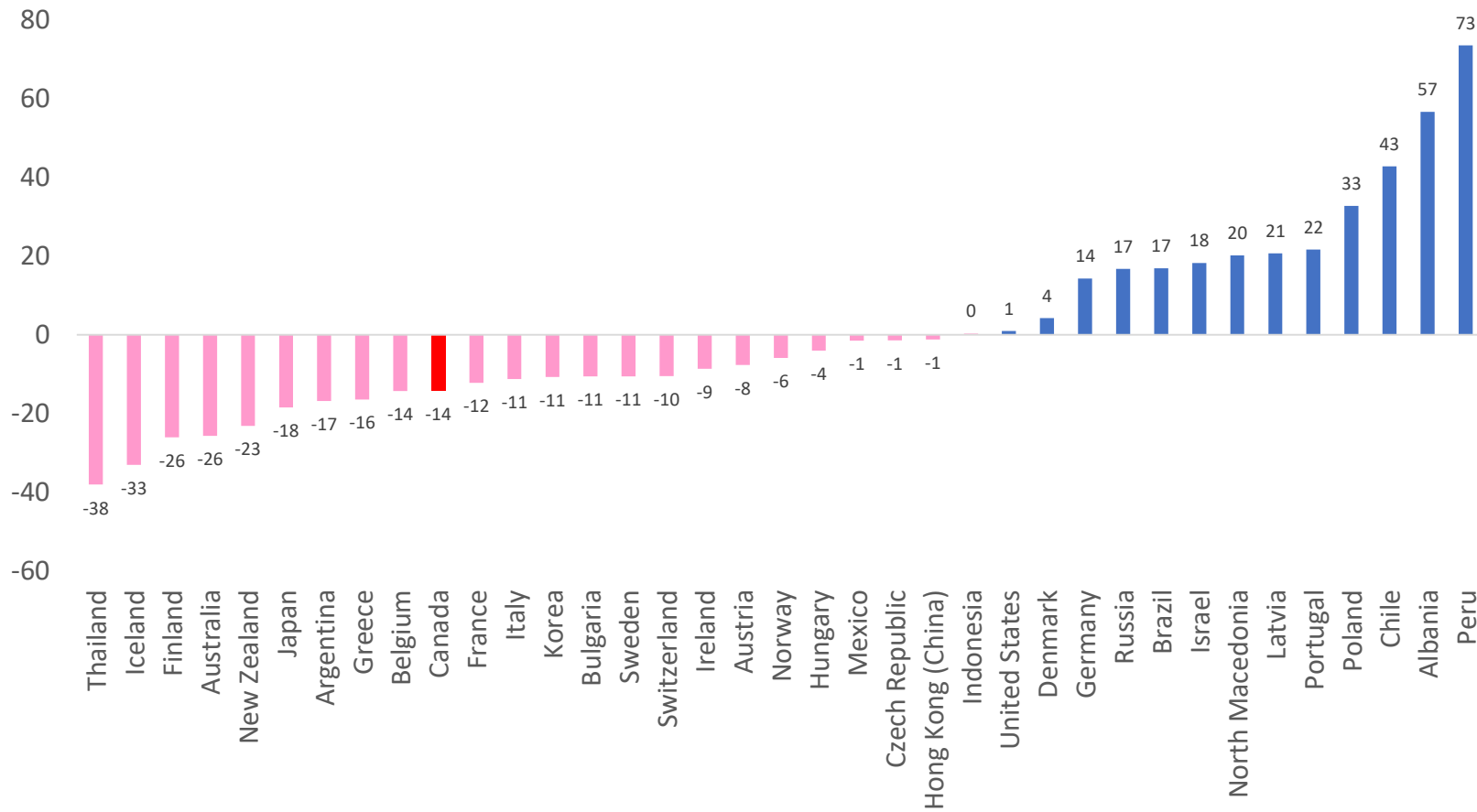


Performance in reading, mathematics and science: provinces in international context (2018)

| Reading | | Math | | Science | |
|----------------------|-----|----------------------|-----|----------------------|-----|
| B-S-J-Z (China) | 555 | B-S-J-Z (China) | 591 | B-S-J-Z (China) | 590 |
| Singapore | 549 | Singapore | 569 | Singapore | 551 |
| Alberta | 532 | Macao (China) | 558 | Macao (China) | 544 |
| Macao (China) | 525 | Hong Kong (China) | 551 | Viet Nam | 543 |
| Hong Kong (China) | 524 | Quebec | 532 | Alberta | 534 |
| Ontario | 524 | Chinese Taipei | 531 | Estonia | 530 |
| Estonia | 523 | Japan | 527 | Japan | 529 |
| Canada | 520 | Korea | 526 | Finland | 522 |
| Finland | 520 | Estonia | 523 | Quebec | 522 |
| Quebec | 519 | Netherlands | 519 | Korea | 519 |
| British Columbia | 519 | Poland | 516 | Ontario | 519 |
| Ireland | 518 | Switzerland | 515 | Canada | 518 |
| Nova Scotia | 516 | Ontario | 513 | Hong Kong (China) | 517 |
| Korea | 514 | Canada | 512 | British Columbia | 517 |
| Nfld & Lab | 512 | Alberta | 511 | Chinese Taipei | 516 |
| Poland | 512 | Denmark | 509 | Poland | 511 |
| Sweden | 506 | Slovenia | 509 | New Zealand | 508 |
| New Zealand | 506 | Belgium | 508 | Nova Scotia | 508 |
| United States | 505 | Finland | 507 | Slovenia | 507 |
| Viet Nam | 505 | British Columbia | 504 | Nfld & Lab | 506 |
| United Kingdom | 504 | Sweden | 502 | United Kingdom | 505 |
| Japan | 504 | United Kingdom | 502 | Netherlands | 503 |
| Australia | 503 | Norway | 501 | Germany | 503 |
| Chinese Taipei | 503 | Germany | 500 | Australia | 503 |
| Prince Edward Island | 503 | Ireland | 500 | United States | 502 |
| Denmark | 501 | Czech Republic | 499 | Prince Edward Island | 502 |
| Norway | 499 | Austria | 499 | Saskatchewan | 501 |
| Saskatchewan | 499 | Latvia | 496 | Sweden | 499 |
| Germany | 498 | Viet Nam | 496 | Belgium | 499 |
| Slovenia | 495 | France | 495 | Czech Republic | 497 |
| Manitoba | 494 | Iceland | 495 | Ireland | 496 |
| Belgium | 493 | New Zealand | 494 | Switzerland | 495 |
| France | 493 | Nova Scotia | 494 | France | 493 |
| Portugal | 492 | Portugal | 492 | Denmark | 493 |
| Czech Republic | 490 | Australia | 491 | New Brunswick | 492 |
| New Brunswick | 489 | New Brunswick | 491 | Portugal | 492 |
| OECD average | 487 | OECD average | 489 | Norway | 490 |
| Netherlands | 485 | Nfld & Lab | 488 | Austria | 490 |
| Austria | 484 | Russia | 488 | Manitoba | 489 |
| Switzerland | 484 | Italy | 487 | OECD average | 489 |
| Croatia | 479 | Prince Edward Island | 487 | Latvia | 487 |
| Latvia | 479 | Slovak Republic | 486 | Spain | 483 |
| Russia | 479 | Saskatchewan | 485 | Lithuania | 482 |
| Italy | 476 | Luxembourg | 483 | Hungary | 481 |
| Hungary | 476 | Manitoba | 482 | Russia | 478 |



Change in Mean Reading Scores, PISA 2000 to 2018

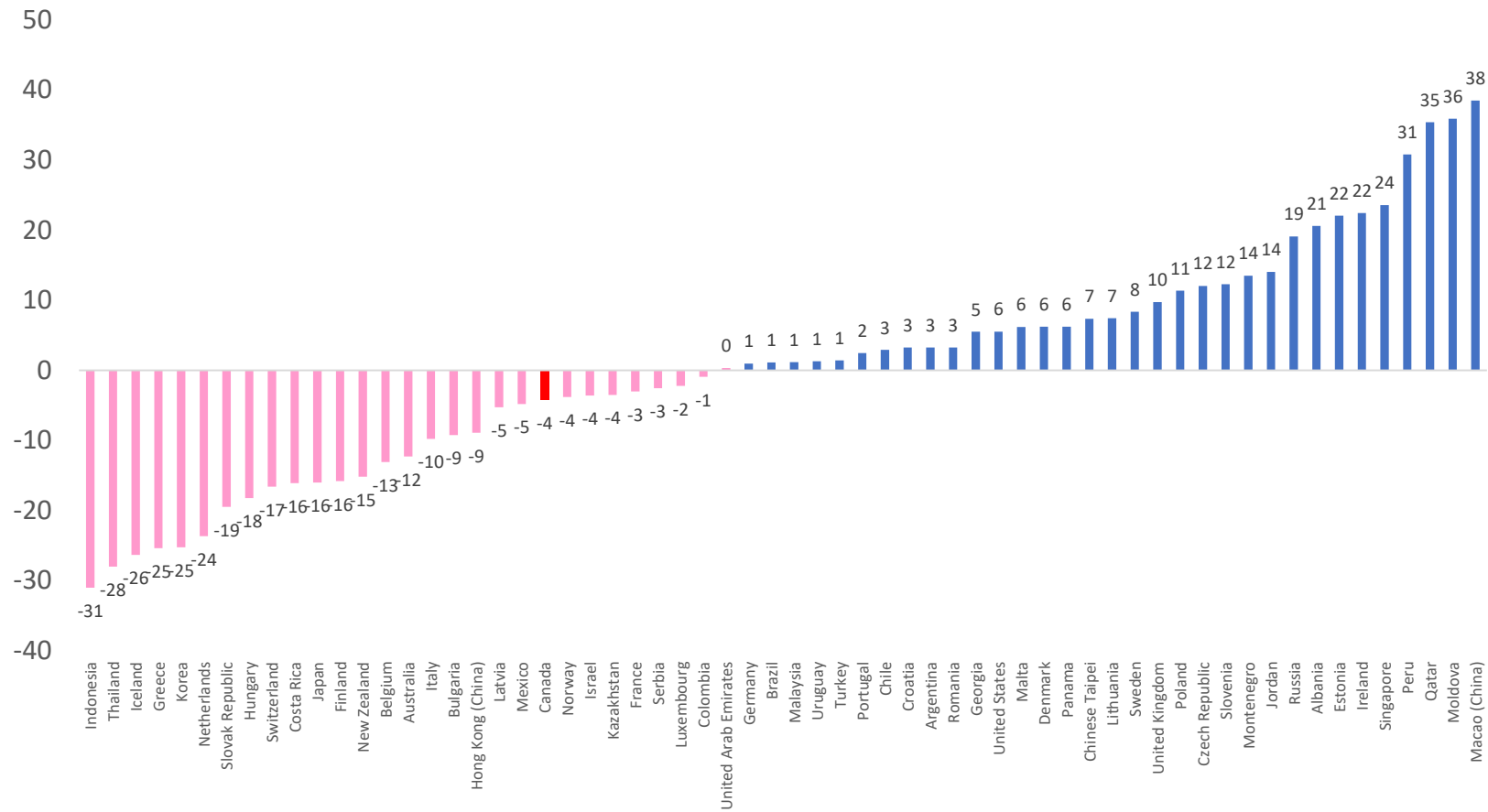


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)



Change in Mean Reading Scores, PISA 2009 to 2018

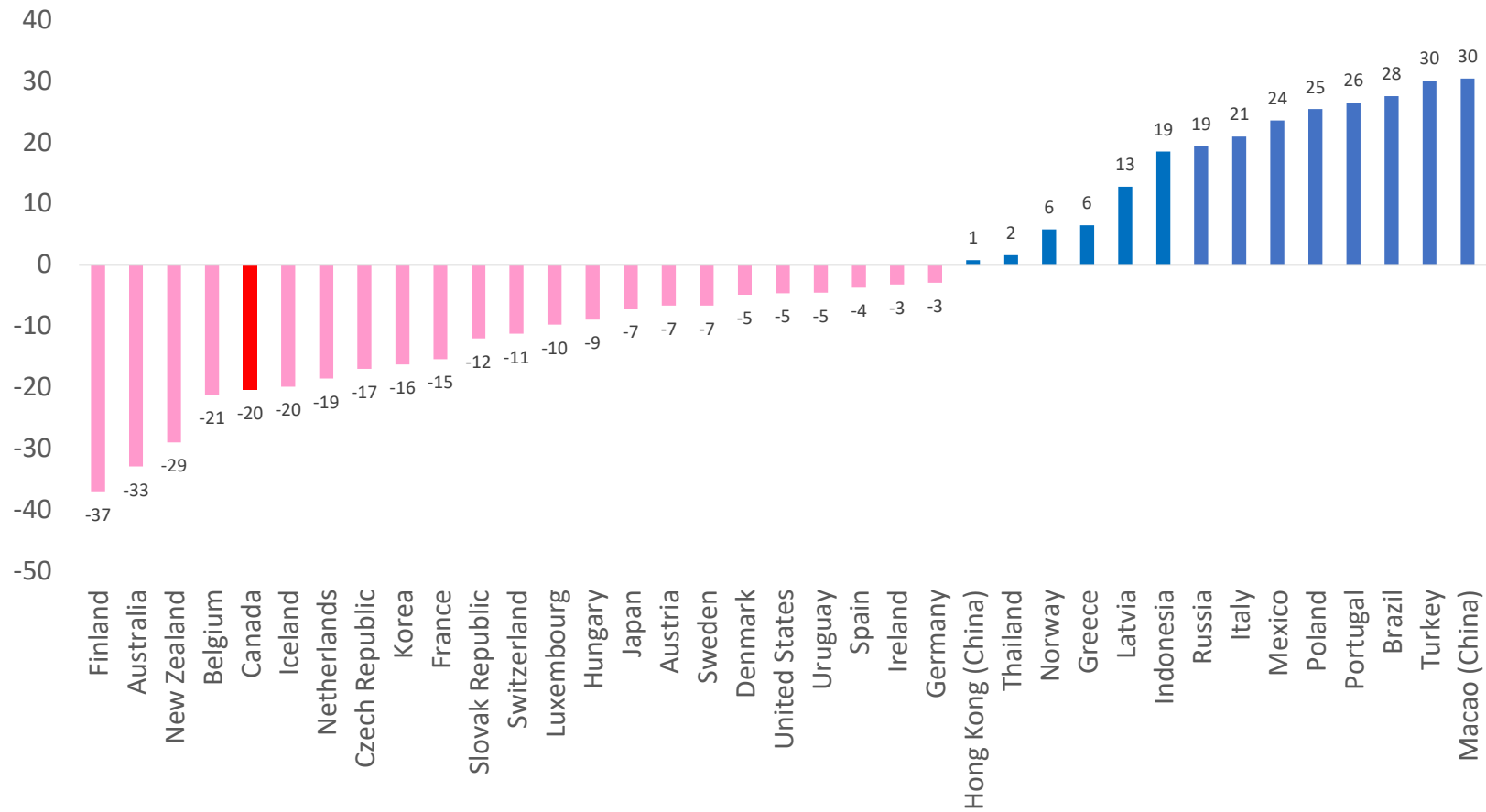


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)



Change in Mean Math Scores, PISA 2003 to 2018

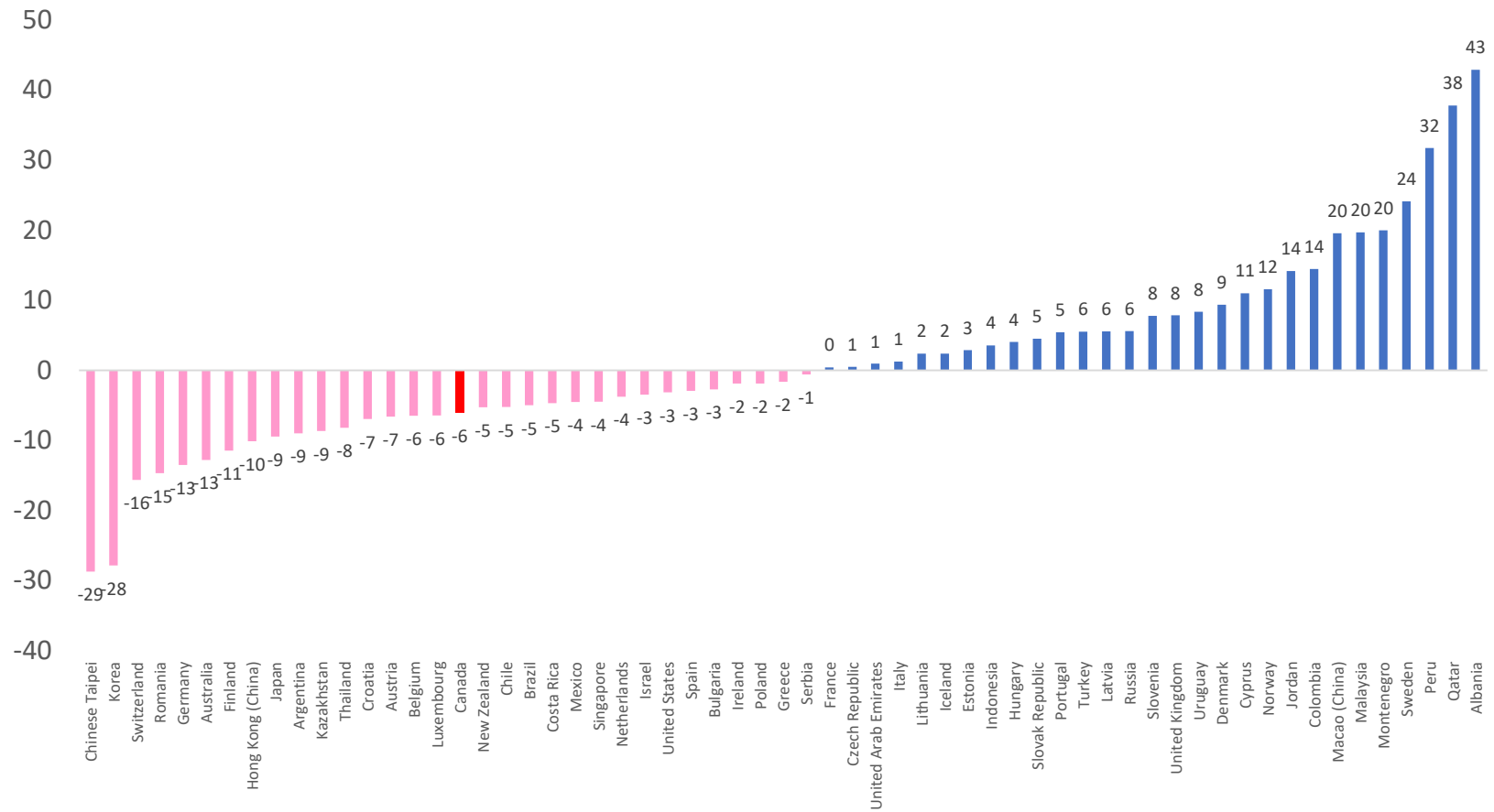


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)



Change in Mean Math Scores, PISA 2012 to 2018

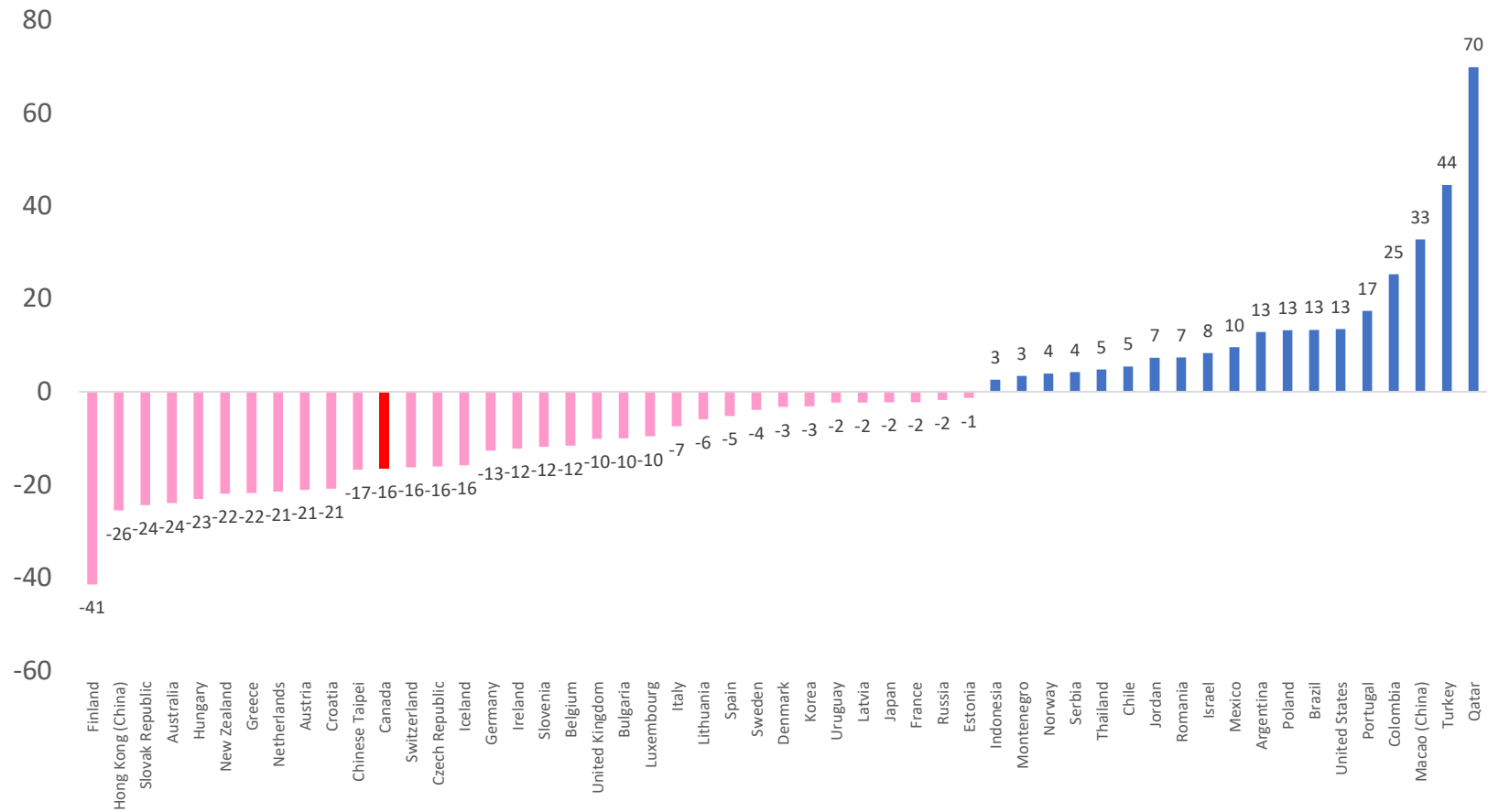


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)



Change in Mean Science Scores, PISA 2006 to 2018

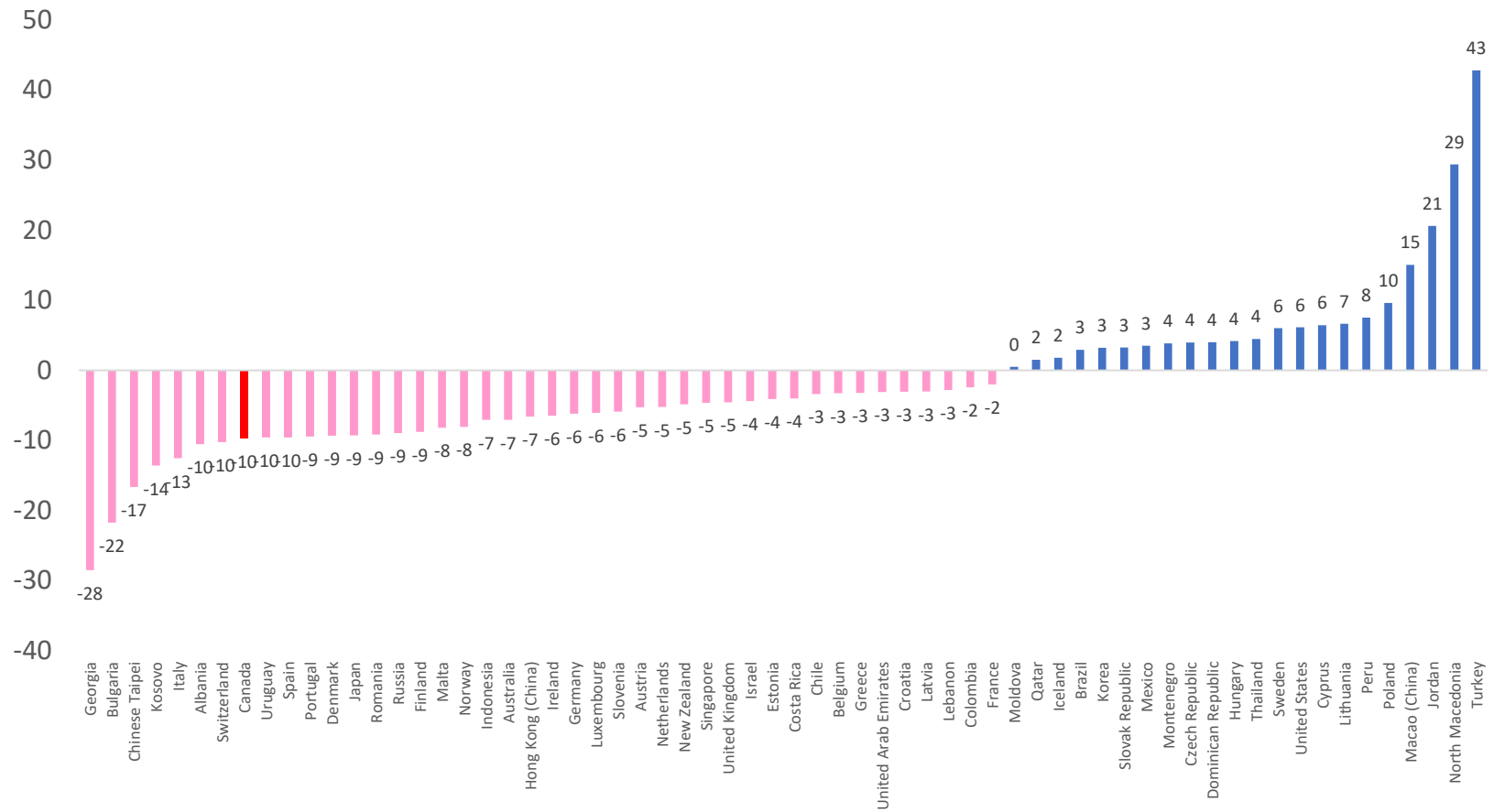


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)



Change in Mean Science Scores, PISA 2015 to 2018



PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)



Trends in PISA Mean Scores for Reading, Canada and Provinces (2000-2018)

| | 2000 | 2003 | 2006 | 2009 | 2012 | 2015 | 2018 |
|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Canada | 534 | 528 | 527 | 524 | 523 | 527 | 520 |
| NL | 517 | 521 | 514 | 506 | 503 | 505 | 512 |
| PEI | 517 | 495 | 497 | 486 | 490 | 515 | 503 |
| NS | 521 | 513 | 505 | 516 | 508 | 517 | 516 |
| NB | 501 | 503 | 497 | 499 | 497 | 505 | 489 |
| QU | 536 | 525 | 522 | 522 | 520 | 532 | 519 |
| ON | 533 | 530 | 534 | 531 | 528 | 527 | 524 |
| MB | 529 | 520 | 516 | 495 | 495 | 498 | 494 |
| SK | 529 | 512 | 507 | 504 | 505 | 496 | 499 |
| AB | 550 | 543 | 535 | 533 | 525 | 533 | 532 |
| BC | 538 | 535 | 528 | 525 | 535 | 536 | 519 |

PISA 2018: Summary of results for Canada

Source: CMEC, *Measuring Up* (2019)



Trends in PISA Mean Scores for Math, Canada and Provinces (2003-2018)

| | 2003 | 2006 | 2009 | 2012 | 2015 | 2018 |
|--------|-------------|-------------|-------------|-------------|-------------|-------------|
| Canada | 532 | 527 | 527 | 518 | 516 | 512 |
| NL | 517 | 507 | 503 | 490 | 486 | 488 |
| PEI | 500 | 501 | 487 | 479 | 499 | 487 |
| NS | 515 | 506 | 512 | 497 | 497 | 494 |
| NB | 512 | 506 | 504 | 502 | 493 | 491 |
| QU | 537 | 540 | 543 | 536 | 544 | 532 |
| ON | 530 | 526 | 526 | 514 | 509 | 513 |
| MB | 528 | 521 | 501 | 492 | 489 | 482 |
| SK | 516 | 507 | 506 | 506 | 484 | 485 |
| AB | 549 | 530 | 529 | 517 | 511 | 511 |
| BC | 538 | 523 | 523 | 522 | 522 | 504 |

PISA 2018: Summary of results for Canada

Source: CMEC, *Measuring Up* (2019)



Trends in PISA Mean Scores for Science, Canada and Provinces (2006-2018)

| | 2006 | 2009 | 2012 | 2015 | 2018 |
|--------|-------------|-------------|-------------|-------------|-------------|
| Canada | 534 | 529 | 525 | 528 | 518 |
| NL | 526 | 518 | 514 | 506 | 506 |
| PEI | 509 | 495 | 490 | 515 | 502 |
| NS | 520 | 523 | 516 | 517 | 508 |
| NB | 506 | 501 | 507 | 506 | 492 |
| QU | 531 | 524 | 516 | 537 | 522 |
| ON | 537 | 531 | 527 | 524 | 519 |
| MB | 523 | 506 | 503 | 499 | 489 |
| SK | 517 | 513 | 516 | 496 | 501 |
| AB | 550 | 545 | 539 | 541 | 534 |
| BC | 539 | 535 | 544 | 539 | 517 |

PISA 2018: Summary of results for Canada

Source: CMEC, *Measuring Up* (2019)



Change in PISA mean scores for each subject since 2015 (positive, negative or unchanged)

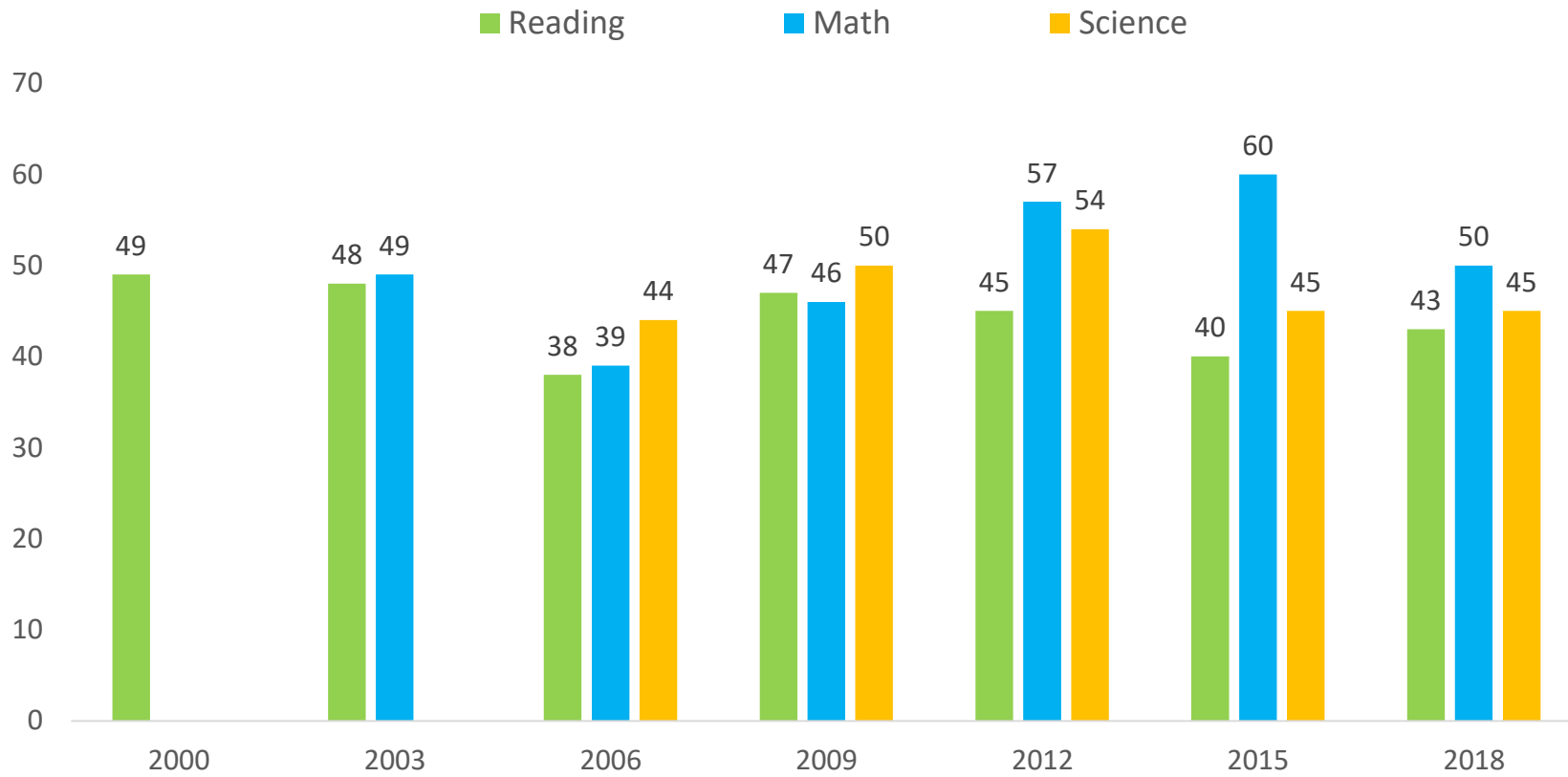
| | Reading | Math | Science |
|--------|---------|------|---------|
| Canada | - | - | - |
| NL | + | + | o |
| PEI | - | - | - |
| NS | - | - | - |
| NB | - | - | - |
| QU | - | - | - |
| ON | - | + | - |
| MB | - | - | - |
| SK | + | + | + |
| AB | - | o | - |
| BC | - | - | - |

PISA 2018: Summary of results for Canada

Source: CMEC, *Measuring Up* (2019)



Difference (in points) in mean scores between highest and lowest achieving province



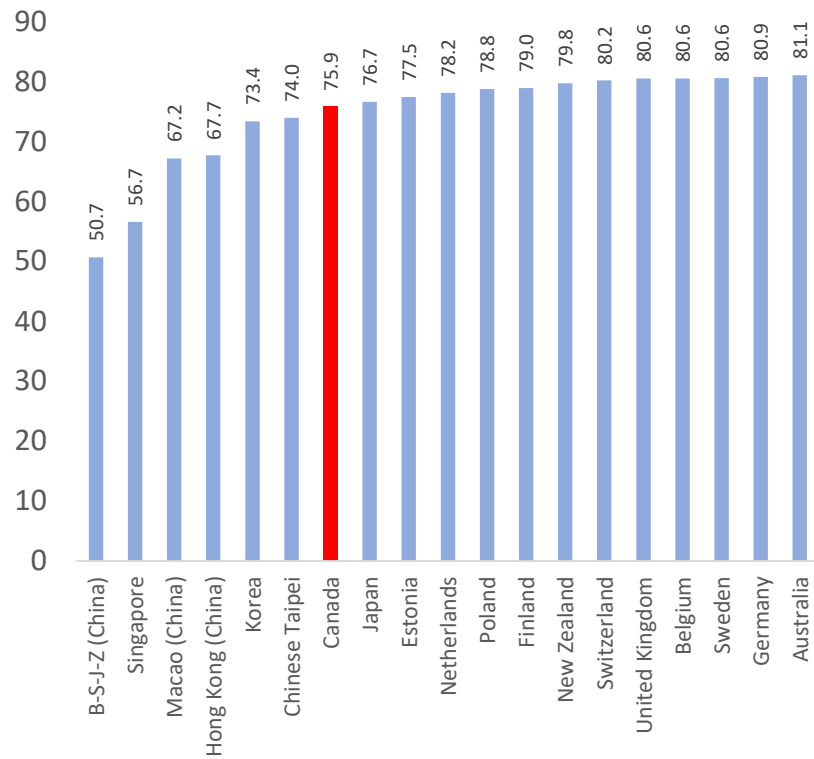
PISA 2018: Summary of results for Canada

Source: CMEC, *Measuring Up* (2019)

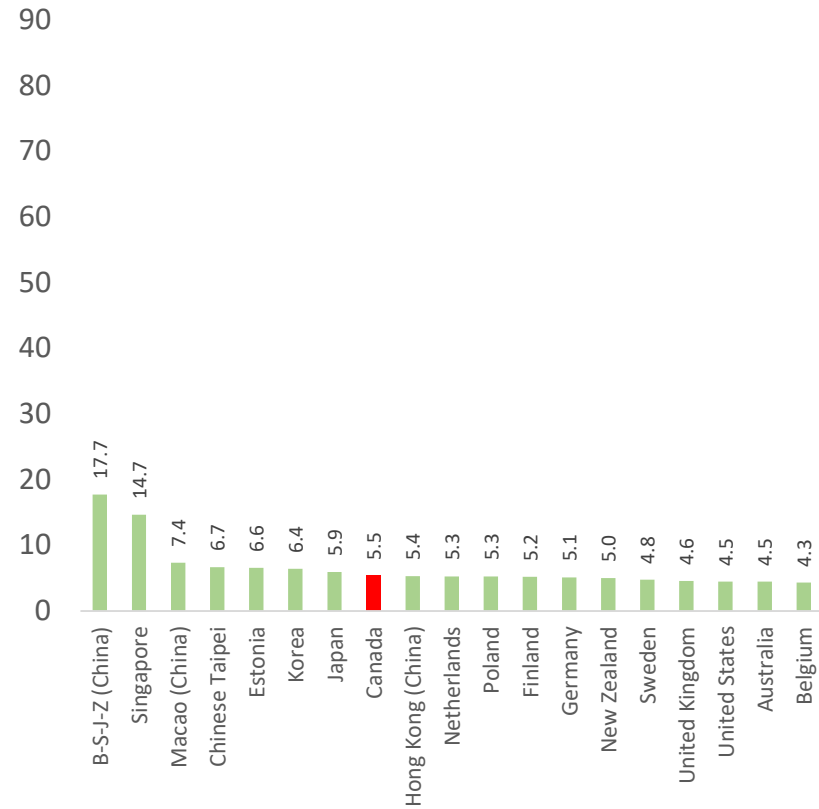


Top performers in reading, mathematics and science

Not top performers in any of the three domains



Top performers in all three domains



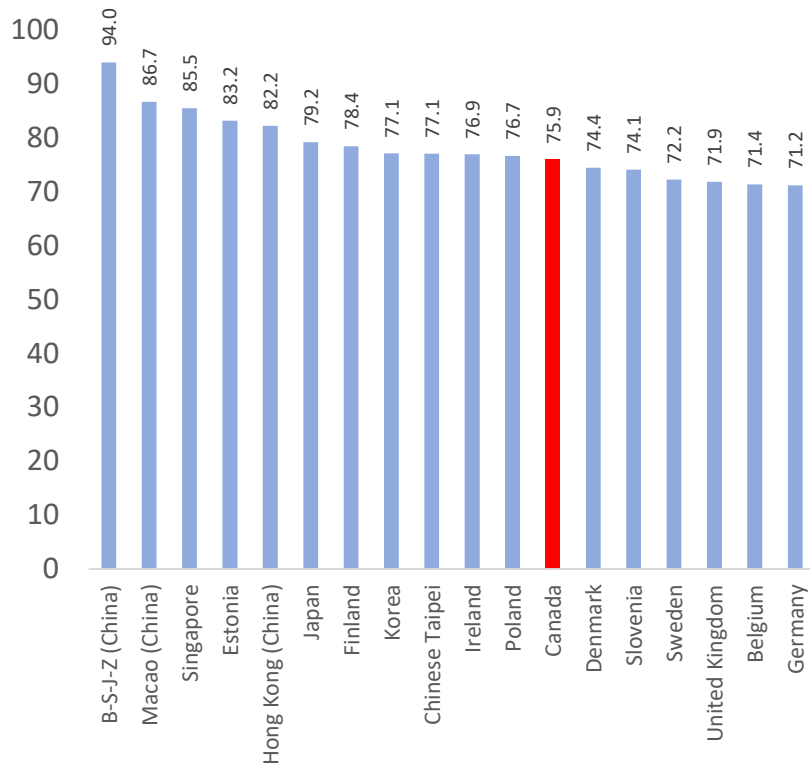
PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)

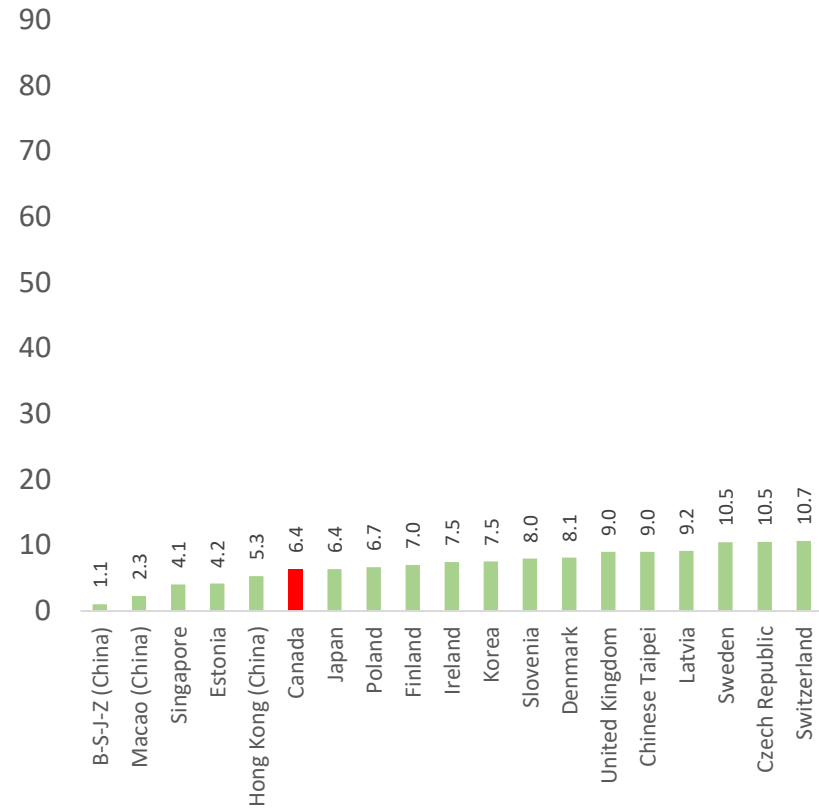


Low achievers in reading, mathematics and science

Not low achievers in any of the three domains



Low achievers in all three domains

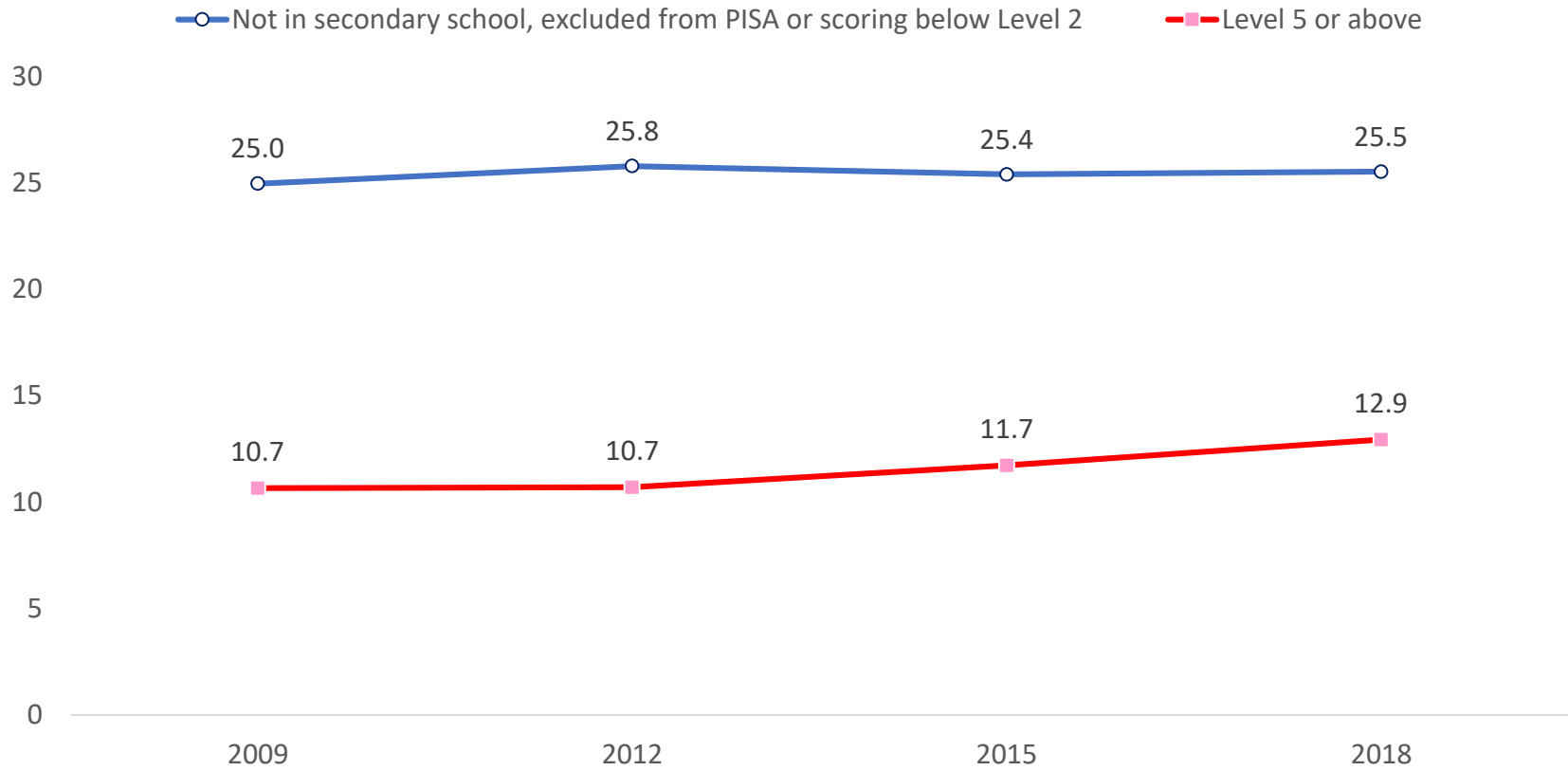


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)



Canada: Percentage of low achievers and top performers in reading among all 15-year-olds, 2009 through 2018

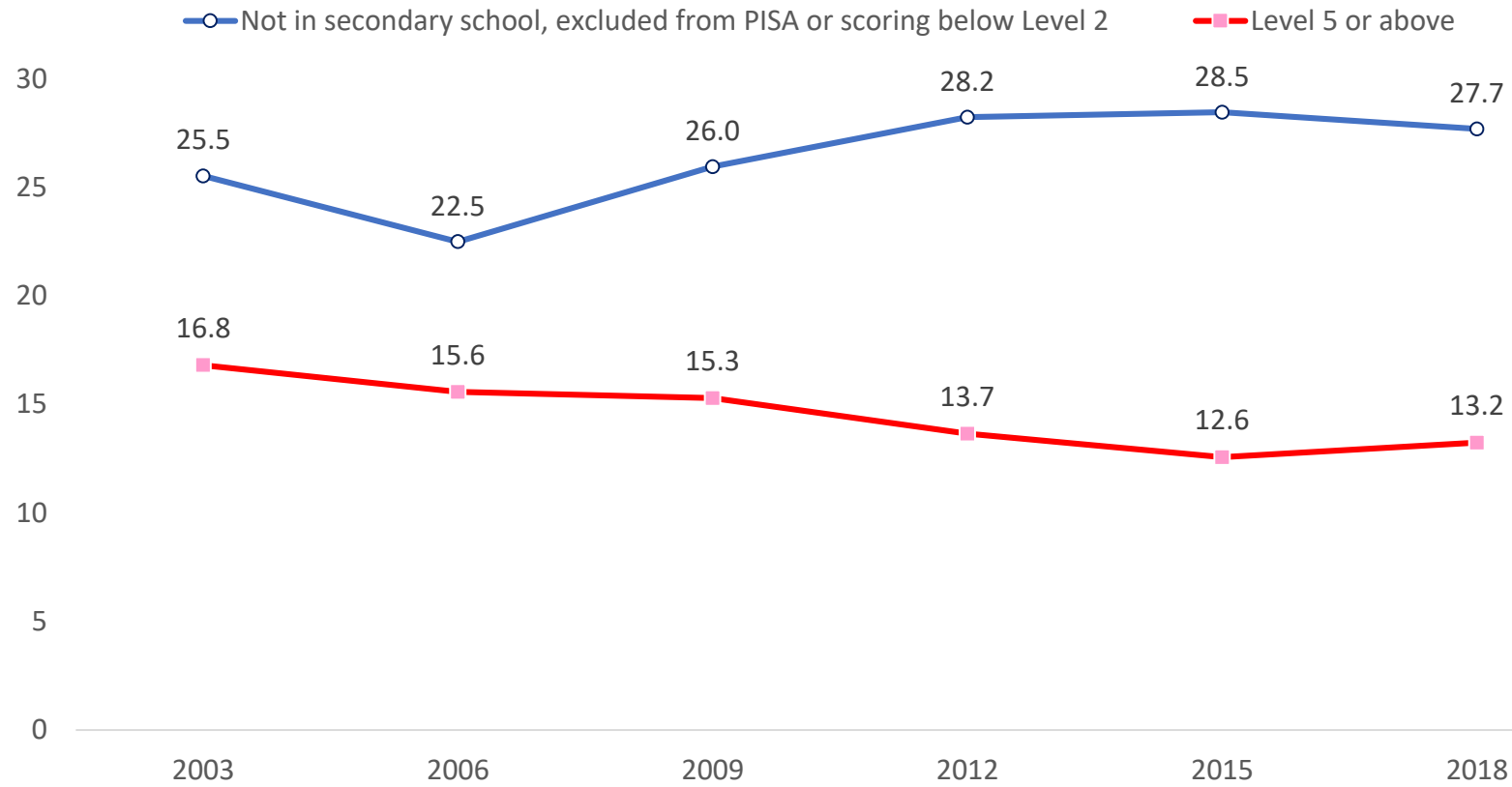


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)



Canada: Percentage of low achievers and top performers in mathematics among all 15-year-olds, 2003 through 2018

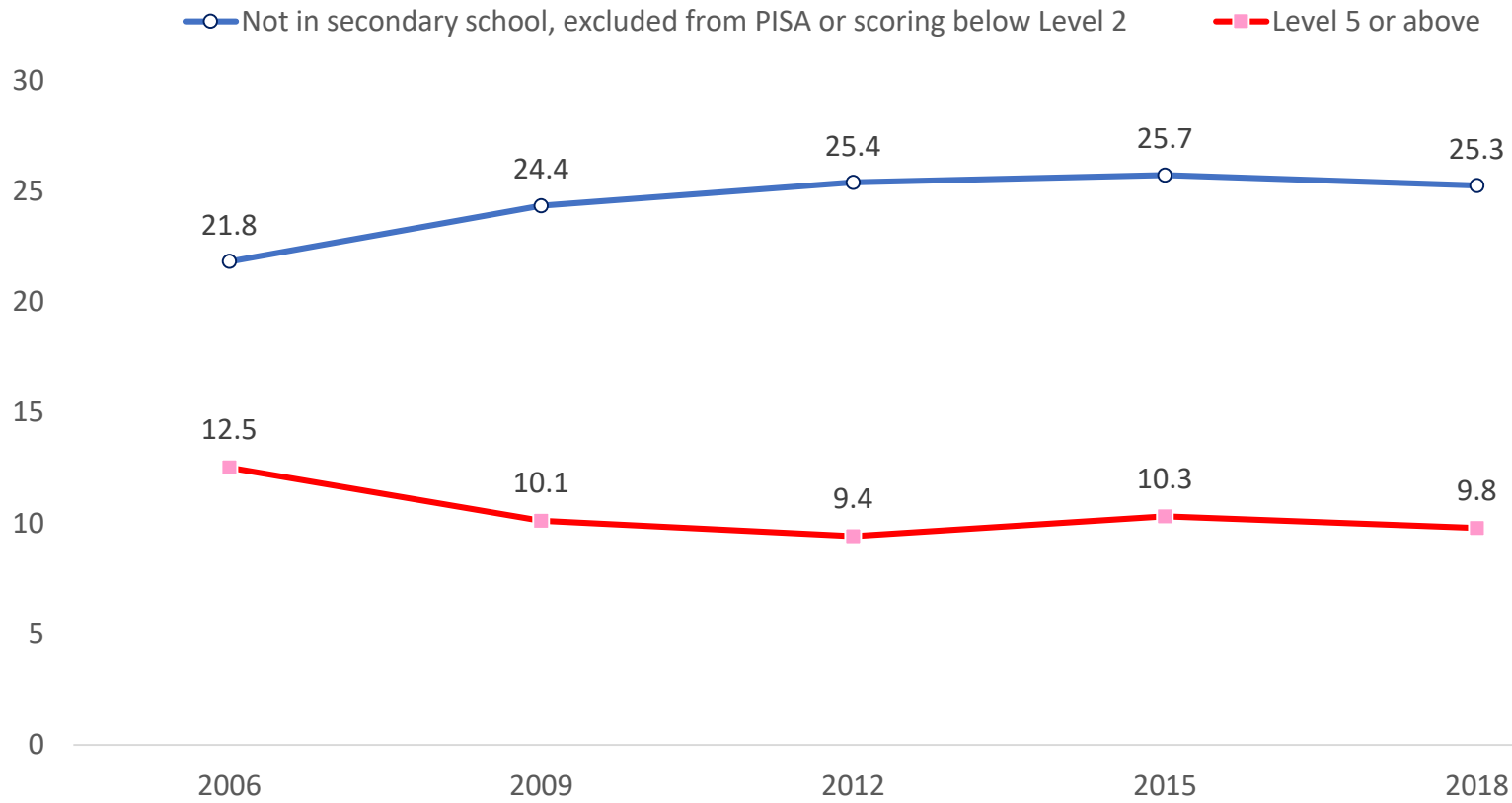


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)



Canada: Percentage of low achievers and top performers in science among all 15-year-olds, 2006 through 2018

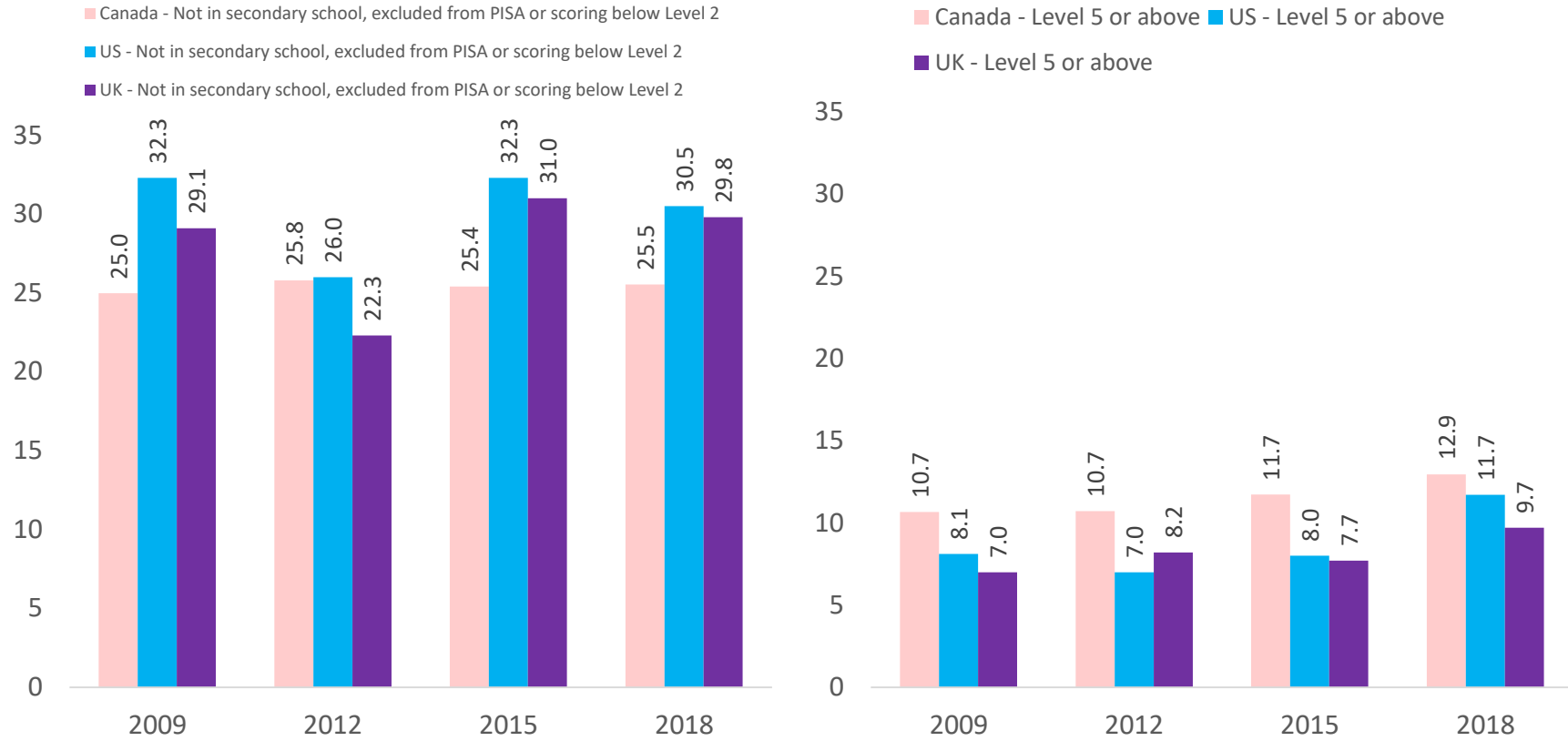


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)



Percentage of low achievers and top performers in reading among all 15-year-olds, 2009 through 2018: Canada, United States and U.K.

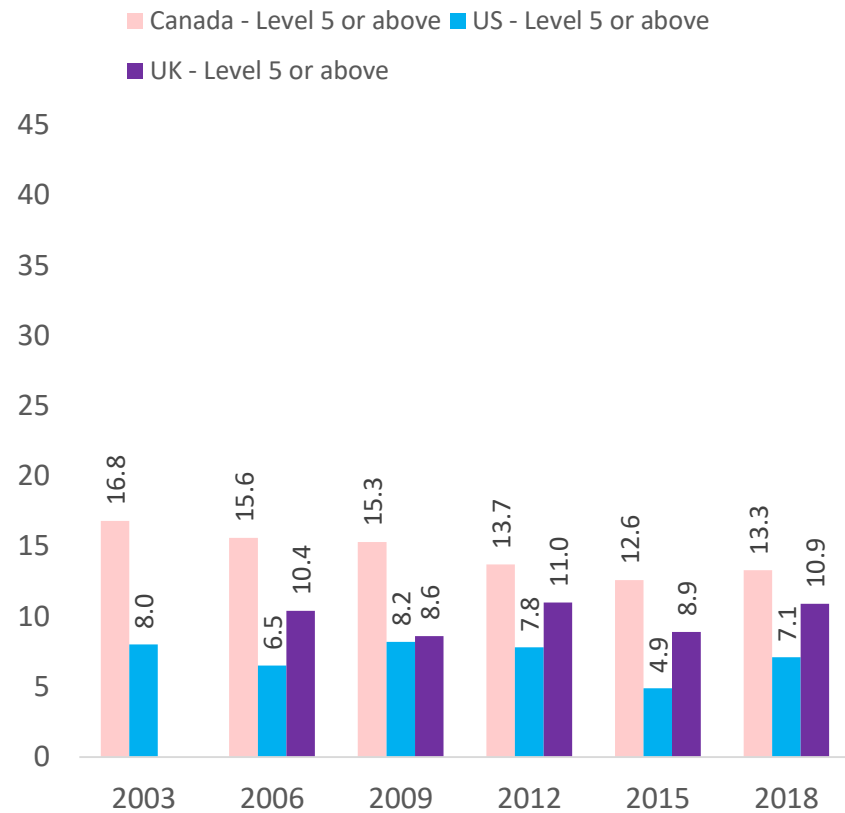
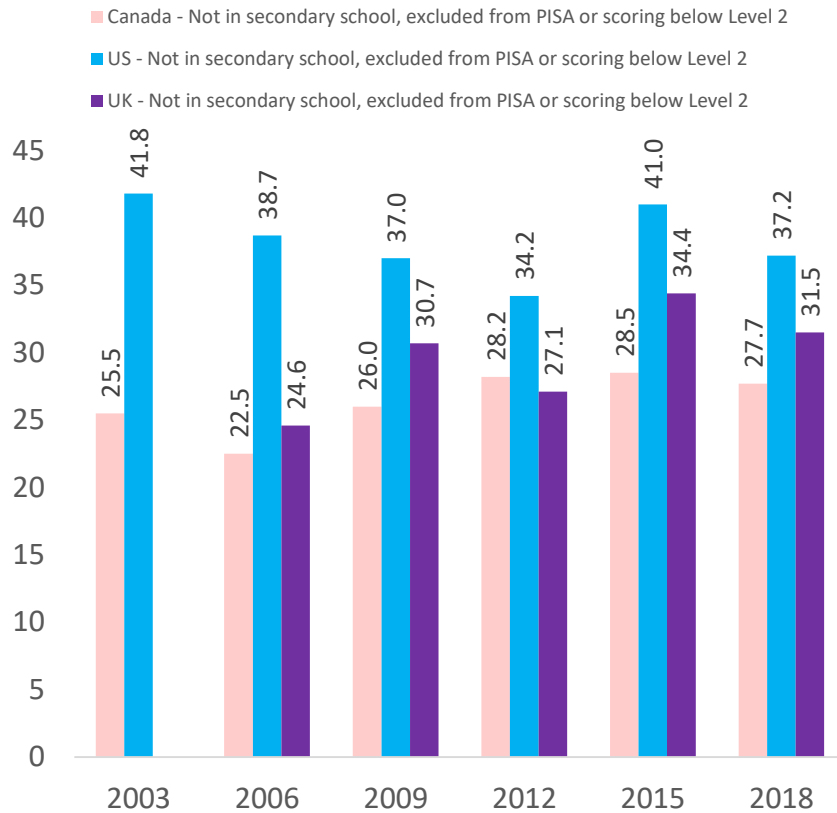


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)



Percentage of low achievers and top performers in mathematics among all 15-year-olds, 2003 through 2018: Canada, United States and U.K.

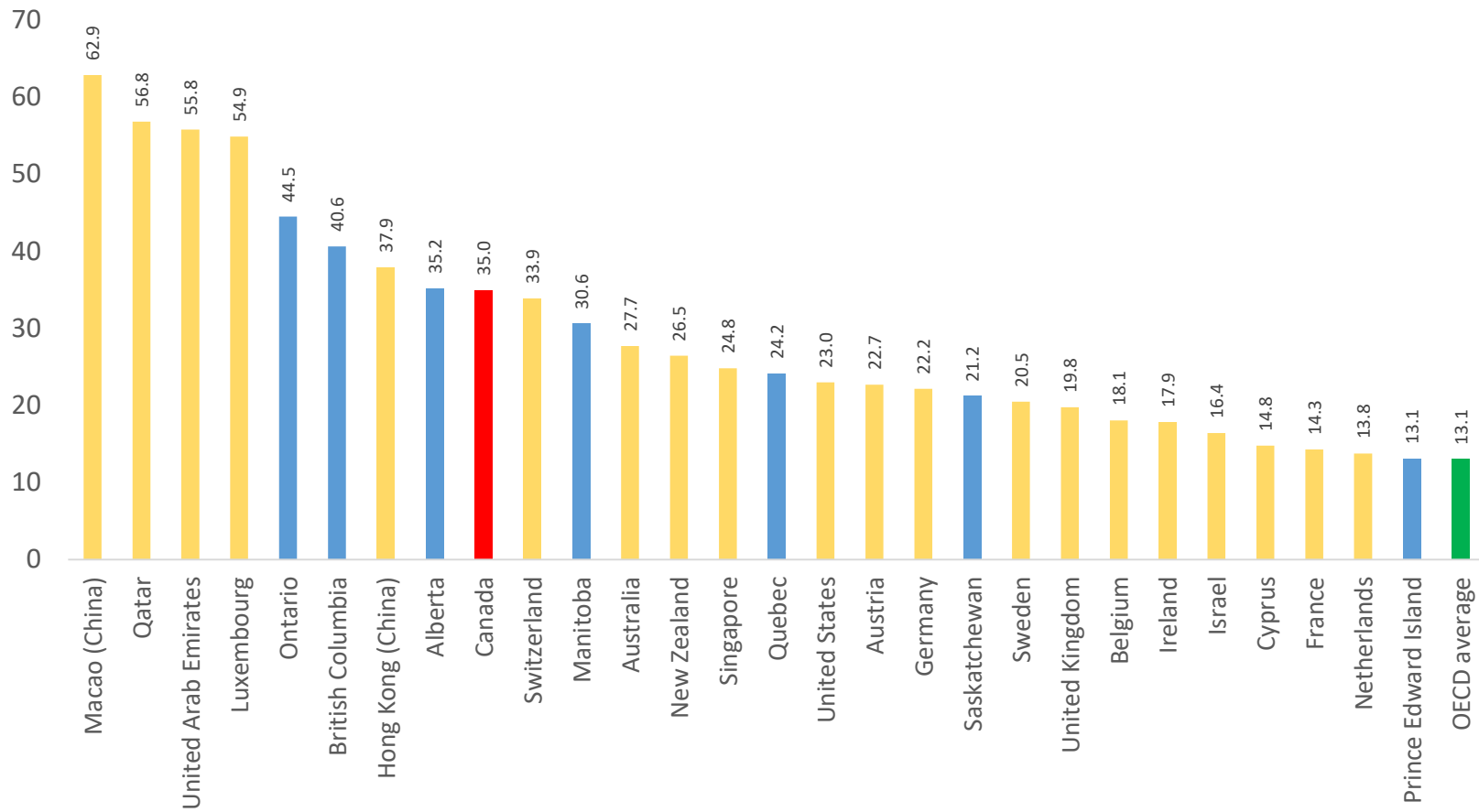


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. I)



Percentage of immigrant students (1st + 2nd generation)

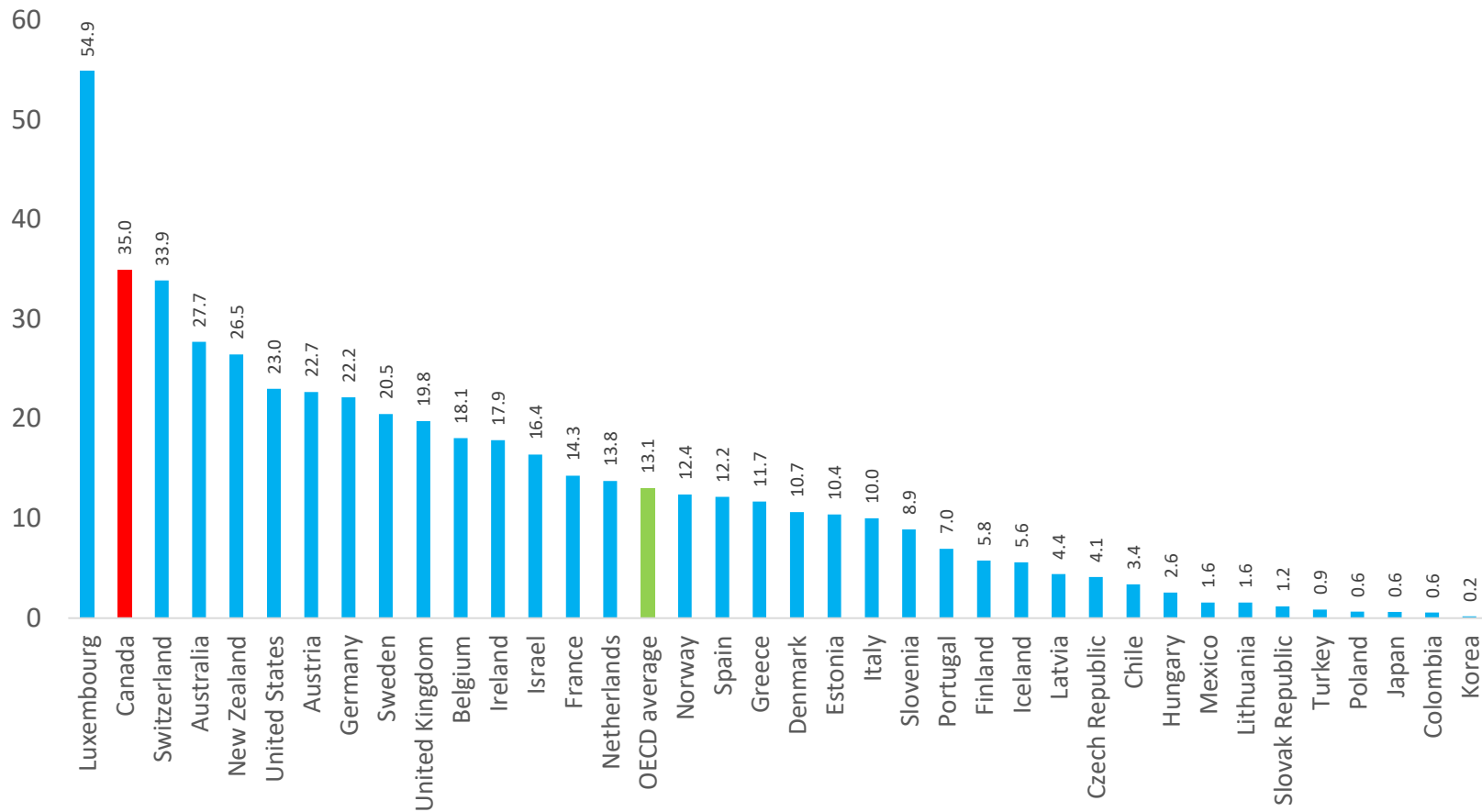


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. II)



Percentage of immigrant students (1st + 2nd generation) OECD countries

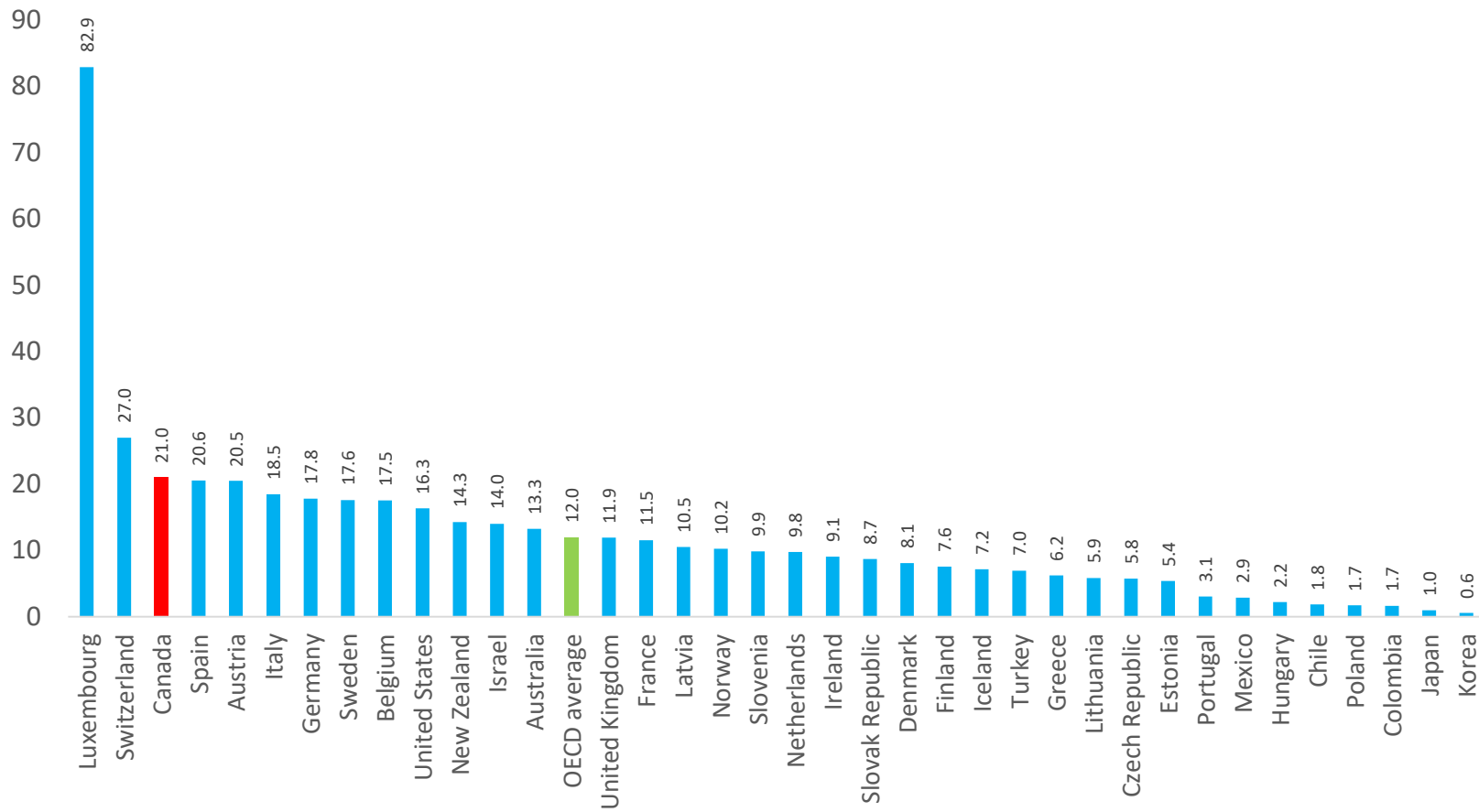


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. II)



Percentage of students who speak mainly another language (other than the language of the assessment) at home – OECD countries



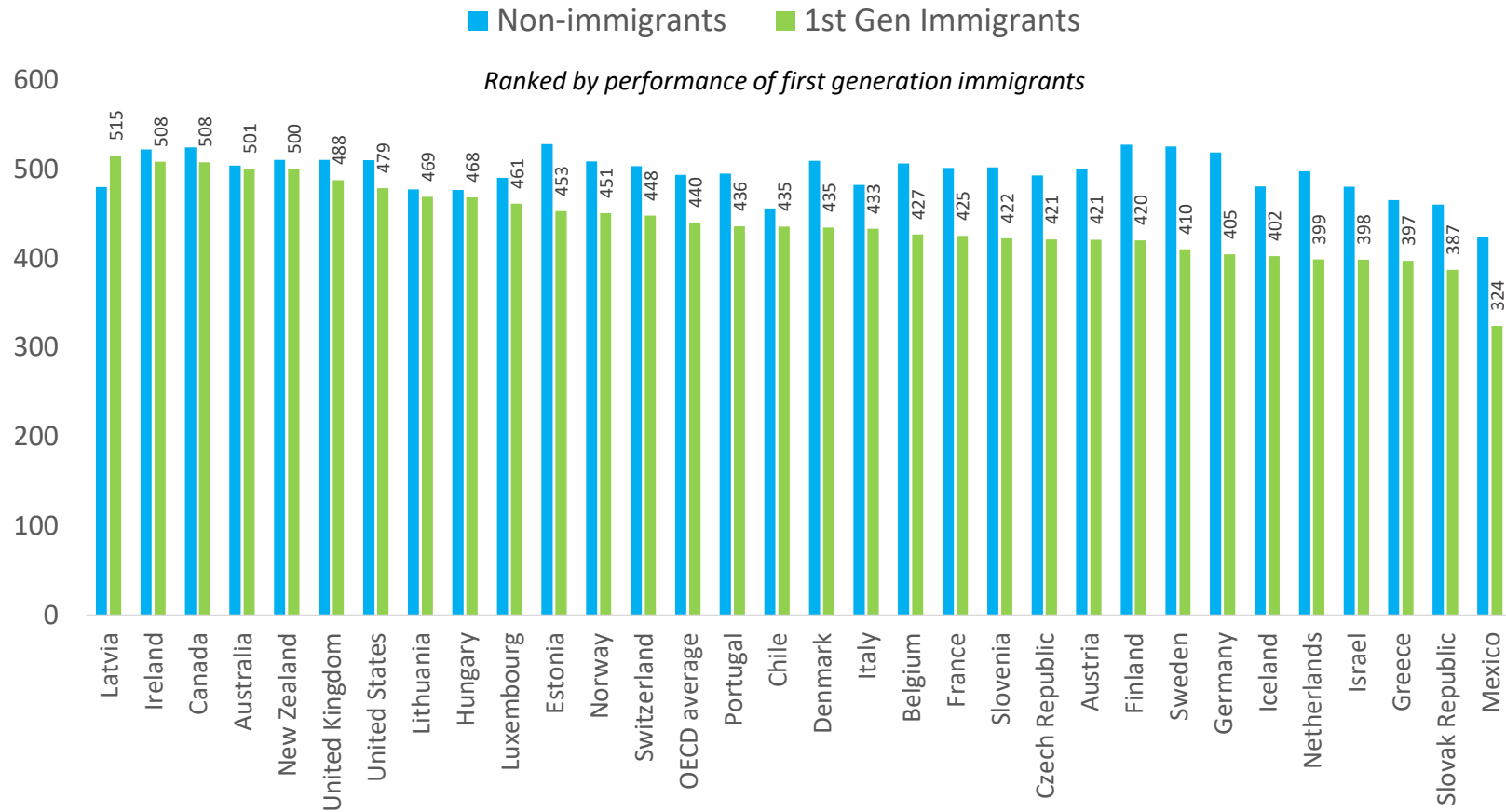
PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. II)



Mean reading performance, by immigrant background (2018)

OECD countries



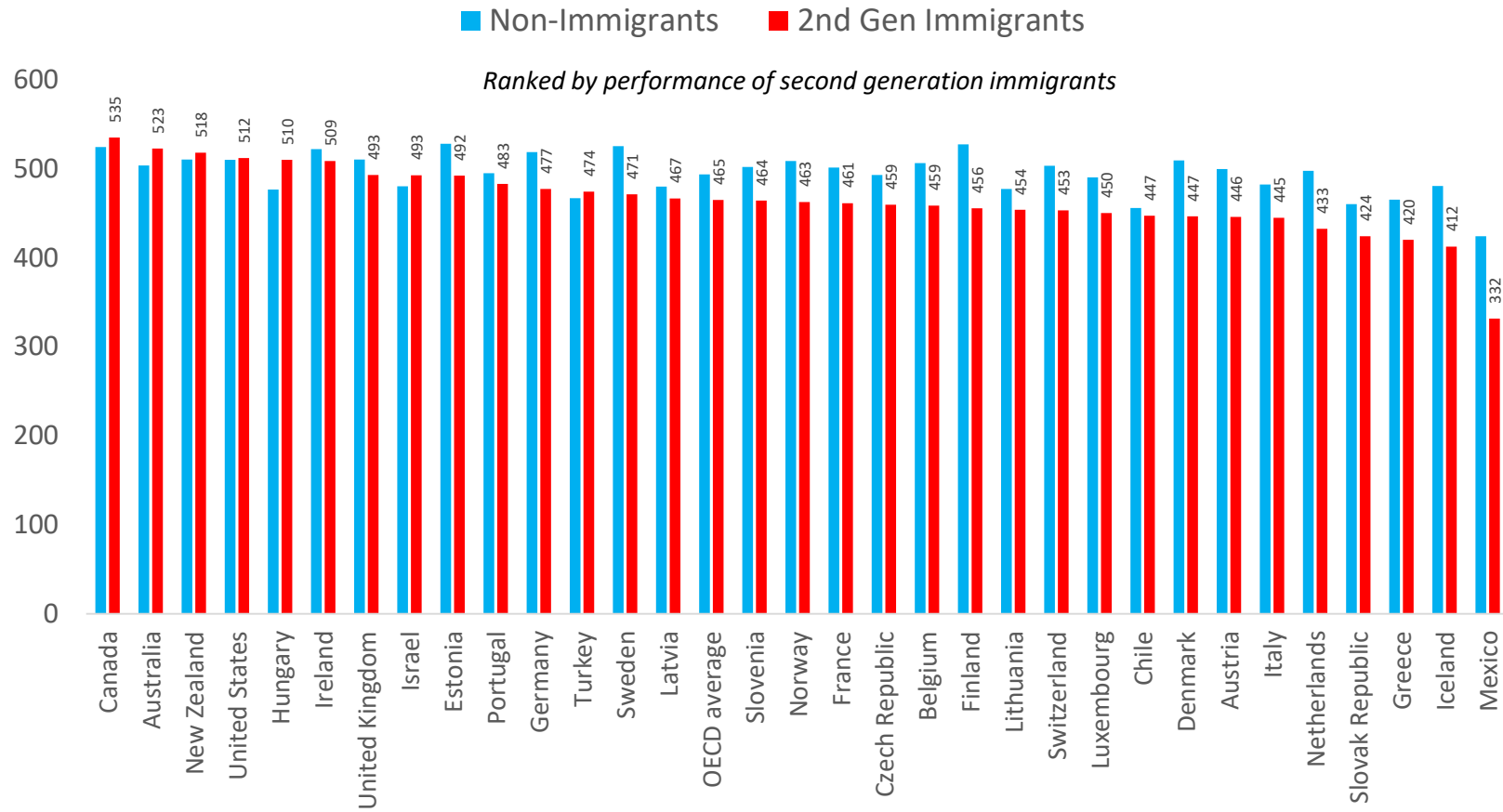
PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. II)



Mean reading performance, by immigrant background (2018)

OECD countries



PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. II)



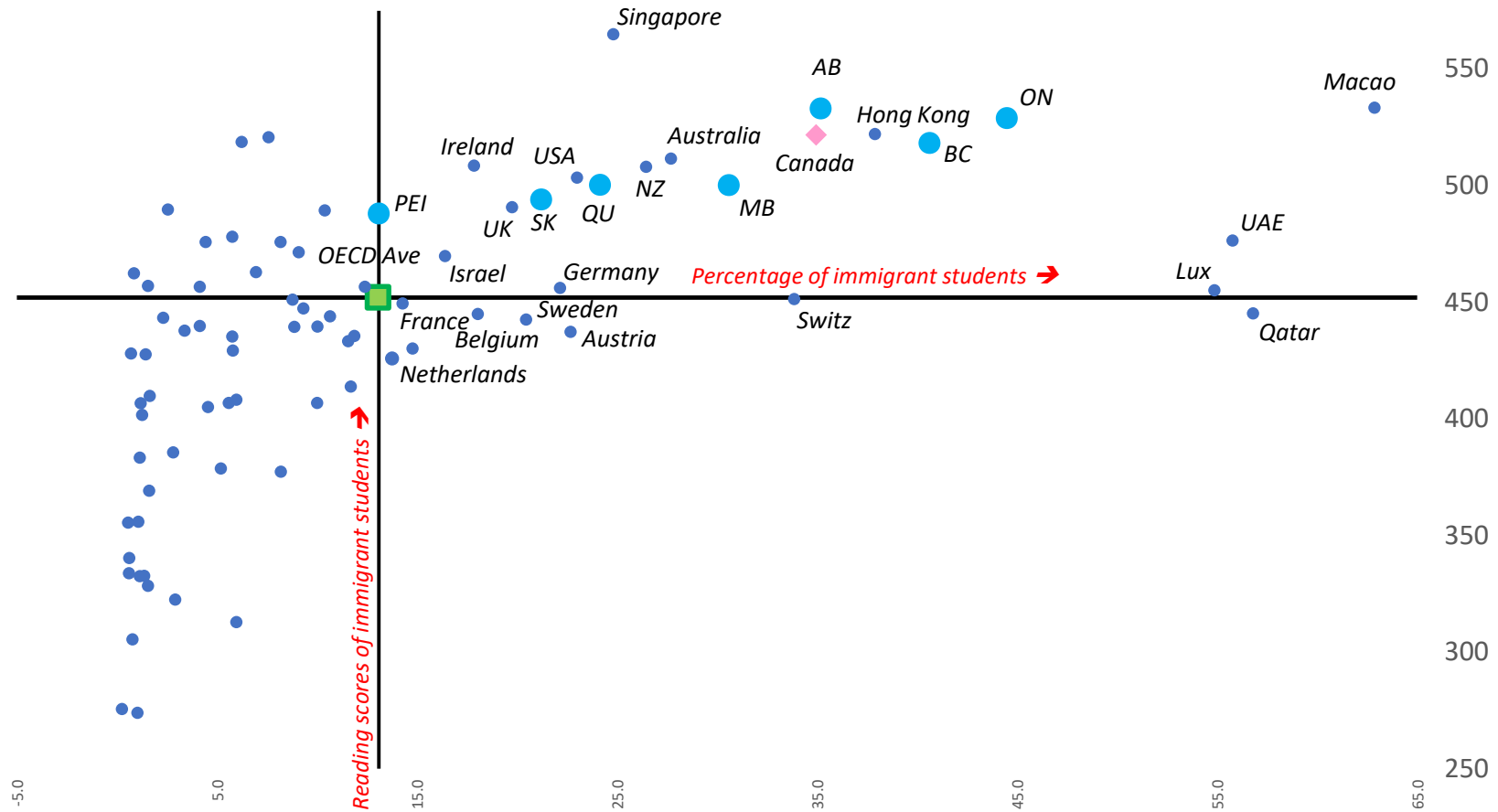
Difference in reading performance (in points), immigrants compared to non-immigrants, by immigrant background (2018)

OECD countries

| Country | All immigrant background | Country | First Generation Immigrants | Country | Second Generation Immigrants |
|-----------------|--------------------------|-----------------|-----------------------------|-----------------|------------------------------|
| Hungary | 13 | Latvia | 35 | Hungary | 33 |
| Australia | 8 | Australia | -3 | Australia | 19 |
| New Zealand | -2 | Hungary | -8 | Israel | 12 |
| Canada | -3 | Lithuania | -9 | Canada | 11 |
| Latvia | -4 | New Zealand | -10 | New Zealand | 8 |
| Turkey | -5 | Ireland | -14 | Turkey | 7 |
| United States | -7 | Canada | -17 | United States | 2 |
| Israel | -11 | Chile | -21 | Chile | -9 |
| Ireland | -14 | United Kingdom | -23 | Portugal | -12 |
| Chile | -18 | Luxembourg | -29 | Ireland | -13 |
| United Kingdom | -20 | United States | -31 | Latvia | -13 |
| Lithuania | -21 | Italy | -49 | United Kingdom | -18 |
| Portugal | -32 | OECD average | -54 | Lithuania | -24 |
| Luxembourg | -35 | Switzerland | -56 | OECD average | -29 |
| Estonia | -39 | Norway | -58 | Czech Republic | -34 |
| OECD average | -41 | Portugal* | -60 | Slovak Republic | -36 |
| Italy | -43 | Greece | -68 | Estonia | -36 |
| Greece | -51 | Czech Republic | -72 | Italy | -37 |
| Switzerland | -52 | Slovak Republic | -73 | Slovenia | -38 |
| Norway | -52 | Denmark | -75 | France | -40 |
| France | -52 | Estonia | -75 | Luxembourg | -40 |
| Czech Republic | -53 | France | -76 | Germany | -42 |
| Slovak Republic | -53 | Iceland | -78 | Greece | -45 |
| Colombia | -59 | Austria | -79 | Norway | -46 |
| Belgium | -61 | Belgium | -80 | Belgium | -48 |
| Austria | -63 | Slovenia | -80 | Switzerland | -50 |
| Slovenia | -63 | Israel | -82 | Austria | -54 |
| Germany | -63 | Netherlands | -99 | Sweden | -54 |
| Denmark | -65 | Mexico | -100 | Denmark | -63 |
| Netherlands | -72 | Finland | -107 | Netherlands | -65 |
| Iceland | -74 | Germany | -114 | Iceland | -68 |
| Sweden | -83 | Sweden | -115 | Finland | -72 |
| Finland | -92 | | | Mexico | -92 |
| Mexico | -96 | | | | |



Mean reading performance of immigrant students & percentage of immigrant students (2018) -- including Canadian provinces



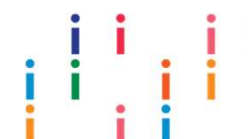
PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. II)



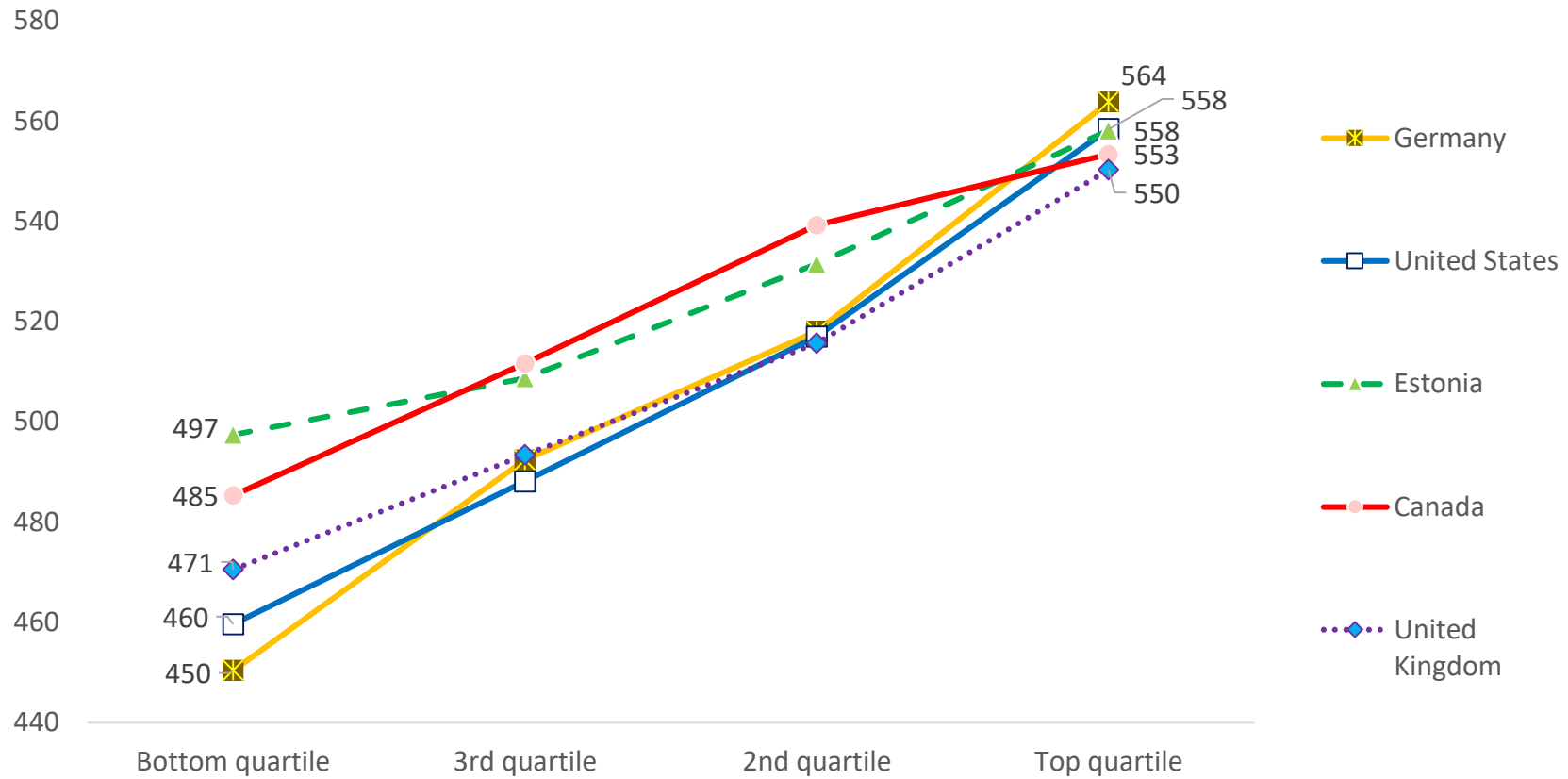
Reading performance, by national quarter of ESCS – OECD countries (ESCS refers to the PISA index of economic, social and cultural status)

| Bottom quartile | | 3 rd quartile | | 2 nd quartile | | Top quartile | |
|-----------------|-----|--------------------------|-----|--------------------------|-----|-----------------|-----|
| Estonia | 497 | Canada | 512 | Canada | 539 | Germany | 564 |
| Canada | 485 | Ireland | 511 | Finland | 533 | Finland | 562 |
| Finland | 483 | Finland | 509 | Estonia | 532 | Poland | 560 |
| Ireland | 482 | Estonia | 509 | Ireland | 527 | United States | 558 |
| Korea | 477 | Poland | 504 | Sweden | 526 | Estonia | 558 |
| United Kingdom | 471 | Korea | 503 | Korea | 525 | New Zealand | 558 |
| Poland | 469 | Sweden | 501 | New Zealand | 525 | Ireland | 557 |
| Japan | 465 | Japan | 499 | Norway | 520 | Canada | 553 |
| Denmark | 462 | Norway | 496 | Australia | 519 | Korea | 552 |
| Slovenia | 462 | United Kingdom | 493 | Germany | 518 | United Kingdom | 550 |
| New Zealand | 462 | Denmark | 493 | Poland | 518 | France | 550 |
| Australia | 460 | Germany | 492 | United States | 517 | Belgium | 550 |
| Sweden | 460 | Australia | 490 | Japan | 517 | Australia | 549 |
| United States | 460 | New Zealand | 490 | United Kingdom | 516 | Sweden | 549 |
| Norway | 459 | United States | 488 | Denmark | 514 | Czech Republic | 544 |
| Germany | 450 | Czech Republic | 481 | Belgium | 512 | Portugal | 543 |
| Portugal | 448 | Portugal | 480 | France | 509 | Slovenia | 541 |
| Netherlands | 448 | Belgium | 476 | Israel | 507 | Denmark | 540 |
| Latvia | 447 | OECD average | 476 | Slovenia | 506 | Switzerland | 539 |
| OECD average | 445 | Slovenia | 476 | Portugal | 501 | Luxembourg | 537 |
| France | 443 | Austria | 475 | OECD average | 500 | Japan | 537 |
| Belgium | 440 | France | 474 | Switzerland | 499 | Netherlands | 536 |
| Austria | 440 | Italy | 474 | Czech Republic | 498 | Hungary | 534 |
| Czech Republic | 439 | Netherlands | 470 | Austria | 496 | OECD average | 534 |
| Iceland | 437 | Latvia | 470 | Iceland | 495 | Austria | 533 |
| Turkey | 437 | Switzerland | 469 | Netherlands | 495 | Norway | 532 |
| Italy | 436 | Lithuania | 465 | Latvia | 490 | Israel | 529 |
| Switzerland | 435 | Iceland | 463 | Hungary | 489 | Lithuania | 522 |
| Lithuania | 432 | Hungary | 463 | Lithuania | 488 | Turkey | 513 |
| Hungary | 420 | Israel | 455 | Luxembourg | 488 | Latvia | 512 |
| Greece | 417 | Turkey | 452 | Italy | 487 | Italy | 511 |
| Luxembourg | 415 | Slovak Republic | 449 | Greece | 468 | Slovak Republic | 511 |
| Chile | 415 | Luxembourg | 445 | Slovak Republic | 468 | Iceland | 510 |
| Israel | 407 | Greece | 444 | Turkey | 461 | Chile | 502 |
| Slovak Republic | 404 | Chile | 443 | Chile | 455 | Greece | 502 |
| Mexico | 382 | Mexico | 413 | Mexico | 426 | Mexico | 464 |
| Colombia | 373 | Colombia | 398 | Colombia | 419 | Colombia | 459 |



Reading performance, by national quarter of ESCS – selected countries

(ESCS refers to the PISA index of economic, social and cultural status)

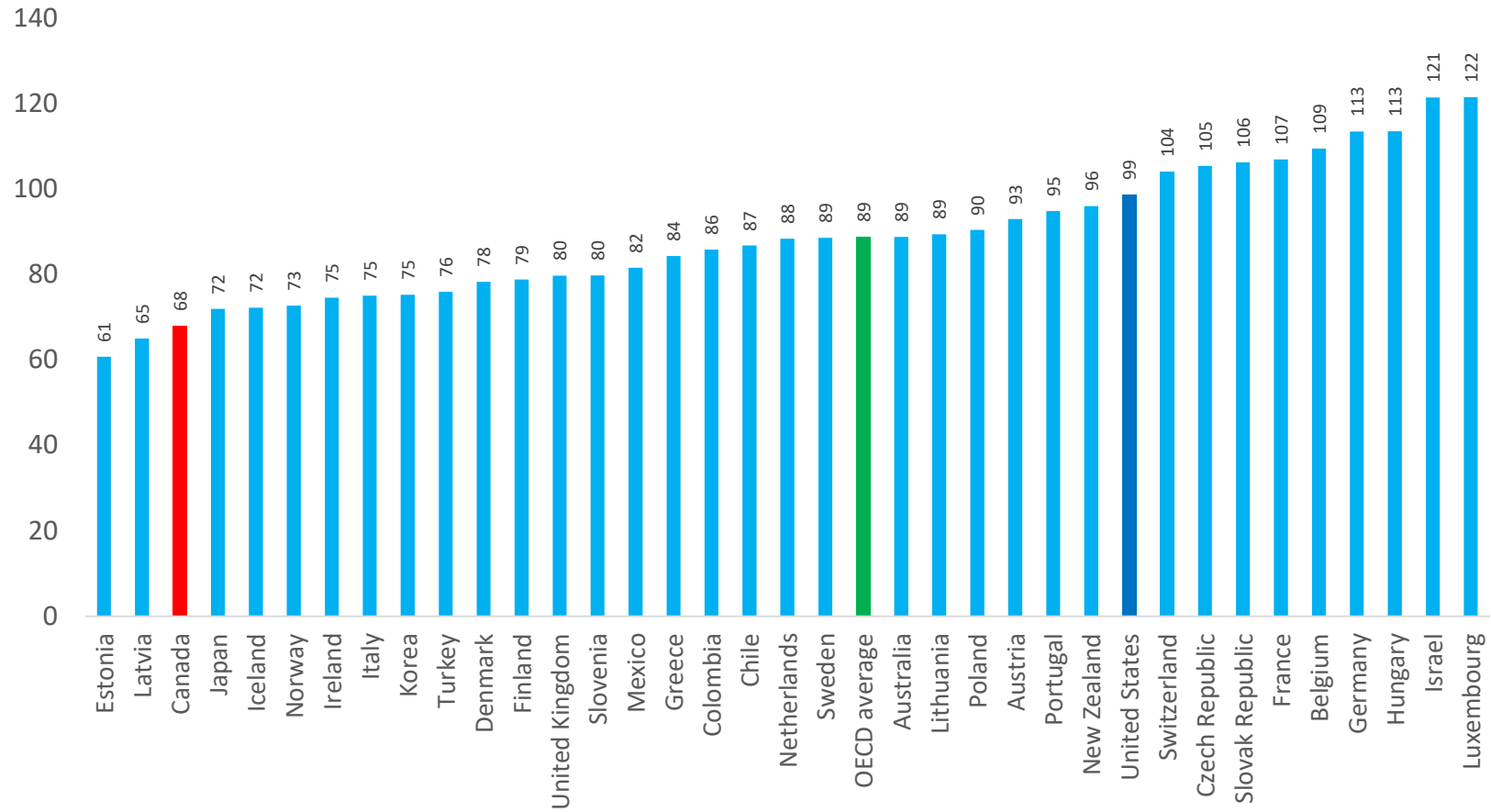


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. II)



Reading score difference (in points) between top and bottom ESCS quartiles (ESCS refers to the PISA index of economic, social and cultural status)

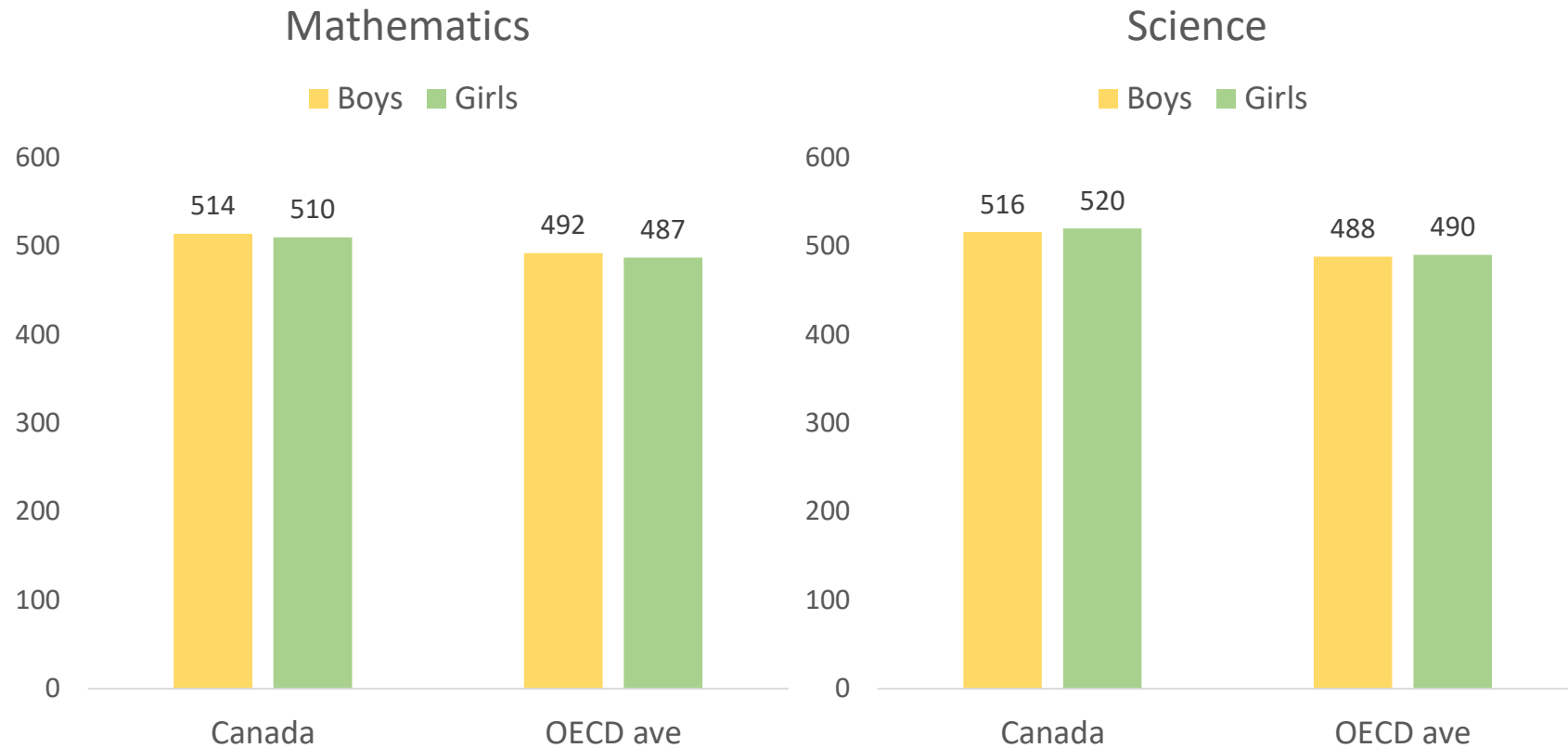


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. II)



Performance by gender

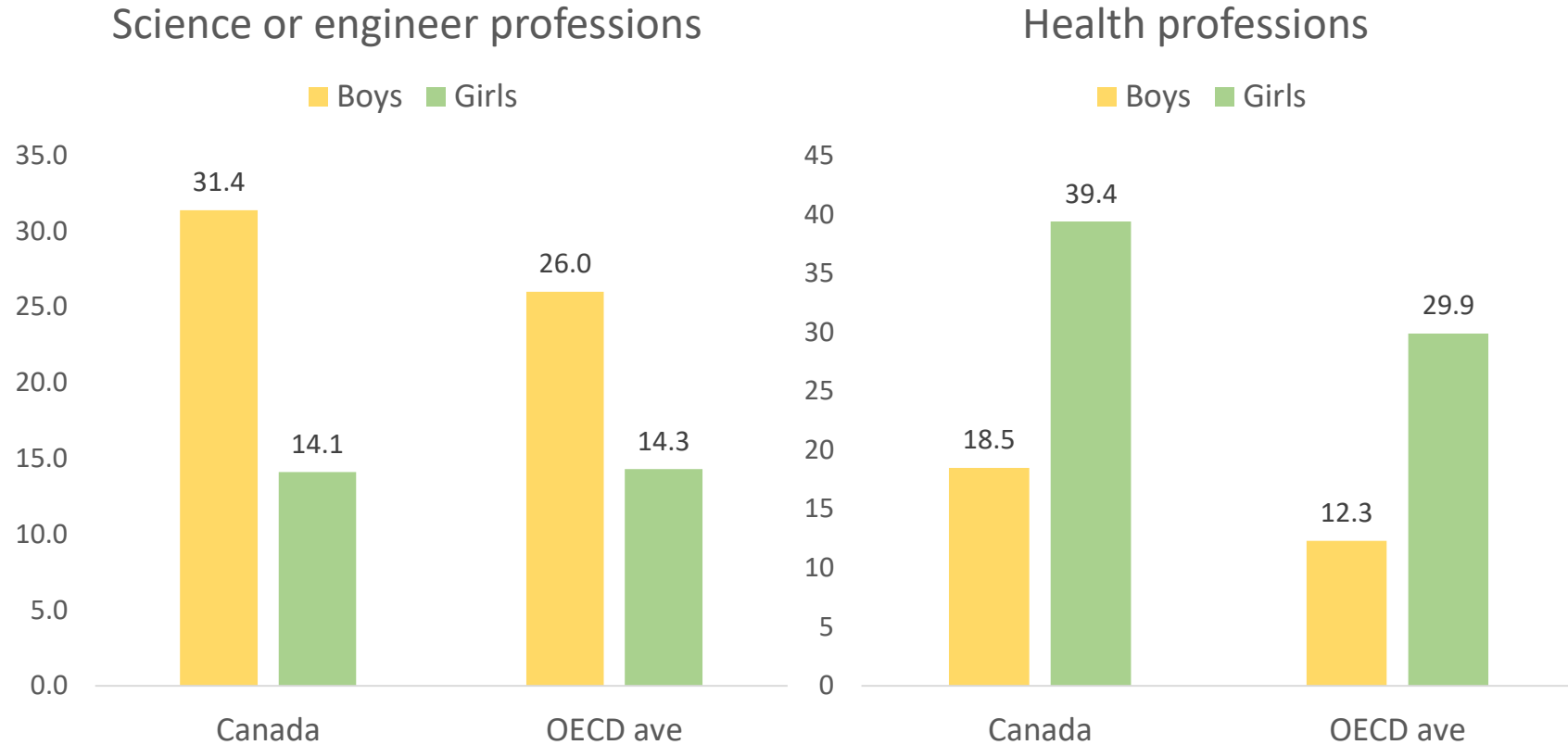


PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. II)



Expectation among top performing students (in science or math) to work as science-related professional, by gender



PISA 2018: Summary of results for Canada

Source: OECD, PISA 2018 Results (Vol. II)



Thank you

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