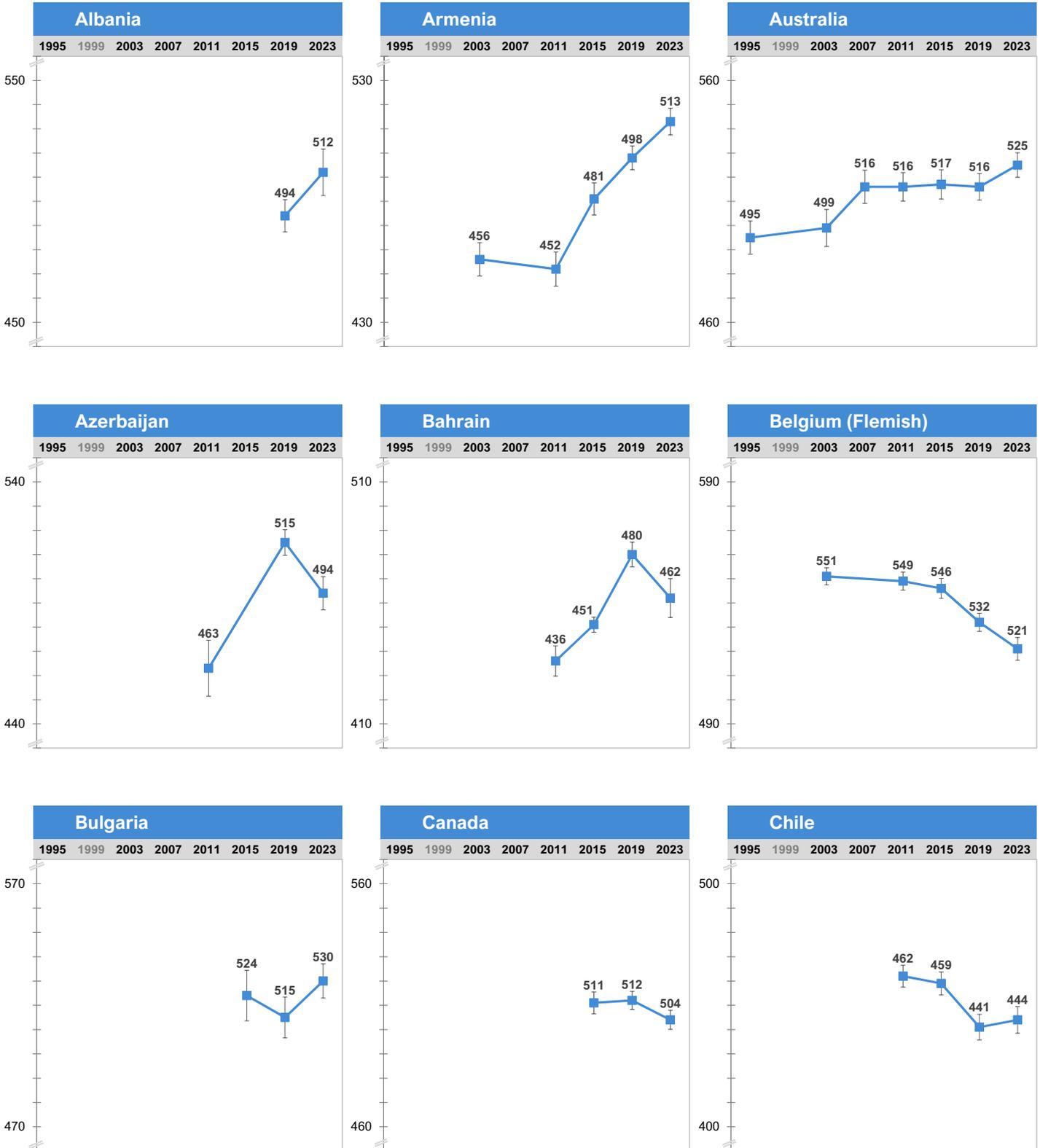


Exhibit 1.1.9: Trend Plots of Average Mathematics Achievement[◇]

This exhibit displays changes in achievement across assessment years for the countries and benchmarking participants that have comparable data from previous TIMSS assessments. The accompanying table (Exhibit 1.1.10) provides details. The scale interval is 10 points for each country, but a different part of the scale is shown according to each country's average achievement. See Appendix A for country participation in previous assessments.

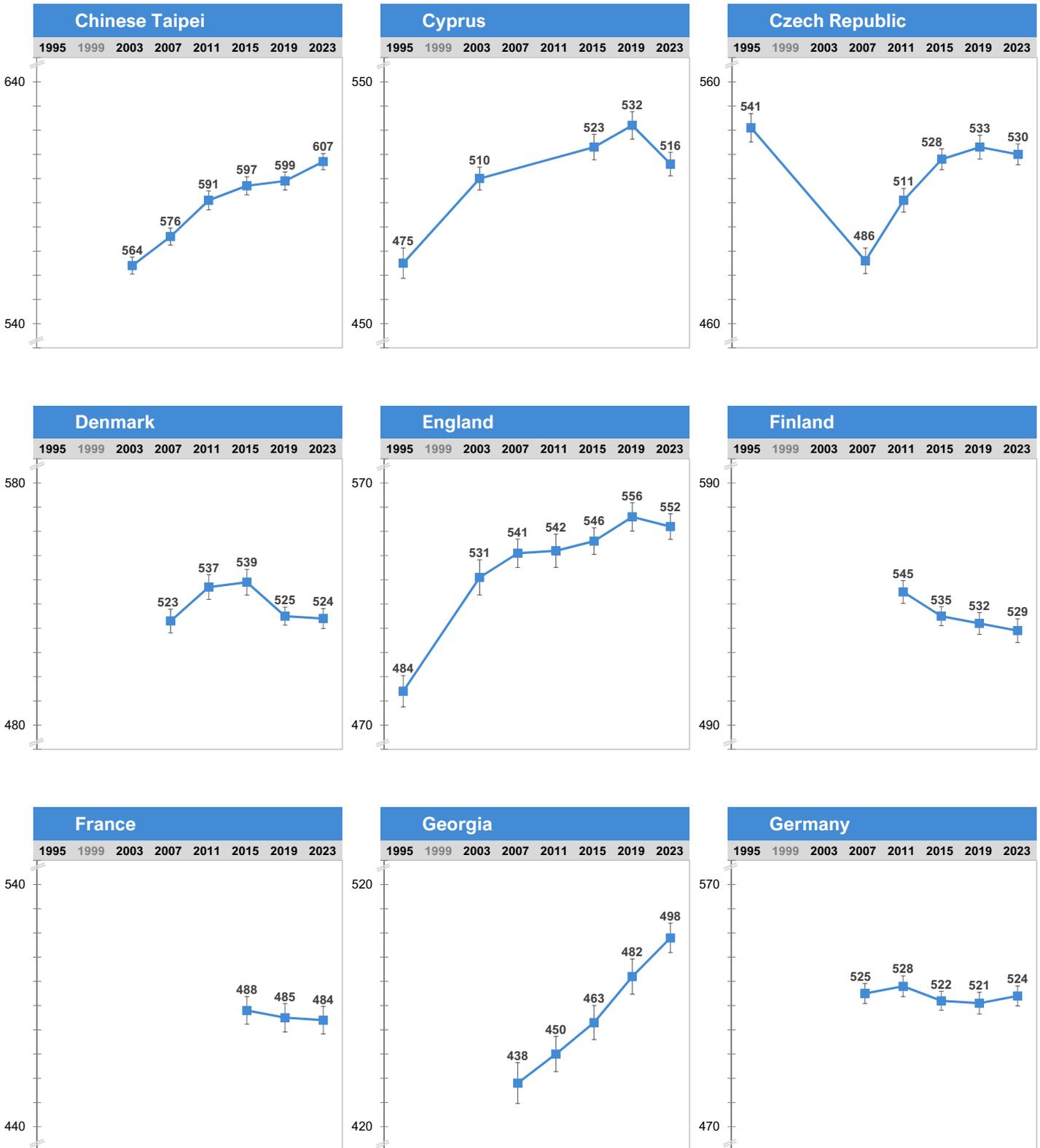


[◇] There was no TIMSS fourth grade assessment in 1999. See Appendix A for country participation in previous TIMSS assessments. The scale interval is 10 points for each country, but a different part of the scale is shown according to each country's average achievement. I. The black bars represent the 95% confidence interval.

Exhibit 1.1.9: Trend Plots of Average Mathematics Achievement[◇]

(Continued)

This exhibit displays changes in achievement across assessment years for the countries and benchmarking participants that have comparable data from previous TIMSS assessments. The accompanying table (Exhibit 1.1.10) provides details. The scale interval is 10 points for each country, but a different part of the scale is shown according to each country's average achievement. See Appendix A for country participation in previous assessments.

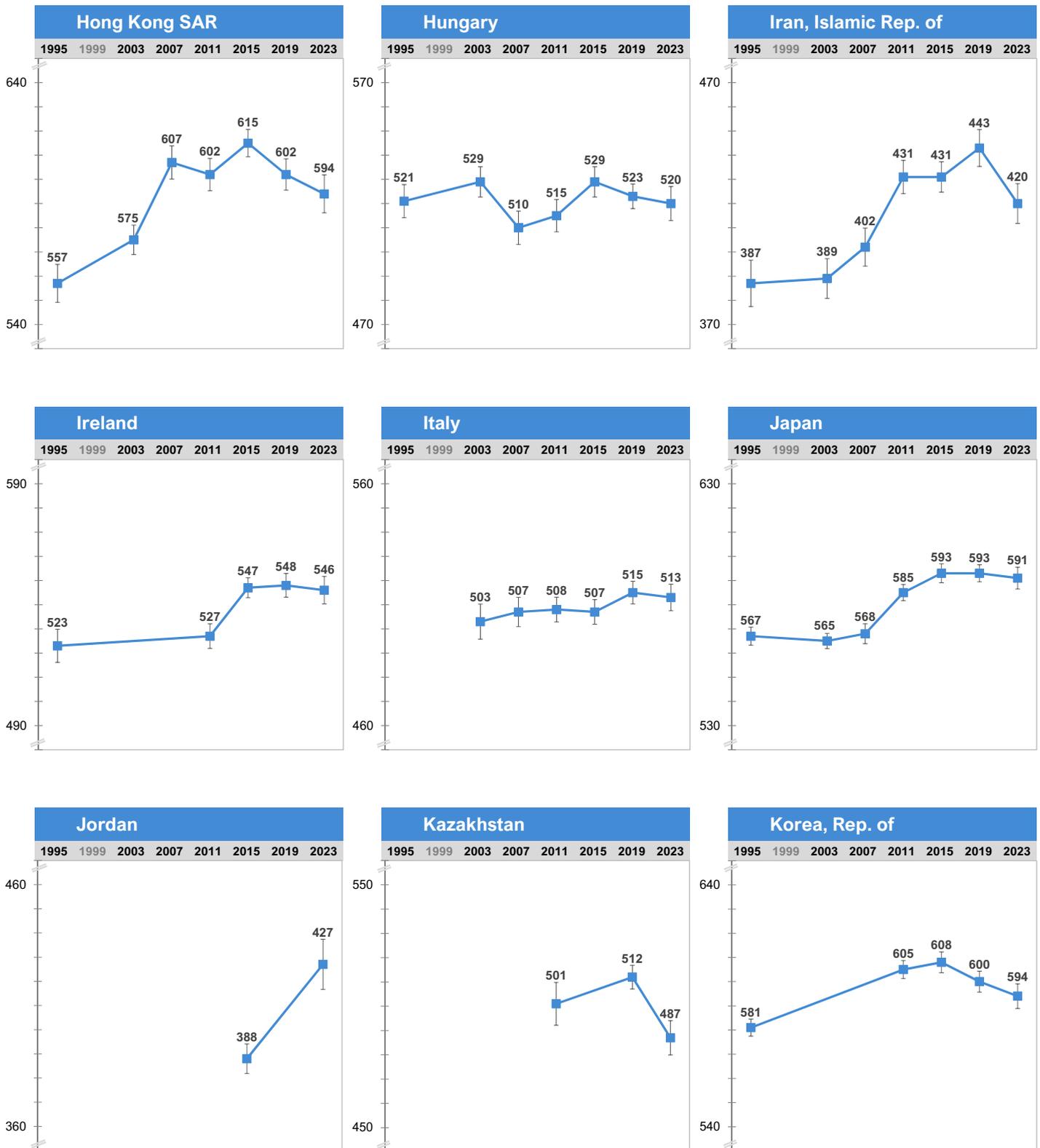


◇ There was no TIMSS fourth grade assessment in 1999. See Appendix A for country participation in previous TIMSS assessments. The scale interval is 10 points for each country, but a different part of the scale is shown according to each country's average achievement.
 I The black bars represent the 95% confidence interval.

Exhibit 1.1.9: Trend Plots of Average Mathematics Achievement[◇]

(Continued)

This exhibit displays changes in achievement across assessment years for the countries and benchmarking participants that have comparable data from previous TIMSS assessments. The accompanying table (Exhibit 1.1.10) provides details. The scale interval is 10 points for each country, but a different part of the scale is shown according to each country's average achievement. See Appendix A for country participation in previous assessments.

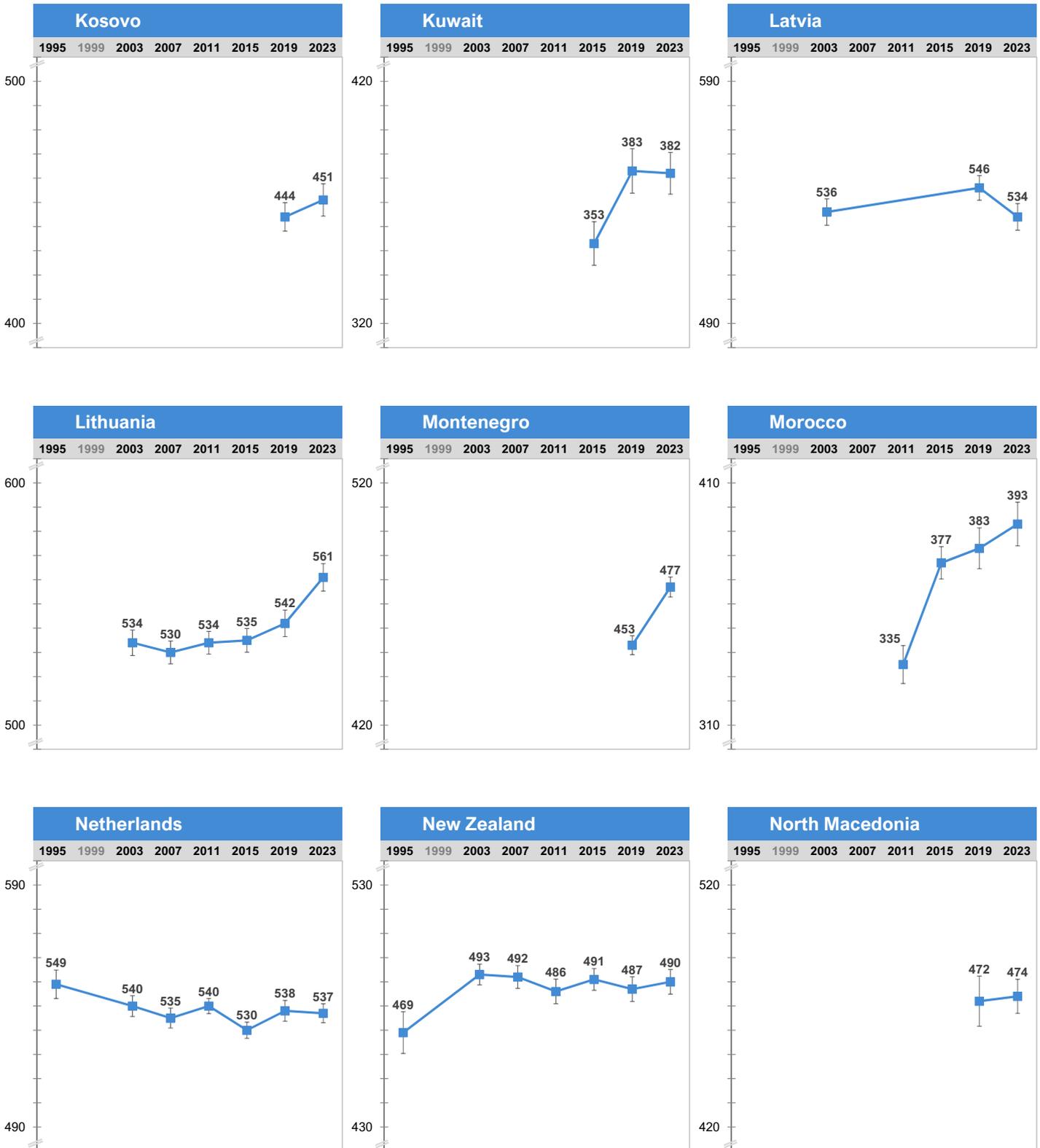


◇ There was no TIMSS fourth grade assessment in 1999. See Appendix A for country participation in previous TIMSS assessments. The scale interval is 10 points for each country, but a different part of the scale is shown according to each country's average achievement. I The black bars represent the 95% confidence interval.

Exhibit 1.1.9: Trend Plots of Average Mathematics Achievement[◇]

(Continued)

This exhibit displays changes in achievement across assessment years for the countries and benchmarking participants that have comparable data from previous TIMSS assessments. The accompanying table (Exhibit 1.1.10) provides details. The scale interval is 10 points for each country, but a different part of the scale is shown according to each country's average achievement. See Appendix A for country participation in previous assessments.

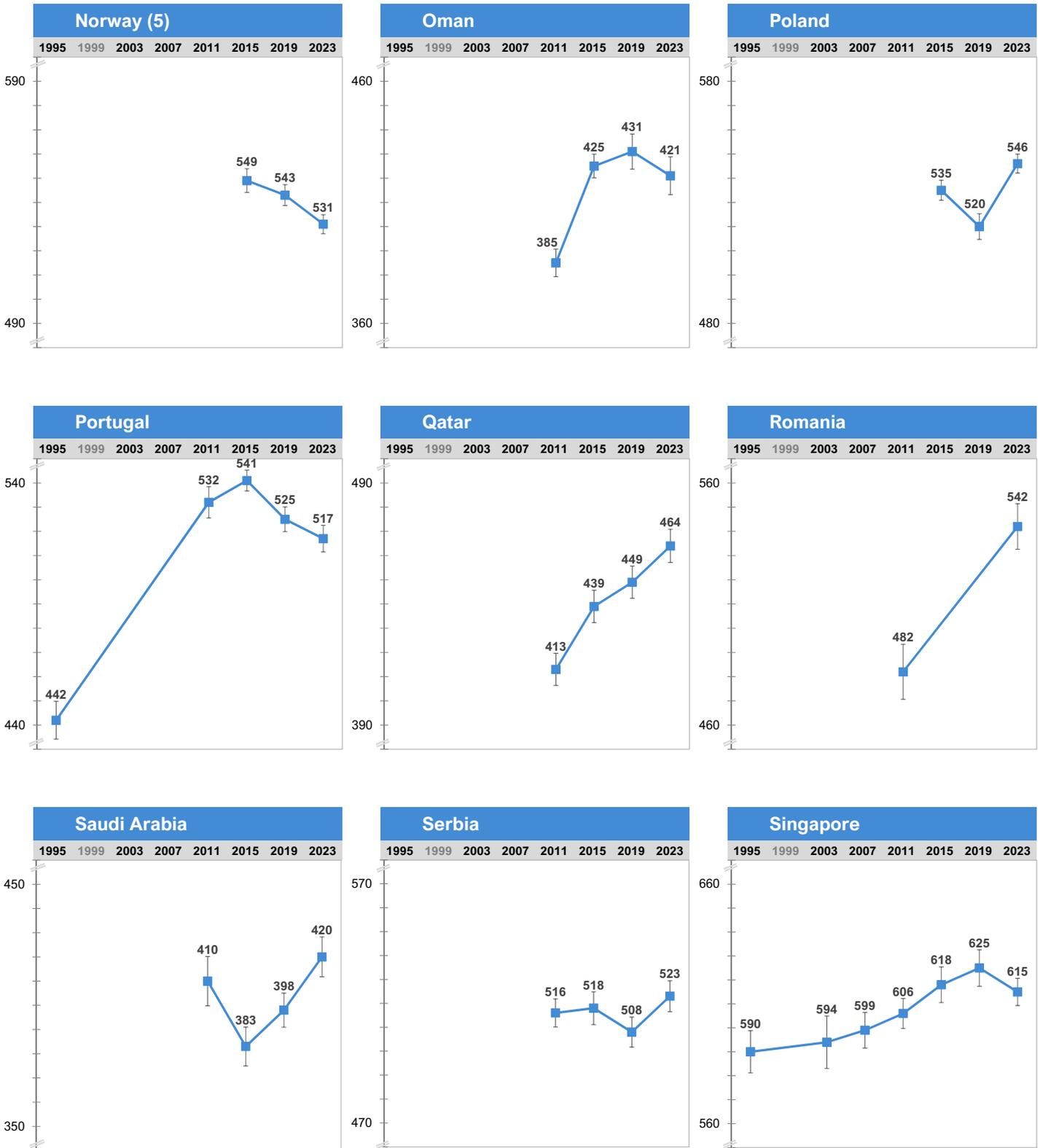


◇ There was no TIMSS fourth grade assessment in 1999. See Appendix A for country participation in previous TIMSS assessments.
 The scale interval is 10 points for each country, but a different part of the scale is shown according to each country's average achievement.
 I The black bars represent the 95% confidence interval.

Exhibit 1.1.9: Trend Plots of Average Mathematics Achievement[◇]

(Continued)

This exhibit displays changes in achievement across assessment years for the countries and benchmarking participants that have comparable data from previous TIMSS assessments. The accompanying table (Exhibit 1.1.10) provides details. The scale interval is 10 points for each country, but a different part of the scale is shown according to each country's average achievement. See Appendix A for country participation in previous assessments.

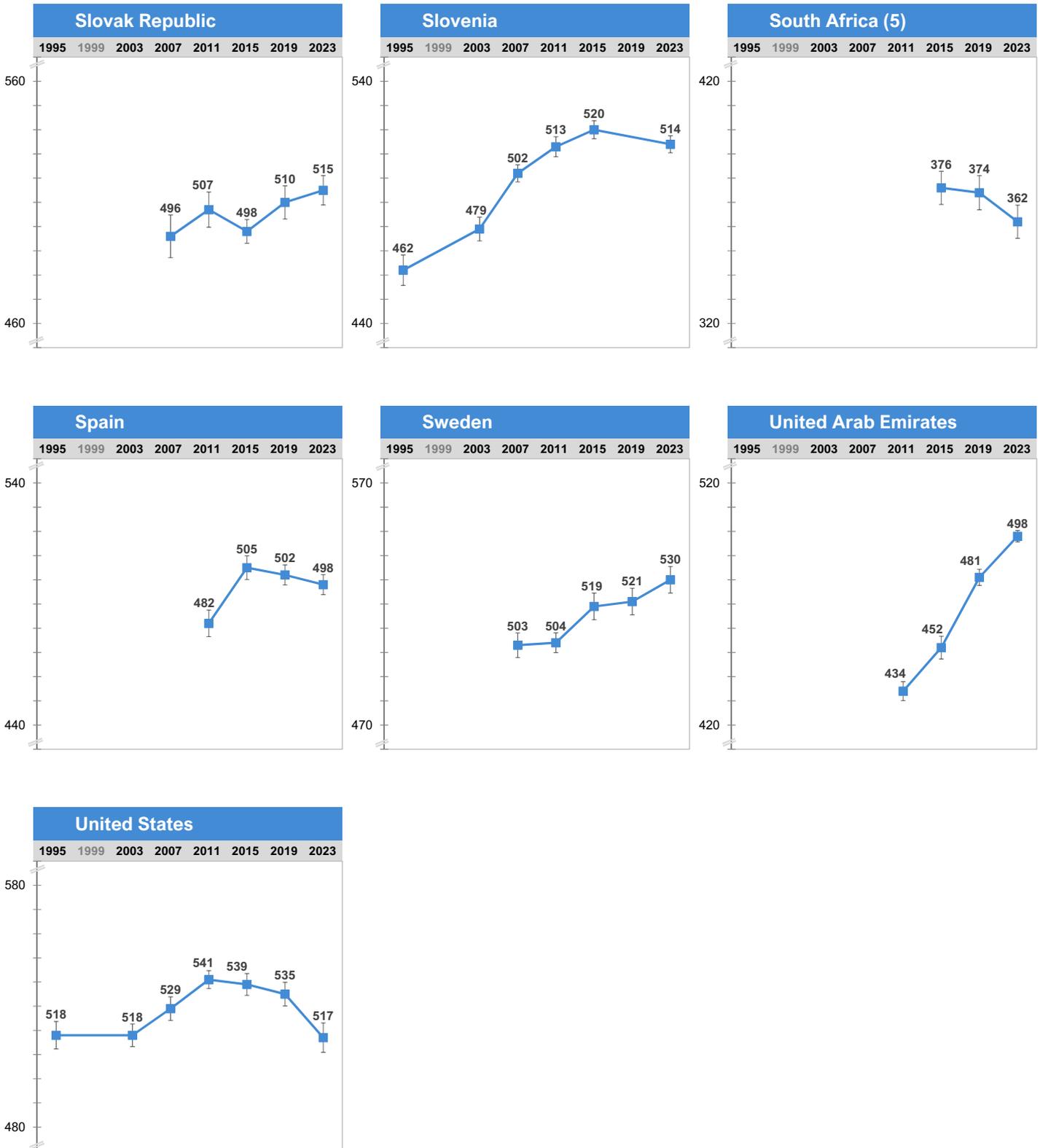


◇ There was no TIMSS fourth grade assessment in 1999. See Appendix A for country participation in previous TIMSS assessments. The scale interval is 10 points for each country, but a different part of the scale is shown according to each country's average achievement. I The black bars represent the 95% confidence interval.

Exhibit 1.1.9: Trend Plots of Average Mathematics Achievement[◇]

(Continued)

This exhibit displays changes in achievement across assessment years for the countries and benchmarking participants that have comparable data from previous TIMSS assessments. The accompanying table (Exhibit 1.1.10) provides details. The scale interval is 10 points for each country, but a different part of the scale is shown according to each country's average achievement. See Appendix A for country participation in previous assessments.



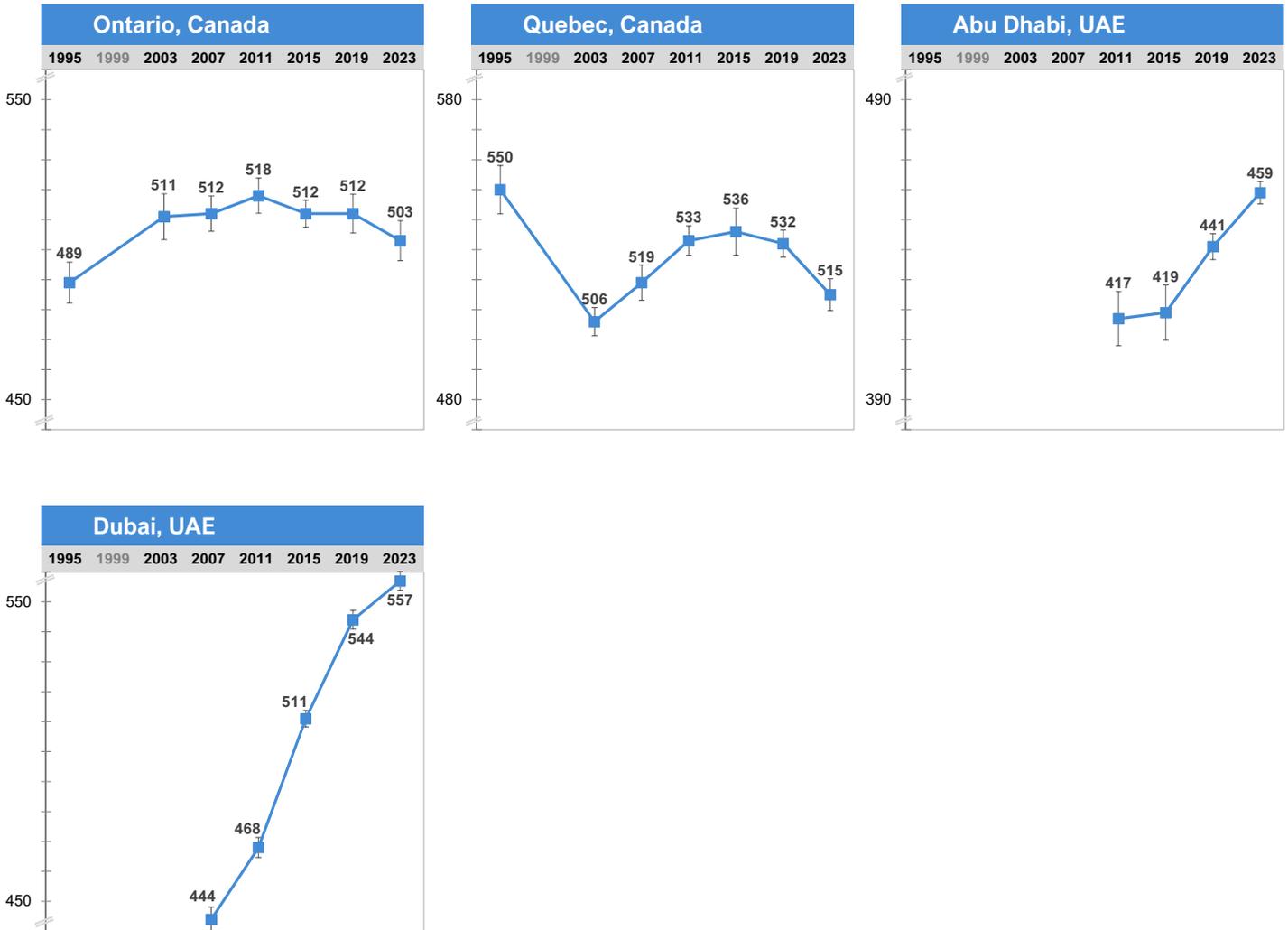
◇ There was no TIMSS fourth grade assessment in 1999. See Appendix A for country participation in previous TIMSS assessments. The scale interval is 10 points for each country, but a different part of the scale is shown according to each country's average achievement. I The black bars represent the 95% confidence interval.

Exhibit 1.1.9: Trend Plots of Average Mathematics Achievement[◇]

(Continued)

This exhibit displays changes in achievement across assessment years for the countries and benchmarking participants that have comparable data from previous TIMSS assessments. The accompanying table (Exhibit 1.1.10) provides details. The scale interval is 10 points for each country, but a different part of the scale is shown according to each country's average achievement. See Appendix A for country participation in previous assessments.

Benchmarking Participants

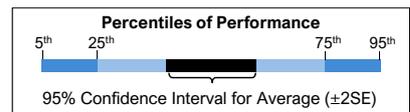


◇ There was no TIMSS fourth grade assessment in 1999. See Appendix A for country participation in previous TIMSS assessments. The scale interval is 10 points for each country, but a different part of the scale is shown according to each country's average achievement. I The black bars represent the 95% confidence interval.

Exhibit 1.1.10: Trends in Average Mathematics Achievement and Scale Score Distributions

This exhibit reports differences in achievement across assessment years for the countries and benchmarking participants that have comparable data from previous TIMSS assessments. Symbols indicate if the row year is significantly higher (▲) or significantly lower (▼) than the performance in TIMSS 2023. See Appendix A for country participation in previous TIMSS assessments.

Country	Average Scale Score	95% Confidence Interval for Average	Difference from TIMSS 2023	Mathematics Achievement Distribution
Albania				
² 2023	512 (4.9)	502 - 521		
2019	494 (3.4)	487 - 501	-18 (6.0) ▼	
Armenia				
² 2023	513 (2.8)	507 - 518		
2019	498 (2.5)	493 - 503	-14 (3.8) ▼	
2015	481 (3.4)	474 - 488	-32 (4.4) ▼	
2011	452 (3.6)	445 - 459	-60 (4.5) ▼	
2003	456 (3.5)	449 - 463	-57 (4.4) ▼	
Australia				
2023	525 (2.6)	520 - 530		
2019	516 (2.8)	510 - 521	-9 (3.8) ▼	
2015	517 (3.1)	511 - 523	-8 (4.0) ▼	
2011	516 (3.0)	510 - 522	-9 (3.9) ▼	
2007	516 (3.5)	509 - 523	-9 (4.3) ▼	
[†] 2003	499 (3.9)	491 - 506	-26 (4.7) ▼	
[≡] 1995	495 (3.5)	488 - 501	-30 (4.3) ▼	
Azerbaijan				
2023	494 (3.5)	487 - 501		
2019	515 (2.7)	510 - 521	21 (4.4) ▲	
² 2011	463 (5.9)	451 - 474	-31 (6.8) ▼	
Bahrain				
2023	462 (4.1)	453 - 470		
2019	480 (2.6)	475 - 485	18 (4.9) ▲	
² 2015	451 (1.6)	448 - 454	-11 (4.5) ▼	
2011	436 (3.2)	430 - 442	-26 (5.3) ▼	
Belgium (Flemish)				
² 2023	521 (2.4)	516 - 526		
[†] 2019	532 (1.9)	529 - 536	12 (3.1) ▲	
[†] 2015	546 (2.1)	542 - 550	25 (3.2) ▲	
2011	549 (1.9)	545 - 553	28 (3.1) ▲	
² 2003	551 (1.8)	547 - 554	30 (3.0) ▲	
Bulgaria				
2023	530 (3.6)	523 - 537		
2019	515 (4.3)	507 - 523	-15 (5.6) ▼	
2015	524 (5.3)	514 - 535	-6 (6.4)	
Canada				
^{1 3} 2023	504 (2.0)	500 - 508		
^{1 2} 2019	512 (1.9)	508 - 515	8 (2.7) ▲	
^{1 2} 2015	511 (2.3)	506 - 515	7 (3.1) ▲	
Chile				
² 2023	444 (2.8)	438 - 449		
2019	441 (2.7)	436 - 446	-3 (3.9)	
2015	459 (2.4)	454 - 463	15 (3.7) ▲	
2011	462 (2.3)	457 - 466	18 (3.6) ▲	
Chinese Taipei				
2023	607 (1.7)	604 - 610		
2019	599 (1.9)	595 - 603	-8 (2.6) ▼	
2015	597 (1.9)	593 - 600	-10 (2.6) ▼	
2011	591 (2.0)	587 - 595	-16 (2.6) ▼	
2007	576 (1.8)	572 - 579	-31 (2.5) ▼	
2003	564 (1.8)	561 - 567	-43 (2.5) ▼	
Cyprus				
² 2023	516 (2.5)	511 - 521		
2019	532 (2.9)	526 - 538	16 (3.8) ▲	
2015	523 (2.7)	518 - 528	7 (3.6)	
2003	510 (2.4)	505 - 515	-6 (3.5)	
1995	475 (3.2)	469 - 481	-41 (4.1) ▼	



See Appendix A for country participation in previous TIMSS assessments.
 () Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.
 See Appendix B.2 for population coverage notes 1, 2, and 3. See Appendix B.5 for sampling guidelines and sampling participation notes †, ‡, and ≡.

Exhibit 1.1.10: Trends in Average Mathematics Achievement and Scale Score Distributions

(Continued)

Country	Average Scale Score	95% Confidence Interval for Average	Difference from TIMSS 2023	Mathematics Achievement Distribution
Czech Republic				
² 2023	530 (2.2)	526 - 535		
2019	533 (2.5)	528 - 538	3 (3.3)	
2015	528 (2.2)	524 - 533	-2 (3.1)	
2011	511 (2.5)	506 - 516	-20 (3.3) ▼	
2007	486 (2.7)	481 - 492	-44 (3.5) ▼	
1995	541 (3.0)	535 - 546	10 (3.7) ▲	
Denmark				
† 2023	524 (2.1)	520 - 528		
† 2019	525 (1.9)	521 - 528	1 (2.8)	
² † 2015	539 (2.7)	533 - 544	15 (3.4) ▲	
² 2011	537 (2.6)	532 - 542	13 (3.3) ▲	
† 2007	523 (2.5)	518 - 528	-1 (3.2)	
England				
² 2023	552 (2.7)	547 - 557		
² 2019	556 (3.0)	550 - 562	4 (4.0)	
2015	546 (2.8)	541 - 552	-6 (3.9)	
2011	542 (3.5)	536 - 549	-10 (4.4) ▼	
2007	541 (3.0)	536 - 547	-10 (4.0) ▼	
† 2003	531 (3.7)	524 - 538	-21 (4.6) ▼	
³ † 1995	484 (3.3)	477 - 491	-68 (4.3) ▼	
Finland				
2023	529 (2.5)	524 - 534		
2019	532 (2.3)	527 - 537	3 (3.4)	
2015	535 (2.0)	531 - 539	6 (3.2)	
2011	545 (2.4)	541 - 550	16 (3.5) ▲	
France				
² 2023	484 (2.9)	478 - 490		
2019	485 (3.0)	479 - 491	1 (4.2)	
2015	488 (2.9)	482 - 494	4 (4.1)	
Georgia				
¹ 2023	498 (3.1)	492 - 504		
¹ 2019	482 (3.7)	475 - 489	-16 (4.8) ▼	
¹ 2015	463 (3.6)	456 - 470	-35 (4.7) ▼	
¹ 2011	450 (3.7)	443 - 457	-48 (4.8) ▼	
¹ 2007	438 (4.3)	430 - 447	-59 (5.3) ▼	
Germany				
2023	524 (2.1)	520 - 528		
2019	521 (2.3)	517 - 525	-3 (3.1)	
2015	522 (2.0)	518 - 526	-2 (3.0)	
2011	528 (2.2)	523 - 532	4 (3.1)	
2007	525 (2.1)	521 - 529	1 (3.0)	
Hong Kong SAR				
† 2023	594 (4.0)	586 - 602		
† 2019	602 (3.3)	595 - 608	7 (5.2)	
† 2015	615 (2.9)	609 - 620	20 (4.9) ▲	
² 2011	602 (3.4)	595 - 608	7 (5.3)	
2007	607 (3.5)	600 - 614	12 (5.4) ▲	
† 2003	575 (3.1)	569 - 581	-20 (5.1) ▼	
1995	557 (4.0)	549 - 565	-37 (5.7) ▼	
Hungary				
2023	520 (3.6)	513 - 527		
2019	523 (2.6)	518 - 529	3 (4.4)	
2015	529 (3.2)	523 - 535	9 (4.8)	
2011	515 (3.4)	509 - 522	-5 (4.9)	
2007	510 (3.5)	503 - 517	-11 (5.0) ▼	
² 2003	529 (3.2)	522 - 535	8 (4.8)	
1995	521 (3.5)	514 - 528	1 (5.0)	
Iran, Islamic Rep. of				
ψ 2023	420 (4.2)	411 - 428		
2019	443 (3.9)	435 - 451	23 (5.7) ▲	
2015	431 (3.2)	425 - 438	12 (5.3) ▲	
2011	431 (3.5)	424 - 438	11 (5.4) ▲	
2007	402 (4.0)	395 - 410	-17 (5.8) ▼	
² 2003	389 (4.2)	381 - 397	-31 (5.9) ▼	
1995	387 (4.9)	377 - 396	-33 (6.4) ▼	
Ireland				
2023	546 (2.9)	540 - 551		
2019	548 (2.5)	544 - 553	3 (3.8)	
2015	547 (2.1)	543 - 552	2 (3.6)	
2011	527 (2.6)	522 - 532	-18 (3.9) ▼	
² 1995	523 (3.5)	516 - 530	-23 (4.6) ▼	

ψ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 15% but does not exceed 25%.

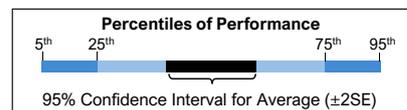


Exhibit 1.1.10: Trends in Average Mathematics Achievement and Scale Score Distributions

(Continued)

Country	Average Scale Score	95% Confidence Interval for Average	Difference from TIMSS 2023	Mathematics Achievement Distribution
Italy				
² 2023	513 (2.8)	508 - 519		
2019	515 (2.4)	510 - 520	2 (3.7)	
² 2015	507 (2.6)	502 - 512	-6 (3.8)	
2011	508 (2.6)	503 - 513	-5 (3.8)	
2007	507 (3.1)	501 - 513	-6 (4.2)	
2003	503 (3.7)	496 - 510	-10 (4.6) ▼	
Japan				
2023	591 (2.3)	586 - 595		
2019	593 (1.8)	590 - 596	2 (2.9)	
2015	593 (2.0)	589 - 597	2 (3.0)	
2011	585 (1.7)	582 - 589	-5 (2.9)	
2007	568 (2.1)	564 - 572	-23 (3.1) ▼	
2003	565 (1.6)	561 - 568	-26 (2.8) ▼	
1995	567 (1.9)	563 - 571	-23 (3.0) ▼	
Jordan				
2023	427 (5.3)	417 - 437		
2015	388 (3.1)	382 - 394	-38 (6.1) ▼	
Kazakhstan				
² 2023	487 (3.6)	480 - 494		
² 2019	512 (2.5)	507 - 517	25 (4.4) ▲	
² 2011	501 (4.5)	492 - 510	14 (5.8) ▲	
Korea, Rep. of				
2023	594 (2.6)	589 - 600		
2019	600 (2.2)	595 - 604	5 (3.5)	
2015	608 (2.2)	604 - 612	14 (3.5) ▲	
2011	605 (1.9)	601 - 609	10 (3.3) ▲	
² 1995	581 (1.8)	577 - 584	-14 (3.2) ▼	
Kosovo				
² 2023	451 (3.4)	445 - 458		
² 2019	444 (3.0)	438 - 450	-7 (4.6)	
Kuwait				
2023	382 (4.4)	373 - 391		
2019	383 (4.7)	374 - 393	1 (6.5)	
^ψ 2015	353 (4.6)	344 - 362	-29 (6.4) ▼	
Latvia				
2023	534 (2.8)	529 - 540		
² 2019	546 (2.6)	541 - 551	12 (3.8) ▲	
2003	536 (2.8)	530 - 541	2 (4.0)	
Lithuania				
² 2023	561 (2.9)	555 - 566		
² 2019	542 (2.8)	537 - 548	-18 (4.0) ▼	
² 2015	535 (2.5)	530 - 540	-25 (3.8) ▼	
^{1,2} 2011	534 (2.4)	529 - 538	-27 (3.8) ▼	
¹ 2007	530 (2.4)	525 - 534	-31 (3.8) ▼	
¹ 2003	534 (2.7)	529 - 539	-27 (4.0) ▼	
Montenegro				
² 2023	477 (2.1)	473 - 481		
2019	453 (2.0)	449 - 457	-24 (2.8) ▼	
Morocco				
2023	393 (4.6)	384 - 402		
2019	383 (4.3)	375 - 392	-10 (6.3)	
2015	377 (3.4)	371 - 384	-16 (5.7) ▼	
[✱] 2011	335 (4.0)	327 - 342	-59 (6.1) ▼	
Netherlands				
[†] 2023	537 (2.0)	533 - 541		
[≡] 2019	538 (2.2)	533 - 542	0 (2.9)	
[†] 2015	530 (1.7)	526 - 533	-7 (2.6) ▼	
[†] 2011	540 (1.6)	537 - 543	3 (2.6)	
[‡] 2007	535 (2.1)	531 - 539	-2 (2.9)	
[†] 2003	540 (2.2)	536 - 545	3 (2.9)	
[≡] 1995	549 (3.0)	543 - 555	12 (3.6) ▲	
New Zealand				
^{2,†} 2023	490 (2.6)	485 - 495		
² 2019	487 (2.6)	482 - 492	-3 (3.7)	
2015	491 (2.3)	486 - 495	0 (3.5)	
2011	486 (2.6)	481 - 491	-4 (3.7)	
2007	492 (2.4)	488 - 497	2 (3.5)	
2003	493 (2.2)	489 - 498	3 (3.4)	
1995	469 (4.4)	460 - 478	-21 (5.2) ▼	
North Macedonia				
2023	474 (3.6)	467 - 481		
2019	472 (5.3)	461 - 482	-2 (6.4)	

^ψ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 15% but does not exceed 25%.
[✱] Average achievement not reliably measured because the percentage of students with achievement too low for estimation exceeds 25%.

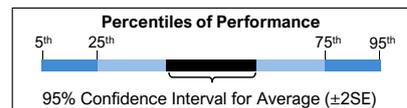
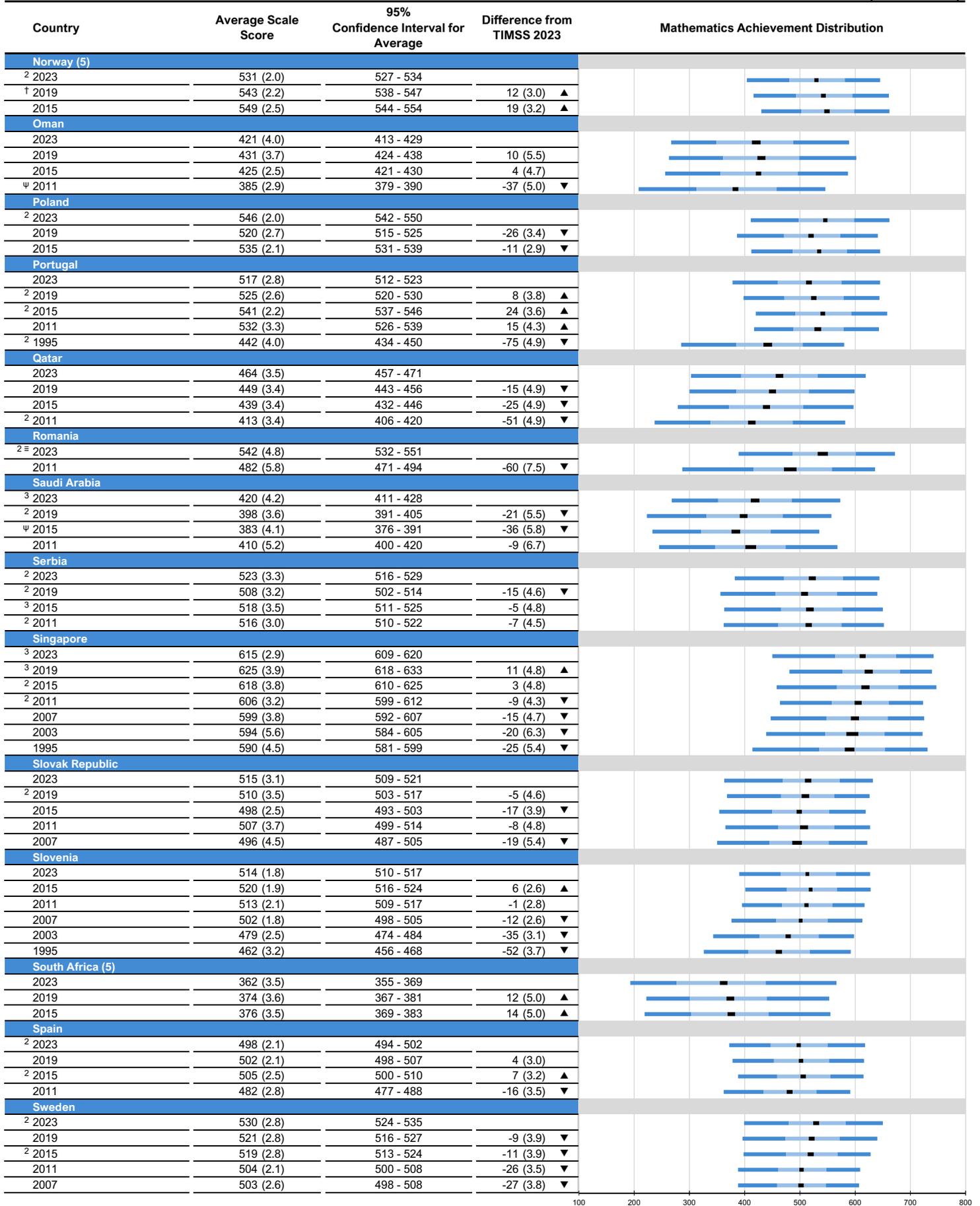


Exhibit 1.1.10: Trends in Average Mathematics Achievement and Scale Score Distributions

(Continued)



ψ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 15% but does not exceed 25%.

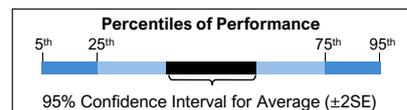
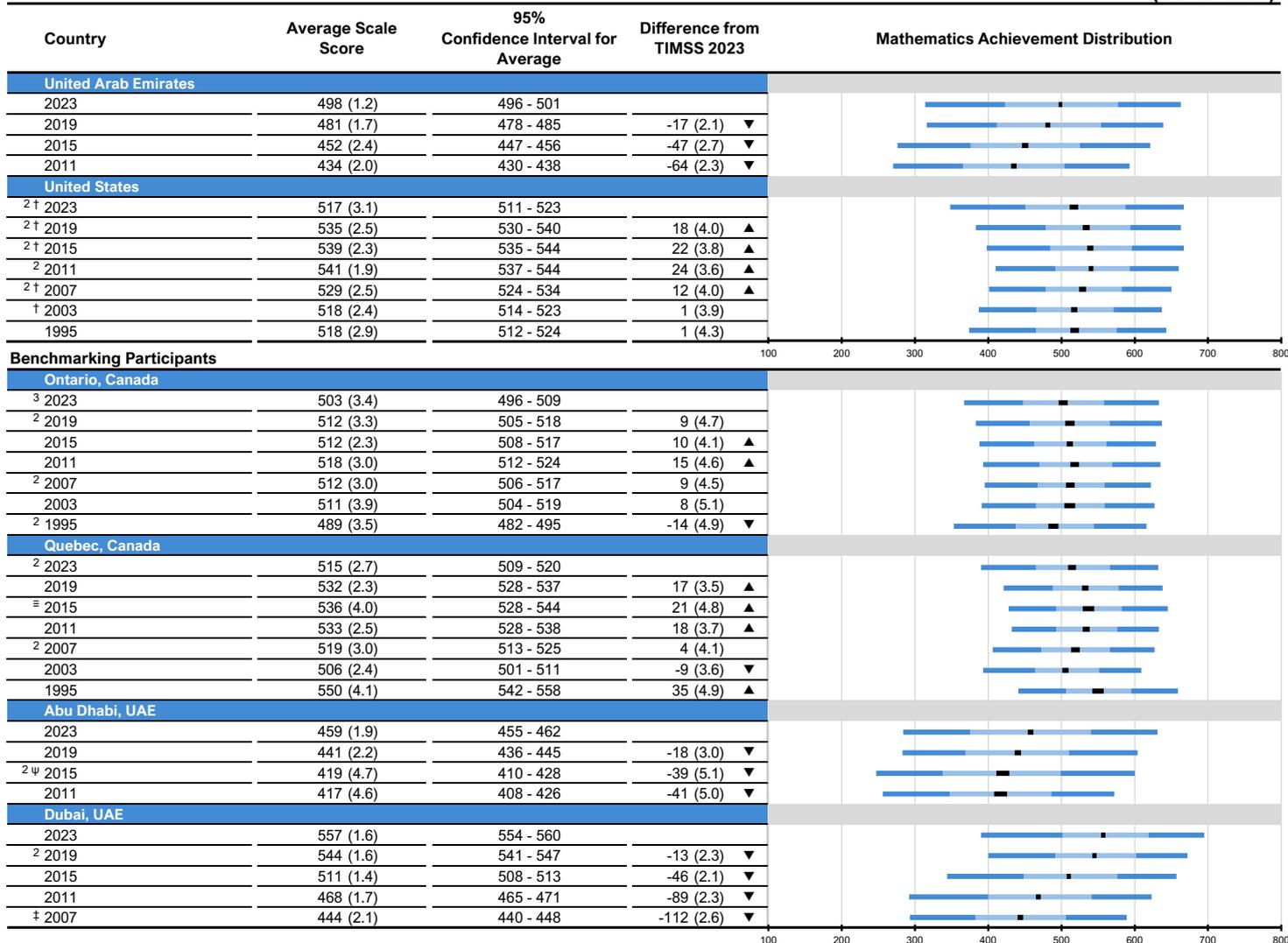


Exhibit 1.1.10: Trends in Average Mathematics Achievement and Scale Score Distributions

(Continued)



ψ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 15% but does not exceed 25%.

