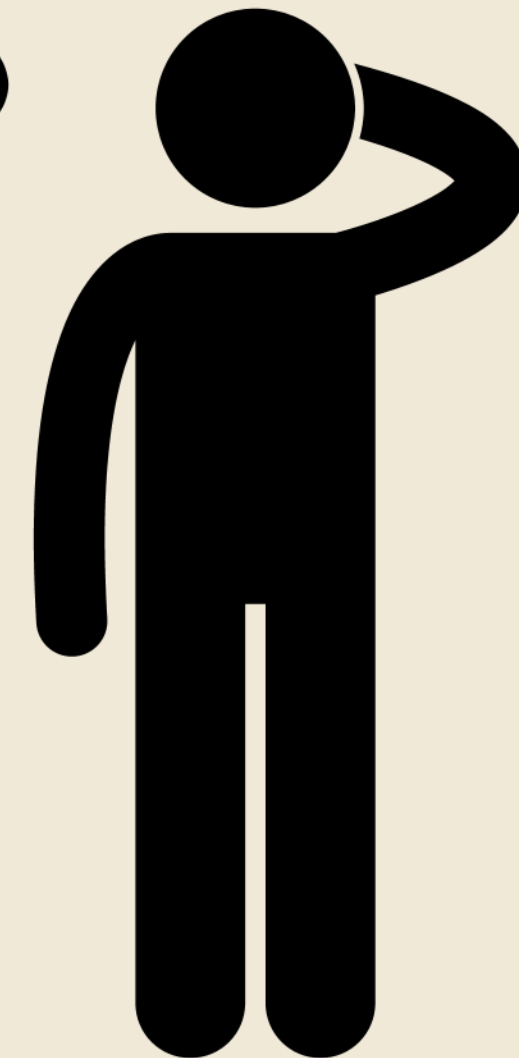
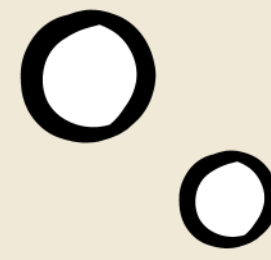


TRENDS IN THE NSC: 2008-2023

REBECCA SELKIRK

TRENDS?!!





Issues with “trends” in the NSC:

(as per, for example, Gustafsson & Taylor (2017))

Year to year changes in:

- Difficulty levels
- Repetition and dropout patterns
- Subject choice

Gustafsson, M. & Taylor, N. (2017). Generation and use of data in the Western Cape in the delivery of basic education. *Report for National Treasury’s Financial Management Improvement Programme (FMIP) III.*

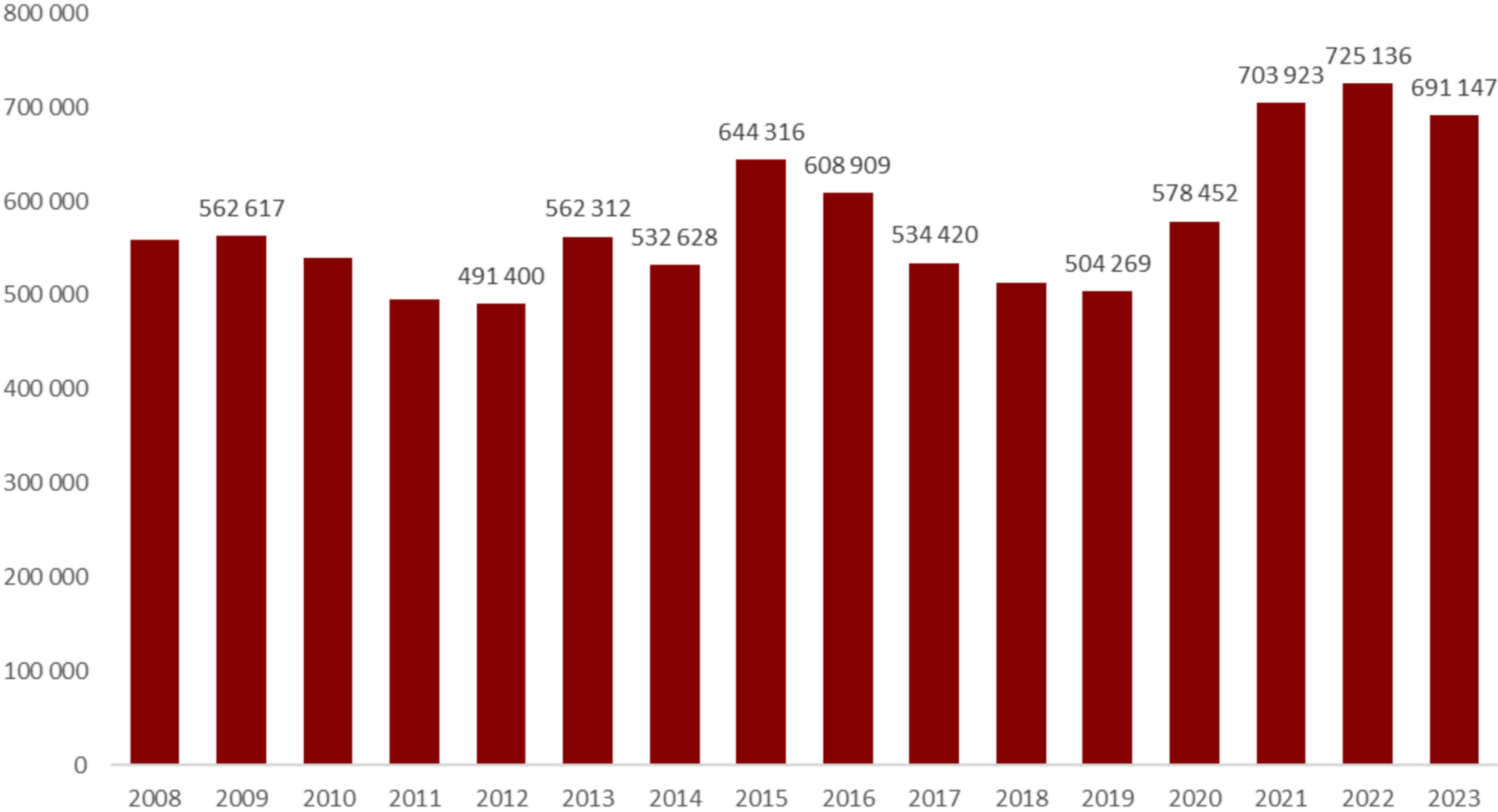
Data



- Learner-level NSC subject data 2008-2023
- SNAP data (1997-2016)

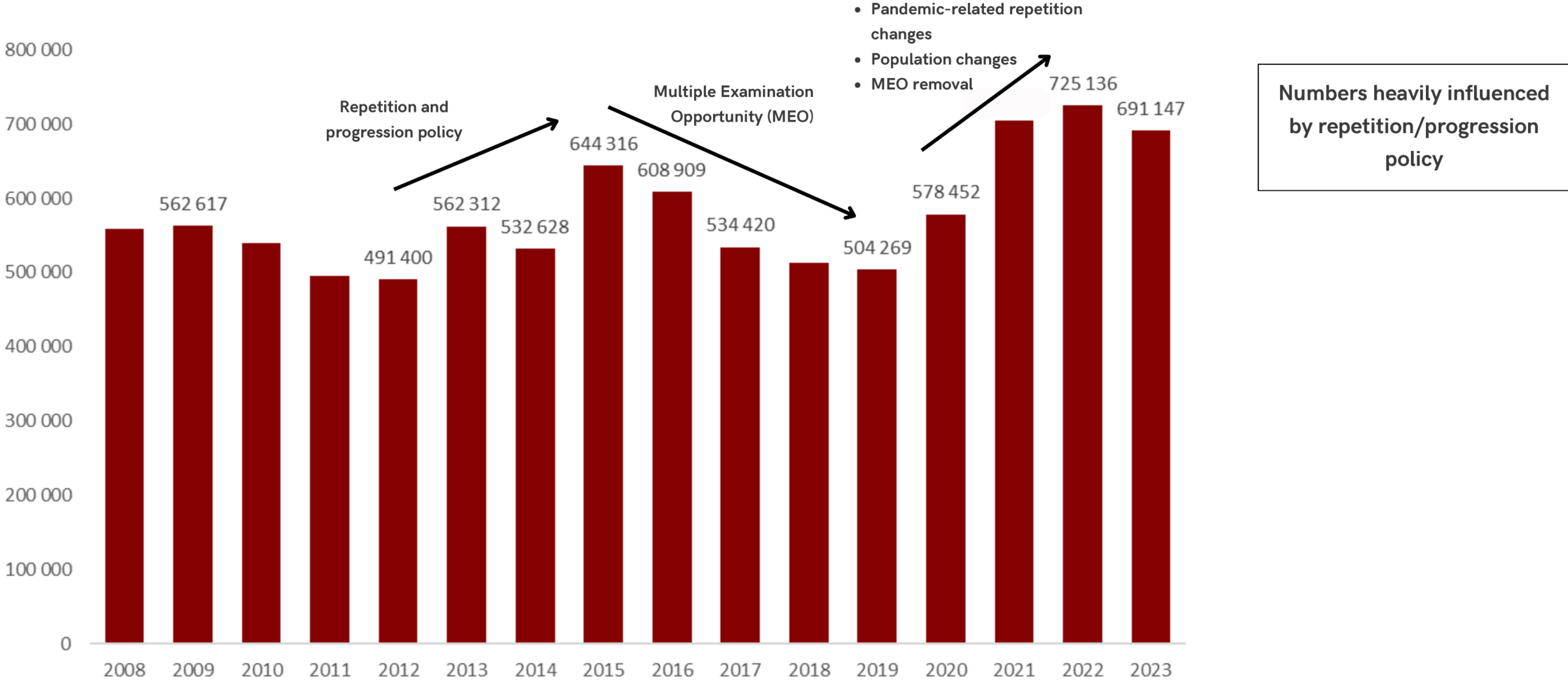
Note: NSC analysis is restricted to full-time candidates; and numbers may differ slightly from examination reports

Candidate numbers are currently at their highest levels



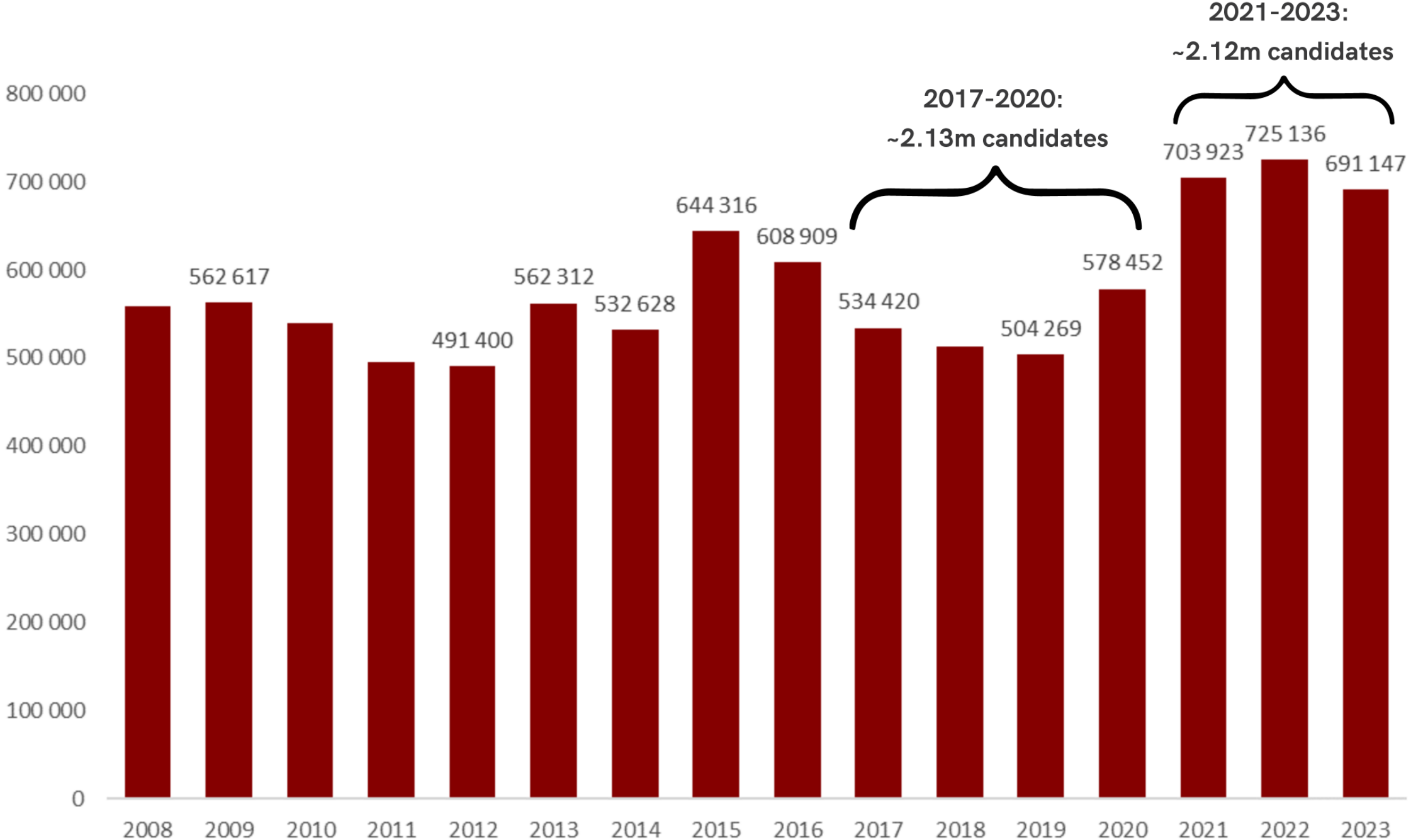
Full-time candidates writing the Nov/Dec NSC Examination

Candidate numbers are currently at their highest levels



Full-time candidates writing the Nov/Dec NSC Examination

Candidate numbers are currently at their highest levels



Scale is large:

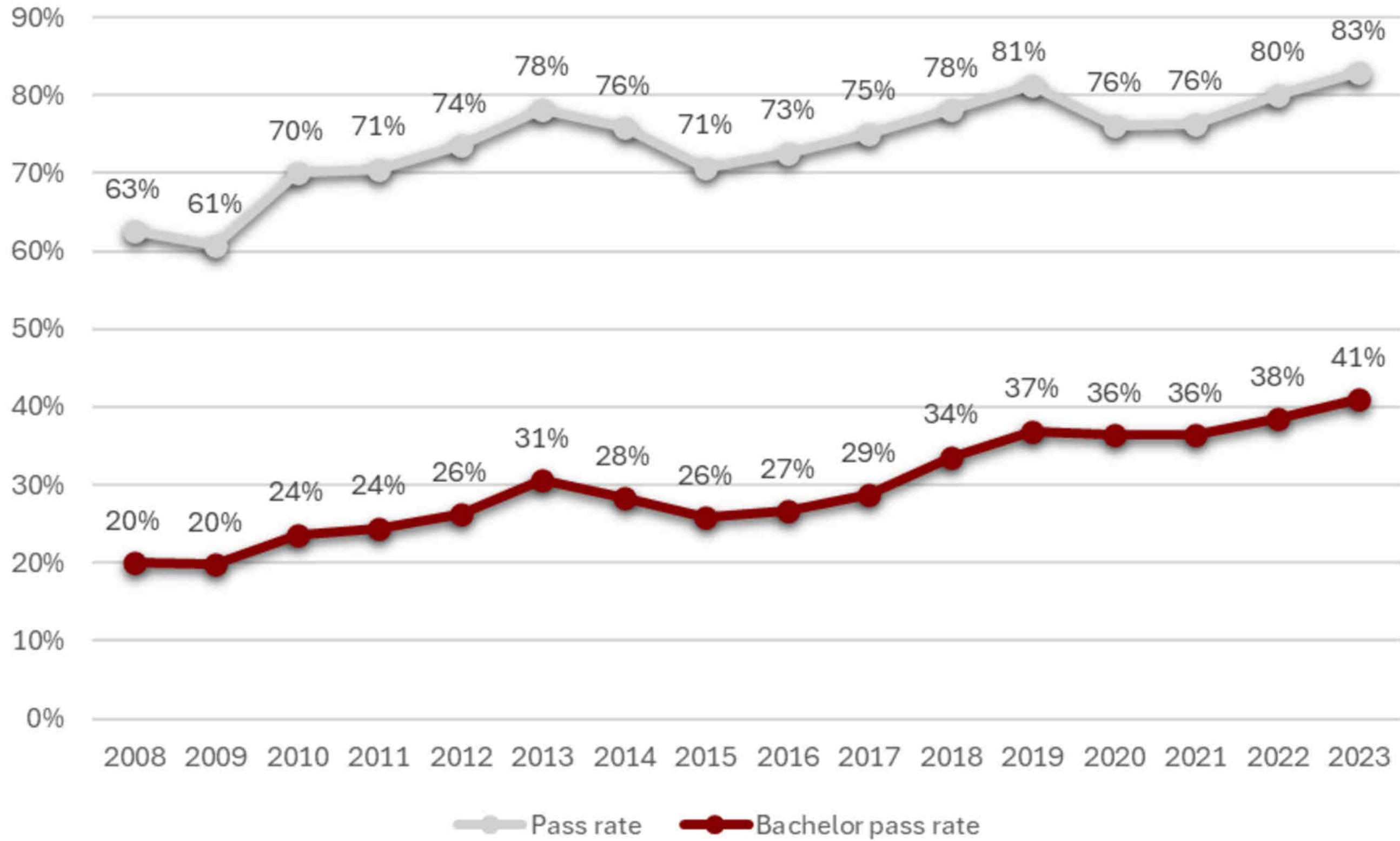
2022: 30% higher than 2013-2019 average enrolment

2021-2023 had an "extra year" of candidates*

Full-time candidates writing the Nov/Dec NSC Examination

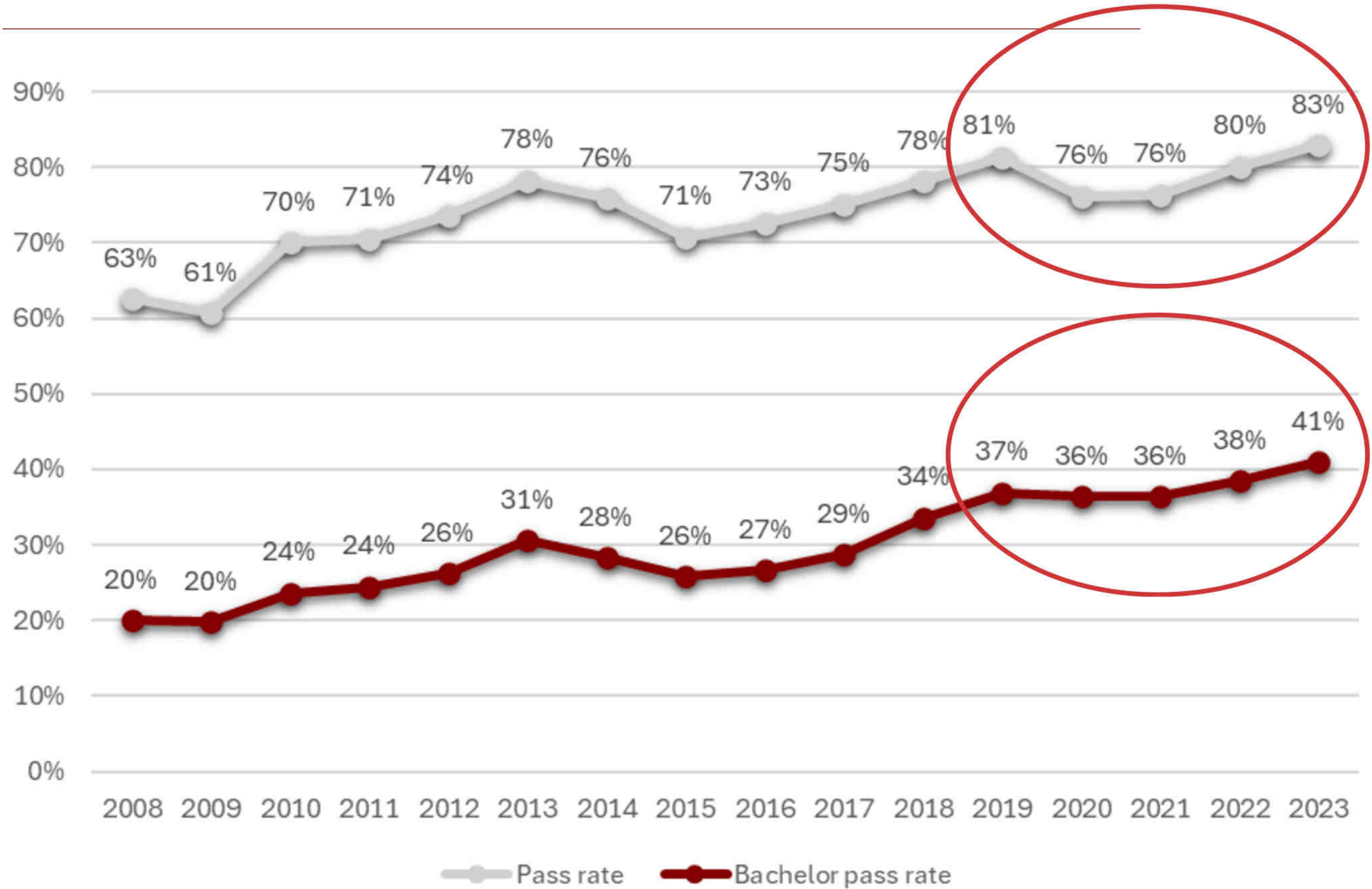
*Not taking into account MEO/part-time candidates

Pass and bachelor pass rates are at an all-time high



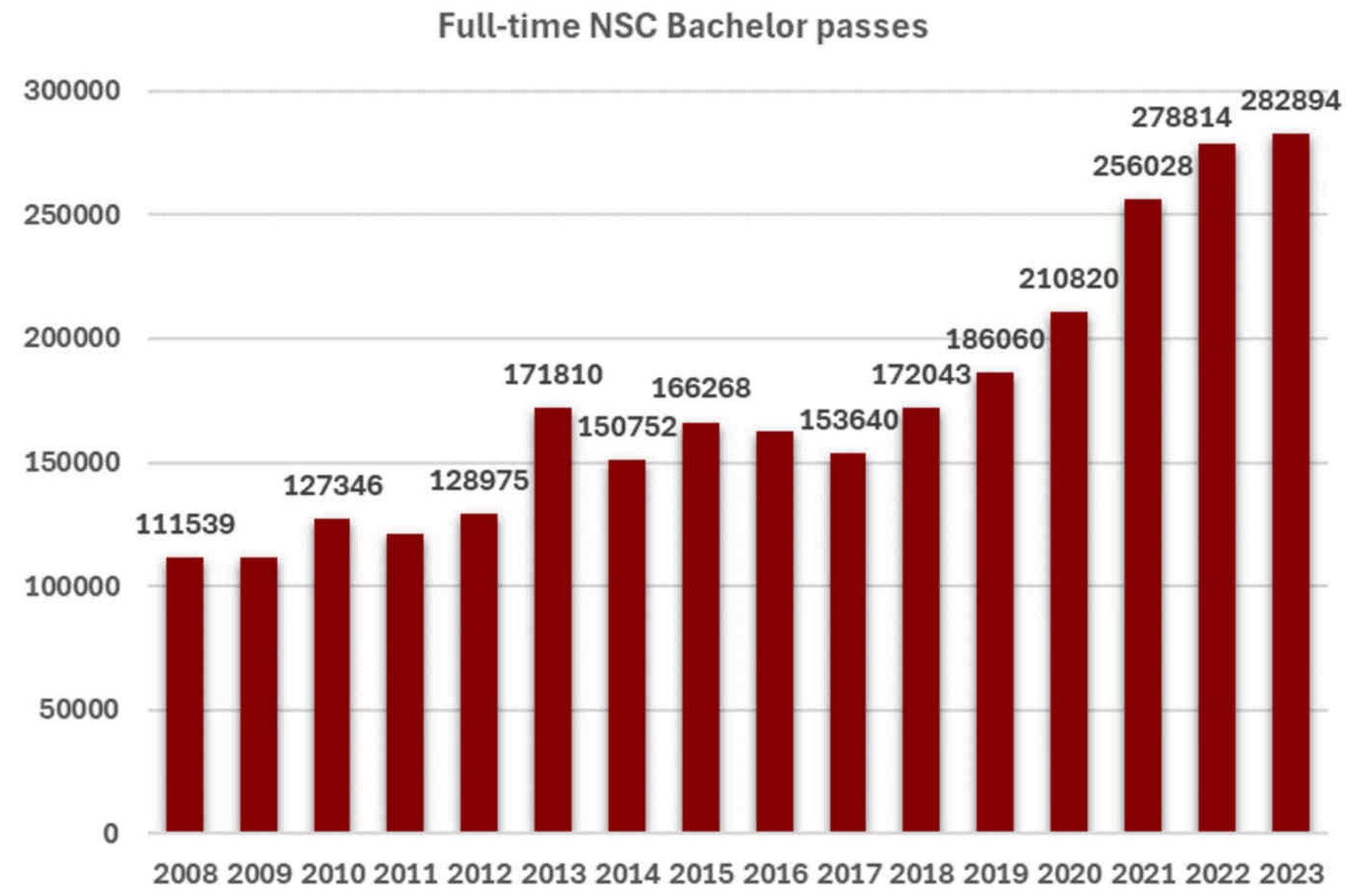
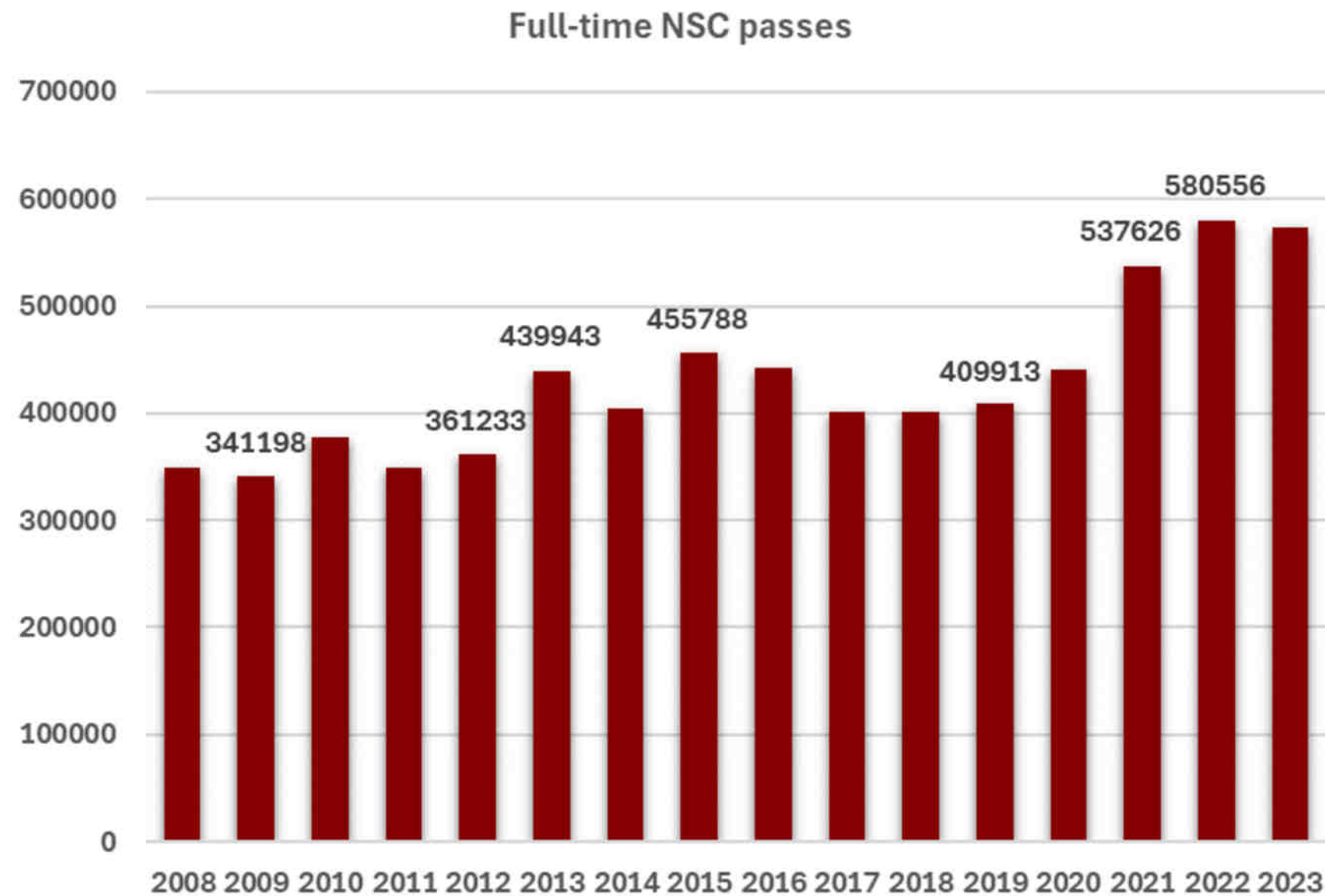
National full-time NSC pass and bachelor pass rates

Pass and bachelor pass rates are at an all-time high



National full-time NSC pass and bachelor pass rates

The combined result is substantially more passes and bachelor passes:

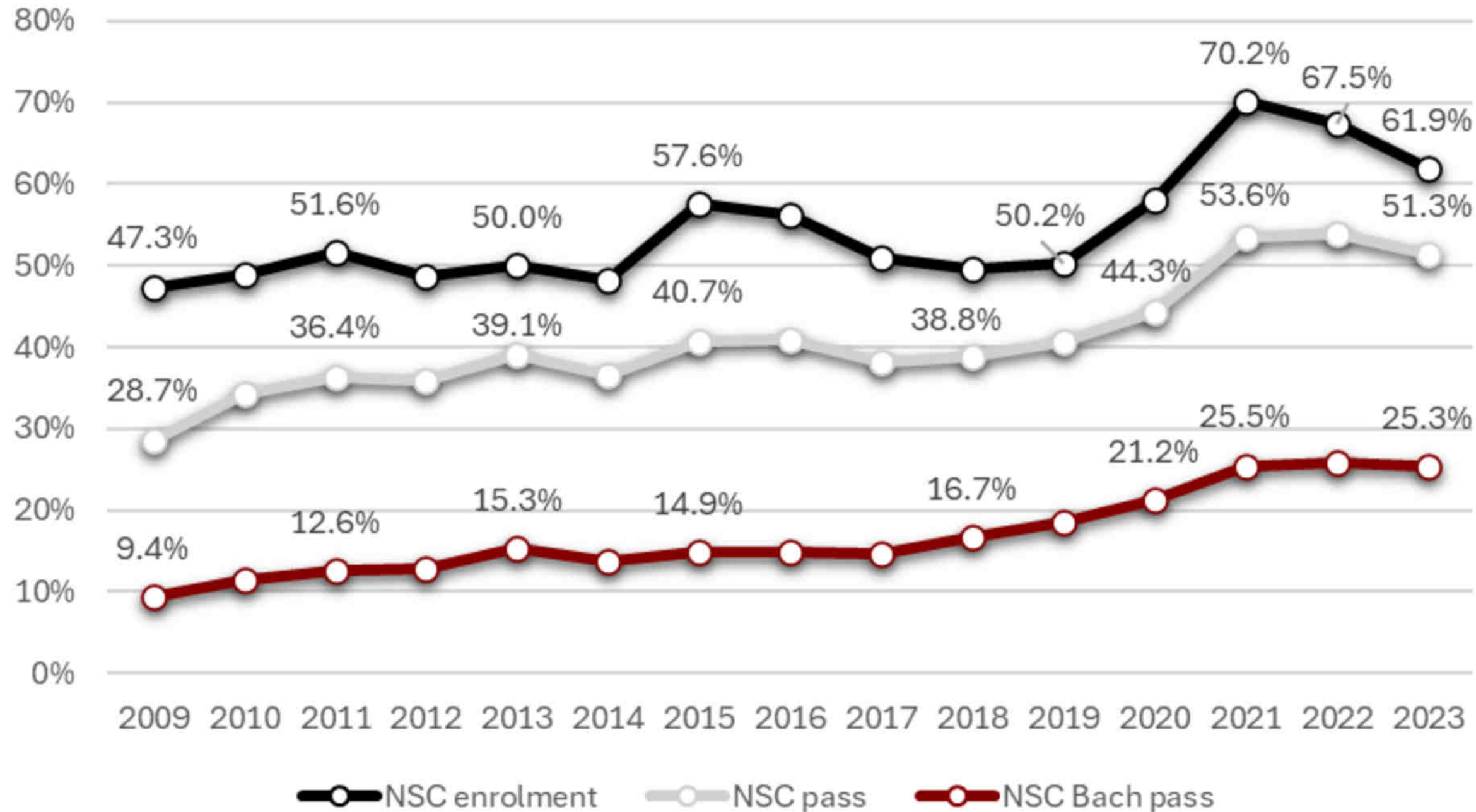


The 4 "pandemic" NSC cohorts (2020-2023) achieved:

- ~21 000 more passes than the preceding 5 years (2015-2019)
- ~37 000 more bachelor passes than the preceding 6 years (2014-2019)

This is good news for the “efficiency” of the SA school system

Grade 12 full-time numbers as a proportion of Grade 2 enrolment



Example calculation:

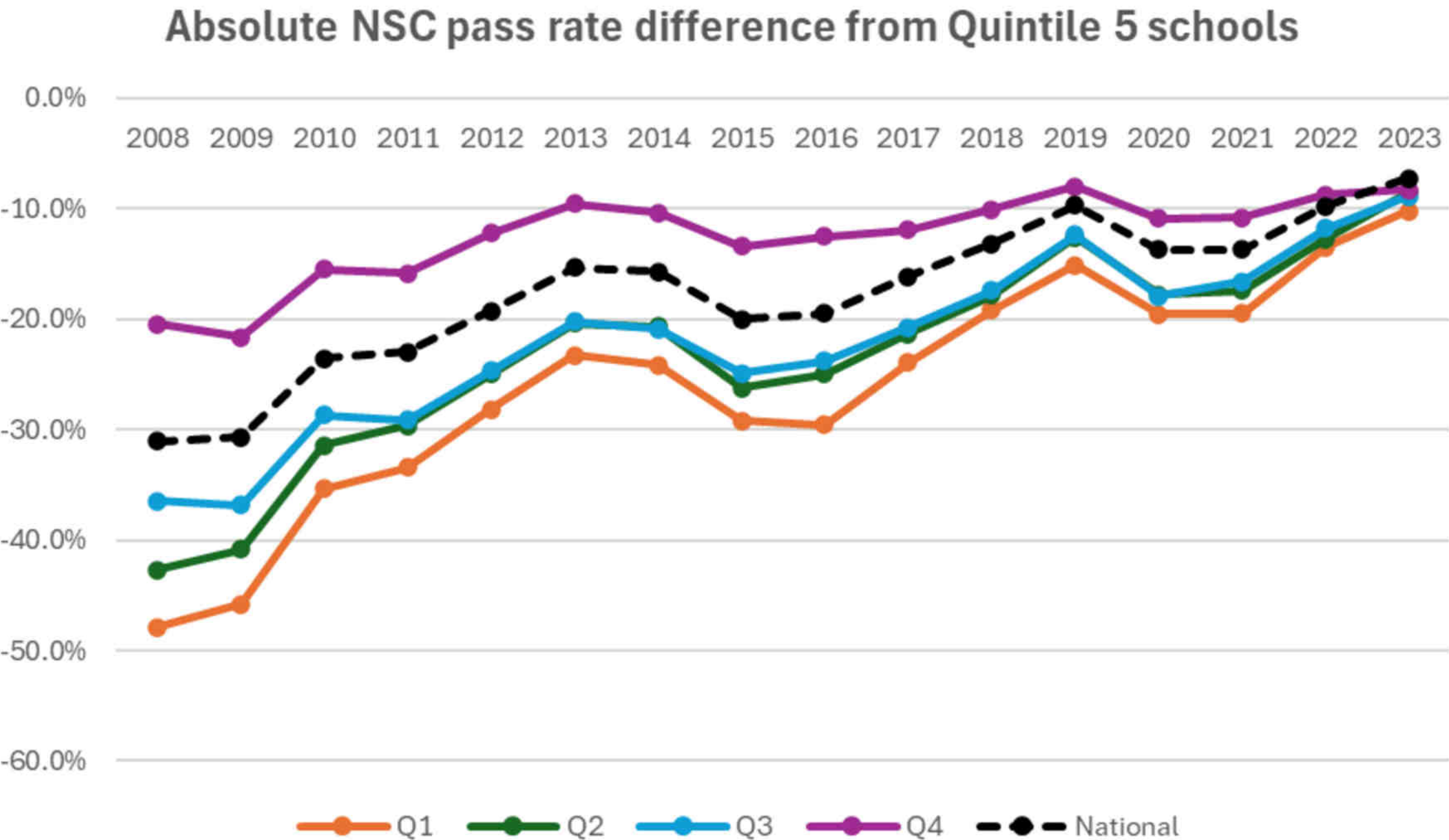
$$\text{NSC enrolment proportion (2023)} = \frac{\text{Number of full-time NSC candidates (2023)}}{\text{Number of Grade 2 learners (2013)*}}$$

Why Grade 2?

- Somewhat mitigates effect of Grade 1 repetition rate fluctuations
- But still an imperfect method (hence, “efficiency”)

**Source: own calculations using Grade 2 SNAP data 2008 is not shown due to unreliable 1998 SNAP data*

Equity has also improved substantially since 2008



Note: Independent schools and schools with missing quintile information are not shown, but are included in the "National" gap

E.g. Quintile 1 vs Quintile 5 pass rates:

NSC PASS RATE	Q1	Q5	GAP (Q5-Q1)
2008	45.8%	93.7%	-47.9%
2013	70.3%	93.6%	-23.3%
2019	75.9%	91%	-15.1%
2021	70.5%	90%	-19.5%
2023	79.9%	90.2%	-10.2%

Bachelor pass rate gaps have also narrowed substantially over time, but currently remain more unequal than pass rate gaps.



At face value, everything is great!

Over the period 2008-2023:

- More youth reached and wrote Matric as full-time candidates
- More passes
- More bachelor passes
- Equity improvements
- Complete recovery from the pandemic losses



But is it really?

everything is great!

Over the period 2008-2023:

- More youth ...

Issues with "trends" in the NSC:
(as per, for example, Gustafsson & Taylor (2017))

Year to year changes in:

- Difficulty levels
- Repetition and dropout patterns
- Subject choice

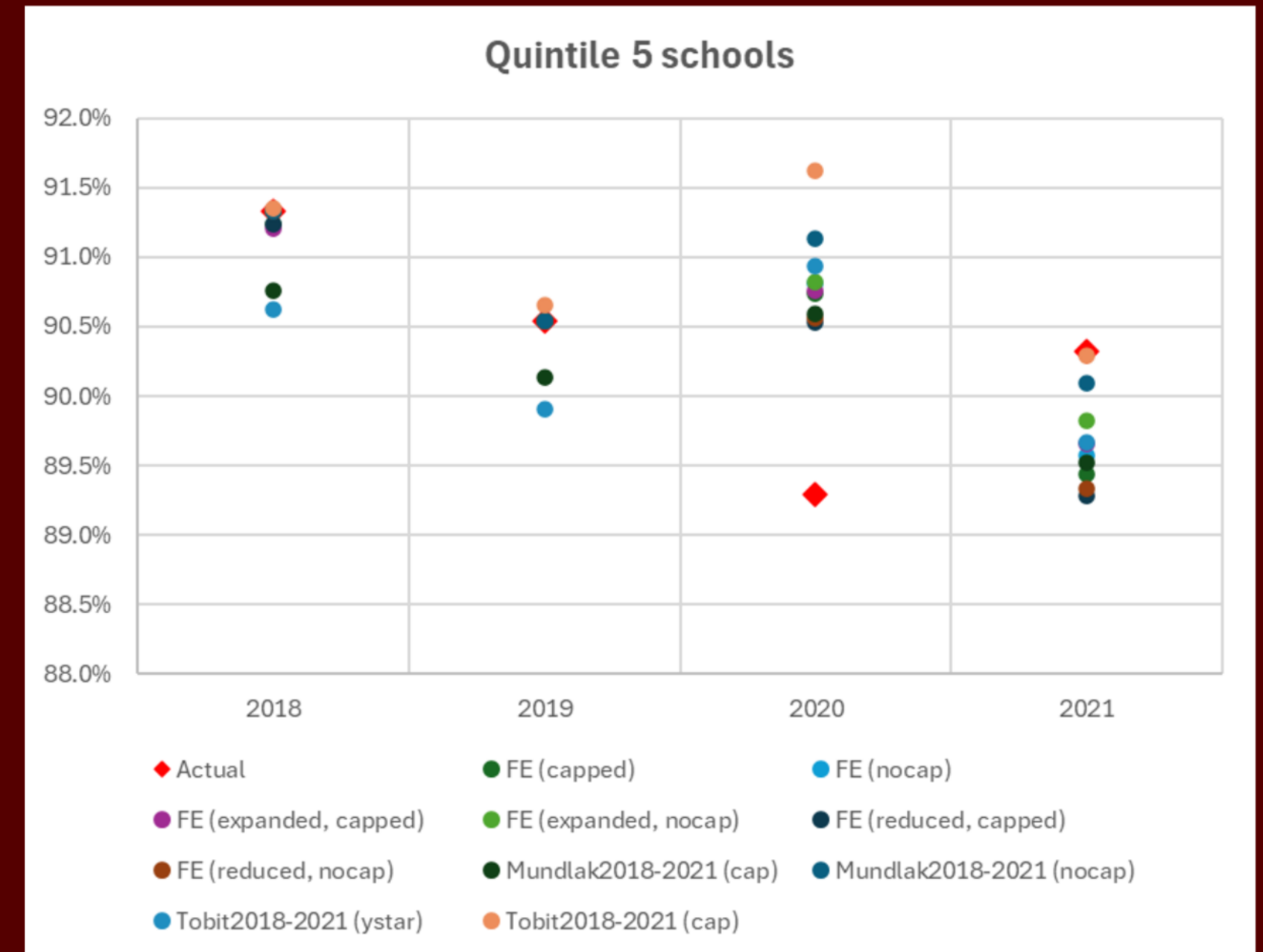
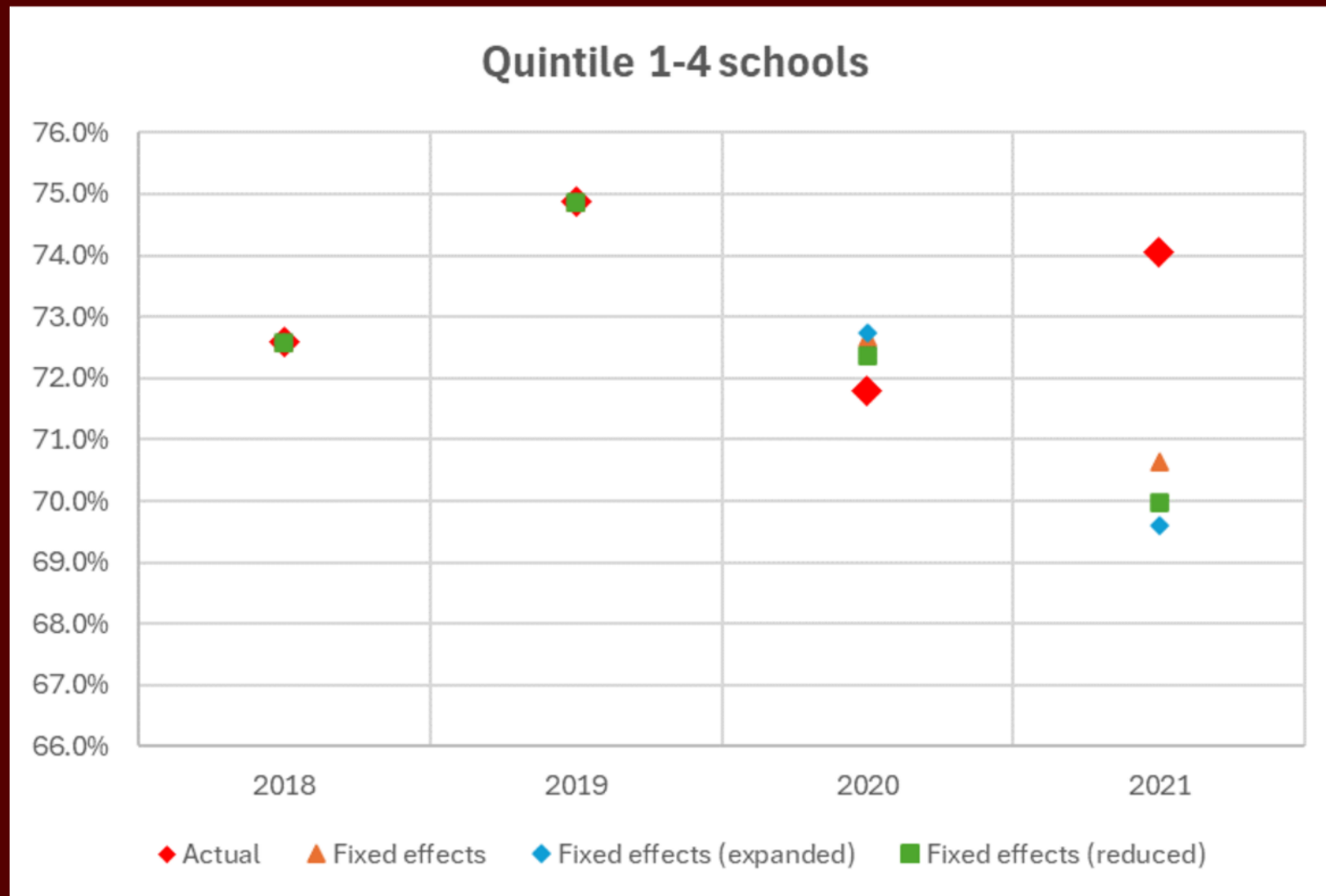


Gustafsson, M. & Taylor, N. (2017). Generation and use of data in the Western Cape in the delivery of basic education. Report for National Treasury's Financial Management Improvement Programme (FMIP) III.

recovery from the pandemic losses

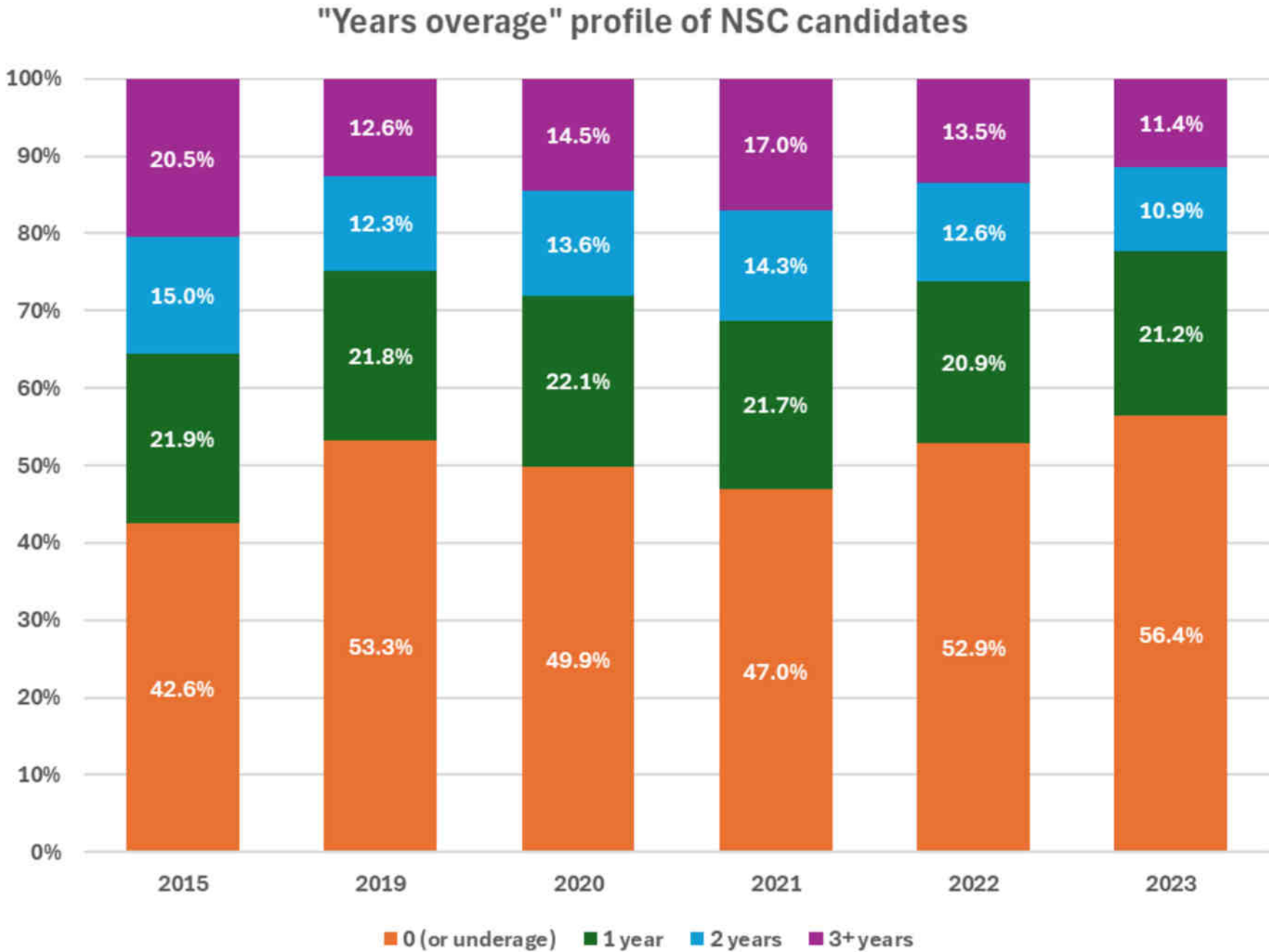
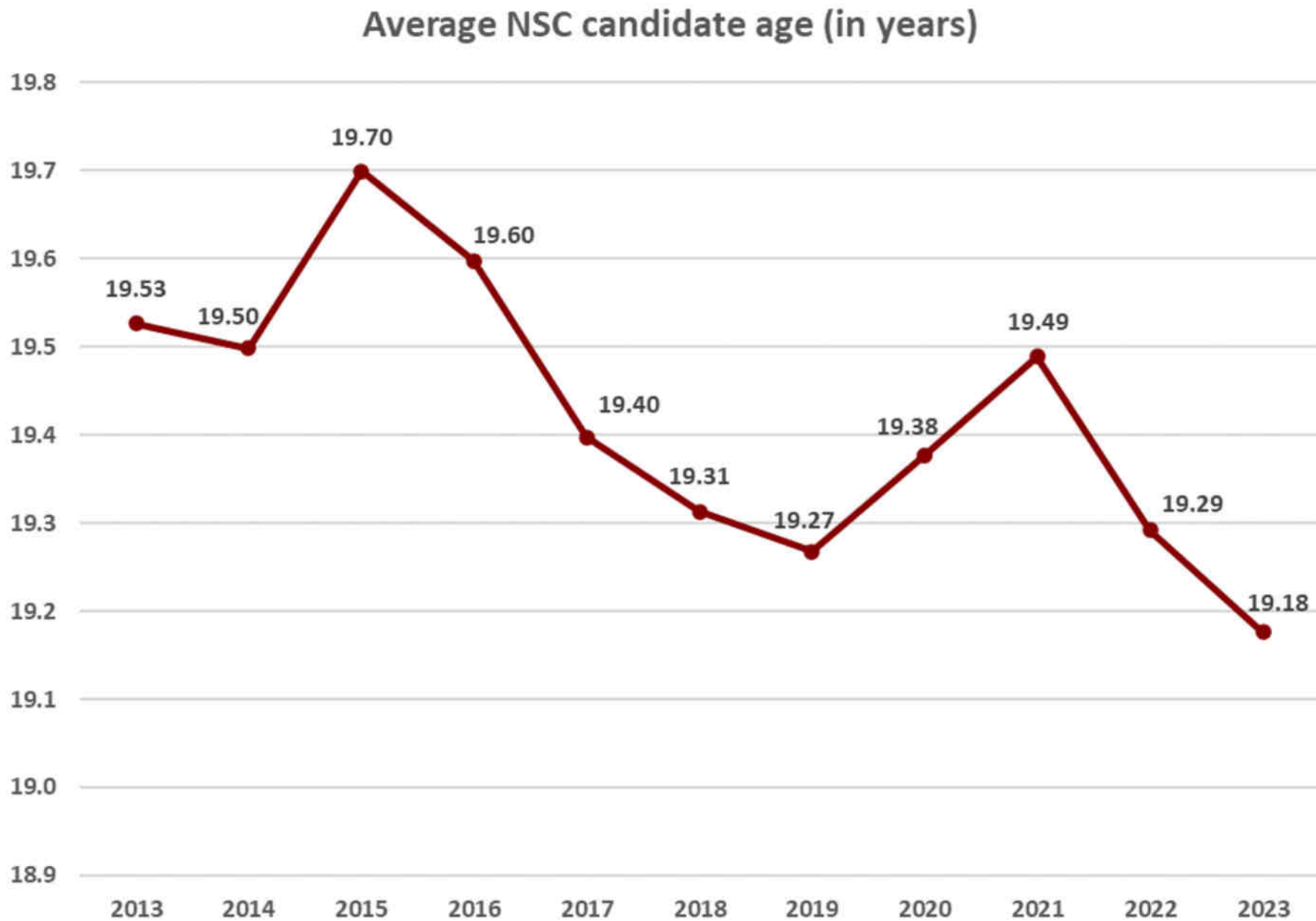
Analysis of Western Cape NSC results suggest that there may have been leniency in 2021 (especially in lower SES schools)

Predicted vs actual Western Cape NSC pass rates*: 2018-2021



*Estimates from own school-level analysis of CEMIS, WC Systemic Test and NSC data (Selkirk, forthcoming). The models regressed schools' NSC pass rates on their Grade 11 repetition rates, prior academic achievement, and various school and learner characteristics. The estimates obtained for the 2018/19 sample were used to predict 2020/21 pass rates.

Changes to repetition patterns can be seen in age statistics

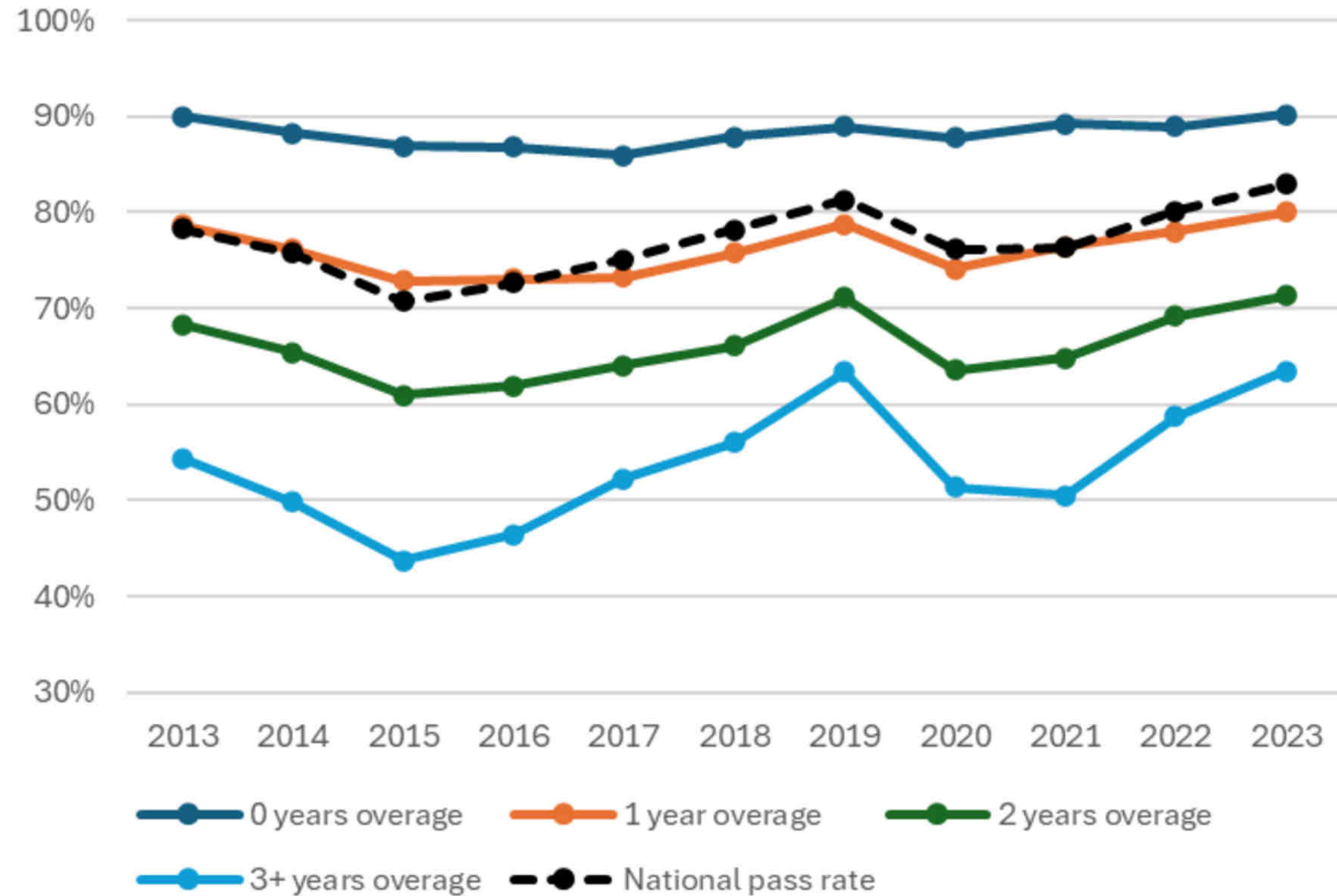


Note: 2008-2012 is not shown due to incomplete age data. 2013-2016 age data is also not complete, but missing less than 5% of candidates' ages.

2023 has the lowest average age on record, and the highest proportion of appropriately-aged candidates

Overage = 19 years or older in the December of the year in which the NSC examination was written

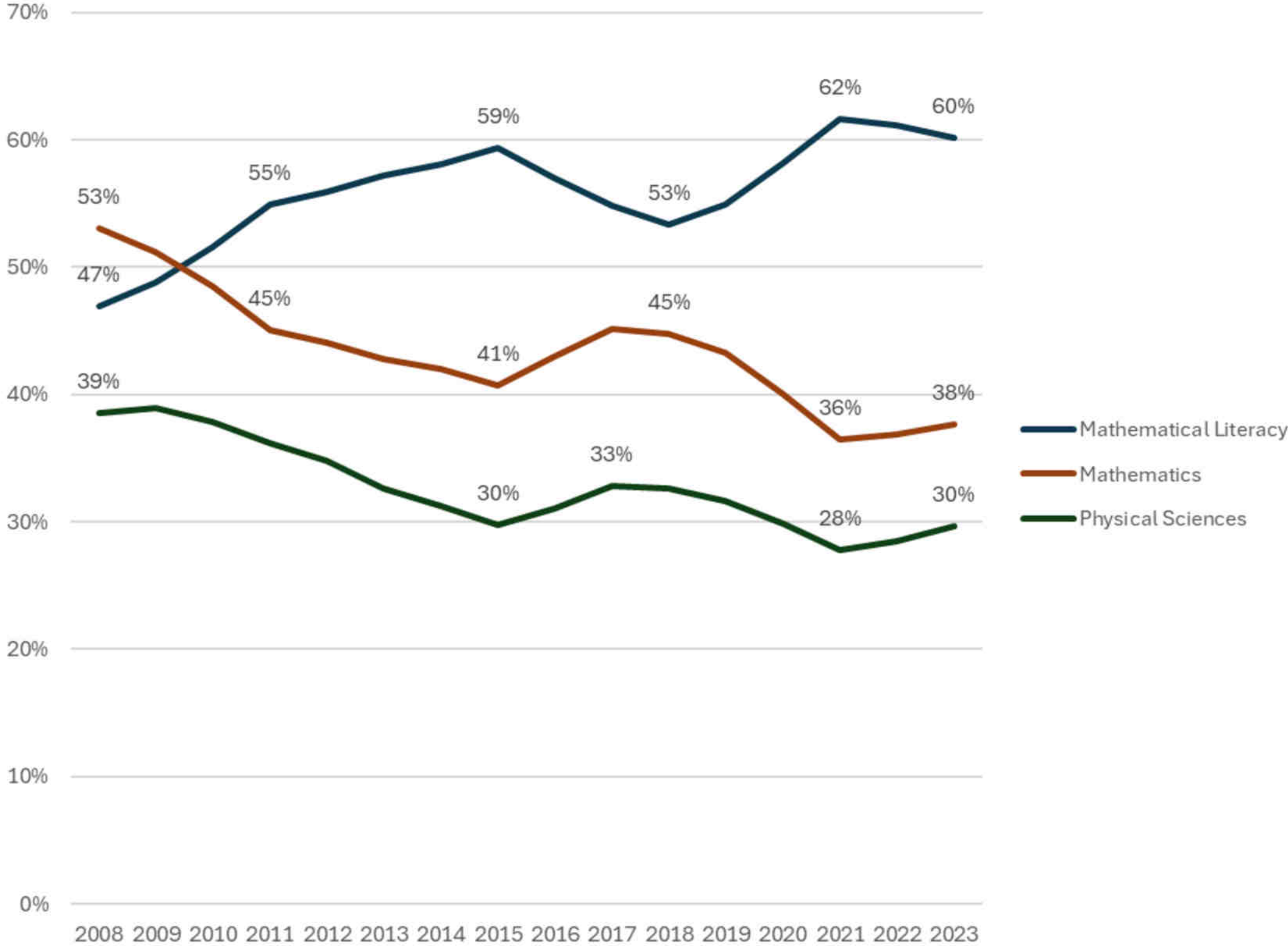
Younger learners have higher achievement



National full-time NSC pass rates by overage status

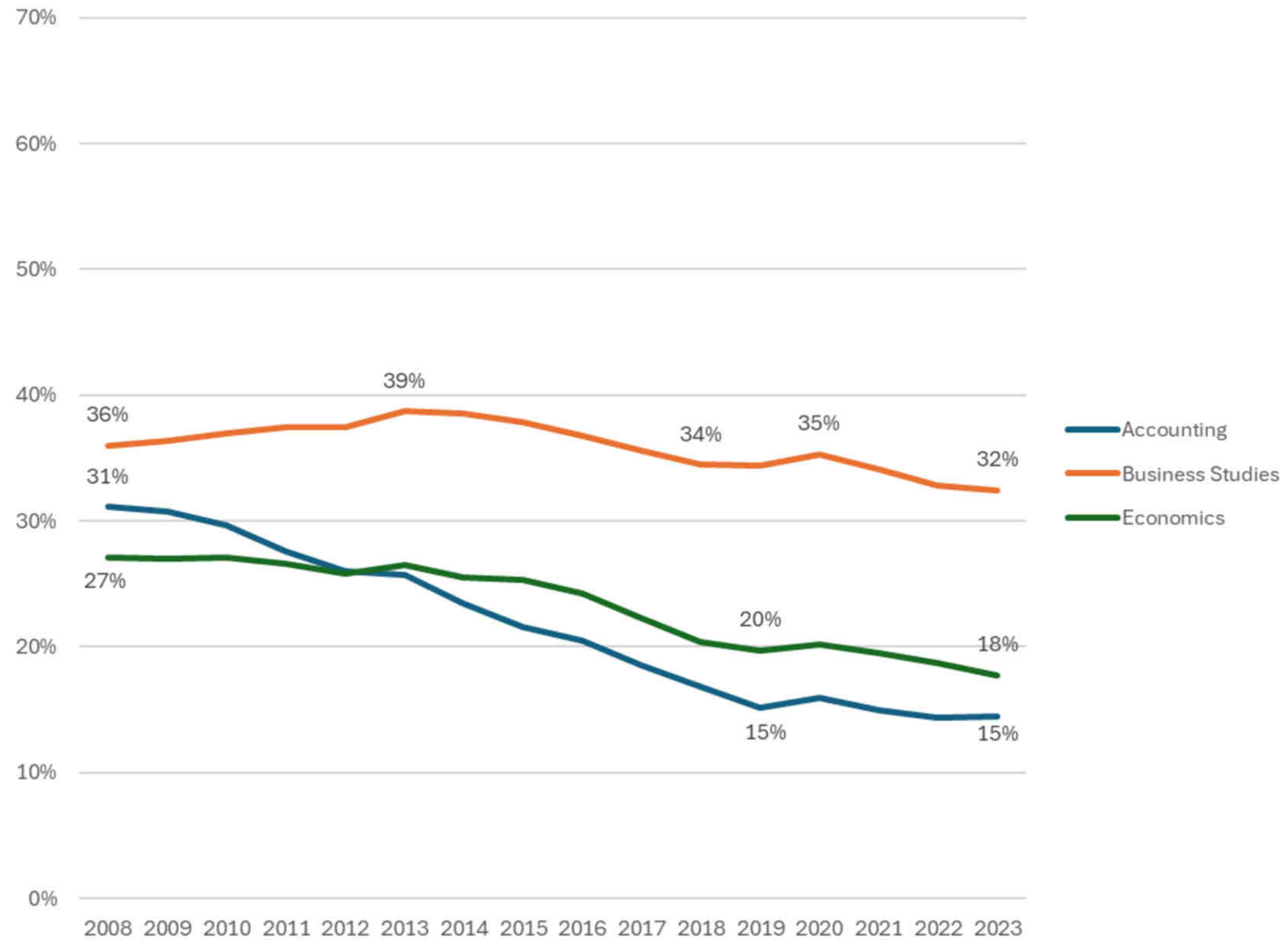
SUBJECT CHOICE

Mathematics and Physical Science choice have been declining



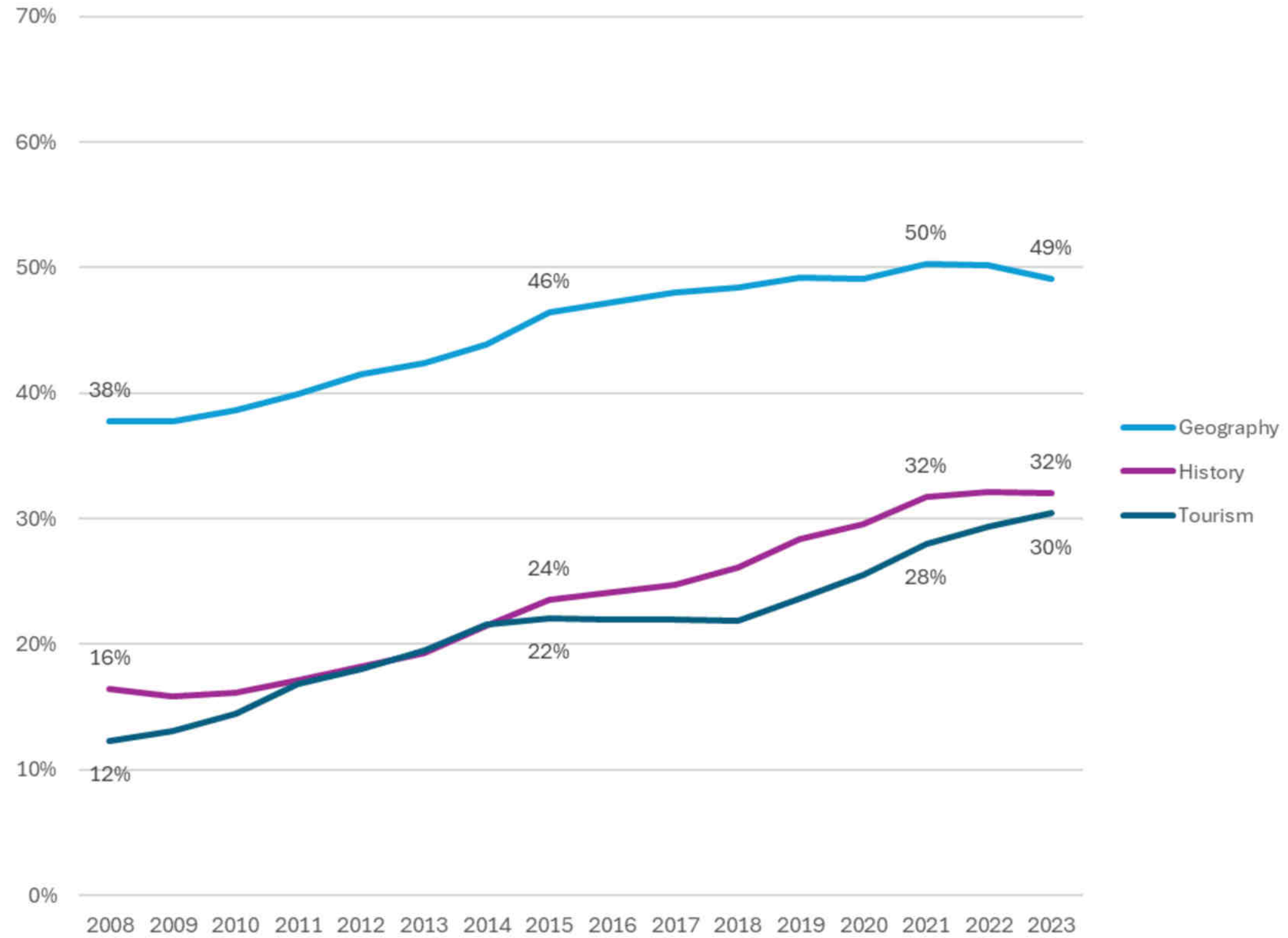
National full-time NSC subject choice

Commerce subjects have also fallen in popularity



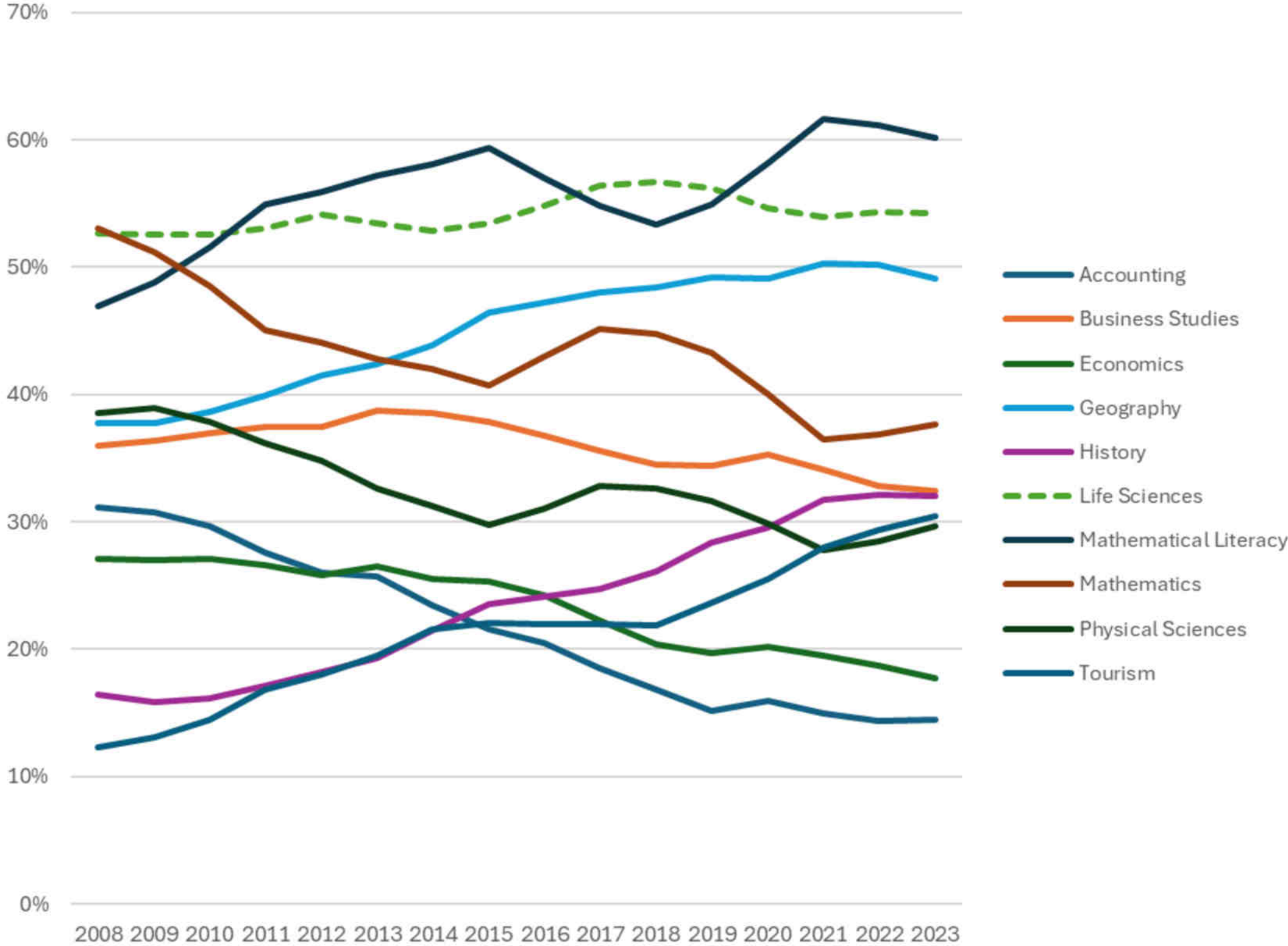
National full-time NSC subject choice

Social Sciences and services have increased in popularity



National full-time NSC subject choice

Life Sciences has remained the most popular non-compulsory subject



National full-time NSC subject choice

This has changed the “type” of bachelor passes the system produces

Percentage of NSC Bachelor passes with specified subject:

	2013	2019	2021	2023	2013-2023 change	2019-2023 change
Tourism	12%	22%	27%	28%	17%	6%
Mathematical Literacy	43%	47%	53%	52%	9%	6%
Economics	22%	16%	18%	17%	-5%	1%
History	17%	27%	29%	28%	11%	1%
Business Studies	38%	32%	35%	32%	-7%	0%
Accounting	30%	17%	18%	17%	-12%	0%
Geography	39%	46%	44%	46%	7%	0%
Life Sciences	57%	58%	55%	56%	-1%	-2%
Physical Sciences	42%	39%	35%	36%	-6%	-3%
Mathematics	57%	52%	46%	46%	-11%	-6%

The increase in overall Bachelor pass numbers means that absolute numbers still increased in all these subjects.

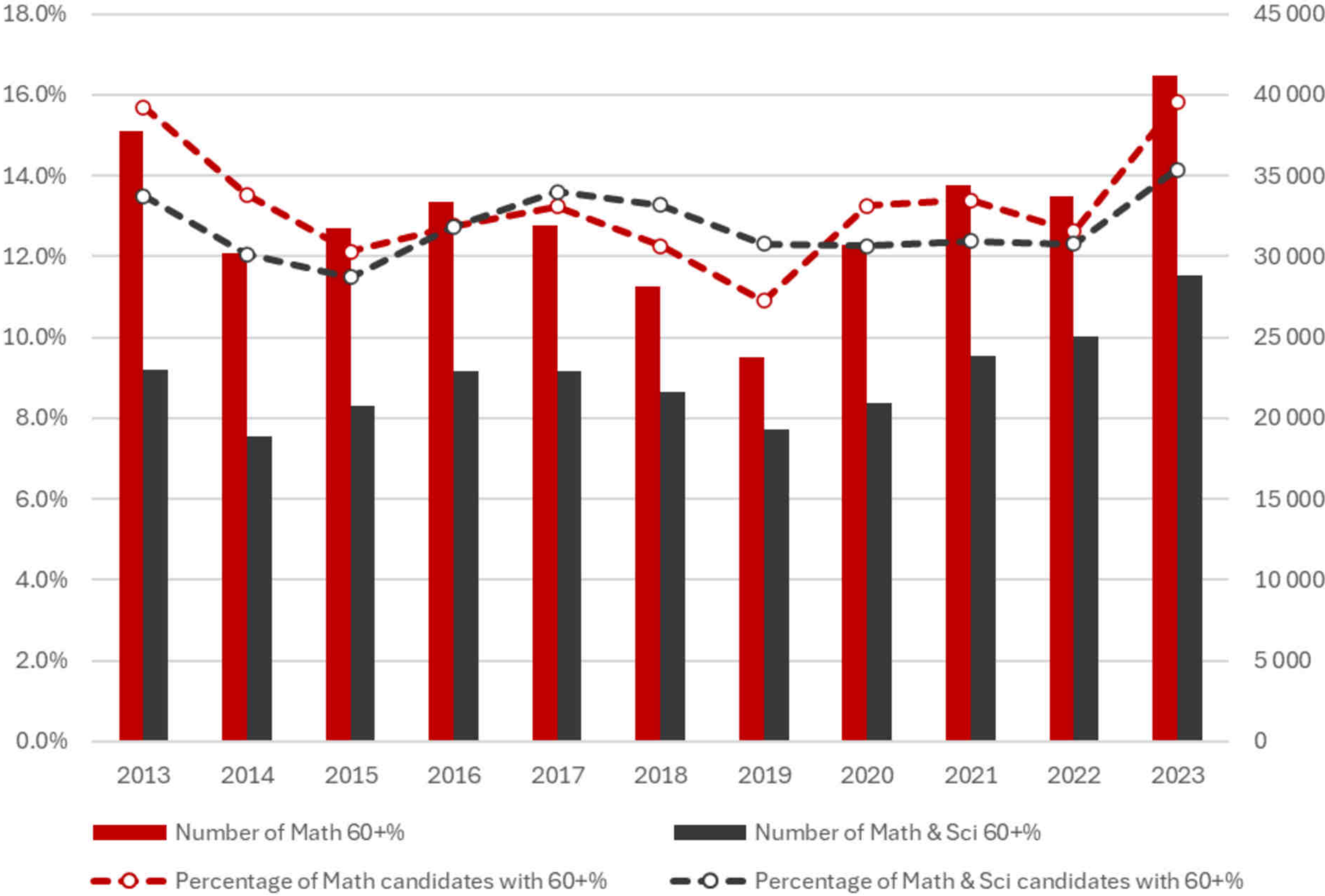
E.g. Bachelor passes with Mathematics as a subject:

2019 - 97,294

2023 - 130,007

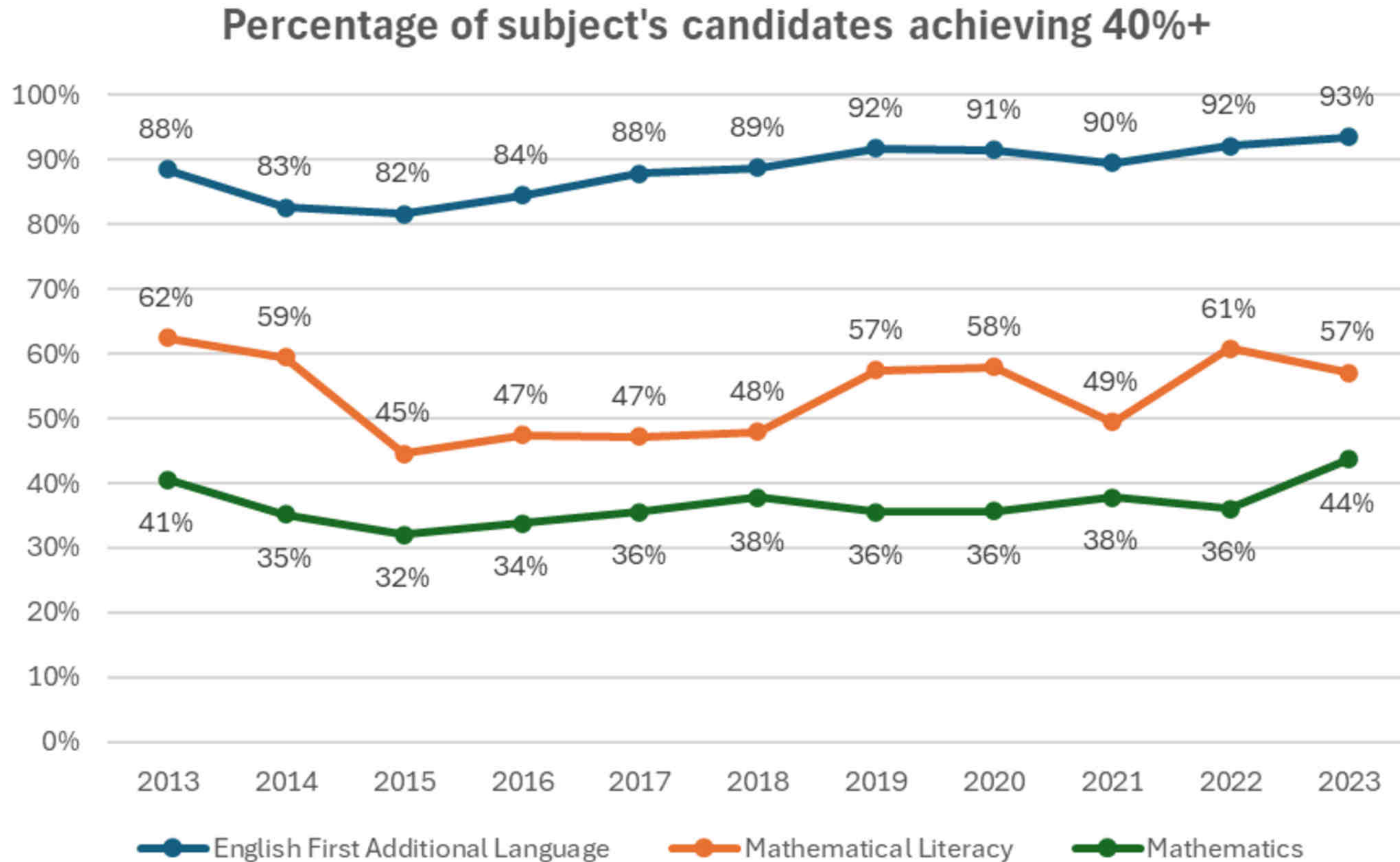
= 32,713 increase, **but** far below the national increase of 96,834.

High achievement in STEM subjects hasn't increased substantially

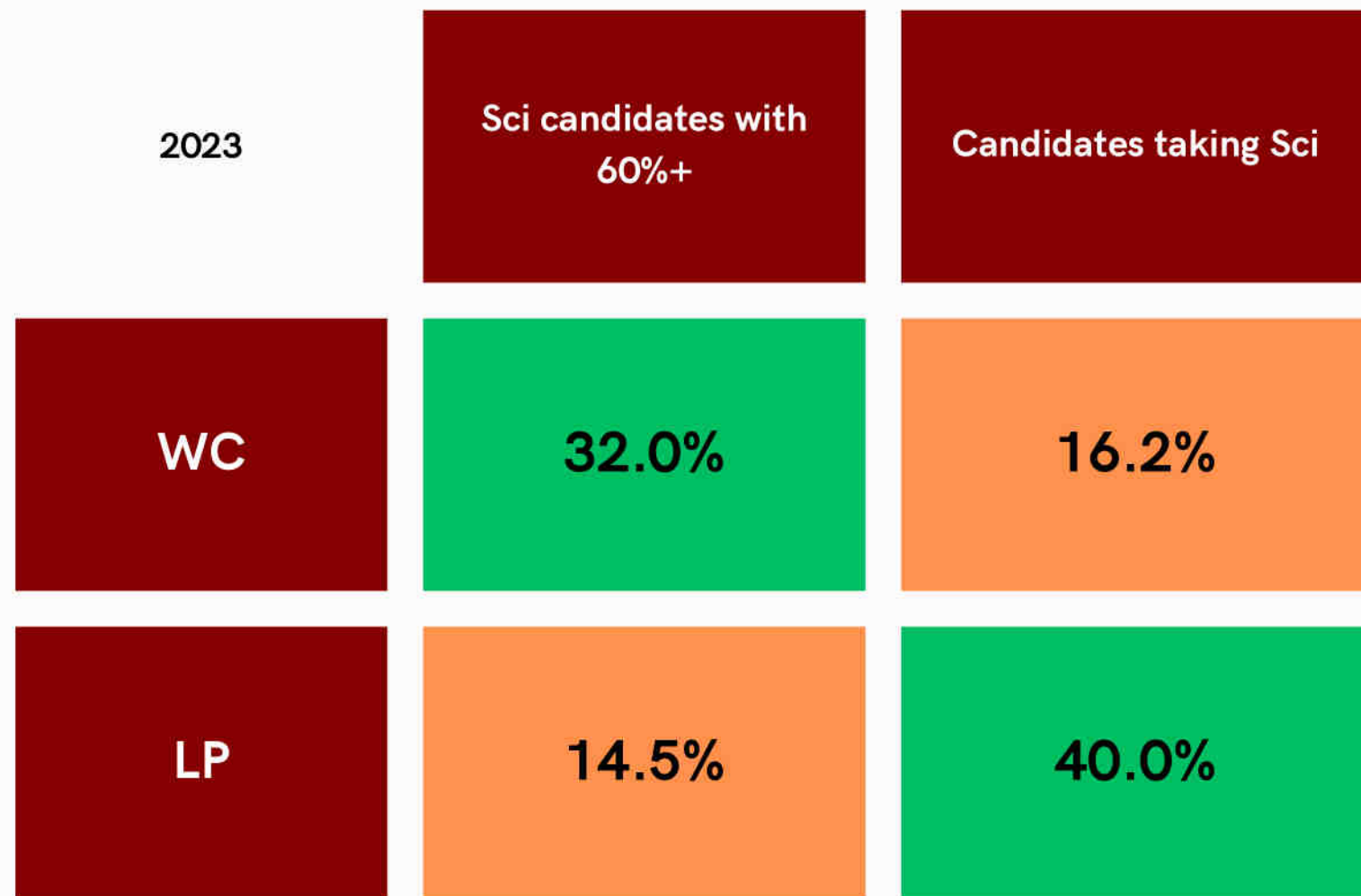


National full-time NSC high achievers

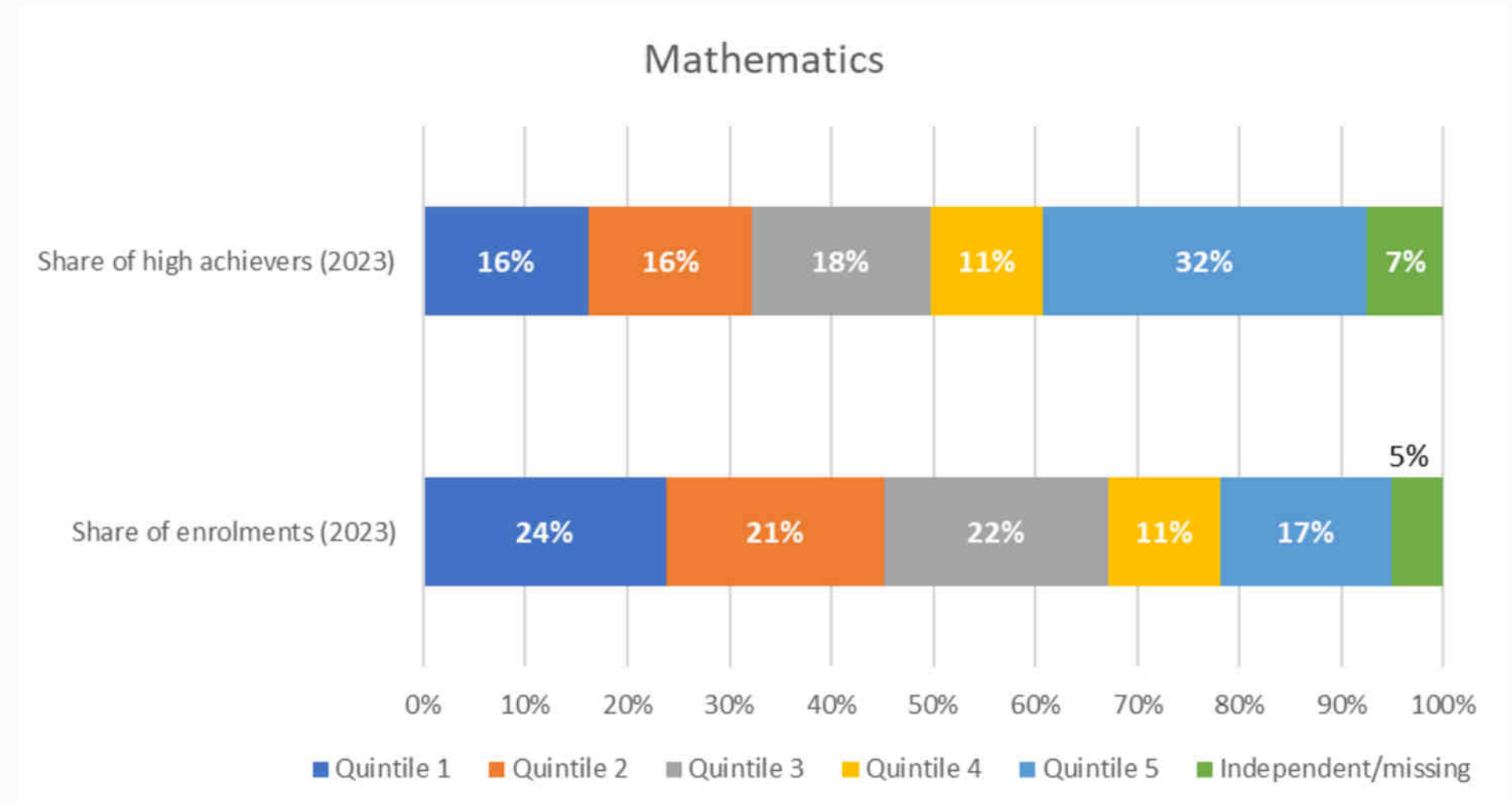
And overall Mathematics achievement remains extremely poor



Substantial variation exists by province and quintile

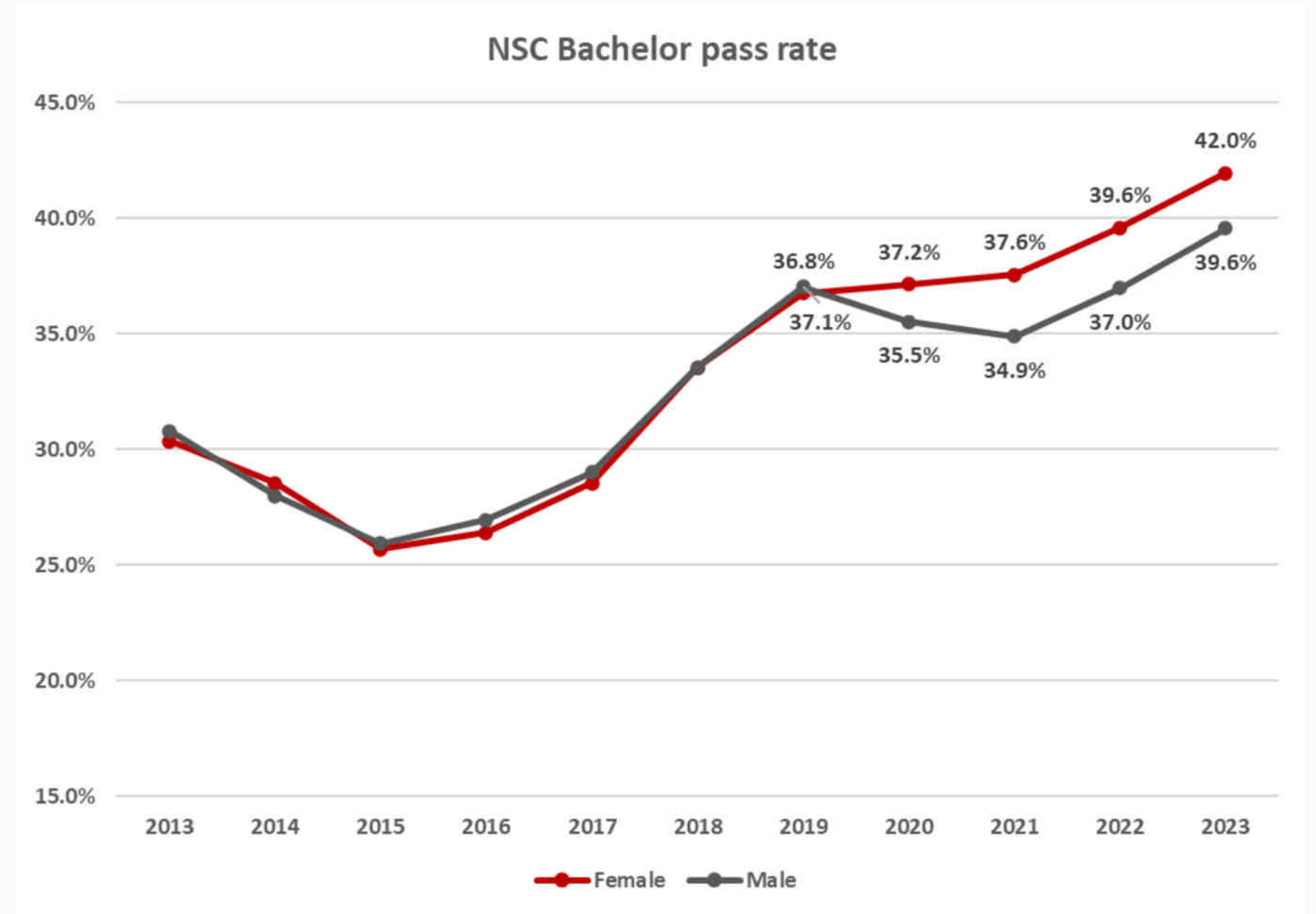
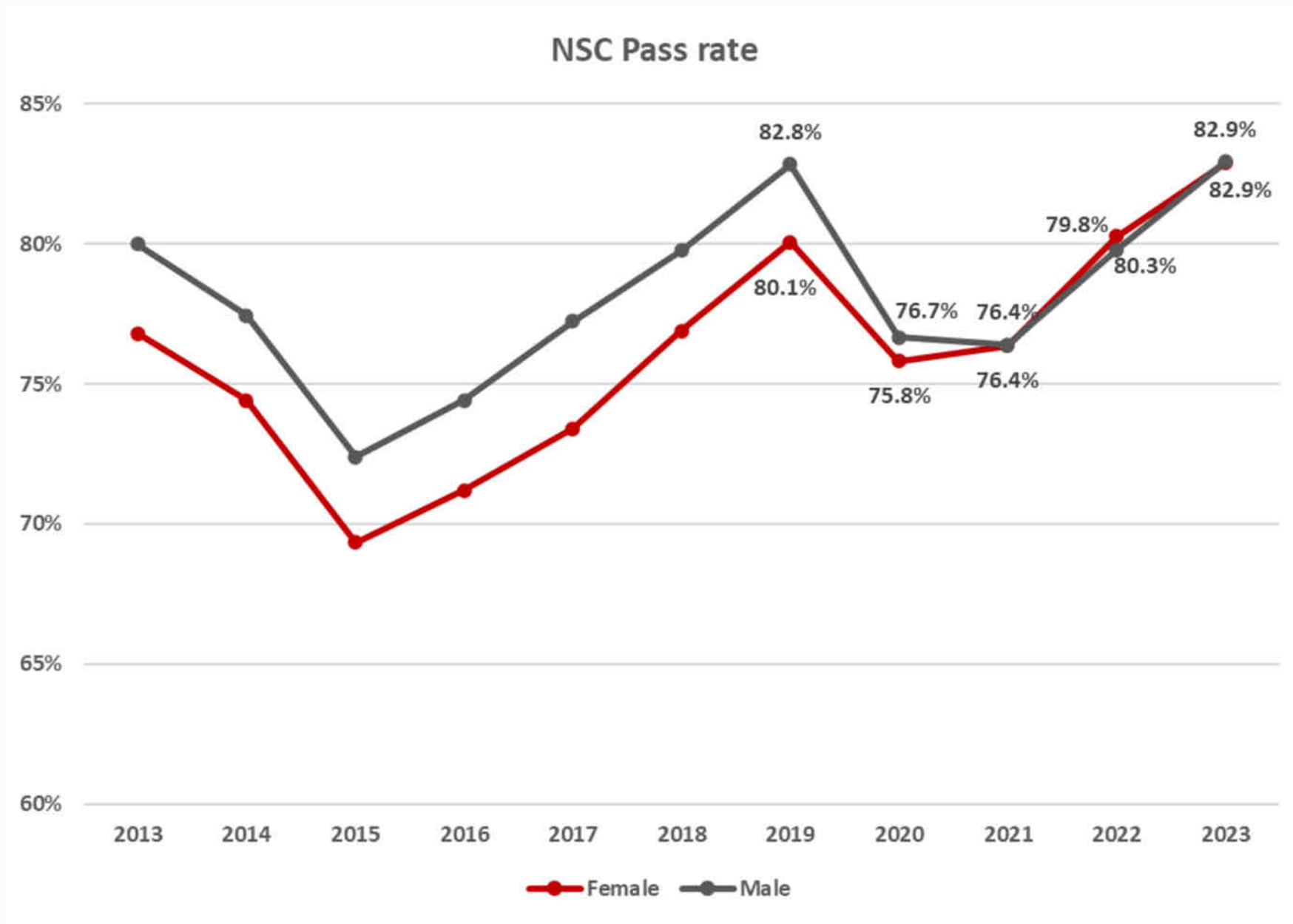


Provincial differences in achievement and subject choice



Quintile differences in achievement and enrolment share

Since 2020, gender patterns have also changed



National full-time NSC pass rates by gender

To summarize,

At face value, NSC stats look great

with massive increases in the number of passes and bachelor passes, and a return to pre-pandemic pass rates

The age profile of NSC candidates has improved

aided by more lenient promotion requirements during the pandemic

Leniency may have existed from 2021 onwards

but requires further investigation - COVID learning losses and recovery are relatively unknown at secondary level

The long term trend is movement away from STEM and commerce subjects

with implications for skill mismatches in higher education and the labour market

Inequality has decreased, but large provincial and quintile differences persist,

likely requiring qualitative research to understand

Overall, there have been substantial improvements in NSC access and performance over time

but...



A LOT
OF FACTORS
INFLUENCE NSC
ACHIEVEMENT

