

Muddling Through Malapportionment:

The Representation Formulas, 1867-2022 & How to
Get Closer to Representation by Population

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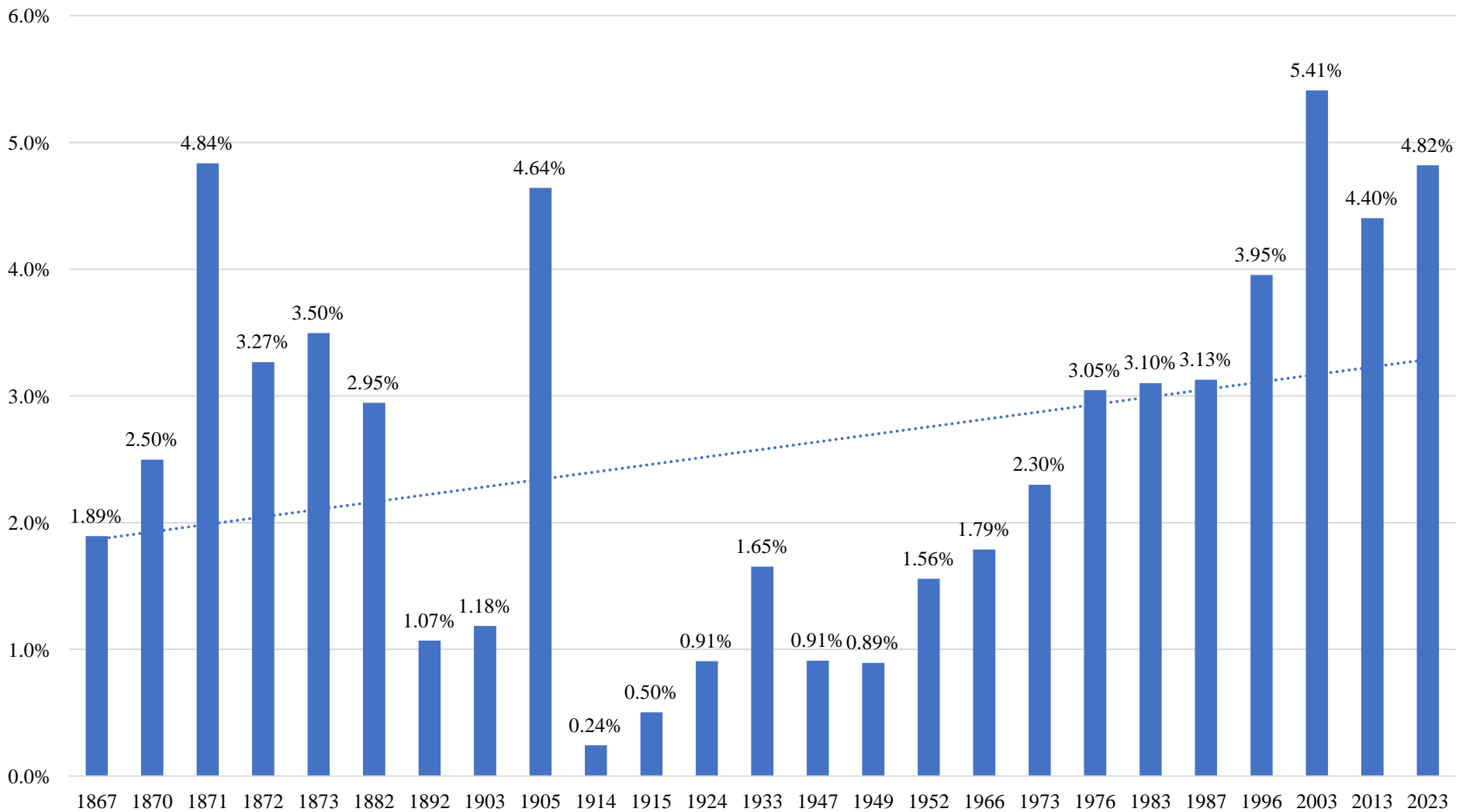
Representation by Population in Theory

- Share of the population = share of the House of Commons
 - Proportion counts, not absolute numbers
- Fundamental to Confederation in 1867
- The quintet of sections 51, 52, 53, 54, and 55 under the *Constitution Act, 1867* all inter-connect to make Responsible Government possible:
 - 51: Representation Formula
 - 52: Proportionate Representation Clause
 - 53: Origination Principle
 - 54: Royal Recommendation
 - 55: Royal Assent

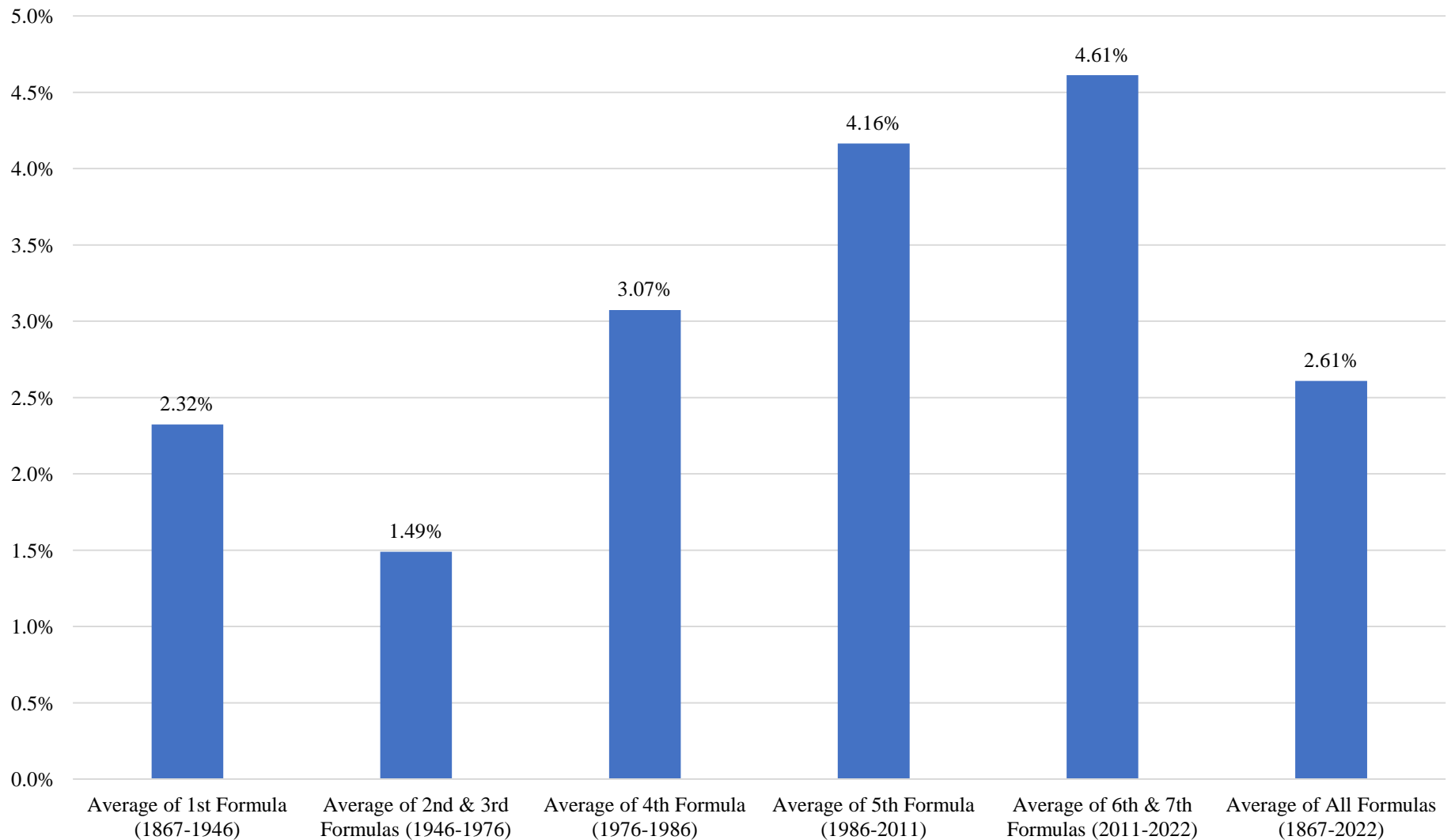
Malapportionment in Practice

- Divergence between shares of the population and House of Commons
 - measured by the Loosemore-Hanby Index
- Temporary malapportionment
 - Over-representing new provinces in the 1870s, 1880s, and 1900s
 - Self-correcting
- Structural malapportionment
 - Permanent and pernicious
 - Senatorial Clause of 1915
 - One-Twentieth Clause, 1920s-1930s
 - The 15% Clause, 1950s-1960s
 - Grandfather Clauses, 1974-2022

Malapportionment, 1867-2023



Malapportionment, 1867-2023



Representation Formulas

- Section 51(1) of the *Constitution Act, 1867*
 - puts the principle of representation by population into practice
 - determines the number of MPs per province after each decennial census
 - Parliament alone can amend it under the unilateral procedure, subject to section 52
 - Parliament changes them in response to a crisis, never proactively
- Section 51A, 1915-present
 - Senatorial Clause gives minimum number of MPs irrespective of population
 - Entrenched under the unanimous amending procedure

Proportionate Representation Clause

- Section 52 of the *Constitution Act, 1867*
 - Entrenches the principle of representation by population and protects it from Parliament's meddling
- Section 42(1)(a) of the *Constitution Act, 1982*
 - Doubly entrenches the principle
 - Can only be abolished under the General Amending Procedure

Confederation Formula, 1867-1946

- Divisor: Quebec's 65 MPs
 - Ratio of people per MP in Quebec applies to the other provinces in proportion
- One-Twentieth Clause allowed provinces to keep MPs for longer
 - Designed for the Maritimes in the 19th century
 - Benefited Ontario in the early 20th century instead
- Provinces gained and lost MPs
 - The Commons could gain or lose MPs overall
- Broke down in the 1930s when Quebec outpaced Ontario
- Used in 1870s, 1880s, 1890s, 1900s, 1910s, 1920s, & 1930s

The One-Twentieth Clause

- One-Twentieth Clause misinterpreted and misunderstood in Canadian political science
 - A province would only lose MPs if its share of the total population between the previous and latest censuses decreased by a ratio of at least 5% relative to its share under the previous census
 - *Not*, more simply, if a province's share of the population decreased by 5% between the latest and previous censuses
- Difference between *Quebec Resolutions* and final *BNA Act*
- But only misunderstood in retrospect post-1946
 - The official calculations were still correct
 - Stats Can showed the true method in 1921

The One-Twentieth Clause

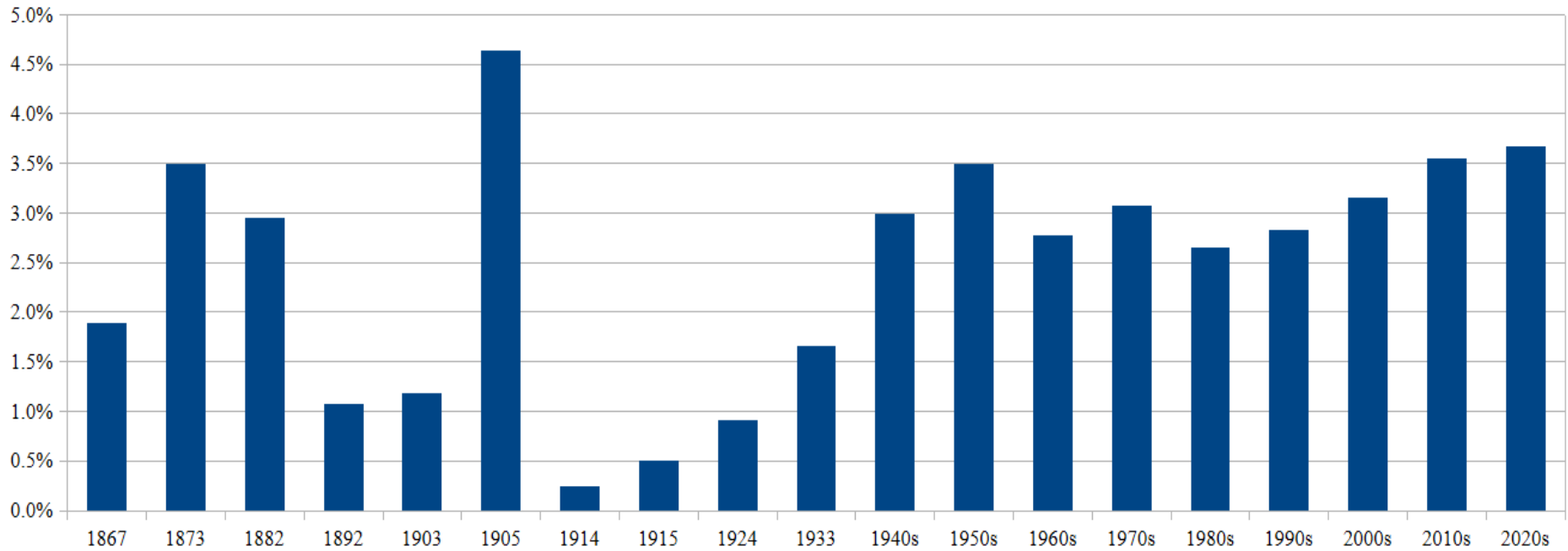
Calculating the Number of MPs under the 1st Representation Formula, 1930s

Rule 4: One-Twentieth Clause							
Population, 1921	MPs, 1924	Share of Population in 1921	Share of Population in 1931	Decrease in Shares (1921 to 1931)	Ratio of Decrease in Shares to Share in 1921	MPs, 1930s	
88,615	4	1.01%	0.85%	0.16%	15.88%	2	
523,837	14	5.97%	4.95%	1.02%	17.10%	12	
387,876	11	4.42%	3.94%	0.48%	10.88%	9	
2,360,510	65	26.90%	27.74%	-0.84%	-3.12%	65	
2,933,662	82	33.43%	33.11%	0.32%	0.95%	82	
610,118	17	6.95%	6.76%	0.20%	2.83%	17	
757,510	21	8.63%	8.89%	-0.26%	-3.04%	21	
588,454	16	6.71%	7.06%	-0.35%	-5.27%	16	
524,582	14	5.98%	6.70%	-0.72%	-12.07%	14	
8,775,164	244						
8,787,949		100.00%	100.00%				

Calculating the Number of MPs under the 1st Representation Formula, 1930s (FALSE)

One-Twentieth Rule								Section 51A	Total Number of MPs Under the Formula	Total Number of MPs According to History
Population, 1921	MPs, 1905	Share of Population in 1901	Share of Population in 1911	Difference	MPs, 1910s					
88,615	4	1.01%	0.85%	-0.16%	4	0	4	4		
523,837	18	5.96%	4.94%	-1.02%	18		18	12		
387,876	13	4.41%	3.93%	-0.48%	13		13	10		
2,360,510	65	26.86%	27.70%	0.84%	0		65	65		
2,933,662	86	33.38%	33.07%	-0.31%	86		86	82		
610,118	10	6.94%	6.75%	-0.20%	0		16	17		
757,510	10	8.62%	8.88%	0.26%			21	21		
588,454	7	6.70%	7.05%	0.35%			17	17		
524,582	7	5.97%	6.69%	0.72%	0		16	16		
8,775,164							256	244		
8,788,493	220	99.85%	99.87%							

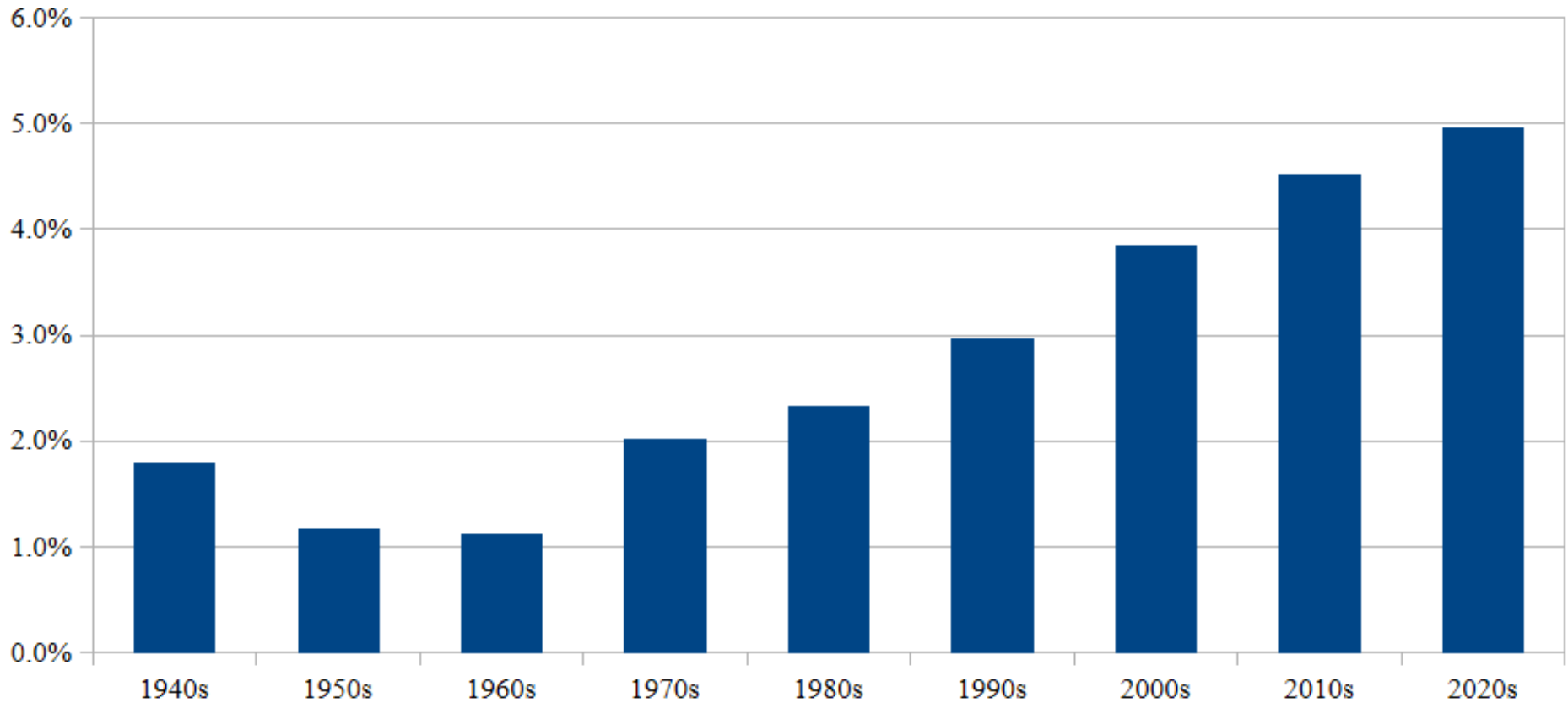
Confederation Formula, 1867-2020s



Fixed Floor Formula, 1946-1952

- Replaced the Confederation Formula outright
- Divisor: fixed number of MPs, 261
- Absolute cap on the size of the House of Commons
- Broke down in 1950s when Saskatchewan lost too many MPs
- Used only in the 1940s

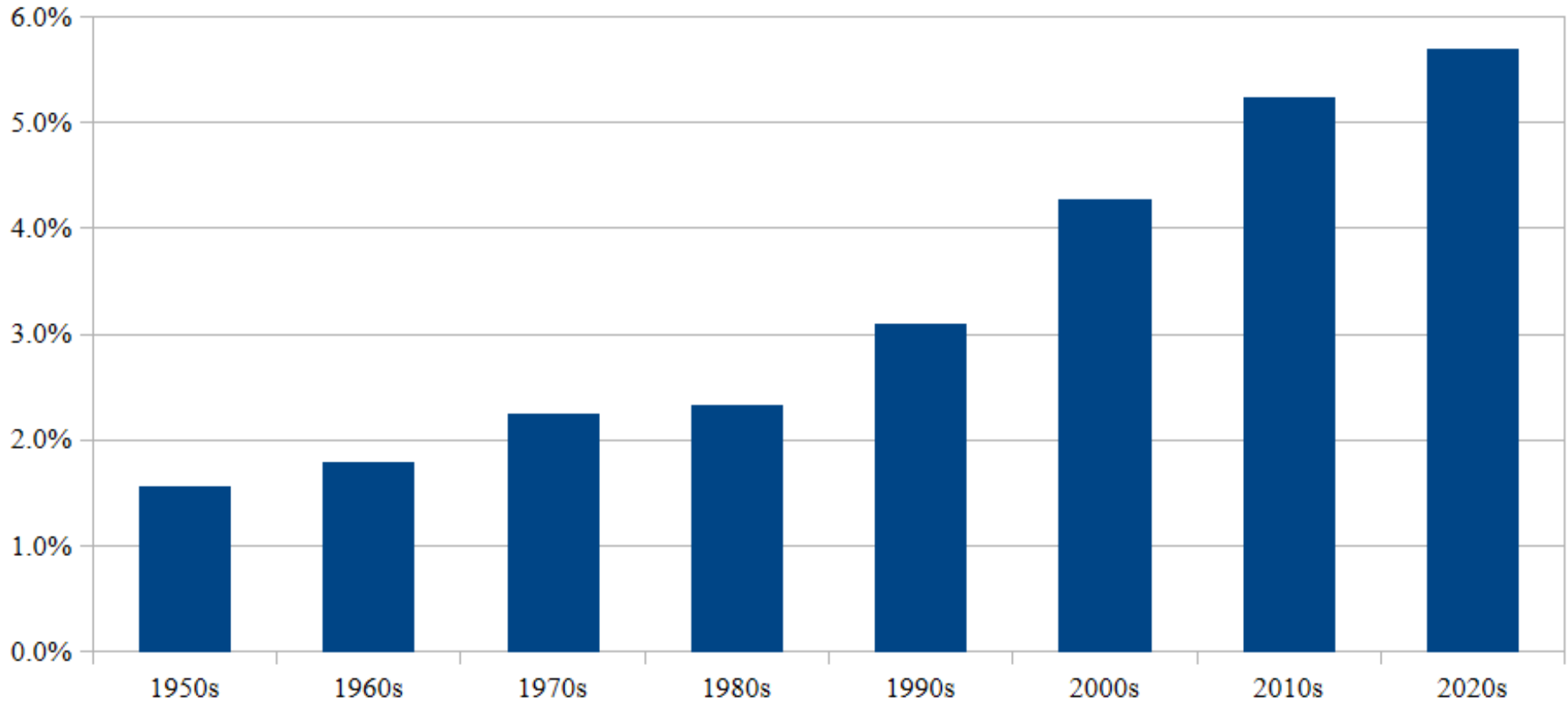
Fixed Floor Formula, 1946-2020s



Flexible Floor Formula, 1952-1974

- Amended the Fixed Floor Formula at the behest of Saskatchewan
- Divisor: flexible number of MPs, 261
- 15% Clause let provinces lose MPs more slowly
- Provinces could still lose MPs
- Broke down when Quebec lost MPs in the 1970s
- Used in the 1950s, 1960s; cancelled in the 1970s

Flexible Floor Formula, 1952-2020s



Flexible Floor Formula, 1952-1974

- Elections Canada and the Representation Commissioner miscalculated both the Fixed and Flexible Floor Formulas the entire time
 - An error only arose in the 1970s
 - Order matters
 - Two rounds of Rules 1 & 2 in between Senatorial Clause
- Andrew Sancton was right back in 1973!
 - Whether Nova Scotia obtained 10 MPs under rules 1 & 2 vs under rules 3 & 4 changed whether Ontario obtained 91 vs 92 MPs

Flexible Floor Formula, 1970s I

Province	Rule 1: Calculating the Quotient & MPs/Province				Rule 2 (1 st Round)			Rule 3		
	Population, 1971	Electoral Divisor & Quotient	MPs	Rounded Down	Remainders	Distributed	Sub-Total	Senators	Section 51A	Sub-Total
Newfoundland	522,104	82,433	6.3336	6	0.3336		6	6	0	6
Prince Edward Island	111,641	82,433	1.3543	1	0.3543		1	4	3	4
Nova Scotia	788,960	82,433	9.5709	9	0.5709	1.0000	10	10	0	10
New Brunswick	634,557	82,433	7.6978	7	0.6978	1.0000	8	10	2	10
Quebec	6,027,764	82,433	73.1228	73	0.1228		73	24	0	73
Ontario	7,703,106	82,433	93.4464	93	0.4464		93	24	0	93
Manitoba	988,247	82,433	11.9884	11	0.9884	1.0000	12	6	0	12
Saskatchewan	926,242	82,433	11.2362	11	0.2362		11	6	0	11
Alberta	1,627,874	82,433	19.7477	19	0.7477	1.0000	20	6	0	20
British Columbia	2,184,621	82,433	26.5017	26	0.5017	1.0000	27	6	0	27
Provinces combined	21,515,116	261	261.00	256						266
Remainders					5.00				5	

Flexible Floor Formula, 1970s II

Calculating the Number of <u>MPs</u> under the 3rd Representation Formula, 1970s (Abandoned)						
Rule 4: Recalculating the Quotient & Remainders After Section 51A				Rule 2 (2 nd Round)		
Electoral Quotient After Rule 3	Electoral Divisor After Rule 3	<u>MPs</u>	Rounded Down	Remainders	Distributed	Sub-Total Before the 15% Rule
84,085		6.2093	6	0.2093		6
			-	-		4
84,085		9.3829	9	0.3829		9
			-	-		10
84,085		71.6868	71	0.6868	1	72
84,085		91.6113	91	0.6113	1	92
84,085		11.7530	11	0.7530	1	12
84,085		11.0156	11	0.0156		11
84,085		19.3599	19	0.3599		19
84,085		25.9812	25	0.9812	1	26
20,768,918	247		243			261
				4.00	4.00	

Flexible Floor Formula, 1970s III

Rule 5: The 15% Clause				Final Tally of MPs/Province, 1970s	MPs/Province in History
MPs Under Previous Readjustment Before Rule 5	15% of MPs Under Previous Readjustment	Maximum Loss	Minimum in 1973		
7	1.05	1	6	6	6
4	0.6	0	4	4	4
11	1.65	1	10	10	10
10	1.5	1	9	10	10
74	11.1	11	63	72	72
88	13.2	13	75	92	91
13	1.95	1	12	12	12
13	1.95	1	12	12	12
19	2.85	2	17	19	19
23	3.45	3	20	26	26
262				263	262

Flexible Floor Formula, 1970s in Error

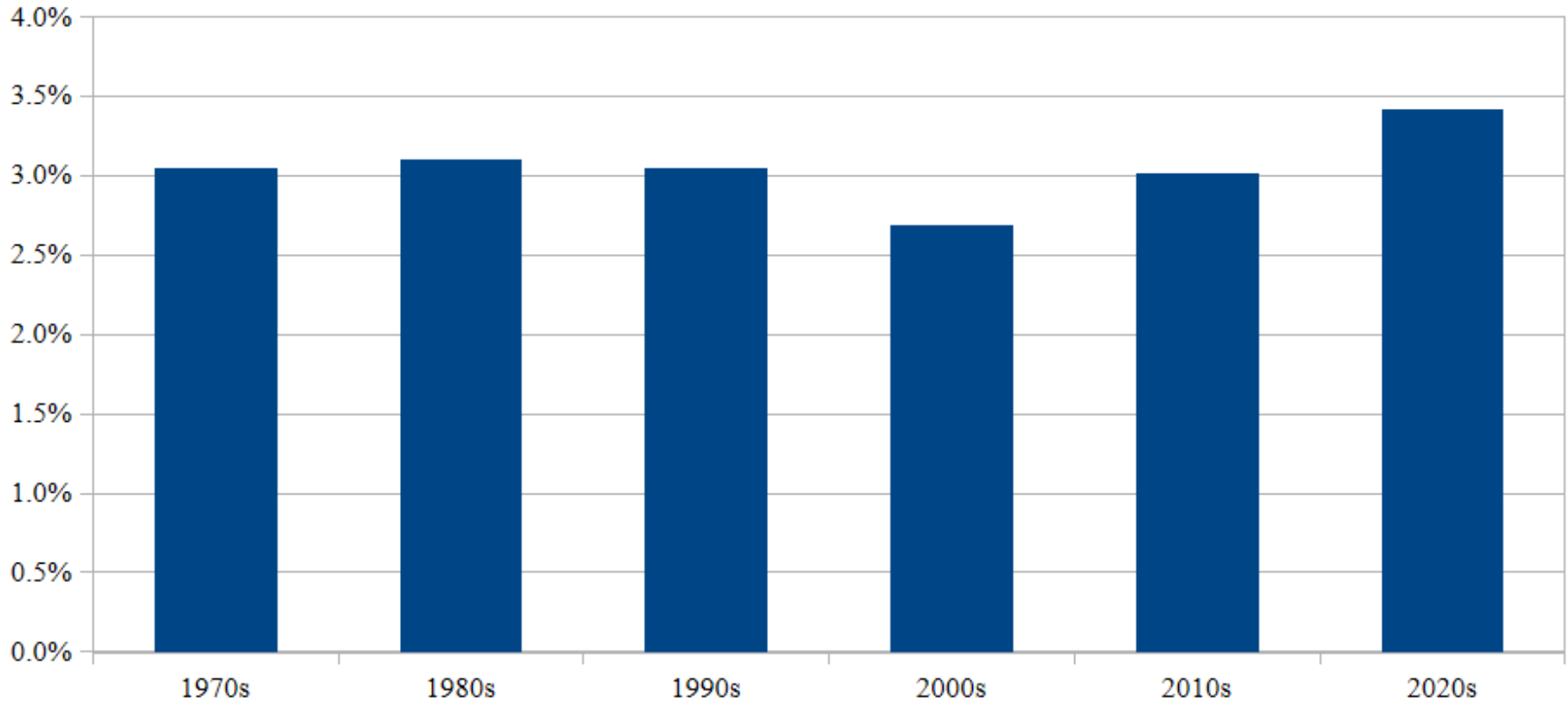
Province	Rule 1: Calculating the Quotient & MPs/Province					Rule 3		Rule 4: Recalculating the Quotient & Remainders After Section 51A			
	Population, 1971	Electoral Quotient	MPs/Province	MPs/Province Rounded Down	Remainders	Section 51A	Sub-Total	Electoral Quotient After Rule 3	MPs/Province	MPs/Province Rounded Down	Remainders
Newfoundland	522,104	82,433	6.3336	6	0.3336			84,304	6.1931	6	0.1931
Prince Edward Island	111,641	82,433	1.3543	1	0.3543	3	4			-	-
Nova Scotia	788,960	82,433	9.5709	9	0.5709	1	10			-	-
New Brunswick	634,557	82,433	7.6978	7	0.6978	3	10			-	-
Quebec	6,027,764	82,433	73.1228	73	0.1228			84,304	71.5007	71	0.5007
Ontario	7,703,106	82,433	93.4464	93	0.4464			84,304	91.3734	91	0.3734
Manitoba	988,247	82,433	11.9884	11	0.9884			84,304	11.7225	11	0.7225
Saskatchewan	926,242	82,433	11.2362	11	0.2362			84,304	10.9870	10	0.9870
Alberta	1,627,874	82,433	19.7477	19	0.7477			84,304	19.3097	19	0.3097
British Columbia	2,184,621	82,433	26.5017	26	0.5017			84,304	25.9137	25	0.9137
Provinces combined	21,515,116	261	261.00	256			237	19,979,958			
Remainders					5.00	-	2				4.00

Rule 2		Rule 5: The 15% Clause				MPs/Province, 1966 After The 15% Rule	MPs/Province in History
Remainder Distributed	Sub-Total Before the 15% Rule	MPs Under Previous Readjustment	15% of MPs Under Previous Readjustment	Number of MPs That Can Be Lost	Minimum Number of MPs in 1973		
	6	7	1.05	1	6	6	6
	4	4	0.6	0	4	4	4
	10	11	1.65	1	10	10	10
	10	10	1.5	1	9	10	10
1	72	74	11.1	11	63	72	72
	91	88	13.2	13	75	91	91
1	12	13	1.95	1	12	12	12
1	11	13	1.95	1	12	12	12
	19	19	2.85	2	17	19	19
1	26	23	3.45	3	20	26	26
	261	262				262	262

The Amalgam, 1974-1986

- Replaced the Flexible Floor Formula outright
- Classified provinces as large, medium, and small
 - One divisor for the large provinces of >2.5M tied to Quebec's MPs
 - Quebec's MPs increased by 4 each decade
 - One quotient for the small provinces of <1.5M
 - One quotient for the medium provinces in between the two
 - One Amalgam to rule them all and in malapportionment bind them
- Kept the Alberta Clause of the Flexible Floor Formula
- Grandfather Clause tied to the *Representation Order, 1966*
 - Prevented provinces from ever losing MPs
 - Made malapportionment permanent
- Expanded the Commons by 30 MPs or so each decade
 - Used only in the 1970s; cancelled in the 1980s

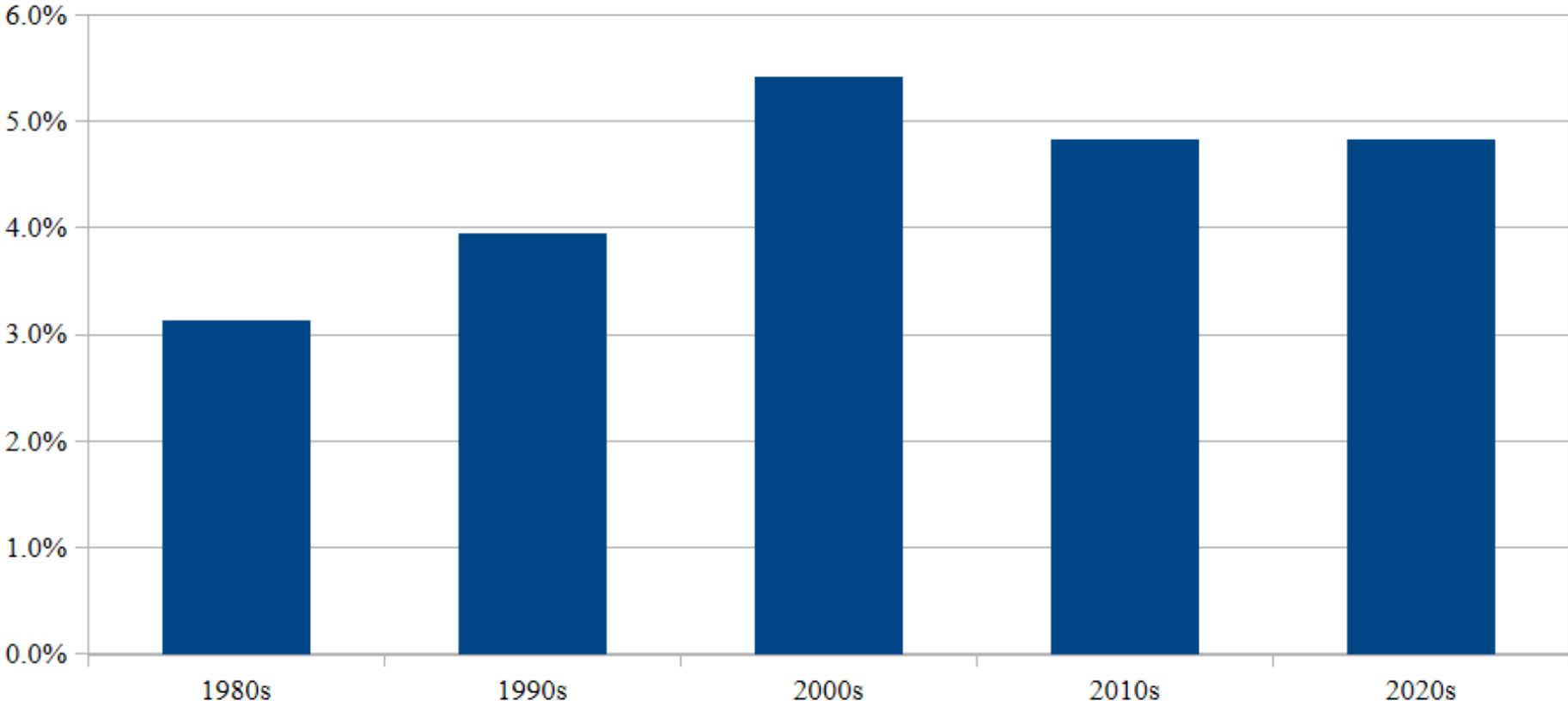
The Amalgam, 1974-2020s



The 279 Formula, 1986-2011

- Replaced the Amalgam to limit the growth of the House of Commons
 - House of Commons grew slowly under the 279
- Divisor: 279
- Grandfather Clause tied to the *Representation Order, 1976*
- Provinces could still never lose MPs
- Perpetuated the perpetual malapportionment of the Amalgam into the 2000s
- Used in the 1980s, 1990s, and 2000s

The 279 Formula, 1986-2020s



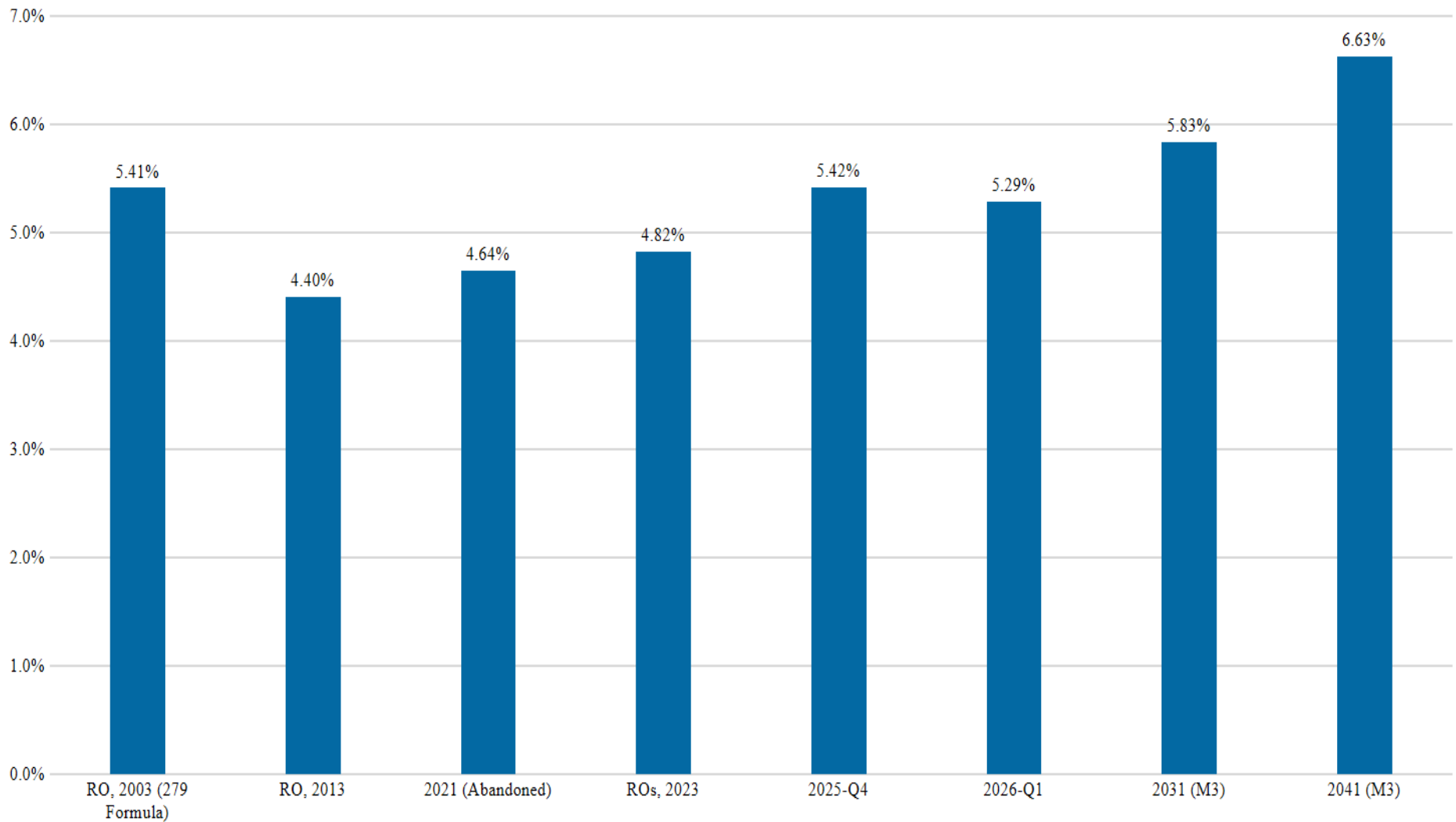
The Population Estimates Formula, 2011-2022

- Replaced the 279 Formula at the behest of Ontario, Alberta, and British Columbia
- First to use estimated instead of census populations
- Quotient based on average growthrate between the population estimates in years of previous and current decennial census
 - 111,166 in 2011
 - 121,891 in 2021
- Grandfather Clause tied to the *Representation Order, 1987*
 - Perpetuated malapportionment yet again
- Representation Rule topped up Quebec
 - Perpetuated Quebec's over-representation from the 279 Formula
- Used in the 2010s; modified in the 2020s

The Modified Population Estimates Formula, 2022-Present

- Quebec could lose MPs under the Representation Rule
- Parliament amended the Grandfather Clause for Quebec
 - Grandfather Clause now tied to the *Representation Order, 2013*
- Everything else stayed the same
- Quotient based on average growthrate: 121,891 in 2020s
- Representation Rule has become redundant

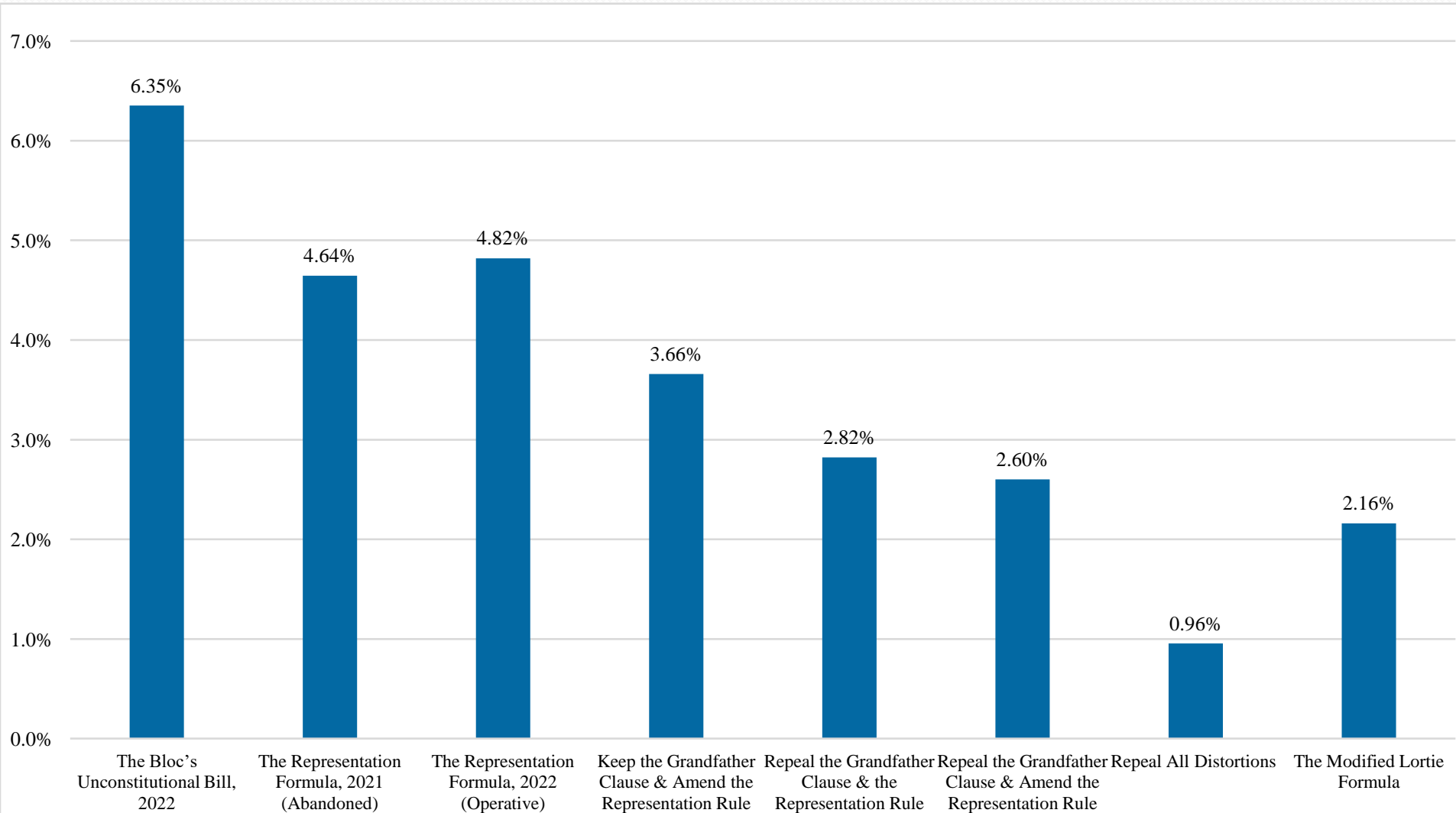
Malapportioning into the Future



Limiting Malapportionment I

- The Senatorial Clause will haunt us forever
- Amend the Population Estimates Formula
 - 1. Keep the Grandfather Clause & Amend the Representation Rule (340 to 356 MPs)
 - 2. Repeal both the Grandfather Clause & the Representation Rule (340 to 325 MPs)
 - 3. Repeal the Grandfather Clause & Amend the Representation Rule (340 to 337 MPs)
- Adopt a new Representation Formula
 - Modified Lortie Commission Formula (340 to 345 MPs)
 - Divisor: Quebec at 78, which sets the ratio for the rest; Senatorial Clause; Alberta Clause; Provinces can lose no more than 1 MP per cycle

Limiting Malapportionment II



Why Malapportionment Matters

- 318 MPs vs 340 MPs
 - The Population Estimates Formula without the exemptions allocated 318 MPs to the ten provinces in the 2020s
 - The operative formula produced 340
- 22 surplus MPs
 - 7 under the Senatorial Clause
 - 15 under the Grandfather Clause
 - Can change which party forms government – especially in a minority parliament
- The Confederation Bargain has broken
 - We used to allow provinces to lose MPs
 - This permanent malapportionment only dates to 1974
- Parliament can fix most of the malapportionment itself
 - Only the Senatorial Clause would remain
 - Newfoundland & Labrador, Nova Scotia, Quebec, Manitoba, and Saskatchewan would lose MPs
- 2030s & 2040s: *more* malapportionment than under the 279 Formula!



Questions?