

Prof. Scott Eacott

Building education systems for equity and inclusion



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4 QUALITY
EDUCATION



9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



10 REDUCED
INEQUALITIES



A Policy Problem

Designing robust education systems that can deliver equitable and inclusive schooling at scale while withstanding internal tensions for differentiation and external pressures for standardisation has been an enduring issue for government and systems.

Proposed solution

Choice + Autonomy + Accountability



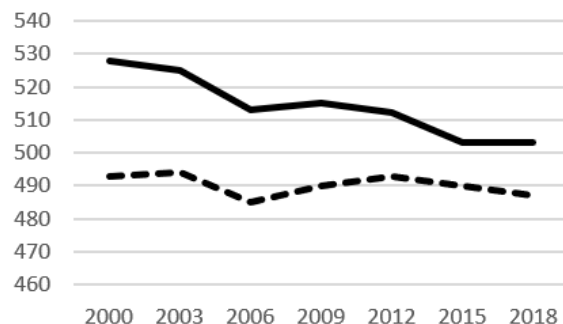
A tentative empirical model

$$EIEA = SC_{g\ sea} + SA_{f\ s\ e} + PA_{ao\ si}$$

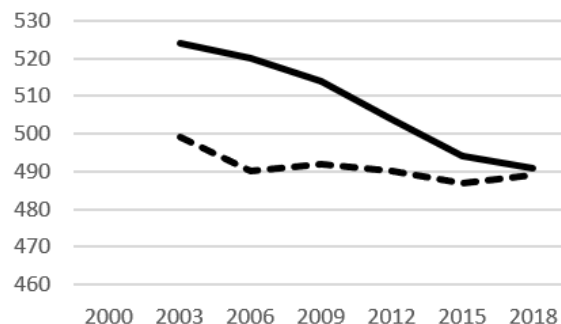
- Where *EIEA* is equitable and inclusive education in Australia, *SC* is school choice across geolocation $_g$ and socio-educational (dis)advantage $_{sea}$, *SA* is school autonomy and particularly over fiscal $_f$, staffing $_s$, and educational $_e$ matters, and *PA* is public accountability linked to academic outcomes $_{ao}$ and social impact $_{si}$.

The evidence base

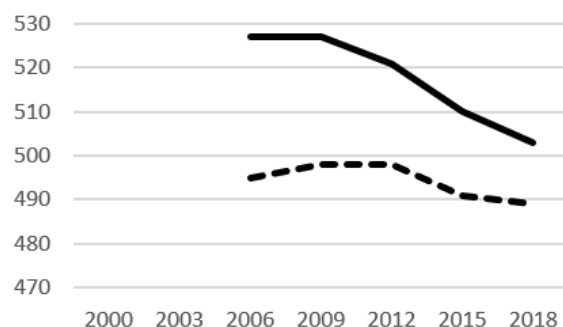
Panel 1: Reading



Panel 2: Mathematics



Panel 3: Science



Panel 4: Average ranking across 3 tests

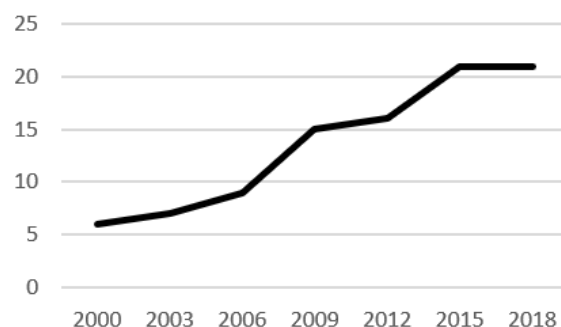
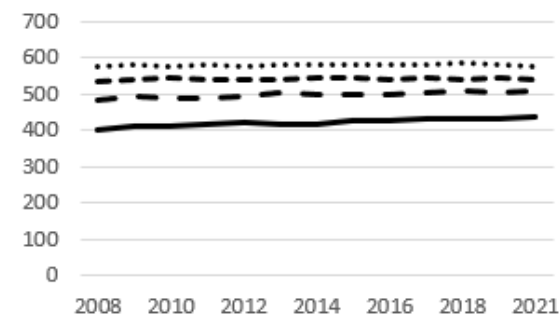
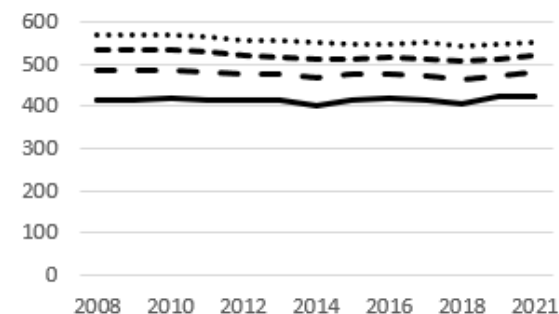


Figure 1. Australia's (—) performance in PISA reading, mathematics, and science against OECD average (- -) 2000-2018

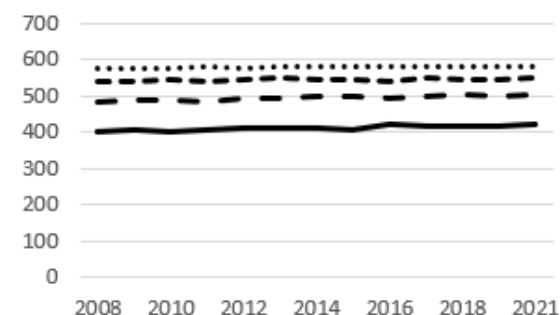
Panel 1: Reading



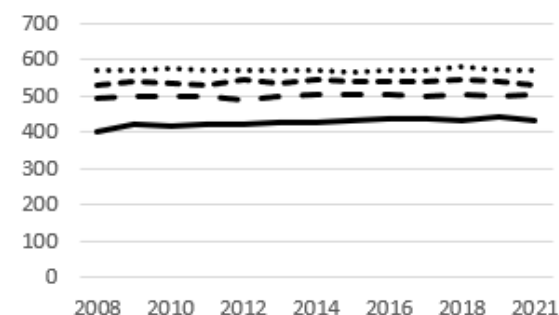
Panel 2: Writing



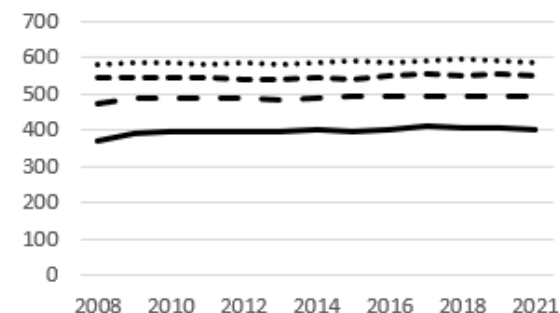
Panel 3: Spelling



Panel 4: Grammar and Punctuation



Panel 5: Numeracy

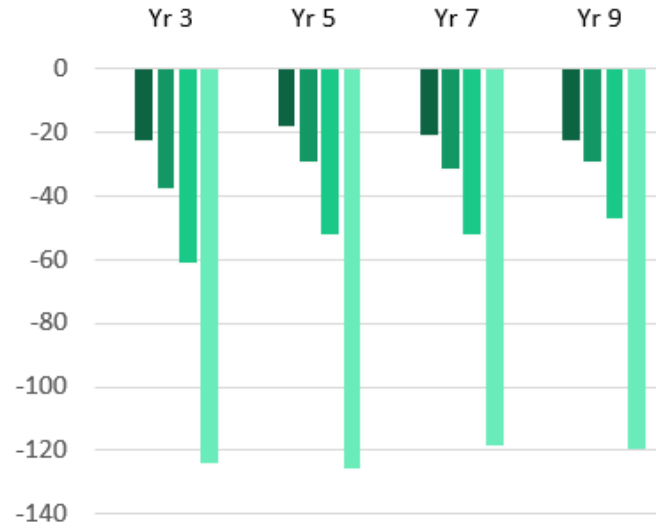


Legend

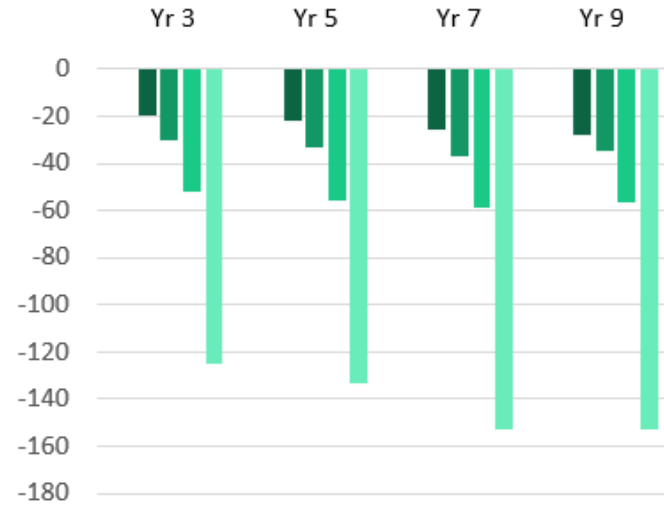


Figure 2. Average NAPLAN score (Australia), Year 3, 5, 7 & 9, 2008-2021

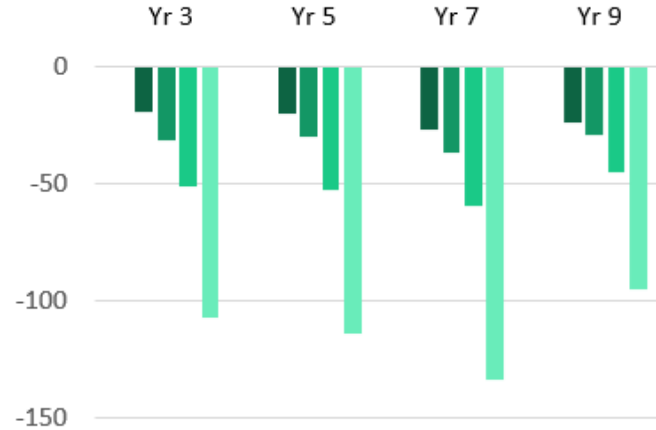
Panel 1: Reading



Panel 2: Writing



Panel 3: Numeracy



Key

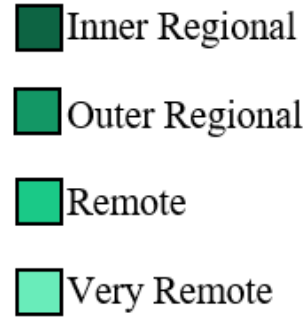


Figure 3. Difference from Major Cities mean score on NAPLAN (Reading, Writing & Numeracy) Year 3, 5, 7 & 9 by geolocation, 2021



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Table 1. Percentage of students enrolled with low (bottom quartile) Socio-Educational Advantage Government v Non-Government school, state / territory level, 2013-2020

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	AUST
2020									
Govt	32.0	27.5	32.3	28.9	32.3	42.7	13.3	47.5	30.8
Non-Govt	12.1	13.1	11.8	12.5	14.9	19.1	4.4	30.5	12.6
2019									
Govt	31.6	27.6	31.9	28.6	31.8	42.0	13.4	47.5	30.6
Non-Govt	12.5	13.2	11.8	13.1	14.5	19.3	4.6	28.8	12.8
2018									
Govt	31.9	27.9	31.4	28.7	32.4	42.4	12.9	46.8	30.6
Non-Govt	12.8	13.4	11.9	13.2	14.2	20.3	4.7	30.8	13.0
2017									
Govt	31.4	28.0	31.1	28.4	31.3	42.1	13.2	49.4	30.4
Non-Govt	12.5	13.3	11.6	13.2	14.0	20.3	4.9	29.5	12.9
2016									
Govt	31.5	27.8	30.5	27.7	30.5	42.3	12.5	49.6	30.1
Non-Govt	12.4	13.2	11.7	12.4	13.9	19.0	4.7	31.5	12.7
2015									
Govt	31.4	28.5	30.6	28.2	30.8	42.4	12.5	50.1	30.4
Non-Govt	12.8	13.3	11.4	12.5	13.4	18.3	4.7	27.9	12.7
2014									
Govt	30.8	28.5	30.8	27.6	30.7	42.4	12.6	51.9	30.2
Non-Govt	12.6	13.4	11.6	12.1	13.7	17.9	4.4	29.7	12.7
2013									
Govt	29.7	28.9	31.2	28.1	30.3	42.9	12.0	50.7	30.1
Non-Govt	12.6	13.3	13.0	12.8	14.3	19.1	4.6	28.8	13.2



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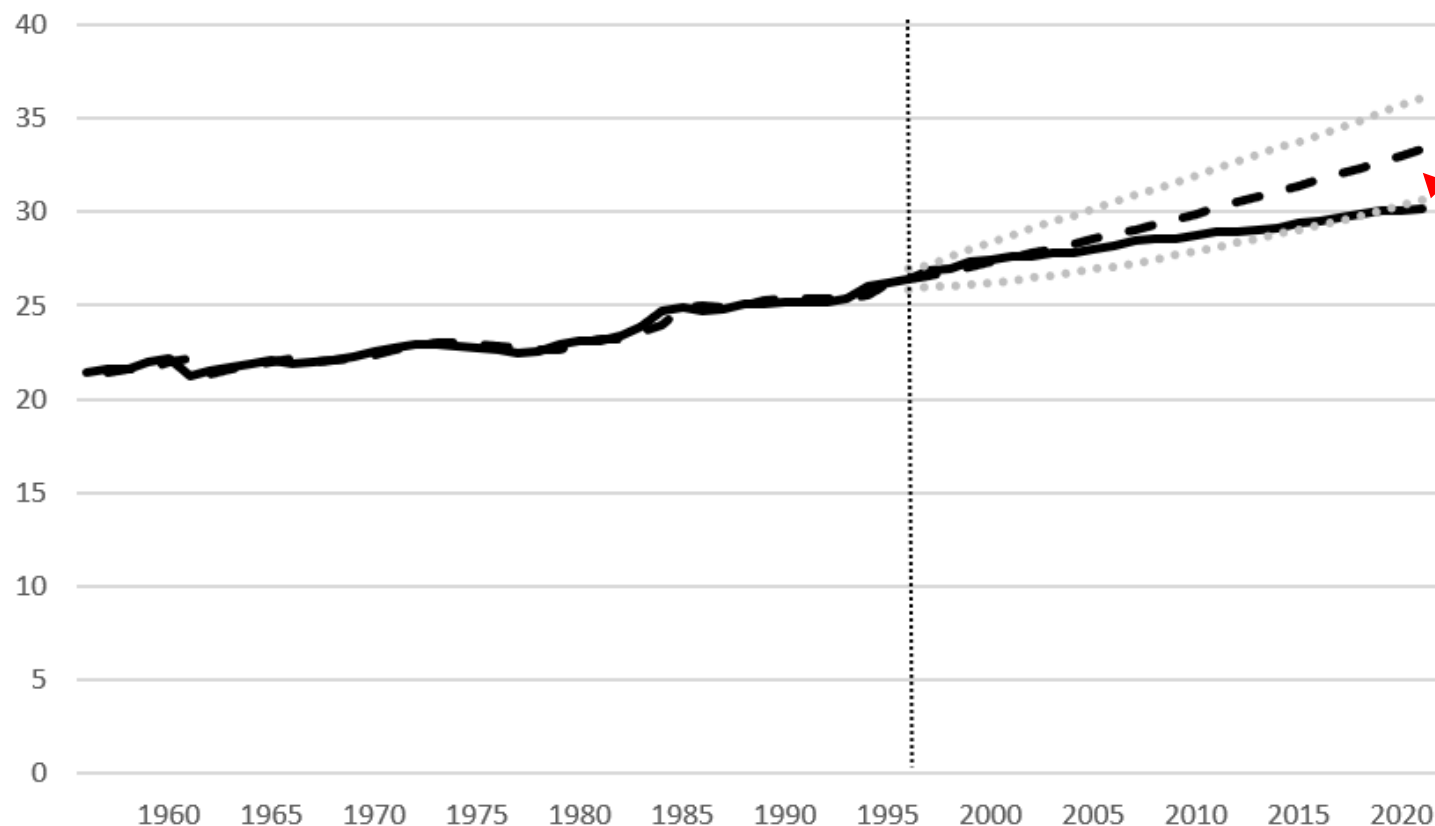
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Hypotheses

- *H_1 : The abolishment of the New Schools Policy (1996) led to a shock in provision through unprecedented expansion of non-government schools and enrolments nationally.*
- *H_2 : School autonomy reforms (post-2008) have changed the role of school principal to allow greater focus on improving outcomes.*
- *H_3 : Accountability reforms (post-2008) have improved data infrastructure to better focus on improving teaching and learning.*



The provision of schools

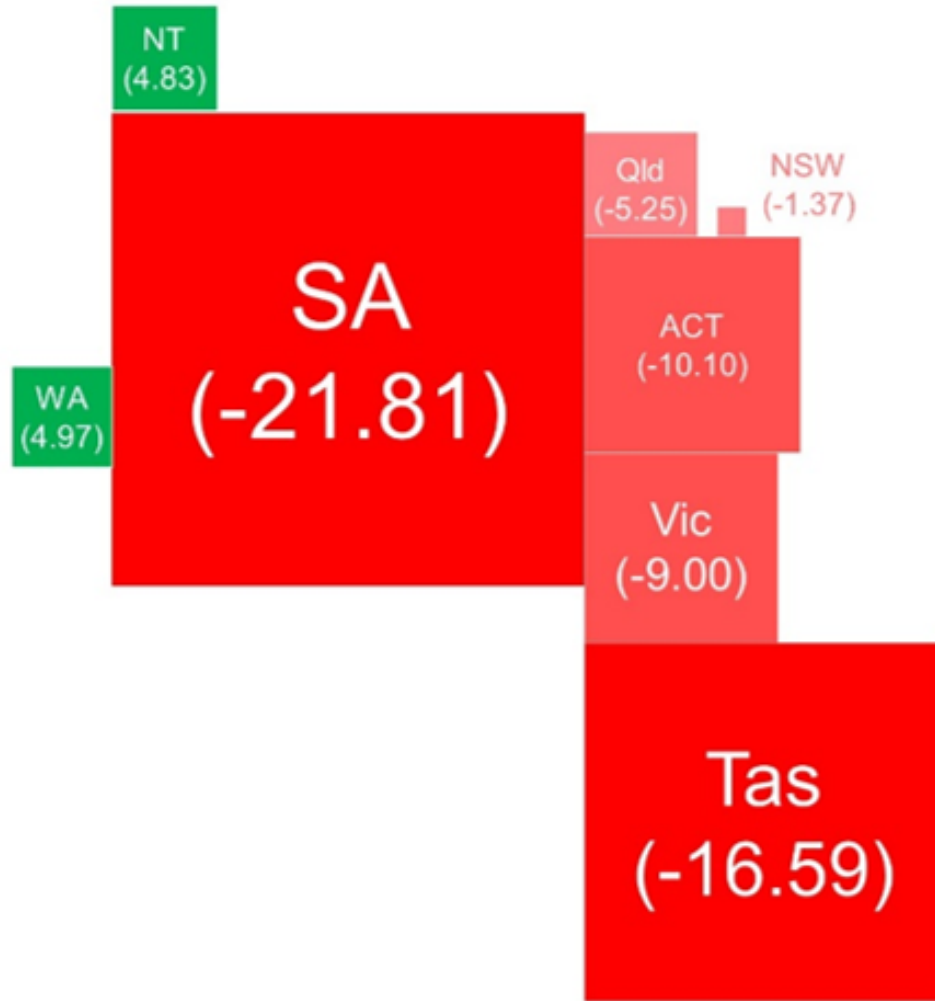


**3.22 per cent
variance**

308 schools

Figure 5. Number of schools (government v non-government), actual (—) and predicted (- -) (including upper and lower confidence bounds), 1956-2021

Panel 1: Government schools



Panel 2: Non-government schools

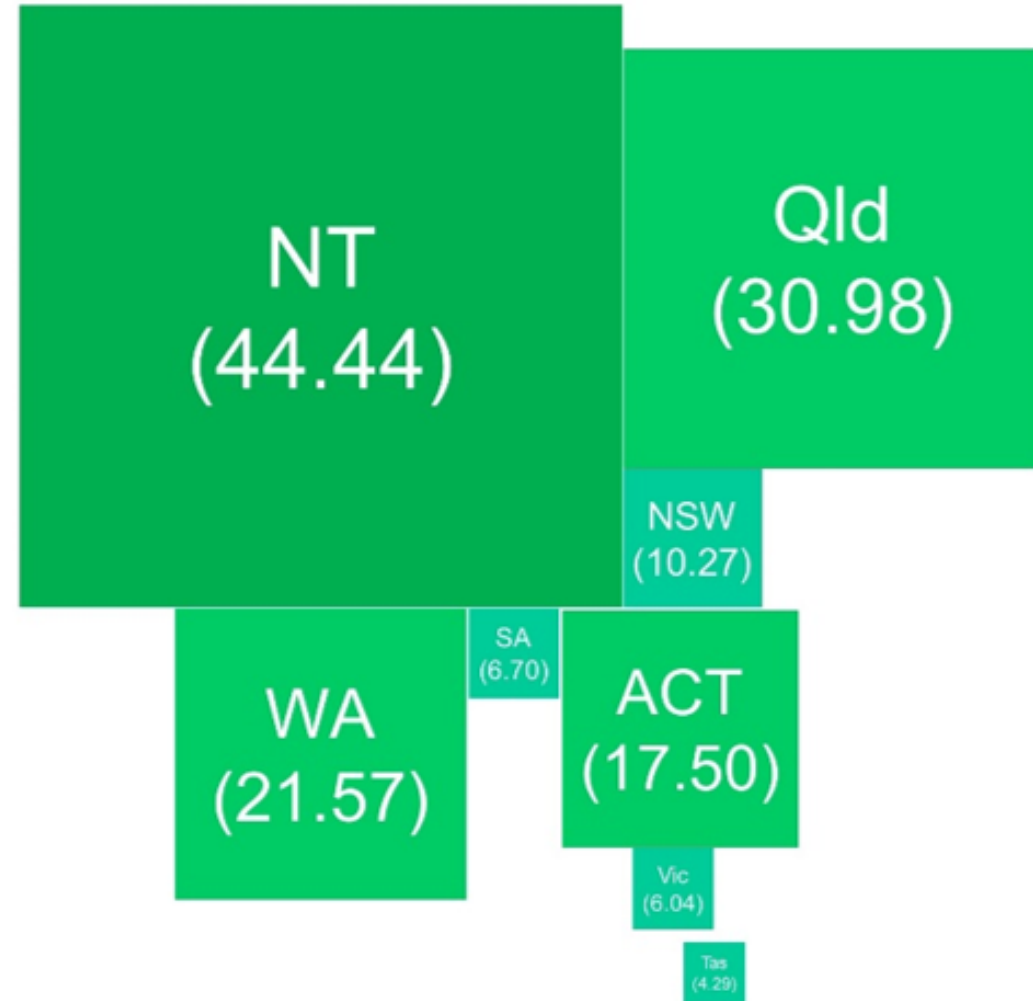
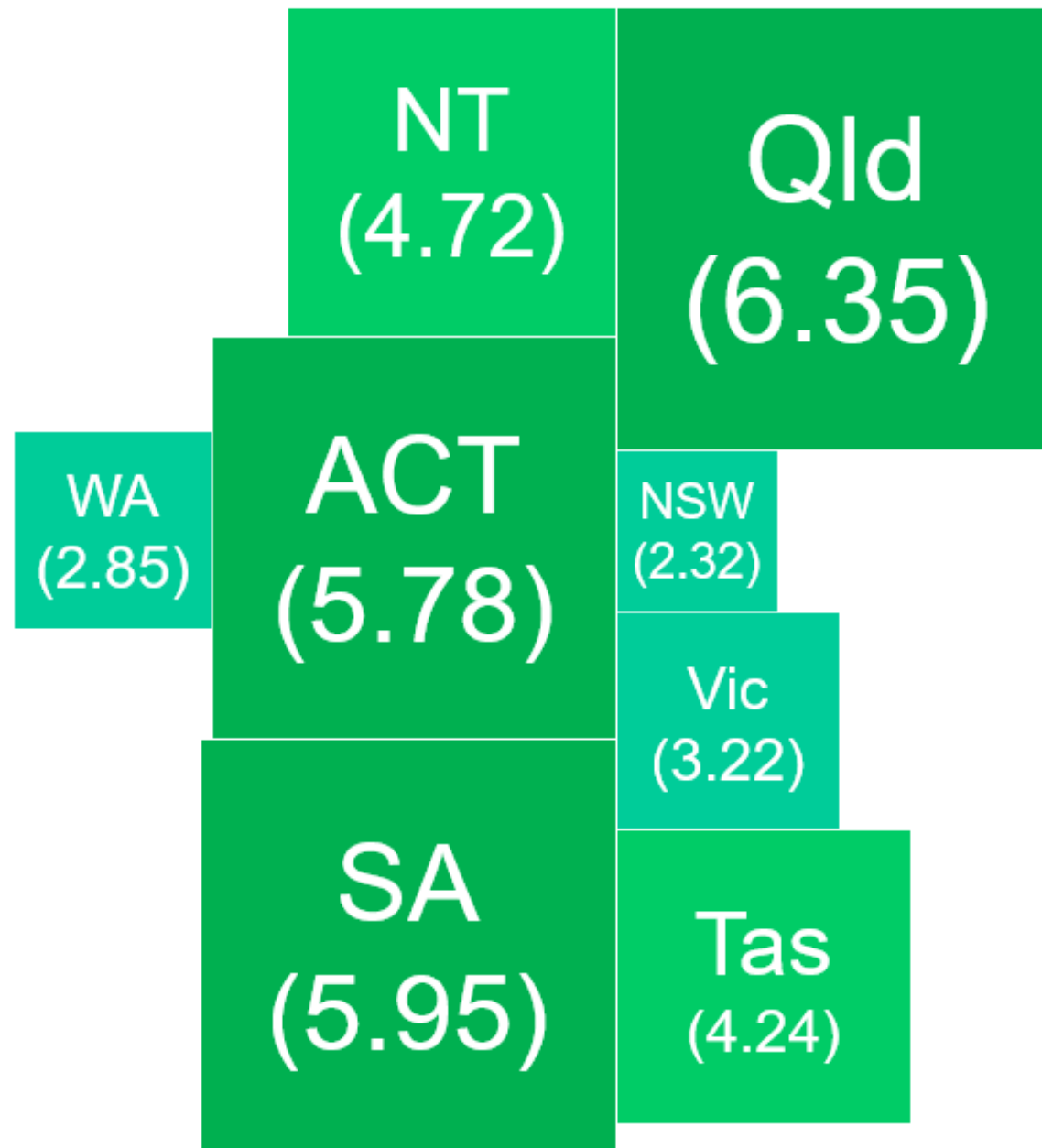


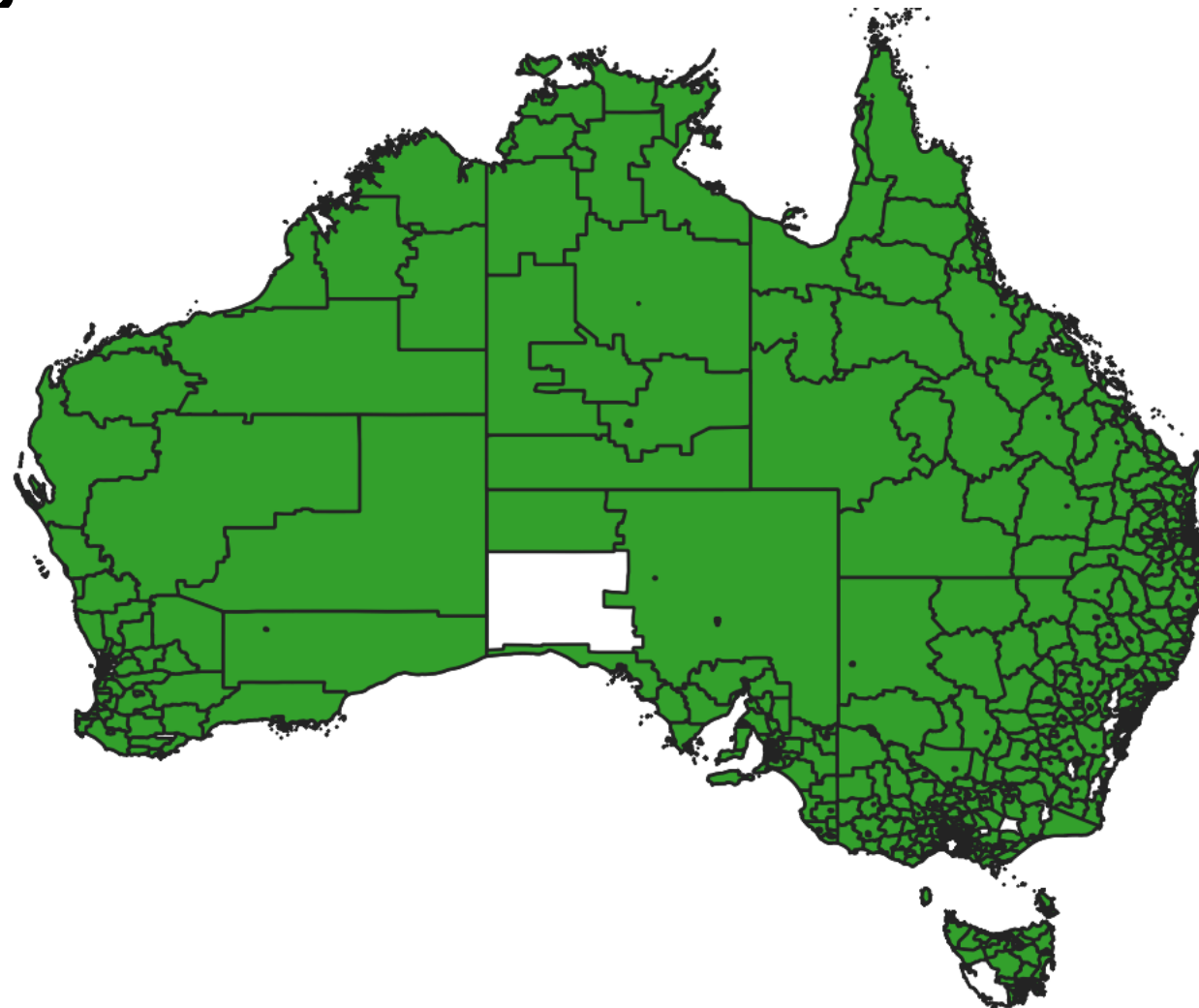
Figure 5. Percentage change in the number of government or non-government schools by state / territory, 1996-2021



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Choice by geolocation

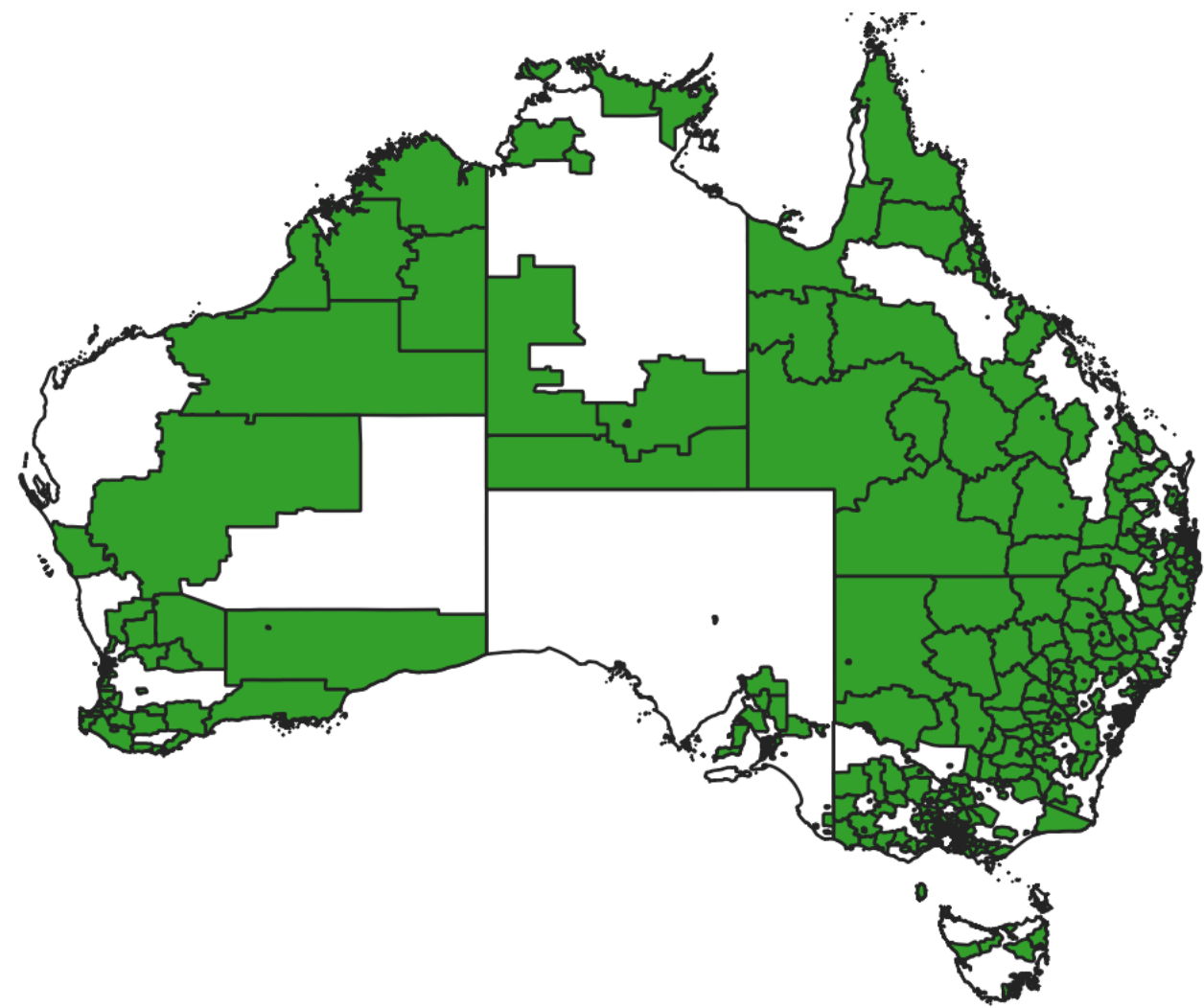


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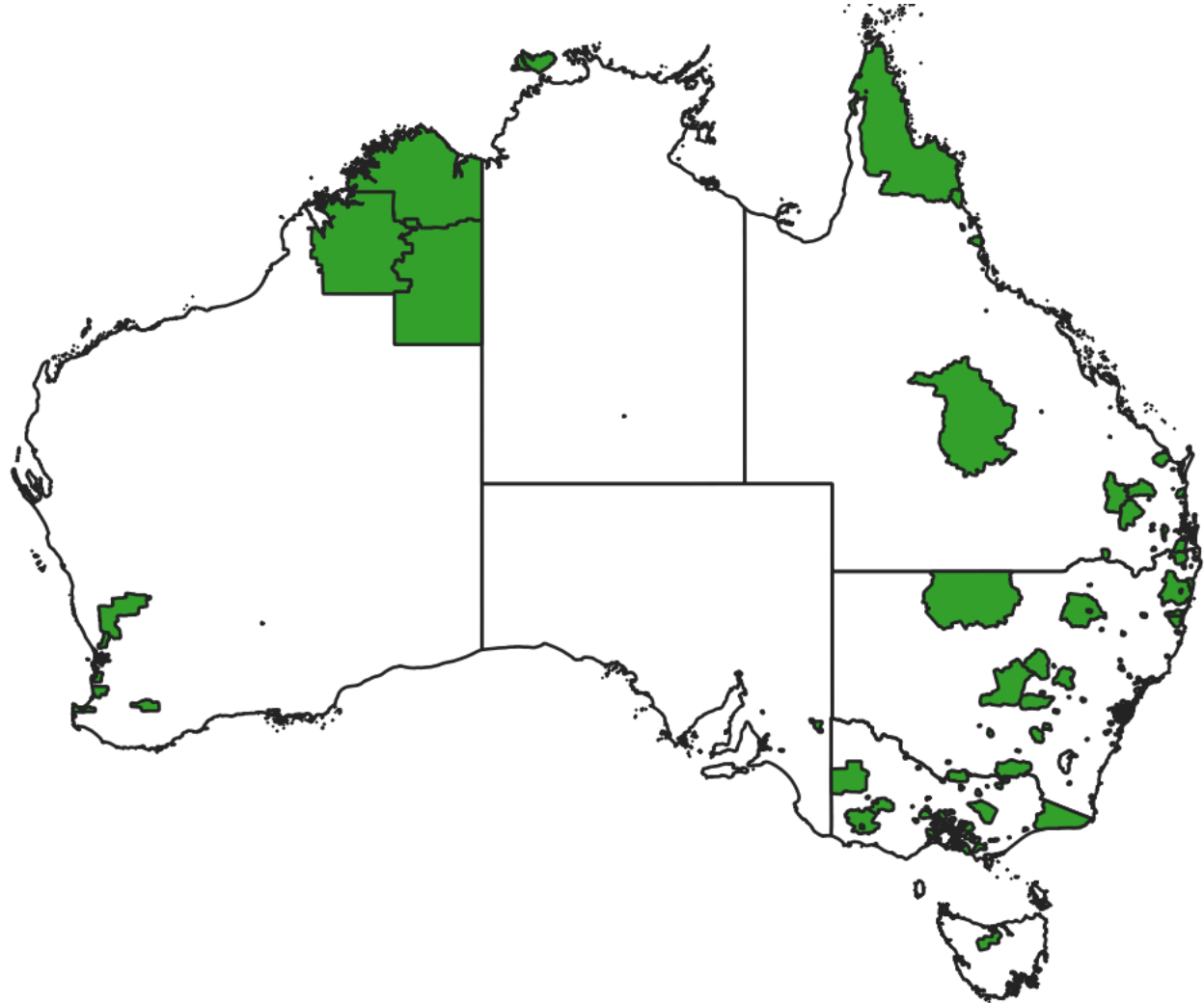






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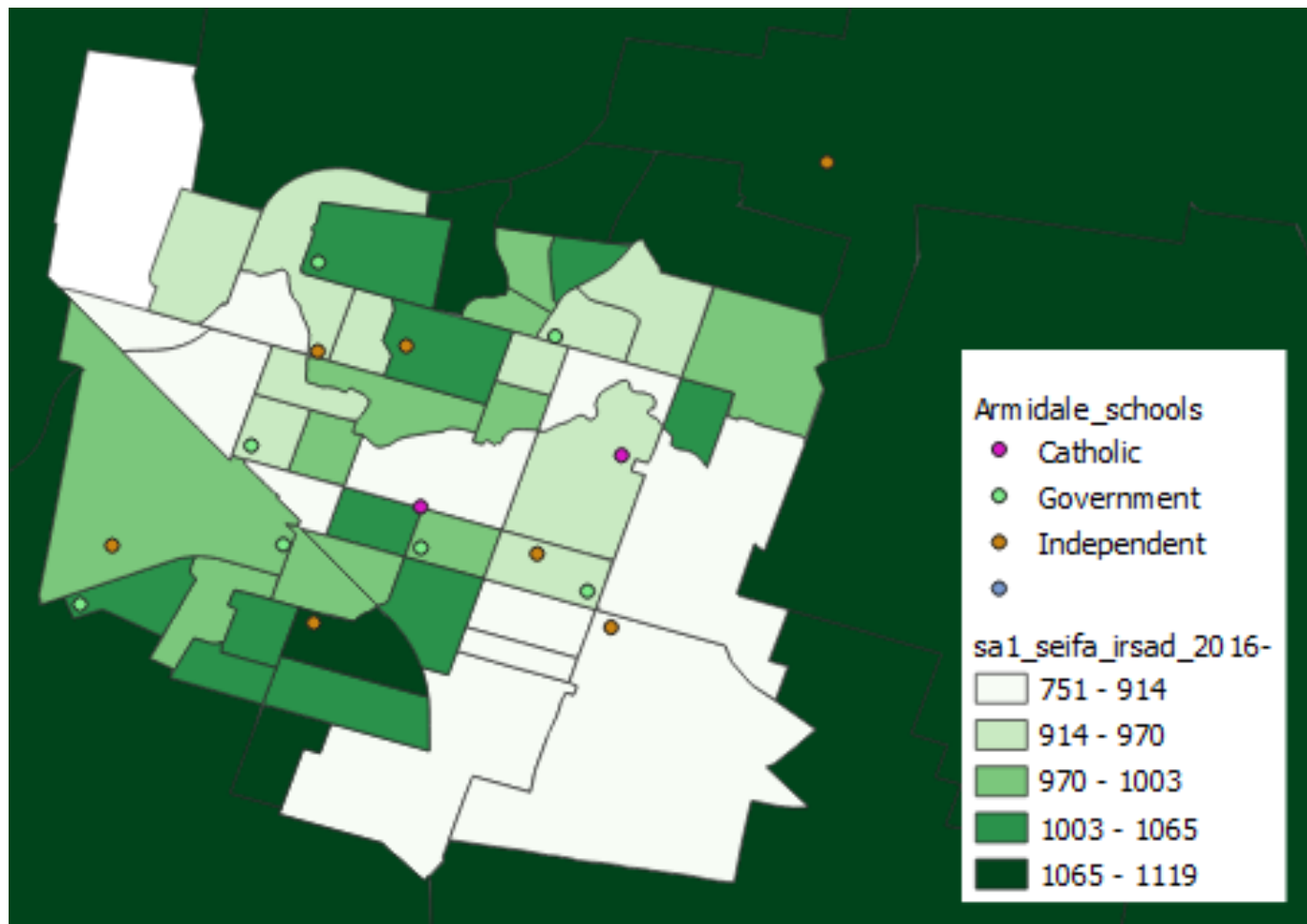
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Choice by socio-educational (dis)advantage



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SES is not necessarily negatively correlated with school choice.

HOWEVER

SES scales (including SEIFA, IRSD, ICSEA etc) are all designed to include 'education'. Therefore, analysis by these categories will evidence disadvantage based on education. See: *endogeneity*

Enrolment by sector

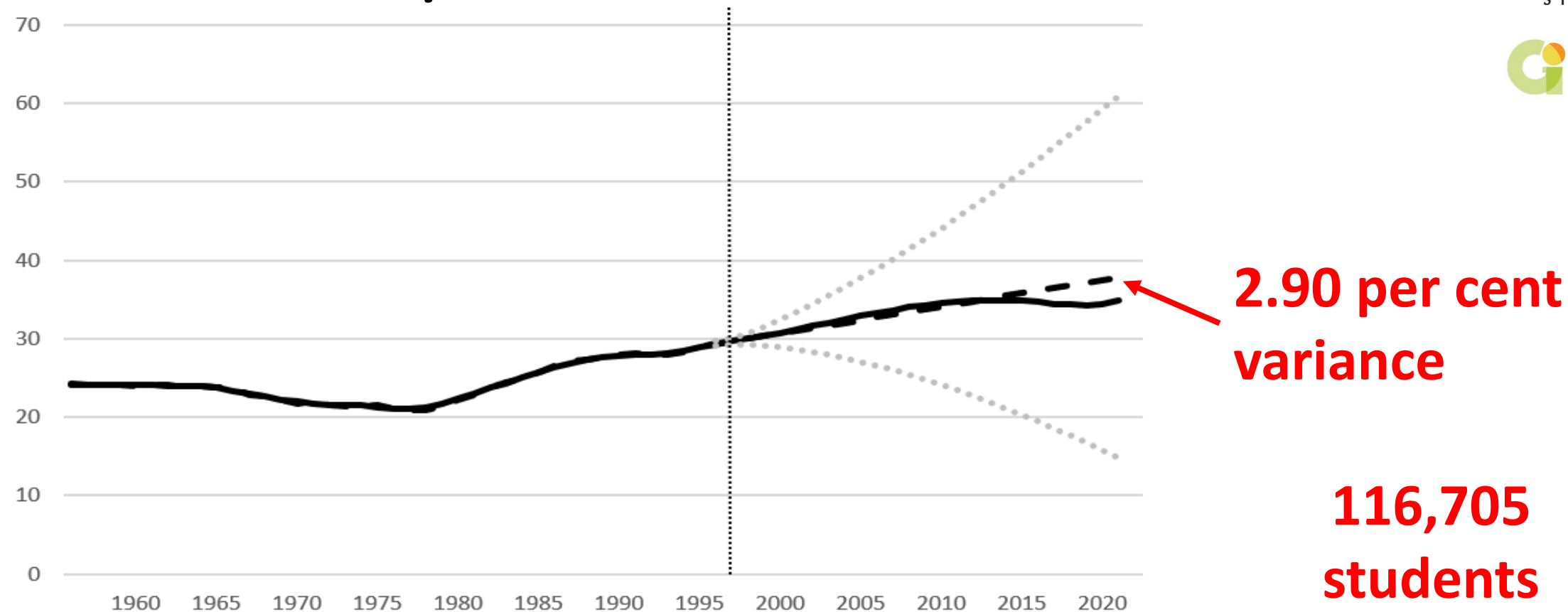
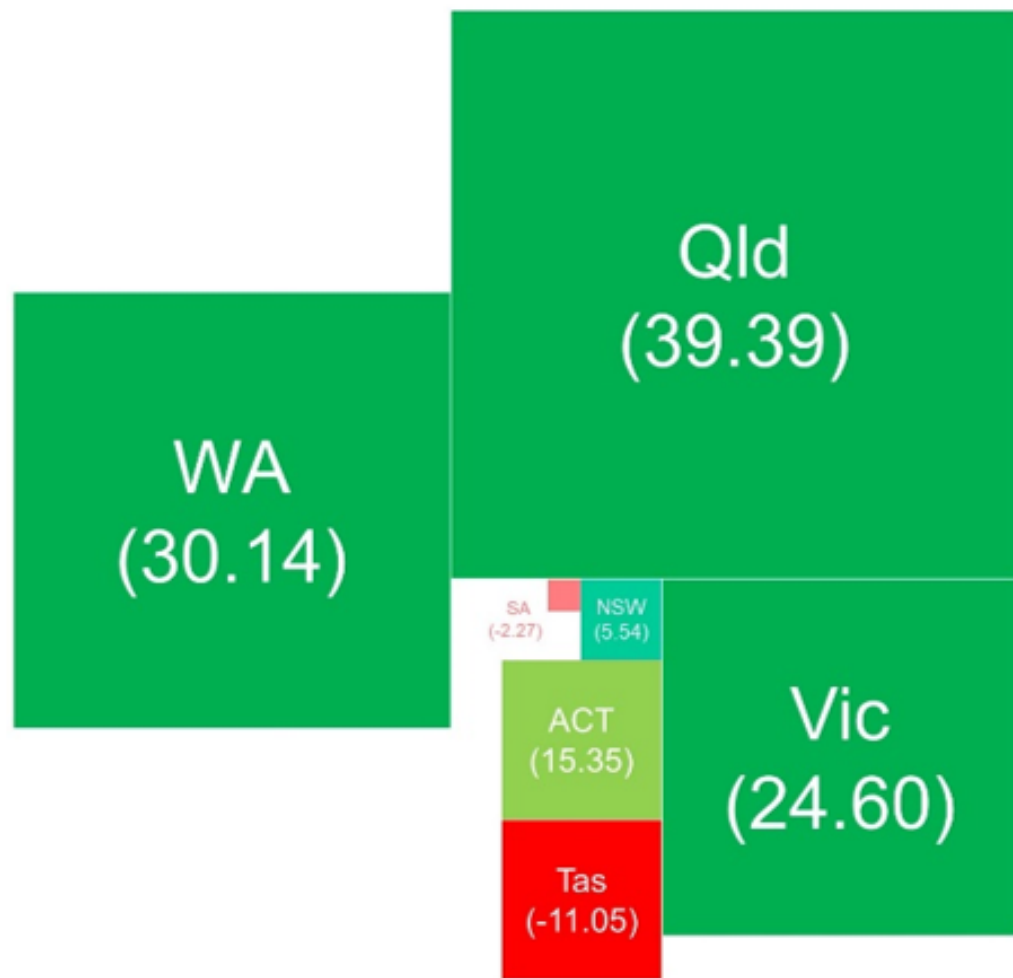
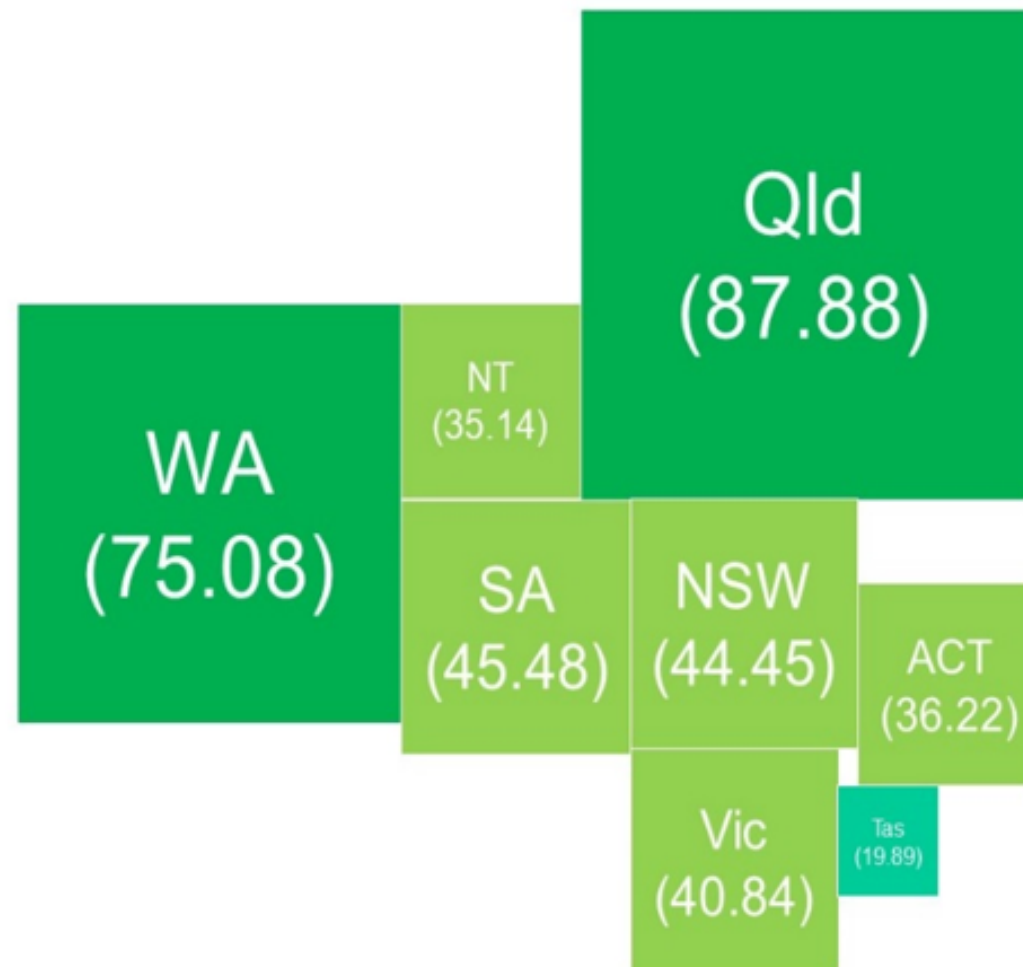


Figure 8. Distribution of enrolments as percentage of market share for non-government schools (actual and predicted, including upper and lower confidence bounds), 1956-2021

Panel 1: Government schools



Panel 2: Non-government schools

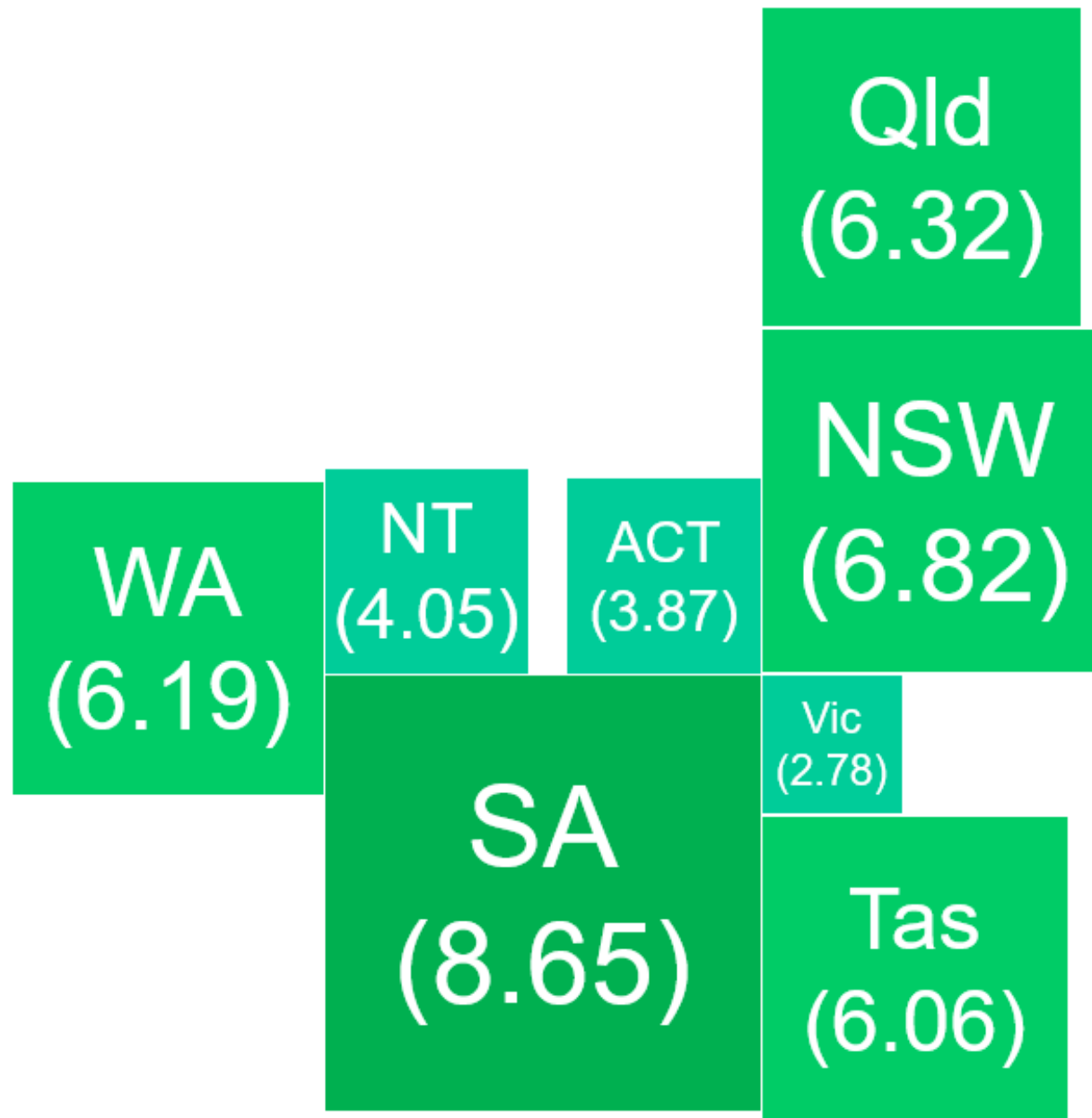


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Figure 6. Percentage change in enrolment, government v non-government schools by state / territory, 1996-2021



Enrolment by geolocation

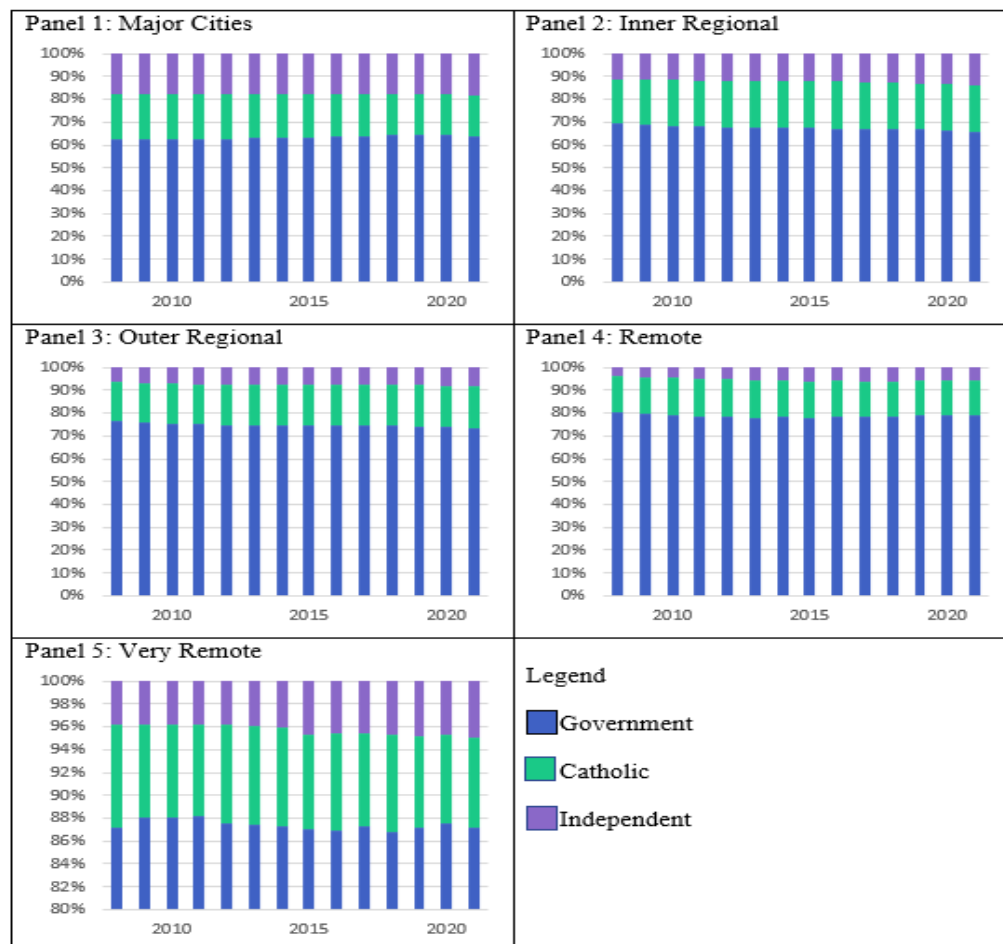


Table X. Variance (percentage and absolute) in enrolment by sector and geolocation, 2008-2021

Geolocation	Sector		
	Government	Catholic	Independent
Major Cities	+1.13 (33,126)	-1.61 (-47,197)	+0.49 (14,364)
Inner Regional	-3.67 (26,527)	+0.97 (7,611)	+2.70 (19,561)
Outer Regional	-3.06 (9,656)	+0.92 (2,903)	+2.13 (6,721)
Remote	-1.33 (601)	-0.13 (59)	+1.46 (660)
Very Remote	-0.05 (15)	-1.08 (317)	+1.13 (332)
TOTAL	-3,673	-37,659	+41,593

School autonomy



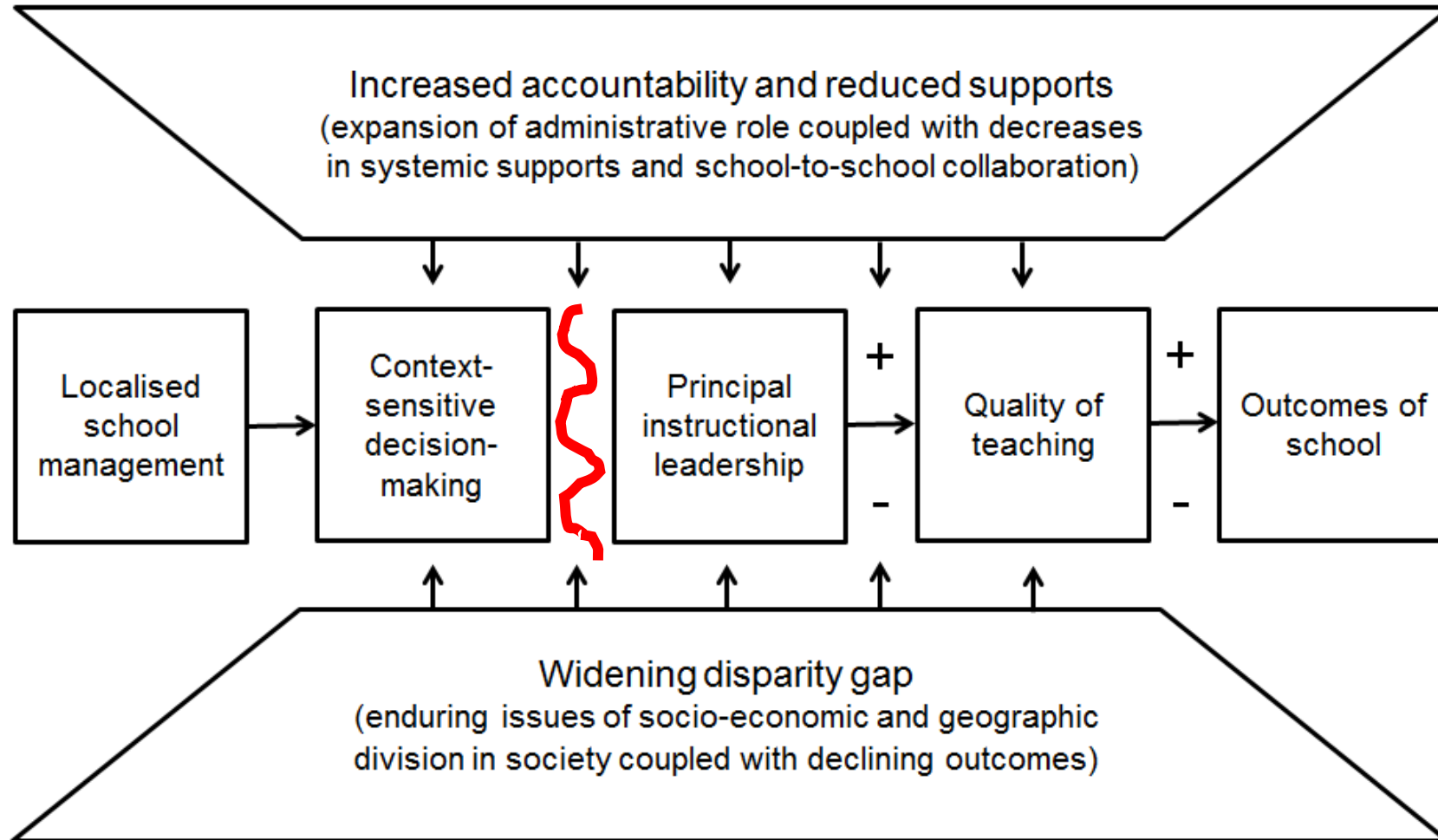
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11% of time on
teaching and
learning tasks

Sch leaders
report 57-60+
hrs per week

60% of TCH
and P consider
leaving



No demonstrable
improved
outcomes

Alignment with
accountability
issues remain

Accountability

School-based education attracted over \$70 billion of public funding last financial year

National Reporting on Schooling data
MySchool website
Systemic dashboards
Annual School Reports

Existing data infrastructure focuses on academic outcomes not other forms of value / impact creation

Despite accreditation requirements, there is no oversight on judgements on the **quality of teaching**

Significant research indicates families choose school based on absolute not value-add measures

Conflation of equality (input variable) compared with equity (an output variable)



And so ...

- School **choice** has not improved outcomes and when coupled with the unique architecture of Australian education, led to many spill over effects in the distribution of students and schools.
- School **autonomy** has not led to significant differentiation in provision and instead amplified administrative work at the school-level compromising outcomes.
- Narrow and cascading **accountability** requirements have not improved outcomes and taken educators away from high impact activities.

