RESEARCH NOTE

Seeing the problem, but missing the point: decile dilemmas

THE NEW ZEALAND INITIATIVE

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Decile dilemmas

Yesterday, the government announced that New Zealand's decile-based school funding system would be replaced, from 2021, by a funding formula tied to student risk factors. It noted that parents too often conflate a school's decile rank with its quality.

The government has identified two real problems but has missed a substantial opportunity for more effective reform.

New Zealand's decile funding system is an underappreciated part of the state's overall egalitarian policy framework. Put simply, schools serving students who come from neighbourhoods with poorer socioeconomic characteristics receive more funding from the state than schools serving more privileged neighbourhoods: a decile 1 school will receive just under $1,000 more per student than a decile 10 school;1 schools also receive additional targeted funding for at-risk students.

No funding system is perfect. School decile calculations are based on the average socioeconomic characteristics of the neighbourhoods where a school's students live. A school that tends to serve the richer kids from poorer neighbourhoods will receive more funding that a school serving the poorer kids from richer neighbourhoods – a situation that can emerge when children do not attend their neighbourhood school. And a particular student's needs may be entirely unrelated to their neighbourhood's characteristics – although current targeted funding for at-risk students seeks to address that problem.

Because schools serving less privileged communities will often underperform other schools on league tables of NCEA achievement, parents may conflate a school's decile ranking with its quality. 'Decile drift', whereby parents seek to enrol their children in higher decile schools, has occurred; whether parents do this in pursuit of perceived improvements in the quality of education, or to choose a more privileged peer group for their children, has not been adequately studied.

The government seeks to abolish the stigma attached to lower decile schools by erasing decile labels from 2021 or 2022. The current decile funding formula will be replaced by one that bases funding on the risk characteristics of students enrolled in the school.

It can make sense for funding to be linked to individual pupil characteristics rather than neighbourhood characteristics. But unfortunately, the proposal will do little to solve the underlying problems.

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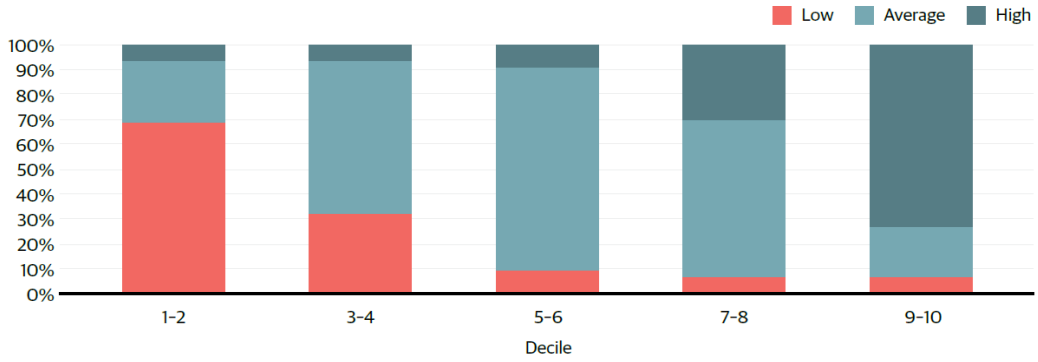
Decile Stigma

Parents will always want the best for their children. If the local school is seen as wanting, parents will try to get their children into schools perceived as better – whether through out-of-zone enrolments or by moving house. The price premium attached to school zones seen as desirable can be substantial.[2] Parental assessment of school quality will depend on a wide range of factors, ranging from NCEA performance and decile rankings through to reports from the Education Review Office and word of mouth.

The government is right to wish to erase the stigma attached to lower decile schools. While lower decile schools fare worse in league tables of NCEA performance, those performance differences are largely due to factors outside of the school's control. The Initiative's recent report, *In Fairness to our Schools*, shows that over 40 percent of decile 1 and 2 schools are in the top 25 percent of overall school performance – once factors outside of the school's control are properly accounted for. There are excellent schools across the decile ranks, and hidden underperformance in higher decile schools.

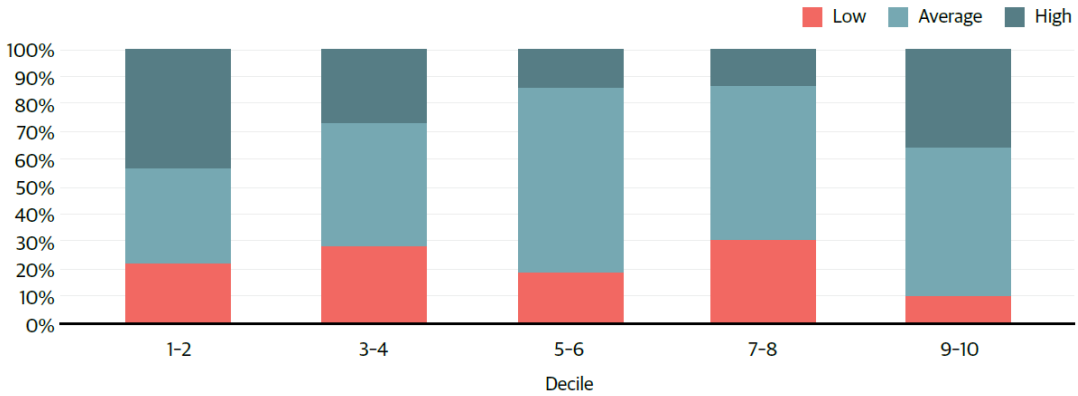
The figures below, from *In Fairness to our Schools*, demonstrate just how important it is to account for the differences in circumstances facing schools. Measures that do not account for those differences suggest that quality simply comes down to decile. Accounting for those differences instead shows that deciles 1 and 2 have the greatest proportion of top-performing schools.

Figure 8: Distribution of school performance: University Entrance (unadjusted)



Source: Author's calculations from Statistics New Zealand's Integrated Data Infrastructure (IDI).

Figure 9: Distribution of school performance: University Entrance (adjusted)



Source: Author's calculations from Statistics New Zealand's Integrated Data Infrastructure (IDI).

Simply erasing decile labels will do nothing to address the ongoing injustice of blunt NCEA league tables, nothing to meet parents' information needs and little to improve the system for pupils.

Current decile rankings of New Zealand schools are widely available[3], and neighbourhood characteristics do not shift quickly enough for the history of decile rankings to disappear. Parents want and need better information about the quality of their local school. In the absence of good information, they will continue to rely on the information that is at hand: NCEA outcomes; historic decile rankings; word of mouth; and reports from the Education Review Office.

The route to system improvement

While the proposed revision to the decile funding model will address relatively minor potential discrepancies in school funding, it misses an incredible opportunity to meaningfully improve school outcomes both for underperforming schools and across the board.

The predictive risk modelling underling the revised funding formula only shows which student characteristics are currently linked to worse outcomes at school; it does not show just how much more effective some schools are than others at helping students with different risk profiles succeed.

Figuring out just how some schools improve outcomes for certain groups, for example Māori students who are currently underserved by too many schools, is a bigger, and more important, task. And we have worked out how to do it.

Using comprehensive data on students and their families linked in the Statistics New Zealand Integrated Data Infrastructure, the Initiative's school performance model separates school performance from the things outside of a school's control.

That performance measure can be used to identify schools that outperform others with similar intakes, so the Ministry and other schools can learn from their successes.

And, the model can do that *now*, without changes to the funding formula. While roughly 80 percent of schools perform comparably to each other when differences in student cohort are accounted for, there are star performers out there – and some laggards. Using the model to figure out which schools have been able to deliver better outcomes for their students, and learning from them, would allow better practice to spread organically across the school system.

Providing more resources to schools facing a more difficult challenge is laudable. But even more laudable is doing that within an evaluation framework that equips us to learn what works and what does not.

Better measures for greater equity

Right now, the Ministry of Education, if the government chose to allow it to do so, could provide reports to the principal and school board of each and every secondary school in the country, telling them how well their school is performing. It could detail the school's performance over time, both on average and for targeted and at-risk cohorts.

If the data was shared with parents, they would be empowered to look beyond decile, or NCEA league tables, when deciding where to educate their child. They could quickly tell whether the local school is among the wide band of schools performing about as well as expected, whether the local school is one of the star performers, or whether it needs to improve.

This would not only help end decile stigma, it would also help teachers, leaders and school boards to govern and improve their schools.

There is immense opportunity in using New Zealand's excellent data infrastructure to improve excellence and equity in our education system. Minor tweaks to the decile funding model do little to further that worthy goal.

ENDNOTES

[1] The Ministry of Education's online funding calculator allows you to vary the decile of a school and see how it affects the school's funding. See here: http://www.fundingcalc.minedu.govt.nz/

[2] See, for example, Susan Edmunds, 2017, "Data shows NZ school zoning makes a huge difference to house prices", Stuff, 4 August 2017, available at https://www.stuff.co.nz/business/95390822/data-shows-school-zones-make-significant-difference-to-house-prices. See also Michael Rehm and Olga Filippova, 2008, "The impact of geographically defined school zones on house prices in New Zealand", *International Journal of Housing Markets and Analysis*.

[3] Wikipedia even has a list of Auckland schools which can be sorted by Decile. https://en.wikipedia.org/wiki/List_of_schools_in_the_Auckland_Region

ABOUT THE INITIATIVE

The New Zealand Initiative is an independent public policy think tank supported by chief executives of major New Zealand businesses. We believe in evidence-based policy and are committed to developing policies that work for all New Zealanders.

Views expressed are those of the author and do not necessarily reflect the views of The New Zealand Initiative, its staff, advisors, members or officers.

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