Does the power of diversity in governance apply to schools?
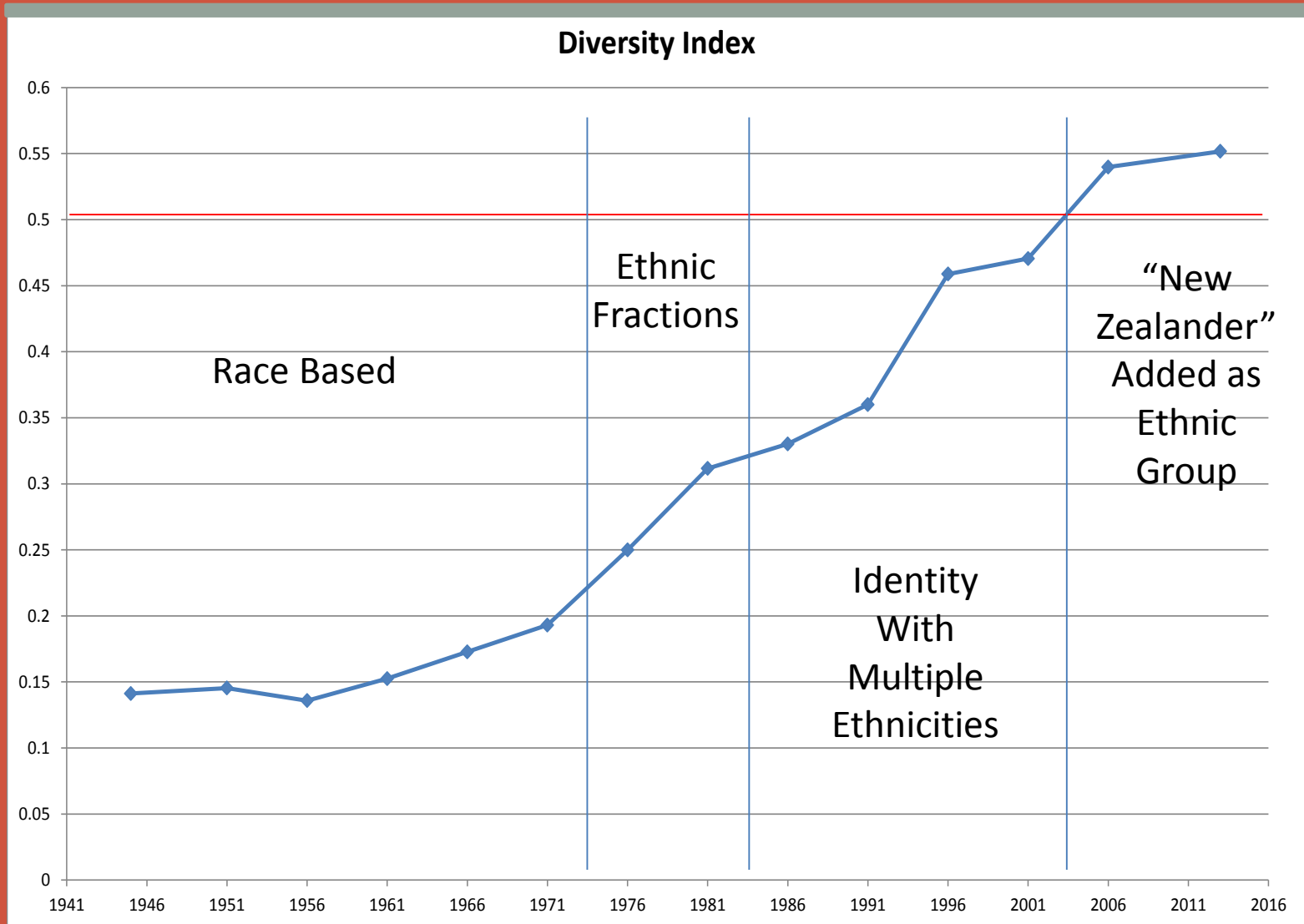Professor Jacques Poot, Louis Wright, Dr Alison Day

Source: http://www.arahoe.school.nz

National Institute of
Demographic and Economic Analysis
Te Rūnanga Tātari Tatauranga
THE UNIVERSITY OF WAIKATO

CaDDANZ
Capturing the Diversity Dividend
of Aotearoa/New Zealand

MASSEY
UNIVERSITY
TE KUNENGA KI PŪREHUROA
UNIVERSITY OF NEW ZEALAND

Growing Ethnic Diversity of Aotearoa New Zealand

Motivation for this project

- Student populations are becoming more ethnically diverse

- Schools are run by Boards of Trustees

  - Up to 11 members: 3-7 elected parent reps, principal, staff member, co-opted trustees

- Can the "power of diversity" be detected in terms of school performance?

- Performance measure: national standards in mathematics, reading and writing

- Data: Ministry of Education, contributing primary schools (years 1-6), 2013

- Methodology: regression modelling

What does the literature suggest?

- Stahl et al. (2010) meta-analysis of the effects of cultural diversity in teams: inconclusive / hard to generalize

- Recent European research on diversity and innovation: inverse-U shaped relationship

- Howard (2010) – NZ case study: challenges and benefits associated with ethnicity-matched teacher assignment and increased teacher diversity

- Sheah (2014): spillover effect of students from educated immigrants can be +ve (Aus), -ve (Can), 0 (US)

- Braster and Dronkers (2014) Student ethnic diversity has a negative effect on student performance in rural & provincial areas, but a positive effect in large cities

- Thijs and Verkuyten (2014): impact of ethnic diversity in schools in contexts-specific. Consider: multicultural education, school identity, student-teacher relationships, peer norms, networks, BoT effectiveness

How do we measure ethnic diversity?

Nijkamp and Poot (2015) *The economics of cultural diversity*:

- There are many different measures
- Each measure represents a different feature of the distribution
- We can also try to account for cultural "distance"
- Measures are sensitive to the level of disaggregation in the classification
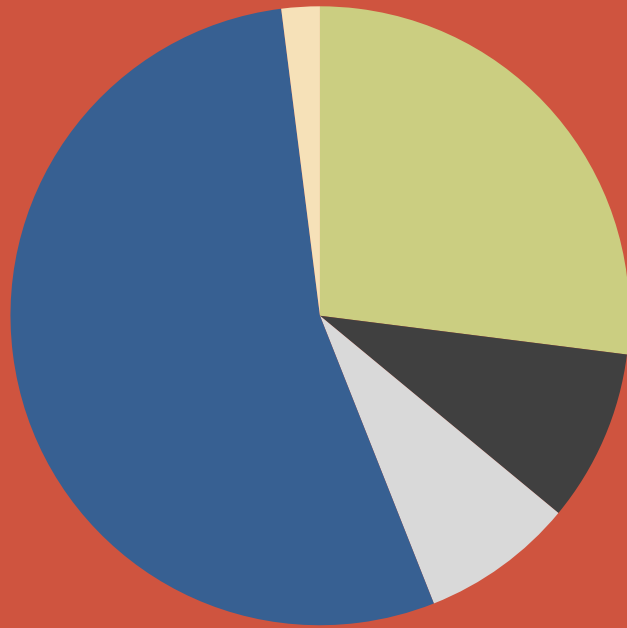
Six key measures of diversity

- SW: Shannon-Weaver information (entropy) index

- FR1: importance of minorities

- FR2: diversity among minorities

- FR: fractionalisation index FR = FR1 + FR2

- HO: Hoover index

- RQ: Reynal-Querol polarization index

Ethnic diversity of New Zealand's Boards of Trustees, 1997-2013
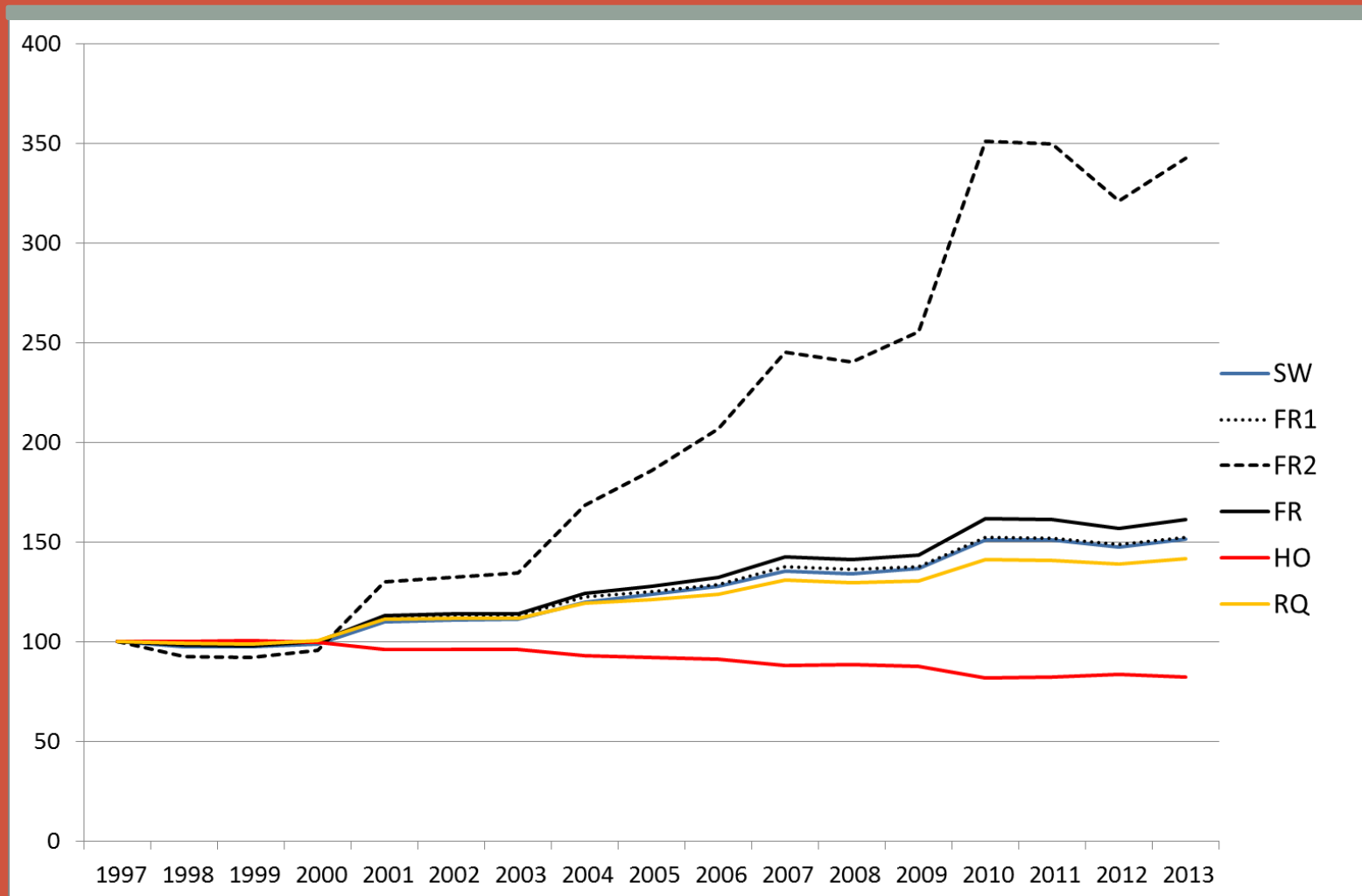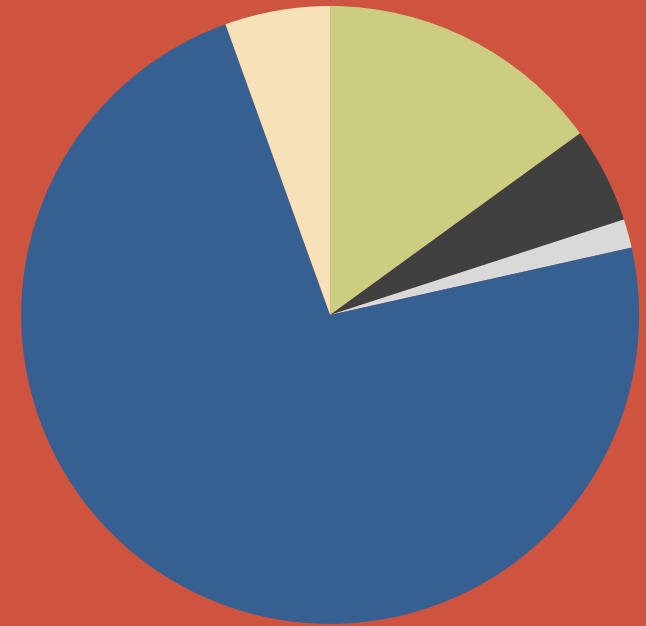
Comparison of ethnic composition

Student population by ethnicity

BoT members by ethnicity

- ■ **Maori**
- ■ **Pasifika**
- ■ **Asian**
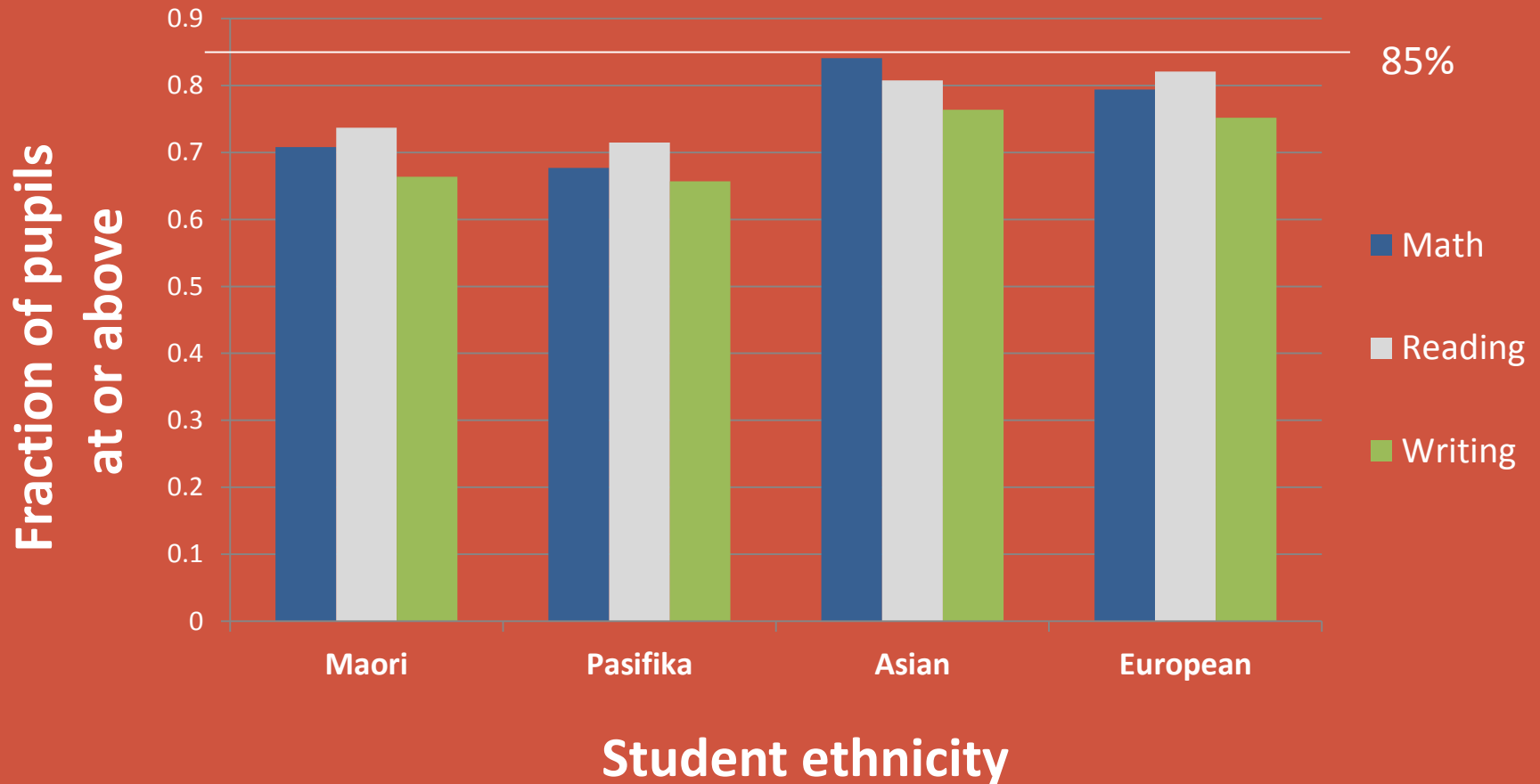- ■ **European**
- ■ **Not Stated**

Duncan & Duncan Dissimilarity index: used to compare evenness of distribution of two mutually exclusive groups within a greater population.

Analysis of national standards data

Hypotheses

1. Schools with diverse BoTs perform better than schools with homogeneous BoTs

2. BoTs that better reflect the ethnic composition of the student population are associated with stronger NS performance

Fraction of students at or above the national standard in 2013
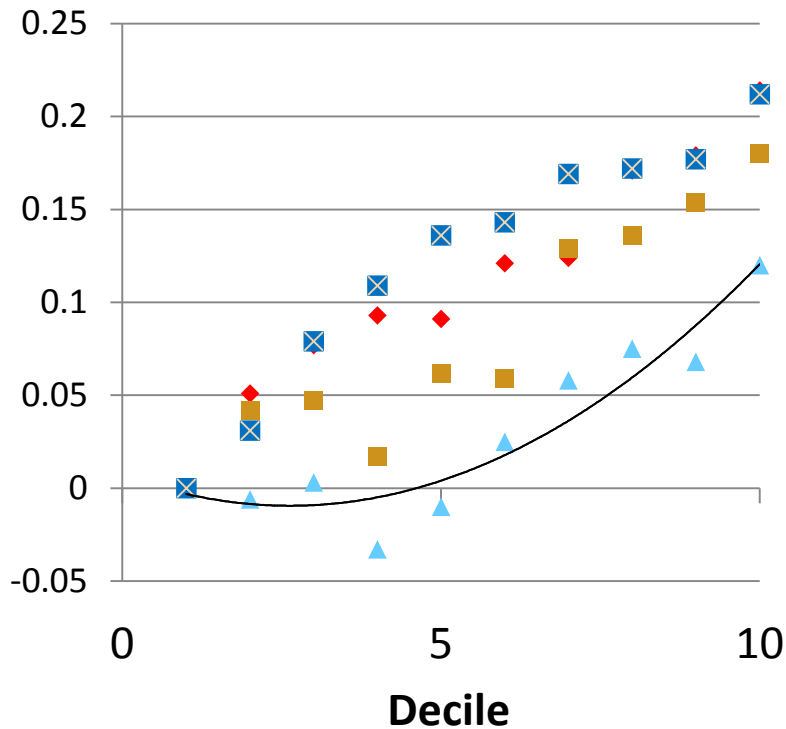
Regressions

Most robust findings

- The higher the decile, the better the average NS performance

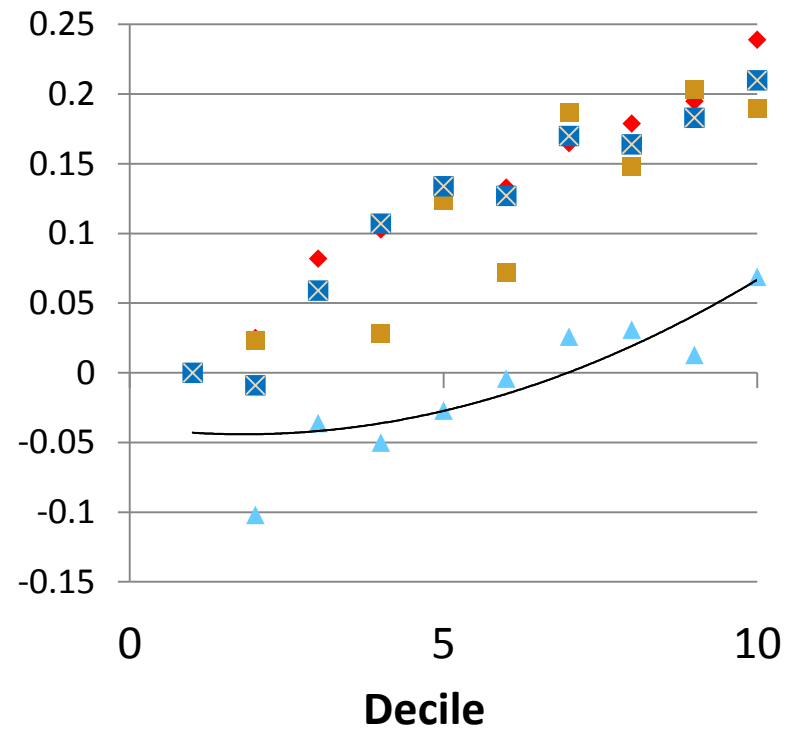 However, decile sometimes significant as a quadratic function

  i.e: low and high decile schools perform better

Student performance in NS by decile

Regressions

Most robust findings

- Higher decile → better average performance in NS

   Decile sometimes significant as a quadratic function

   i.e: low and high decile schools perform better

- European students perform better in North Island schools

- Maori students perform better when diversity is high among minorities

- Students perform better in NS in smaller schools (except Maori)

Conclusions

- Increasing ethnic diversity of school students and BoTs

- The diversity experience varies widely across schools

- "Good fit" regression models differ between ethnic groups

- Small size of BoTs makes applying diversity measures difficult

- Results less informative among Pasifika and Asian ethnicities

Further research

- What is the impact of the school's surrounding community and city/region?

- Controlling for the many unobserved school-specific effects with longitudinal panel data analysis

- Use much less coarse measures of diversity

- Accounting for "sorting" and "reverse causality":

  – Parents' school selection may be based on reported student NS performance.

  – This may be resolved by "instrumental variables", such as predicting school ethnic composition by past national or regional migration trends

Source: clydequay.school.nz

Thank you! Whakawhetai ki a koutou! Xièxiè! Faafetai! Dank u!

www.caddanz.org.nz