NEW ZEALAND POLICY RESEARCH INSTITUTE
TE KĀHUI RANGAHAU MANA TAURITE

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Reading and maths skills and the life-course outcomes of young people in NZ

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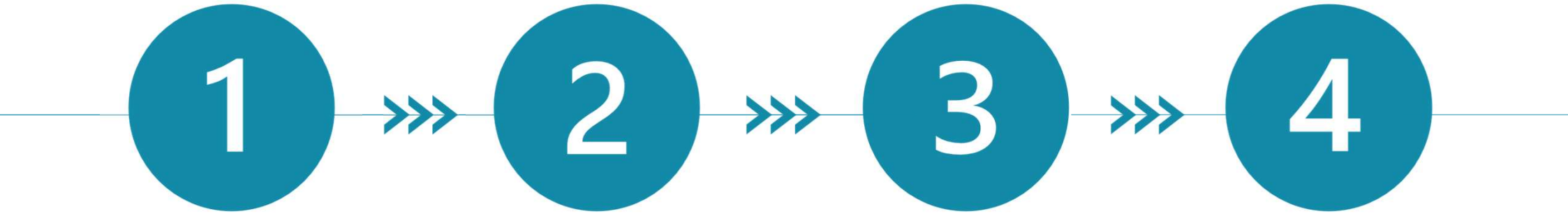
Disclaimer

These results are not official statistics. They have been created for research purposes from the Integrated Data Infrastructure (IDI) which is carefully managed by Stats NZ. For more information about the IDI please visit https://www.stats.govt.nz/integrated-data/.

The results are based in part on tax data supplied by Inland Revenue to Stats NZ under the Tax Administration Act 1994 for statistical purposes. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes, and is not related to the data's ability to support Inland Revenue's core operational requirements.

Overview



What is the relationship between young people's reading and maths proficiency at age 15 and their life-course outcomes?

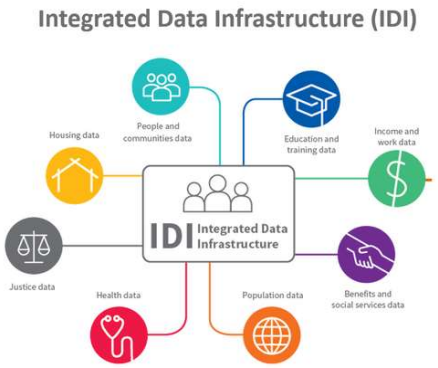
We use the Integrated Data Infrastructure for measures of reading and maths skills of 15-year-old students from NZ's 2009 Programme of International Student Assessment (PISA) and link these to administrative data

This allows us to follow a cohort of young people and track their outcomes for 11 years until they are about 26 years old

We examine educational, labour market, health, family formation and justice outcomes

Data and method

Stats NZ's Integrated Data Infrastructure (IDI)



Population of Interest

- 2009 PISA participants

Characteristics

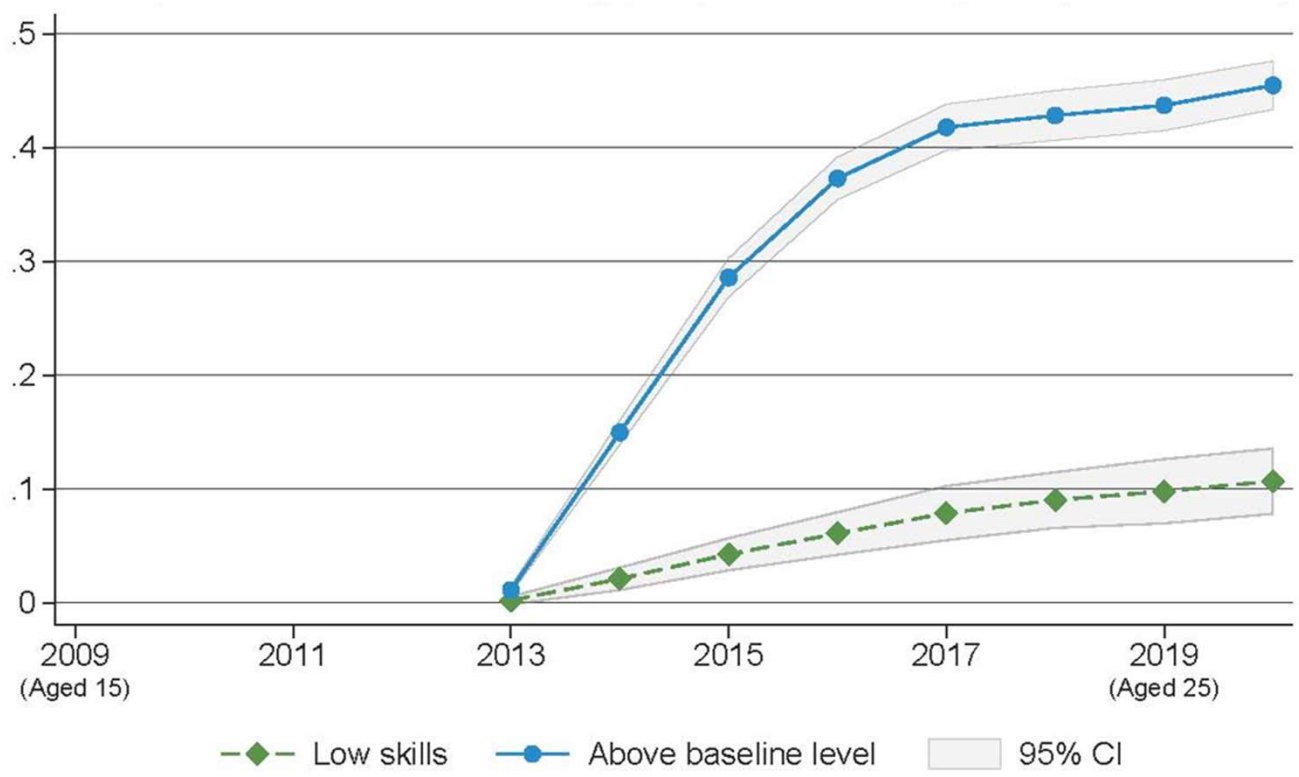
- Linked to IDI admin data allows us to follow 2009 PISA participants over time until 2020 (age approx. 26 years)
- Multiple data sources used

Stratify by proficiency

- 19% have low skills (below Level 2 in either reading or maths); 81% have above-baseline skills
- Construct annual dataset of outcomes for each calendar year 2009-2020
- Exclude those who die or were overseas for >100 days in a given year

Results: Education

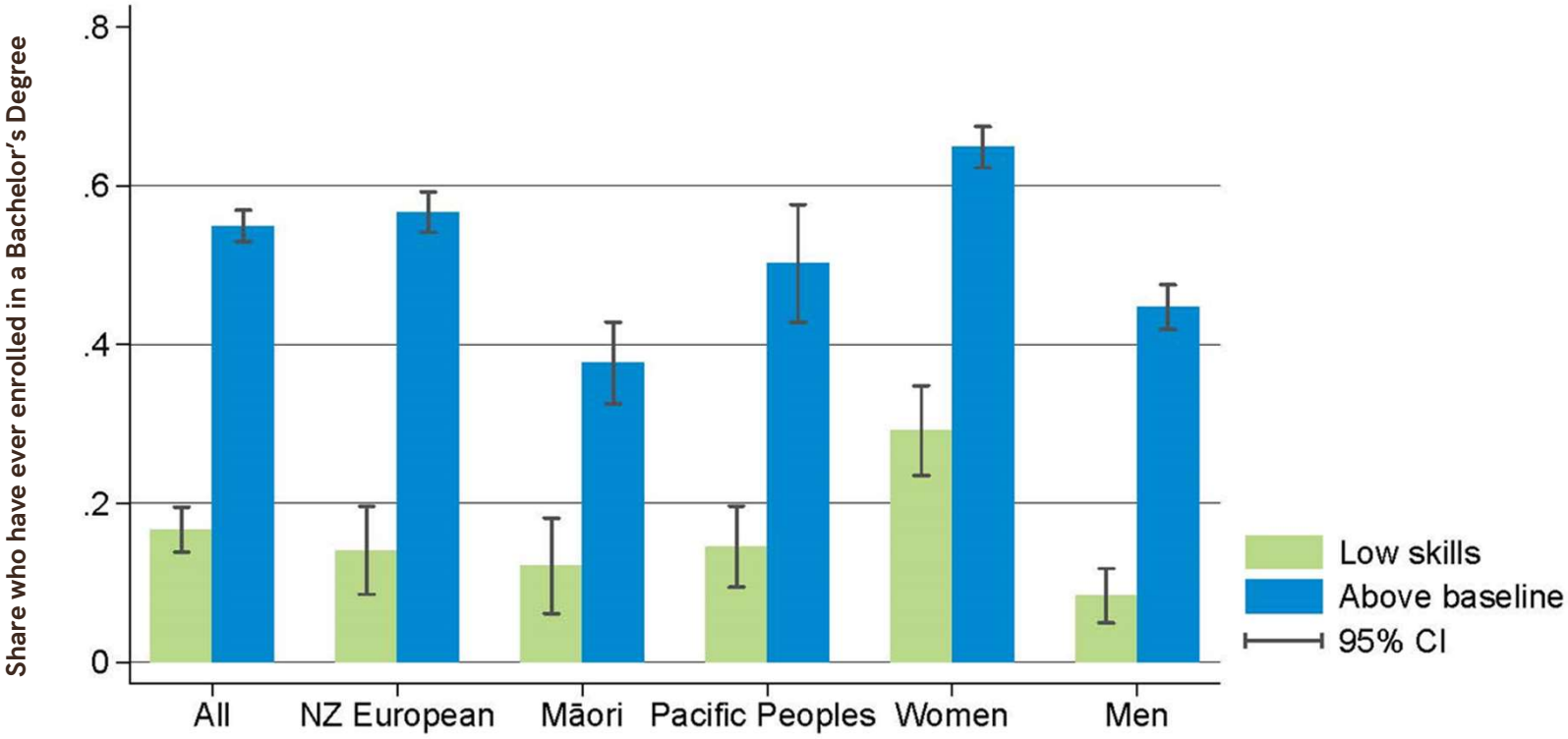
Educational attainment over time



Low-skills group are much less likely to attain Level 7 or above

Results: Education

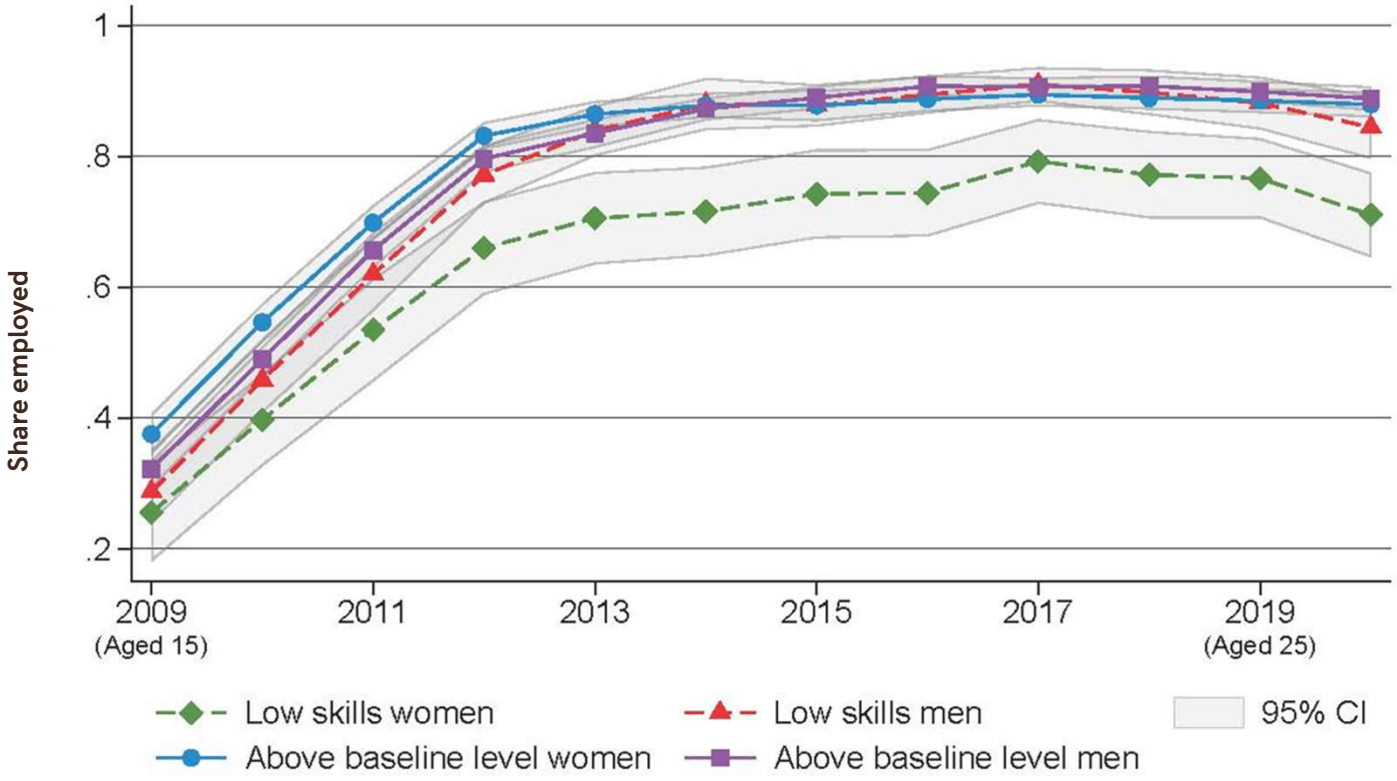
Bachelor's enrolment by characteristics



Above-baseline Māori are less likely to enrol in a Bachelor's than above-baseline NZ Europeans

Results: Labour Market

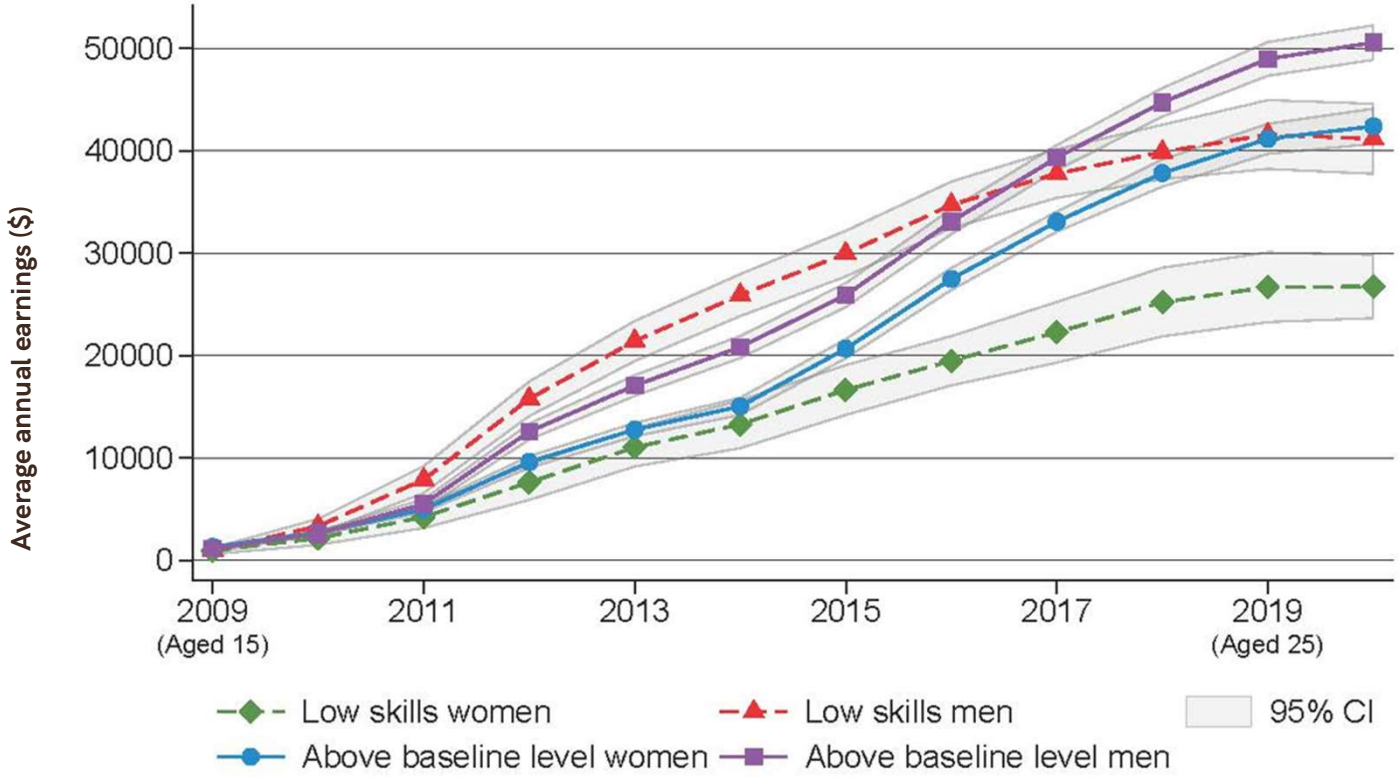
Employment over time



Women with low skills are less likely to be employed

Results: Labour Market

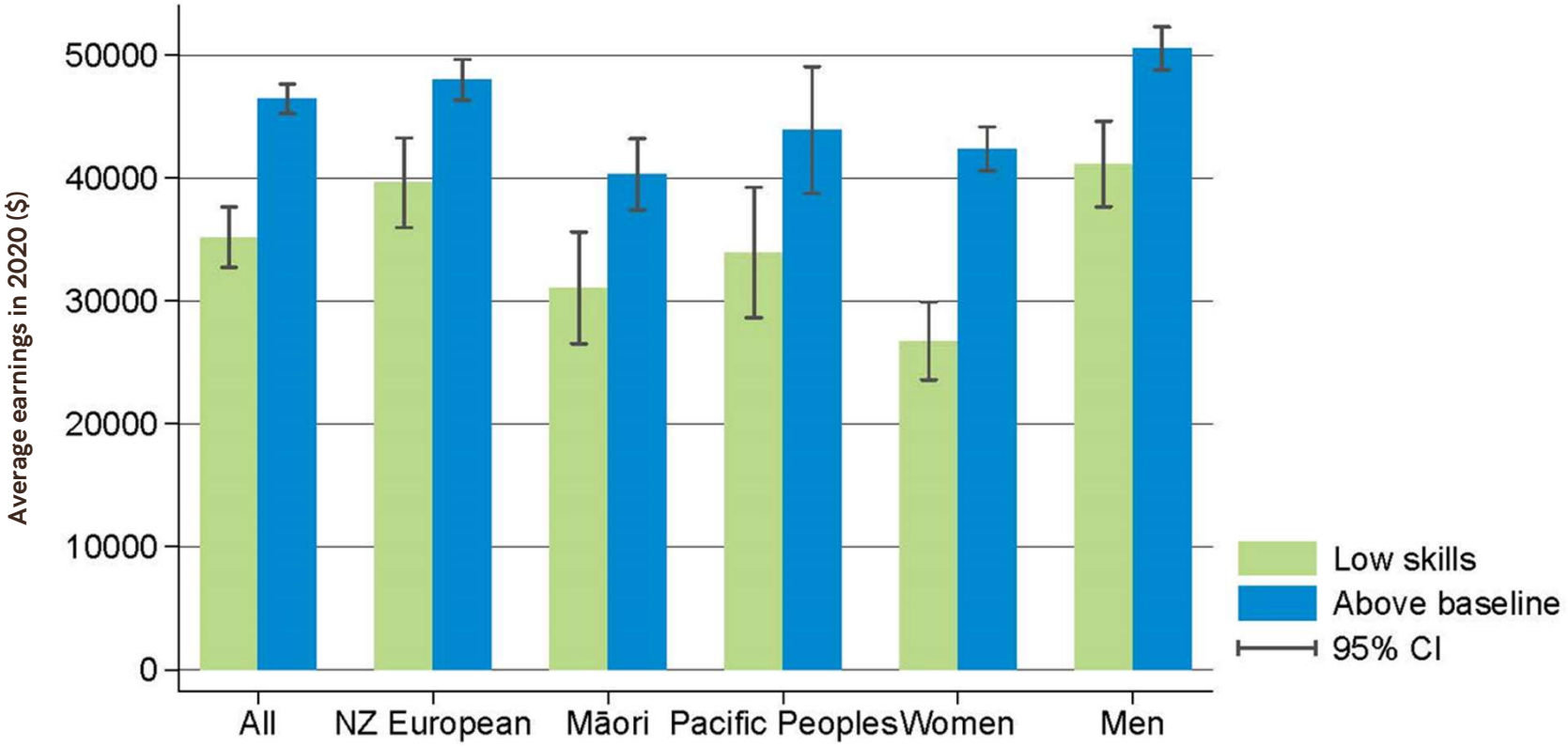
Earnings over time



Above-baseline men have highest earnings; low-skilled women have the lowest

Results: Labour Market

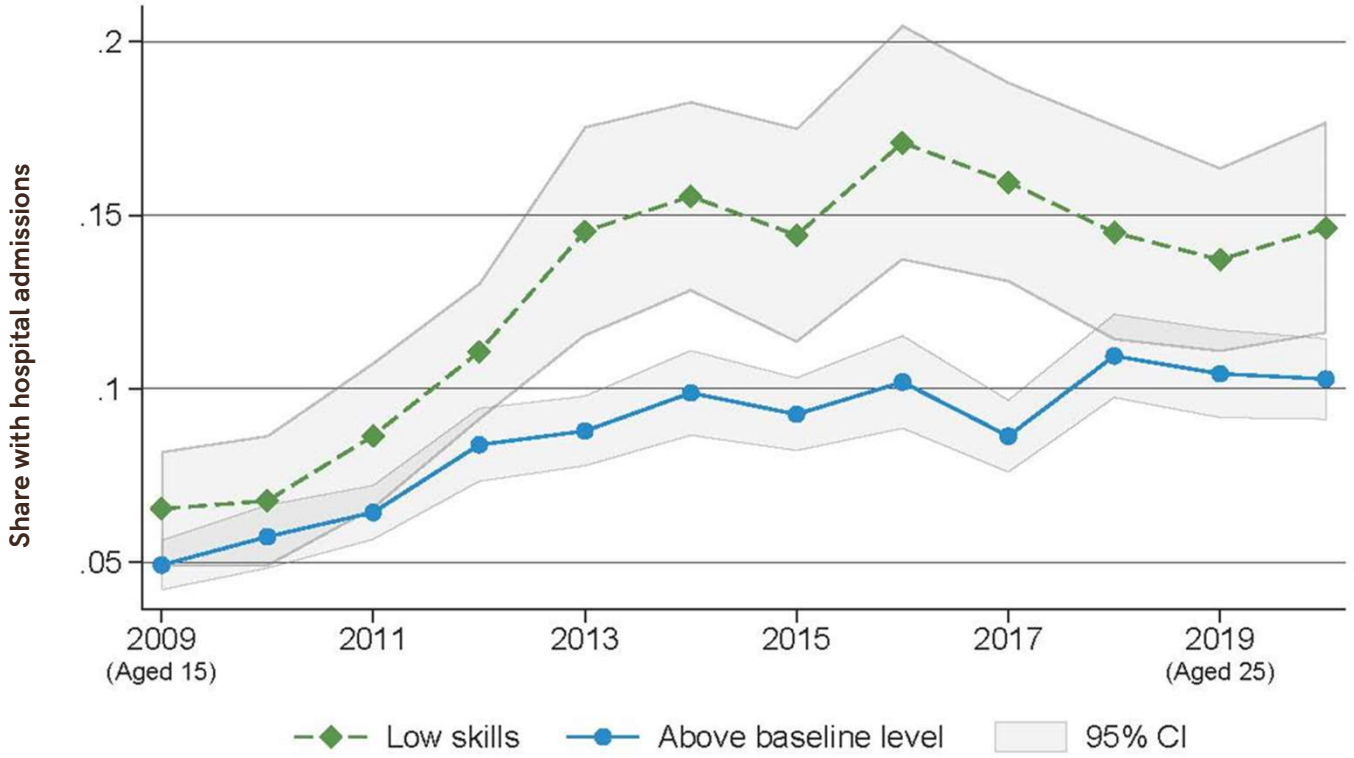
Earnings by characteristics



Above-baseline Māori have similar average earnings to low-skilled NZ Europeans

Results: Health

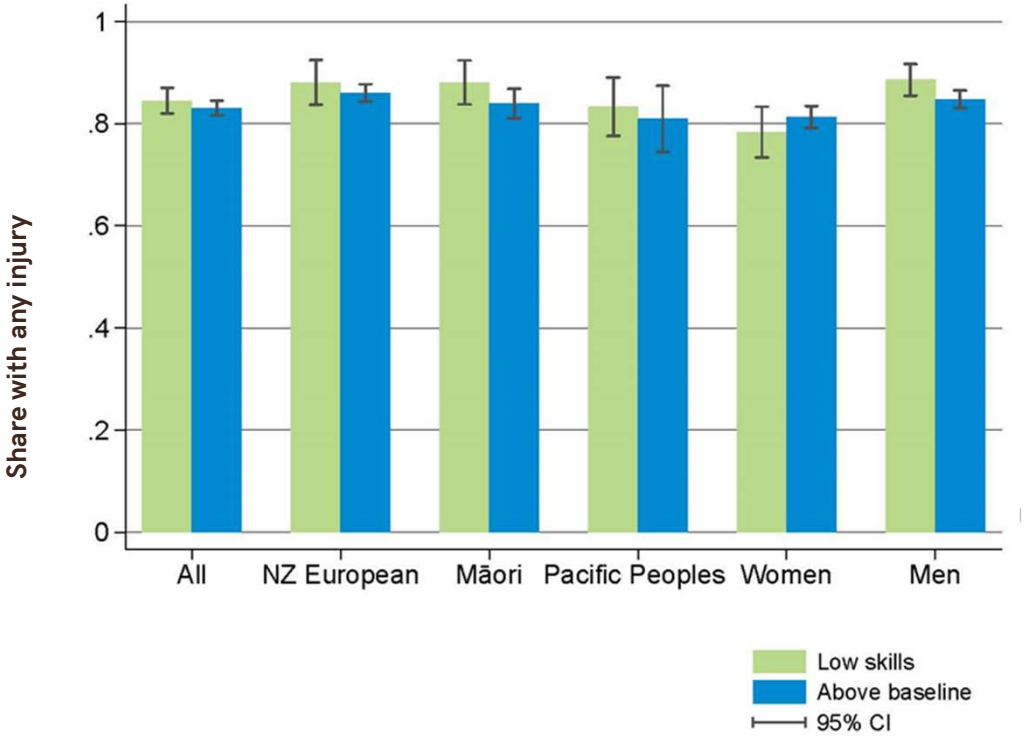
Hospitalisation rates

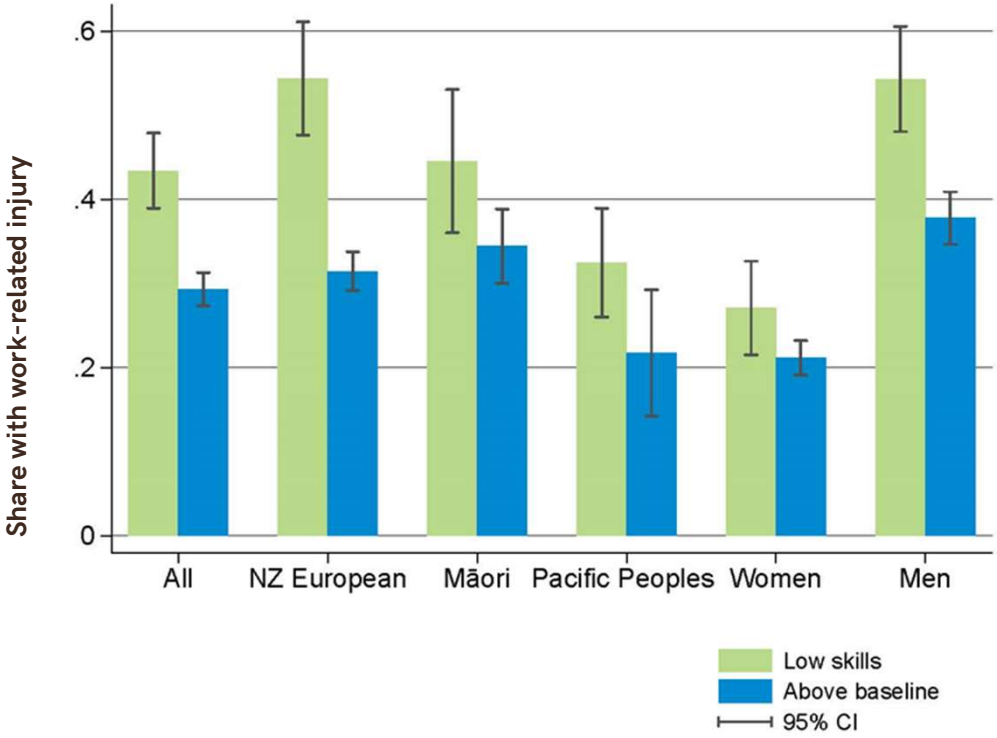


Those with low skills have higher rates of hospital admissions

Results: Health

Injury rates

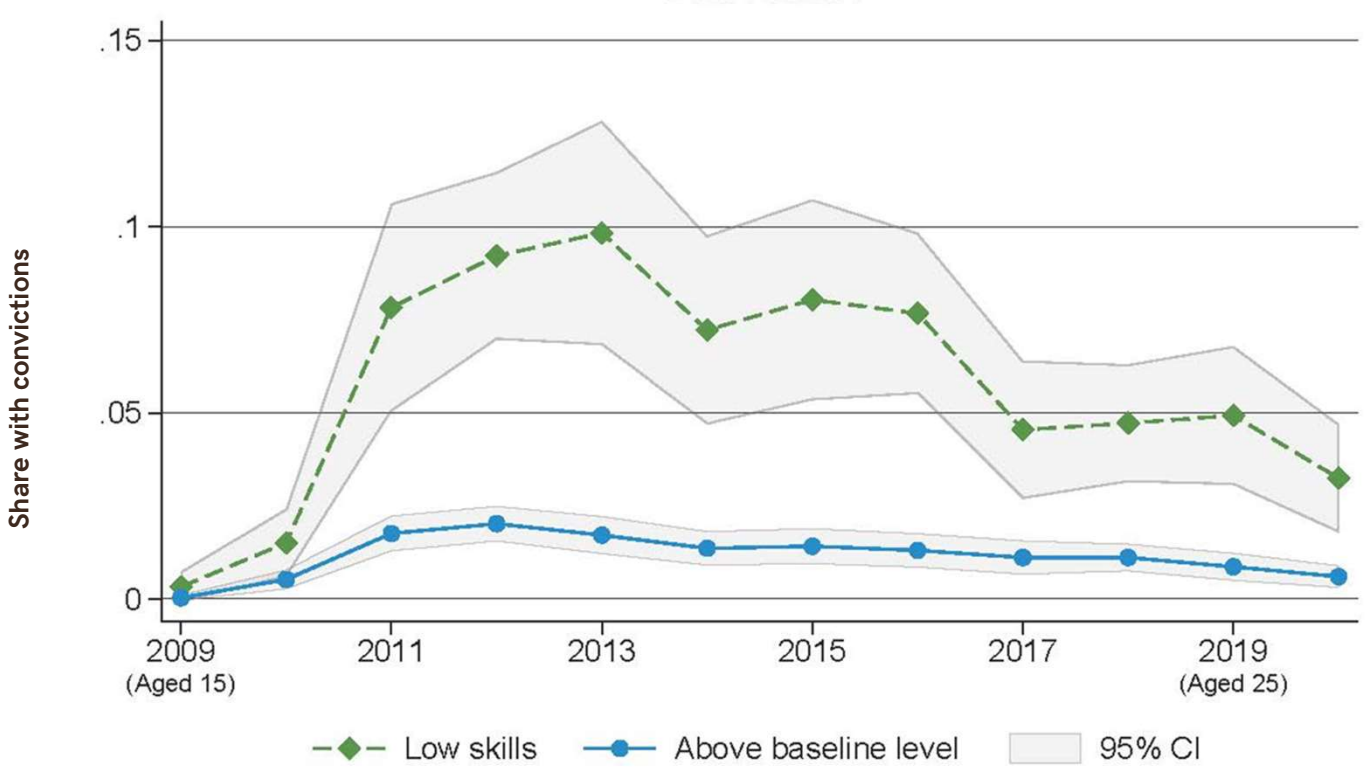




No difference in overall injury rates, but low-skills group have more work injuries

Results: Crime

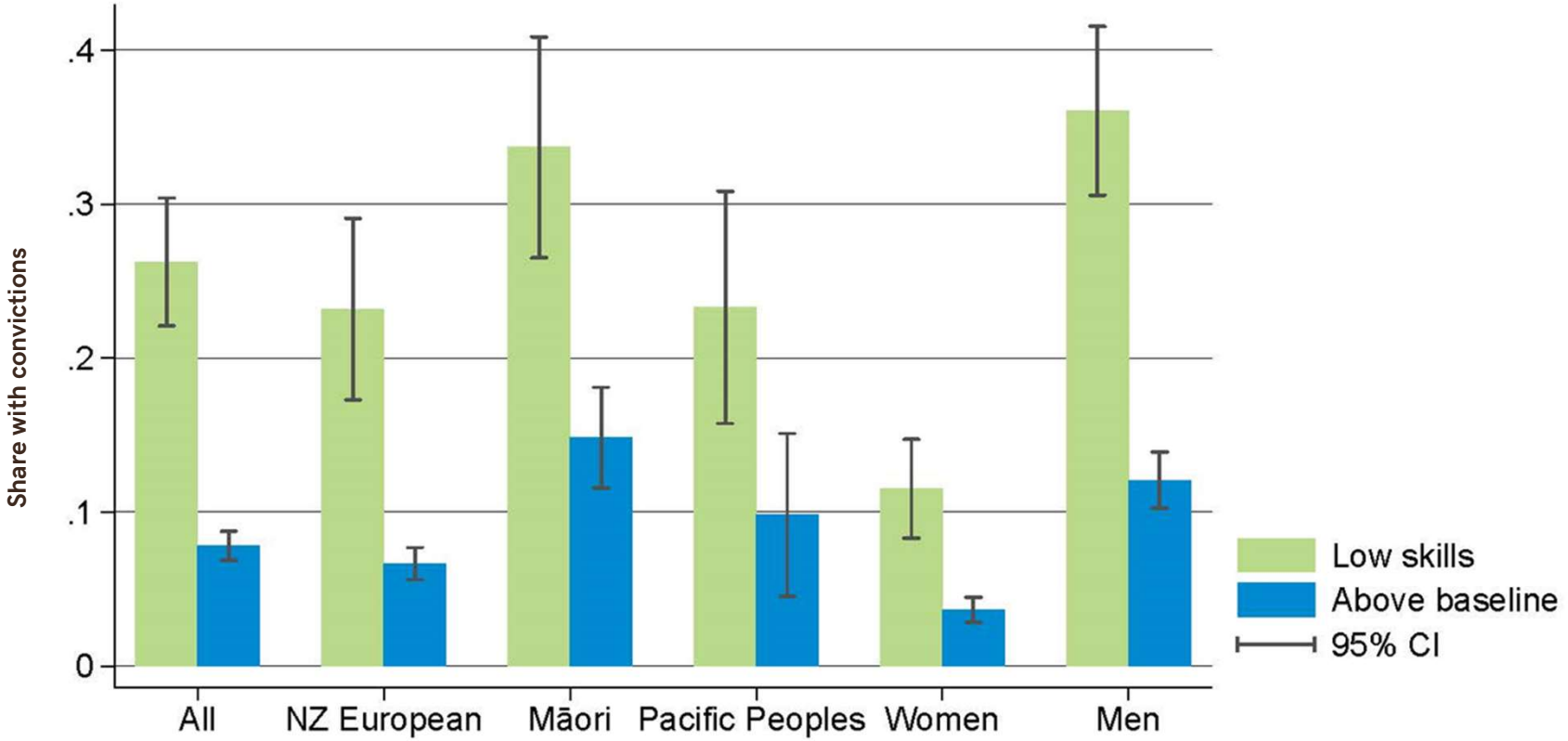
Convictions over time



Those with low skills are more likely to have convictions

Results: Crime

Convictions by characteristics



Low-skilled men and Māori have high conviction rates

Summary

Students with lower measured skills have less favourable outcomes:

- Lower rates of participation in, and completion of, further education
- Lower rates of employment and average earnings
- Labour market differences between low-skills and above-baseline groups are particularly stark among women
- Higher rates of hospitalization
- Higher rates of criminal convictions
- Outcomes for Māori of both the low-skills and above-baseline groups are less favourable than those of their NZ European counterparts
    - E.g. Māori with above-baseline skills have similar average earnings to NZ Europeans in the low-skills group

Thank you

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