



**NEW ZEALAND  
WORK RESEARCH INSTITUTE**

# The gender pay gap

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# Stats NZ Disclaimer

Access to the data used in this study was provided by Statistics New Zealand under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975.

The results presented are the work of the authors, not of Statistics NZ.

# Gender pay gap research

## Objectives:

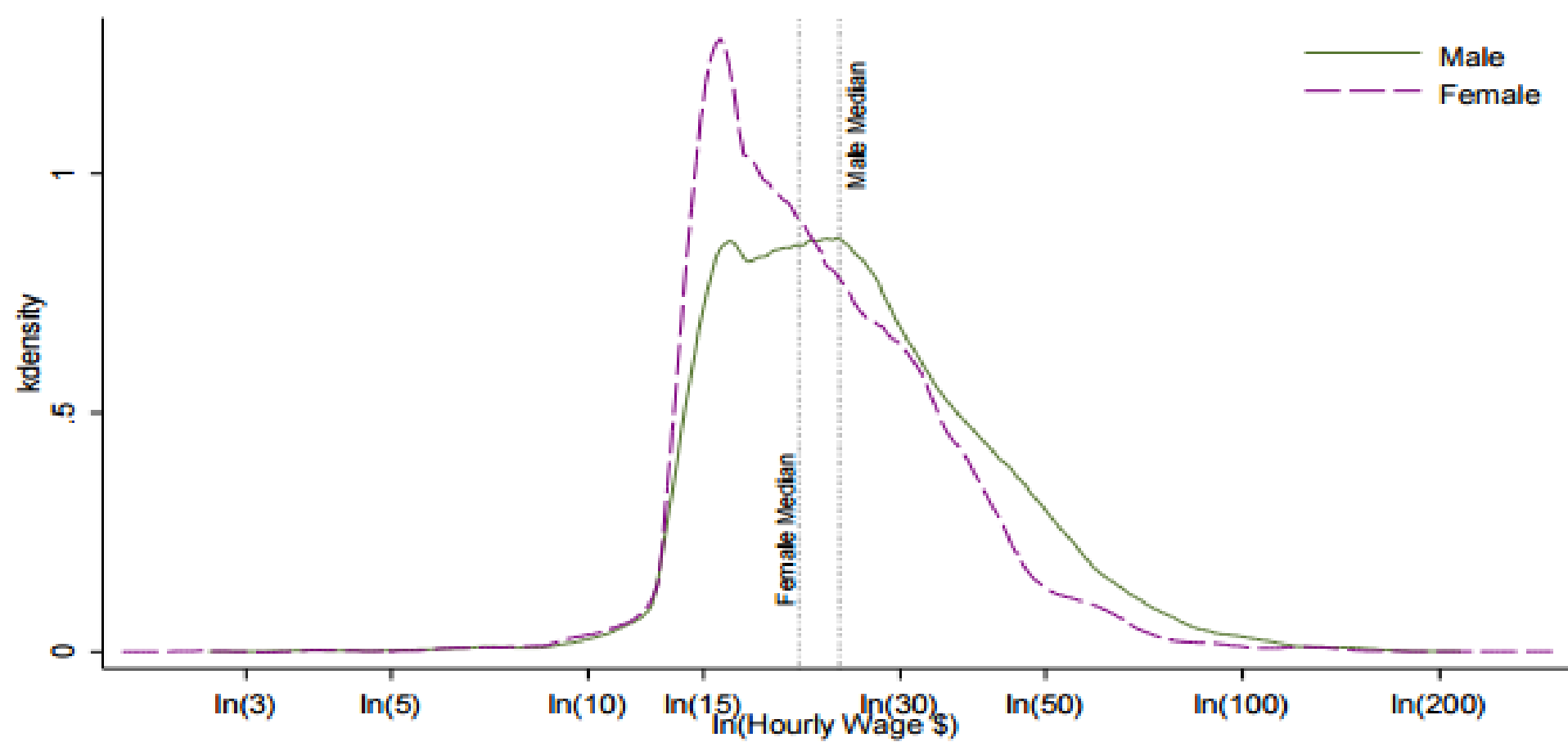
- Estimate size of the gender pay gap, controlling for all observables
- Apportion the gap into 'explained' and 'unexplained'
- Check how the gap fares across the wage distribution

# Data

- Income Survey
- Representative sample of individuals from approx. 15,000 hhlds
- Focus on working age population (16-64)
- Drop tails of the distribution
- Exclude self employed

# Portrait of wages

Figure 1: Usual hourly wage distribution, by gender (2015)



# Education gains

- Five categories of educational attainment:  
No qualification; school; post-school; bachelors; postgraduate.
- Females overtaking males in all levels (except post-school)
- Males more likely to have no qualifications
- Let's compare to educational differences to early research:

- Bachelor's degree or higher

1997	Males = 14.3%	Females = 12.4%
2015	Males = 22.5%	Females = 30.5%

# Empirics

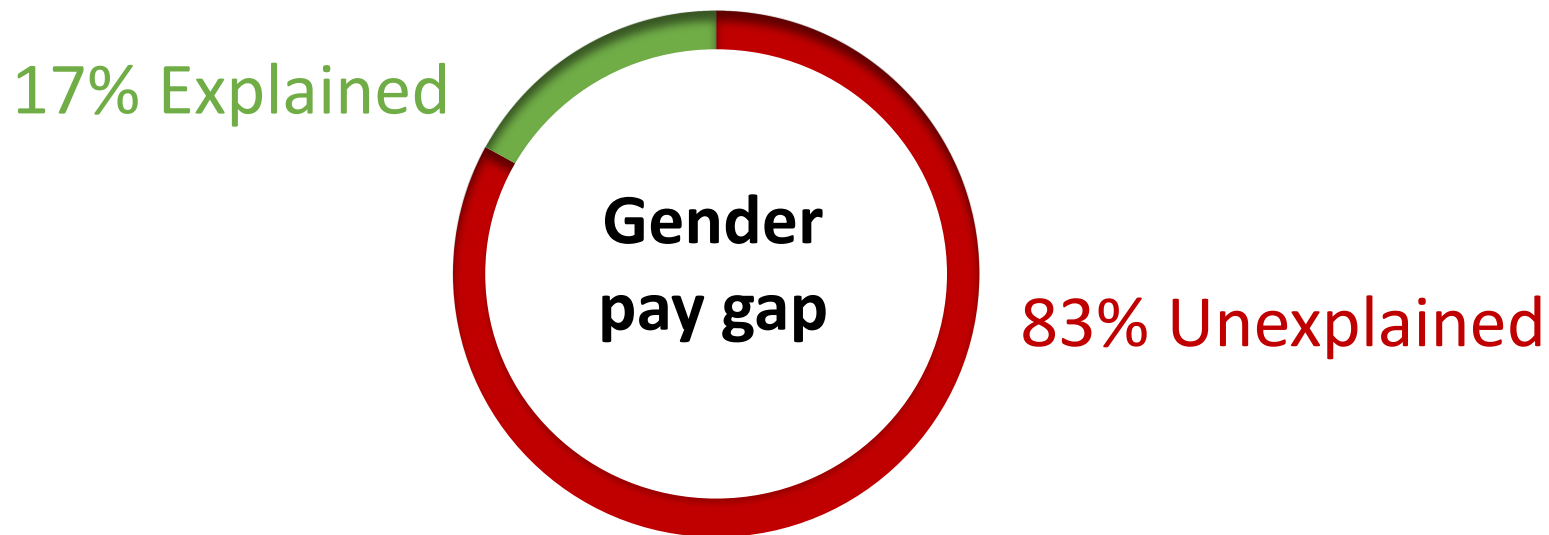
## Oaxaca Decomposition

Separates wage differences into two components:

1. Explained component – male / female differences in average characteristics
2. Unexplained component – male / female differences in returns to characteristics

Unexplained problematic to interpret, but important to track over time.

# Decomposition of total gap = 12.71%



## Comparisons with international evidence:

- Difficult to compare
- Christofides et al (2013) finds unexplained = 74% in Denmark; 76% in Germany; 45% in the United Kingdom
- OECD finds figures ranging from 15% to 100%

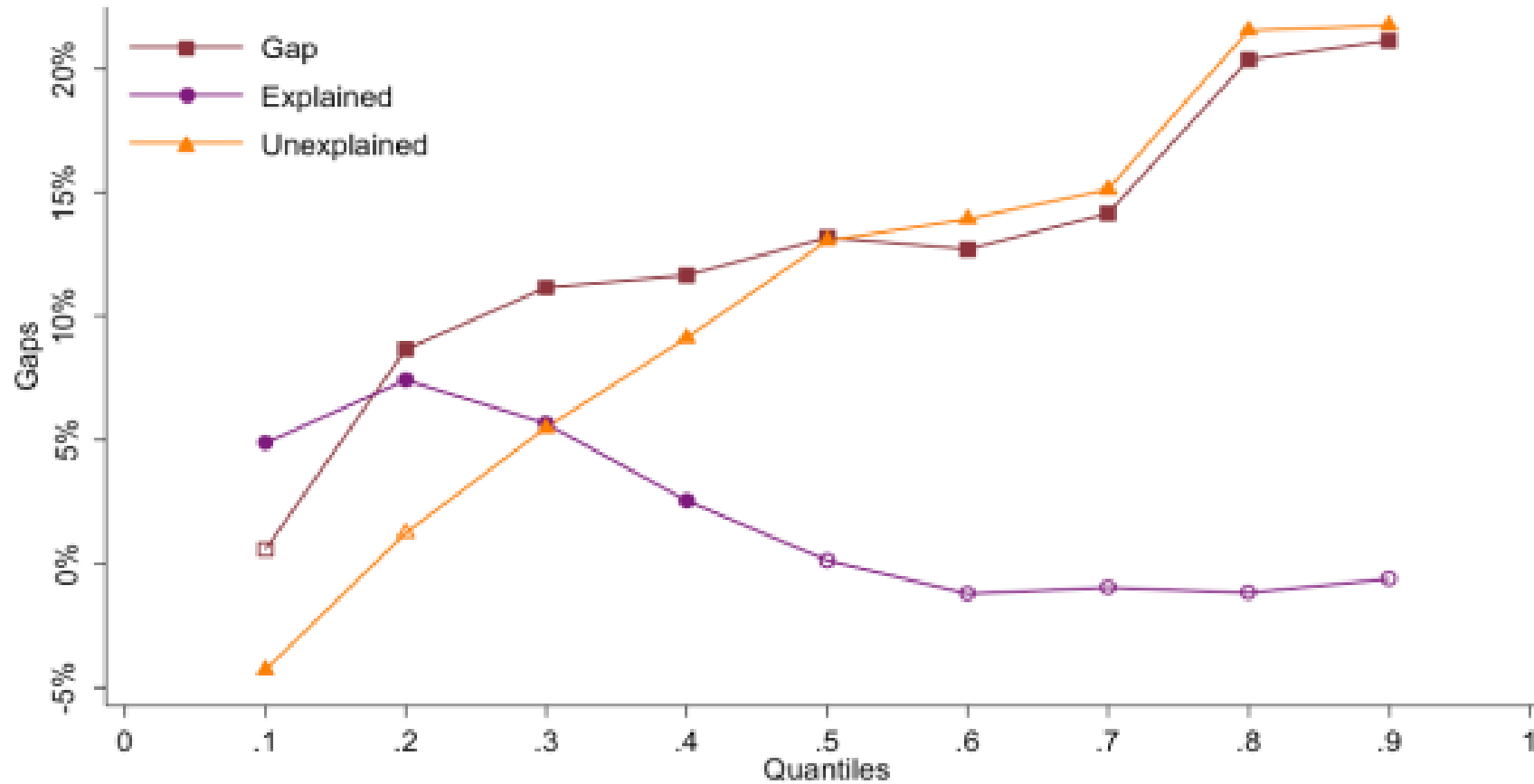


# Unexplained

- Unobserved differences in characteristics, e.g. subject of degree
- Different preferences regarding non-pecuniary aspects of the job
- Discrimination
- Unconscious bias
- ??

# Quantile regression

Figure 3: Gender pay gaps across wage distribution



Note: Hollow markers indicate insignificant gaps at 10% significance level. Source: 2015 IS. Author's compilation.

# Summary of key findings

- The gender pay gap is a high level indicator of earning difference
- Regardless of approach undertaken the majority of the gap was unexplained
- The result is robust to alternative methods – such as propensity score matching
- The size of the gap depends heavily on the location in the wage distribution
- Strong evidence pointing to a glass ceiling effect in NZ



## Empirical evidence of the gender pay gap in New Zealand

March 2017

W012712



## Parenthood and labour market outcomes

May 2018

# Thank you very much for your time

Both reports available at :

<http://women.govt.nz/work-skills/income/gender-pay-gap>

Interested in more research from NZWRI (e.g. we monitor the United Nations Women's Empowerment Principles for NZ) – see <https://workresearch.aut.ac.nz/>



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**Thank you**

