Empirical evidence of the gender pay gap in NZ

Gail Pacheco, Chao Li & Bill Cochrane

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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 in this study are the work of the authors, not Statistics NZ.
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- How do the results change if we switch to propensity score matching?
- How does the gap differ across the wage distribution?
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- 40 to 80 percent explained, based on a 15% pay gap.

- By 2003, Dixon shows that the wage gap had fallen to 12.8%
Data

- Working age population aged 16 to 64.
- Trimmed outliers in hourly earnings and removed self-employed.
- Final sample = 6,834 males and 6,903 females.
Wage Distribution

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Females are more likely to be sole parents, widowed / separated / divorced; and males are more likely to have an under 6 year old in the household.
Descriptives

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Education gains a plenty for females.

- Comparing proportion that had a bachelors or higher:
  - In 1997: 14.3% males and 12.4% females
  - In 2015: 22.5% males and 30.5% females
Oaxaca Decomposition

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  - Household characteristics.
The unexplained

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Sample selection

- Wages only observed for those employed.
- Decision to enter the labour market may be systematically linked with potential wages.
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**Table: With and without correction**

<table>
<thead>
<tr>
<th></th>
<th>Original</th>
<th>Corrected for females</th>
<th>Corrected for males</th>
<th>Corrected for both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explained</td>
<td>2.15%</td>
<td>2.15%</td>
<td>2.46%</td>
<td>2.46%</td>
</tr>
<tr>
<td>Unexplained</td>
<td>10.56%</td>
<td>18%</td>
<td>2.10%</td>
<td>9.54%</td>
</tr>
<tr>
<td>Total gap</td>
<td>12.71%</td>
<td>20.14%</td>
<td>4.56%</td>
<td>12%</td>
</tr>
</tbody>
</table>
Propensity score matching

- Matching like with like.
- Using same characteristics as decomposition models.
- Total gap = 12%; Explained is 4.27% and Unexplained is 7.73%
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The explained component has risen a little, but the majority of the gap is still unexplained.
Distributional differences

Figure: Quantile regression

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Key findings

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- The gender pay gap is approximately 12% and unchanged since 2003.

- Regardless of approach undertaken the majority of the gap remains unexplained.
  - This result persists after correcting for selection bias.

- The size of the gap depends heavily on the location in the wage distribution.
  - Strong evidence pointing to a glass ceiling effect in NZ
Actions for employers

The Ministry has produced a booklet which serves as the starting point for employers who want to know if they have a gender pay gap and what to do about it.

Thank you very much for your time.

Full report is available at:


Also, email gail.pacheco@aut.ac.nz