The evolution of the gender pay gap in Australia: Do young women now have the advantage?

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The evolution of the gender pay gap in Australia

Outline

- Motivation for this paper
- Background literature
- Methodology
- Descriptive Dynamics
- Drivers of the gender pay gap
- Decomposition
- Summary & Next Steps

Motivation – why do we care?

- Gender pay gap has been persistent despite progress

- Economic and social implications of persistent gender pay gaps

- Younger generations - highly educated, greater labour force attachment, changing attitudes to gender roles and social norms, confident and proactive attitudes

- Expectation for younger generations that the pay gap should be non-existent or potentially reversed

Background literature – key references

- Numerous studies that look to further understand the nature of the gender pay gap.

- Typically involve breaking down this gap using traditional decomposition methods developed by Blinder & Oaxaca and variations thereof.

- Focus on specific groups (e.g. managers, public/private sector) or specific drivers (e.g. occupational segregation, non-cognitive factors) or different points of the earnings distribution.

- Introduction of longitudinal surveys has opened the doors for deeper exploration into the drivers and dynamics of the gender pay gap.

- A number of international studies have assessed the gender pay gap for younger cohorts and how these track over time.

- Finnie & Wannell (2004) follow three cohorts five years after leaving university. Find the gender pay gap widens the further out from leaving university, with hours playing an important role in explaining this gap.

- Fortin (2008) examines the evolution of the pay gap for young people in the USA using a number of cohorts in their mid-twenties and early thirties. Finds considerable improvement largely explained by convergence in human capital.

- Bertrand, Goldin and Katz (2010) hone in on MBA graduates from Chicago and asses their labour market outcomes (incl. gpg) at various periods after graduation.

- Pooling graduates from 1990 to 2006, they find that male and female earnings are almost identical at the outset of their careers, but soon widen – male graduates earning 82% more a decade out after degree completion. Main drivers – pre-MBA training, career interruptions and hours…

- Currently no econometric studies that we are aware of that focus in on young Australians to examine the gender pay gap.

- Household, Income and Labour Dynamics in Australia (HILDA) survey spanning 16 years of data collection from 2001 to 2016

Generation	Born	Age in 2001	Age in 2016
Generation Y	1976 - 1991	10 - 25	25 - 40
Generation X	1961 - 1975	26 - 40	41 – 55
Baby Boomers	1946 – 1960	41 - 55	56 - 70

- Core econometric analysis restricts the sample to Generation Y – Descriptive dynamics assess all generations.

Standard Mincerian wage equation forms the basis of our analysis:

$\ln(W\_ig) = [\![\alpha\_a + X]\!]\_ig\hat{} \ \beta\_g + u\_ig$, for i=1,…,N_a at age a_ and gϵ(M,F)

The gender wage differential can then be decomposed into that part attributable to differences in human capital endowments (Xs) and that part attributable to the group-specific rewards for those endowments (βs)

$$\text{E}\big[\ln(W_{iM})|X_{iM}\big] - \text{E}\big[\ln(W_{iF})|X_{iF}\big] = (\bar{X}_M - \bar{X}_F)'\hat{\beta}^* + \bar{X}'_M(\hat{\beta}_M - \hat{\beta}^*) + \bar{X}'_F(\hat{\beta}^* - \hat{\beta}_F)$$

- Dependent variable: log real hourly wages = gross wages/hours worked (main job).

- Conventional individual and work-place characteristics that affect wages are included – education, experience, occupation, industry, union membership, contract type and sector.

- Impact of any year-specific effects related to the business cycle or otherwise have been controlled for using year dummies and also included information about geographic location, capturing localised economic activity.
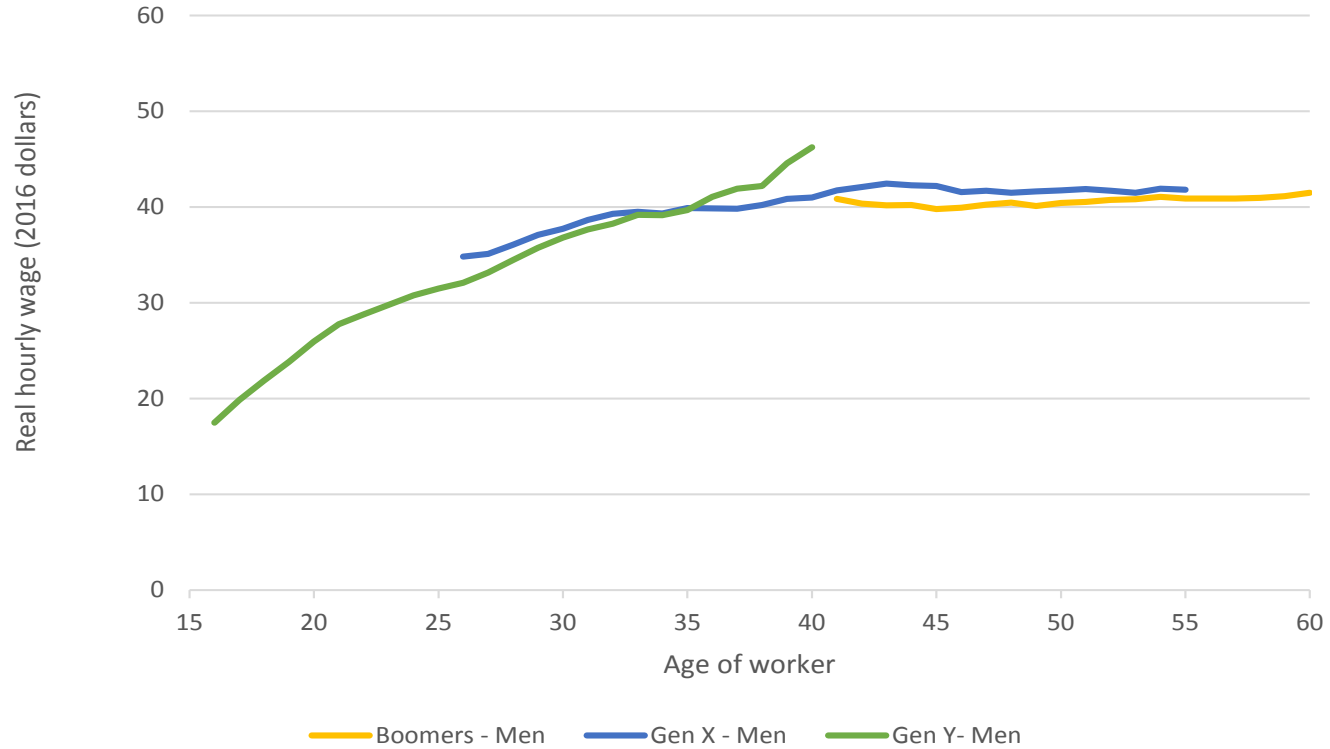
- We know from our key references and previous literature that hours of work play an important role in wage determination. We know in Australia from work undertaken by Booth & Wood (2008) that there also exists a part-time wage premium.

- We include a suite of banded working hour indicators to capture the contemporaneous hours structure for survey respondents. These are designed to capture any systematic differences in wage offers between full and part-time employees and variations thereof.

- We are also interested in the accumulated labour market history of hours worked and the role these play. We derive a history of work hours structure by exploiting the longitudinal data.

- We do this by selecting respondents that have been observed in the data for at least five years prior and assess their labour market history by counting the number of years in each of the following hours bands:
    - Zero hours
    - 1-20 hours (low part-time)
    - 21-29 hours (regular part-time)
    - 30-34 hours (high part-time)
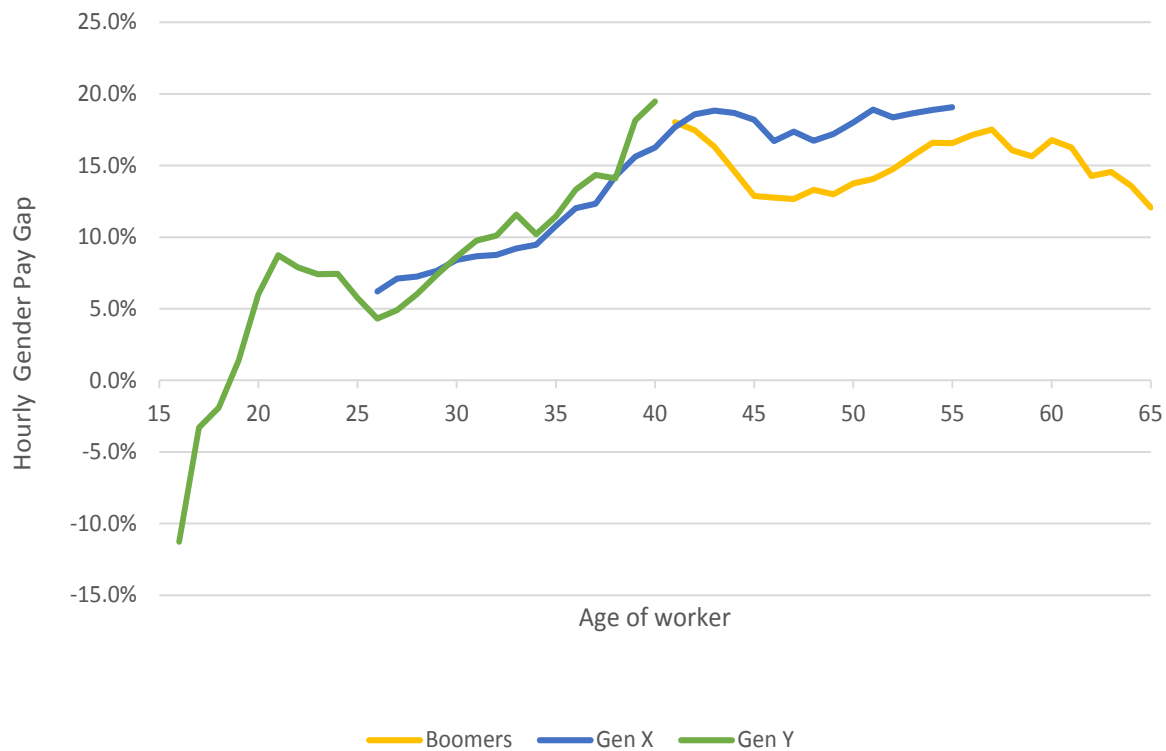   - 35-40 hours (regular full-time)
    - 41+ ('big' full-time)

Descriptive Dynamics - Men

Descriptive Dynamics – gender pay gap

Descriptive Dynamics - Summary

- Classic earnings profile for men and women

- Hourly wages for women remain below that of men

- Younger generations have higher gender pay gap than older generations at the same age – counter to expectations?

We now want to figure out what contributes to the differences in hourly wages between Gen Y men and women.

As a first step, we look see to what extent observed characteristics between men and women contribute to the hourly wage gap and what remains once these characteristics are controlled for.

We do so by progressively adding observable covariates X_{ia} arranged on a series of domains to pooled log hourly wage regressions from ages $a = 21, \dots, 38$, including a gender group indicator of the form:

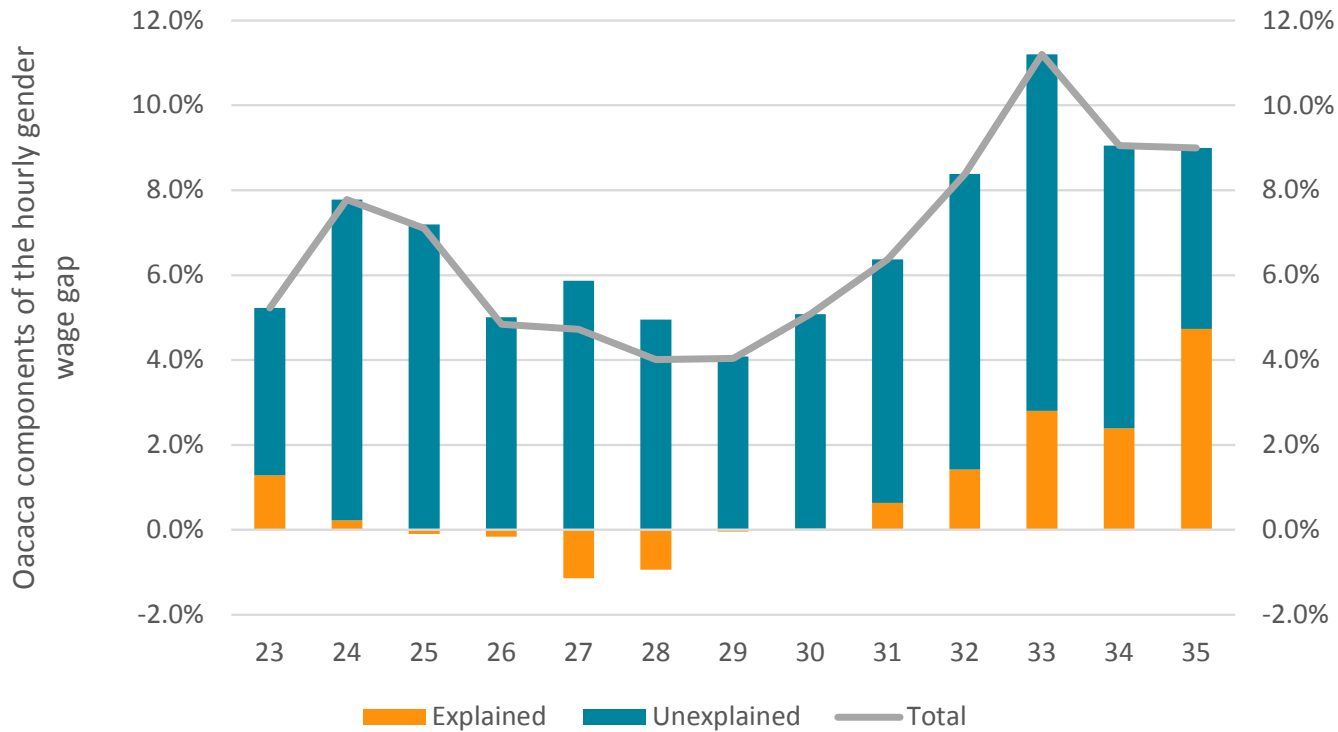$$\ln(W_{ia}) = X'_{ia}\beta + \gamma . gender_i + u_{ia} \text{ , for } i = 1, \dots, N_a$$

Drivers of the gender pay gap – Gen Y

adjusted gap when we add:

Age	total (predicted) gap (1)	+education (2)	+experience (3)	+ Work hour bands (4)	+ Work hour history (5)	+ Contract type (6)	+ All other job characteristics (7)	++ Selection (8)
21	5.8%	8.1%	7.7%	8.7%	6.8%	6.5%	4.7%	4.7%
22	4.9%	6.9%	6.6%	7.9%	6.1%	5.8%	4.1%	4.0%
23	6.1%	7.9%	7.7%	8.6%	6.1%	6.1%	4.6%	4.6%
24	6.9%	8.7%	8.3%	9.3%	6.8%	7.1%	6.3%	6.2%
25	5.7%	7.6%	7.1%	7.9%	5.6%	6.1%	5.5%	5.4%
26	4.6%	6.6%	6.2%	6.9%	4.5%	5.1%	4.3%	4.2%
27	4.9%	7.4%	6.8%	7.3%	4.8%	5.5%	5.8%	5.6%
28	5.8%	8.6%	8.1%	8.4%	5.8%	6.5%	6.6%	6.4%
29	6.5%	10.0%	9.1%	9.0%	5.8%	6.6%	6.5%	6.3%
30	7.5%	11.2%	10.1%	10.5%	6.9%	7.7%	7.5%	7.2%
31	8.3%	11.7%	10.6%	10.5%	6.7%	7.5%	7.5%	7.3%
32	8.7%	12.6%	11.6%	11.6%	6.9%	7.7%	7.1%	6.8%
33	9.9%	14.2%	13.2%	12.5%	6.3%	7.3%	6.8%	6.8%
34	9.3%	13.0%	12.5%	11.2%	4.7%	5.8%	6.5%	5.9%
35	9.9%	13.4%	13.2%	10.5%	3.5%	4.7%	4.6%	3.8%
36	13.8%	17.7%	17.7%	14.9%	7.4%	8.2%	7.9%	6.2%
37	15.8%	18.6%	18.7%	13.1%	5.9%	6.4%	7.4%	5.5%
38	13.3%	14.5%	14.1%	6.2%	1.1%	1.6%	8.4%	4.9%

Decomposing the gender pay gap

Summary
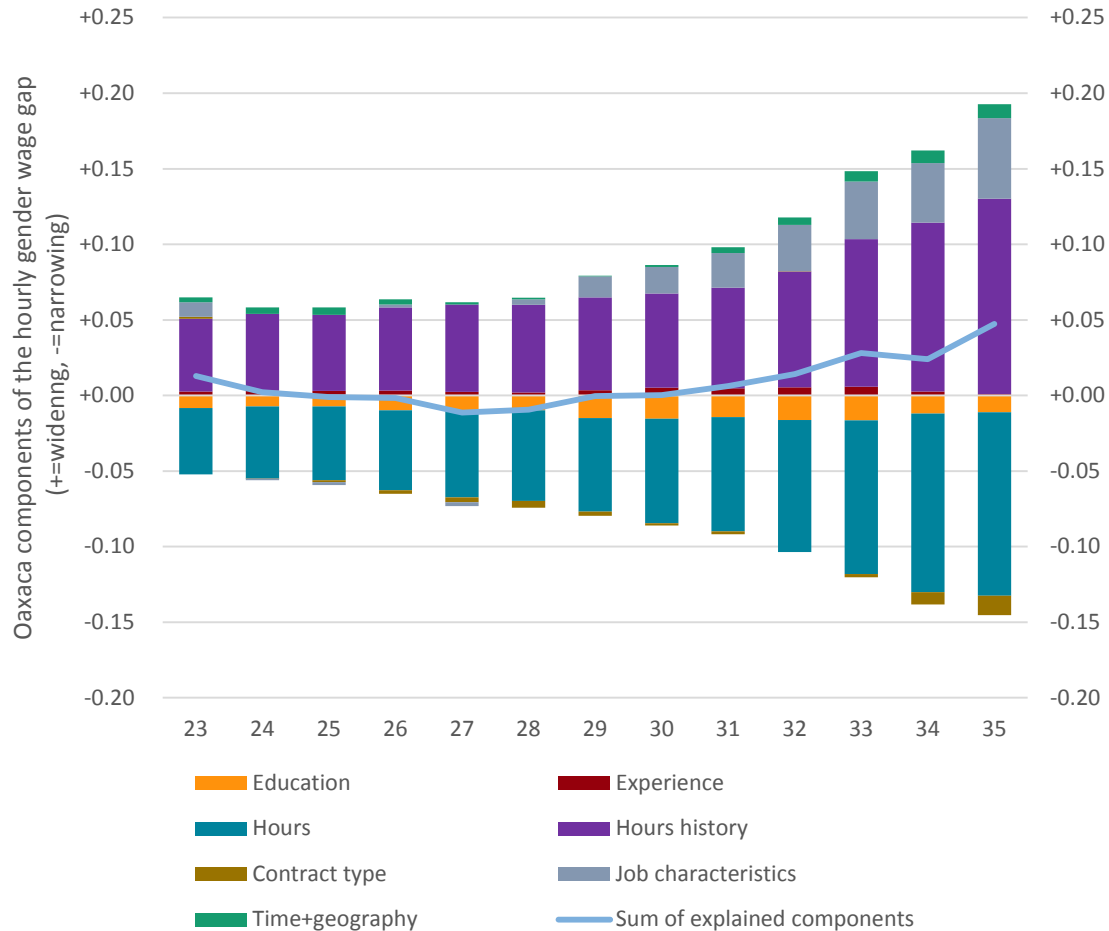
- Gender pay gap is following a similar trajectory for Gen Ys and Gen X's – but potentially worse in comparison at similar ages.

- Some drivers of the pay gap work in favour of women – others in favour of men.

- Capturing working hours history helps to explain more of the pay gap and raises questions around disadvantage that women face in maintaining hourly wages alongside men's, when they find it harder to accumulate this type of experience due to the other major role they play in society.

- It also makes us question whether these big hours are capturing pure productivity or whether it is operating as a signalling effect to employers (presenteeism)

Next steps

- Look further at the interaction between work hour histories and contract type.

- Extend the analysis to other generations

- Confine to those with a higher education

- Test choice of non-discriminatory wage structure on decomposition results

Thank you

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Descriptive Dynamics - combined