The Gender Pay Gap in Victoria:
Measures, Trends and Intersections

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Women in Social & Economic Research

Acknowledgement of Country

We pay tribute to the Aboriginal and Torres Strait Islander peoples of Victoria and the leadership they provide in redressing inequality and disadvantage and improving outcomes for Aboriginal and other women in the State.

This report was prepared on the lands of the Wadjuck Nyungar people. We acknowledge their ownership of these lands and express our gratitude for their custodianship of the land and water on which we rely.

We understand that there is a wide diversity of Aboriginal peoples living throughout Victoria. We use the terms 'Aboriginal' and 'Indigenous' in this report to include all people of Aboriginal and Torres Strait Islander descent who are living in Victoria.

Other acknowledgements

We acknowledge that the data and research in this report is limited to the gender binary of men and women. It therefore does not fully account for the experiences of lesbian, gay, bisexual, trans and gender diverse, intersex and queer (LGBTIQ+) people. One of our recommendations is for improved intersectional data collection, so that future studies of the gender pay gap will be able to reflect the needs and interests of all Victorians.

Disclaimer

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WiSER

The Women in Social and Economic Research unit or "WiSER" is an academic based research unit offering a gendered analysis of economic and social policy issues that confront women. WiSER's broad objectives include: identifying the cases and causes of women's disadvantaged social and economic status and contributing to policy debates to address their disadvantage; demonstrating ways in which social factors, particularly gender, influence the construction of economic theory and policy; and fostering feminist research, both nationally and internationally.

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Executive summary

Executive summary

As part of the Victorian government's efforts to advance gender equitable outcomes in the state, this report provides policy makers and others with data and analysis to better understand and take informed action to reduce the gap in pay and superannuation between Victorian men and women.

The authors acknowledge that gender does not only exist in binary categories and that the focus on the experiences of cisgender people is a limitation of this report. However, datasets with information on pay and superannuation only collect data in a binary way. Until such data issues are resolved, studies of gender pay and superannuation gaps will necessarily be limited to the important differences in outcomes between cismen and women.

This report examines:

- different approaches to measuring gender pay gaps,
- key sources of publicly accessible data on such pay gaps,
- the extent of the current Victorian gender gap in pay, and
- recent trends and key differences in gender pay gaps across industries, sub-sectors, occupations and groups of workers in Victoria.

This report adds a life course perspective on the gender gap in pay in Victoria[1], providing data on the gap at different ages and for different cohorts.

It also examines gender differences in the superannuation balances of Victorians, showing the cumulative effects of gender gaps in pay over the life course.

This report complements its presentation of data on gender pay and superannuation gaps with an analysis of drivers of these gaps (see the overview of key data points at the end of the executive summary).

Generally, this report focuses on the attitudes and behaviours of those with decision-making power over pay and hiring, and on the regulation of pay, because we do not think the answer to gender inequality lies in changing women's actions and attitudes. We argue that the challenge must be to employers, wage-setting bodies, and regulators to address the biases and constraints that contribute to GPGs.

The analysis presented in this report demonstrates that gender pay gaps are the product of a complex inter-play of factors, many of which are associated with occupational differences.

Occupation clearly matters to the gender pay gap. Many Victorian women work in occupations that are relatively low paid.

However, many majority-women occupations are concentrated in a limited set of industries, have high rates of part-time and casual work, use awards to set pay, and have workforces comprised of relatively high numbers of those with limited skills in English and low educational qualifications.

The occupation-based clustering of factors that are relevant to the gender pay gap makes it difficult to disentangle the 'independent' effects of occupational segregation on the gap.

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1 Gender gaps may be calculated using median data or average (mean) data. The median compares the wages of men and women who are in the middle of their respective pay distributions:

The clustering also implies that changing the occupational profile of women (and men) is unlikely to have a large impact on the gender pay gap, although addressing barriers to the employment of women in some sectors will help reduce the gap.

What is likely to be more important to reducing the gender pay gap will be efforts to improve the pay of those who for one reason or another (and often because of disadvantage and/or unpaid care roles) find themselves working in low paid occupational roles.

Because women are over-represented in low paid jobs and under-represented in high paid roles, reducing the level of pay inequality between high and low paid jobs across and within occupations will help reduce the gender pay gap.

In other words, the gender gap will narrow if the pay of those on low earnings improves in relation to those on median and high pay.

Public sector employment can play a role in minimising the gaps in pay between low and high pay jobs and, in doing so, help to reduce the gender pay gap.

The stronger regulation of pay in public sector organisations tends to result in a higher wage floor. Such regulation also helps to limit pay outcomes at the top of the earnings distribution. In doing so it helps to constrain the gender pay gap.

The award system also helps to reduce the level of pay inequality, by providing a safety net for low-paid workers. Thus, policies which buttress the award system can be expected to be positive for the gender pay gap.

The fact that many more Victorian women than men rely on awards to set their pay makes policy action to improve award rates even more important to improving the gender pay gap.

However, there are differences in award rates of pay between majority-men and majority-women sectors that do not reflect differences in job content or skill. Thus, there is also an ongoing need for policy action to redress undervaluation in award and other rates of pay.

Victorians who are employed on a casual basis clearly have relatively low rates of pay than others, and more women are employed casually than men. This relationship is intertwined with connections between key women-majority occupations (such as carers and aides), part-time work and low pay.

Changing employment from casual and fixed term to permanent, thus, will not necessarily enhance pay outcomes for women in the short-term. However, such a change might well deliver longer-term gains, by improving the bargaining position of the workers in key majority-women occupations.

Education also matters to the gender pay gap. If Victorian women did not have higher educational qualifications than men, the gender pay gap would be larger than it currently is. This evidence suggests that improving women's educational qualifications is a further option for reducing the gender pay gap.

However, the data in this report also reveal that women's qualifications are already much higher than men's in several occupations where few women work. Thus, instead of such gaps in education being a positive indicator of gender equality at the occupational level, they could instead signify barriers to women's access to jobs. That is, such gaps could be showing that women need higher qualifications than their male (and older) counterparts to access jobs.

Generally, the gender pay gap can be linked, in turn, to "care unfriendly" job structures. Many Victorian women seemingly find it difficult to work full-time and in higher-paid occupational roles because the large unpaid roles they take on are not accommodated in certain sectors, and this contributes to the gender pay gap.

However, there are some other sectors where the number of women employed is high and most work full-time. This shows that it is possible to have (full-time) job structures that better respond to the circumstances and needs of those with large unpaid care roles.

Social norms and conventions matter to the gender pay gap in part because of their effect on job structures and whether these are "care friendly" or not.

Social conventions affect the days of the week and times of the day that different workplaces operate, and hours of work arrangements affect whether those with care responsibilities can participate and progress in a workplace or not.

Social norms influence the type of work that is viewed as being able to be done on a part-time basis or from home, an arrangement that is often useful for those with care roles. They also affect beliefs about who should and shouldn't undertake different jobs, something that affect men's and women's ability to participate and progress in non-traditional roles.

Social norms also matter to the gender pay gap because they also influence pay relativities. They influence the types of factors considered to be deserving of a wage premium, the assessment of the level of compensation that should be attached to each factor that is counted in evaluating a job or level of performance, and they affect the level of pay inequality that is deemed overall to be legitimate.

The data presented in this report shows the likely relevance of undervaluation and discrimination to the GPG in Victoria.

The regression analysis of the GPG found that a large share of the gap between the annual earnings of Victorian men and women cannot be explained by measured differences in their characteristics (including occupation), which implies that women with the same characteristics as men receive a lower rate of pay.

The large differences in pay between majority-men and majority-women occupations point, additionally, to undervaluation of women's work.

Evidence on the differences in award rates of pay across sectors for reasons other than differences in skill or job content point to a similar conclusion.

However, the data in this report suggest that discrimination and undervaluation likely to play out in a variety of ways given the complex interplay between occupation, method of setting pay, employment type, sector, and work hours.

Tackling undervaluation and discrimination will require policy action on pay systems. There is a need for close examination of what are seen to be legitimate reasons for variations in pay and the assignment and recruitment of men and women to different jobs and roles.

Policy action on the GPG will also need to be informed by additional data collection that "unpacks" the mechanisms through which undervaluation and discrimination might be playing out.

Other initiatives include changing the Government's reliance on short-term agreements to fund community service organisations, so as improve outcomes for the care and community workforce.

The Victorian Government should also continue to lobby for changes to the national industrial relations system so that the work of the Fair Work Commission and the Fair Work Ombudsman is informed by gender equity principles.

When it comes to gender gaps in superannuation, this report identifies large gaps between the lifetime earnings and superannuation balances of Victorian men and women. Such gaps are consequential for the opportunities for economic independence of many older Victorian women, a group that will become increasingly large in coming decades. Our findings suggest some avenues for policies that might help to rectify the obvious gender inequalities with the current system of superannuation.

Generally, the causes of the gender gap in superannuation lie outside the system itself and are instead located in unequal lifetime earnings consequent upon unequal paid and unpaid roles, especially those associated with parenthood.

Measures that promote equality between working-age partners in their paid and unpaid roles (reducing gender gaps in work hours and work participation) would work towards equalising the gender distribution of superannuation balances, as would measures that reduce the GPG. Thus, the various policy options discussed in the previous paragraphs are also relevant to policy on superannuation.

However, less reliance on superannuation for retirement funding and a greater role for an improved age pension would also assist women and reduce the need for women (and men) to navigate what are often complex and risky decisions about their superannuation. The Victorian government should, at a minimum, advocate to the Commonwealth for a strong, well-funded age pension.

Chapter 1

Introduction and context

1.1 Victoria and its commitment to and leadership of gender equality

Victoria has a comprehensive set of principles guiding the advancement of gender equitable outcomes in the state. As set out in the 2020 *Gender Equality Act*, these principles are that:

- All Victorians should live in a safe and equal society, have access to equal power, resources and opportunities and be treated with dignity, respect and fairness.
- Gender equality benefits all Victorians regardless of gender.
- Gender equality is a human right and precondition to social justice.
- Gender equality brings significant economic, social and health benefits for Victoria.
- Gender equality is a precondition for the prevention of family violence and other forms of violence against women and girls.
- Advancing gender equality is a shared responsibility across the Victorian community.
- All human beings, regardless of gender, should be free to develop their personal abilities, pursue their professional careers and make choices about their lives without being limited by gender stereotypes, gender roles or prejudices.
- Gender inequality may be compounded by other forms of disadvantage or discrimination that a person may experience on the basis of Aboriginality, age, disability, ethnicity, gender identity, race, religion, sexual orientation and other attributes.
- Women have historically experienced discrimination and disadvantage on the basis of sex and gender.
- Special measures may be necessary to achieve gender equality.

With the *Gender Equality Act*, the government committed to tracking progress towards gender equality in Victoria, and it required its departments to embed an intersectional gender lens into the development of their policies, programs and services.

The first gender equality action plan (GEAP) under the Act, 'Our Equal State', published in 2023, identified key legislation, programs, strategies, etc, that exclusively progress gender equality. It also nominated systems, reforms and programs that contribute to such equality, including industrial relations and the Equal Workplaces Advisory Committee. Covering the period to 2027, this plan adopted a life course approach to gender equality, acknowledging both that gender and other intersecting inequalities start before birth and accumulate and grow over time changing the trajectory of people's lives, and that such inequalities have long-term impacts.

1.2 Key recent Victorian studies of gender pay and superannuation gaps

The findings and recommendations of the Inquiry into economic equity for Victorian women, headed by Carol Schwartz AO, strongly influenced the design of the 2023 GEAP. This inquiry was charged with investigating issues relating to pay equity and relevant workplace barriers, the value given to work performed in women-dominated industries and other sectors, blocks to workforce participation, skill development and access to promotional opportunities, work insecurity and rates of casualisation in women-dominated industries and other sectors.

The report from the inquiry (hereafter 'the Schwartz report'), published in 2022, had 31 recommendations and 26 findings about workplace and economic inequity for women in Victoria. Of special relevance to the current project, the report recommended improved efforts to collect and assemble data on "the compounding social, cultural and economic factors that create discrimination and disadvantage", with such data identified as crucial to the design of policy interventions aimed at servicing the needs and interests of Victorian communities.

The Commissioner for Gender Equality in the Public Sector (CGEPS) oversees implementation of the *Gender Equality Act* and provides support to defined public sector entities to help to build their capacity to understand and meet their obligations under the Act. As part of its role, the CGEPS collects and reports data on gender inequalities in public sector organisations. Its Baseline report published in 2021 (hereafter 'the Baseline report') is a further key recent study of gender pay gaps (GPGs) in Victoria. The Baseline report outlined "the most comprehensive gender-disaggregated dataset on public sector organisations in Australia" and included a detailed analysis of the drivers of (and possible policy responses to) gender pay gaps in the state.[1]

1.3 Aims and outline

The current report adds new data and perspectives on gender pay and superannuation gaps in Victoria. The design of this report is informed by research on the following questions:

1. What is the "true" gender pay gap in Victoria, that includes total earnings and other remuneration, across industries and sub-sectors and occupations?
2. What impact does the gender pay gap and forms of work and employment have on women's superannuation balances?
    i. Where are the key leverage points that explain the divergence in men's and women's superannuation levels and accumulations over their respective life courses, for example, commonly having children with consequent time out of the workforce, or relationship breakdown, both impacting earnings and superannuation?
    ii. Are there cohorts of women who are particularly disadvantaged by the current superannuation system, leading to higher risk/incidence of poverty and disadvantage in retirement?
3. Where can government policy play a role to address these divergence points for the "true" gender pay gap and superannuation gaps?

The outline of this report reflects these aims with the following chapters addressing the research questions in turn.

1 See https://insights.genderequalitycommission.vic.gov.au/application-dashboard.

Chapter 2

The gender pay gap in Victoria

In this chapter we address Research Question (RQ) 1, on the extent of the "true" gender pay gap in Victoria. The chapter examines different approaches to measuring gender pay gaps, outlines the key sources of publicly accessible data on such pay gaps, presents an overview of the extent of the current Victorian gender gap in pay, and documents recent trends and key differences in gender pay gaps across industries, sub-sectors, occupations and groups of workers in Victoria.

2.1 Measuring the gender pay gap

The gender pay gap is a high-level indicator of the status of women in the labour market. There are, however, various ways of measuring the gender pay gap, with the choice of measure affecting the level of gender inequality that is reported.[2]

2.1.1 The raw gender pay gap

The raw gender pay gap is the difference in pay between women and men without considering compositional effects. In other words, it does not take into consideration gender differences in factors such as education or experience that may correlate with pay.

There are two common approaches to measuring the raw gender pay gap. One is to measure the average (or mean) gender pay gap and the other is to estimate the median gender pay gap.

The average gender pay gap measures the difference in the average (mean) pay of women and the average (mean) pay of men. The average pay of women is the total value of wages earned by women in a period divided by the number of women employees (e.g., total value of all weekly wages paid to women employees / number of women employees).

The median, in contrast, compares the wages of women at the middle of the women's pay distribution with those of men at the middle of the men's pay distribution.

Some organisations such as the Organisation for Economic Cooperation and Development (OECD) favour the median over the average.[3] Others such as the Workplace Gender Equality Agency (WGEA) typically publish information on both the average (mean) and median gender pay gaps.

The advantage of a median measure is that is less influenced by extremely high or low wages and so is a more stable measure when there are outliers. Arguably it also provides a better measure of what typical workers earns and is, therefore, a more useful measure for assessing the pay gap between typical men and women in paid work.

The raw gender wage gap is, therefore, typically calculated as the difference between median earnings of men and women **relative to median earnings of men**. The calculation is shown below:

$$\text{Median pay men (\$)} - \text{Median pay women (\$)} = \text{gap (\$)} \quad \text{(Eq.1)}$$

$$\text{gap (\$)} \div \text{Median pay men (\$)} \times 100 = \text{gender pay gap (\%)} \quad \text{(Eq.2)}$$

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2 See: (a) International Labour Organization (2019) Global Wage Report 2018/19: What lies behind gender pay gaps (www.ilo.org/publications/global-wage-report-201819-what-lies-behind-gender-pay-gaps); and (b) The Australian Bureau of Statistics (ABS) gender pay gap guide (www.abs.gov.au/statistics/understanding-statistics/guide-labour-statistics/gender-pay-gap-guide).

3 See: https://data.oecd.org/earnwage/gender-wage-gap.htm.

This shows how much lower men's pay would need to be for the pay of men and women to be equal (on the assumption that the gap favours men).[4]

Such gender pay gaps are commonly measured at the level of nations, states, industries, occupations, and for various other sub-groups of workers.

2.1.2 The adjusted gender pay gap

The raw gender pay gap, as noted, does not take into consideration any differences in the composition of the male and female workforces. This may matter where there have been large structural shifts in the composition of these workforces.

Women in Victoria are, for example, much more educated today than before. For example, in 2006 14.7% of Victorian women held a bachelor degree or higher; by 2021 this share was equal to 50.4%. Among Victorian men the share with a bachelor degree or higher was 13.0% in 2006, rising to 41.4% by 2021.[5]

Education correlates with pay and it is, therefore, likely that the median and mean pay of Victorian women has increased, in part, because there are now more qualified women in the workforce today.

If women's median and mean pay is rising faster than men's on account of compositional changes, this may see the raw gender pay gap converge. Depending on the question being asked it may be appropriate to net out the compositional effects (e.g., the change due to educational effects) and focus on an adjusted measure instead.

Estimating the adjusted gender pay gap is, however, not a straightforward exercise. Typically, it involves statistical and econometric analysis. It is also harder to estimate an adjusted *median* gender pay gap than it is to estimate an adjusted average (*mean*) gender wage gap. This is because the econometric analysis often uses linear models such as Ordinary Least Squares (OLS) where the focus is on the mean of the dependent variable.

A particularly common approach when estimating an adjusted gender pay is to use Oaxaca-Blinder decomposition technique. This approach is frequently employed in academic studies to decompose the gender pay gap into a component that may be 'explained' or accounted for by gender differences in characteristics such as education and experience and a component that is 'unexplained' and caused by differences in the way men and women are paid. The latter may arise because of discriminatory treatment or an undervaluation of women's work. The decomposition technique is described in a technical appendix to this report.

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4 An alternative approach is to divide the pay gap "gap $" by the median pay of women and multiply by 100. This gender pay gap would show how much higher (in % terms) women's pay would need to be at the median to equal the median pay of men (again assuming the gap favours men).

5 These estimates are derived from 2006 and 2021 Census data using the ABS Tablebuilder. The shares are based on a total that excludes the "non-applicable" group (e.g., those still in school).

2.1.3 Alternative categories of earnings

Measures of gender pay gaps are also sensitive to the choice of what to count as 'pay'. As an example, the Baseline report includes two alternative measures of pay for Victorian public sector employees:

- **Base salary**, which includes "salary payments, any packaged or salary sacrificed component, annual leave, leave loading, long service leave, workers compensation payments and penalty rates that are part of an employee's ordinary working hours".
- **Total remuneration**, which combines base salary and "any additional benefits, such as fixed bonus payments (including performance pay), superannuation, fixed discretionary pay, overtime and penalty rates that are not part of an employee's ordinary working hours, other allowances (such as first aid, clothing, meal, and study allowances) and other benefits (such as share allocations)".

The total remuneration measure provides better estimates of people's rewards from paid work and, thus, is a better basis for calculating the "true" gender pay gap than base salary. Its use will tend to result in a larger estimate of the pay gap than estimates based on base salary data if there is a gender unequal distribution of employment benefits, discretionary pay, bonuses etc. However, equivalent data to the Baseline's measure of total remuneration are not currently readily available for private sector workers in Victoria.

A key Australian Bureau of Statistics (ABS) statistical series which may be used to study wage relativities is the ABS "Employee, Earnings and Hours, Australia" (catalogue number 6306.0) (hereafter referred to as the EEH). The Survey of EEH is conducted every two years with data collected directly from employers at the level of the individual employee.[6]

In the EEH, measures of cash earnings are based on hours paid for during the reference pay period. Cash earnings are defined by the ABS as gross amounts (i.e., before tax). **ABS cash earnings are before tax**. They:

- include: piece rates or regular bonuses, pay when on annual or sick leave and salary sacrificed amounts.
- exclude: irregular and infrequent payments, such as annual bonuses, payments in kind, leave loading, severance and termination payments.
- exclude: employer superannuation contributions (other than through salary sacrifice).

To the extent that the excluded parts of employee compensation (e.g., annual bonuses and superannuation) are larger for men than women, the ABS data will understate the "true" gender gap in pay.

The ABS also makes a distinction between cash earnings from **ordinary time** (or ordinary hours) and cash earnings from **total hours** paid for. Measures based on ordinary time capture cash earnings paid at ordinary time rates and do not include overtime payments. Earnings based on total hours include measure **ordinary time cash earnings + overtime cash earnings** or payments that are in excess of standard or agreed hours of work.

6 See: www.abs.gov.au/articles/guide-understanding-employee-earnings-and-hours-statistics.

2.1.4 Alternative approaches to pay periods

Measures of the gender pay gap are also sensitive to the period over which earnings are calculated (hours, weeks, months or years).

Generally, the measured gender pay gap increases with the time frame of the earnings comparison. For example, the gender pay gap is generally higher when yearly or monthly wages are used rather than when hourly wages are used.

Measures that compare the earnings of those who are employed at a single point in time also tend to produce relatively small estimates of the gender pay gap. This is because they do not capture gender gaps in earnings caused by differential rates of workforce participation and unemployment over the life course.

Comparing men's and women's annual earnings tends to show larger pay gaps than measures based on weekly earnings because of the relatively high proportion of women who work only part of the year. Measured gender differences in earnings over the life course tend to be higher still as they capture the effects of gender gaps in years spent out of paid work.

2.1.5 Alternative approaches to work hours

The gender pay gap is also sensitive to the sub-group across which comparisons are made. For example, if the population or sub-group includes employees who work part-time (defined as less than 35 hours per week in Australia), depending on the question being asked, it may make sense to compare hourly wages rather than weekly, monthly or annual wages.

Hourly based comparisons are, however, not without their challenges as it depends on whether the denominator is measuring hours paid for or hours worked. The ABS measure in the EEH data measures hours paid for. Hourly wages in other data sets such as Household, Income and Labour Dynamics in Australia (HILDA) are constructed with a denominator that measures hours usually worked.

In practice, most series that monitor the gender pay gap focus on a weekly measure of pay rather than hourly earnings. This approach has several advantages:

- It provides greater consistency, particularly for studying patterns in the gender pay gap over time.
- Weekly pay can capture differences in remuneration that may not be picked up by an hourly measure (e.g., overtime pay).
- Weekly pay can provide a more holistic view of the gender pay gap given gender differences in labour market attachment (e.g., hours worked).

Some studies monitor patterns using a measure that just captures full-time employees. The advantage of this approach is that it reduces variation arising from gender differences in hours worked.

The downsides of restricting the focus to full-time employees, however, is that the majority of women work part-time and that part-time work is, on average, lower paid than full-time work.[7]

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7 International Labour Organization (2019) Global Wage Report 2018/19: What lies behind gender pay gaps (www.ilo.org/publications/global-wage-report-201819-what-lies-behind-gender-pay-gaps).

For example, among Victorian employees in 2023, 57% of women worked part-time compared to 27% among men. In 2023 in Victoria the difference in the hourly total cash earnings of men employed full-time and men employed part-time was 34% (based on EEH data). Among women the corresponding gap was 20%.

When it comes to monitoring the GPG it is important that those involved in part-time work are not ignored and for this reason this report focuses on the gender gap in weekly cash earnings.

2.1.6 Our approach

This report adopts two approaches. In the main the focus is on the raw gender pay gap in Victoria using data from the ABS Employee Earnings and Hours (EEH) survey. The EEH data is the ABS's preferred basis for measuring gender pay gaps (ABS 2023).[8]

The EEH survey includes all employees except those who are members of the Australian permanent defence forces, those primarily engaged in agriculture, forestry and fishing, and employees in private households and foreign embassies. The survey excludes the self-employed, subcontractors and persons paid by commission.

We predominantly use the EEH data and report the **gender pay gap in 2023 based on median weekly total cash earnings (e.g., including overtime payments) of employees of all ages.[9] The estimates include employees who work full-time and part-time**. This approach, as noted, accommodates the impact on the GPG of differences in the hours worked of men and women.

One limitation of the EEH survey is that it collects only limited information on the characteristics of workers and, thus, it has limited value for studies of the intersections between gender and other types of inequality.

We respond to this limitation by using data from the 2021 Census to furnish data on income of First Nations Victorians, those living with a core limitation and those from migrant communities. The Census does not collect information on people's pay but, rather, only on their income (which includes pay and other sources of income, such as income from investments). However, the Census does measure a number of characteristics not captured in the EEH and its information on income provides an indication of the direction and magnitude of the differences in pay across key groups in the Victorian community.

A further limitation of the EEH survey is that only enables measurement of the GPG at given points in time (once every 2 years). We respond to this limitation by using data from the longitudinal Household, Income and Labour Dynamics in Australia (HILDA) Survey, which provides measures of pay over up to 22 years. We use the HILDA data to measure gender gaps in gross financial year wages and salaries.[10] We also use the HILDA data to estimate a measure of the adjusted gender pay gap in Victoria and examine gender gaps in lifetime earnings and gender gaps in superannuation balances.

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8 ABS 2023. Gender pay gap guide, accessed at https://www.abs.gov.au/statistics/understanding-statistics/guide-labour-statistics/gender-pay-gap-guide, May 20 2024.

9 Some studies limit the focus further still to persons aged 25-54, with the argument being that the group younger than age 25 will include students who may be working in casual jobs and the group 55 and older may include those close to retirement who again have different motivations for working. Whilst we acknowledge that, depending on the question being asked, there may be reasons to limit the group to this age range, we do not believe that state-wide comparisons of the GPG should exclude younger and older workers.

10 This measure – of previous financial year wage and salary income – does not include salary sacrificed amounts. HILDA does include a question on salary sacrificing but few respondents report such earnings and those who do report only small amounts.

2.2 The current state of play with the gender pay gap in Victoria

2.2.1 What the EEH data show on the gender gap in earnings

The EEH data on median weekly total cash earnings shows that the typical Victorian man engaged as a waged employee (either full-time or part-time) earned $1,493.0 per week in 2023. The corresponding total cash earnings among women was $1,1148.1 per week.

- This equates to a gender pay gap (GPG) of 23.1% (using the approach outlined above with the median earnings of men as the denominator).

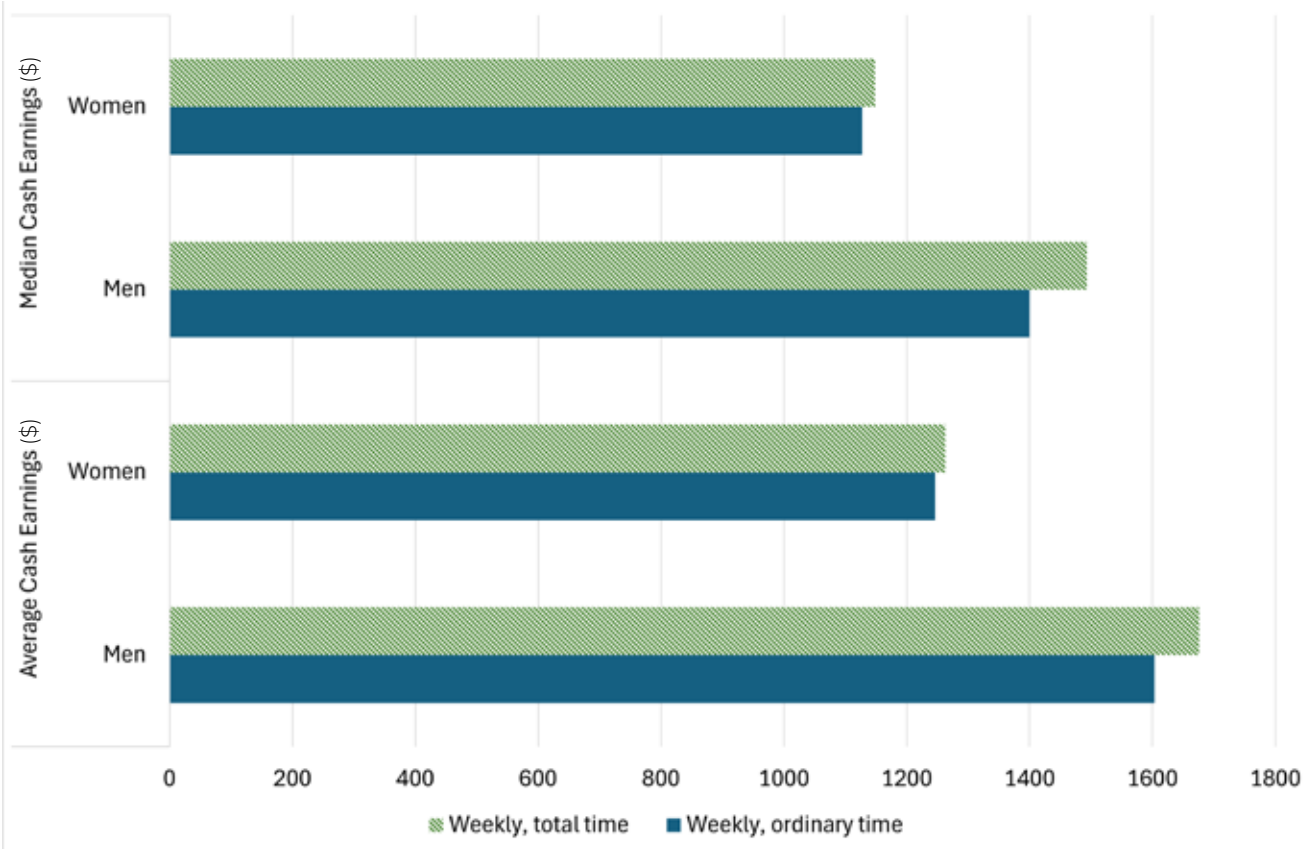
There is little difference in the total (median) cash earnings and ordinary (median) cash earnings of women.

- Among men ordinary (median) cash earnings is less than total (median) cash earnings with the difference likely because of a greater incidence of overtime work among men (Figure 1).

Cash earnings arrived at using the median measure are also less than cash earnings based on the average (mean) measure. This points to a skewed pay distribution with higher paid jobs pulling up the overall average, particularly among men.

- When average earnings are used the GPG is larger still at 24.7%, showing the influence of men's greater representation in high pay jobs. (Figure 2).

Figure 1: Average and median weekly cash earnings (ordinary time and total time) of employees, Victoria, 2023



Source: EEH 2023 Table Builder.

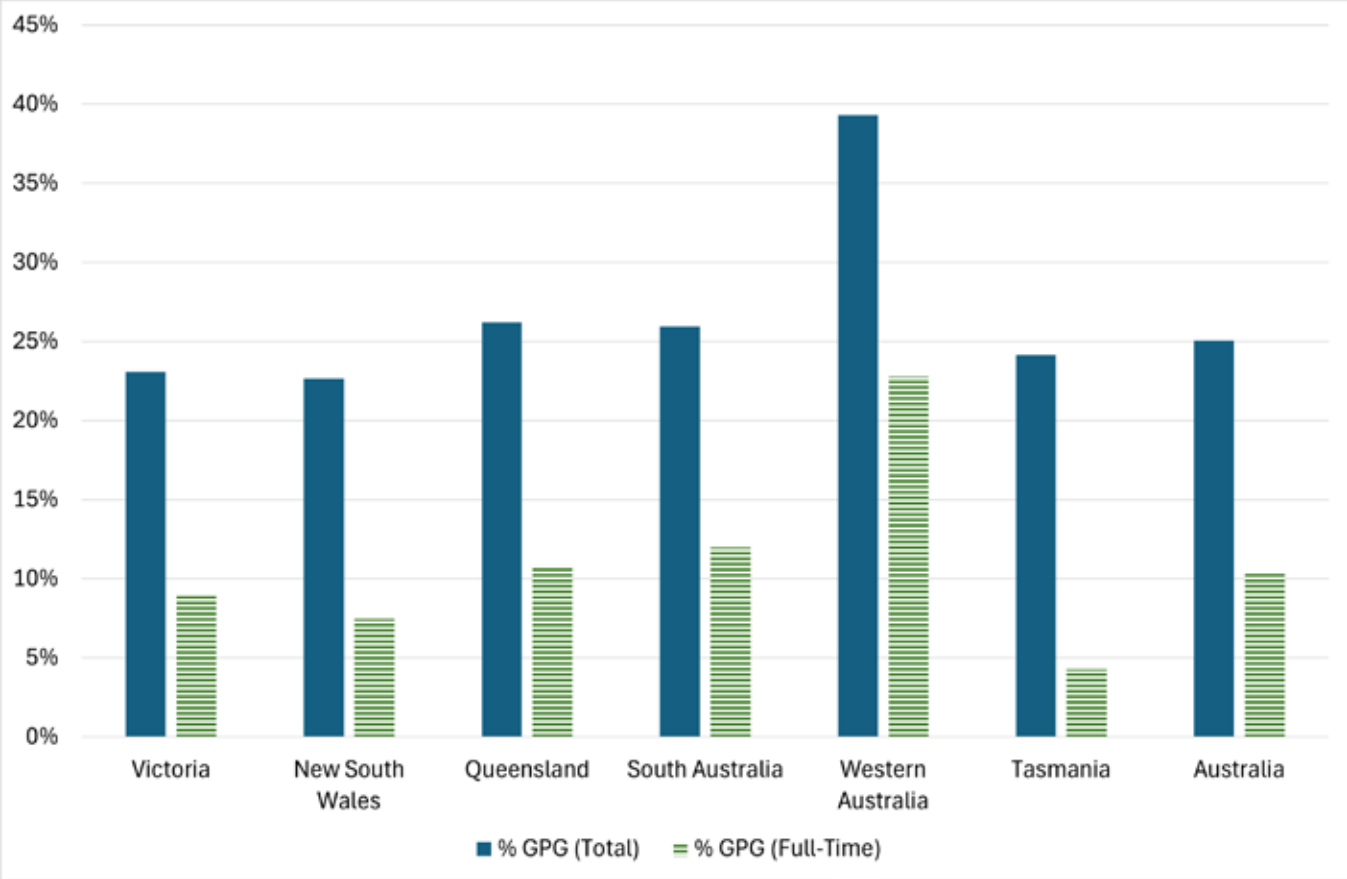
When the focus is restricted to employees in full-time work, the EEH data shows that the median weekly total cash earnings of Victorian men is equal to $1,760.5 in 2023. The Victorian GPG in full-time work is equal to 9.1% (see Figure 2).

In the part-time labour market, the GPG is negative, indicating that the median pay of women who are employed part-time is greater than the median pay of men employed part-time.

- In 2023 the median weekly total cash earnings of part-time employees was equal to $746.9 among women and $624.7 among men in 2023. This translates to a GPG of negative 19.6%.
- The higher relative pay of women in part-time work likely stems from the greater share of women than men working part-time in higher paid occupations (for example, professional occupations such as teaching and nursing).

The Victorian-wide median GPG of 23.1% (for all employees, including part-time employees) is qualitatively the same as the corresponding median GPG in New South Wales (NSW) (which was equal to 22.7% in 2023). It is smaller than the GPGs nationally and in all other states (see Figure 2).

Figure 2: The gender pay gap by state, median weekly total cash earnings, 2023.



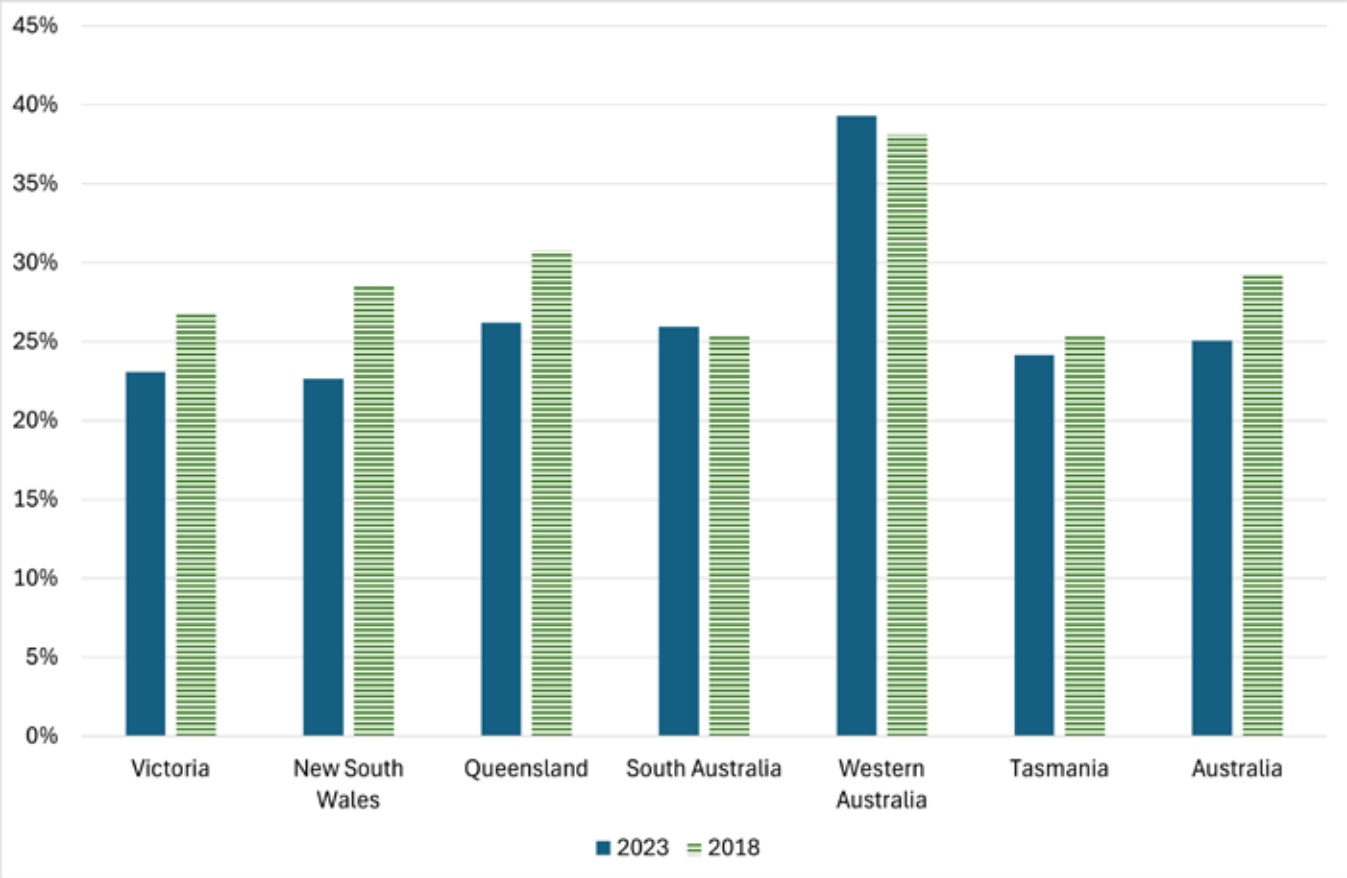
Source: EEH 2023 Table Builder.

2.2.2 Recent trends in the state-wide gender pay gap

The state-wide GPG (based on the EEH median weekly total cash earnings) has narrowed in recent years, falling from 26.8% in 2018 to 23.1% in 2023.

- Relative to NSW, convergence was slower in Victoria, but NSW was coming off a higher 2018 GPG.

Figure 3: The gender pay gap by state, median weekly total cash earnings for all hours, 2018 and 2023.



Source: EEH 2018 and 2023 Table Builder.

The Schwartz report noted that the COVID pandemic exacerbated existing gendered economic inequities and hit women's employment and hours of work particularly hard. However, these effects are not easy to discern in the set of GPG measures presented here.

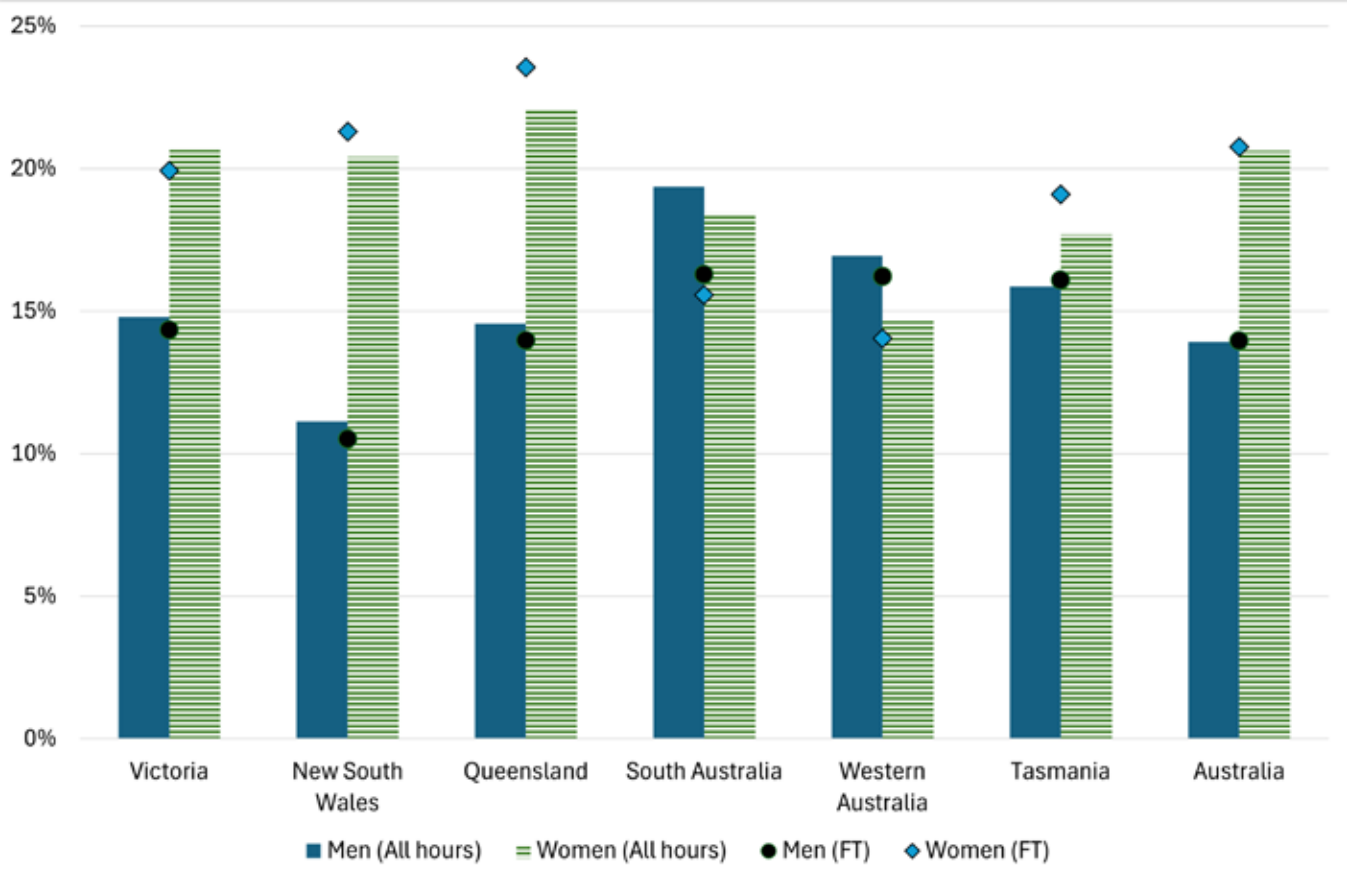
Figure 4 shows the percent growth in median weekly total cash earnings between 2018 and 2023.

- In Victoria the earnings of men (all hours) increased by 15% (above the corresponding growth of 11% in NSW).
- The earnings of Victorian women (all hours) increased by 21% which was on par with earnings growth of NSW women (at 20%).

Focusing on the full-time labour market, the estimates in Figure 4 show that between 2018 and 2023 in Victoria:

- the earnings of men and women increased by 14.3% and 19.9%, respectively.
- In NSW the corresponding growth in full-time wages was slower among men and faster among women (equal to 10.5% and 21.3%, respectively.

Figure 4: Percent growth in median weekly total cash earnings between 2018 and 2023 by state, sex and hours worked.



Source: EEH 2018 and 2023 Table Builder.

2.3 Differences in GPGs across industries, sub-sectors, occupations and groups of workers

There are large differences in the distribution of Victorian men and women working across the private and public sector, across different industries groups and across small and large organisations. Thus, it makes sense to ask about the types of workplaces where GPGs are high and low.

In each sector and broad industry group as well as in organisations that employ few workers as well as those with a large workforce the median weekly total cash earnings of men exceed those of women.

2.3.1 GPG by industry

There is considerable variation in the GPG by industry. Within Victoria the gap is largest within the professional, scientific and technical services industry (approx. $870 or 41%) and lowest in wholesale trade (see Table 1 and Figure 5).

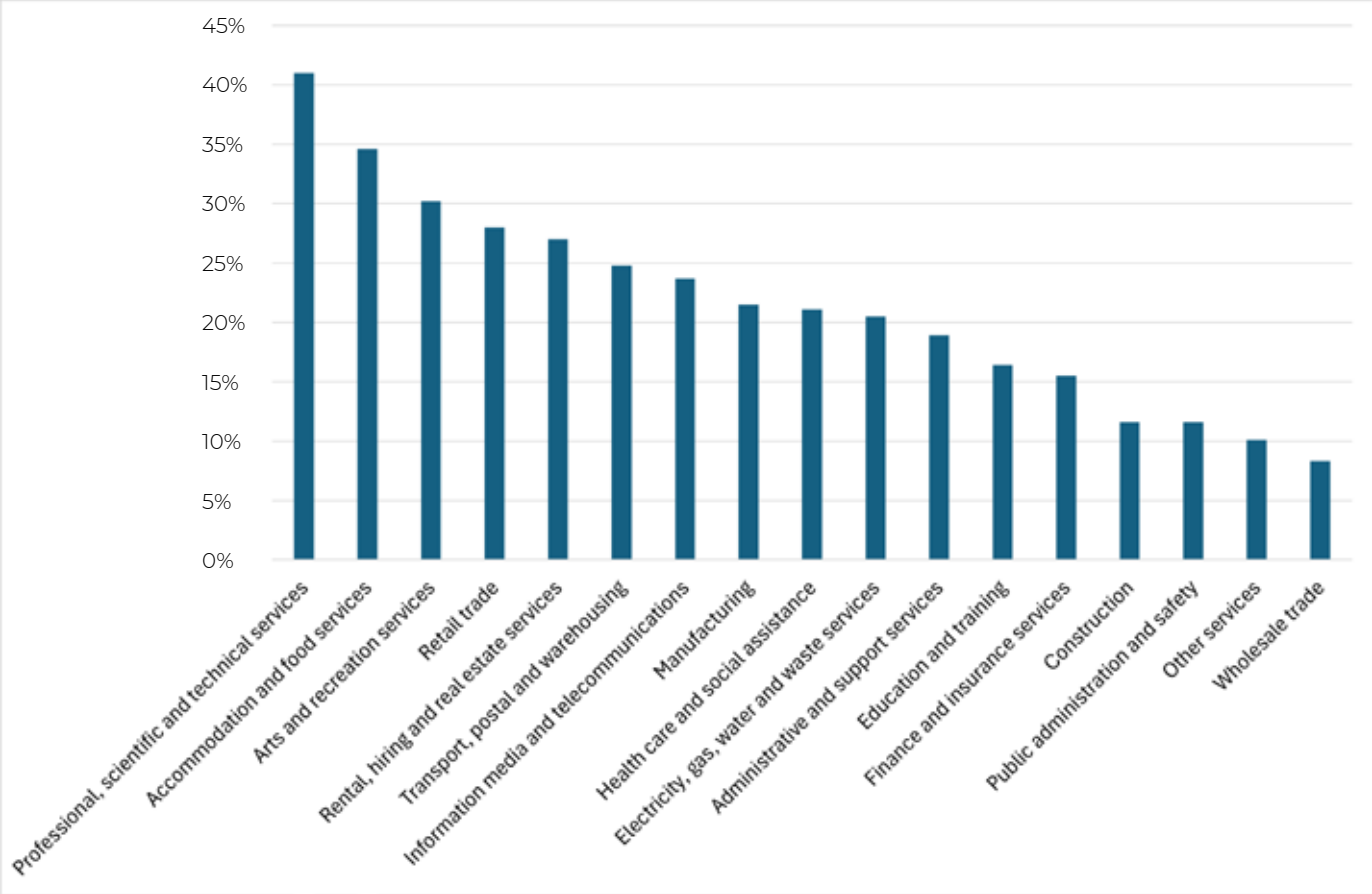
Table 1: Median weekly total cash earnings and the gender pay gap (GPG), by broad industry group, Victoria, 2023

Industry#	Men ($)	Women ($)	GPG ($)	GPG (%)
Mining	1826.9	-	-	-
Manufacturing	1534.9	1204.4	330.5	21.5%
Electricity, gas, water and waste services	2108.2	1676.3	431.9	20.5%
Construction	1628.3	1440.0	188.3	11.6%
Wholesale trade	1442	1322.9	119.1	8.3%
Retail trade	979.4	705.0	274.4	28.0%
Accommodation and food services	792.4	518.2	274.2	34.6%
Transport, postal and warehousing	1718.1	1292.0	426.1	24.8%
Information media and telecommunications	2135	1628.5	506.5	23.7%
Finance and insurance services	1922.8	1624.4	298.4	15.5%
Rental, hiring and real estate services	1633.3	1191.9	441.4	27.0%
Professional, scientific and technical services	2121.3	1252.4	868.9	41.0%
Administrative and support services	1176	953.7	222.3	18.9%
Public administration and safety	1925	1701.5	223.5	11.6%
Education and training	1544	1291.5	252.5	16.4%
Health care and social assistance	1459.4	1151.5	307.9	21.1%
Arts and recreation services	1029.3	718.9	310.4	30.2%
Other services	1062.5	954.8	107.7	10.1%

Notes:

1. #: The EEH does not report on those in Agriculture and Mining.
2. Source: EEH 2023 Table Builder.

Figure 5: Victorian GPG by industry, 2023



Source: Table 2 and EEH 2023 Table Builder.

"Within Victoria the gender pay gap is largest within the professional, scientific and technical services industry and lowest in wholesale trade."

2.3.2 GPG by sector

Across Australia median wages of men and women are higher in the public sector than they are in the private sector. In Victoria, for example, the public sector wage premium among men is equal to 24%. Among women the corresponding wage premium is equal to 29%.

The GPG is, however, smaller in the Victorian public sector (at 21.5%) than it is in the private sector (at 25.9%) (see Table 2). The former may be reflective of a more compressed wage structure in the public sector (fewer outliers, particularly among men).[11]

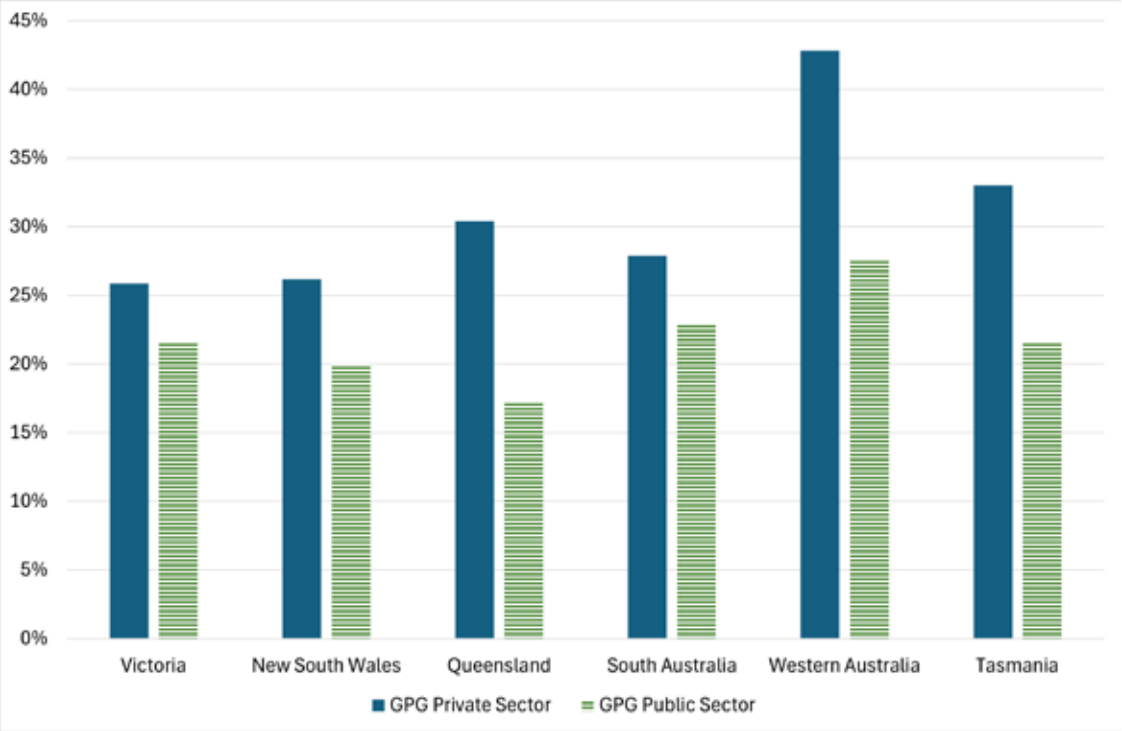
Table 2: Median weekly total cash earnings and the gender pay gap (GPG), by sector, Victoria, 2023

Sector	Men ($)	Women ($)	GPG ($)	GPG (%)
Private sector	1427.0	1058.0	369.0	25.9%
Public sector	1886.7	1481.1	405.6	21.5%

Source: EEH 2023 Table Builder.

The GPG in the Victorian private sector is below that of all other states while the Victorian GPG in the public sector lies above that of Queensland and NSW, but below that of Tasmania, South Australia and Western Australia (see Figure 6).

Figure 6: GPG by sector and state, 2023



Source: EEH 2023 Table Builder.

11 The Baseline report found a similar pattern of pay gaps across the public and private sectors. Using a measure based on total remuneration data, it found an average (mean) annualised pay gap in total remuneration of 15.6% or $19,000, whilst in the non-public sector organisations that report to Australia's Workplace Gender Equality Agency this gap was 22.8%, or $25,792 per year.

2.3.3 GPG by occupation

Pay gaps vary across groups of workers depending on their occupation, the method used to set their pay, and whether they are a permanent, fixed term or casual employee.

The data in Table 3 below show that the GPG is particularly large in the labourer occupational group (41.9%) and smallest among machinery operators and drivers (16.6%).

The Baseline report also found the highest GPG in percentage terms in the labourer occupational group but identified larger absolute gaps in the managerial group and much smaller gaps among trades workers and technicians.

The relatively larger GPG among labourers may relate to two factors: (a) differences in hours worked per week; and (b) undervaluing of work undertaken by women who fall within this occupational grouping.[12]

Figure 6 shows, graphically, the GPGs for all employees (by occupation) and for full-time employees. Among labourers the GPG of 41.9% reduces to 17.2% when the focus is on full-time employees. Among employees who work full-time the GPG is largest among community and personal service workers (at 22.8%).

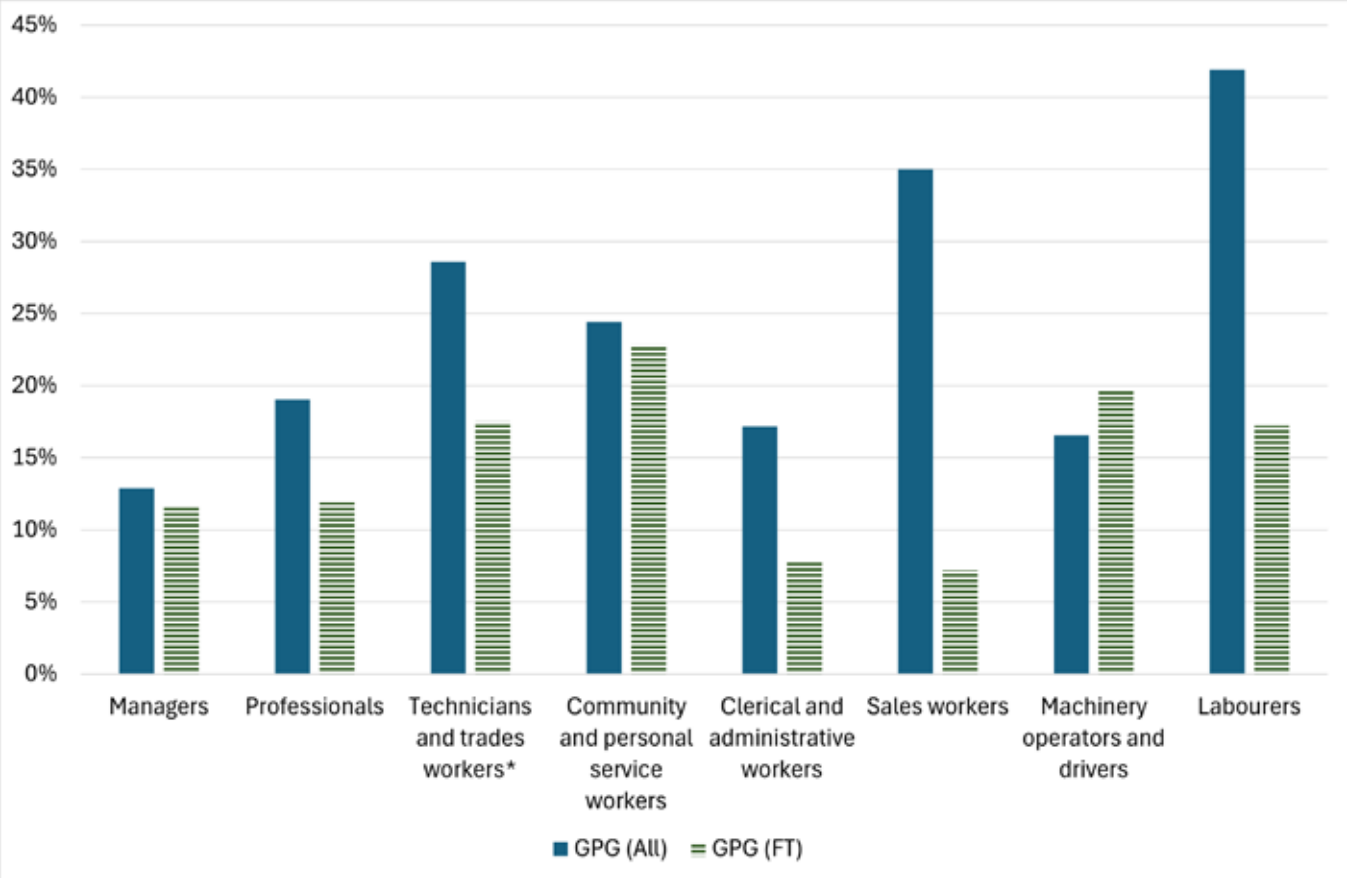
Table 3: Median weekly total cash earnings and the gender pay gap (GPG), by broad occupational group, Victoria, 2023

Occupation	Men ($)	Women ($)	GPG ($)	GPG (%)
Managers	2677.3	2332.8	344.5	12.9%
Professionals	2014.8	1631.3	383.5	19.0%
Technicians and Trades Workers	1481.3	1057.7	423.6	28.6%
Community and Personal Service Workers	1043.8	788.9	254.9	24.4%
Clerical and Administrative Workers	1415.1	1172.3	242.8	17.2%
Sales Workers	892.5	580.2	312.3	35.0%
Machinery Operators and Drivers	1366.5	1140.2	226.3	16.6%
Labourers	1171	680.1	490.9	41.9%

Source: EEH 2023 Table Builder.

12 www.fwc.gov.au/documents/sites/work-value-aged-care/submissions/am202099andors-sub-junorreport-anmf-291021.pdf

Figure 7: GPG by occupation, Victoria, 2023



Source: EEH 2023 Table Builder.

Note: * the estimates for Technicians and trades workers have relatively large standard errors and are considered too unreliable for general use.

The EEH only allows incomplete measurement of the GPG at a finer level of occupational disaggregation. This is because only small numbers are surveyed in several occupational groups (such as women in construction roles). However, the number of occupations at the ANZCO2 level is very large and so in the table below the GPGs are only presented for the five largest occupations for Victorian women.

This disaggregated data also points to a large variation in pay levels and GPGs across and within occupations.

- Women's weekly earnings range from only $538 in the group of sales assistants and salespersons to almost $2,000 in the group of business, human resource and marketing professionals.
- The GPG is 25% among educational professionals and only 5.2% among carers and aides.

Table 4: Median weekly total cash earnings and the gender pay gap (GPG), by ANZSCO 2-digit occupational group, Victoria, 2023

Table 4: Median weekly total cash earnings and the gender pay gap (GPG), by ANZSCO 2-digit occupational group, Victoria, 2023

Occupation (5 largest occupational groups for women)	Men ($)	Women ($)	GPG ($)	GPG (%)
[62] Sales assistants and salespersons	649.6	538	111.6	17.2%
[42] Carers and aides	810.0	767.5	42.5	5.2%
[24] Education professionals	1722.5	1291.5	431	25.0%
[25] Health professionals	1770.2	1630.6	139.6	7.9%
[22] Business, human resource and marketing professionals	1972.1	1859.7	112.4	5.7%

Notes:

1. The numbers in square brackets show the ANZCO_2 codes.
2. Source: EEH 2023 Table Builder.

2.3.4 GPG by employer size

Table 5 shows the GPGs by employer size and Figure 8 shows the GPGs graphically, with the GPG among full-timers also included for comparison.

As shown, the GPG (all employees) is smallest among large employers (those with 1,000 or more employees) and largest in the smallest establishments where there is greater variability in hours worked.

When the focus shifts to the GPG among full-time employees, and when disaggregated by employer size, the GPG is largest among employers with 20-49 employees.

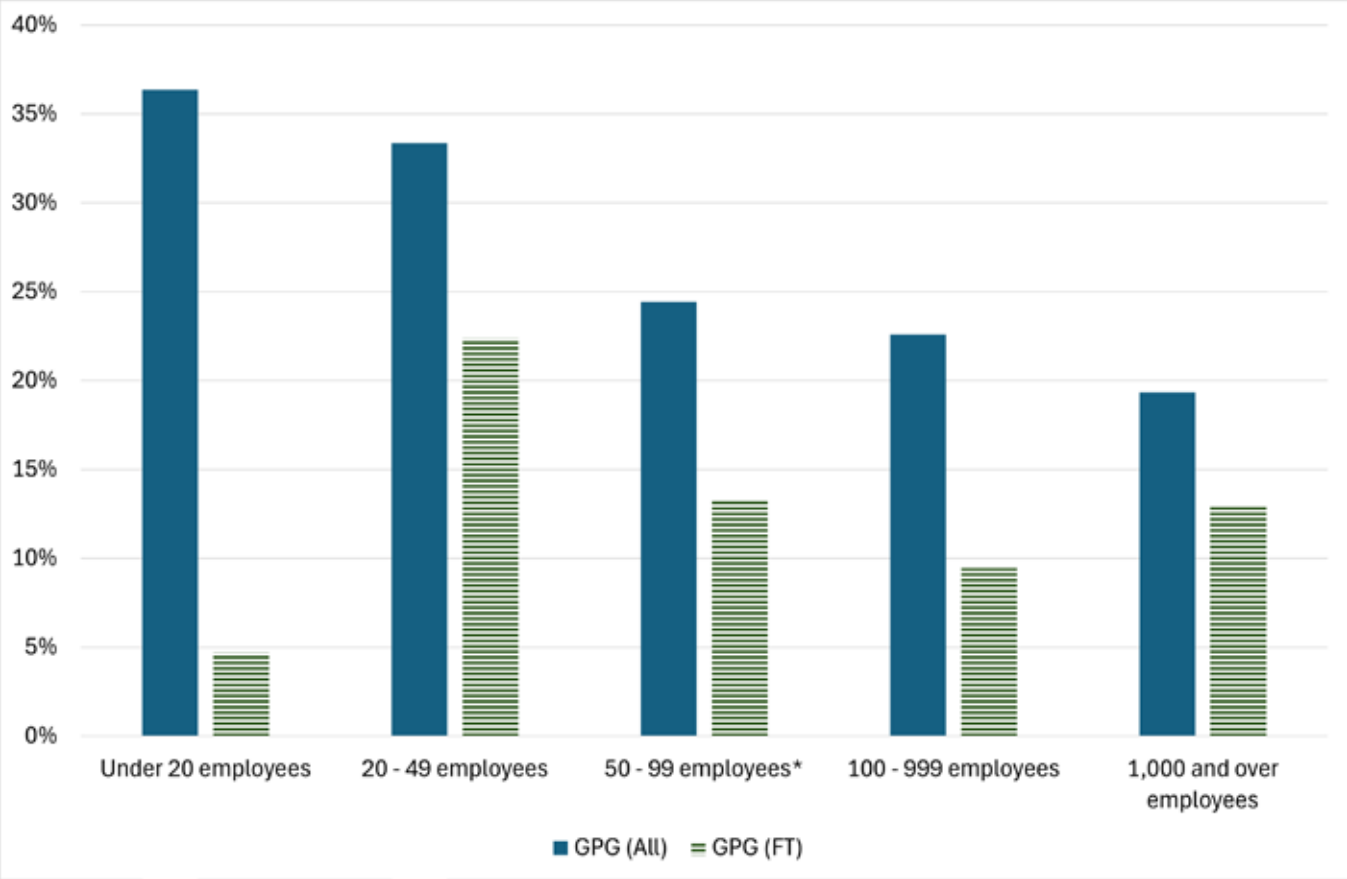
Table 5: Median weekly total cash earnings and the gender pay gap (GPG), by employer size, Victoria, 2023

Number of Employees	Men ($)	Women ($)	GPG ($)	GPG (%)
Under 20 employees	1250.7	795.9	454.8	36.4%
20 - 49 employees	1613.8	1075.4	538.4	33.4%
50 - 99 employees*	1526.9	1154.0	372.9	24.4%
100 - 999 employees	1620.3	1254.1	366.2	22.6%
1,000 and over employees	1601	1291.5	309.5	19.3%

Source: EEH 2023 Table Builder.

Note: * the estimates for firms with 50-99 employees have relatively large standard errors and are considered too unreliable for general use.

Figure 8: GPG in median weekly total cash by employer size, all employees and employees who work full-time, Victoria, 2023.



Source: EEH 2023 Table Builder and Table 2.

Note: * the estimates for firms with 50-99 employees have relatively large standard errors and are considered too unreliable for general use.

2.3.5 GPG by method of pay setting

The GPG is also affected by the method of pay setting. The data in Table 6 show that the GPG is largest in the group of workers whose pay is set by an Individual Arrangement ($393 and 23.5%) and smallest amongst those whose pay is determined by the relevant Award ($125 and 16.4%).

- The smaller GPGs among Award wage workers reflects the fact that the wage structure is more compressed within the Award stream.
- GPGs are larger where there is more wage inequality (e.g., among those covered by Individual Arrangements).

Table 6: Median weekly total cash earnings and the gender pay gap (GPG), by method of pay setting, Victoria, 2023

Method of Pay Setting	Men ($)	Women ($)	GPG ($)	GPG (%)
Award	763.3	638.4	124.9	16.4%
Collective Agreement	1612.5	1291	321.5	19.9%
Individual Arrangement	1671.8	1279	392.8	23.5%

Source: EEH 2023 Table Builder.

2.3.6 GPG by form of employment

The GPG is largest in dollar terms in the group of workers who are employed on a permanent contract (with access to sick and holiday leave) and smallest among those who are casually employed. Pay levels diverge strongly between these categories.

- When the GPG ($) is expressed as a percentage we see that the GPG(%) is larger among casual than permanent employees (21.2% vs 19.8%) (see Table 7).

Table 7: Median weekly total cash earnings and the gender pay gap (GPG), by employee type, Victoria, 2023

Employee Type	Men ($)	Women ($)	GPG ($)	GPG (%)
Permanent	1642.1	1316.5	325.6	19.8%
Fixed term	1538	1291.4	246.6	16.0%
Casual	587	462.5	124.5	21.2%

Source: EEH 2023 Table Builder

2.4 Gender pay gaps by age

2.4.1 EEH median weekly total cash earnings

Gender pay gaps vary by age. In Victoria men's median weekly cash earnings are higher than women's median weekly cash earnings within all age groups. The GPG also increases with age.[13]

- The largest GPG (in absolute terms) is in the 55-64 age group ($492 and 29.2%).
- The smallest GPGs are among those aged less than 21 years ($25 and 8.4%) (see Table 8).

Table 8: Median weekly total cash earnings and the gender pay gap (GPG), by Age Group, Victoria, 2023

Age Group	Men ($)	Women ($)	GPG ($)	GPG (%)
<21	298.9	273.9	25.0	8.4%
21-24	954.4	673.6	280.8	29.4%
25-34	1448.8	1240.7	208.1	14.4%
35-44	1732.8	1314.7	418.1	24.1%
45-54	1759.3	1291.3	468	26.6%
55-64	1684.7	1192.5	492.2	29.2%

Source: EEH 2023 Table Builder

2.4.2 HILDA median gross financial year earnings from wages and salary

The Schwartz report highlighted the low and precarious incomes of many older Victorian women, which can result from barriers to their continued participation in paid work.

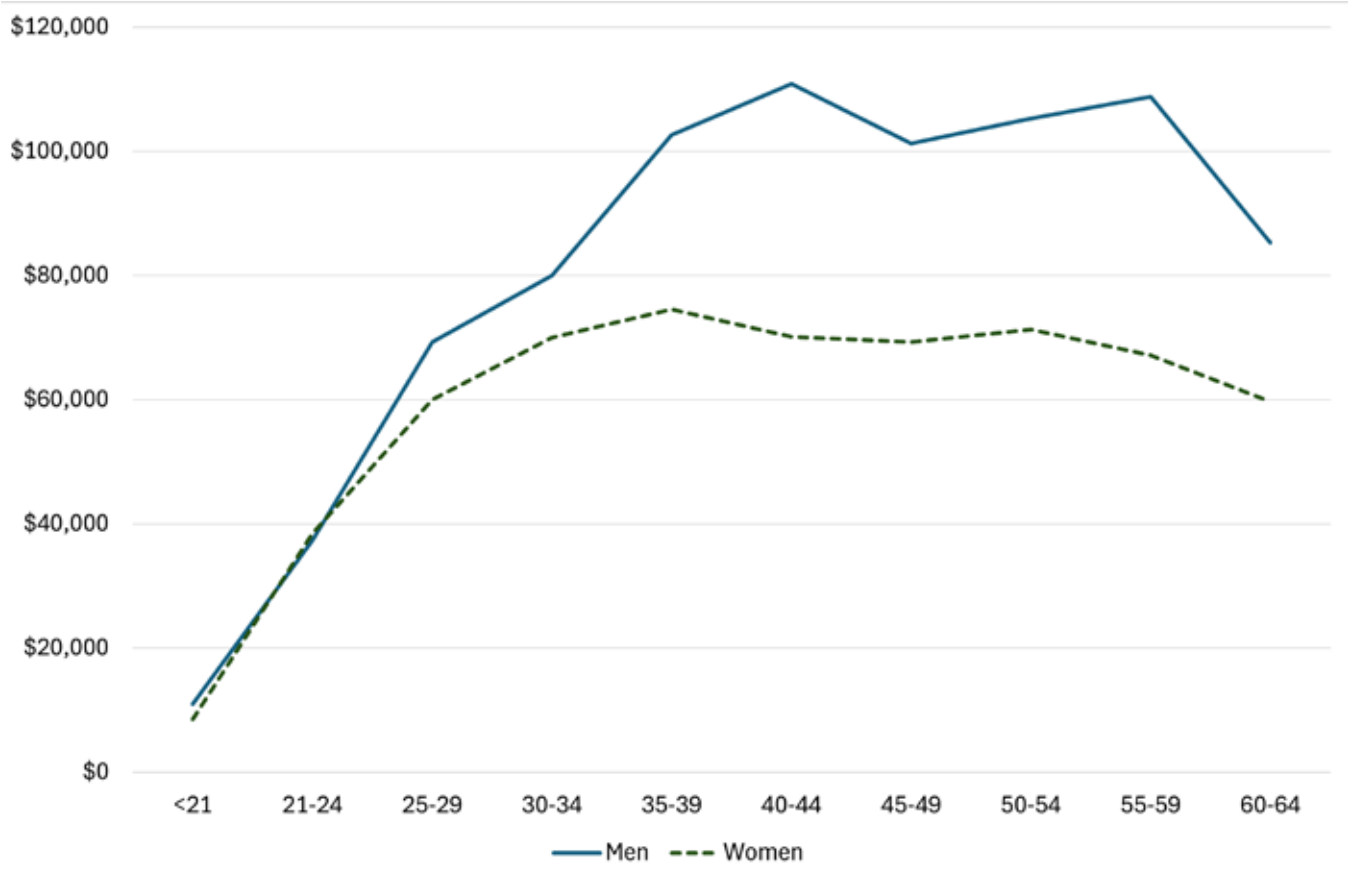
With the ageing of the Victorian workforce, the gender pay gap in older age groups may have an increasingly large impact on the state-wide gap in coming years.

In Figure 9 we draw on data from HILDA to augment this age discussion of GPGs. Here the focus is on median gross financial year wage and salary earnings of Victorian men and women who are engaged as employees.

- At age 25-29 the gender gap in median gross financial year earnings in Victoria in 2020-22 was equal to 13%.
- The GPG rises to 32% among 45-49 year olds and peaks at 38% among 55-59 year olds.

13 The Baseline report found that gender pay gaps in favour of men in Victorian public sector organisations widen with age. Also see Workplace Gender Equality Agency, Wages and ages: mapping the gender pay gap by age, WGEA, https://www.wgea.gov.au/publications/wages-and-ages

Figure 9: Median gross financial year earnings from wages and salaries, employees, Victoria, 2020-22



Notes:

1. Sample: employees.
2. Estimates based on the median over three waves (2020, 2021 and 2022).
3. Gross financial year wage and salary earnings are in 2022 prices.
4. Estimates weighted to reflect population totals.
5. Source: HILDA, waves 20, 21 and 22.

2.4.3 Gender gaps in average gross financial year earnings from wages and salary by birth cohort

HILDA data are also used to provide a cohort analysis and show what has been happening to the GPG among Victorian baby boomers (BB) (born 1946 to 1964), generation Xs (GenX) (born 1965 to 1980) and generation Ys (GenY) (born 1981 to 1997). The focus is again on gross financial year wage and salary earnings, although here the focus is on average rather than median earnings and the period covered is 2001 to 2022. The focus on the average (mean) is because the GPGs reported in this section are derived from a regression model that is estimated using OLS. All earnings data is in 2022 prices.

The purpose of the exercise is to show that although GPGs are large and vary across the life course, they are narrowing at various stages in the life course for successive cohorts.

Focusing, first, on Victorian GenYs, the estimates presented in Figure 10 show that at age 25-29 the gender gap in mean financial year earnings within this group was equal to 10%. There are no estimates for GenXs and GenYs in this age range as, over the 2001 to 2022 period, there were either none or few GenYs or GenXs aged 25-29 years.

At age 30-34 the GPG among GenYs has increased to 24%. This may be compared to the GPG of 32% among GenXs when they were aged 30-34 years.

The age band 35-39 affords a comparison of GPGs for all three cohorts. In this age group the GPGs for GenYs, GenXs and BBs are equal to 36%, 43% and 44%, respectively. In other words, although large, the GPG by age is falling for successive cohorts. The Victorian trends are very similar to those observed nationally.

Focusing on older Victorians, the estimates for the age 50-54 group show similarity in the GPGs for GenXs and BBs. Given that the first GenXs were born in 1965 this means the would have been aged 54 in 2019 and, at the time of writing, now aged around 59 years. In other words the eldest GenXs will now be within the 55-59 and the younger BBs moving into the 60-64 year-old age group. The GPGs among these older Victorians have come off their peak but are still large.

- Among GenXs aged 55-59 the mean GPG is currently around 34%.
- Among BBs aged 50-64 the mean GPG is currently around 29%.

Figure 10: GPG based on mean differences in financial year earnings, by birth cohort, Victoria, 2001-22.

Notes:

1) Sample comprised of employees who are aged 25-64 and worked the full-year and full-time in the previous financial year. Employees in Agriculture, forestry, fishing and hunting are excluded.

2) Estimates weighted to reflect population values.

3) The gap is based on gender differences in average (mean) financial year gross labour earnings from wages and salary.

4) Source: HILDA, waves 1-22.

2.5 Gender pay gaps among different groups of Victorians

Gender can intersect with other forms of disadvantage and discrimination and cause those who experience multiple, compounding forms of discrimination to fare particularly poorly in the workplace.

However, currently the EEH data enables only limited comparisons of GPGs across groups of workers with different demographic and other characteristics, and there are limited alternative sources of intersectional data.[14]

Below, we use data from the 2021 ABS Census to show how Aboriginal and non-Aboriginal men and women are distributed across the income distribution and to calculate average (mean) gender income (rather than pay) gaps.[15]

The mean income values derived using Census data are attained by taking the mid-point of each of the weekly income bands.[16]

2.5.1 Census mean weekly income, Aboriginal and non-Aboriginal

Figure 11 (for men) shows that the mode (most common) category of weekly earnings for employed non-Aboriginal men in Victoria in 2021 was $2,000 to $2,999 per week (or, annualised, around $104,000 to $155,999). Among employed Aboriginal men the mode was $1,000 to $1,249 per week (or, annualised, around $52,000 to $64,999 per year).

Among women (Aboriginal, and non-Aboriginal) the mode was also between $1,000 to $1,249 per week, although it is clear that the distribution is more right skewed (more women with higher incomes) for non-Aboriginal women.

Table 9 shows the estimated mean income for each group using the mid-point approach described above. It is clear that there are sizeable differences in the mean weekly incomes of Aboriginal and non-Aboriginal Victorians (a 10.8% gap among women).

- Within the non-Aboriginal group the gender income gap is 22.8%.
- Among First Nations people in Victoria the gender income gap is 18.5%.
- When the benchmark group is non-Aboriginal men the gender income gap facing Aboriginal women is 31.2%.

14 The *Gender Equality Act* aims to help address this data deficit by requiring defined entities to collect, analyse and submit gender-disaggregated and intersectional workforce data to the CGEPS. The initial attempts at this were perceived to be "ambitious" and the set of data in the first Baseline report was considered incomplete (see Baseline report).

15 The Census captures information on total income. This will predominantly be made up of wages and salaries but, for some, may include other sources of income, such as income from investments.

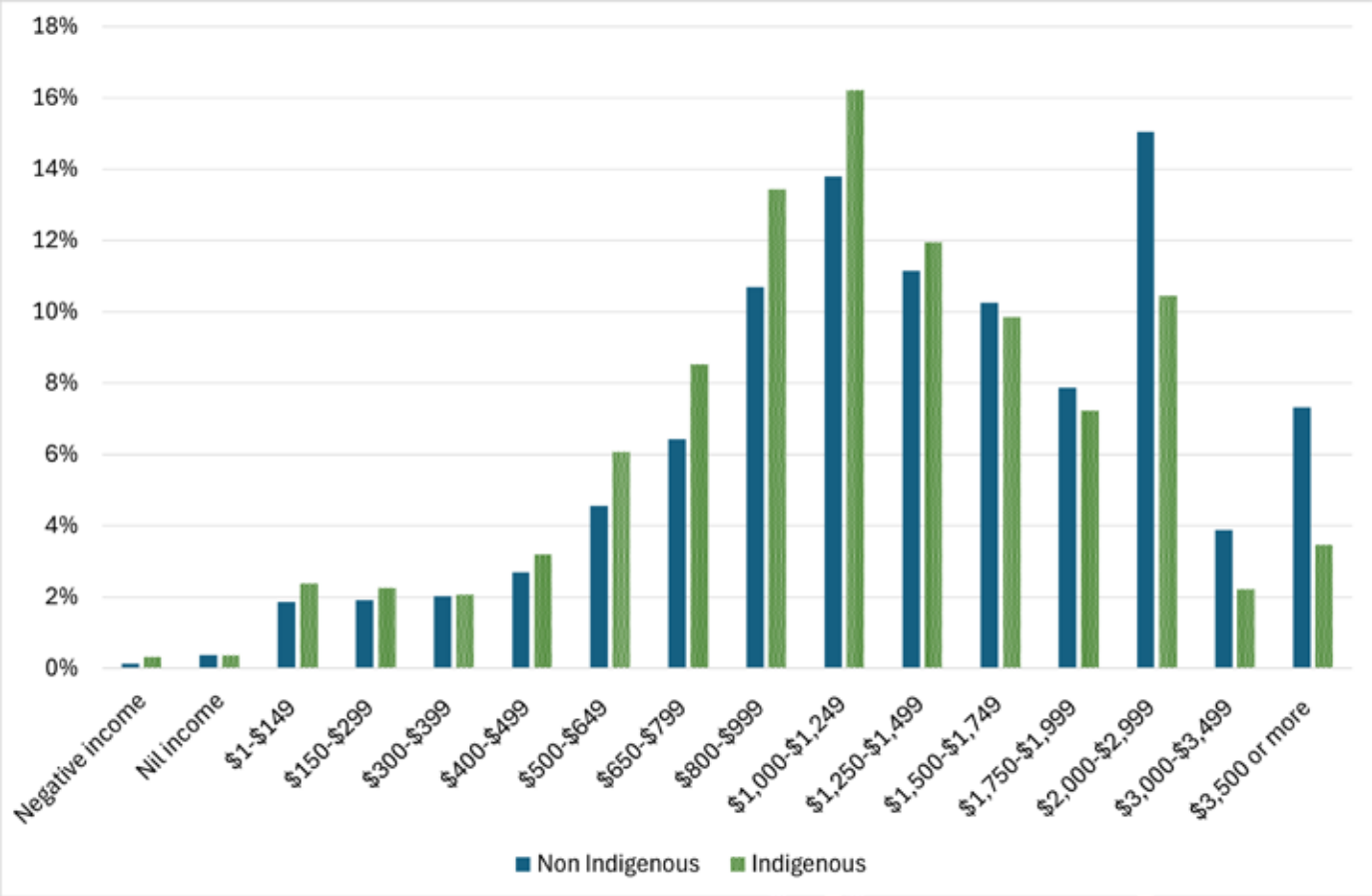
16 The Census income data is only reported as grouped data. We take the mid-point of each band and multiply the $ value through by the number of employees in each band / group. We then sum up the total earnings for a group and divide by total persons in a group to attain the mean.

Table 9: Mean weekly income and gender income gaps among employed Aboriginal and non-Aboriginal people, Victoria, 2021

Characteristic	Men ($)	Women ($)	Gender Income Gap ($)	Within Group Gender Income Gap (%)	Gender Income Gap Relative to Non-Indigenous Men
Non-Aboriginal	1611.6	1243.3	368.2	22.8%	22.8%
Aboriginal	1359.7	1108.8	251.0	18.5%	31.2%

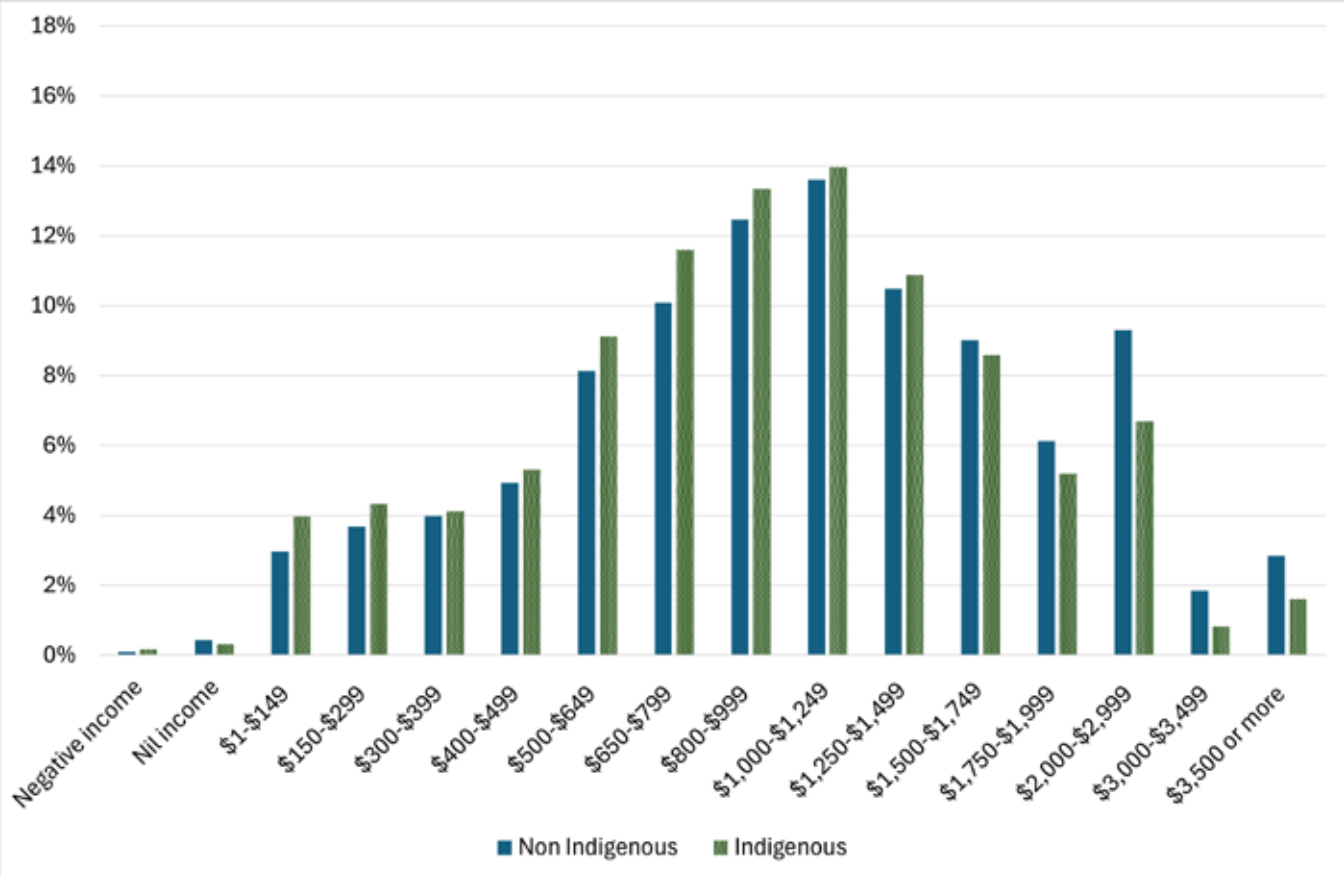
Notes: 1. Employed either full-time or part-time. 2. Source: Census 2021 Table builder.

Figure 11: Distribution of Aboriginal and non-Aboriginal employed men by weekly income, Victoria, 2021.



Source: Census 2021 Table Builder

Figure 12: Distribution of Aboriginal and non-Aboriginal employed women by weekly income, Victoria, 2021.



Source: Census 2021 Table Builder

"Gender can intersect with other forms of disadvantage and discrimination and cause those who experience multiple, compounding forms of discrimination to fare particularly poorly in the workplace."

2.5.2 Census mean weekly income gaps for linguistically diverse groups

According to the 2021 Census, 65% of all Victorians were born in Australia.[17] This means that more than one third are migrants. The top five countries of birth of migrants (in rank order from high to low) are India, England, China, New Zealand and Vietnam.

Many migrants to Australia face barriers in the workforce, with the Schwartz report highlighting obstacles that range from a lack of Australian work experience to difficulties in getting their skills and qualifications recognised.

Table 10 which is derived from 2021 Census data shows the mean weekly incomes of employed Victorian men and women, disaggregated by language and spoken English ability.

When benchmarked to men who speak English only, the gender income gap is equal to:

- 24% for women who also speak English only
- 28.1% for women who use another language and speak English very well or well
- 56.1% for women who do not speak English well or at all.

Table 10: Mean weekly income and gender income gaps among employed Victorians by spoken English ability, 2021

Characteristic	Men ($)	Women ($)	Gender Income Gap ($)	Within Group Gender Income Gap (%)	Gender Income Gap Relative to Men Who Only Speak English (%)
Speaks English Only	1678.5	1276.1	402.4	24.0%	24.0%
Uses other language and speaks English very well or well	1508.2	1207.7	300.5	19.9%	28.1%
Uses other language and speaks English not well or not at all	959.7	737.4	222.3	23.2%	56.1%

17 This statistic includes all Victorians irrespective of their labour force status or age. See: www.abs.gov.au/census/find-census-data/quickstats/2021/2

2.5.3 Census mean weekly income gaps for persons who need assistance with core activities

Table 11 shows the mean income of Victorian men and women who are in employment and who have a 'need for assistance with core activities'.[18] In the Census a person falls within this category if they have need for assistance with core activities and have a long-term health condition (lasting six months or more) or a disability (lasting six months or more).

The within-group gender income gap is equal to 5.7%. However, when the income of women who need assistance with core activities is compared to men who speak English only the gender gap increases to 42.7%.

Table 11: Mean weekly income and gender income gaps by need for assistance status, Victoria, 2021

Characteristic	Men ($)	Women ($)	Gender Income Gap ($)	Gender Income Gap (%)
Has need for assistance with core activities	1019.7	962.0	57.7	5.7%

Source: 2021 Census, Table builder.

2.6 Chapter conclusion

In this chapter we address Research Question (RQ) 1, on the extent of the "true" gender pay gap in Victoria. The chapter examines different approaches to measuring gender pay gaps, outlines the key sources of publicly accessible data on such pay gaps, presents an overview of the extent of the current Victorian gender gap in pay, and documents recent trends and key differences in gender pay gaps across industries, sub-sectors, occupations and groups of workers in Victoria.

Much of the material in this chapter compares the median earnings of women with the median earnings of men, predominantly using data on total weekly cash earnings from the EEH 2023 survey.

The focus is on Victorian employees. Estimates show that in 2023 the weekly median earnings of Victorian men (employed full-time or part-time) were $1,493. The median earnings of Victorian women (full-time and part-time) was $1,148 per week. This equates to a gender pay gap (GPG) of 23%.

The Victorian GPG has narrowed in recent years, from 27% in 2018 to 23% in 2023. Underpinning this has been a faster (or stronger) increase in the wage growth of Victorian women in recent years. This likely reflects the positive influence of the Victorian government's strong commitment to gender equality.

The large GPGs are, however, still reflective of the barriers that women, more than men (and some groups of women in particular) face in the Victorian workforce. The data on the gender pay gap that has been presented in this chapter highlight the importance of developing indicators of, and policy responses to, the factors that contribute to such gaps (the subject of Chapter 3).

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18 See www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/disability-and-carers/core-activity-need-assistance-assnp

Chapter 3

Identifying targets for policy on the gaps in pay

3.1 Introduction

A complex mix of economic and social factors contribute to the disadvantage women experience in the workplace and these need to be carefully considered and monitored if policy remedies to pay gaps are to be found (Research Question 3).

In the following paragraphs we outline the details on our approach to identifying the factors that contribute to GPGs. We then present the measures of the factors that this approach recommends (and Victorian data on what such measures currently show). We comment on policy options in chapter 6.

We structure this discussion of possible targets for policy – and indicators of gender inequality in the Victorian workforce – with reference to a framework which:

- treats gender as social constructed and one that affects the types and configurations of jobs that men and women do and how they are paid;
- views pay setting as a complex and historically situated (leading to a historic undervaluation of some jobs);
- acknowledges the close interconnection of paid and unpaid work;
- links the gender pay gap to job structures that divide jobs into separate inter-linked groups and grade individual jobs/workers within each group of jobs; and
- focuses on the influence on the GPG of pay systems.

Explainer

Job structures allocate the tasks that need to be performed in workplaces across different groups (or clusters) of employees. For example: A health clinic will likely have a job structure that allocates tasks between medical doctors, nurses, administrative staff and cleaners. Across these job clusters the organisation of work and the bases for differences in pay among the individuals will differ. Administrative staff might be organised on basis of seniority, creating a hierarchy of roles and differences in pay based on each worker's length of service. Doctors might be organised based on their qualifications – producing a flatter organisational and pay hierarchy. Cleaners might be organised on a casual basis and paid based on their hours of work.

Payment systems link pay to defined job and worker characteristics, such as job content, assessed performance, educational qualifications, seniority, additional work hours, unsociable hours, dangerous work, etc. There are two elements to pay systems that are consequential for GPGs: the worker and job characteristics used to determine pay differentials; and the size of any such differentials.

3.1.1 How are job structures and payment systems determined?

The form of a job structure will partly reflect the 'technical' factors governing the tasks that need to be performed and the different types of workers needed to achieve these tasks. However, job structures can also be affected by rules that have evolved to protect the needs and interests, including bargaining power, of those currently doing certain types of work (e.g., there might be barriers to nurses writing scripts to protect the interests of medical doctors).

Social norms also affect job structures because they influence perceptions of how, where and when different types of work should be done, and by whom. For example, social conventions affect the days of the week and times of the day that different workplaces can operate, as do beliefs about which types of work can be done on a part-time basis, and which type of work, if any, can be done from home. Prevailing norms affect personnel managers' beliefs about who should and shouldn't undertake different jobs (e.g. a belief that doctors shouldn't clean, answer phones or collect payments) and thus also influence the form of job structures in the workplace.

A similar complex mixture of material and normative factors influences pay systems. Mainstream economic theory emphasises the role of market forces in the setting of pay differentials. However, social norms are also influential because they affect the types of factors that are judged to be deserving of a wage premium, assessments of the level of compensation that should be attached to each factor that is counted in evaluating a job or level of performance, and the level of pay inequality that is deemed overall to be legitimate. Normative influences are also evident in the relative stability of pay differentials over time, even when market conditions have changed. Such stability reveals how strongly our perceptions of what the bases and extent of pay differences should be and are affected by historical patterns of compensation and social comparison (see Austen 2003).[19]

3.1.2 Where does gender come in?

Job structures are gendered when they are not equally based on, or responsive to the needs and circumstances of men and women. Job structures in many industries show the influence of male breadwinner norms, with work hour regimes in key job clusters suited only to those (usually men) who have few unpaid care roles. Gender discrimination, sexism and sexual harassment, inflexible working arrangements, and a lack of access to paid parental leave have contributed to the under-representation of women in many traditionally 'blokey' industries (Schwartz Report: 13). As a result of gendered job structures, men and women tend to be differently represented in the workforce (in full-time roles and as a whole), differently distributed across job clusters (aka horizontal segregation), and differently distributed within job clusters (aka vertical segregation).

Pay systems are also gendered when they are based on job evaluations that either fail to equally recognise the skills and contributions of women and men or reward one gender more than the other for equivalent skills/contributions. A GPG will not necessarily result from gender gaps in workforce participation or from segregation (see below). What also matters is the pattern and extent of pay differentials across majority men and majority women occupations, industries and jobs. In other words, to understand the GPG at a given point in time (and to identify possible policy remedies), it is vital to consider the role of payment systems and how these interact with gendered job structures.

19 Austen, S. 2003. Culture and the Labour Market, Cheltenham, Edward Elgar.

GPGs that favour men thus can arise when:

- payment systems are based on a single set of worker and job characteristics, and such characteristics differ in their distribution between men and women. For example, seniority is often an important basis for pay, and women end up with relatively low pay because they have less accumulated experience than men – due to career interruptions linked to care roles.
- payment systems are based on a single set of worker and job characteristics, and there is gender bias in the subjective evaluation of such characteristics. For example, managers might evaluate their male employees' performance (or the performance of managerial workers) more favourably than those of their female workers (or workers in lower-level jobs) and allocate bonuses accordingly, resulting in a gender gap in pay.
- payment systems in female-dominated job clusters are based on different worker and job characteristics from those used in male dominated job clusters and either the work that women more commonly do is valued less than work done by men (e.g. care vs plumbing), or the characteristics that women more commonly have are valued less than those of men (e.g. language vs math) (undervaluation).
- women with the same characteristics as men receive a lower rate of pay (discrimination).
- women's access to 'good' (primary sector) jobs (those with relatively high pay and job security) is restricted and this causes them to be crowded into the lower paid, less secure (secondary sector) jobs.

The level of pay inequality will matter to the GPG, and to the outcomes of women in the most vulnerable positions, because the extent of GPG favouring men will tend to be large when the size of any pay differentials between lower and higher paid positions is large (Mandel 2009:705).[20]

3.1.3 Comparing to previous studies

This study emphasises the negative effects on the GPG of particular payment systems and gendered job structures and attempts to identify indicators relevant to each of the above factors (although some of the factors – such as gender gaps in characteristics – are much easier to measure than others (especially gender bias in subjective evaluations).

Like many studies of GPGs, we report on gender segregation. However, unlike some others we adopt a circumspect approach to its links to the GPG, because international comparative studies (see especially Rubery et al. 1997)[21] show that narrow overall GPGs can co-exist with high levels of gender segregation. We emphasise that GPGs are the product of gendered job structures and pay inequality; that is, we stress that payment systems matter too.

Like other studies we also report on the gender gap in workforce participation. But we are careful not to conflate our discussion of this and the gender pay gap; that is, to assume or imply that increases in participation will be associated with falls in the overall GPG.

We opt for keeping the discussion of these issues separate because another finding of international comparative studies (see Mandel 2009 op cit.) is that overall GPGs and rates of workforce participation can be positively related. We acknowledge the positive benefits of women's workforce participation for gender equity but also note that these benefits might not be reflected in positive

20 Mandel, H. 2009. Configurations of gender inequality: the consequences of ideology and public policy. The British Journal of Sociology 60(4):693-719.

21 Rubery, J. 1997. Payment structures and gender pay differentials: some societal effects. The International Journal of Human Resource Management 8(3): 130-149.

Explainer

The relationship between women's rate of workforce participation and the overall GPG is complicated because women with the least education and experience are more likely to 'stay out' of paid work than those with high levels of education. Thus, the average level of education of women in the workforce tends to be relatively high when the barriers to women's workforce participation are high. As a result of these "selection effects" the observed overall GPG favouring men tends to be lower when women's workforce participation rate is low (see Mandel 2009: 703-4), and a reduction in the barriers to women's workforce participation (which is positive for gender equity in employment) can be associated with an increase in the overall GPG.

short-term change in the overall GPG. For these reasons, relying solely on the GPG to gauge gender equity in the workplace can be misleading.

As noted, we examine gender gaps in worker characteristics (such as education and experience), but unlike many other studies we do not attribute all such differences to the influence of gender norms on individuals' decisions about their occupations, hours of work, etc.[22].

We aim, generally, to shift the focus more to the attitudes and behaviours of those with decision-making power over pay and hiring, and on the regulation of pay, because we do not think the answer to gender inequality lies in changing women's actions and attitudes. The challenge must be to employers, wage-setting bodies, and regulators to address the biases and constraints that contribute to GPGs.

3.1.4 Measures of factors relevant to the GPG

The approach we take to modelling the overall GPG, as well as the availability of data, explains the indicators we have selected for monitoring Victoria's GPG. These are measures of:

- Gender segregation.
- Paid work hours by gender: (part-time vs full-time).
- Worker characteristics by gender: (and by age, qualifications, language skills, cultural background).
- Job characteristics by gender: (and by method of setting pay, contract type, sector, size of organisation).
- Pay differentials: (the level of pay inequality) (overall and by worker and job characteristics).
- Rates of work participation by gender.

We organise the measures of the above factors (excluding workforce participation) at the 2-digit occupational level with the aim of providing information on the characteristics of the jobs that are most relevant to the experiences of Victorian women and potentially also to the GPG. Because this presentation of indicators falls short of a causal analysis of the drivers of GPGs, we complement it with a detailed analysis using the rich data available in HILDA (see chapters 4 and 5).

22 For example, the Schwartz report cited University of Queensland research that linked gender disparity in certain industries "to influences surrounding the experiences and decisions made in childhood and early high school years by boys and girls".

3.2 Gender segregation

3.2.1 What the EEH and Census data show on occupational segregation

We start with 2023 EEH data on the distribution of men and women across the five largest and smallest occupational groups (at the ANZCO 2-digit level) for Victorian women. As shown in the following table, more than 40% of women are employed in the 'top 5' occupations, and all but one of these is highly feminised. In contrast, and reflecting the gender segregation of jobs, few women are employed in several occupations that are important to the employment of men.

Table 12: Employees, by occupation and gender, Victoria, 2023

Occupation (5 largest and smallest occupational groups for women)	Number of men	Number of women	Women as % of total workforce	Occupation's share of women's total employment
All occupational groups	1,518,383.8	1,686,975.9	52.6%	-
Largest occupational groups				
62 Sales assistants and salespersons	108,700.9	161,119.5	59.7%	9.6%
42 Carers and aides	35,198.9	152,571.6	81.3%	9.0%
24 Education professionals	57,618.2	133,822.4	69.9%	7.9%
25 Health professionals	44,298.0	127,858.9	74.3%	7.6%
22 Business, human resource and marketing professionals	108,469.6	120,356.8	52.6%	7.1%
Smallest occupational groups				
1(2) Farmers and farm managers	514.4	2,398.6	82.3%	0.1%
72 Mobile plant operators	14,862.3	1,637.6	9.9%	0.1%
82 Construction and mining labourers	44,806.1	1,116.0	2.4%	0.1%
33 Construction trades workers	40,339.2	n.a.	0.0%	0.0%
34 Electrotechnology and telecommunications trades workers	32,214.4	n.a.	0.0%	0.0%

Source: EEH 2023 Table Builder

Notes: the numbers attached to the occupational labels are their ANZCO_2 codes.

The larger sample of data in the Census 1% file enables us to 'dig deeper' into the level of occupational segregation. The data in the following table shows how there is also gender segregation of jobs within some of the ANZSCO 2-digit occupational groups.

- The table reports the dissimilarity index for the 5 largest and smallest occupations for Victorian women, showing the proportion of women who would need to change jobs to achieve a 50:50 gender split of jobs within the occupational group.

The data shows a relatively high level of job segregation among health professionals, where women are much more likely to be midwifery and nursing professionals than men; and men are more likely to be medical practitioners than women.

- Close to 40% of women health professionals would need to change jobs for a 50:50 gender split of jobs to be reached in the sector.
- Construction trade work also features a relatively high level of job segregation, with the (relatively small number of) women in this occupation clustered into painting (vs building labouring and carpentry) jobs.

Table 13: Occupation dissimilarity index, by occupation, Victoria, 2021

Occupation (5 largest and smallest occupational groups for women)	Dissimilarity Index2
Largest occupational groups	
62 Sales assistants and salespersons	n.a.
42 Carers and aides	0.276
24 Education professionals	0.170
25 Health professionals	0.388
22 Business, human resource and marketing professionals	0.104
Smallest occupational groups	
1 Farmers and farm managers	n.a.
72 Mobile plant operators	n.a.
82 Construction and mining labourers	n.a.
33 Construction trades workers	0.345
34 Electrotechnology and telecommunications trades workers	0.163

Source: Census 2021 Table Builder

Notes: the numbers attached to the occupational labels are their ANZCO_2 codes.

The dissimilarity index can only be calculated for occupational groups that have ANZCO_3 groupings of jobs.

3.2.2 What the EEH data show on industry segregation

Industry of employment can also affect the gender pay gap if the jobs that women take on are in different industries from those held by men, and if pay differs between industries (see Table 1 for details on such pay differences).

The data in the following table show the industries that are the largest employers of Victorian women and men. It reveals a pattern of industry segregation that closely mirrors the pattern of occupational segregation: women are concentrated in the health and social services and education and training industries; men's work is relatively concentrated in the construction industry; and the retail sector is important to the employment of both men and women.

Because the patterns of occupations and industries overlap so substantially, there is generally little to be gained from measuring men's and women's worker and job characteristics at both the occupational and the industry level. However, there might be possible exceptions to this rule which might become obvious at a finer level of disaggregation of the industry data that is not possible with the EEH data.

- For example, the characteristics (and pay outcomes) of carers and aides who work in the education and training industry might differ from those working in health and social services, and such differences might be gendered.
- For similar reasons, it could be useful to compare the pay outcomes (and characteristics) of women working as mobile plant operators in the transport, postal and warehousing industry with those in the construction industry.

Table 14: Key industries, by gender, Victoria, 2023

Industries (5 largest industry groups for women and men)	% of men in industry	% of women in industry
Largest for women		
84 Hospitals	3.2%	9.6%
80 Preschool and school education	3.4%	8.5%
69 Professional, scientific and technical services (except computer system design and related services)	6.5%	7.9%
87 Social assistance services	1.5%	7.6%
42 Other store-based retailing	3.8%	6.9%
Largest for men		
32 Construction services	8.1%	1.7%
69 Professional, scientific and technical services (except computer system design and related services)	6.5%	7.9%
45 Food and beverage services	4.8%	5.6%
42 Other store-based retailing	3.8%	6.9%
41 Food retailing	3.7%	3.5%

Source: EEH 2023 Table Builder

Notes: 1: the numbers attached to the industry labels are their ANZSIC_2 codes.

The substantial overlaps in the pattern of occupational and industry segregation also motivate us, in the remainder of this section, to examine the factors relevant to GPGs only at the occupational level.

3.3 Paid work hours

Women are significantly overrepresented in part-time work and underrepresented in paid overtime work, partly reflecting the difficulties in combining long work hours with unpaid care roles (and the gendered distribution of such roles)[23]. These patterns have an obvious direct link to the GPG as measured by weekly and annual earnings (for any hourly wage rate, total earnings will increase in proportion with hours of work). However, indirect linkages are also possible, if a) access to higher-paid occupations, industries and jobs depends on one's capacity to work long hours; and/or b) large wage premiums flow to those who work long hours.

3.3.1 What the EEH data show

The data in Table 15 show the incidence of part-time work and how this varies by gender. We report this data for Victoria as a whole and for the five largest and smallest occupational groups for Victorian women.

The data in the table shows that the rate of part-time work is relatively high in the largest occupational groups for women, whilst it is relatively low in the smallest occupational groups.

- The rate of part-time work in the two largest groups (sales assistants and salespersons, and carers and aides), for example, exceeds 80%, whilst it is only 8% in the group of construction and mining labourers.
- In some occupational groups, women's rate of part-time work exceeds that of men's by a large margin. For example, the gender gap in this rate is above 20 percentage points for educational and health professionals. However, in the two largest occupational groups both women and men typically work part-time.

The data in this table are most relevant to the link between the GPG and women's access to 'good' (primary sector) jobs (those with relatively high pay and job security). Overall, the data are consistent with women being clustered into occupations that offer/enable part-time work and under-represented in occupations where such working time arrangements are less available.

This pattern of clustering could reflect difficulties in accessing part-time work in some occupations and/or difficulties in working full-time in some occupations for those with unpaid care roles (due, for example, to inflexible start and finish times).

- It is important to note that the level of part-time work is not high in all the occupations where women's employment is high.
- In some occupations, including business, human resource and marketing professionals, the number of women employed is high and most work full-time.

Across the Victorian workforce as a whole, the data in Table 15 point to the clustering of women into occupations where part-time work is common, and this is likely to be consequential for the GPG. The crowding of women into a small group of jobs will likely push down women's wages. Women's wages will also be pushed lower if such clustering is associated with occupational downgrading for women (see Connelly and Gregory 2008)[24]; that is, if those who are seeking part-time work move into jobs with lower skill requirements.

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23 Evidence on the influence of unpaid care roles on work hours includes HILDA data showing the gender gap in hours worked increases from 6.3% in the 25-29 age group (women, on average, worked 36.2 hours per week while men, on average, usually worked 38.5 hours per week) to 13.1% at age 30-34 and 23.1% among those aged 35-39.

24 Connolly, S. and Gregory, M. 2008. Moving down: Women's Part-Time Work and Occupational Change in Britain 1991-2001. The Economic Journal 118(526):F52-F76.

Table 15: Part time work, by occupation and gender, Victoria, 2023

Occupation (5 largest and smallest occupational groups for women)	% of men working PT	% of women working PT	% of total workforce working PT	gender gap in rate of PT work (percentage points)
All occupational groups	27.5%	57.3%	43.2%	29.72
Largest occupational groups				
62 Sales assistants and salespersons	67.6%	83.1%	76.9%	15.49
42 Carers and aides	83.3%	86.8%	86.1%	3.53
24 Education professionals	44.9%	66.9%	60.3%	22.00
25 Health professionals	48.1%	72.6%	66.3%	24.50
22 Business, human resource and marketing professionals	16.4%	27.5%	22.2%	11.04
Smallest occupational groups				
1 Farmers and farm managers	0.0%	0.0%	0.0%	0.00
72 Mobile plant operators	18.8%	25.5%	19.5%	6.71
82 Construction and mining labourers	8.1%	0.0%	7.9%	-8.08
33 Construction trades workers	5.3%	n.a[2]	5.3%	n.a.
34 Electrotechnology and telecommunications trades workers	0.0%	n.a[2]	0.0%	n.a.

Source: EEH 2023 Table Builder

1. Notes: the numbers attached to the occupational labels are their ANZCO_2 codes.

2. No women were counted in the EEH data in these occupations.

3.4 Worker characteristics

In recent decades, the average level of women's educational qualifications has grown with their increased access to higher education and to the extent that the proportion of women with degrees now exceed that of men. However, as noted earlier, across educational groups, many women take time out of paid work, or move into part-time roles, to respond to the care needs of children and others. Thus, women continue to be under-represented in older age groups within the full-time workforce.

Such differences in the distribution of education and age between men and women can impact the GPG, to extent that payment systems are based on these characteristics. The differences are commonly emphasised in discussions of the GPG, reflecting the role such factors play in determining both the allocation of jobs and the bases for pay differentials.

Data presented earlier showed large differences in median total cash earnings across educational and age groups. In this section, we assemble data on these characteristics, as well as language, indigenous identity, and location at the ANZSCO 2-digit level. The data on age comes from the EEH, whilst the other characteristics are measured using Census data for 2021.

3.4.1 What the EEH data show on age differences

Within the Victorian workforce as a whole there is little difference in the age distribution of men and women (see Table 16). A similar proportion of women and men workers are aged over 45, and a similar proportion of each gender is under 25.

However, a key occupational group for women – sales assistant and salespersons – features a very high proportion of young workers (close to 50% for both men and women). But other 'top 5' occupational groups have relatively small numbers of young women (and women are strongly represented in older age groups). These data, then, on their own, do not help explain the GPG.

Larger gender differences in age are apparent in the data on the full-time workforce.

- 66% of men who work full-time are aged 35+, whilst only 60% of full-time women workers are in this age group.
- In several key occupations (carers and aides, and education and health professionals), the gender gap in the proportion of full-time workers over 35 is larger, and these data point to possible barriers to women's continuation in full-time roles within many occupations, which is directly relevant to the size of the GPG.

As noted earlier, seniority is often an important basis for pay, and women end up with relatively low pay because they have less accumulated experience than men – due to career interruptions linked to care roles.

Table 16: Age distribution, by occupation and gender, all workers, Victoria, 2023

Occupation (5 largest[1] occupational groups for women)	%<25		%25-34		%35-44		%>45	
	ALL men	ALL women	ALL men	ALL women	ALL men	ALL women	ALL men	ALL women
All occupational groups[2]	14.9%	14.6%	21.7%	23.0%	23.6%	22.0%	38.2%	38.7%
62 Sales assistants and salespersons	47.7%	48.4%	19.6%	15.1%	13.3%	10.5%	18.6%	25.8%
42 Carers and aides	4.8%	15.4%	16.7%	19.9%	31.4%	19.4%	41.3%	45.8%
24 Education professionals	4.5%	2.0%	15.2%	21.2%	19.2%	19.7%	65.1%	57.5%
25 Health professionals	3.1%	6.2%	27.5%	27.3%	29.4%	28.1%	36.9%	38.7%
22 Business, human resource and marketing professionals	5.9%	3.3%	29.9%	29.7%	23.4%	32.1%	39.6%	35.5%

Source: EEH 2023 Table Builder

Notes:

1. Because the number of women smallest occupational groups in the EEH's survey is close to zero it is not possible to disaggregate the data in these occupations by age

2. the numbers attached to the occupational labels are their ANZCO_2 codes.

Table 17: Age distribution, by occupation and gender, full-time workers, Victoria, 2023

OCC2 (5 largest[1] occupational groups for women)	%<25		%25-34		%35-44		%>45	
	FT men	FT women	FT men	FT women	FT men	FT women	FT men	FT women
All occupational groups[2]	8.2%	4.9%	23.6%	30.3%	25.8%	22.0%	40.1%	37.7%
62 Sales assistants and salespersons	20.2%	8.4%	27.7%	38.5%	22.9%	16.0%	30.4%	39.5%
42 Carers and aides	0.0%	9.8%	12.9%	21.1%	32.2%	10.3%	48.0%	39.5%
24 Education professionals	0.0%	1.6%	18.6%	35.5%	17.6%	15.3%	58.6%	51.0%
25 Health professionals	3.5%	5.6%	31.9%	33.3%	20.7%	28.2%	52.9%	34.7%
22 Business, human resource and marketing professionals	4.2%	3.8%	31.5%	35.6%	24.9%	28.9%	38.1%	32.2%

Source: EEH 2023 Table Builder

Notes:

1. Because the number of women smallest occupational groups in the EEH's survey is close to zero it is not possible to disaggregate the data in these occupations by age

2. The numbers attached to the occupational labels are their ANZCO_2 codes.

3.4.2 What the Census data show on gender differences in educational qualifications, language skills, and the inclusion of Aboriginal people in the Victorian workforce

Across the Victorian workforce, the proportion of women with tertiary qualifications exceed that of men by a large margin, 10.5 percentage points. However, the gender gap in qualifications that favours women is much smaller (and sometime the gap favours men), in the five largest occupational groups for women.

The gender gap in qualifications that favours women is larger in the occupational groups where relatively few women work (see Table 18).

Table 18: Tertiary qualifications, by occupation and gender, Victoria, 2021

Occupation (5 largest and smallest occupational groups for women)	% of men with tertiary qualifications	% of women with tertiary qualifications	% of total workforce with tertiary qualifications	gender gap in rate tertiary qualifications (percentage points)
All occupational groups	34.0%	44.5%	39.2%	-10.5%
Largest occupational groups				
62 Sales assistants and salespersons	19.0%	15.2%	16.6%	3.8%
42 Carers and aides	30.2%	27.2%	27.6%	3.0%
24 Education professionals	86.1%	90.0%	88.9%	-4.0%
25 Health professionals	91.4%	90.0%	90.3%	1.5%
22 Business, human resource and marketing professionals	74.7%	75.7%	75.2%	-1.0%
Smallest occupational groups				
1 Farmers and farm managers	12.4%	22.6%	15.3%	-10.2%
72 Mobile plant operators	5.7%	9.3%	5.8%	-3.7%
82 Construction and mining labourers	5.5%	15.8%	5.8%	-10.3%
33 Construction trades workers	3.6%	16.5%	3.8%	-12.9%
34 Electrotechnology and telecommunications trades workers	6.5%	21.4%	6.9%	-14.9%

Source: Census 2021 Table Builder

Notes: 1: the numbers attached to the occupational labels are their ANZCO_2 codes.

The gender gap is qualifications that favours women is likely to be positive for the GPG overall, given that payment systems commonly reward relevant qualifications. For similar reasons, women's relative wages should be pushed higher in those occupational groups where their rate of tertiary qualifications is above men's. However, the patterns in the data in Table 18 caution against interpreting a high gender gap in qualifications as a positive indicator of gender equality at the occupational level. Such a gap could instead signify barriers to women's access to jobs within some occupations, causing them to need higher qualifications than their male (and older) counterparts to access jobs.

The gender gaps in language skills, disability and aboriginal identity are smaller.

- Across the Victorian workforce, 10% of men and 8.5% of women rate their English skills as less than very good.

As compared to other Victorian women in the workforce, a relatively small proportion of women with 'less than very good English' were working in the health, education, and business, human resource and marketing professionals occupational groups.

A relatively high proportion were working in low pay occupations, as carers and aides, cleaners and laundry workers, and factory process workers.

These patterns reflect the difficulties faced by those with low English skills in accessing higher paid jobs. They also point to occupational groups where a substantial number of women are vulnerable to low pay due to a lack of such skills; a factor that is also potentially relevant to occupational pay differentials and, in turn, the state-wide GPG.

The prevalence of disability is low for both men and women in paid work – speaking to the barriers that can pose to workforce participation under current work arrangements.

- In 2021, 0.9% of men and 1.0% of women workers reported a core activity need for assistance (in comparison the 10.4% of the Australian working age population has a disability).
- Mirroring patterns observed for those with low English skills, women with a disability were over-represented in the cleaners and laundry workers and factory process worker groups and under-represented in the professional categories.
- This data adds to a picture of vulnerable women being clustered in relatively low paid jobs.

Aboriginal people comprise 0.7% of the Victorian workforce, which is below their share of the population as a whole. This discrepancy points to the barriers which face this group of Victorians in finding paid work.

There is only a marginal difference in the proportion of men's and women's workforces that are Aboriginal (0.74 to 0.76%), and across the occupational groups the share of Aboriginal workers varies by only a small amount. However, compared to other women, Aboriginal women (like their disabled and linguistically diverse sisters) are generally under-represented in the professions. Many Aboriginal women work as carers and aides, health and welfare support workers and legal, social and welfare professionals.

3.5 Job characteristics

The way work and pay are organised differs between male- and female-dominated job clusters in ways that are likely to be consequential for the gender pay gap.

Data presented earlier showed large differences in median total cash earnings across workers whose pay is set by an Award and those who are covered by either a Collective Agreement or Individual Arrangement, and between those hired on a permanent vs a fixed term or casual basis.

This section presents, first, 2023 EEH data on the pattern of such job characteristics across ANZSCO occupational groups at the 2-digit level. We also present data on the key industries for the five largest and smallest occupations for women using Census data to achieve such disaggregation.

3.5.1 What the EEH data show on pay setting methods

Women are more likely to have their pay set by an Award than men (21.1% of women have their pay set this way, as compared to 15.4% of men). Collective Agreements are also more common for women than men (42.5% versus 32.0%). Thus, a key gender gap is in the use of Individual Arrangements to set pay (35.6% for women, as compared to 52.3% for men) (see Table 19).

Table 19: Methods of Setting Pay, by Occupation and gender, ALL workers, Victoria, 2023

Occupation (5 largest[1] occupational groups for women)	**% of workforce whose pay is set by an Award**		**% of workforce whose pay is set by an Collective Agreement**		**% of workforce whose pay is set by an Individual Arrangement**		**gender gap in rate of individual agreements (%-point)**
	men	women	men	women	men	women	
All occupational groups[2]	15.4%	21.1%	32.0%	42.5%	52.3%	35.6%	16.7
62 Sales assistants and salespersons	31.7%	43.1%	43.3%	38.8%	24.7%	19.0%	5.6
42 Carers and aides	34.2%	39.6%	55.6%	49.0%	13.2%	10.0%	3.2
24 Education professionals	0.9%	4.9%	80.9%	83.4%	15.8%	10.6%	5.2
25 Health professionals	0.0%	2.0%	76.2%	90.7%	18.8%	6.5%	12.3
22 Business, human resource and marketing professionals	5.7%	5.5%	26.4%	32.5%	66.6%	62.0%	4.7

Source: EEH 2023 Table Builder

Notes:

1. Because the number of women smallest occupational groups in the EEH's survey is close to zero it is not possible to disaggregate the data in these occupations by method of setting pay

2. The numbers attached to the occupational labels are their ANZCO_2 codes.

Awards are relatively common in the occupational groups where pay is generally low, and this includes the two largest occupations for women – sales assistants and salesperson and carers and aides.

- In these groups close to 40% of women have their pay set by an Award.
- In the professional occupational groups, Collective Agreements predominate (83.4% of women who are education professionals and 90.7% of those who are health professionals have their pay set by such an agreement).
- In the group of business, human resource and marketing professionals, individual agreements are much more common (62.0% of women have their pay set this way).

There are only small gender differences in the way pay is set in the 'top 5' occupations for women. The group of health professionals is an exception – with 18.8% of men, as compared to only 6.5% of women having their pay set by an Individual Arrangement. This could reflect differences in the occupational roles taken on by men and women in the health professional group and differences in the methods of setting pay across these roles (for example, Individual Arrangements might be used to set the pay of medical specialists whilst nurses' pay is commonly set by a Collective Agreement). Such an explanation is consistent with a pattern evident in the data more broadly: of pay setting which varies more between than within occupations.

The link between pay setting and the GPG therefore occurs because Awards set the pay of a disproportionately large number of workers in a number of low pay occupations where women predominate.

- This does not mean that changing from Awards to other methods of pay in these occupations would improve the GPG; the opposite might well be true. Rather, the data presented here highlights how Award rates of pay are important to the pay outcomes of many women, especially those in low paid jobs because they provide a floor (or safety net) for pay outcomes.

Awards also affect the GPG by affecting pay relativities across majority-men and majority women occupations and industries. Broadway and Wilkins (2017) found from their investigation of Australian data for 2008-14 that Award rates are not neutral with respect to the gender composition of jobs, with such rates higher in majority-men than women-majority sectors for reasons unrelated to skill or job content. Thus, also important to the GPG is the pattern of earnings across occupations of those whose pay is set by an Award.

A link between pay setting and the GPG also exists because individual agreements are much more common than Awards in occupational groups (and possibly sub-groups) that have both fewer women and a higher level of pay.

- To the extent that such agreements give those with high bargaining power an ability to leverage better pay outcomes, or if they increase the risk of managers evaluating their male employees' performance (or the performance of workers in occupational roles dominated by men) more favourably than those of their female workers (or workers in lower-level jobs) their presence will be negative for the GPG.

3.5.2 What the EEH data show on type of employment

A smaller proportion of women than men (70.7 to 79.7%) have a permanent contract and the job security this provides. The lower rate of permanent employment amongst women reflects in part their higher involvement in part-time work (casual and part-time work are strongly correlated). But this does not take away from the fact that the level of job security for women is relatively low.

As shown in Table 20, the rate of permanent employment is low in those occupational groups where women's employment is high and pay is low.

- Among sales assistants and salespersons only 44% of women have a permanent contract; among carers and aides this rate is only 61.8%.
- In other key occupational groups for women – and generally in occupations where skill levels and pay are higher – the rate of permanent employment is higher:
  - 88.4% of women in the group of business, human resource and marketing professionals are permanently employed;
  - 79.4% of women health professionals have this contract type.
  - However, women in the group of educational professionals, in contrast to other professionals, have a relatively low rate of permanent employment (69.5%).

Table 20: Permanent contracts, by occupation and gender, ALL workers, Victoria, 2023

Occupation (5 largest[1] occupational groups for women)	**% of workforce employed on a permanent contract**		**gender gap in rate of permanent contracts (percentage points)**
	men	women	
All occupational groups[2]	79.7%	70.7%	9.0 %-point
62 Sales assistants and salespersons	57.7%	44.0%	13.7 %-point
42 Carers and aides	59.6%	61.8%	-2.2 %-point
24 Education professionals	72.5%	69.5%	3.0 %-point
25 Health professionals	72.2%	79.4%	-7.2 %-point
22 Business, human resource and marketing professionals	85.0%	88.4%	-3.4 %-point

Source: EEH 2023 Table Builder

Notes:

1. Because the number of women smallest occupational groups in the EEH's survey is close to zero it is not possible to disaggregate the data in these occupations by type of contract

2. The numbers attached to the occupational labels are their ANZCO_2 codes.

Non-permanent employment is a correlate of low pay for women partly because the occupations that many women work in are characterised by both low pay and a high level of casual (often part-time) work.

Changing employment from casual and fixed term to permanent in such occupations will not necessarily enhance their pay outcomes (and thus improve the GPG).

However, such a change is likely to help if improvements in job security increase the bargaining position of the workers in these occupations.

3.5.3 What the EEH data show on sector

Most Victorians work in the private sector (80% of women and 87.5% of men). As shown in Table 21 all those working in the sales assistant and salespersons group are in the private sector; and a slightly higher than average proportion of women working as carers and aides also work in the private sector (82.3%).

This is relevant to the gender pay gap because, as noted earlier, these occupations are large employers of women and they are also relatively low paid.

The low presence of public sector employers in these occupations could be one factor contributing to their low pay outcomes: a stronger regulation of pay in the public sector might result in a higher wage floor.

Such regulation of pay in public sector organisations might also limit pay outcomes at the top of the earnings distribution. Thus, among professionals and managers, a gender gap in private sector employment that favours men might also contribute to pay gaps that are in their favour. Such complexity means that care needs to be taken in interpreting this indicator.

Table 21: Sector of employment, by occupation and gender, all workers, Victoria, 2023

Occupation (5 largest occupational groups for women)	**% of workforce employed in the private sector**		**gender gap in rate of private sector employment (percentage points)**
	men	women	
All occupational groups	87.5%	79.8%	7.7 %-point
62 Sales assistants and salespersons	100.0%	100.0%	0.00 %-point
42 Carers and aides	70.8%	82.3%	-11.5 %-point
24 Education professionals	34.3%	49.0%	-14.6 %-point
25 Health professionals	46.2%	44.7%	1.4 %-point
22 Business, human resource and marketing professionals	83.2%	79.3%	3.8 %-point

See notes to Table 20.

3.5.4 What the EEH data show on organisation size

Victorians work in a range of different-sized organisations. Larger organisations might be expected to better monitor their GPGs and implement policies to reduce them where possible. The data in the following table shows that, in key occupational groups for women, a relatively large proportion of employment occurs in large organisations.

Table 22: Organisation size, by occupation and gender, all workers, Victoria, 2023

Occupation (5 largest occupational groups for women)	% of workforce employed in organisations with <21 employees		% of workforce employed in organisations with 1000+ employees	
	men	women	men	women
All occupations	26.0%	20.2%	24.7%	34.2%
62 Sales assistants and salespersons	23.5%	20.2%	48.5%	42.2%
42 Carers and aides	6.4%	9.8%	40.7%	32.6%
24 Education professionals	4.6%	9.8%	61.8%	43.8%
25 Health professionals	18.5%	3.5%	59.5%	71.2%
22 Business, human resource and marketing professionals	22.8%	10.6%	30.5%	38.0%

See notes to Table 20.

3.6 Pay inequality

With many women in low paid jobs and under-represented in high paying roles, the level of pay inequality within and across occupations plays a key role in determining the extent of gender gap in pay. Data on the distribution of earnings is not available in either the EEH or the Census, so for this indicator we turn to the ABS Survey of Employee Earnings (for 2023) and measure pay inequality, first, by the 90:10 ratio.

This 90:10 ratio expresses the earnings of the person close to the top of the earnings distribution (at the 90th percentile) as a proportion of the earnings of the person close to the bottom of the distribution (at the 10th percentile). We also compare the 50:10 and 90:50 ratios to assess whether pay inequality is more associated with low earnings for those at the bottom of the earnings distribution or high earnings for those at the top.

3.6.1 What the EE data show on pay inequality

The data in Table 23 show that the level of pay inequality across occupations exceeds that within occupations, with the 90:10 ratios of both hourly and weekly earnings across all occupations (6.84 and 3.60 respectively) larger than those recorded in most individual occupational groups. The level inequality in weekly earnings is also generally higher than that in hourly earnings, showing how gaps in work hours translate into gaps in pay.

The level of inequality in weekly earnings, as measured by the 90:10 ratio, is especially large in the sales assistants and salesperson group, where the earnings of those at the 90th percentile are almost 12 times as large as those at the 10th percentile. With hourly earnings, the level of inequality is relatively large in the group of business, human resource and marketing professionals where the hourly earnings of those at the 90th percentile are 3.6 times those at the 10th percentile.

Table 23: The 90:10 ratios, by occupation, Victoria, 2023

Occupation (5 largest and smallest occupational groups for women)	P90:10 (weekly earnings)	P90:10 (hourly earnings)
All occupational groups	6.84	3.60
Largest occupations		
62 Sales assistants and salespersons	11.96	3.07
42 Carers and aides	4.12	2.26
24 Education professionals	4.11	3.27
25 Health professionals	3.79	3.12
22 Business, human resource and marketing professionals	4.05	3.40
Smallest occupations		
1 Farmers and farm managers[2]	6.55	3.353
72 Mobile plant operators	3.07	2.79
82 Construction and mining labourers	4.09	2.62
33 Construction trades workers	3.90	3.24
34 Electrotechnology and telecommunications trades workers	4.45	3.75

Source: ABS Employee Earnings 2023 Cat. No. 6337

Notes:

1: The numbers attached to the occupational labels are their ANZCO_2 codes.

2: In this occupational group P10 earnings were 0. We report instead the P90:25 ratio

The data in Table 24 – on 50:10 and 90:50 ratios – show that, across the Victorian workforce, inequality in weekly earnings is most pronounced at the bottom of the earnings distribution (the 50:10 ratios of weekly earnings generally exceed the 90:50 ratios). However, the opposite is true for hourly earnings, where the 90:50 ratios are larger than the 50:10 ratios. Again, this pattern of difference across measures of pay inequality based on weekly versus hourly earnings shows how those on low hours pre-dominate in the group with low weekly earnings.

The occupational groups of carers and aides and health professionals record relatively small gaps between the hourly earnings of those at the 10th percentile and those on median earnings. The group of carers and aides also has a relatively low 90:50 ratio, indicating that the wage structure in this occupation is more compressed than others.

In contrast, each of the professional occupational groups have a relatively high 90:50 ratio, showing that the pay outcomes for individuals in high paid roles diverge strongly from middle-ranked workers within these occupational groups.

In part, this likely reflects the pattern of occupational segregation (at the ANZCO 3-digit level) that was identified in earlier paragraphs, where men in the health professional group, for example, are more likely to be medical practitioners (on relatively high pay) and women health professionals are more likely to be nurses or midwives (where pay is lower).

But the difference is pay across these occupational groups is also fundamental to the gender gap in earnings.

Table 24: The 50:10 and 90:50 ratios, by occupation, Victoria, 2023

Occupation (5 largest and smallest occupational groups for women)	P50:10 (weekly earnings)	P90:50 (hourly earnings)	P90:50 (weekly earnings)	P50:10 (hourly earnings)
All occupational groups	3.16	2.17	1.69	3.16
Largest occupations				
62 Sales assistants and salespersons	5.40	2.22	1.70	1.80
42 Carers and aides	2.36	1.74	1.44	1.57
24 Education professionals	2.57	1.60	1.70	1.92
25 Health professionals	2.04	1.85	1.56	2.00
22 Business, human resource and marketing professionals	2.14	1.90	1.70	2.01
Smallest occupations				
1 Farmers and farm managers	4.12	1.592	1.60	2.61
72 Mobile plant operators	1.67	1.84	1.49	1.87
82 Construction and mining labourers	2.12	1.93	1.40	1.87
33 Construction trades workers	2.14	1.82	1.90	1.70
34 Electrotechnology and telecommunications trades workers	2.55	1.75	2.22	1.69

See notes to Table 23.

3.7 Work participation

Women's rate of participation in paid work falls short of men's (Figure 13), showing once more the barriers to remaining in paid work in the presence of unpaid care roles.

Previous studies have identified that these effects are large for most Victorian mothers and relatively large for migrant and Aboriginal mothers, as well as mothers with disability, mothers caring for others with disability and young mothers (Baseline Report: 84)

As noted earlier, however, the link between the gender gap in workforce participation rates and the GPG is complex.

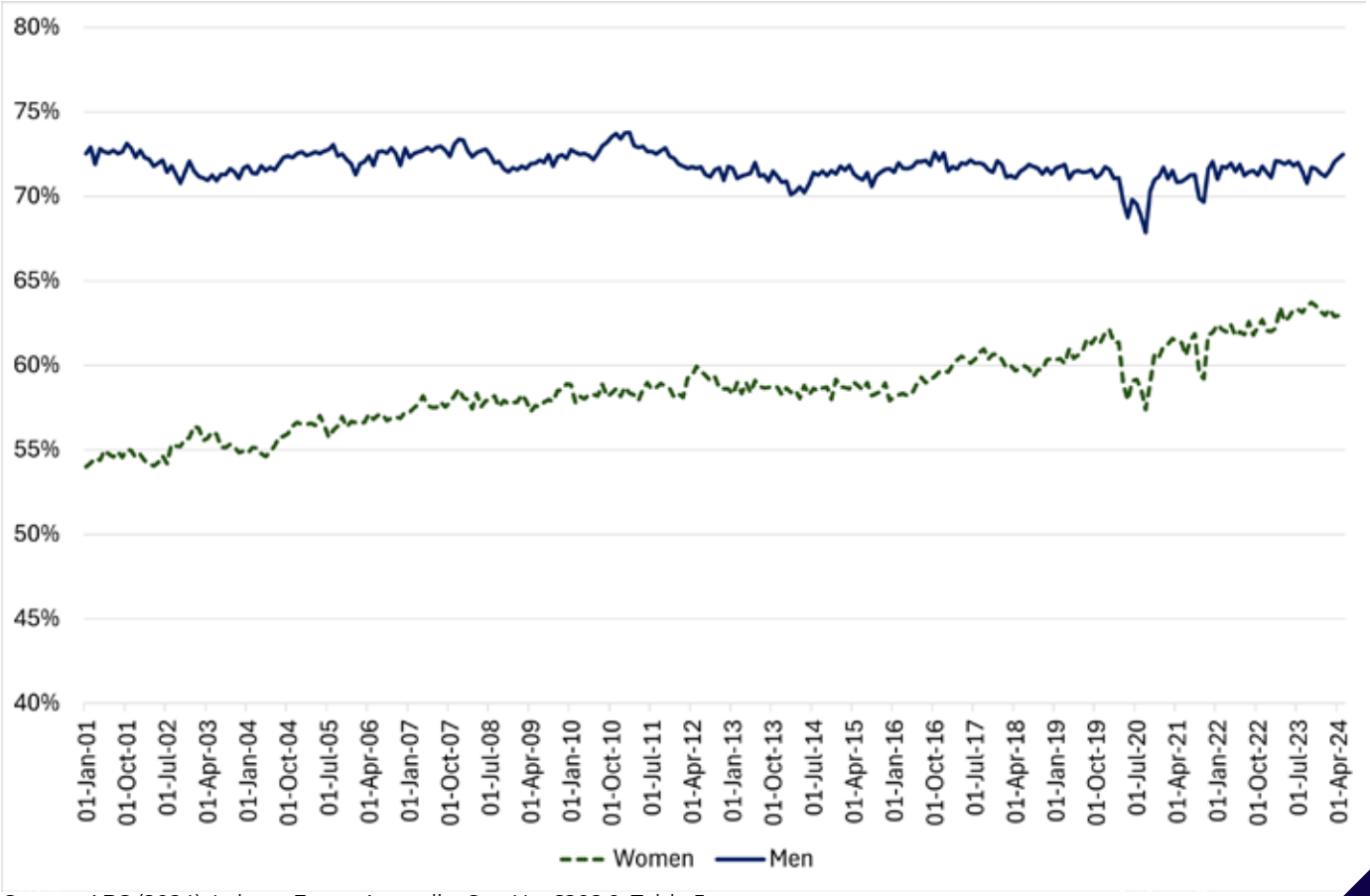
With annual data, those who, prior to the survey date, have spent part of the year of the paid workforce will record relatively low earnings (and this will show up in the GPG measure if there are gender differences in the time out of paid work).

Directly, for any hourly wage rate, total earnings will decrease in proportion with the time spent out of the paid workforce for care and other reasons.

Indirect linkages are also possible, if a) access to higher-paid occupations, industries and jobs depends on continuous/long term employment; and/or b) large wage premiums flow to those with long tenure.

However, women who are not in paid work will not be represented in the data at all and the resulting 'selection effects' (see above) may push the measured GPG lower.

Figure 13: Labour Force Participation Rates, by Gender, Victoria, 2001 to 2024



Source: ABS (2024). Labour Force, Australia, Cat. No. 6202.0, Table 5

3.8 Chapter conclusion

We draw several conclusions on the drivers of the GPG in Victoria from the data presented in this chapter. First, clearly there is a close interconnection between the GPG and the unpaid work roles undertaken by women. The data consistently point to the large effects of differences in work hours on the GPG. The effects of part-time work on the GPG are both direct and indirect, with the data pointing to how women's access to higher-paid occupational roles is limited by their restricted capacity to work full-time hours.

Thus, the data presented in this chapter suggests that the GPG can be linked, in turn, to "care unfriendly" job structures in a number of sectors. Many women seemingly find it difficult to work full-time in some sectors and, as noted, this affects the GPG in a variety of way. However, our data also shows there are some other sectors where the number of women employed is high and most work full-time. This shows that it is possible to have (full-time) job structures that better respond to the circumstances and needs of those with large unpaid care roles. Other research (especially Goldin 2014)[25] shows that it is possible in some sectors for those with such care roles to transition to part-time work (and out again when care roles reduce) without leaving their jobs. Such positive examples are important to keep in mind as they show the potential for positive change in work arrangements.

The data in this chapter also show how the GPG is the product of a complex inter-play of factors, many of which are associated with occupational differences. Occupation clearly matters to the GPG; many women work in occupations that are relatively low paid. However, many of these occupations are concentrated in a limited set of industries, have high rates of part-time work, use Awards to set pay, have workforces comprised of relatively high numbers of those with limited skills in English and low educational qualifications, etc. Such occupation-based clustering of factors that are relevant to the GPG makes it difficult to disentangle the 'independent' effects of occupational segregation on the GPG. It also implies that changing the occupational profile of women (and men) is unlikely to have a large impact on the gap, although addressing barriers to the employment of women in some sectors will help. What is likely to be more important to the GPG is improving the pay of those who for one reason or another (and often because of disadvantage and/or unpaid care roles) find themselves working in low paid occupational roles.

The complex interactions evident in the data we've presented also make it hard to disentangle the independent effects on the GPG of payment methods and employment type. Those on Awards and employed on a casual basis clearly have relatively low rates of pay, and more are women than men. However, as noted, these relationships are intertwined with connections between key women-majority occupations (such as carers and aides), part-time work and low pay. Changing from Awards to other methods of pay in such occupations, thus, might not improve the GPG. What is more likely to be beneficial is increases in Award rates of pay in those women-majority sectors where pay has been historically low. Similarly, changing employment from casual and fixed term to permanent will not necessarily enhance pay outcomes for women (and thus improve the GPG), although such a change might well deliver longer-term gains, by improving the bargaining position of the workers in key majority-women occupations.

25 Goldin, Claudia. 2014. A Grand Gender Convergence: Its Last Chapter. American Economic Review 104(4): 1–30.

The results confirm that pay inequality matters to the GPG. Women are over-represented in low paid jobs and under-represented in high paid roles. Thus, the level of pay inequality between high and low paid jobs across and within occupations directly affects the size of the GPG. The GPG will narrow if the pay of those on low earnings improve in relation to those on median pay.

Our results also show that in professional occupational groups GPGs are associated with large differences between the pay outcomes of those in high paid roles and those of middle-ranked workers. We identify possible links to the more frequent use of Individual Agreements in occupational groups (and possibly sub-groups) that have relatively high levels of pay. To the extent that such agreements give those with high bargaining power an ability to leverage better pay outcomes, their use will be negative for the GPG. Such agreements will also be negative for the GPG if they increase the risks associated with managers evaluating their male employees' performance (or the performance of workers in occupational roles dominated by men) more favourably than those of their female workers (or workers in lower-level jobs).

Public sector employment plays a role in minimising the gaps in pay between low and high pay jobs and, in doing so, help reduce the GPG. The low presence of public sector employers in several key occupations could be one factor contributing to their low pay outcomes: a stronger regulation of pay in the public sector workers might result in a higher wage floor. However, such regulation of pay in public sector organisations might also limit pay outcomes at the top of the earnings distribution. Thus, among professionals and managers, a gender gap in private sector employment that favours men might also contribute to pay gaps that are in their favour. This is a further example of the complexity in the relationships affecting the GPG that demonstrates the need for care in interpreting the available data.

Education matters to the GPG. The data presented in this chapter demonstrate how, in the absence of the gender gap in qualifications favouring women, the GPG would be larger than it currently is. Women's relative wages are pushed higher in many sectors because they have more tertiary qualifications than men. However, the data in this chapter also reveal that there a high gender gaps in qualifications favouring women in several occupations where few women work. Thus, instead of such gaps being a positive indicator of gender equality at the occupational level, they could instead signify barriers to women's access to jobs. That is, such gaps could be showing that women need higher qualifications than their male (and older) counterparts to access jobs. If this is the case, then the "rewards" that women get from their qualifications will be less than men's.

Chapter 4

Digging deeper into the drivers of the GPG

The indicators described in the previous chapter provide important insights to the possible sources of GPGs in Victoria and give guidance on the types of policies that could make a positive difference to gender equality in the state. However, indicators are necessarily partial, showing correlations only between one factor and GPGs at a time.

In this chapter we provide a deeper analysis of the drivers of gender gaps in pay using an ordinary least squares regression model to examine how the gap in annual earnings is affected by gender differences in years of labour market experience, hours worked, qualifications and a number of other characteristics of workers and their jobs.

With regression analysis we are also able to isolate any gender gap in pay that persists once gender differences in worker and job characteristics are taken into account. The analysis, thus, enables us to measure the 'adjusted' gender pay gap.

In this chapter we draw on HILDA data and use information on the average financial year gross wage and salary earnings of Victorian men and women as the dependent variable. We focus on average (mean) rather than median earnings here because linear regression models only provide reliable estimates of median earnings if median and mean earnings are identical (which isn't the case, as the data in Chapter 2 shows).The sample for this part of our study is employees aged 25-64[26] between 2020 and 2020[27].

4.1 Method and descriptive statistics

There are numerous statistical methods one may adopt when examining the GPG. The simplest approach is the 'dummy variable' regression approach. Here the adjusted GPG – that is, the GPG that persists once account is taken of measured differences in the characteristics of men and women workers - is reflected in the coefficient on the variable that identifies men and women. The indicator variable is commonly coded as equal to 1 for women and 0 for men. If the dependent variable is in natural logarithms then the coefficient on the indicator variable shows the per cent adjusted difference or gap in the annual earnings of women compared to men when evaluated as: [exp(coefficient)-1]*100[28].

An alternative approach is to use the Blinder-Oaxaca decomposition. This approach involves the estimation of two separate regression equations – one for women's and one for men's annual earnings. The results from these regressions are used to measure the part of the pay gap that is due to gender differences in characteristics and the part due to men and women being "rewarded" differently for the same characteristics. These two different sources of gender differences in pay are termed, respectively, the "explained" and "unexplained" parts of the pay gap.

While some studies attribute all of the unexplained component to discrimination we adopt a more cautionary approach and recognise that some of it may also arise from gender differences in characteristics that we have not controlled for in the regression.

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26 We restrict the analysis to persons aged 25-64 to exclude a number of young people who are still studying, a factor which is likely to distort the estimates of the relationship between various worker and job characteristics and pay.

27 We pool the data over these years as a means of overcoming the small sample and cell sizes that we would otherwise face when restricting the analysis to one wave of data for a sample of Victorian employees. Our sample for the analysis of employment probability is 8,370 observations (4,487 (or 53.6%) of whom are women). For the wage regressions our sample is limited to those who are employees - and for whom we have observed wage and experience information. We also exclude those who work in Agriculture, Forestry, Fishing or Hunting. This renders a final sample of 5,069 observations (54% women).

28 Halvorsen, R. and Palmquist, R. (1980) 'The interpretation of Dummy Variables in Semilogarithmic Equations', American Economic Review, 70, 474-475.

In the results below we use both methods (the dummy variable method and the decomposition method) to study the gap. However, we only report the detailed results from the dummy variable method in this chapter. The results from the decomposition are presented in Appendix A (Table A.2).

With any approach to assessing the drivers of the GPG, a necessary first step is to control for selection effects. As noted earlier, measures of the GPG may be distorted by any tendency for workers with, for example low qualifications, to drop out of paid work. To overcome this potential bias or limitation a common approach is to adopt a two-stage estimation approach. The first is the estimation of a model that determines the probability or the likelihood of a person with certain characteristics (e.g. age, university qualifications) being in employment. The second stage involves estimating a model of the GPG where information from the first stage (concerning the probability of being in employment) is captured.[29] The regression results associated with the first stage (employee participation regression) are reported in Table A.1 in Appendix A.

We adopt a step-wise approach when estimating the regressions. That is, we add in variables that measure a range of worker and job characteristics. This enables us to examine how the gap in annual earnings varies when such factors are added.

Table 25 shows the definition and construction of variables which are used in the wage regression. Descriptive statistics are also presented separately for men and women.

A few patterns in the descriptive data in Table 25 are worth noting. The first is that the gender dollar gap in previous financial year gross earnings from wages and salaries is $28,085. Expressed as a proportion of men's pay this translates to a difference of 27.1%. Similar shares (94%) of men and women reported working the full year. However, mirroring the patterns in the EEH data reported earlier, women are more likely to be in part-time jobs. At the time of the survey women, on average, worked 34.5 hours per week (all jobs) and men 41 hours per week (all jobs).

HILDA is a longitudinal household survey and, as such, has information on the respondent's employment (and other characteristics) in previous waves. Taking advantage of this historical data we generate a variable which we label 'EverPT'. This captures whether the respondent was ever observed as having worked part-time in their main job. In deriving this variable, we restricted it those aged 25-64 to avoid also picking up periods when the respondent may have been younger and engaged in part-time work (e.g., perhaps when a student). We include this variable in the regression to capture the longer-term effects of part-time work on earnings perhaps arising from factors such as reduced promotion opportunities, reduced training opportunities etc. The descriptive statistics show 75.6% of women have worked part-time in their main job since turning 25. We will return to this variable later as it emerges as a particularly strong factor in accounting for the gender gap in wages.

One challenge we face when estimating pay equations using 2020 -2022 data is how to deal with the effect that Covid-19 had on employment and earnings over this period. Our approach was to include a binary variable in the regressions that is set equal to 1 if the respondent reported receiving any government Covid-19 payment in the previous financial year. As shown in the table above, 1.9% of women and men in our sample reported receiving such a payment.

29 We use of population weights to ensure the sample data is representative of the population. Because we pool data to increase the sample size, we apply statistical techniques to accommodate the fact that the same individual may be observed across multiple waves.

Table 25: Descriptive statistics and variables used in the earnings regression

Label	Description	Women	Men
FinW&S	Previous financial year gross earnings from wages and salary (all jobs) (in 2022 prices)	$75,360.65 (41,934.19)	$103,446.10 (53,088.09)
FinW&S(SS)	Previous financial year gross earnings from wages and salary (all jobs) including salary sacrificed values (in 2022 prices)	$75,802.84 (42,291.36)	$103,792.4 (53,339.69)
lnFinW&S	natural logarithm of "FinW&S"	11.1 (0.6)	11.4 (0.6)
AllFinYr	=1 if worked the full-year (of the previous financial year)	93.6%	93.7%
Hours	Usual weekly hours (all jobs) [at time of survey]	34.5 (10.9)	41.0 (9.4)
Ln(Hours)	log of Hours	3.5 (0.4)	3.7 (0.3)
Experience	Years of labour market experience	20.2 (10.6)	22.0 (11.8)
NumKids	Number of dependent children	0.580 (0.882)	0.616 (0.909)
KidLT5	Has a child in the house that is aged < 5 years	15.8%	18.0%
Foreign	=1 if born outside of Australia	23.2%	24.6%
TimeAus	=1 if foreign and arrived in Australia in last 10 years	2.8%	3.4%
Dipcert	=1 if highest qualification is a diploma or certificate	27.7%	38.0%
Degree	=1 if highest qualification is an undergraduate degree (including honours)	27.9%	22.3%
PG	=1 if highest qualification is a postgraduate degree	25.5%	17.6%
Manger	=1 if currently employed as a manager	12.1%	20.2%
Professional	=1 if current employed as a professional	38.8%	25.6%
Trade	=1 if currently employed as a tradesperson	4.2%	17.6%
Service	=1 if currently employed as a service worker	13.9%	7.0%
Clerical	=1 if currently employed as a clerical worker	20.4%	9.2%
Sales	=1 if currently employed as a salesperson	5.7%	5.4%
Operator	=1 if currently employed as an operator	2.0%	9.6%

Label	Description	Women	Men
Labourer	=1 if currently employed as a labourer	2.9%	5.5%
Permanent	=1 if employed on a permanent contract	79.6%	84.0%
Casual	=1 if employed on a casual contract	10.7%	8.8%
Fixed	=1 if employed on a fixed-term contract	9.7%	7.1%
UnionEA	=1 if a member of a union or employee association	26.9%	24.8%
IA	=1 if paid according to an Individual Agreement	36.7%	51.1%
Award	=1 if paid according to an Award	18.1%	10.3%
CA	=1 if paid according to a Collective Agreement	37.9%	31.6%
PayOther	=1 if pay is set by some other instrument	5.8%	6.2%
Flag_payset	=1 if have information on how pay is set	98.5%	99.2%
EverPT	=1 if ever worked part-time (fewer than 35 hours) in main job (since the age of 25)	75.6%	32.0%
Covid	=1 if reported receiving any government Covid-19 payment in the previous financial year	1.9%	1.9%
Melbourne	=1 if resides in Melbourne	77.4%	80.0%
w2020	wave 20	31.8%	30.9%
w2021	wave 21	32.8%	34.0%
w2022	wave 22	35.5%	35.1%
Obs		**2,747**	**2,322**

Notes

1. Sample: Victorian, employees, aged 25-64
2. Estimates weighted to reflect population totals
3. Percentages shown for binary variables and standard errors only reported on continuous variables.
4. Source: HILDA, waves 20, 21 and 22

The other data in Table 25 - on other worker and job characteristics - generally closely mirror the measures we generate from EEH and Census data. The HILDA data confirms that Victoria women are, on average, more qualified than men. In this data, for example, among women, 27.9% have a bachelor degree and a further 25.5% hold a postgraduate qualification. The corresponding shares among men are 22.3% and 17.6%. The data also confirms the pattern of occupational segregation – albeit only with information organized at the ANZSCO 1-digit level. While men are more likely to be employed as a manager (20.2% versus 12.1%) women, on the other hand, are more likely to be employed in a professional role (e.g., nursing, teaching etc.) (38.8% (women) versus 25.6% (men)). Women are also much less likely than men to hold a trade job. The HILDA data mirrors the EEH data by showing a gender difference in contract of employment with men more likely to be permanent (84.0% versus 79.6%) and less likely to be casual (10.7% of women are casual versus 8.8% of men). Gender differences are also apparent in the HILDA data on pay setting method. As is shown also with the EEH data, men, for example, are predominantly (51.1%) covered by an individual agreement (IA) and a relatively small fraction have their pay proscribed by an Award. In contrast, more women (nearly one fifth (18.1%) in the HILDA data) have their pay set by an Award[30].

4.2 Results: Drivers of the gender gap in annual earnings

The regression results associated with the dummy variable approach are reported in Table 26. The regressions incorporate a term to adjust for potential selection bias (see Technical Appendix A for more details).

Our presentation of these results focuses on the coefficient on the woman dummy variable (coded as 1 if the respondent is a woman and zero if a man)[31] as this measures the gap in annual earnings that remains once differences in worker and job characteristics are controlled for. The main results may be summarised as follows:

- Women, on average, have gross financial year earnings which are 17.3% less than men in a model that controls for differences in the worker characteristics of education, experience and working time (usual hours worked and whether work the full year) and the presence of children (see the coefficient on the variable “woman” in model 3).
- The gender gap in annual earnings reduces to 11.8% when account is taken of the influence on pay of occupation, sector, form of employment (e.g., casual), method of pay setting (e.g., Award) and ever having worked part-time (model 6). In this model we see that:
    - Casual workers earn on average 9.2% less each year than their counterparts who are employed permanently (all else held constant).
    - Persons who have their wages set via an Award rather than another instrument have annual earnings, on average, 11.7% less than their counterparts who are paid via an Individual Agreement (all else held constant).
    - Part-time workers earn on average 16.1% less each year than their counterparts who work full-time.
    - People living in Melbourne earn on average 7.3% more each year than their counterparts living outside of the capital city.

30 In our regressions where we control for pay we also include a flag variable (“Flag_payset”). This variable is set equal to 1 if the method of pay setting is observed and not missing. We follow this approach as a means of minimising the loss of observations due to missing data. If this coefficient on this variable is significant it suggests that those with missing pay setting information are somehow different than the rest of the sample. The descriptive statistics show that pay setting information is missing for 1.5% of the sample of women and 0.8% of the male sample.

31 The HILDA does have information on sexual orientation, however, the information is partial and not collected annually.

In model 1 we see from the coefficient on the "woman" variable that the adjusted gender gap in annual earnings is 34.9%. In this model we control for children, experience and migrant status but where we do not control for hours worked.

In model 2 we add in controls for whether the respondent worked the full year ("AllFinYr") and hours worked ("lnHours"). The results confirm the strong influence of hours worked on annual earnings. For every 1% increase in usual hours worked the dependent variable (the log of annual earnings) increases by 0.78% (in model 2). Controlling for these time variables soaks up some of the variation in annual earnings between men and women and the adjusted gender gap in model 2 reduces to 13.8%.

In model (3) we add in controls for education. Because women, on average, are more educated than men, when we control for education (via three dummy variables) we see that the adjusted gap in annual earnings increases to 17.3%.

When we include controls for occupation (dummy variables at the ANZSCO 1-digit level with labourers the reference group) in model 4, the adjusted gap in annual pay falls but not by a statistically significant amount – suggesting the occupational segregation (measured at this aggregated level) is not a key source of the gender gap in annual earnings.

In model 5 we add in controls for other job characteristics known to correlate with pay (e.g., sector, form of employment (e.g., permanent, casual etc.) and method of pay setting). The inclusion of these variables again, as a group, has little effect on the adjusted gap in annual earnings.

Model 6 controls for having ever worked part-time employment (main job) since turning 25 ("EverPT"). Studies elsewhere show that part-time work pays less than full-time work, ceteris paribus (holding all else constant). There are several forces that may give rise to such an effect. For example, employers may be able to hold down the wages of part-time jobs if many women seek out jobs with child-friendly hours. Part-time work may also pay less than full-time work if part-time work is concentrated in occupations that historically have been undervalued.[32] Consistent with this literature the "EverPT" variable soaks up some additional variation in annual earnings between men and women and the adjusted gender gap falls to 11.8%.

4.3 Results: Decomposing the gender gap in earnings

In this section we discuss the results derived from the estimation of separate regressions for men and women using the models employed in Table 26. The detailed results are presented in Table A.1 of Technical Appendix A.

The value of the decomposition is that it helps identify the part of the earnings gap that may be linked to gender gaps in worker and job characteristics. In doing so, the approach helps to identify gender differences in pay that might be associated with gender biased subjective evaluation of such characteristics through discrimination or undervaluation. They also help identify possible targets for policy interventions to narrow the pay gap.

A summary of the decomposition results is presented in Table 27. These estimates are based on model 6 (or column (6) from Table A.2 in the appendix; i.e., the full or extended model).

The estimates show that in 2020-22 (and in 2022 prices) the mean financial year gross earnings from wages and salaries for Victorian men was $103,446.1 and for Victorian women it was $75,360.65. (The sample is employees aged 25-64 years). The gender gap is equal to $28,086 or 27.2%

32 Preston, A. and Yu, S. (2015), "Is There a Part-time/Full-time Pay Differential in Australia?", Journal of Industrial Relations, 57:1 (2015): 24-47.

Table 26: Drivers of Annual Earnings, Victoria, 2020-22

Model	(1) Basic	(2) Basic,Time	(3) Basic,Time, Education	(4) Basic,Time, Education, Occupation	(5) Basic,Time, Education, Occupation, Job & Award	(6) Basic,Time, Education, Occupation, Job,Award & ever part-time
Female	-0.299***	-0.148***	-0.190***	-0.187***	-0.182***	-0.125***
	(0.029)	(0.023)	(0.024)	(0.022)	(0.022)	(0.023)
Experience	0.039***	0.030***	0.034***	0.030***	0.027***	0.031***
	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Experience2	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
NumKids	0.052***	0.066***	0.045***	0.033**	0.032**	0.034***
	(0.019)	(0.015)	(0.014)	(0.013)	(0.012)	(0.012)
KidLT5	0.057*	0.049*	0.044*	0.019	0.007	0.009
	(0.033)	(0.026)	(0.025)	(0.024)	(0.024)	(0.024)
Foreign	0.086*	0.066**	0.035	0.064**	0.070**	0.076***
	(0.044)	(0.033)	(0.033)	(0.029)	(0.028)	(0.028)
TimeAus	-0.214*	-0.123*	-0.150**	-0.141***	-0.110**	-0.107**
	(0.112)	(0.073)	(0.075)	(0.053)	(0.049)	(0.046)
AllFinYr		0.448***	0.440***	0.402***	0.362***	0.355***
		(0.046)	(0.045)	(0.043)	(0.043)	(0.042)
Ln(Hours)		0.780***	0.785***	0.699***	0.648***	0.577***
		(0.038)	(0.038)	(0.036)	(0.037)	(0.037)
Dipcert			0.013	0.009	0.001	0.001
			(0.031)	(0.029)	(0.028)	(0.028)
Degree			0.229***	0.114***	0.105***	0.117***
			(0.038)	(0.035)	(0.033)	(0.035)

Table 26 continued

Model	(1) Basic	(2) Basic,Time	(3) Basic,Time, Education	(4) Basic,Time, Education, Occupation	(5) Basic,Time, Education, Occupation, Job & Award	(6) Basic,Time, Education, Occupation, Job,Award & ever part-time
PG			0.279***	0.139***	0.127***	0.145***
			(0.041)	(0.039)	(0.037)	(0.039)
Manager				0.484***	0.461***	0.442***
				(0.053)	(0.052)	(0.051)
Professional				0.360***	0.319***	0.314***
				(0.053)	(0.052)	(0.051)
Trade				0.213***	0.192***	0.192***
				(0.055)	(0.055)	(0.053)
Service				0.093*	0.098*	0.106*
				(0.056)	(0.055)	(0.054)
Clerical				0.133**	0.108**	0.104**
				(0.052)	(0.052)	(0.050)
Sales				0.005	0.019	0.023
				(0.066)	(0.064)	(0.061)
Operator				0.102*	0.111**	0.115**
				(0.057)	(0.056)	(0.055)
Public					0.000	0.006
					(0.021)	(0.021)
Casual					-0.123***	-0.096***
					(0.036)	(0.036)
Fixed					-0.037	-0.035
					(0.027)	(0.027)

Table 26 continued

Model	(1) Basic	(2) Basic,Time	(3) Basic,Time, Education	(4) Basic,Time, Education, Occupation	(5) Basic,Time, Education, Occupation, Job & Award	(6) Basic,Time, Education, Occupation, Job,Award & ever part-time
UnionEA					0.070***	0.072***
					(0.021)	(0.020)
Award					-0.132***	-0.124***
					(0.027)	(0.026)
CA					-0.008	-0.007
					(0.021)	(0.021)
PayOther					0.063**	0.054*
					(0.031)	(0.031)
Flag_payset					0.040	0.041
					(0.117)	(0.111)
EverPT						-0.176***
						(0.023)
Melbourne	0.172***	0.121***	0.089***	0.081***	0.079***	0.070***
	(0.029)	(0.023)	(0.022)	(0.021)	(0.020)	(0.020)
Covid	-0.308***	-0.253***	-0.215***	-0.222***	-0.184***	-0.180***
	(0.068)	(0.045)	(0.047)	(0.052)	(0.052)	(0.050)
w2021	-0.032*	-0.037***	-0.028**	-0.016	-0.017	-0.019
	(0.016)	(0.014)	(0.014)	(0.013)	(0.013)	(0.013)
w2022	-0.061***	-0.073***	-0.058***	-0.051***	-0.050***	-0.050***
	(0.020)	(0.016)	(0.015)	(0.015)	(0.014)	(0.014)
lambda	-0.903***	-0.580***	-0.234***	-0.156**	-0.146**	-0.112*
	(0.145)	(0.098)	(0.082)	(0.075)	(0.070)	(0.065)

Table 26 continued

Model	(1) Basic	(2) Basic,Time	(3) Basic,Time, Education	(4) Basic,Time, Education, Occupation	(5) Basic,Time, Education, Occupation, Job & Award	(6) Basic,Time, Education, Occupation, Job,Award & ever part-time
Constant	11.096***	7.835***	7.582***	7.751***	8.000***	8.578***
	(0.078)	(0.154)	(0.151)	(0.146)	(0.196)	(0.226)
R-squared(%)	23.1%	47.3%	50.1%	55.0%	56.2%	57.6%
Observations	4,981	4,981	4,981	4,981	4,981	4,981

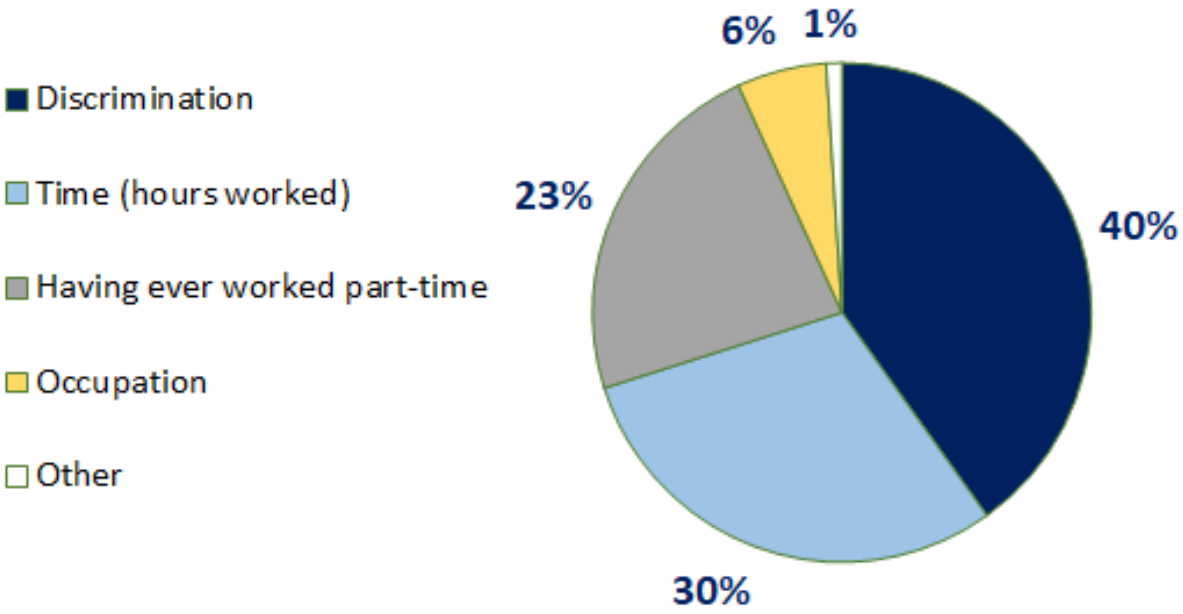
Notes:
1. Sample: employees aged 25-64, Victoria. Excludes employees in Agriculture, Forestry, Fishing and Hunting
2. Dependent variable: Previous financial year gross earnings from wages and salaries (all jobs) (in 2022 prices and trimmed to exclude bottom and top 1%
3. Because the dependent variable is in natural logarithms the coefficient on each variable shows the per cent difference in pay when evaluated as: [exp(coefficient)-1]*100.
4. Reference groups: Male, Australian born, no post-school qualifications, Labourers and related workers, private sector employees, permanent employees, paid via an individual agreement, resides outside of Melbourne.
5. Estimates weighted to reflect population values
6. Robust standard errors clustered on the individual and reported in parentheses
7. Significance given by: *** p<0.01, ** p<0.05, * p<0.1
8. Source: HILDA, waves 20, 21 and 22

A decomposition analysis of the $28,086 gap (Table 27) shows that the main drivers of the gender gap in financial year earnings were:

- Discrimination (differences in the way the labour market treats similar characteristics of men and women) – equal to 40% (or $11,234pa).[33]
- Less time spent in work (e.g., fewer hours and not working the full-financial year) (30% or $8,046pa).
- Having ever worked part-time (capturing the occupational downgrading and ongoing penalty effects of part-time work) (23% or $6,464pa).
- Occupation of employment (1-digit) (6% or $1,639pa).

This components of the gender gap in annual earnings are summarised in Figure 14.

Figure 14: Drivers of the gender pay gap, Victoria



33 The 40% gap is the "unexplained" share; i.e. the share of the gap not accounted for or explained by gender differences in characteristics. It is often the case that this component is treated as a measure of labour market discrimination (be it conscious or unconscious bias). A portion of this unexplained component will reflect unmeasured factors as the regression does not control for everything.

Table 27: Summary of Factors Contributing to the Gender Gap in Annual Earnings, Victoria, 2020-22

Mean previous financial year gross earnings from wages and salary (all jobs) (in 2022 prices) - Men	$103,446.1	
Mean previous financial year gross earnings from wages and salary (all jobs) (in 2022 prices) – Women	$75,360.65	
Difference: Raw Gender Gap ($)	$28,086	
Details of the 'explained' component. Gender difference in factors that help 'explain' the gender wage gap:	**Contribution to the gender wage gap**	
Experience	2.6%	$742
Time (hours and full-year employment)	29.9%	$8,406
Education	-5.9%	-$1,651
Occupation	5.8%	$1,639
Award	2.8%	$780
Ever having worked part-time (since age 25)	23.0%	$6,464
Job characteristics and other factors NEI	1.2%	$774
Total	61.1%	$17,153

Notes:
1. Dollar values in 2022 prices.
2. Calculations based on data in Appendix A, Table A.2, column (6).

4.4 Chapter conclusion

The data presented in this chapter points to the likely relevance of discrimination to the GPG in Victoria. The regression analysis found that a large share of the gap between the annual earnings of Victorian men and women cannot be explained by measured differences in their characteristics (including occupation), which implies that women with the same characteristics as men receive a lower rate of pay.

The large differences in pay between majority-men and majority-women occupations point, additionally, to undervaluation.

Evidence on the differences in Award rates of pay across sectors for reasons other than differences in skill or job content point to a similar conclusion. However, the data in this chapter suggest that this process is likely to play out in a variety of ways given the complex interplay between occupation, method of setting pay, employment type, etc.

It might be, for example, that the value employers attach to the work performed by those in majority-women occupations is not commensurate with the value of such work, nor the risk or responsibility workers within such occupations hold.

It might also be possible that differences in minimum wage rates across occupations reflect gendered (and historical) valuation of different occupational roles in ways that are consequential for the GPG (as Broadway and Wilkins (2017) identified).

Policy action on the GPG will, thus, need to be informed by additional data collection that “unpacks” the mechanisms through which undervaluation and discrimination might be playing out.

Chapter 5

The gender gap in lifetime earnings and gender gap in superannuation balances

In this chapter our interest lies in understanding gender differences lifetime earnings and superannuation balances of Victorians; of how the GPG and work and employment patterns contribute to the gender gap in lifetime earnings and superannuation (Research Question 2). A lifetime and life course perspective is important as there are significant differences in men's and women's forms of work and employment at various life stages.

In general, the literature and evidence from developed economies shows that when compared to women, men, on average, have significantly higher rates of employment participation at all stages of the life course and, when in employment, men are more likely than women to work full-time.[34]

Such gender differences – along with the gender pay gap – significantly impact on gender differences in lifetime earnings and correlate with gender inequality in access to resources. They also reinforce gender norms and the gender division of labour.

Gender differences in lifetime earnings, however, are a particular cause for concern as they have the potential to significantly impact on gender differences in living standards in old age – especially in retirement systems where saving for retirement is linked to occupational earnings (as in the Australian case).

There are comparatively few studies of the gender gap in lifetime earnings. This relates, in large part, to data availability: relatively few surveys follow people over a sufficiently long enough period to enable and analysis of their pay over their life course.

Austen and Mavisakalyan (2018), however, used data from the first 15 waves of the HILDA Survey (covering the period 2001 to 2015) for Australia to measure the gross annual wage and salary earnings of individuals over 15 years. Their study found that women, on average, earned 48% less over the 15-year period than did men.[35]

34 For national and international evidence see: Joshi, H., Bryson, A., Wilkinson, D. and Ward, K. (2021), The gender gap in wages over the life course: Evidence from a British cohort born in 1958, Gender, Work and Organisation, 28: 397-415; Weisshaar, K., and Cabello-Hutt, T. (2020), Labour force participation over the life course. Demography, 57(1): 33-60; and Jefferson, T. and Preston, A. (2005), Australia's "other" gender wage gap: baby boomers and compulsory superannuation accounts, Feminist Economics, 11(2), 79-101.

35 Austen, S. and Mavisakalyan, A. (2018), Gender gaps in long-term earnings and retirement wealth: the effects of education and parenthood, Journal of Industrial Relations, 60(4), 492-516.

5.1 Gender gaps in lifetime earnings

There is a dearth of data measuring lifetime earnings and, accordingly, estimates are commonly based on some predicted measure.

In this report we use the HILDA data to predict average (mean) lifetime wage and salary earnings of Victorian men and women. We focus on average (mean) rather than median earnings because the predictions are based on linear regression models and, for the reasons outlined in the previous chapter, these are necessarily based on estimates at the mean.

To predict lifetime earnings we use cross-sectional data from HILDA for Victoria. We pool the data over three waves (2020, 2021 and 2022) to increase the sample size and we restrict the sample to Victorian employees aged 25-64 to reduce some of the variability in the estimates that may come from having younger people in the sample.[36]

We begin by estimating an earnings equation with previous financial year gross earnings from wages and salaries (in 2022 prices) as the dependent variable. The coefficient estimates from this stage are then used to predict the gross annual average earnings of Victorian men and women. Appendix B explains in more detail the method used.[37]

Our predicted estimates of lifetime earnings, suggests that at age 64:

- men will have earned a total of $4.2m over their lifetime while women will have earned $3.0m.
- The difference of $1.2m equates to a gender gap in average lifetime labour earnings of 28%.

To generate these estimates we have had to assume that men and women work continuously over the life course.

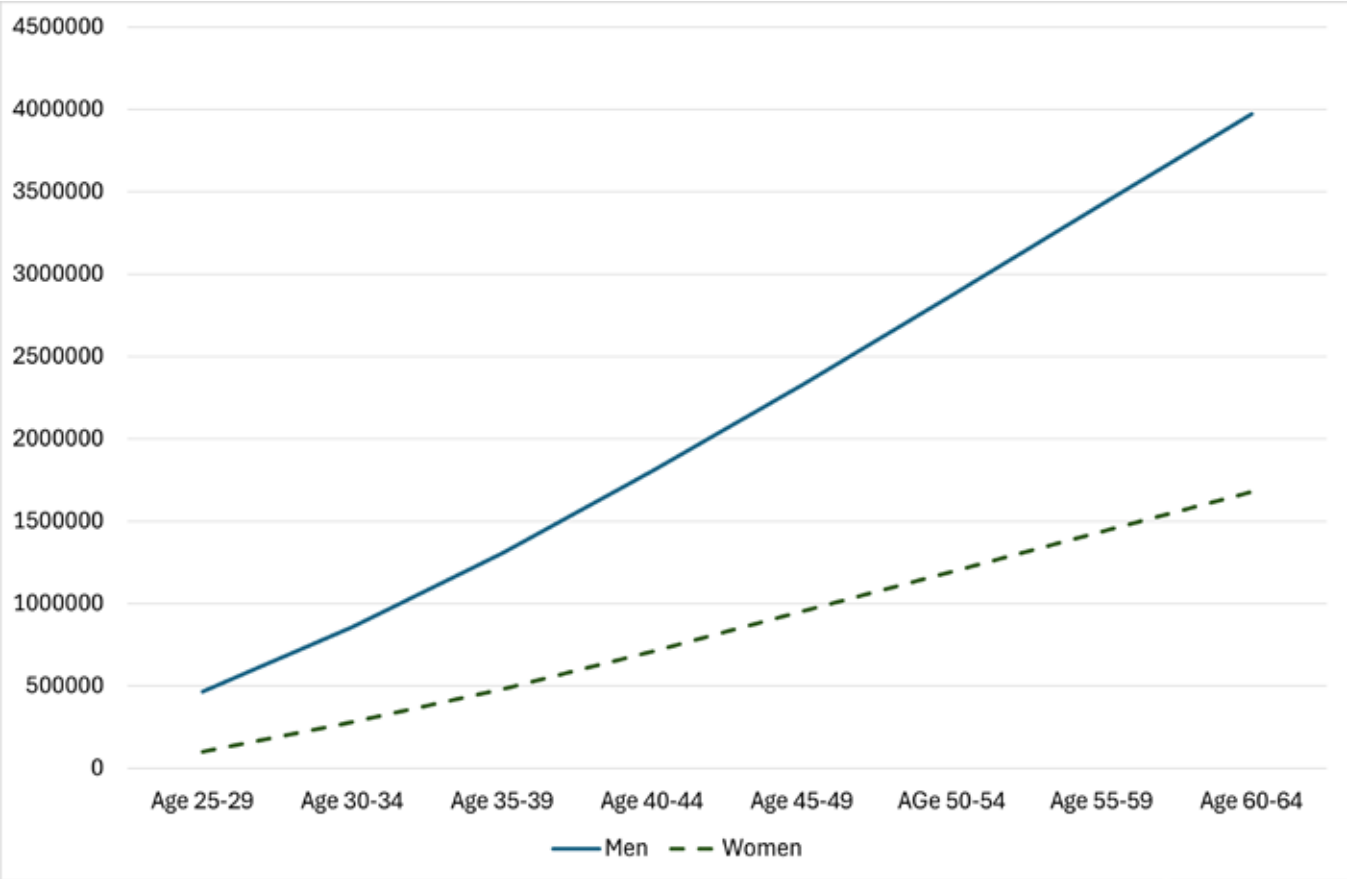
The reality is that many women have periods out of employment. A more realistic comparison of the gender gap in lifetime earnings may, therefore, be to compare the lifetime earnings of women who work part-time with men (who predominantly work full-time). When we make this comparison we see that, at age 64 (see Figure 14):

- Victorian men are predicted to have earned $4.2m over their lifetime (as before).
- Victorian women are predicted to have earned $1.96m over their lifetime.
- These estimates produce a Victorian gender gap of $2.2m in lifetime earnings (or a gap of 53% - which is more in keeping with the gap reported in Austen and Mavisakalyan (2018)).

36 Some young people have superannuation balances that are not proportional to their measured earnings. This could reflect the influence of contributions to superannuation accounts made by some parents.

37 The approach used to derive a measure of lifetime earnings (mean cumulative earnings) draws on an approach used by Preston and Wright (2023) in their study of gender gaps in superannuation. (Preston, A. and Wright, R.E. (2023), Gender, financial literacy and pension savings. Economic Record, 99(324), 58-83.

Figure 15: Predicted mean cumulative earnings of Victorian men and women



Source: author calculations based on coefficients at Appendix B and estimates reported in Table 28 (column (1) for men and column (7) for women.

Table 28 shows predicted lifetime earnings at various ages by occupation. Our working assumption is that after five years of experience men and women are aged 25, after 10 years of experience they are aged 30 etc.[38] At age 64 (which is after 44 years in the labour market) we estimate that:

- The lifetime earnings of men who are Managers would be $5.1m and the lifetime earnings of women who are Managers would be $3.7m, with the difference equal to a gender gap of 27%
- Among professionals we estimate a gender gap in lifetime earnings of 23%.

38 HILDA estimates for the Victorian sample show at that age 25 the average employee has 5 years of work experience.

Table 28: Predicted cumulative earnings and lifetime earnings of Victorian men and women

Experience (Years)	Assumed age (Years)	(1) All	(2) Managers	(3) Professionals	(4) Tradesperson	(5) Salesperson	(6) Tertiary Qualified	(7) Employed Part-Time
		Men ($ values)						
5	Age 25	319,655	391,657	337,457	300,170	243,168	343,290	188,452
10	Age 30	692,625	848,639	731,198	650,407	526,894	743,837	408,336
15	Age 35	1,116,905	1,368,487	1,179,107	1,048,825	849,652	1,199,488	658,470
20	Age 40	1,604,879	1,940,862	1,687,948	1,513,959	1,247,967	1,715,167	990,233
40	Age 60	3,753,916	4,573,967	3,956,667	3,532,001	2,882,783	4,023,100	2,257,194
44	Age 64	4,187,384	5,105,074	4,414,275	3,939,047	3,212,531	4,488,618	2,512,744
		Women ($ values)						
5	Age 25	263,665	326,317	296,094	208,131	195,672	281,290	168,379
10	Age 30	560,115	693,211	629,006	442,142	415,674	597,556	357,694
15	Age 35	886,073	1,096,624	995,055	699,446	657,575	945,304	565,854
20	Age 40	1,236,657	1,513,626	1,380,017	991,160	936,081	1,314,572	812,727
40	Age 60	2,740,272	3,374,535	3,068,568	2,178,080	2,051,948	2,918,698	1,772,948
44	Age 64	3,030,208	3,733,366	3,394,165	2,406,949	2,267,116	3,228,015	1,958,103
		Gender Gap (%)						
5	Age 25	18%	17%	12%	31%	20%	18%	11%
10	Age 30	19%	18%	14%	32%	21%	20%	12%
15	Age 35	21%	20%	16%	33%	23%	21%	14%
20	Age 40	23%	22%	18%	35%	25%	23%	18%
40	Age 60	27%	26%	22%	38%	29%	27%	21%
44	Age 64	28%	27%	23%	39%	29%	28%	22%

Notes: The predicted earnings are generated from profiles applying incremental years of experience. The age labels are mapped to experience with the assumed starting point (at age 25) being 5 years of experience. A person entering the labour market at age 20 would, after 40 years of experience, be aged 60. The estimates are predictive of the 'average' person who is assumed to work continuously over their lifetime.

5.2 Gender gaps in superannuation balances

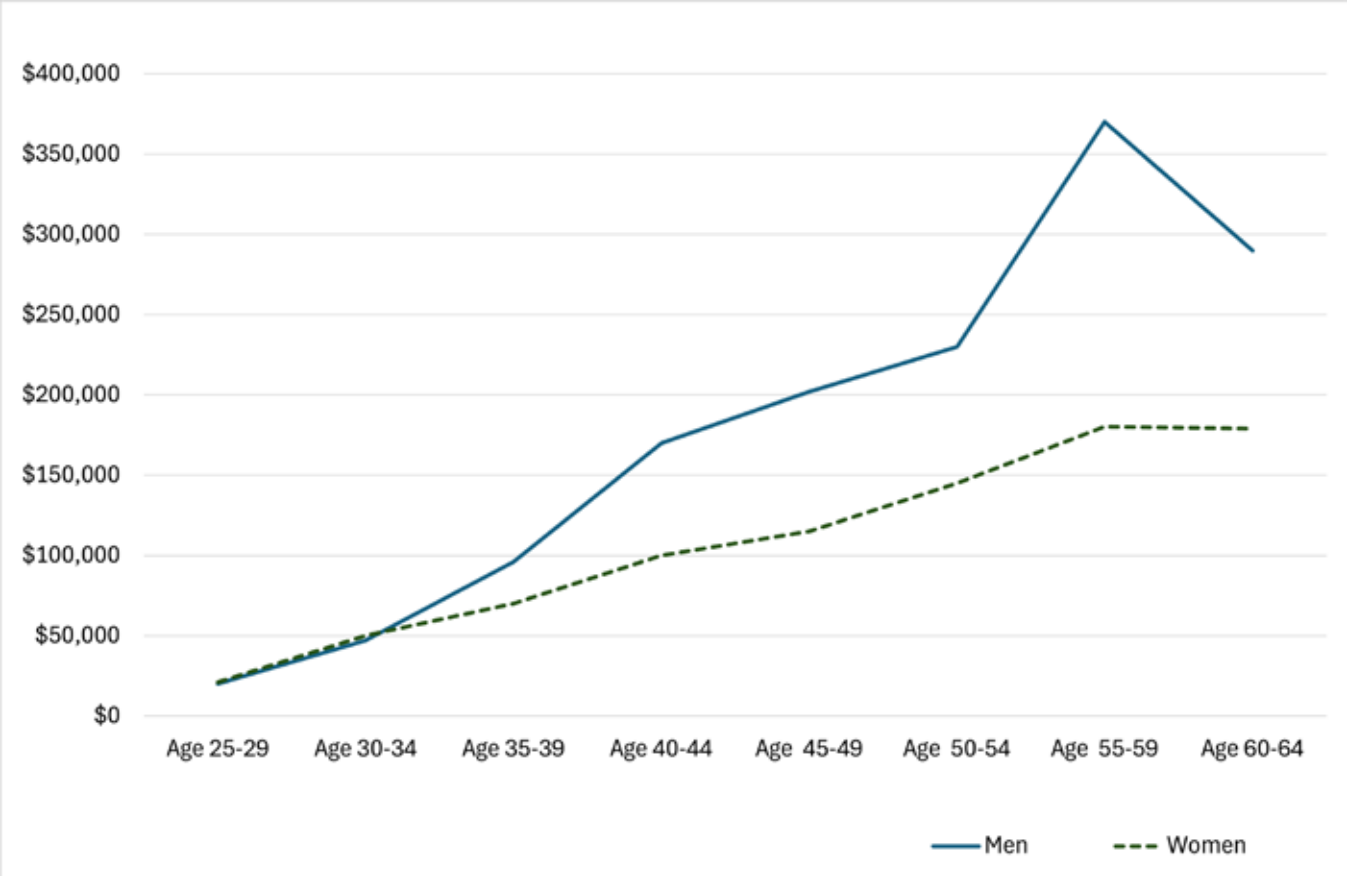
Table 29 shows the median and mean superannuation balances and the associated gender gaps (%). The data are drawn from the most recent HILDA survey which was conducted in 2022 and pertain to persons who have positive superannuation balances. The sample is restricted to non-retired persons aged 25-64. (Figure 16 plots the median superannuation balances of Victorians in 2022 by age).

Focusing on the median, the estimates in Table 29 show that among those aged 55-59 (the group at or closest to retirement):

- The gender gap in median superannuation balances is equal to $189,88 or a gap of 51%.
- Within this age group, the median balance among men is equal to $370,000 and the median balance among women is $180,112.

The gender gap in superannuation balances widens over the life course, consistent with women typically working less hours, but also because they tend to receive lower pay, have less financial year earnings and, accordingly, receive fewer employer contributions to their superannuation funds.

Figure 16: Median Superannuation balances of Non-Retirees with positive balances, by Age, Victoria, 2022



Notes: 1. Sample: not-retired, aged 25-64 and residing in Victoria; 2. Estimates weighted to reflect population totals; 3. Source: HILDA, wave 22 and Table 13 below.

Table 29: Median and average superannuation balances ($) of Victorian men and women who have not retired, 2022

	Age 25-29	Age 30-34	Age 35-39	Age 40-44	Age 45-49	Age 50-54	Age 55-59	Age 60-64	All (25-64)
Median					$				
Men	20,000	47,000	96,000	170,000	202,000	230,000	370,000	290,000	105,000
Women	21,000	50,000	70,000	100,000	115,000	145,000	180,112	179,000	70,000
Difference	-1,000	-3,000	26,000	70,000	87,000	85,000	189,888	111,000	35,000
Average (mean)					$				
Men	28,169	55,079	118,835	180,465	280,373	322,081	453,612	443,785	210,300
Women	24,397	51,850	73,239	123,036	172,922	244,593	270,511	327,212	142,404
Difference	3,771	3,228	45,596	57,429	107,451	77,488	183,102	116,573	67,895
% Gap									
Median	-5%	-6%	27%	41%	43%	37%	51%	38%	33%
Average	13%	6%	38%	32%	38%	24%	40%	26%	32%
N (Men)	163	177	171	138	128	126	119	100	1,122
N (Women)	194	213	195	160	139	148	127	97	1,273

Notes:
1. Sample: not-retired, aged 25-64 and residing in Victoria.
2. Sample restricted to those with positive (>$0) superannuation balances.
3. Estimates weighted to reflect population totals.
4. Source: HILDA, wave 22.

The current superannuation system clearly leaves many women with less retirement balances, and thus lower economic security and independence than men in retirement.

Groups of women who are likely to fare particularly poorly are those who work part-time, those who are low paid and those who have lengthy periods of time out of employment or reduced hours early in their career.

The level of employment attachment in the early years (be it participation or hours) matters as it affects earnings and, therefore, superannuation contributions by employers on behalf of employees. This in turn has a knock-on effect on superannuation balances in later years as workers miss out on cumulative growth in their contributions.

The recent (2023/24) federal budget announcement to pay superannuation on government funded Paid Parental Leave (PPL) (from 1 July 2024) is a welcome initiative and will contribute to a narrowing of the gender gap in superannuation balances.

5.3 Digging deeper into the drivers of gender gaps in superannuation

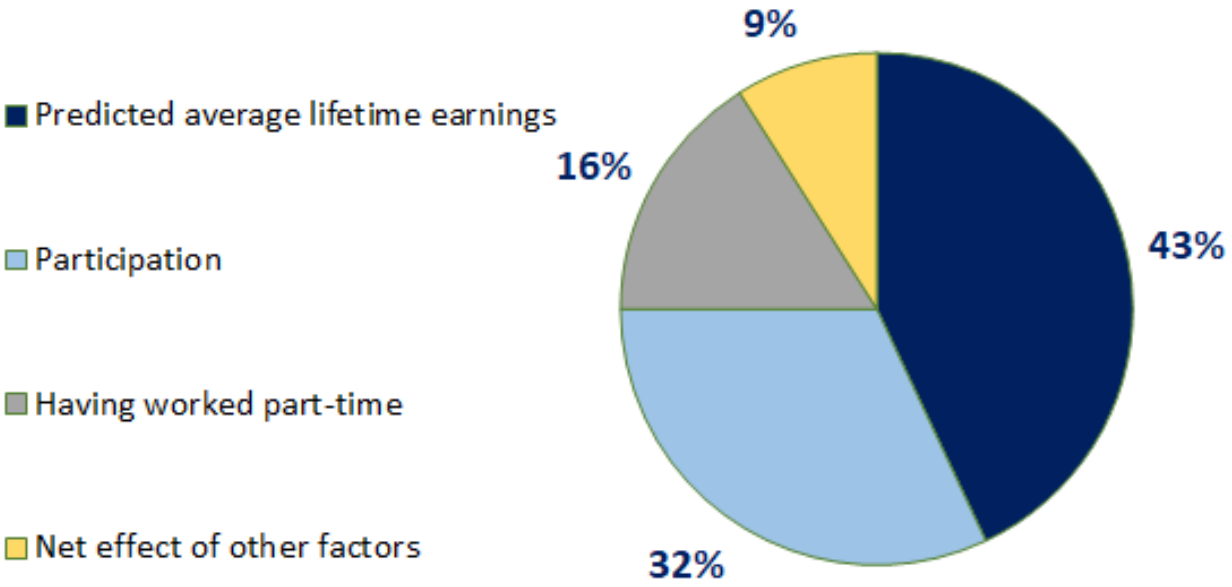
To derive a richer understanding of the source of the gender gap in superannuation balances of Victorian men and women we dig deeper using techniques which permit us to decompose the gender gap into two components. The first is a component that may be explained by gender differences in characteristics such as average earnings, time in the workforce, family background etc. The second is a component that arises because of gender differences in the 'returns' to, or rewards from particular characteristics (e.g. men receiving greater employer contributions to their superannuation than women).

The detailed analysis is contained within Technical Appendix C. The sample comprises Victorian employees aged 25-64 who are not retired and who have positive superannuation balances. The total sample of men and women for the regressions is N=2,106 observations. This is less than the number of observations used to generate the mean and median superannuation balances at Table 29 (where N=2,395). We have lost some observations on account of missing information on some of the control variables. The implication of this is that the average (mean) balances of the two groups are not identical. In the regression analysis the mean gender gap is equal to $61,209, whereas in Table 29 it was equal to $67,896.

Our estimates show that:

- More than half (57%) of the $67,896 gender gap in superannuation balances may be explained by gender differences in the variables controlled for in the regression. This leaves 43% of the gap unexplained.
- Gender differences in average lifetime earnings, on its own, explains 42.9% of the gap. In other words, gender differences in lifetime earnings is the main cause of gender differences in superannuation balances.
- One third (32.3%) of the gap may be explained by gender differences in years spent in paid work. This shows the 'cost' that women suffer as result of time out of the labour market.
- There are off-setting factors such as the fact that women benefit from being in professional occupations. Once we sum up the effect of all the 'explained' components the overall explained share is 57% (as previously noted).

Figure 17: Drivers of the gender gap in superannuation balances, Victoria



5.4 Chapter conclusion

Descriptive analysis of median financial year earnings by age (i.e., a life course analysis) presented in Chapter 2 shows that that among 45-49 year-olds the gender gap was at its highest, equal to 38% (see Figure 9 in Chapter 2).

These gender gaps in median financial year earnings over the life course also show up as significant gender differences in lifetime earnings.

We assume Victorian men will predominantly work full-time and Victorian women will predominantly work part-time. From this we predict that the average

- Victorian man will earn $4.2m over their lifetime (as before).
- Victorian woman will earn $1.96m over their lifetime.
- The Victorian gender gap in lifetime earnings will be around of $2.2m or 53%.

Such large gender differences in lifetime earnings largely reflect gender differences in time spent in paid work (both in terms of hours worked per week (part-time work) and time spent in employment).

Gender gaps in lifetime earnings matter for several reasons and are especially problematic within a retirement income system – such as Australia's – that is centred around occupational superannuation. Such systems favour those with high lifetime earnings (i.e., men more than women).

Our superannuation analysis shows that there are large gender gaps in median superannuation balances by age. Within the 55-59 year old age group (the group closes to retirement), the median balance among men is equal to $370,000 and the median balance among women is $180,112. This translates to a gap of $189,88 or 51%.

These are concerning differences, especially when one considers that the system of compulsory superannuation balances was first introduced in Australia in 1992 and, thus, many of those who are retiring now and into the future have been covered by the compulsory superannuation system for most of their working life[39]. In 2022 the eldest GenX (born 1965) would have been aged 57 (and thus part of the 55-59 year old group). The system of compulsory superannuation would have started when they were aged 27.

Women who are at particular risk in the current retirement income system that privileges occupational superannuation are those on low pay, those working part-time and those who have career breaks, particularly early in their working life.

The gaps are magnified by time spent in part-time employment, reflecting the fact that many part-time jobs have limited career opportunities and where prospects for wage growth are limited and often tied to decisions of the Fair Work Commission (annual wage reviews that deliver adjustments to the Award wage).

Our deeper analysis of the source of gender gaps in superannuation balances shows that, on its own, gender differences in average lifetime earnings explains around two-fifths of the mean gender gap in superannuation balances. A further one third comes from gender differences in years spent in paid employment. There are some offsetting factors (e.g., women benefit from their disproportionate distribution in professional occupations). Overall the regression analysis shows that 57% of the mean gender gap in superannuation balances (of Victorian employees aged 25-64 with positive superannuation balances) is due to gender differences in characteristics such as earnings, time in paid employment, occupation and family characteristics.

Measures that promote equality between working-age partners in paid and unpaid roles will help narrow the gender gap in superannuation as will the recent decision to pay superannuation on government funded Paid Parental Leave (PPL). Other policy considerations are outlined in the following chapter.

39 www.apra.gov.au/superannuation-australia-a-timeline

Chapter 6

Where can government policy play a role?

The findings from our analysis of Victorian data on the gender gaps in pay and superannuation suggest several directions for government policy. At the state level, action aimed at improving pay and superannuation equality is likely to feature a combination of state government policies and programs, including industrial relations policy, and advocacy to the Commonwealth government for supportive policy change. The state government might also use its role as an employer and as a procurer of goods and services to leverage greater equality in pay and superannuation.

The Gender Equality Act 2020 has created important new opportunities to leverage change in the GPG by requiring the Victorian public sector, local councils and universities to, inter alia, take positive action towards gender equality and regularly collect and report data on gender equality in workplaces by completing workplace gender audits.[40] The Social Procurement Framework, including the Building Equality in Procurement policy for the construction sector, also has the potential to support better outcomes for women. With amendment, this framework could mandate that all government purchasers apply the women's equality objective (OES).

Changes in employment conditions in the public sector and in organisations contracted by the State are likely to influence outcomes in private sector workplaces. However, other policy initiatives are needed to effect change in this sector, where, progress in reducing gender pay gaps has been slow despite the efforts of WGEA and other organisations. The Schwartz inquiry identifies problems with a lack of accountability and proposes in response extending the Gender Equality Act 2020 to non-defined entities on a voluntary basis and supporting "all organisations to address gender inequalities in workplaces and communities through the development of tailored research, guidance materials and education" (Schwartz recommendation 14).

In the following paragraphs we structure our discussion of these various policy approaches around the key themes of our findings. We also draw on the recommendations of recent inquiries into gender equity in Victoria, with the aim of minimising the duplication of policy advice.

40 In 2023, all Victorian public sector organisations with obligations under the Act had completed workplace gender audits and developed gender equality action plans (OES: 42)

6.1 Policy that targets the links between work hours and the GPG

Policy measures that can help reduce gender gaps in work hours include changing working arrangements in the public sector. A less direct approach is to encourage a greater participation by men in unpaid care by altering parental leave arrangements in the public sector so that more men take up such leave[41].

There are fewer opportunities to directly influence working time arrangements in other parts of the economy (where their consequences for the GPG are largest). Reflecting the lack of strong policy levers at the state level to directly affect what happens in private sector employment contracts, key avenues for the Victorian Government to effect change are through its advocacy to the Australian Government for stronger protections for parents and carers in the Fair Work Act 2009 and National Employment Standards. Further avenues for influencing outcomes in the private sector are measures that improve the ability of women to increase their involvement in full-time work by improving the availability and lowering the cost of childcare. The $14 billion Best Start, Best Life reforms, the Outside School Hours Care Establishment Grants Initiative are positive examples.

6.2 Policy that targets the links between gender segregation and the GPG

Policy measures aimed at tackling gender segregation often focus on the actions and attitudes of – and towards – women and girls. The Senior Secondary Pathways Reforms, outlined in Our Equal State (OES), for example, will develop and implement an approach to address gender bias in careers education and pathways options for girls and gender diverse students. Measures have also been proposed to embed a gender equality focus across the VET–TAFE system with a view to increasing women's enrolment and retention in non-traditional courses, and to "support, upskill and mentor women in the energy and manufacturing sectors" (OES: 19).

There is scope for additional policy initiatives that target men's and boy's job choices, so that the number of men in care roles increases. There is also scope for policy initiatives that target employers. The Schwartz Inquiry recommends, employment targets and measures to "create inclusive, respectful workplace cultures, including by preventing and eliminating sexual harassment in workplaces" in key majority-men industries (recommendations 19 and 20). Such measures will need to be complemented with initiatives that ensure job structures in majority-men sectors accommodate care responsibilities. Examples include a requirement for a five-day work week on government-funded construction projects.

41 Nearly 8 out of 10 parental leave takers were women, and their leave lasted an average of 8 times longer than men's (The Baseline report (Executive summary)).

6.3 Policy that targets the links between education and the GPG

Several policy measures to improve women's education and training have been recommended in recent inquiries, including the Apprenticeship Innovation Fund, which creates career pathways for woman apprentices in male-dominated trades. Calls have also been made for programs that help leverage the existing skills and experiences of migrant and refugee women (Schwartz Report: 25). Our results point to a broader need: to ensure the qualifications of all Victorian women are adequately utilised. This will require a strong focus on sectors where women's qualifications are higher than men's but their pay is much lower. The dashboard should be useful in helping identify the key sectors for policy to target.

6.4 Policy that targets undervaluation, discrimination, and the GPG

Changing the Government's reliance on short-term agreements to fund community service organisations has been identified as a way of improving outcomes for the care and community workforce (Schwartz Report: 117). The Our Equal State report proposed, additionally, to explore ways to support Victorian early childhood education and care services as the sector expands by investing in educators and teachers. If effective, such changes will help redress the effects of undervaluation.

The Ministerial Taskforce on Workplace Sexual Harassment made several recommendations that should help redress discrimination, including treating workplace gendered violence as an occupational health and safety issue. The Schwartz Inquiry's recommendation for the dismantling of harmful workplace cultures that limit women's participation in some of sectors, and improving the collection of data and reporting on formal complaints of sexual harassment is a further positive initiative.

However, tackling undervaluation and discrimination will also require policy action on pay systems. The Baseline report (page 51) recommends a wide-ranging approach to identifying possible gender bias in public sector workplaces, advocating for the assessment of "all the factors identified as legitimate causes of pay variation for potential bias, …including employee performance measurement, promotion, recruitment and appointment systems."

The Schwartz Inquiry proposes a Fair Jobs Code "to improve job security and conditions for the majority-women community services workforces". OES proposes both measures to improve flexibility, job security and conditions for school leaders and additional research to identify how "the fair economic value of care and community work can be reflected in improved pay and conditions" (OES: 49)

The State's contributions towards maintaining Australia's national industrial relations system and advocating to the Australian Government and Fair Work Commission will remain critical to the effort to reduce the GPG in Victoria. Broadly, the Victorian Government should continue to lobby for changes to the national industrial relations system so that the work of the Fair Work Commission and the Fair Work Ombudsman is informed by gender equity principles. Our report – and previous research – shows how the Award system generally helps to reduce the GPG, providing a safety net that stops women's pay falling behind men's. Thus, policies which buttress the Award system will be generally positive for the GPG. We also show that many more Victorian women than men rely on Awards to set their pay. Thus, policy action that helps improve Award rates will directly help lower the GPG. However, as we note earlier in this report, there are differences in Award rates of pay between majority-men and majority-women sectors that do not reflect differences in job content or skill. Thus, there is also an ongoing need for policy action to redress undervaluation in Award and other rates of pay.

6.5 Policy that targets the gap in superannuation

This report has identified large gaps between the lifetime earnings and superannuation balances of Victorian men and women. Such gaps are consequential for the opportunities for economic independence of many older Victorian women, a group that will become increasingly large in coming decades. Our findings suggest some avenues for policies that might help to rectify the obvious gender inequalities with the current system of superannuation.

The data in this report make it clear that the causes of the gender gap in superannuation lie outside the system itself and are instead located in unequal lifetime earnings consequent upon unequal paid and unpaid roles, especially those associated with parenthood. These will not be rectified by changes within the current superannuation system. Measures that promote equality between working-age partners in their paid and unpaid roles (reducing gender gaps in work hours and work participation) would work towards equalizing the gender distribution of superannuation balances, as would measures that reduce the GPG. Thus, the various policy options discussed in the previous paragraphs are also relevant to policy on superannuation.

Less reliance on superannuation for retirement funding and a greater role for the age pension would assist women, help to reduce the gender gap in superannuation, and reduce the need for women (and men) to navigate what are often complex and risky decisions about their superannuation. Preliminary work has identified how, if set at a reasonable level, a universal age pension could be funded by progressive taxes on retirement income (see Account Plan, 2020)[42]. The Victorian government should, at a minimum, advocate to the Commonwealth for a strong, well-funded age pension.

Whilst we hope that gender gaps in pay and lifetime earnings will narrow quickly, most likely such change will not occur soon enough to protect current generations of Victorian women from the risks of low superannuation. It is likely the case that superannuation will remain a key part of Australia's retirement income system in future years. Thus, there is also a need for policy work to address some of the gender inequities that superannuation creates.

Strong and persistent advocacy from the Victorian Government might help achieve changes in policy on superannuation to achieve a more gender equitable system. The State could, for example, advocate to the Commonwealth for a system such as care credits towards superannuation for periods spent caring for children or adult family members. However, how to implement such credits so that they close the gender gap in superannuation but do not further entrench unequal paid and unpaid care roles is not obvious and requires further research, including detailed policy simulations.

42 Account Plan (2020). 'Mercer slams means test, strongly urges universal age pension'. Accessed June 2024, at https://accountplan.com.au/mercer-slams-means-test-strongly-urges-universal-age-pension/

Policy measures that require or encourage superannuation transfers between spouses can be positive in reducing gender gaps in superannuation, as do measures that improve individuals' access to information on their partners' superannuation and other financial assets. Previous research (see Austen et al. 2024)[43] suggest that it is not uncommon for older women to have little to no knowledge of their partner's superannuation assets. Recent legislative change at the Commonwealth level improved individuals' access to information on their partner's superannuation assets in situations of relationship breakdown, in response to Victorian research showing that the process for obtaining a share of superannuation assets was complex to navigate for women (Commonwealth of Australia, 2021; Women's Legal Services Victoria, n.d.).[44] However, currently those within continuing relationships have no such rights and there is a lack of research on how changing such rights might affect processes and outcomes for women.

6.6 Initiatives targeting particular intersections

The data assembled in this report reinforces the need, identified in other inquiries, for measures to address age-based discrimination and ableism for women and gender diverse people in the workplace. The Yuma Yirramboi strategy, which has a vision to achieve economic parity for Aboriginal Victorians within our lifetime, will hopefully deliver better employment, pay and superannuation to Aboriginal women. However, such policy action will need to be complemented with action on the current lack of data on the different experiences and needs of Aboriginal women, culturally and linguistically diverse women, migrant and refugee women, LGBTQI+ women and women with disability.

6.7 Better data collections

This report has exploited the rich potential of the EEH data to provide insights into the GPG in Victoria. However, this data only takes us so far; it doesn't include measures of many relevant worker and job characteristics (including migrant status, disability and aboriginal identity) that are relevant to the GPG. The Census does include such measures, but it doesn't have adequate measures of pay. HILDA includes both but it doesn't have a large enough sample at the state level to allow detailed investigations of the GPG for Victoria.

Thus, large gaps remain in the set of gender-disaggregated and intersectional data, and policy action should be directed towards filling these. Ideally the EEH survey would collect data on additional characteristics relevant to gender gaps in employment and pay, so long as such data can be collected and reported on without compromising the privacy and safety of those involved. It would help too if the Census had better measures of pay, although this solution would still leave open the problems inherent in relying on individuals' reports of their pay, and in having the data collected only once every 5 years. The ABS Time Use Survey is an invaluable source of data on unpaid work. In recent decades it has not been collected on a regular basis. The recent decision to re-commence the Time Use Survey on a regular on-going basis from 2024 is welcomed but we still need a commitment to survey items that enable comparisons with both previous periods and other countries.

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43 Austen, S., Himmelweit, S., Sharp, R and Costa, M. 2024. "Negotiating Assets in a Financialised Retirement Income System: Evidence for Older Australian Mixed Sex Couple Households in Australia" in Bennett, F., Avram, S. and Austen, S. (eds) A Research Agenda for Financial Resources within the Household, Edward Elgar, Cheltenham.

44 Commonwealth of Australia . (2021). Improving the Visibility of Superannuation Assets in Family Law Proceedings. Accessed June 2024 at https://treasury.gov.au/consultation/c2021-177055; Women's Legal Services Victoria. (n.d.). Improving the Disclosure of Superannuation Fund Information in the Family Law System. Accessed June 2024 at https://www.womenslegal.org.au/~womensle/wp-content/uploads/2021/04/Small-Claims-Large-Battles-Briefing-Paper.pdf

Technical Appendix A

Drivers of the gender pay gap

In this appendix we present the findings from a detailed analysis of the gender pay gap using regression techniques. The sample consists of Victorian men and women who are employees and are aged 25-64. We pool three waves of data from 2020, 2021 and 2022.

As detailed in Chapter 4, two methods or approaches are used. The first is a dummy variable approach and the second uses the Oaxaca-Blinder decomposition that is described below.

A.1 The Blinder-Oaxaca decomposition technique

The statistical decomposition technique as outlined by Oaxaca (1973) and Blinder (1973) may be used to decompose the observed gender gap in wages or superannuation in two components: one that is 'explained' or due to gender differences in observed characteristics (i.e., characteristics controlled for in the regression) and one that is due to gender differences in the coefficients from the regression. In a wage regression gender differences in coefficients capture differences in the way the labour market has 'rewarded' (or penalised) particular characteristics such as education or occupation (whatever is controlled for in the regression).

The decomposition approach requires first fitting two regressions using Ordinary Least Squares (OLS), where the subscripts "M" and "W" denote men and women respectively:

$$ln(\text{Earnings}_M) = \boldsymbol{\beta}_M \boldsymbol{X}_M + \varepsilon_M \quad (1)$$

$$ln(\text{Earnings}_W) = \boldsymbol{\beta}_W \boldsymbol{X}_W + \varepsilon_W \quad (2)$$

"ln" denotes the natural logarithm; "Earnings" is a measure of annual earnings; "X" is a vector of characteristics; "ε" is an error term; and "β" is a vector of coefficients to be estimated.

Subtracting equation (2) from equation (1) and rearranging the terms gives:

$$\ln(GPG) = (X_m - X_w)\beta_m + X_w(\beta_m - \beta_w) \quad (3)$$

where "ln(GPG)" (which denotes 'Gender Pay Gap') is the (natural) logarithm of the difference in annual earnings of men and women.

The first term on the right hand side of equation (3), is the amount of the gap that may be attributed to gender differences in the values of " X "; i.e., gender differences in characteristics or factors controlled for in the regression.

The second component measures the unexplained component. This is the portion of the gap that is due to gender differences in the regression coefficients.

In studies of the gender pay gap this unexplained component is sometimes seen as a measure of the level of discrimination in the labour market given that it reflects differences in the way the labour market values and rewards the characteristics of men and women who are employed. While it may be the case that a large share of this component is due to discriminatory treatment it needs to also be remembered that a part of the gap may also reflect gender differences in unobservable characteristics that have not been captured in the regression (e.g., differences in particular types of ability) or, in the case of the gender gap in superannuation the unexplained gap may be picking up factors such as differences in financial literacy.

A.2 Employment probability results

In our analysis we control for selection bias through the use of a Heckman (1979)[45] two-stage selection approach which involves first estimating a model that determines the probability of being in employment. The results from this model are presented in Table A.1.

Of particular relevance to the GPG is the result on the schooling variable. This shows that one additional year of schooling increases the likelihood of a man being in employment and engaged as an employee by 2.7%. For women the corresponding effect is 3.6%. Without adjusting for this 'selection effect' the measured GPG would be lower than its "true" value – as the relatively low rate of participation of women with low qualifications in paid work, and how this pushes up the average wage of women in jobs would not be captured. Men who are either married or in a de-facto relationship are also statistically more likely to be engaged as an employee. The children variables are not significant for men but are for women, consistent with women, on average, having primary responsibility for the care of children and this affecting their labour market outcomes. For example, "NumKids" shows that each additional dependent child reduces the likelihood of women being in employment by 7.2%, with this relationship highly statistically significant.

45 Heckman, J.J. (1979) Sample selection bias as a specification error. Econometrica, 47(1): 153-161.

Table A.1: Employment Participation in Victoria, Regression Results, Marginal Effects

	(1) Men	(2) Women
Age 30-34	-0.056	-0.026
	(0.038)	(0.034)
Age 35-39	-0.090*	-0.043
	(0.054)	(0.046)
Age 40-44	-0.152**	-0.026
	(0.066)	(0.049)
Age 45-49	-0.153***	-0.096*
	(0.045)	(0.050)
Age 50-54	-0.179***	-0.126***
	(0.047)	(0.047)
Age 55-59	-0.249***	-0.164***
	(0.050)	(0.046)
Age 60-64	-0.367***	-0.382***
	(0.047)	(0.046)
Schooling	0.027***	0.036***
	(0.008)	(0.006)
Partnered	0.131***	0.054*
	(0.034)	(0.030)
NumKids	-0.008	-0.072***
	(0.018)	(0.018)
KidLT5	-0.014	-0.037
	(0.042)	(0.042)
NonLabInc (x 1000)	-0.029***	-0.012***
	(0.009)	(0.004)
UR	-0.006	-0.012**
	(0.006)	(0.005)
Obs	3,883	4,487

Notes:
1. Sample: Victorians aged 25-64
2. Y = 1 if employee; =0 otherwise
3. Estimates weighted to reflect population values
4. Marginal effects reported
5. Robust standard errors in parentheses, significance given by: *** p<0.01, ** p<0.05, * p<0.1
6. Source: HILDA, waves 20, 21, 22

A.3 Decomposition results – gender pay gap

Table A.2 shows the detailed results associated with a Blinder-Oaxaca decomposition of the gender pay gap.

Model (3) in Table A.2 shows the results from the estimation of relatively standard earnings equations (as described above). Here we see that gender differences in the factors controlled for accounts for or 'explains' 42.4% of the raw 0.339 log points gender pau gap.[46]

When we exponentiate the unexplained gap (i.e., the difference due to coefficients) and convert to a proportion the adjusted GPG (i.e., the gap net of gender differences in characteristics) is equal to 21.6%. This means that the earnings of women need to increase by 21.6% if they are to equal those of men (at the mean) (holding all else constant).

The bottom panel in Table A.2 provides more detail on the factors underpinning the explained component and indicates whether the set of particular variables are significant or not in accounting for the gap.

Reading down column (3) we see that the time factors (whether worked the full financial year and the log of hours worked) explains around half (46.4%) of the raw GPG. The negative sign on the education coefficient shows that if women had the same education levels as men the gender pay gap would be wider (it would be 9.8% wider). This is because women, on average, are more qualified than men. Column (4) controls for occupation.

The inclusion of occupation (at the 1-digit level) shows that gender differences in occupation of employment account for 6.1% of the gender gap in annual earnings (significant at the 5% level). The positive sign indicates that the gender gap in financial year earnings would be lower if women where to be distributed across occupations in the same manner as men. This may reflect the highly significant returns that male tradespersons receive relative to the base group and relative to women who hold trade qualifications.

Column (6) presents the results from a detailed specification that also controls for occupation and other job characteristics, including method of pay setting. Gender differences in method of pay setting (e.g., women being more likely to be covered by an Award) accounts for a small share of the gap (2.8%). A large part of the gap is due to gender differences in time in paid employment and the ongoing effects of part-time work.

46 The 42.4% is calculated as [0.144/0.339]*100, where 0.144 is the coefficient or share of the gap due to gender differences in the factors controlled for.

Table A.2: Decomposing the Gender Wage Gap, Victoria, 2020-22.

	(1) Experience, Children migrant status	(2) Model (1)+ Time	(3) Model (2)+ Education	(4) Model (3)+ Occupation	(5) Model (4)+ Job characteristics	(6) Model (5)+ EverPT
Mean log(Y), men (all models)	11.407					
Mean log(Y), women (all models)	11.068					
Raw gender wage gap (GWG) (all models)	0.339					
Gap due to gender differences characteristics	0.038***	0.184***	0.144***	0.157***	0.156***	0.202***
	(0.010)	(0.018)	(0.019)	(0.019)	0.020)	(0.021)
Gap due to gender differences in effect of characteristics (i.e., due to coefficients)	0.301***	0.155***	0.195***	0.183***	0.183***	0.137***
	(0.021)	(0.021)	(0.021)	(0.019)	0.020)	(0.021)
% Raw gender wage gap arising from gender differences in characteristics	11.3%	54.3%	42.4%	46.1%	46.0%	61.1%
Adjusted gender wage gap[a]	*35.1%*	*16.8%*	*21.6%*	*20.1%*	*20.1%*	*14.1%*
Explained component (detailed)						
Experience	0.024***	0.017***	0.013**	0.012**	0.010*	0.009*
	(0.009)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)
Children (number and pre-school)	0.005	0.004	0.004	0.004	0.003	0.003
	(0.004)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)
Migrant (status and time in Australia)	-0.005	0.000	-0.0005	-0.0002	-0.000	0.000
	(0.002)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
Time (whether worked full-year and usual hours worked per week)	--	0.155***	0.157***	0.139***	0.122***	0.102***
		(0.015)	(0.015)	(0.014)	(0.014)	(0.013)
Education (capturing differences in highest qualification attained)	--	--	-0.033***	-0.018***	-0.017***	-0.020***
			(0.005)	(0.004)	(0.004)	(0.004)

Table A.2: continued

	(1) Experience, Children migrant status	(2) Model (1)+ Time	(3) Model (2)+ Education	(4) Model (3)+ Occupation	(5) Model (4)+ Job characteristics	(6) Model (5)+ EverPT
Occupation (1 digit controls)	--	--	--	0.018**	0.021**	0.020**
				(0.009)	(0.009)	(0.009)
Job characteristics (sector, casual, fixed term, union membership and method of pay setting (not including Award)	--	--	--	--	0.006	0.004
					(0.005)	(0.004)
Award	--	--	--	--	0.010***	0.009***
					(0.003)	(0.003)
EverPT (whether ever worked part-time (since turning 25)	--	--	--	--	--	0.078***
						(0.010)
Share (%) of raw GWG accounted for by aggregated characteristics						
Control set:						
Experience	7.1%	5.1%	3.8%	3.5%	2.8%	2.6%
Children	1.6%	1.2%	1.3%	1.1%	1.0%	1.0%
Migrant status	-0.2%	0.1%	-0.1%	-0.1%	0.0%	0.0%
Time	--	45.8%	46.4%	41.0%	35.9%	29.9%
Education	--	--	-9.8%	-5.2%	-5.1%	-5.9%
Occupation	--	--	--	5.1%	6.1%	5.8%
Job	--	--	--	--	1.7%	1.2%
Award	--	--	--	--	2.9%	2.8%
Ever Part-Time	--	--	--	--	--	23.0%

Table A.2: continued

Notes:
1. Sample: columns (1) to (7) Victorian men and women, aged 25-64 and currently engaged as employees in their main job.
2. Note (a): the adjusted gender wage gap is the coefficient on the unexplained share (due to coefficients) transformed [exp(coef)-1]*100. For example: column (1) [exp(0.301)-1]*100 = 35.1%.
3. Estimates weighted and adjusted for selection into employment.
4. Note that in the presentation of the detailed coefficients information related to gender differences in the following variables: “Melbourne” “Covid”, “Wave” and “lambda” have not been presented. The coefficient on Melbourne is statistically significant at p<0.1 in all models and explains between 0.7 and 1.2% of the raw gap. The other variables are not significant and explain less than 1% of the raw gap.
5. Standard errors in parentheses
6. Significance given by *** p<0.01, ** p<0.05, * p<0.1
7. Source: Household, Income and Labour Dynamics in Australia (HILDA) Survey, waves 20, 21 and 22.

Technical Appendix B

Predicting lifetime earnings

To predict lifetime earnings we use cross-sectional data from HILDA for Victoria. We pool the data over three waves (2020, 2021 and 2022) to increase the sample size and we restrict the sample to Victorian employees aged 25-64.[47]

We begin by estimating a regression equation with previous financial year gross earnings from wages and salaries (in 2022 prices) as the dependent variable. The coefficient estimates from this stage are reported at Table B.1.

To predict lifetime earnings we use the coefficient estimates from columns (3) and (4). Columns (1) and (2) are simply presented to demonstrate the differing effects of children on the earnings of men and women. Once a control for part-time work is included the children variables become insignificant. This underscores the fact that much part-time work is entered into to care for children.

Table B.1: Regression Estimates Used to Predict Lifetime Earnings

	(1) Men	(2) Women	(3) Men	(4) Women
Dipcert	0.091**	0.000	0.074*	-0.043
	(0.043)	(0.050)	(0.039)	(0.041)
Degree	0.152***	0.162***	0.176***	0.135***
	(0.047)	(0.054)	(0.042)	(0.044)
Experience	0.043***	0.027***	0.037***	0.028***
	(0.007)	(0.006)	(0.007)	(0.005)
Experience2	-0.001***	-0.000***	-0.001***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
NumKids	0.056***	-0.063***	0.056***	-0.003
	(0.022)	(0.022)	(0.020)	(0.018)
KidLT5	0.104***	-0.094**	0.089***	-0.046
	(0.038)	(0.044)	(0.034)	(0.038)
AllFinYr	0.415***	0.472***	0.377***	0.438***
	(0.060)	(0.065)	(0.057)	(0.062)
Manager	0.632***	0.830***	0.529***	0.579***
	(0.101)	(0.091)	(0.072)	(0.080)
Professional	0.462***	0.609***	0.380***	0.482***
	(0.102)	(0.087)	(0.073)	(0.077)
Trade	0.330***	0.196**	0.263***	0.129
	(0.100)	(0.099)	(0.073)	(0.083)
Service	0.236**	0.116	0.255***	0.109
	(0.103)	(0.093)	(0.076)	(0.083)
Clerical	0.092	0.350***	0.069	0.233***
	(0.105)	(0.083)	(0.078)	(0.074)

47 We have restricted the sample to 25-64 year olds to reduce some of the variability in the estimates that may come from having younger employees in the sample.

	(1) Men	(2) Women	(3) Men	(4) Women
Sales	0.067	0.023	0.053	0.068
	(0.136)	(0.102)	(0.111)	(0.085)
Operator	0.226**	0.114	0.178**	0.075
	(0.104)	(0.122)	(0.075)	(0.102)
Melbourne	0.139***	0.105***	0.125***	0.051*
	(0.041)	(0.033)	(0.037)	(0.028)
Covid	-0.181**	-0.336***	-0.184**	-0.265***
	(0.088)	(0.098)	(0.072)	(0.088)
2021	0.003	0.012	-0.016	-0.009
	(0.017)	(0.021)	(0.018)	(0.019)
2022	-0.032	0.000	-0.055***	-0.017
PT(all jobs)	--	--	-0.527***	-0.518***
			(0.052)	(0.026)
	(0.020)	(0.022)	(0.019)	(0.020)
Constant	9.863***	9.775***	10.111***	10.118***
	(0.111)	(0.111)	(0.091)	(0.101)
R-squared(%)	39.0%	35.1%	47.0%	49.9%
Observations	2,322	2,747	2,322	2,747

Notes:
1. Sample is Victorian employees aged 25-64, excluding agriculture, forestry, fishing and hunting, employees with missing information on work experience and those with labour earnings in the bottom and top 1% of the distribution.
2. Dependent variable: natural logarithm of previous financial year gross earnings from wages and salaries.
3. Estimates weighted to reflect population totals.
4. Robust standard errors clustered on the individual and reported in parentheses.
5. Significance levels given by: *** p<0.01; ** p<0.05; and * p<0.1.
6. Source: Household, Income and Labour Dynamics in Australia (HILDA) Survey, waves 20-22.

To generate the predicted average annual earnings for Victorian men and women aged 25-64 from the regression which incorporates information on occupation we first had to assign all persons who were not presently employed an occupation. For this we used the historical data in HILDA and matched the information back to their last occupation (if not presently employed).

To predict average annual earnings for Victorian men with 5 years of work experience we ran the following generate command in Stata across a sample of Victorian men aged 25 to 64 who were not missing information on years of actual experience. We then repeated the exercise for women (using the coefficients from the regression on women). The highlighted (bold, enlarged) shows the prediction based on outcome at 5 years of experience (and its square (5*5)). We do this for every year of experience and then sum up the annual amounts to generate a cumulative measure over earnings over 44 years of work.

gen lnFYwage=DipCert*0.0736263+Degree*0.1761705+**(5)*0.0365056+(5*5)*-0.0005083**+NumKids*0.0556703+KidPreSch*0.0889187+Fullyr*0.3765987+PTall*-0.5265859+manager*0.5291724+professional*0.3802238+trade*0.2631367+service*0.254792+clerical*0.0688184+sales*0.0525385+opertor*0.1776453+Melbourne*0.1249904+covid*-0.1843423+w2021*-0.0163248+w2022*-0.0551378+10.11141

Technical Appendix C

The gender gap in superannuation

In this appendix we report the detailed regression results where the dependent variable is the natural logarithm of superannuation balances. We have employed regression analysis to: (a) examine the way the determinants of superannuation balances differ for Victorian men and women; and (b) examine the source of the gap using decomposition techniques.

Table C.1 shows the mean superannuation balances of Victorian men and women as well as the descriptive statistics associated with variables in the regression analysis.

The sample is non-retired Victorians aged 25-64 with positive superannuation balances in 2022.

Table C.1: Superannuation balances - descriptive statistics and variable definitions

Variable	Women	Men
Dependent variable		
Superannuation balance	$153,427.5 ($268,336.5)	$214,636.6 ($289,856.4)
Log of superannuation balance	11.11 (1.46)	11.48 (1.43)
Control variables		
ln(Av.LifetimeWage)	10.93 (0.45)	11.23 (0.34)
ln(YearsWorked)	2.86 (0.62)	2.96 (0.60)
Married & never divorced, separated or widowed	51.6%	52.9%
Ever in a defacto relationship	48.6%	49.9%
Ever divorced	8.3%	5.9%
Ever widowed	1.2%	1.1%
Ever had children	66.8%	66.6%
Ever worked part-time (since age 25)	75.5%	35.1%
Ever self-employed	21.8%	32.2%
Ever unemployed	24.9%	25.6%
Ever a trade union member	36.3%	39.5%
Ever worked in the public sector	50.4%	29.1%
Ever a homeowner	73.5%	71.8%
Born overseas	22.9%	23.9%
Ever a manager	34.4%	47.7%
Ever a professional	58.7%	44.4%
Ever a tradesperson	14.7%	40.3%
Ever a service worker	39.0%	18.4%
Ever a clerical worker	47.7%	26.7%

Variable	Women	Men
Ever a salesperson	32.5%	21.9%
Ever an operator	4.9%	23.3%
Ever a labourer	17.4%	34.3%
Melbourne	77.8%	78.7%
Covid	4.5%	5.7%
Observations	1,036	943

Notes:
1. Sample is aged 25-64, not retired, living in Victoria and reporting positive superannuation balances.
2. Estimates weighted to reflect population totals.
3. Standard deviation in parentheses for continuous variables only.
4. Source: HILDA wave 22 (2022).

Table C.2 reports the regression results where the dependent variable is the natural logarithm of superannuation balances.

- The first column (which pools the data for men and women) shows that there is, at the mean, a gender gap in superannuation balances of around 16% (as given by the '-0.148' coefficient on the dummy variable that captures gender).[48]
- The separate regressions for women and men show, perhaps unsurprisingly, that the strongest predictor of superannuation balances is earnings followed by time spent in work.[49]

48 Note, as we are using regression analysis here the focus is on the average (mean) rather than median.

49 The earnings measure that we use measures average lifetime earnings. This approach follows that used in: Preston, A. and Wright, R.E. (2023), Gender, financial literacy and pension savings. Economic Record, 99(324), 58-83.

Table C.2: Determinants of superannuation balances of non-retired Victorians, 2022

	Persons	Women	Men
Female	-0.148** (0.073)		
ln(Av.LifetimeWage)	0.387*** (0.106)	0.299** (0.138)	0.536*** (0.168)
ln(YearsWorked)	1.174*** (0.078)	1.158*** (0.106)	1.200*** (0.088)
Married & never divorced, separated or widowed	0.169** (0.071)	0.050 (0.106)	0.288*** (0.088)
Ever in a defacto relationship	0.049 (0.057)	0.103 (0.080)	0.016 (0.074)
Ever divorced	0.010 (0.103)	0.008 (0.139)	-0.010 (0.156)
Ever widowed	0.215 (0.239)	0.632* (0.331)	-0.224 (0.203)
Ever had children	-0.039 (0.074)	-0.070 (0.116)	-0.041 (0.094)
Ever worked part-time (since age 25)	-0.232*** (0.065)	-0.279** (0.109)	-0.149* (0.081)
Ever self-employed	-0.425*** (0.077)	-0.344*** (0.128)	-0.475*** (0.086)
Ever unemployed	0.010 (0.069)	0.012 (0.104)	0.006 (0.087)
Ever a trade union member	0.277*** (0.057)	0.259*** (0.080)	0.299*** (0.080)
Ever worked in the public sector	0.038 (0.061)	0.051 (0.087)	0.057 (0.080)
Ever a homeowner	0.421*** (0.097)	0.505*** (0.151)	0.312*** (0.104)
Born overseas	-0.095 (0.083)	-0.034 (0.133)	-0.168* (0.092)
Ever a manager	0.225*** (0.059)	0.211** (0.087)	0.219*** (0.076)
Ever a professional	0.314*** (0.065)	0.319*** (0.107)	0.305*** (0.077)
Ever a tradesperson	-0.066 (0.063)	0.033 (0.121)	-0.080 (0.074)
Ever a service worker	-0.114 (0.070)	-0.189** (0.094)	-0.071 (0.097)

	Persons	Women	Men
Ever a clerical worker	0.084 (0.062)	0.061 (0.086)	0.100 (0.078)
Ever a salesperson	-0.161** (0.069)	-0.230** (0.101)	-0.074 (0.078)
Ever an operator	-0.035 (0.083)	-0.299 (0.200)	0.090 (0.094)
Ever a labourer	-0.229*** (0.075)	-0.101 (0.131)	-0.331*** (0.085)
Melbourne	-0.002 (0.058)	-0.002 (0.078)	0.021 (0.080)
Covid	-0.044 (0.123)	0.005 (0.165)	-0.073 (0.169)
Constant	3.295*** (1.162)	4.185*** (1.497)	1.550 (1.821)
R-squared (%)	55.9%	50.0%	62.2%
Observations	2,106	1,057	959

Notes:
1. Dependent variable is the natural logarithm of self-reported superannuation balances (balances) in 2022.
2. Sample: non-retired Victorians aged 25-64 with positive superannuation balances.
3. Estimates weighted to reflect population totals
4. Robust standard errors in parentheses.
5. Significance given by: *** p<0.01, ** p<0.05, * p<0.1
6. Source: HILDA, wave 2022.

To gain a better appreciation of the extent to which these factors account for or 'explain' the gender gap in superannuation balances we decompose the gender gap using the Blinder-Oaxaca decomposition technique (as outlined in Appendix A).

C.1 Decomposition results - superannuation

The detailed results from a decomposition of the gender superannuation gap are presented in Table C.3.

The sample comprises Victorian employees aged 25-64 who are not retired and who have positive superannuation balances. The total sample of men and women for the regressions is N=2,106 observations. This is less than the number of observations used to generate the mean and median superannuation balances at Table 29 (where N=2,395). We have lost some observations on account of missing information on some of the control variables. The implication of this is that the average (mean) balances of the two groups are not identical. In the regression analysis the mean gender gap is equal to $61,209, whereas in Table 29 it was equal to $67,896.

Our estimates show that:

- More than half (57%) of the $67,896 gender gap in superannuation balances may be explained by gender differences in the variables controlled for in the regression. This leaves 43% of the gap unexplained.
- Gender differences in average lifetime earnings, on its own, explains 42.9% of the gap. In other words, gender differences in lifetime earnings is the main cause of gender differences in superannuation balances.
- One third (32.3%) of the gap may be explained by gender differences in years spent in paid work. This shows the 'cost' that women suffer as result of time out of the labour market.
- There are off-setting factors such as the fact that women benefit from being in professional occupations. Once we sum up the effect of all the 'explained' components the overall explained share is 57% (as previously noted).

Table C.3: Decomposing the gender gap in superannuation balances of non-retired Victorians, 2022

(1)	Men – mean superannuation savings (natural logarithm)	11.48		
(2)	Women – mean superannuation savings (natural logarithm)	11.11		
(3)	Raw gender gap in mean superannuation savings (log points)	0.369		
		Coef.	**Std.err**	**% of raw gap**
(4)	**Explained share (due to gender differences in characteristics controlled for)**	**0.210**	**(0.092)****	**57%**
(5)	**Unexplained share (due to coefficients)**	**0.159**	**(0.091)***	**43%**
Detailed description of the explained share				
(6)	Average lifetime wages	0.158	(0.051)***	42.9%
(7)	Time in employment	0.119	(0.040)****	32.3%
(8)	Family characteristics (marital status, children)	0.005	(0.008)	1.3%
(9)	Having ever worked part-time (since age 25)	0.060	(0.033)*	16.2%
(10)	Having ever been self-employed	-0.049	(0.015)***	-13.3%
Occupation:				
(11)	Manager	0.029	(0.012)**	7.9%
(12)	Professional	-0.043	(0.014)***	-11.8%
(13)	Tradesperson	-0.020	(0.019)	-5.5%
(14)	Service worker	0.015	(0.020)	3.9%
(15)	Clerical worker	-0.021	(0.017)	-5.7%
(16)	Salesperson	0.008	(0.008)	2.1%
(17)	Operator	0.016	(0.017)	4.5%
(18)	Labourer	-0.056	(0.016)***	-15.1%
(19)	Remaining controls	-0.010	(0.022)	-2.8%
(20)	Total explained share	0.210	(0.092)	57%

Notes:
1. Sample: non-retired Victorians aged 25-64 with positive superannuation balances.
2. Estimates weighted to reflect population values.
3. Standard errors in parentheses.
4. Significance given by: *** p<0.01, ** p<0.05, * p<0.1.
5. Source: HILDA, wave 22.


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