

**UNDERSTANDING LINKS
BETWEEN GENDER AND PAY:
AN IMPORTANT ROLE FOR
HETERODOX ECONOMICS**

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In early 2013 the prominent mainstream economist, Judith Sloan, claimed that the Workplace Gender Equality Agency (WGEA) was 'ignorant' about both economics and statistics (Sloan, 2013). The cause of Sloan's claim was a WGEA press release about the gap between salaries received by men and women who were recent university graduates. Sloan argued that men and women work in different occupations, with men concentrated in some of the higher earning categories of dentistry and engineering. Her implicit argument was that women's relatively lower earnings can be explained partly by their 'choices' with respect to workforce participation. In a nutshell, according to Sloan, more men than women choose highly paid occupations such as dentistry and engineering and thus their higher earnings are justified.

The basic argument, expressed by Sloan, is that valid comparisons of average salaries should take into account all the factors that affect men's and women's pay, including their different choices and patterns of workforce participation. In effect, if we are not comparing 'like with like', then it may be possible that observed gender-based differences in pay are justified. Sloan's argument reflects the basis of standard mainstream economic analyses of gender and pay in Australia and internationally. However, increasingly detailed analyses using this approach have shed relatively little light on the causes of women's relatively low wages. The purpose of this article is to review the extent to which mainstream economic methods have been successful, or otherwise, in explaining a substantial and ongoing gap in the earnings of men and women in Australia which, by commonly used measures

described later, had grown to approximately 18 per cent in May 2014, compared with 16.2 per cent in November 2007 (ABS 2008, 2014). It then goes on to argue that insights into the possible causal links between gender and pay can only be achieved by analyses that extend beyond the factors that can be included in mainstream analysis. Thus, if a more complete picture of links between gender and pay is to be achieved in the future, an important role must be played by heterodox economists willing to use alternate analytical approaches.

As discussed in this article, heterodox approaches to the analysis of gender-based differences in labour markets typically do not rely on complex statistical procedures but contribute both statistical evidence and detail on the relevant history, industrial organisation and structures of labour markets. Importantly, heterodox economists can also continue to contribute to debates on the gender pay gap by providing critiques of mainstream analyses, with the aim of elucidating the meaning and limitations of different gender pay gap estimates. Both the critiques and analyses undertaken by heterodox economists can play an important role in policy development and reform aimed at improved gender equity in the Australian labour market.

Overview and Background of Gender Pay Gaps in Australia

Differences in the average earnings of men and women are frequently referred to as gender pay gaps. Internationally, there is no 'official' or 'standard' definition of the gender pay gap, resulting in different measures of gendered patterns in pay being used in different contexts and discussions. Broadly speaking, however, a gender pay gap refers to the different average wages earned by men and women. So, for example, if women earn an average of 80 per cent of men's earnings then there is a gender pay gap of 20 per cent.

Interest in the links between gender and earnings has a long history. In Australia, gendered patterns of earnings were closely tied with industrial tribunal decisions that formally permitted lower rates of wages for women compared with men. Throughout the twentieth century, a range of decisions were made to increase women's earnings relative to men's. In the 1949–50 Basic Wage Case the female basic wage was increased from 54 per cent to 75 per cent of the male basic wage. Later decisions by the

Australian Conciliation and Arbitration Commission in 1969 and 1972 introduced principles of equal pay for men and women undertaking work of equal value (Borland 1999). These decisions brought Australia into line with the International Labour Organisation's convention 100 on equal pay to 'ensure the application to all workers of the principle of equal remuneration for men and women workers for work of equal value' (ILO 1951).

Despite legislative change, however, Australian women continue to have lower average earnings than men and this has meant that the gender pay gap is of ongoing policy concern (Summers 2013). This concern is not unique to the Australian context. Internationally, gendered patterns of pay have persisted despite the introduction of regulatory reforms aimed at 'equal pay' for men and women. As a result, there is ongoing international interest in methods of estimation and the meaning of different measures that compare men's and women's earnings (Grimshaw and Rubery 2002), and in the range of factors that contribute to the persistence of a gender pay gap.

Estimating Australia's Average 'Raw' Gender Pay Gap

There are different ways of measuring the gender pay gap. In Australia the most commonly used estimate compares the average ordinary time weekly earnings of men and women working full-time (ABS Catalogue 6302.0). That is, the measure excludes overtime payments and the earnings of people working on a part-time basis. For some decades this approach has resulted in an estimated gender pay gap of approximately 17 – 18 per cent. The common usage of earnings for full-time workers reflects the availability of regular data releases from the Australian Bureau of Statistics. This is the measure traditionally used in relatively high profile campaigns such as equal pay day (WGEA 2014) and frequently quoted in mass media (see, for example, Summers 2013).

Internationally, gender pay gaps are often estimated on the basis of differences in the average gross hourly earnings of men and women. This is important in contexts such as Australia's, where part-time employment rates are high, because hourly data includes the earnings of workers who are missing from the full-time earnings estimates discussed above. The key disadvantage, however, is that hourly data is collected less frequently and so indicators often lag by two years or more. The use of hourly

earnings estimates is reflected in the recent gender indicators series developed by the Australian Bureau of Statistics (ABS 4125.0). Using hourly earnings data, an estimate of a national average gender pay gap for Australia is about 11 per cent (ABS Catalogue 6306.0).¹

Challenges in Comparing Men's and Women's Pay: The Role of Decomposition Analysis

A commonly noted problem with measures of the gender pay gap that rely on nation-wide measures of men's and women's wages is that they don't compare 'like with like'. The comparisons might be restricted to full-time employees or hourly wage rates but the possible sources of difference between men's and women's earnings are not solely related to hours of work. As noted above, Sloan criticised the WGEA press release on a gender gap in graduate earnings because men and women are differently represented in the various fields of study and occupations (Sloan 2013). Her comment is illustrative of a common argument that, to properly measure the gender pay gap, it is necessary to distinguish between the 'raw' gender pay gap and the 'adjusted' gap, which takes into account differences in the characteristics of men and women workers, such as their hours of work, labour market experience and education.

1 The use of weekly wage rates for full-time employees as the basis for estimating the gender pay gap in Australia is partly a reflection of the type of data collected on a regular basis. Weekly earnings estimates from the ABS *Average Weekly Earnings Survey* (6302.0) are published twice yearly and facilitate regular monitoring of a gender pay gap. There are two key data sets that allow for the development of gender pay gap estimates based on hourly earnings. The first, the *Survey of Employee Earnings and Hours* (ABS Catalogue 6306.0), is undertaken every two years and this precludes the estimation of gender pay gaps for periods shorter than two years and limits the capacity to conduct timely investigations of changed gendered patterns of pay. Data from the annual Housing, Income and Labour Dynamics Australia (HILDA) Survey can also be used to obtain hourly earnings estimates for men and women. However, estimates from this source are not regularly published in a form accessible to the public. HILDA data also has a relatively longer time lag between its collection and release. It has usually been used for comparatively technical research projects that extend beyond the development of a relatively simple indicator such as a raw gender pay gap.

The Oaxaca decomposition technique is one of the most commonly used statistical techniques for measuring the adjusted gender pay gap. The technique is derived from mainstream labour market models, such as the human capital model, that posit that workers' wages will directly reflect their productivity. It uses proxy measures of productivity, such as education and years of workforce experience, to assess the correlation of productivity with earnings. Applied to the analysis of the gender pay gap, the Oaxaca decomposition technique measures the extent to which an observed, raw gender pay gap reflects differences in the measured 'productive' characteristics of men and women. It generates an estimate of the 'adjusted gender pay gap', which is the gap in the average earnings of men and women that remains once pay differences related to measured differences in productivity have been accounted for. The presence of an adjusted gender pay gap is commonly interpreted as evidence of gender bias in labour market processes and outcomes.

The Oaxaca technique can be illustrated by using a highly simplified example. Imagine that men's and women's productivity in employment is determined by just one characteristic, their years of workforce experience. In this case a gender pay gap should only emerge if (and to the extent that) there are differences in the years of work experience between men and women. If men, on average, have 20 years of work experience and women have 16 years, then a 20 per cent pay gap would match the 20 per cent difference in workforce experience. In this case the raw gender pay gap is fully 'explained' and the adjusted pay gap is zero. If there were a pay gap of 30 per cent, then work experience only partly 'explains' the observed gender pay gap. The adjusted pay gap would be 10 per cent and this would indicate that men and women were being rewarded differently for similar attributes relevant to their productivity. The presence of a difference between the raw and adjusted gender pay gap, or, in other words, an 'unexplained' portion of the gender pay gap, constitutes *prima facie* evidence of women experiencing 'gender discrimination'² in the labour market. The same technique can be applied to investigate other possible causes of labour market discrimination, such as racial discrimination (Becker 1957).

2 The approach assumes that the only source of gender bias is discriminatory attitudes held by employers or customers.

In 1999 Borland summarised sixteen studies of the gender pay gap in Australia, most of which utilised the Oaxaca technique (Borland 1999). The earliest data used in these analyses was from 1973 (Haig 1982) and the most recent was 1995 (Meng 1999; Reiman 1999). Borland's overview showed, firstly, that the both the raw and adjusted gender pay gaps reduced in Australia in the thirty years following the introduction of equal pay legislation (Borland 1999). A second feature of the studies, however, was that the measured productivity characteristics they included 'explained' a relatively small proportion of the 'raw' wage gap. The largest explained proportion of the wage gap, approximately 65 per cent, was achieved by Drago (1999) using a sample restricted to full-time non-supervisory employees. However, the analyses in most cases explained less than 30 per cent of the raw gap, leaving more than 70 per cent unexplained or, in the language of mainstream economists, evidence of possible discrimination. More recent studies (listed in the Appendix) show similar results.

Australian and international insights into individual variables that may cause gender pay gaps remain very limited: the key explanatory variables such as occupation, industry and part-time work are themselves highly correlated with gender (Grimshaw and Rubery 2002), an issue we discuss in the next section. A key contribution of some recent studies, however, has been to demonstrate the extent to which differences in gender and pay vary across different workforce sectors, especially according to whether the sample is taken from a high or low part of the income distribution (Kee 2006, Barón and Cobb-Clark 2010).

Critiques of Decomposition Analysis

An attraction of decomposition analysis is its offer of an apparently straightforward method for identifying possible gendered biases in labour market processes and outcomes. It can also inform policy on how to close the gender pay gap. For example, if gender differences in work experience (favouring men) are found to be a key source of difference in men's and women's wages, then policy targeted at expanding childcare provision and paternity leave would be an appropriate policy to help reduce the raw gender pay gap. Childcare may assist women to have similar patterns of work experience to men and thus reduce gender pay gaps. If, on the other hand, occupational segregation is a key driver, then

policy aimed at promoting equal employment shares would be appropriate.

However, despite its apparent advantages, the Oaxaca technique has not clearly identified the sources of women's relatively lower pay. In part, this reflects the technique's reliance on accurate measures of worker productivity. It will produce distorted estimates if data on productivity factors that do actually explain wages are excluded from the analysis, or if the factors are poorly measured. An oft-cited scenario is one where male workers are, on average, more highly qualified for a particular job than female workers due to unobserved factors, such as physical strength, not captured in data, thus causing the size of the 'unexplained' portion of the gender pay gap estimated in decomposition analysis to be overstated (Blau and Kahn 2007).

Many studies of the gender pay gap have responded by adding more variables to their decomposition analysis. Measures of workplace characteristics (such as union membership or firm size) have become common additions, as have measures of demographic characteristics, such as marital status and parenthood. The effect of these additions has typically been to reduce the 'unexplained' portion of the pay gap (and thus reduce the estimate of the adjusted gender pay gap). However, the inclusion of these variables raises important questions about their relationship to individual productivity and, in turn, the accuracy of the measures of labour market bias generated by the analysis. For example, the inclusion of union membership in a decomposition analysis implies that union membership is functionally related to individual productivity, and that wage differences between men and women correlated with differences in union membership are not affected by gender bias. Both conclusions are clearly contentious.

The inclusion of occupational measures in a decomposition analysis raises similar issues. Adding occupational variables also tends to substantially reduce the 'unexplained' portion of the gender pay gap. This is because occupational variables correlate strongly with wage differentials, and sex segregation is a key feature of labour markets. However, including occupational variables in a decomposition analysis has the effect of factoring out gender bias associated with barriers to occupational mobility or the differential valuation of the work performed by men and women. As such, it can be argued, decomposition analyses that include occupational variables, whilst improving the 'like with like'

comparison, tend to underestimate the extent of gender bias in the labour market. The assumptions underpinning the analysis also neglect the way in which the wages attached to different occupations evolve historically and institutionally, as we discuss further below.

A further limitation of decomposition analysis derives from what are known as 'feedback effects'. The approach assumes that observed differences in the characteristics of male and female workers are themselves *not* the result of gender-biased processes. However, if, for example, employers discriminate against women in the allocation of training opportunities, then differences in the measured productivity characteristics of male and female workers will emerge, which won't be included in the calculation of the adjusted gender pay gap. Moreover, if women perceive gender bias in specific sectors or occupations they may decide against personal investments in education and training in these areas (thus, also limiting their labour market productivity). In each of these cases gender bias will be driving different wage outcomes for men and women, but decomposition techniques will not identify this effect because the direction of causal links are ambiguous.

Decomposition techniques are further limited by the fact that they do not identify aspects of the wage structure that may be gender-biased. For example, many wage structures feature strong rewards for seniority. This will contribute to a raw gender pay gap if male workers are, on average, older than female workers. However, decomposition analysis will not identify an adjusted pay gap if men's and women's earnings increase with age at a similar rate. This is contentious because, if women take a break from paid work at a relatively young age, a seniority-based wage structure reduces their earnings opportunities. The issue becomes more pronounced if the wage structure does not closely reflect age-related differences in productivity but is more the product of societal norms about valuing seniority.

This latter point highlights the potential for the results of decomposition analysis to be interpreted in a number of different ways, which limits their usefulness in the formulation of policy. In the previous example, decomposition analysis may identify that gender differences in the demographic characteristics of men and women contribute to a pay gap. However, if the differences are interpreted as reflecting the freely-made choices of individual men and women about when to take a break from paid work, which appears to the type of interpretation Sloan might offer,

the finding does not itself generate an argument for policy intervention. If seniority-based wage differences are presumed to reflect productivity differences, the argument for policy intervention falls further.

What can Heterodox Economics Contribute to the Analysis of Gender and Pay?

The various limitations of decomposition analysis highlight a need for research on gender and pay that is informed by different theoretical perspectives. Specifically, there is a need for approaches that are capable of representing the complex nature of labour market processes that produce gendered outcomes.

Many existing heterodox approaches to analysing links between gender and pay focus on analyses developed within institutional and/or feminist approaches to economics. These analyses, which we label ‘feminist institutional’ approaches, explicitly recognise gendered patterns of work and pay as socially constructed patterns of behaviour. In contrast to mainstream analyses, a feminist institutional approach does not predict that wage differences between individual workers will closely reflect differences in the value of their productive contribution. Rather, divergence of wage outcomes from the value of workers’ contribution is the standard prediction, based on an understanding that market institutions can fail to adequately value the commodities produced by different groups of workers; labour market institutions can fail to appropriately value the attributes of different types of work; and a host of market and other institutions limit the opportunity sets of different groups of workers (Austen, Jefferson and Preston 2013). The nature of institutions that can result in negative wage and other outcomes for women – and the possible remedies for gender inequality via institutional change – is the focus of a feminist institutional analysis of the gender pay gap.

We have summarised a feminist institutional approach to the analysis of wages previously (Austen, Jefferson and Preston 2013), drawing attention to the way in which institutional theory and its focus on cultural, relational and historical context provides insights into the determination of wage outcomes. In this approach, institutions are defined to include both formal institutions, such as constitutions, laws and regulations, as well as informal institutions, which include social

norms and conventions. Both types of institutions are assumed to combine and affect how different types of work are evaluated by participants in the exchange of labour services; their motivations, bargaining power and outside options; and the rules governing the determination of wage rates. Thus, the nature of 'negotiations' of labour services, and actual wage outcomes, is predicted to vary with change in the institutional context. Explanations of labour market events, including wage outcomes, are therefore likely to reflect historically, geographically and culturally specific events, rather than being based in generalised theories that do not distinguish between the particularities of different labour market sectors.

Some examples of the formal institutions that will be relevant to this approach are legal rights and obligations of employers and employees and the regulatory framework relevant to the determination of wages and working conditions. Legal rights and obligations may define, for example, the extent to which lockouts or strikes are viable actions and thus influence the bargaining power of different parties. Regulatory frameworks can have important effects of the types of issues that might legitimately be brought before industrial tribunals. A key example of this, with relevance to the determination of the gender pay gap, occurred when changes to the equal remuneration provisions of the *Fair Work Act* (2009) provided an opportunity for a major case to examine the under-valuation of work carried out by social and community care employees (Austen, Jefferson and Preston 2013).

Informal institutions can include the beliefs and expectations of the level of wages that are legitimate for various types of work. Both employers and employees are likely to be informed about the levels of wages and working conditions that might be legitimately negotiated by previous practices and conventions in their organisational or workplace context. Thus, the history of particular industries will matter. For example, the factors that lead to particular wages and working conditions in the care sector, which are particularly important to the wages of women, will be informed by its historic links with charitable organisations, lack of unionisation and the often constrained capacity of publicly-funded organisations to pay higher wages (Briggs, Meagher and Healy 2007; Meagher and Cortis 2009). As a result, the links between gender and pay in the context of care work will vary considerably from those that apply in, for example, the engineering workforce where the historical and cultural issues informing women's participation and pay reflect

expectations associated with traditional 'male' occupations (Mill, Franzway, Gill and Sharp 2014).

The adoption of a feminist institutional approach will have important implications for the methodologies used in studies of gender and pay. By taking a feminist institutional approach, quantitative techniques can still play a significant role. If we again take care work as an example, research may use large national data sets to identify patterns in the characteristics of male and female workers, their work and earnings (Healy and Moskos 2005; King and Martin 2008; King, Mavromaras, Wei, He, Healy, Macaitis, Moskos and Smilt 2012). However, understanding the sources of differences in the patterns of men's and women's pay and, importantly, the identification of possible remedies to the gender pay gap will require the use of a diverse range of evidence on the institutional environment of the labour market. Documents relevant to the actions of key 'players' in the institutional matrix, such as corporations, trade unions, and regulatory agencies will be important. Qualitative data collections that target perceptions of the value of men's and women's work, or career aspirations, or bargaining strength can also play an important role. Given the complexity of labour markets, in many instances it may be necessary to adopt a case-study approach, rather than attempt an 'explanation' of the gender pay gap at an economy-wide level (see, for example, Moskos and Martin 2005; Junor, Hampson and Ogle 2009; Junor, Hampson and Smith 2009).

Within a feminist institutional framework it would be rare to find researchers claiming that gender pay gaps are 'explained' by men's and women's different occupational choices. The different wages paid to different occupations are more likely to be treated as an observation that warrants investigation and explaining.

The research agenda for those adopting an institutional feminist framework and, more generally, for researchers within the heterodox community is therefore pluralistic in nature. Studies can be both deductive and inductive in their approach. Some might test existing theories while others will focus on building new theory or particular constructs based on insights from case studies. Where resources allow, mixed methods studies that purposefully integrate insights from diverse sources of data can be particularly revealing of the influences on specific labour market outcomes, including wages (Austen, Jefferson, Sharp, Adams, Ong and Lewin 2014). The key argument is, however, that

insights beyond those provided by decomposition analysis require the use of diverse theories and methods.

An important advantage of heterodox approaches is the capacity it provides to contribute specialist knowledge to community debate on the gender pay gap. The statistical methods used by mainstream economists are generally accessible only to researchers with specialist skills in decomposition analysis. Further, the models and assumptions underlying statistical analysis embedded in mainstream economic theory are usually unfamiliar to researchers outside of the economics discipline. Those with an interest in feminist and institutional approaches to economics, as well as other heterodox economists familiar with decomposition analysis, can assist with broader community understandings of the strengths and weakness of this approach, in addition to bringing broader or alternative insights from their own research.

The potential for this aspect of heterodox economics was highlighted in the equal remuneration case brought before Fair Work Australia in 2012 (Austen, Jefferson and Preston 2013). The relatively technical nature of the decomposition analysis included as part of the Australian Industry Group's (AIG) submission to the case made it difficult for unions representing social and community sector workers to understand the basis of the AIG's claims. This was particularly important when the AIG claimed that current gendered distribution of occupations is *positive* for women's earnings. The basis of this claim was that, if women had the same occupational distribution as men, then there would be more women working in, for example, labourer positions, a largely masculinised occupational group with relatively low pay. The analysis underlying the AIG's claim was not transparent and the claim itself was less than intuitive, given the low wages of women in female-dominated occupations. However, by explaining the approach taken to analysing gender and pay in the AIG submission, the heterodox economists who were involved in the case were able to draw on their understanding of the particular ideological and methodological commitments underlying decomposition analysis to highlight the strengths and weakness of the evidence submitted by the AIG.

Their plurality of methods makes heterodox economists useful in public forums such as wage claim hearings because they explain important factors that contribute to gender pay gaps that are not readily included in statistical analyses. Such approaches can facilitate discussion across

research disciplines and aid in the construction of mixed methods research programs which draw on different expertise and perspectives (Austen *et al* 2014). A more complete knowledge base for important issues such as gender pay gaps can also provide a firmer footing for policy development and implementation.

Conclusions and Recommendations

We introduced our argument with reference to Sloan's comments about a WGEA press release on gender and pay, acknowledging that her argument reflects the current state of the art in mainstream economics' approach to investigating the gender pay gap. The intellectual efforts given to the mainstream approach have, however, yielded little insight into the existence and persistence of the gender pay gap. We therefore argue that there is a clear need for heterodox economists to use alternative theories and analyses to provide greater understanding of the gender pay gap and contribute to appropriate policy development.

This need is not unique to the case of investigating links between gender and pay. We have drawn upon this example because it is both an important social and economic policy issue and one where we have some experience. The argument can be generalised to almost any area of economic research which is sufficiently complex to require more than one type of analysis to gain valuable insights. This is particularly the case in an economic and social context of rapid change that challenges the stable relationships between variables assumed in mainstream economic modelling. Complexity and rapid change can also mean that new variables become increasingly relevant to understanding economic events. If research is to be relevant to policy, then it must accommodate and address such possibilities - and a plurality of approaches is a key way of achieving this goal.

Arguments in support of pluralism in economics (King 2013) are also arguments in favour of an economic research community that provides adequate support and resources to wide ranging approaches. We cannot achieve the benefits of pluralism and interdisciplinary mixed methods research without a viable heterodox community that can engage in discussion with the methods and findings from both mainstream economics and related social sciences.

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APPENDIX

Table 1: Studies of the Gender Pay Gap in Australia Since Borland 1999

Study	Year and Source of Data	Earnings variable	Sample	Explanatory Variables	Actual Male-Female Wage Differential (%)	Unexplained Wage Differential (%)
Preston 1997	Australian Census 1991	Weekly income (all sources)	One per cent sample of full-time wage and salary earners aged 16-64	Human capital, workplace characteristics, location, demographic	19.9	14.5
Wooden 1999	Survey of Training and Education 1993	Hourly wage rates	Employees 15-64 years old.	Human capital, Demographic characteristics, gender composition of occupational group	11.5	10.0
Pocock and Alexander 1999	AWIRS 1995	Hourly wage rates	Random sample of Australian workplaces with 20 or more employees (excluding agriculture an defence)	Human capital, location, demographic characteristics, job characteristics, workplace characteristics (including firms), gender composition of occupational group	17.1	Specification 1: 16.4 Specification 2: 7.6 Specification 3: 17.2 Specification 4: 16.9 Specification 5: 13.2
Meng and Meurs 2004	Australian Workplace Industrial Relations Survey (AWIRS) 1995	Hourly wage rates	Random sample of Australian workplaces with 20 or more employees (excluding agriculture an defence)	Human capital, workplace characteristics (firms), hours worked, number of children	15.7	13.9
Meng 2004	Australian Workplace Industrial Relations Survey (AWIRS) 1995	Hourly wage rates	Random sample of Australian workplaces with 20 or more employees (excluding agriculture an defence) with at least 2 male and 2 female observations	Human capital, workplace characteristics (firms), hours worked, number of children	16.6	13.2
Miller 2005	Australian Census 2001	Hourly wage rates	Full-time (35 hours +) workers aged 20-64	Human capital, demographic characteristics, sector	12	Low income workers 10 High income workers 25

Table 1 (continued): Studies of the Gender Pay Gap in Australia Since Borland 1999

Study	Year and Source of Data	Earnings variable	Sample	Explanatory Variables	Actual Male-Female Wage Differential (%)	Unexplained Wage Differential (%)
Kee 2006	HILDA 2001	Hourly wages rates	Full-time and part-time employees aged 18-60 (excludes self-employed and agriculture)	Human capital, demographic characteristics, location, workplace characteristics, occupation, sector Analysis: conditional quantile regression estimates	Private sector (all) 15.3 10 th percentile 1.0 25 th percentile 1.8 50 th percentile 13.7 75 th percentile 22.3 90 th percentile 26.9 Public sector (all) 15.2 10 th percentile 14.9 25 th percentile 16.4 50 th percentile 14.1 75 th percentile 12.1 90 th percentile 12.0	Private sector 10 th percentile 0.8 25 th percentile 6.0 50 th percentile 12.8 75 th percentile 20.2 90 th percentile 26.2 Public sector 10 th percentile 11.0 25 th percentile 12.3 50 th percentile 13.3 75 th percentile 13.6 90 th percentile 15.8
Baron and Cobb-Clark 2010	HILDA 2001-2006	Hourly wage rates (main job)		Human capital characteristics, demographic characteristics, workplace characteristics	Private sector (all) 17.4 10 th percentile 7.7 25 th percentile 9.5 50 th percentile 16.1 75 th percentile 20.9 90 th percentile 24.6 Public sector (all) 12.0 10 th percentile 12.0 25 th percentile 12.6 50 th percentile 11.7 75 th percentile 11.4 90 th percentile 12.2	Private sector 10 th percentile 1.1 25 th percentile 3.8 50 th percentile 5.6 75 th percentile 9.3 90 th percentile 16.9 Public sector 10 th percentile 9.2 25 th percentile 11.8 50 th percentile 12.1 75 th percentile 12.3 90 th percentile 7.1
Watson 2010	HILDA 2008	Annual wage and salary income	Managers (ANZSCO Major Group 1)	Demographic characteristics, Human Capital, Occupation, Sector, Location, Union membership, Organisation characteristics	27	Blinder technique 18 Oaxaca technique 26
Cobb-Clark and Tan 2011	HILDA 2001-2006	Hourly wages	25-65 year old employees	Human Capital, Demographic Characteristics, Occupation, Personality traits	14.3	11.0