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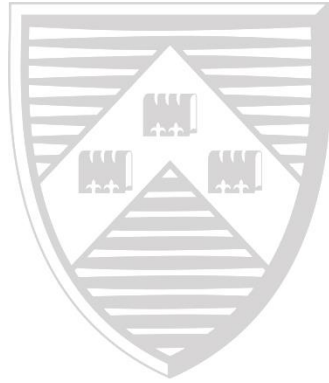
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*Discussion Papers in Economics*

**No. 19/10**

The Gender Earnings Gap in British Workplaces: A  
Knowledge Exchange Report.

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# **The Gender Earnings Gap in British Workplaces: A Knowledge Exchange Report.**

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## **Executive summary.**

The gender earnings gap in Britain has declined over time but has also displayed considerable persistence over the last two decades. We use the latest release of the Workplace Employee Relations Survey (WERS11) to explore the determinants of the gender earning gaps between males and females in Britain allowing us to take account of a wide range of the key causes of the scale of the gap.

WERS11 collects an extensive range of information on both employees and their workplaces, providing for the possibility of separating out individual from workplace effects on wages and the gender earnings gap.

We provide estimation results for both genders from earnings function analysis. Decomposition analysis is introduced to consider the contribution of individual employee characteristics as well as occupation, industry, region and other workplace specific characteristics to the pay gap.

Comparison of the gender pay gap over time and across the earnings distribution is provided by contrasting the results with previous findings for 2004 (Mumford and Smith, 2009) and with alternative data from the ASHE series for 2004, 2011 and 2015 (Butcher et al., 2016).

The raw overall gender earnings gap in the UK has fallen over time as shown in the WERS and ASHE data. It has done so gradually for full-time workers and with more variability for part-timers. We find that the raw gender earnings gap typically declined over time in all occupations and industries, but not uniformly. In many cases, the raw gender earning gap is commonly close to zero at low wages and substantially higher from around the 7th decile; this could be taken as evidence of glass ceiling effects in Britain.

Decomposition analysis shows us that individual characteristics, occupation and industry are important in explaining the gender earnings gap. Putting working hours and gender together, therefore, we find a complex story for earnings gaps. The gap between female and male full-time employees is still substantial at 12.2% and is mainly not explained by observable characteristics. Within occupation, our decompositions



show industry is important; and within industry occupation is important. Segregation at occupation and/or industry level is therefore a concern.

For all of the across gender and working hour decomposition comparisons we present, the unexplained (or discrimination component) is always associated with males having higher wages than females. As discussed in Mumford and Smith (2004 and 2009), the finding that a large pure gender earnings gap remains for both full and part-time employees suggests that the Equal Pay legislation in Britain is still not fully effective. An important policy response is therefore more effective application of this legislation. The finding that segregation of females into occupations, industries and workplaces accounts for a significant proportion of the raw earnings gap suggests that more vigorous application of comparable worth policies may also be necessary to further close the gender earnings gap.

## 1. Introduction

The gender earnings gap in Britain currently sits at some 18%, it has declined over time (Dickens 2007) but has also displayed considerable persistence over the last two decades. There is significant and continuing debate as to the determinants of the gap and how these have also developed over time. In addition to new material, this report includes and updates results presented in Butcher et al. (2016) and Mumford and Smith (2007 and 2009). We use the latest release of the Workplace Employee Relations Survey (WERS11) to explore the determinants of the gender earning gaps between males and females in Britain allowing us to take account of a wide range of the key causes of the scale of the gap.

There have been a series of studies exploring the gender pay gap in the UK published in the last two years. Olsen et al (2018) uses data from the UK Household Longitudinal Study (UKHLS) and finds the biggest driver of the gender pay gap is the reduced years of work experience women have compared to men, followed by women working in lower paid occupations and industries. Other factors lowering the gender pay gap include an increasing trend for men to move into poor-quality low paid part-time employment and for women to find preferential working conditions in the public sector. Costa Dias et al. (2018) using data from the British Household Panel – Understanding Society - Survey also argue that the majority of the gender pay gap can be explained by women accumulating less work experience than men. Jewell et al. (2019) using ASHE data argue that a large proportion of the gender pay gap can be explained by the impact of firms that workers are employed by, some three times more important than occupational choices. They conclude that the explainers of the gender pay gap occur within rather than across firms. Jones and Kaya (2019) use ASHE to explore gender pay gaps in the public sector. They emphasise the interpretation of the component of the gender pay gap that is left unexplained as reflecting unequitable treatment across genders (Oaxaca 1972). They find that whilst the raw gender pay gap in the public sector tends to be smaller than the private sector, this is not true for the unexplained gap.

WERS11 collects an extensive range of information on both employees and their workplaces, providing for the possibility of separating out individual from workplace effects on wages and the gender earnings gap. Typically individual-based data sets, while they may include some broad firm information, provide very little detail on the specific workplace the worker is employed in. In contrast, the linked employee–workplace data in WERS allows us to measure the impact of occupational, industrial and workplace segregation on the gender pay gap in a direct way (Groshen, 1991; Altonji and Blank, 1999; Bayard et al., 2003; Mumford and Smith 2007 and 2009).<sup>1</sup>

We adopt the standard empirical approach to investigate the gender pay gap. Beginning with discussion the determinants of earnings, we provide estimation results for both genders from earnings function analysis. Decomposition analysis is introduced to consider the contribution of individual employee characteristics as well as occupation, industry, region and other workplace specific characteristics to the pay gap. Comparison of the gender pay gap over time and across the earnings distribution is provided by comparing the results with previous findings for 2004 (Mumford and Smith, 2009) and with alternative data from the ASHE series for 2004, 2011 and 2015 (Butcher et al., 2016).

## **2. Data**

The primary source of data used in this study is the British Workplace Employee Relations Survey 2011 (WERS11)<sup>2</sup>; with additional information provided from the British Workplace Employment Relations Survey 2004 (WERS04), and the Annual Survey of Hours and Earnings (ASHE) 2004, 2011 and 2015.

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<sup>1</sup> There are various data sets that can be used to investigate the gender pay gap in Britain, Luchinskaya (2013) compares across 15 different data sets that can (and have) been used in the past.

<sup>2</sup> The Workplace Employment Relations Study (WERS) was conducted by NatCen Social Research on behalf of the Department for Business, Innovation and Skills, the Economic and Social Research Council, the UK Commission for Employment and Skills, the Advisory, Conciliation and Arbitration Service and the National Institute of Economic and Social Research. The data was distributed by the UK Data Archive at the University of Essex. Workplace Employee Relations Survey: Cross-Section, 2011 (computer file). 2<sup>nd</sup> ed. Colchester: The Data Archive (distributor).

WERS11 is the sixth survey in the WERS series, it is a nationally representative survey of workplaces with 5 or more employees<sup>3</sup>. A workplace comprises the activities of a single employer at a single set of premises. Face-to-face interviews for these WERS were conducted with a senior manager (with day-to-day responsibility for employee relations). At those workplaces responding to the manager survey, a questionnaire was presented to 25 randomly selected employees (in workplaces with more than 5 employees) or to all the employees (in workplaces with fewer than 26 employees). In 2011 there were 2,680 completed workplace surveys, with 21,981 completed employee questionnaires.

WERS is a stratified random sample, and larger workplaces and some industries are over-represented. The data have been weighted throughout this study to allow for the complex survey design and thus represent the sampling population (Deaton, 1998; WERS (2014; 26-36)). All of the empirical results that follow use workplace and employee sampling weights when possible. Retaining only those individuals who have complete information for the variables used in the analyses below leaves us with almost 18,000 workers from more than 1,800 workplaces in 2011.

WERS04 has the same sampling properties as the WERS11 survey. The entire surveying process for WERS04 resulted in 2,295 completed workplace surveys, with 22,451 completed employee questionnaires from 1,733 of these workplaces. Retaining only those individuals who have complete information for the variables used in the analyses below leaves us with over 20,000 employees from more than 1,700 workplaces.

The Office for National Statistics (ONS) collect the ASHE from a 1 per cent survey of employee jobs from HM Revenue and Customs Pay as You Earn (PAYE) administrative records<sup>4</sup>. ASHE contains rich and detailed data on wages and hours earned in different industries and occupations but it covers a limited number of additional variables (for example, there are no measures of ethnicity, education or training for employees). We will use the ASHE data to provide us with information on how average hourly wages move across the earnings distributions for the groups of employees of primary interest in this study.

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<sup>3</sup> The industries excluded from WERS are agriculture, hunting and forestry; fishing; mining and quarrying; private households with employed persons; and extra-territorial organisations and bodies.

<sup>4</sup><http://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/annualsurveyofhoursandearnings/previousReleases>

### 3. Earnings and the earning gaps

The measure of earnings used is average hourly earnings for each employee.<sup>5</sup> This is calculated by dividing the employee's gross (before tax and other deductions) weekly wages by the hours they usually work each week (including any overtime and extra hours). Whilst usual hours worked is a continuous measure, the survey responses for gross weekly wages are banded in the WERS data set. There are 14 bands and the midpoints of these bands are used. Any employees showing an hourly rate of pay below £1 or above £100 are excluded from the dataset. A part-time employee is defined to be working 30 or fewer hours per week, a common definition used in the UK.

Table 3.1 presents average hourly wages for different groups in the workforce in 2011. The table presents the wage data measured in natural logs, this is a common transformation of wage data in earnings analysis. On average, males earn £13.50 (2.460) an hour and women earn £11.39 (2.280); women earn some 18% per cent less than men. This is a measure of the overall average gender pay gap. Full-time workers also earn on average substantially more than part-time workers. The highest earning group in the labour market are clearly the males working full-time and the lowest paid group are male part-timers.

**Table 3.1. Log average log hourly wages.**

<b>Groups</b>	<b>Ave hourly wage (logs)</b>
Males	2.460
Females	2.280
Full-Time workers	2.449
Part-Time workers	2.113
Female Full-Time workers	2.377
Male Full-Time workers	2.499
Female Part-Time workers	2.120
Male Part-Time workers	2.087

Source: WERS 2011.

<sup>5</sup> Full definitions of the variables are provided in Appendix Table A1.1.

Aggregate part-time pay is much more similar to the female part-time average than the male part-time average because working part-time is considerably more common in Britain for women than for men.<sup>6</sup> Dividing the data by gender and employment status (full-time versus part-time) in Table 3.1 reveals partially offsetting movements with gender and employment status (full-time or part-time) in the raw earnings gaps.

Table 3.2 presents the earnings gaps (or differences) in the average hourly pay of the comparison groups, taken from Table 3.1, measured in log percentage points (lpp) as an approximation of percentage differences which we use throughout the report. The average male hourly wage is 18% higher than the female hourly wage (2.46 - 2.28 from Table 3.1). In contrast, the pay gap between full-time and part-time employees is considerably larger at 33.6%.

**Table 3.2. Raw gender earnings gaps in log per cent.**

<b>Comparison groups</b>	<b>Total gap %</b>
Men versus Women	18.0
Male Full-Time versus Female Full-Time	12.22
Male Part-time versus Female Part-Time	-3.30
Full-Time versus Part-Time	33.60

*Source:* WERS 2011.

We can see from Table 3.1 that the gender earnings gap between full-time employees (12.2%) is larger than the gender gap between part-time employees. Indeed, the final row of Table 3.2 reveals a small gender earning gap between part-time employees of 3.3% which is actually in favour of women. These are the gender pay gaps that will be focussed on in the report below.

<sup>6</sup> In 2011, 39.8% of the women worked part-time and 10.5% of the men did as shown in Table 3.3. Full tables of summary statistics are provided in Appendix Tables A1.2 and A1.3.

## 3.2 The determinants of earnings

### 3.2.1 *Individual characteristics*

Most authors adopt the human capital model as the theoretical basis for the earnings function (Becker 1964). This approach will also be used here. At the individual employee level, it is assumed that wages increase with measures of the worker's accumulated skills via their work experience, education and training (Mincer and Polachek 1974).

Measures of work experience are usually assumed to be positively related to wages via the ability to acquire skills over the time period the employee has spent working. Typically, studies do not have data on the history of actual lifetime work experience across firms for individuals. Instead proxies are provided, the most common of which is potential experience: the age of the individual minus years spent in education and infancy. This may lead to difficulties interpreting the relationship between work experience and earnings if the individual was not actually employed during substantial parts of their life (such as the long-term unemployed or mothers who have taken time out of the labour force to care for their children (Joshi et al (1998)) or if the individual has spent substantial periods engaged in part-time rather than full-time employment (Olsen et al, 2018). WERS also does not have information on actual experience over one's working life; potential experience (age minus (education plus infant years)) is instead used and the results need to be interpreted with this caveat in mind. Educational achievement is identified by the highest qualification the individual has received and training by the number of days the individual has spent in employer-provided training in the last year. Table 3.3 provides sample means for some of the variables used in the report.<sup>7</sup> On average, British workers have some 24 years of work experience and 2.5 days of work experience a year. Part-time females have the least training (1.8 days) and full-time females the most (2.7 days). Some 32% of the workforce are graduates (22% with degrees and 10% post-graduate qualifications), but only 22% of the part-time females.

The earnings function is augmented with the inclusion of further categories of explanatory variables capturing individual employee characteristics such as demographic variables (including the presence of dependent children, marital status,

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<sup>7</sup> Full summary statistics are provided in Tables A1.2 and A1.3 of the Appendix.

ethnic identification, and physical disability); individual job characteristics (being on a fixed term contract, and trade union membership); and occupation.

To draw out a few of the differences revealed in Table 3.3, we can see that 69% of the workforces are married (or cohabitating); 72% of full-time men and 57% of part-time men. Having children is common especially amongst the full-time men and the part-time women. And almost one in five of the part-time women has a long-term disability. Ethnicity differs quite dramatically between part-time employees with 16% of these men and 6% of the women reporting a non-white ethnic background. Working on a fixed term contract is considerably more likely for part-time men, twice as prevalent as for any other group. There are also major differences in the occupations that full and part-time workers have, and between males and females. We will return to discuss these occupational differences in detail below.



**Table 3.3. Sample means.**

	full sample	full-time		part-time	
		male	female	male	female
log hourly pay	2.370	2.499	2.377	2.087	2.120
potential work experience	24.195	24.646	22.404	24.963	25.896
training days	2.482	2.644	2.741	1.927	1.804
<i>Education measures:</i>					
none	0.031	0.036	0.019	0.051	0.032
vocational	0.120	0.128	0.098	0.144	0.131
cse25	0.092	0.101	0.075	0.097	0.093
cse1	0.273	0.252	0.281	0.196	0.332
gceae	0.042	0.032	0.048	0.045	0.054
gce2ae	0.086	0.073	0.098	0.092	0.097
degree	0.224	0.234	0.258	0.207	0.150
postgrad	0.101	0.111	0.105	0.111	0.066
other	0.031	0.032	0.018	0.058	0.045
child 0-4	0.130	0.157	0.071	0.109	0.169
child 5-11	0.110	0.123	0.068	0.080	0.159
child 12-18	0.116	0.120	0.104	0.055	0.143
married	0.688	0.723	0.649	0.567	0.696
disabled	0.013	0.011	0.013	0.016	0.018
ethnic	0.086	0.086	0.093	0.156	0.060
fixed term contract	0.036	0.031	0.038	0.071	0.035
current job tenure	5.587	5.765	5.484	4.480	5.609
trade union member	0.284	0.297	0.278	0.231	0.274
workplace age	39.208	38.741	40.785	34.819	38.819
workplace size	639.086	684.953	691.368	484.491	481.258
multisite	0.735	0.732	0.742	0.739	0.729
foreign owned	0.145	0.191	0.135	0.064	0.071
increasing market	0.238	0.228	0.250	0.301	0.227
reward wages	0.331	0.275	0.386	0.310	0.381
family friendly index	1.604	1.614	1.674	1.455	1.500
employer interaction index	2.386	2.426	2.427	2.180	2.272
industrial relations index	1.750	1.819	1.756	1.628	1.606
equal opportunity	0.922	0.920	0.938	0.869	0.917
relative female workplace	0.513	0.329	0.643	0.463	0.751
relative female occupation	0.543	0.440	0.621	0.546	0.659
<i>Occupations:</i>					
Managerial	0.081	0.110	0.084	0.032	0.018
Professional	0.185	0.203	0.200	0.125	0.133
Technical	0.167	0.188	0.190	0.108	0.095
Clerical	0.174	0.080	0.283	0.093	0.238
Craft Service	0.067	0.130	0.012	0.046	0.012
Personal Service	0.079	0.024	0.092	0.098	0.184

**Table 3.3. Sample means, continued.**

	full sample	full-time		part-time	
		male	female	male	female
Sales & Customer	0.070	0.032	0.068	0.120	0.151
Operative & Assembly	0.067	0.129	0.016	0.042	0.008
Unskilled	0.110	0.104	0.055	0.337	0.160
<i>Industries:</i>					
Manufacturing	0.123	0.205	0.077	0.028	0.027
Electricity	0.003	0.005	0.002	0.000	0.001
Water supply	0.006	0.010	0.004	0.003	0.001
Construction	0.037	0.062	0.018	0.014	0.011
Retail	0.141	0.121	0.122	0.226	0.198
Transportation	0.062	0.102	0.029	0.099	0.012
Accommodation	0.043	0.031	0.039	0.132	0.052
Communication	0.041	0.049	0.048	0.021	0.015
Financial	0.049	0.053	0.062	0.016	0.025
Real estate	0.044	0.044	0.053	0.032	0.034
Professional	0.087	0.103	0.098	0.027	0.043
Clerical	0.033	0.034	0.032	0.056	0.028
Public	0.071	0.065	0.086	0.035	0.070
Education	0.116	0.054	0.141	0.140	0.214
Health	0.115	0.041	0.160	0.106	0.220
Arts	0.017	0.011	0.015	0.039	0.029
Other community	0.013	0.009	0.015	0.026	0.019
<i>Regions:</i>					
North East	0.040	0.042	0.037	0.037	0.040
North West	0.137	0.138	0.133	0.133	0.134
Yorkshire & The Humber	0.072	0.064	0.072	0.072	0.088
East Midlands	0.071	0.080	0.054	0.054	0.076
West Midlands	0.070	0.064	0.069	0.069	0.087
East Of England	0.094	0.105	0.076	0.076	0.099
London	0.155	0.172	0.171	0.171	0.085
South East	0.135	0.117	0.154	0.154	0.150
South West	0.088	0.084	0.090	0.090	0.098
Scotland	0.094	0.099	0.094	0.094	0.090
Wales	0.044	0.036	0.049	0.049	0.054
No. observations	17763	7048	5955	827	3933

Source: WERS 2011.

### 3.2.2 Workplace characteristics

A range of workplace characteristics are included in the analyses. These can be grouped in to two broad categories: those common across workplaces (industry and region) and those that are workplace specific. Similar to occupation, there are strong gender differences in the industries British workers are employed in. We will return to consider

these in detail below. It is worth noting that there are some industries with very few part-time or female employees, especially part-time female employees, (such as Electricity, Water supply, Construction and Transportation). This is going to prevent us being able to construct some of the more detailed decompositions etc below.

The workplace specific characteristics can be considered in clusters: physical and market conditions; high performance workplace practices; and industrial relations measures.

Physical and market conditions are captured by: workplace age; workplace size; whether the firm has multiple UK work sites; whether the workplace is foreign controlled; and whether the workplace is facing increasing market demand. Except for increasing market demand (which is more common for part-time male employees), full-time female workers are most likely to work in workplaces with higher average values for these variables.

High performance workplace practices are practices which have been found to be positively associated with employee wages and are argued to be associated with increased productivity (Freeman and Lazear, 1995; Black and Lynch, 2004). The measures of high performance included are: an index of family friendly practices; an index of the extent of employer and employee interaction; and employee perception of what salary is based on (seniority or job grade). Full-time are the most likely to work in a high performance workplace; these women register higher on the family friendly index, wages being based on seniority, and on (just) the employer interaction index. Workplace industrial relations measures include: an index of industrial relations (IR) measures (full time males register highest); and whether or not the workplace has a formal written equal opportunity policy (most common for the workplaces full-time women work in).

### **3.3 Summary**

Much of the difference between full-time and part-time employees comes from the characteristics of the female part-time workforce. These women have fewer university degrees, are less likely to be from a non-white ethnic background, and have longer

current job tenure (than part-time males). They are much more likely to have a young dependent child and to work as clerks, in sales or in personal services. They are concentrated in the retail trades, education, and the health sectors. They are also very likely to work in female dominated workplaces and occupations.

In contrast, part-time males tend to be younger, single, on a fixed term contract, not be a trade union member, and be employed in sales or unskilled occupations. Compared with male full-time employees they are also much more likely to work in a female dominated workplace or occupation. We want to consider how these differences impact on earnings and on the gender pay gap. We turn to this analysis next.

## 4. Estimating earnings

### 4.1 The earnings function

The earnings equations that are estimated in this study are semi-logarithmic versions of:

$$W_i = \alpha + X_i\beta + Z_k\gamma + \varepsilon_i \quad (1)$$

where  $W_i$  is the natural log of the average hourly earnings of individual  $i$ ;  $X_i$  is a vector of regressors measuring a range of individual characteristics;  $Z_k$  is a set of workplace characteristics; and  $\varepsilon_i$  is a residual term. The role of the workplace is handled through  $Z_k$  including the workplace common characteristics (industry and region) and the set of workplace specific characteristics descriptive of the physical market condition, high performance workplace practices, and the industrial relations measures.<sup>8</sup> The models are estimated using ordinary least squares applying appropriate weights reflecting the design of the dataset.

We begin with a pooled regression for all employees including a gender indicator, Earning functions are also estimated separately for each of the groups of employees, male and female, full-time and part-time. Pooling of models for males and females is a common approach (see Bayard et al. 2003, for example). We take the view that models

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<sup>8</sup> We also consider workplace specific fixed effects when we discuss decomposing the gender pay gap; the  $Z_k$  are then fixed workplace specific effects and the estimates  $\hat{\beta}$  are therefore within workplace estimates of the impact of the individual characteristics

for part-time and full-time employees may be more likely to produce different parameters than those for all employees allowing us to more fully capture gender differences in the rate of return from particular characteristics. This is borne out in the results presented below.

#### **4.2 Estimation results; earnings functions.**

The estimates of the various earnings models for each of the groups of employees are presented in Table 4.1 (fuller results are provided in Table A1.3 of the Appendix). The standard errors reported are robust to heteroskedasticity in the residuals of an unknown form and all estimates employ complex survey weights.

Column 1 of Table 4.1 presents estimation results for all of the workers pooled together, the coefficient of -0.07 for female means that females are on average earning 7 per cent less than males after allowing for all the differences in the characteristics that we expect to impact on wages and are discussed in section 3 above. The coefficient being in bold means that the estimate is statistically significantly different from zero at, at least, the 90% confidence level. Some of the coefficients in column 1 are either not statistically significant (such as training which would otherwise imply an extra day's training would increase wages by 0.3%) and/or they are not substantial in size (such as having a child aged between 7 and 11 years).

Beginning with the results for the individual characteristics, the estimates demonstrate the standard feature of the human capital model that earnings are increasing in potential experience; an extra year's work experience would increase wages by 2%, but at a decreasing rate (as shown by a positive coefficient on the level of potential experience and a small negative parameter on the squared level of potential experience). Higher educational achievement is found to be related to greater earnings, compared to the omitted minimal education level (the baseline), having vocational qualifications leads to 7% higher wages but having a degree is only associated with 29% more than the baseline.

We can continue analysis of the results in this manner in each of the columns in Table 4.1, for detailed examination of each of the main sub-groups of employees. Reading across the columns provides interesting comparative findings. Higher

educational achievement is found to be related to greater earnings for all employees, although this relationship is typically greater for full-time females and lower for part-time employees. Having a degree increases wages by 35% for full-time females and by some 19% for part-time workers. Training is found to only be positively related to higher wages for women working full-time.

The demographic variables have mixed associations with earnings. Having children aged between 12 and 18 is negatively related to earnings only for women, in particular, for women working full-time. However, having an infant (aged 0-4) is positively associated with wages for female full-time employees. There is typically a positive association between being married or partnered and higher wages, some 3% for women and 7.7% for men (Korenman and Neumark 1991), but not for part-time females. For part-time males the marriage premium is particularly strong at 14%. Being disabled is significantly related to wages only for full-time women, where it is associated with a substantial 15% lower wages (Jones et al, 2006). The impact of being non-white also appears to be gendered, in this case lowering the wages of full-time male workers by some 9% but not related to women's wages. Whilst working part-time is associated with lower earnings for both gender, 5% less for women and 9% less for men.

Considering individual job characteristics, the return from an extra year of current job tenure is similar across all the groups of employees, although it is not statistically significant for part-time employees. The strong positive impact from being a member of a trade union found for part-time male employees in 2004 (Mumford and Smith, 2009) is not apparent in 2011. Instead, it is only female trade union members who are receiving higher wages on average in 2011; 4.3% more for full-time female employees and 6.6% for those females working part-time. Finally, being on a fixed term contract is only found to be significantly related to wages for part-time females, where it is associated with 9% lower wages.

**Table 4.1 Earning function estimates.**

log hourly pay	Total coeff (1)	Female coeff (2)	Male coeff (3)	Full-time		Part-time	
				Male coeff (4)	Female coeff (5)	Male coeff (6)	Female coeff (7)
Female	<b>-0.071</b>						
potential experience	<b>0.022</b>	<b>0.021</b>	<b>0.024</b>	<b>0.027</b>	<b>0.027</b>	0.006	<b>0.014</b>
pot exp sqd (x1000)	<b>-0.342</b>	<b>-0.345</b>	<b>-0.373</b>	<b>-0.402</b>	<b>-0.456</b>	-0.164	<b>-0.214</b>
Training	0.003	<b>0.005</b>	0.002	0.002	<b>0.006</b>	0.005	0.002
Education minimal is omitted							
Vocational	<b>0.074</b>	<b>0.052</b>	<b>0.092</b>	0.083	<b>0.114</b>	<b>0.162</b>	-0.018
CSE25	<b>0.140</b>	<b>0.136</b>	<b>0.135</b>	<b>0.127</b>	<b>0.221</b>	0.159	0.049
CSE1	<b>0.137</b>	<b>0.132</b>	<b>0.136</b>	<b>0.139</b>	<b>0.217</b>	0.079	0.044
CEAE	<b>0.181</b>	<b>0.187</b>	<b>0.170</b>	<b>0.183</b>	<b>0.239</b>	0.042	<b>0.135</b>
CE2AE	<b>0.192</b>	<b>0.185</b>	<b>0.191</b>	<b>0.183</b>	<b>0.284</b>	<b>0.223</b>	0.073
Degree	<b>0.289</b>	<b>0.273</b>	<b>0.297</b>	<b>0.312</b>	<b>0.353</b>	<b>0.199</b>	<b>0.193</b>
Postgrad	<b>0.337</b>	<b>0.363</b>	<b>0.316</b>	<b>0.342</b>	<b>0.446</b>	0.134	<b>0.264</b>
Other	0.042	0.055	0.037	0.038	<b>0.215</b>	0.075	-0.073
Child 0-4	<b>0.043</b>	<b>0.068</b>	0.016	0.029	<b>0.062</b>	-0.072	0.055
Child 5-11	0.007	-0.006	0.007	0.016	0.003	-0.012	-0.012
Child 12-18	-0.011	<b>-0.036</b>	0.006	0.002	<b>-0.036</b>	0.087	-0.035
Married	<b>0.052</b>	<b>0.033</b>	<b>0.077</b>	<b>0.072</b>	<b>0.037</b>	<b>0.138</b>	0.037
Disabled	<b>-0.087</b>	-0.056	-0.121	-0.118	<b>-0.151</b>	-0.017	0.068
Ethnic	<b>-0.063</b>	-0.021	<b>-0.095</b>	<b>-0.087</b>	-0.021	-0.144	-0.022
Part-time	<b>-0.066</b>	<b>-0.053</b>	<b>-0.088</b>				
Tenure	<b>0.013</b>	<b>0.013</b>	<b>0.012</b>	<b>0.012</b>	<b>0.011</b>	0.009	<b>0.015</b>
Union	<b>0.037</b>	<b>0.057</b>	0.008	0.008	<b>0.043</b>	0.036	<b>0.066</b>
Fixed Contract	-0.051	<b>-0.060</b>	-0.043	-0.047	-0.041	0.018	<b>-0.091</b>
Clerical is omitted							
Managerial	<b>0.323</b>	<b>0.296</b>	<b>0.372</b>	<b>0.342</b>	<b>0.274</b>	<b>0.660</b>	<b>0.342</b>
Professional	<b>0.321</b>	<b>0.302</b>	<b>0.362</b>	<b>0.331</b>	<b>0.263</b>	<b>0.724</b>	<b>0.379</b>
Technical	<b>0.217</b>	<b>0.191</b>	<b>0.274</b>	<b>0.246</b>	<b>0.161</b>	<b>0.490</b>	<b>0.260</b>
Craft	0.037	<b>-0.090</b>	<b>0.100</b>	<b>0.083</b>	-0.064	0.186	-0.080
Personal	<b>-0.174</b>	<b>-0.196</b>	<b>-0.120</b>	<b>-0.154</b>	<b>-0.233</b>	0.016	<b>-0.139</b>
Sales	<b>-0.137</b>	<b>-0.186</b>	0.004	0.037	<b>-0.160</b>	-0.140	<b>-0.197</b>
Operative	<b>-0.127</b>	<b>-0.246</b>	<b>-0.063</b>	<b>-0.080</b>	<b>-0.190</b>	-0.019	<b>-0.385</b>
Unskilled	<b>-0.216</b>	<b>-0.245</b>	<b>-0.148</b>	<b>-0.169</b>	<b>-0.203</b>	-0.084	<b>-0.263</b>
Manufacturing is omitted							
Electricity	<b>0.302</b>	<b>0.319</b>	<b>0.287</b>	<b>0.285</b>	<b>0.330</b>	0.437	<b>0.238</b>
Water Supply	0.105	<b>0.353</b>	0.028	0.010	<b>0.336</b>	0.641	0.405
Construction	<b>0.089</b>	0.028	<b>0.096</b>	<b>0.103</b>	0.075	-0.135	-0.123
Retail	<b>-0.078</b>	<b>-0.085</b>	-0.067	-0.064	-0.058	-0.287	<b>-0.140</b>
Transport	<b>0.082</b>	<b>0.135</b>	0.056	<b>0.071</b>	0.087	-0.358	<b>0.224</b>
Accommodation	<b>-0.201</b>	<b>-0.179</b>	<b>-0.214</b>	<b>-0.210</b>	<b>-0.264</b>	<b>-0.506</b>	-0.128

**Table 4.1 Earning function estimates, continued.**

	Total coeff (1)	Female coeff (2)	Male coeff (3)	<u>Full-Time</u>		<u>Part-Time</u>	
				Male coeff (4)	Female coeff (5)	Male coeff (6)	Female coeff (7)
				Communication	<b>0.087</b>	0.034	<b>0.129</b>
Financial	<b>0.153</b>	0.099	<b>0.211</b>	<b>0.213</b>	0.091	0.153	0.128
Real Estate	<b>0.104</b>	<b>0.115</b>	<b>0.107</b>	<b>0.115</b>	<b>0.130</b>	-0.277	0.045
Professional	<b>0.119</b>	<b>0.121</b>	<b>0.123</b>	<b>0.125</b>	<b>0.111</b>	-0.114	<b>0.168</b>
Education	<b>-0.079</b>	<b>-0.082</b>	-0.049	-0.031	-0.038	<b>-0.548</b>	<b>-0.155</b>
Health	-0.040	-0.017	<b>-0.096</b>	<b>-0.070</b>	-0.008	<b>-0.462</b>	-0.069
Arts	<b>-0.146</b>	<b>-0.183</b>	<b>-0.081</b>	<b>-0.081</b>	<b>-0.192</b>	<b>-0.476</b>	<b>-0.206</b>
Other Community	-0.057	-0.056	-0.067	-0.043	-0.072	<b>-0.516</b>	-0.054
Workplace Age	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Workplace Size	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
Multi Site	0.014	0.001	0.037	0.037	0.025	0.008	-0.028
Foreign Owned	<b>0.085</b>	<b>0.098</b>	<b>0.067</b>	<b>0.071</b>	<b>0.118</b>	0.082	0.021
Increasing Market	<b>-0.040</b>	<b>-0.048</b>	-0.020	-0.008	<b>-0.061</b>	<b>-0.115</b>	-0.026
Reward Wages	0.017	0.024	0.016	0.007	0.023	0.044	0.033
Family Friendly Index	<b>0.028</b>	<b>0.029</b>	<b>0.030</b>	<b>0.034</b>	<b>0.028</b>	0.009	<b>0.033</b>
Interaction Index	<b>0.025</b>	<b>0.030</b>	0.018	0.013	<b>0.035</b>	<b>0.065</b>	0.022
Industrial Relations Index	0.012	0.000	<b>0.025</b>	<b>0.023</b>	-0.002	0.038	0.005
Equal Opps	0.022	-0.005	0.031	0.029	0.024	0.013	-0.025
East Midlands is omitted							
North East	-0.008	-0.048	0.025	0.022	-0.038	0.160	-0.058
North West	-0.010	-0.028	0.018	0.033	-0.030	-0.076	-0.036
Yorkshire & The Humber	0.008	-0.021	0.050	0.045	-0.006	0.167	-0.041
West Midlands	-0.017	-0.024	-0.003	0.000	-0.009	0.010	-0.046
East of England	0.052	0.019	<b>0.086</b>	<b>0.080</b>	0.017	0.185	0.017
London	<b>0.167</b>	<b>0.147</b>	<b>0.192</b>	<b>0.174</b>	<b>0.171</b>	<b>0.340</b>	0.101
South East	<b>0.074</b>	0.054	<b>0.104</b>	<b>0.097</b>	0.064	<b>0.185</b>	0.025
South West	0.010	-0.026	0.050	0.041	-0.034	<b>0.180</b>	-0.001
Scotland	<b>0.071</b>	0.041	<b>0.101</b>	<b>0.101</b>	0.059	0.101	0.020
Wales	-0.024	-0.066	0.039	0.030	-0.068	0.107	-0.072
Constant	<b>1.545</b>	<b>1.584</b>	<b>1.392</b>	<b>1.385</b>	<b>1.413</b>	<b>1.664</b>	<b>1.755</b>
PSUs	1820	1820	1820	1820	1820	1820	1820
No. observations	17763	9888	7875	7048	5955	827	3933
Degrees freedom	1819	1819	1819	1819	1819	1819	1819
R-squared	0.501	0.489	0.513	0.499	0.481	0.512	0.459

Source: WERS 2011. Bold indicates significance at the 5% level.



### *Occupation.*

A number of authors have identified an important role for occupations in explaining both the male/female and full-time/part-time earnings gaps (Bergman 1974; Mumford and Smith 2007 and 2009; for comprehensive and recent surveys see Goldin (2014) and Blau and Kahn (2017). We also find occupation is significantly associated with earnings. We omit the Clerical occupational group and all parameters are therefore estimates of the difference between earnings in Clerical occupations and those associated with any particular occupation. These are typically estimated to be positive for Technical, Professional and Managerial occupations and negative for the remainder.

The differences in the returns relative to being a Clerk from the various occupations can be seen to be larger for part-time compared with full-time employees, substantially so for the additional earnings associated with Managerial and Professional occupations. These are within group comparisons, however, so male part-timers who are working as Managers are earning 66% more than those male part-timers who are working as Clerks. Females working as Managers part-time are only earning 34% more, this may be because female part-time Clerks are earning relatively more or that the female part-time Managers are receiving a lower premium. We will be able to consider the sources of these differences more fully when we can compare across genders in the decomposition analysis presented in section 5 below.

### *Workplace characteristics.*

The characteristics of the workplace included are the workplace common characteristics (industry and region) and the set of workplace specific characteristics descriptive of the physical market condition, high performance workplace practices, and the industrial relations measures. Starting with industry, the estimates show that, when compared with the Manufacturing sector, the Accommodation sector pays the lowest for full-time employees having allowed for the individual characteristics of those employees and their occupations. And, compared to working in Manufacturing, male full-time earnings are highest in Financial Services whilst female full-time employees working in the Utility sector are the highest earning. In contrast, Manufacturing is a relatively high pay sector for part-time males, as indicated by the range of substantial significant penalties of working in other sectors for these men. Similar to occupation, these are within sector comparisons. When we carry out the decomposition analysis across genders in section 5, the potential role of gender segregation across industries on wages will become clearer.

Amongst the workplace specific characteristics the results are mixed. It is notable that larger workplaces are associated with higher wages for all employees, and that foreign owned workplaces are associated with significantly higher earnings for full-time (but not part-time) employees. Increased presence of family friendly practices in the workplace is associated with significantly higher earnings (some 3%) for all but part-time male employees. The index measuring the extent of high performance interaction between employees in the workplace has a positive and significant impact on earnings for female full-time and part-time males. In this sense higher quality workplaces appear not to be consistently rewarding individuals more highly. And the industrial relations index suggests the presence of a trade union in the workplace appears not to have an impact on earnings, over and above whether the individual worker is a union member, for all except full-time male employees. Furthermore, the presence of an equal opportunities policy has no significant impact in these results. This confirms the analysis of Mumford and Smith (2007) using WERS 1998 data who find no significant impact of such a policy on the earnings gap between all male and all female employees, and similarly Mumford and Smith (2009) using WERS 2004 data.

Considering the regions workers are employed in, the omitted category is the East Midlands. Unsurprisingly given the prevalence of London pay loadings, earnings in London are typically higher than in the East Midlands. These findings are particularly so for part-time male employees; the London loading is worth 34% log percentage point more earnings for part-time males, and 17 log percentage points more for full-time males and females. For males, there is also a significant gain associated with working in the South East, again this gain is roughly twice as high for part-time male as for full-time employees. Male part-time employees also see a significant wage gain associated with working in the South West relative to the East Midlands. The regional gaps are not significantly different for part-time female employees.

## 5. Decomposition analysis.

### 5.1 Decomposing the gender pay gap

The estimation results for the groups of employees in Table 4.1 allow us to examine a number of earnings gaps. The approach we adopt to apportion the gap in the mean earnings of any two groups is that discussed in Oaxaca and Ransom (1994). In general, the decomposition of the mean earnings gap between groups of employees  $a$  and  $b$  is calculated as:

$$\bar{W}_a - \bar{W}_b = \left\{ \left( \bar{X}_a - \bar{X}_b \right) \hat{\beta}_a + \left( \bar{Z}_a - \bar{Z}_b \right) \hat{\gamma}_a \right\} + \left\{ \bar{X}_b \left( \hat{\beta}_a - \hat{\beta}_b \right) + \bar{Z}_b \left( \hat{\gamma}_a - \hat{\gamma}_b \right) \right\} \quad (2)$$

for the model described in equation (1) above. In this calculation  $(\bar{X}_a - \bar{X}_b)\hat{\beta}_a$  captures the impact of the difference in the individual characteristics weighted by the parameters from the model for group  $a$ ;  $(\bar{Z}_a - \bar{Z}_b)\hat{\gamma}_a$  captures the impact of the difference in the characteristics of the workplaces where groups  $a$ ,  $b$  work, again weighted by the parameters from the model for group  $a$ ; and  $\{\bar{X}_b(\hat{\beta}_a - \hat{\beta}_b) + \bar{Z}_b(\hat{\gamma}_a - \hat{\gamma}_b)\}$  is the remaining unexplained gap.<sup>9</sup>

The part of the earnings gap for each of the models unexplained is the difference between the parameters for each group evaluated at the mean level of the characteristics for the lower average earnings group. This unexplained (or residual) component of the decompositions reflects differences in returns in terms of earnings for any given characteristic and is often described as the pure gender or discrimination effect.

### 5.2 Decomposition results.

The decompositions are presented in Table 5.1, each row in the table presents one of the bilateral earnings gaps of interested. Numbers in bold are significantly different from zero at the 95% confidence level. Thus, the first row compares male full-time workers with female full-time workers. The earnings gap between these groups of workers is 12.22% in favour of the males. Of this gap, 1.42 percentage points is due to this group of males having more productive

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<sup>9</sup> Fuller decomposition results are provided in the Appendix Tables A2 to A8. As pointed out by Jann (2008) amongst others, there is a problem in interpreting the results for categorical variables where the results may depend on the choice of omitted category. We adopt the solution proposed by Jann, and implemented in Stata, that takes the standard coefficient estimates and computes the elasticities for all categories including the omitted category by reweighting.

characteristics than the corresponding females and 1.75 percentage points is associated with their working in higher paid industries than the females. The remaining 9.83 percentage points, clearly the major component of the gap, is unexplained and is due to the females' characteristics (as estimated in our earnings function) being rewarded at a lower rate than are the characteristics of males. To reiterate, the model does not explain why they are being rewarded differently, hence the term 'unexplained'.

The results for male part-timers relative to female part-timers are very different. These males earn 3.30% less than the females (although this difference is not statistically significant). This gap is decomposed into the individual characteristics component of -3.92 percentage points and the insignificant unexplained residual of 2.64 percentage points or, in other words, male part-time employees have less productive characteristics than do part-time females, but the males receive higher rewards for these characteristics.

**Table 5.1 Decomposing the earnings gaps.**

Model	Difference	Explained					Unexplained
	Gap	Indiv Char	Occup	Industry	Workplace	Region	Total
Male Full-Time vs Female Full-Time	<b>12.22</b>	<b>1.42</b>	-0.98	<b>1.75</b>	0.26	-0.05	<b>9.83</b>
Male Part-time vs Female Part-time	-3.30	<b>-3.92</b>	-3.93	1.86	-0.62	0.66	2.64
Male versus Female	<b>17.95</b>	<b>3.19</b>	<b>3.44</b>	<b>3.13</b>	0.66	0.43	<b>7.09</b>

Source: WERS 2011. Bold indicates significance at the 5% level.

For workers with the same employment status, difference in occupation is associated with a relatively small component of the gender pay gap. Amongst full-time employees, difference in occupation for men and women is associated with 0.98 of the overall pay gap of 12.22%; amongst part-time employees it is a very considerable -3.92 compared to a total of -3.30%. Comparing part-time and full-time employees reveals a much larger role for occupation in the explained pay component of the gender pay gap. Full-time employees work in occupations associated with higher pay whilst part-time employees are concentrated in lower paid occupations, this is especially true for male part-time employees. Occupation is found to be important for pay differences between full and part-time employees.

Working in higher paying industries also provides a substantial component of the gender earnings gaps. In general, women work in lower paid industries than do men. This is true for full-time and part-time employees but not significantly so for part-timers. From our results, the overall impact of the workplace is that full-time male employees work in workplaces with characteristics associated with higher earnings relative to the workplaces of their female counterparts. Also, male part-time employees tend to work in workplaces paying lower wages than do part-time females. Finally, the geographical region in which the workplace is situated explains only a small proportion of the gender earnings gap for full-time employees, and a larger but still statistically insignificant amount for part-time employees.

As discussed above, a part of the earnings gap for each of the models remains unexplained; this is the difference between the parameters for each group evaluated at the mean level of the characteristics for the lower average earnings group. This unexplained (or residual) component of the decompositions reflects differences in returns in terms of earnings for any given characteristic and is often described as the pure gender or discrimination effect. In our results, the discrimination component improves the salary of the males relative to the females. This finding is true for all of the across gender comparisons we make; the discrimination component is always associated with males having higher wages than females.

We find the greater part of the pay gap between full-time male and female workers is unexplained. The contrast between the full and part-time pay gaps is that the part-time gap is negative. However, given the individual characteristics and occupations of the part-time employees, there remains a small unexplained pay gap in favour of men.

### **5.3. More detailed decompositions.**

The results presented so far indicate a complex relationship between occupation, industry and workplace in determining the earnings gaps. In this section, we seek to better understand the roles of these factors by further exploring the gender earnings gap for all employees within occupations; within industries; within regions; and within workplace types.<sup>10</sup>

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<sup>10</sup> Appendix 2 contains full information on these earnings differentials, and decompositions of the earnings gap, for the more detailed variable definitions and/or sub-samples.

We begin with the within-occupation decompositions. Table 5.2 provides decomposition information for differences in the means of the observed characteristics (the explained components) and the total remaining unexplained component.<sup>11</sup> Results are reported in Table 5.2 for the nine major occupation classifications<sup>12</sup>, and for the combined manual and non-manual occupations. However, some of these occupations have relatively few comparison employees in the data set. For example, if we focus only on those occupations employing at least 4% of the potential total male or female workforces (see Appendix 1 Table A1.3) we would exclude Craft Services (with only 1.2% of females); Personal Services (3.1% of males); and Operative and Assembly (1.3% of females) from the analysis. With small sample sizes some of the differences discussed below are not statistically significant at standard confidence levels.<sup>13</sup> In Table 5.2 the components of the decomposition that are significantly different at the 95% confidence level are presented in bold.

Reading down the first column of Table 5.2, we can see there are considerable differences in the raw gender earnings gaps across occupations. With the exception of Clerical, all of these within occupation earnings gaps are statistically significant. Furthermore, within every occupation on average men earn more than women.

Considering the first row of results in Table 5.2, within the Managerial occupation the total raw earnings gap between men and women is 15.99% (first column), of these 7.09 points are unexplained (last column) implying that some 8.9 points are explained (the sum of the explained components). The only statistically significant, and the major, difference in the observed (explained characteristics) is 5.71 points associated with industry; male Managers are considerably more likely to work in higher paying industries than are female Managers.

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<sup>11</sup> The more detailed Table A2.3 in the Appendix also provides information on the separate components making up the unexplained gap.

<sup>12</sup> WERS comes with the standard 9 occupation classifications, however, it also provides information on a 25 level classification. We explored increasing the number of occupation categories (from 9 to 25) in the estimation of the earning functions and find that this, perhaps unsurprisingly, does not significantly affect the components of the decompositions for any of the group comparisons (see Appendix 2, Table A2.2). Concentrating on specific occupations there are, however, some notable differences comparing male and female earnings, and full-time versus part-time employees, within the nine occupations that were the focus of the previous analysis. Table 5.2 summarises these findings, more detailed results are provided in Appendix 2 Tables A2.3 and A2.4.

<sup>13</sup> Full results with standard errors are presented in Appendix Tables A2.3 and A2.4.

**Table 5.2. Decomposing the gender earnings gap for each occupation, selected results.**

	Difference	Explained				Unexplained
	Gap	Individual	Industry	Workplace	Region	Total
Managerial	<b>15.99</b>	0.92	<b>5.71</b>	0.33	1.94	<b>7.09</b>
Professional	<b>12.06</b>	1.10	<b>3.30</b>	0.85	0.19	<b>6.62</b>
Technical	<b>12.77</b>	1.19	1.86	0.75	0.61	<b>8.36</b>
Clerical	1.83	1.42	0.66	-0.07	1.23	-1.41
Craft Service	<b>36.98</b>	<b>6.03</b>	<b>8.62</b>	0.61	-0.29	<b>22.00</b>
Personal Service	<b>6.45</b>	-2.82	2.46	0.79	1.68	4.34
Sales&Customer	<b>24.77</b>	4.09	<b>4.33</b>	1.01	0.04	<b>15.28</b>
Operative&Assembly	<b>24.03</b>	<b>5.93</b>	2.55	-2.74	0.64	<b>17.66</b>
Unskilled	<b>20.73</b>	<b>6.35</b>	<b>8.20</b>	0.36	1.05	4.77
Manual Workers	<b>27.41</b>	<b>6.37</b>	<b>7.49</b>	<b>1.51</b>	0.26	<b>11.78</b>
Non Manual Workers	<b>24.56</b>	<b>7.54</b>	<b>2.55</b>	<b>0.99</b>	<b>1.02</b>	<b>12.46</b>

Source: WERS 2011. Bold indicates significance at the 5% level.

Analysis of this type can be continued for each of the rows in Table 5.2 addressing the different occupations' gender pay gap. Whereas reading down the columns in Table 5.2 allows us to generalise about which component types are more likely to be important in the decompositions. Typically workplace or regions are not relevant amongst the explained components (either in size of the relationship or being statistically significant). As discussed above, this may be related to there being few employees in the subcategories being considered.

Overall, we find that the significant pay gaps in the major occupational groups are associated strongly with the industry in which the individual works as well as their individual characteristics. There also remains a significant unexplained component in nearly all occupations. In particular, women work in industries which reward their occupations less well than men. These differences are true for both manual and non-manual occupations.

Following on from Table 5.2, the table layouts are the same in Table 5.3 (for industry), Table 5.4 (region), and Table 5.5 (workplaces type and female segregation at the workplace level); we discuss these findings next.

Industries hiring less than 4% of the total, female or male work force are dropped from Table 5.3 (full results for all the industries are included in Appendix 2 Table A2.5). Finance has the largest gender pay gap at 35.6%, whilst occupation is associated with almost 9% of the explained gap, there is a very substantial (but statistically insignificant) component associated with the workplace consistent with high wage workers working in high wage workplaces. The relatively large regional impact (compared to other industries) may reflect the concentration of financial services in London.

Reading down the columns of Table 5.3, we can see that occupation plays a significant

**Table 5.3. Decomposing the earnings gap for each industry, selected results.**

	Difference	Explained				Unexplained
	Gap	Indiv Char	Occupation	Workplace	Region	Total
Manufacturing	<b>17.87</b>	3.61	1.02	2.02	-0.07	<b>11.29</b>
Retail	<b>21.15</b>	<b>4.56</b>	<b>3.84</b>	2.62	1.25	<b>8.88</b>
Financial	<b>35.64</b>	2.98	<b>8.91</b>	5.66	3.57	<b>14.52</b>
Real estate	<b>14.76</b>	2.89	<b>5.88</b>	0.30	2.61	3.09
Professional	<b>21.78</b>	3.95	<b>7.76</b>	1.20	2.79	<b>6.08</b>
Public	<b>6.80</b>	1.30	<b>6.57</b>	0.06	-0.52	-0.60
Education	<b>29.29</b>	<b>3.66</b>	<b>14.21</b>	<b>3.84</b>	0.70	<b>6.88</b>
Health	<b>9.12</b>	2.24	<b>4.92</b>	0.06	<b>1.77</b>	<b>0.13</b>

*Source:* WERS 2011. Bold indicates significance at the 5% level.

role in the explained component for all the within industry gaps with the exception of Manufacturing. This is a strong result and supports the finding from the discussion of occupations

above where, within occupations, industry was the most often the significant (and sizable) term in the explained component of the pay gaps. Of particular interest is the public sector, this has the lowest total gender earnings gap (6.8%) of which 6.6 is related to occupation. In contrast to Jones and Kaya (2019), using a different data set and time period, we find the remaining unexplained gap in the public sector is small, statistically insignificant, and suggests women may be enjoying a pay premium. This is a sector well worth additional exploration in



further work. Table 5.3 reveals that there is clearly a strong interaction between the observed occupation and industry for the pay determination of British workers.

In assessing differences in pay in different industries we find that women work in occupations which are not rewarded as well as those followed by men. To a lesser extent women have characteristics which are not rewarded as well as men. There remains an unexplained pay gap in most industries, apart from the public sector where occupational differences explain almost all of the pay gap.

**Table 5.4 Decomposing the gender earnings gap for each region, selected results..**

	Difference	Explained			Unexplained	
	Gap	Individual Characteristics	Occupation	Industry	Workplace	Total
North East	<b>16.71</b>	2.93	3.21	-1.01	3.12	<b>8.46</b>
North West	<b>16.60</b>	2.16	<b>4.47</b>	<b>4.07</b>	1.10	4.81
Yorkshire and Humber	<b>24.11</b>	3.15	4.44	<b>8.17</b>	3.09	5.25
East Midlands	6.93	0.00	1.94	<b>7.30</b>	-2.57	0.26
West Midlands	<b>13.16</b>	<b>3.72</b>	-3.09	3.37	2.75	6.41
East of England	<b>18.62</b>	<b>5.77</b>	-0.62	4.58	1.54	<b>7.35</b>
London	<b>11.48</b>	1.56	3.06	0.68	-0.55	<b>6.72</b>
South East	<b>22.08</b>	<b>4.07</b>	<b>8.85</b>	2.49	0.53	<b>6.15</b>
South West	<b>22.84</b>	<b>4.30</b>	3.66	2.64	1.56	<b>10.68</b>
Scotland	<b>20.59</b>	<b>6.80</b>	2.63	3.36	1.03	<b>6.77</b>
Wales	<b>19.88</b>	2.49	3.06	-2.50	4.40	<b>12.42</b>

Source: WERS 2011. Bold indicates significance at the 5% level.

Column 1 of Table 5.4 shows substantial differences in the raw gender pay gap within regions in Britain, ranging from 24% in Yorkshire and the Humber to (a statistically insignificant) 7% in the East Midlands. Another interesting finding here is the substantial gender differences in the distribution of individual characteristics associated with productivity and higher wages in different regions. In the East Midlands there is no difference across the genders in these characteristics, in sharp contrast to Scotland and the East of England. A similar, but less consistent pattern to that within occupation and within industry, is found for the joint importance of occupation and industry in many regions. Females are employed in industries in some regions which pay them significantly less than men, all other influences allowed for. This is striking in

Yorkshire and the Humberside and the East Midlands, in particular. Occupation is much more important in the South East and the North West. Individual characteristics dominate the pay gap in Scotland, the East of England and the South West. However, a large, significant unexplained component remains in all regions apart from the East Midlands where the raw pay gap is the smallest. We also find sizeable but not statistically significant effects related to the workplace suggesting there may be a gendered concentration of high wage workers working in high wage workplaces in these regions.

**Table 5.5 Decomposing the gender earnings gap for different workplace types, selected results.**

	<b>Difference</b>	<b>Explained</b>					<b>Unexplained</b>
	<b>Gap</b>	<b>Indiv Char</b>	<b>Occupation</b>	<b>Industry</b>	<b>Workplace</b>	<b>Region</b>	<b>Total</b>
High Wage Workplaces	<b>16.09</b>	<b>2.57</b>	<b>5.12</b>	<b>2.59</b>	0.10	-0.22	<b>5.92</b>
Low Wage Workplaces	<b>11.43</b>	<b>3.03</b>	1.03	<b>2.99</b>	0.02	0.10	<b>4.26</b>
High Proportion Female Workplaces	<b>17.40</b>	<b>4.15</b>	<b>6.26</b>	1.37	0.98	0.64	<b>4.00</b>
Low Proportion Female Workplaces	<b>6.98</b>	1.09	-1.03	0.59	0.01	-0.51	<b>6.83</b>

*Source:* WERS 2011. Bold indicates significance at the 5% level.

Table 5.5 presents decompositions within high-wage (or low-wage) workplaces and within disproportionately high (or low) female workplaces. A high (low) wage workplace is defined as a workplace where the average hourly pay is more (less) than 1.5 (0.5) times the average hourly pay across all workplaces. The raw gender pay gap is sizeable in high wage workplaces (16%), however, most of this gap is explained by men having more productive individual characteristics, working in higher paid industries and most importantly working in higher paid occupations within these workplaces. In low wage workplaces there is no notable occupation difference across the genders. In high proportion female workplaces there is again a strong link between the raw gender pay gap (17.4%) and men having more productive individual characteristics and working in higher paying occupations. There is no statistically significant role for industry. In low proportion female workplaces the story is very different: the raw gender pay gap is low (7%), there are no statistically significant components to explain the gap (the occupation component would suggest women are working in higher paid occupations in these workplaces), and the resultant unexplained gap is also 7%. This is actually the highest reported

unexplained gap in Table 5.5. The lowest unexplained gap is for low wage workplaces, it may be that at the bottom end of the pay distribution there is less scope to vary pay other than that related to observable characteristics associated with productivity, we consider the implications of this finding next.

#### **5.4 Summary.**

Our analysis of the gaps in pay within occupations and industries starts to tease out the major contributors to the enduring overall gender and full-time versus part-time pay gaps. We find that occupations with the highest proportion of women working in them, Clerical, Professional, Technical and Personal Services all show a significant positive overall gender pay gap. In these sectors, and some others, the industry in which the employee works explains a significant and substantial part of the pay gap. Differences in individual characteristics are also important in a number of sectors. A residual unexplained part of the gender pay gap in occupations remains in all occupations apart from Clerical and to a lesser degree Personal Services. Differences in the returns to individual characteristics, industry and workplace variables contribute to these unexplained gaps but not in a way that is consistent across occupations. When we aggregate occupations into manual and non-manual tasks we find that the explained gender pay gap is composed mostly by individual characteristics and industry in the case of manual workers and mostly by individual characteristics for non-manual staff. We also find that the unexplained gender pay gap for manual workers is driven mostly by differences in returns to individual characteristics whilst that for non-manual workers is due to differences in the returns to workplace characteristics.

We find that amongst the industries with the highest number of women working in them, some like Health, Education and Professional have a significant positive overall gender pay gap much of which is explained by the distribution of women across the occupations employed in the sector. Also, some sectors with large female representation like Retail, Professional and Education show a significant explained contribution from individual characteristics. However, of these sectors only Health has a small residual unexplained gender pay gap. In Professional, Education and Retail there are large positive contributions to the residual or unexplained gap due to differences in the returns to individual characteristics or occupations. In Retail, Education and Health which show the largest number of part-time workers, occupation and workplace explain

a large part of the gap whilst a significant residual gap is due to differences in the returns to individual characteristics in Education and Health and to differences in returns to workplace characteristics in Retail.

## 6. Gaps across time and the earning distribution.

### 6.1 Earnings gaps across time.

Table 6.1 presents the nominal log average hourly wage for different groups in the workforce in 2004 (column 1) and 2011 (column 2), column 3 presents the difference between these values. On average, we can see that the male hourly wage has increased by 22.6% between 2004 and 2011, whilst the female hourly wage has risen by 25.0%.

**Table 6.1. Log average log hourly wages nominal, 2004 and 2011.**

<b>Groups</b>	<b>Ave hourly wage 2004</b> (1)	<b>Ave hourly wage 2011</b> (2)	<b>Change</b> (3)
Males	2.234	2.460	+0.226
Females	2.030	2.280	+0.250
Full-Time workers	2.191	2.449	+0.258
Part-Time workers	1.969	2.113	+0.144
Female Full-Time workers	2.109	2.377	+0.268
Male Full-Time workers	2.249	2.499	+0.250
Female Part-Time workers	1.930	2.120	+0.190
Male Part-Time workers	2.131	2.087	-0.044

*Source:* WERS 2004 and 2011; results for 2004 taken from Mumford and Smith, 2009.

The major change that has occurred between 2004 and 2011 is that the relative pay of part-time employees has fallen (the pay of part-time employees only rose by 14.4% relative to the 25.8% rise for full-time employees). This is particularly true for part-time male employees. The average hourly wage rate for male part-time employees actually declined 4.4 log points over

the time period; this is the only group where a decline in the average nominal wage rate is found. As the pay of one group declines and the pay of another group increases, the pay gap between the groups will clearly grow. The average male part-time hourly wage was substantially higher than that for female part-time employees in 2004, however, by 2011 these females can be seen to be earning slightly more than the males. We turn to consider measures of the earnings gaps between groups of employees next.

Table 6.2 presents the raw earnings gaps in the average hourly pay of the comparison groups, measured in log per cent. What sits behind these gaps are the relative shifts in average hourly wage levels for the groups reported in Table 6.1. For example, in 2004 the mean earnings gap between men and women was 20.4 log per cent (column 1 of Table 6.2), this value comes from 2.234 minus 2.03 in column 1 of Table 6.1 scaled by 100. By 2011 this raw gender earnings gap had fallen to 18 log per cent (column 2 of Table 6.2); a decline of 2.4 log percentage points (column 3 of Table 6.2). In 2004 the pay gap between full-time and part-time employees in Britain was 22.2 log per cent, by 2011 this gap had risen substantially to 33.6 log per cent; an increase of 11.4 log percentage points. So, whilst the raw average gender earnings gap has declined over this time period, the gap between full-time and part-time employees has increased considerably. As discussed above, working part-time is much more common in Britain for women than for men<sup>14</sup>, and dividing the data by gender and employment status (full-time versus part-time) can reveal partially offsetting movements in the raw earnings gaps.

**Table 6.2. Raw gender earnings gaps in log per cent, 2004 and 2011.**

<b>Comparison groups</b>	<b>Total gap 2004 (1)</b>	<b>Total gap 2011 (2)</b>	<b>Change (3)</b>
Men versus Women	20.40	18.0	-2.40
Male Full-Time versus Female Full-Time	14.01	12.22	-1.79
Male Part-time versus Female Part-Time	20.11	-3.30	-23.41
Full-Time versus Part-Time	22.20	33.60	+11.4

*Source:* WERS 2004 and 2011; results for 2004 taken from Mumford and Smith, 2009.

<sup>14</sup> In 2004 40.4% of women worked part-time, 12% of the men did; in 2011, 39.8% of the women worked part-time and 10.5% of the men did (Mumford and Smith, 2009). Full tables of summary statistics for the 2011 data are provided in Appendix Tables A1.2 and A1.3. .

We can see in Table 6.2 that the raw gender earnings gap between full-time employees has declined only slightly over the time period (falling by 1.79%). There is, however, a substantial relative decline in the pay of male part-time employees compared with female part-time employees (of 23.4%); leading to a small gender gap between part-time employees of 3.3% (in favour of women).

Mumford and Smith (2009) provides comparable analysis to that presented in sections 4 and 5 above for data from WERS 2004. Table 6.3 provides summary information for these decompositions for 2004 (more detail is provided in Appendix 1, Table A1.7) and for 2011 (see also Table 5.1) by gender and employment status. Comparing full-time employees; the raw earnings gap declines (from 14.01% to 12.22%) between 2004 and 2011, as does the unexplained component (11.21% to 9.83%).

**Table 6.3. Decompositions in brief, comparing 2004 and 2011.**

Model	2004		2011	
	Total gap	Unexplained	Total gap	Unexplained
Male Full-Time vs Female Full-Time	14.01	11.21	12.22	9.83
Male Part-time vs Female Part-time	20.11	12.40	-3.30	2.64

Source: WERS 2004 and 2011; results for 2004 taken from Mumford and Smith (2009).

For part-time employees, the raw earnings gap changes dramatically over the time period from 20.11% in favour of males in 2004, to 3.30% in favour of females in 2011. The unexplained component also falls but remains relatively high compared to the total raw gap. Indeed, in each case, the great majority of the earnings gap between these employees is not explained by differences in characteristics associated with productivity and may be argued to reflect discrimination in the labour market. The unexplained components all suggest that men should earn less than they do relative to females, in other words, the discrimination component improves the salary of the males relative to the females. However, the absolute size of this effect has fallen over time especially amongst part-time employees.

The individual earnings data from WERS provides a good indication of the differences in average earnings across the population and occupations, industrial sectors and regions. The size of the sample and the banded nature of the wage data, however, make it difficult to drill down further into the pattern of earnings at these more detailed levels of disaggregation using WERS. A better data set for this purpose is the Annual Survey of Hours and Earnings (ASHE). We consider this next.

## *6.2 Raw gender earning gaps across time and across the distribution.*

ASHE contains rich and detailed data on wages and hours earned in different industries and occupations but it covers a limited number of additional variables (for example, there are no measures of ethnicity, education or training for employees and very limited information on workplaces). We can, however, use the ASHE data to provide us with insight on how raw gender gaps change across the earnings distributions<sup>15</sup>.

Here we focus on the distribution of earnings across deciles for workers in each of the relevant groups. We examine the years of the WERS surveys discussed so far as well as the more recent wave for the year the National Living Wage was introduced in the UK; thus data for 2004, 2011 and 2015. Inevitably there are differences between WERS and ASHE. The major sectoral difference at the aggregate level is the inclusion of Agriculture in ASHE which we expect has a very small impact on the wage gaps we examine.

Selected summary statistics for ASHE for the three years are shown in Tables 6.4.<sup>16</sup> The mean levels of average gross hourly earnings show generally similar patterns to those in WERS. For example, the mean full-time gender raw pay gap has fallen from 21% in 2004 to 18.7% in 2011 and further to 16% in 2015. Likewise the part-time raw gender pay gap has fallen over time, although, this reduction is more pronounced in 2011 in the WERS data than the ASHE data suggest. A more substantial fall is shown to 2.3% in 2015. A comparison between the WERS and ASHE data for 2011 by occupation and industry (see Butcher et al (2016; Appendix Table

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<sup>15</sup><http://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/annualsurveyofhoursandearnings/previousReleases>

<sup>16</sup> Further summary statistics are provided in Table A3.1 of the Appendix.

A3.1) also confirms the overall pattern of earnings although differences in sampling generate some differences in mean earnings.

**Table 6.4 ASHE summary statistics.**

	Mean Gross Hourly Earnings (£/hour)			
	Female		Male	
	Part-Time	Full-Time	Part-Time	Full-Time
<b>2004</b>	8.13	11.11	9.18	13.44
<b>2011</b>	10.62	13.80	11.78	16.38
<b>2015</b>	11.09	14.58	11.34	16.91

	Gender Pay Gaps (%)	
	Part-Time	Full-Time
	<b>2004</b>	12.91
<b>2011</b>	10.92	18.70
<b>2015</b>	2.25	15.98

Source: ASHE 2015.

We can more clearly show the distribution of earnings gaps with figures plotting the decile values of the samples for each group. The earnings gaps that we report are the raw gender pay gaps for full and for part-time workers. Thus we present two plots in Figure 6.1 which taken together show that the gender pay gap is much larger at higher pay deciles for British employees. For full-time workers the gender pay gap remained less than 10% in 2011 and 2015 for the lowest decile, about 12% at the median and just less than 25% in the highest pay decile. The fall in the average full-time gender pay gap over the period from 2004 to 2015 has been concentrated in the bottom 70% of the distribution of full-time workers.

Amongst part-time staff this pattern is even more pronounced. The raw gender pay gap for part-time workers below the 70<sup>th</sup> percentile is essentially zero or slightly negative. In contrast, at the highest two deciles it had been more than 25%, although most recently it has fallen to little more than 10%. In contrast to the gender earnings gap for full-time employees, the greatest

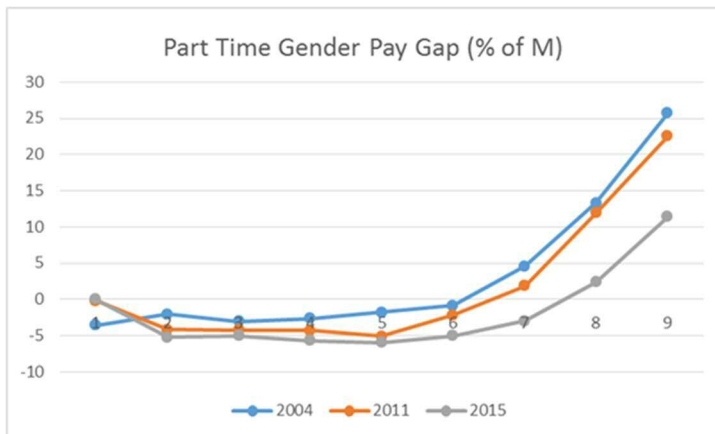
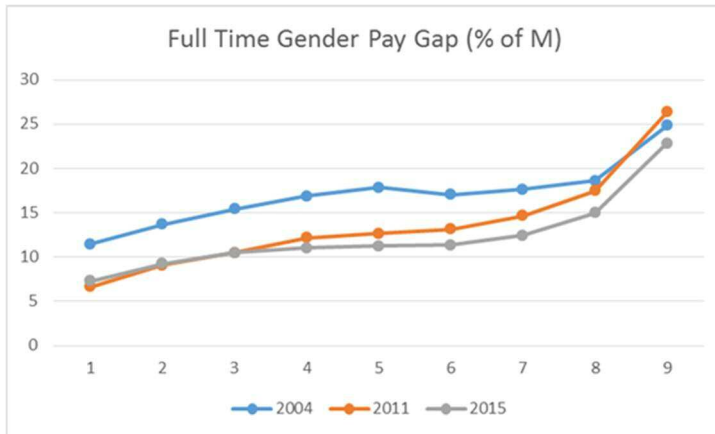


change over time in the part-time gender pay gap has been at the highest three deciles. Even then this change has only been observed in the ASHE data since 2011.

Butcher et al. (2016) provide a detailed analysis of the pattern of raw gender pay gaps across the earnings distribution within occupations and industries using the ASHE data. They show that in many occupations the gender pay gap for the lowest paid workers is generally close to zero, however, the pay gap is substantial at higher rates of pay. Over time, this feature has generally moderated a little but remains a strong feature of the data. Within industries there is more heterogeneity, but the positive association between the gender pay gap and higher pay remains a clear feature, especially amongst part-time workers.

**Figure 6.1: The aggregate distribution of the gender pay gap, for full-time and part-time workers, in ASHE.**

The figure shows the percentage pay gaps at nine deciles for each of three years.



### 6.3 *The National Minimum Wage, the National Living Wage and the gender pay gap.*

Chzhen and Mumford (2011) show that explained gender pay gaps increase at higher earnings levels within occupations and industries in Britain, and that a large component of the national gender pay gap is related to across occupation and industry pay differences: women tend to be concentrated in low skill roles in low paying occupations and industries. Bain et al (2014) further support these findings: the great majority of low pay workers in the UK are concentrated within a limited number of occupations and industries. These workers are more likely to be women and to be working part-time; with their pay sitting in a small band around the National Minimum Wage (NMW). Furthermore, this concentration of low paid workers at the NMW was increasing over time with very limited wage growth associated with tenure and work experience. Bain et al (2014) accordingly recommended introducing a higher National Minimum Wage for workers aged 25 and above.

Considering the lower paid, as an approximation of the direct relationship between the National Minimum Wage and the wage distributions for occupations and industries we can compare the decile values of wages with the NMW for adults. Of the occupations examined above, only three, Unskilled, Sales and Personal Services show an overlap with the relevant adult level of the NMW at that time. In the Unskilled occupation the NMW in 2011 and 2015 occurs around the 3<sup>rd</sup> decile of the wage distribution of male and female part-time workers, whilst in 2004 it was at the first decile. Female full-time workers wage overlapped at the first decile in all three years.

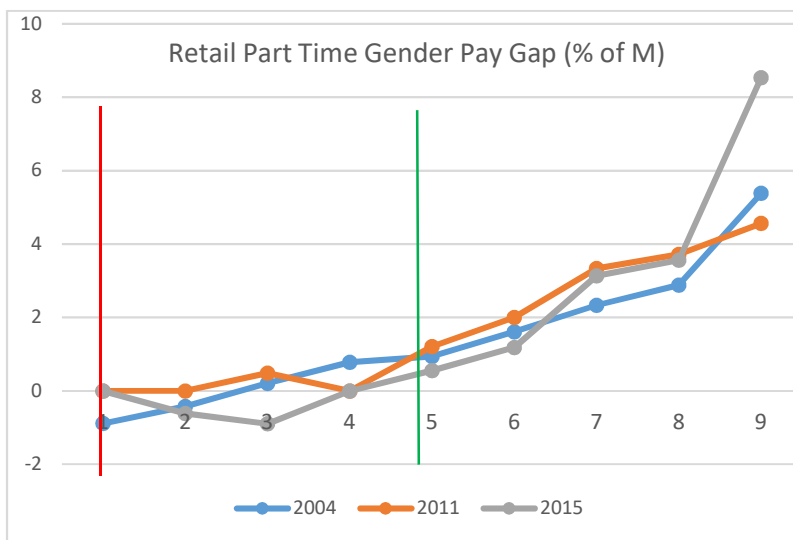
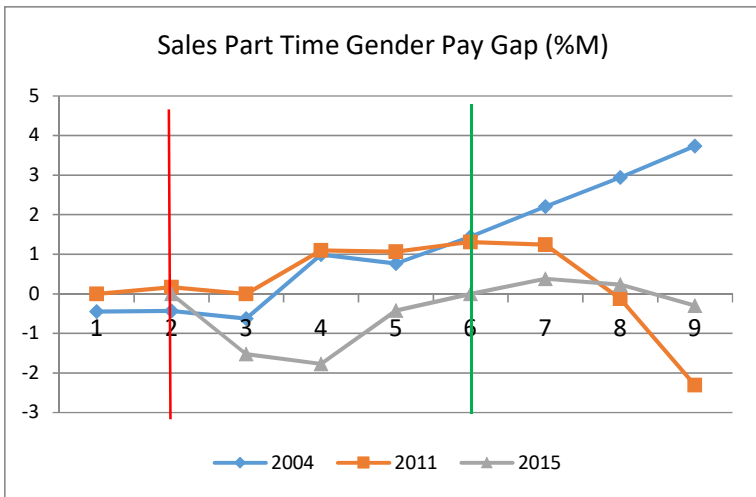
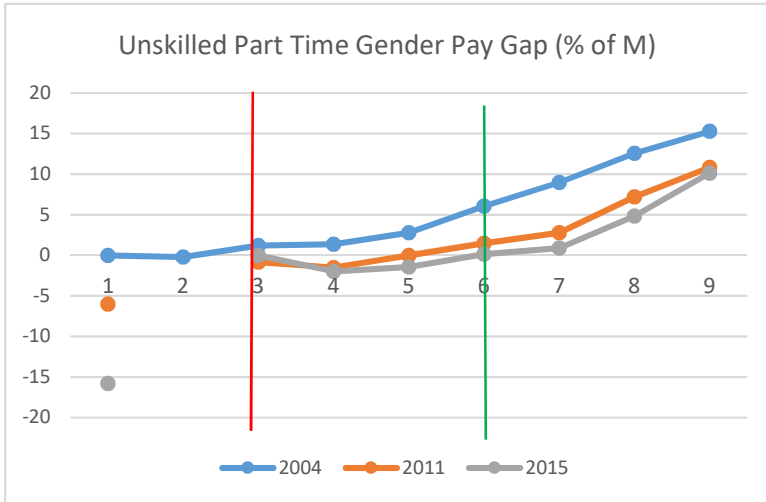
In the summer of 2015 the then Chancellor, George Osborne, announced a higher national minimum wage for those aged 25 and above which he called the National Living Wage. His announcement was based on the policy recommendation made in Bain et al (2014).<sup>17</sup> The new

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<sup>17</sup> In the Summer Budget 2015 speech, the Chancellor George Osborne announced: “I am today introducing a new National Living Wage... The new National Living Wage will be compulsory. Working people aged 25 and over will receive it. It will start next April ...The Low Pay Commission will recommend future rises that achieve the Government’s objective of reaching 60% of median earnings by 2020. That is the minimum level of pay recommended in the report to the Resolution Foundation by Sir George Bain.” Bain et al (2014). <https://www.gov.uk/government/speeches/chancellor-george-osbornes-summer-budget-2015-speech> .

**Figure 6.2: The NLW and the gender pay gap in ASHE**

The figure shows the percentage pay gaps at nine deciles for each of three years.



National Living Wage (NLW) when it came into place in April 2016 overlapped with the wages of male and female part-time workers at the 6<sup>th</sup> decile of the earnings distribution. It covered a substantial proportion of the workforce. Evidence from the Low Pay Commission (2016, 2.101, page 68) shows that on introduction in April 2016 the new NLW was awarded to 1,596,000 workers: there were more part-time NLW workers in 2016 (958,000) than full-time NLW workers (638,000), and twice as many female part-time workers on the NLW than female full-time workers (700,000 compared with 316,000). By increasing the wages of more women than men, we would expect the implantation of the NLW to lower the aggregate raw gender pay gap at the mean by about a fifth, however, we wouldn't expect to see an impact on the relative earnings of men and women amongst the lower deciles of the earnings distribution. This is because, as we saw in Figure 6.1, there is very little gender pay gap amongst the lowest deciles of the earnings distribution.

Figure 6.2 plots the three occupations which had an overlap with the NMW in April of 2016, in each case it was for part-time employees only. The red vertical line denotes the NMW for those aged below 25, and the green line is the new NLW. For example, the part-time gender pay gap for the Unskilled in both 2011 and 2015 is small at all lower deciles and we would not expect the introduction of the NLW to have a significant impact on the raw gender pay gap even in this occupation whose wage distribution shows the biggest overlap. The effects described for the Unskilled occupation also appear to a reduced degree in the Sales and Personal Services occupations and Retail industrial sector. An overlap with the NMW at the lowest decile of wages for male and female part-time workers in these groups is followed by a likely overlap at the median for the NLW in 2016 but again these are groups where the part-time gender pay gap is small, especially at lower levels of the wage distribution.

## **7. Conclusions.**

The raw overall gender earnings gap in the UK has fallen over time as shown in the WERS and ASHE data. It has done so gradually for full-time workers and with more variability for part-timers. We find that the raw gender earnings gap typically declined over time in all occupations and industries, but not uniformly. In many cases, the raw gender earning gap is commonly close to zero at low wages and substantially higher from around the 7th decile; this could be taken as evidence of glass ceiling effects in Britain.

Decomposition analysis shows us that individual characteristics, occupation and industry are important in explaining the gender earnings gap. Putting working hours and gender together, therefore, we find a complex story for earnings gaps. The gap between female and male full-time employees is still substantial at 12.2% and is mainly not explained by observable characteristics. Within occupation, our decompositions show industry is important; and within industry occupation is important. Segregation at occupation and/or industry level is therefore a concern.

For all of the across gender and working hour decomposition comparisons we present, the unexplained (or discrimination component) is always associated with males having higher wages than females. As discussed in Mumford and Smith (2004 and 2009), the finding that a large pure gender earnings gap remains for both full and part-time employees suggests that the Equal Pay legislation in Britain is still not fully effective. An important policy response is therefore more effective application of this legislation. The finding that segregation of females into occupations, industries and workplaces accounts for a significant proportion of the raw earnings gap suggests that more vigorous application of comparable worth policies within workplace may also be necessary to further close the gender earnings gap.

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## Appendix.

- Table A1.1 Variable definitions.
- Table A1.2 Sample means for the aggregate samples.
- Table A1.3 Descriptive statistics; full and part-time, males and females.
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- 
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- Table A2.2. Decompositions of the earnings gap when changing the number of occupations.
- Table A2.3. Decompositions of the earnings gap for each occupation.
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- Table A2.6. Decompositions of the earnings gap for each region.
- Table A2.7. Decompositions of the earnings gap for high and low wage workplaces.
- Table A2.8. Decompositions of the earnings gap for high and low proportion female workplaces.
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- Table A3.1. Summary Statistics for Occupations in WERS and ASHE in 2011.

**Table A1.1. Variable definitions.**

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<b>Variable name</b>	<b>Variable definition</b>
hourly pay	Average hourly pay [midpoints of 14 bands]
log hourly pay	The natural log of average hourly pay
Individual characteristics:	
potential experience (years)	Age minus (approximate years of schooling plus 5), measured in years.
training (days in previous year)	Days of training in the previous twelve months [midpoints of 6 bars, top coded at 10 days]
education measures;	
none/other	Has none of the academic qualifications listed (may have other academic qualifications than those listed)
cse25	Highest level of education is GCSE grades D-G; CSE grades 2-5 SCE; O grades D-; SCE Standard grades 4-7.
cse1	Highest level of education is GCSE grades A-C; GCE O-level passes; CSE grade 1 SCE; O grades A-C; or SCE Standard 1-3
gceae	Highest level of education is GCE A-level grades A-E; 1-2 SCE; Higher grades A-C, As levels
gce2ae	Highest level of education is 2 or more GCE; A-levels grades A-E; 3 or more SCE; or Higher grades A-C
degree	Highest level of education is a first degree, eg BSc, BA, HND, HNC Ma at first degree level
postgrad	Highest level of education is a higher degree, eg MSc, MA, PGCE, PhD
child	Has a dependent child aged below 18
child 0-4	Youngest dependent child aged 0-4
child 5-11	Youngest dependent child aged 5-11
child 12-18	Youngest dependent child aged 12-18
married	Married or living with a partner
disabled	Has a long term (>1 year) illness/disability
ethnic	
fixed contract	Employed on a fixed term contract
hours	Usual hours worked per week (includes over-time)
part time	Working part time, if usual working hours is less than or equal to 30 per week
tenure	Years at this workplace [midpoints of 5 bars, top coded at 10 years]

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<b>Variable name</b>	<b>Variable definition</b>
union	Employee is a union member
<i>occupation categories;</i>	
managerial	Managerial
professional	Professional
technical	Technical
clerical	Clerical
craft	Craft service
personal	Personal service
sales	Sales and customer services
operative	Operative and assembly workers
unskilled	Unskilled
<i>Workplace characteristics:</i>	
workplace size	Total number of employees in the workplace
workplace age	Establishment Age (/1000)
multi site	Firm has multiple UK work sites
foreign owned	Foreign controlled workplace
increasing market	Market for workplace main product or service is growing
age based wage	Pay Based on Age or Years of Experience
grade based wage	Pay Based on Job Grade
equal opportunity	Workplace has a formal written equal opportunity policy
family friendly index	Index of four Family Friendly Policies available at the workplace: paternity leave; maternity leave; child care; paid leave.
paternity leave	If employees on paternity leave receives the normal, full rate of pay
maternity leave	If employees on maternity leave receives the normal, full rate of pay
child care	If a workplace nursery or child care subsidy is available at the workplace
paid leave	If paid family leave is available

<b>Variable name</b>	<b>Variable definition</b>
interaction index	Index of five employee-employer interaction measures at the workplace: employee has a lot of discretion over work; quality circles exists; team working exists; employees consulted over targets; employee briefing system exists
IR index	Index of three industrial relations measures at the workplace: union membership presence; human resources representative; collective grievance procedure present
rel female workplace	Proportion of females in the work place
rel female occupation	Proportion of females in the occupation
<i>regions:</i>	
north east	north east of England
north west	north west of England
yorkshire & the humberside	Yorkshire & the Humberside
east midlands	east midlands of England
west midlands	west midlands of England
east of england	east of England
london	London
south east	south east of England
south west	south west of England
scotland	Scotland
wales	Wales

*Source:* WERS 2011.

**Table A1.2. Sample means for the aggregate samples, 2011.**

	Full sample		All males		All females		Full-time		Part-time	
	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.
hourly pay	12.444	0.179	13.504	0.240	11.388	0.171	13.206	0.197	9.975	0.212
log hourly pay	2.370	0.014	2.460	0.017	2.280	0.014	2.449	0.015	2.113	0.017
potential experience	24.195	0.260	24.676	0.354	23.716	0.275	23.728	0.300	25.707	0.386
potential experience squared	748.402	12.706	770.182	17.808	726.684	13.047	714.767	14.460	857.418	18.846
training	2.482	0.047	2.576	0.060	2.389	0.057	2.684	0.055	1.829	0.061
education measures:										
none	0.031	0.002	0.037	0.004	0.024	0.002	0.029	0.003	0.036	0.004
vocational	0.120	0.004	0.130	0.007	0.110	0.005	0.116	0.005	0.134	0.007
cse25	0.092	0.004	0.101	0.006	0.082	0.004	0.091	0.004	0.094	0.006
cse1	0.273	0.007	0.247	0.009	0.300	0.008	0.264	0.008	0.304	0.010
gceae	0.042	0.002	0.034	0.003	0.050	0.003	0.039	0.002	0.052	0.005
gce2ae	0.086	0.003	0.075	0.004	0.097	0.005	0.083	0.004	0.096	0.006
degree	0.224	0.007	0.231	0.011	0.217	0.008	0.244	0.008	0.162	0.009
postgrad	0.101	0.006	0.111	0.008	0.091	0.005	0.109	0.007	0.075	0.006
other	0.031	0.002	0.034	0.003	0.028	0.003	0.026	0.002	0.048	0.005
child 0-4	0.130	0.005	0.153	0.007	0.108	0.005	0.122	0.005	0.157	0.009
child 5-11	0.110	0.003	0.119	0.005	0.102	0.004	0.100	0.004	0.143	0.008
child 12-18	0.116	0.004	0.114	0.006	0.118	0.005	0.114	0.005	0.125	0.006
married	0.688	0.006	0.709	0.009	0.667	0.008	0.693	0.007	0.670	0.012
disabled	0.013	0.001	0.012	0.002	0.015	0.002	0.012	0.001	0.017	0.003
ethnic	0.086	0.005	0.092	0.007	0.081	0.005	0.089	0.006	0.080	0.008
fixed term contract	0.036	0.003	0.035	0.005	0.037	0.003	0.034	0.003	0.042	0.004
current job tenure	5.587	0.073	5.642	0.108	5.531	0.072	5.650	0.088	5.380	0.095
trade union member	0.284	0.011	0.291	0.016	0.277	0.011	0.289	0.013	0.266	0.012

**Table A1.2. Sample means for the aggregate samples, 2011, continued.**

	Full sample		All males		All females		Full-time		Part-time	
	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.
workplace age	39.208	1.737	38.367	1.920	40.047	1.966	39.577	1.967	38.010	1.773
workplace size	639.086	79.630	665.811	108.005	612.438	67.265	687.577	91.317	481.912	60.675
multisite	0.735	0.015	0.733	0.019	0.737	0.015	0.736	0.017	0.731	0.017
foreign owned	0.145	0.015	0.178	0.020	0.111	0.015	0.168	0.018	0.069	0.014
increasing market	0.238	0.017	0.235	0.019	0.241	0.018	0.237	0.019	0.242	0.020
reward wages	0.331	0.016	0.278	0.018	0.384	0.018	0.320	0.018	0.366	0.019
family friendly index	1.604	0.030	1.599	0.038	1.609	0.030	1.639	0.033	1.491	0.036
employer interaction index	2.386	0.029	2.402	0.036	2.369	0.031	2.426	0.032	2.254	0.037
industrial relations index	1.750	0.034	1.801	0.044	1.699	0.034	1.793	0.039	1.610	0.038
equal opportunity	0.922	0.008	0.915	0.010	0.930	0.008	0.927	0.008	0.907	0.012
relative female workplace	0.513	0.010	0.342	0.010	0.684	0.008	0.458	0.010	0.693	0.011
relative female occupation	0.543	0.005	0.450	0.007	0.635	0.004	0.514	0.006	0.636	0.005
<i>occupations:</i>										
Managerial	0.081	0.005	0.102	0.008	0.060	0.004	0.099	0.006	0.021	0.003
Professional	0.185	0.009	0.196	0.013	0.175	0.008	0.202	0.011	0.131	0.009
Technical	0.167	0.007	0.181	0.010	0.154	0.007	0.189	0.008	0.098	0.008
Clerical	0.174	0.007	0.081	0.006	0.266	0.010	0.163	0.007	0.209	0.012
Craft Service	0.067	0.005	0.122	0.009	0.012	0.002	0.082	0.006	0.018	0.003
Personal Service	0.079	0.005	0.031	0.004	0.127	0.008	0.052	0.004	0.167	0.012
Sales&Customer	0.070	0.006	0.040	0.005	0.099	0.009	0.047	0.005	0.145	0.015
Operative&Assembly	0.067	0.007	0.120	0.013	0.013	0.003	0.083	0.009	0.015	0.004
Unskilled	0.110	0.007	0.127	0.010	0.094	0.006	0.084	0.007	0.195	0.012
<i>industries:</i>										
Manufacturing	0.123	0.013	0.188	0.020	0.058	0.007	0.153	0.016	0.028	0.005
Electricity	0.003	0.001	0.004	0.001	0.001	0.000	0.003	0.001	0.001	0.000
Water supply	0.006	0.002	0.010	0.004	0.003	0.001	0.008	0.003	0.001	0.001
Construction	0.037	0.006	0.057	0.010	0.016	0.003	0.044	0.008	0.012	0.003
Retail	0.141	0.014	0.131	0.016	0.151	0.015	0.121	0.015	0.204	0.021

**Table A1.2. Sample means for the aggregate samples, 2011, continued.**

	Full sample		All males		All females		Full-time		Part-time	
	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.
Transportation	0.062	0.009	0.102	0.015	0.023	0.004	0.072	0.011	0.030	0.006
Accommodation	0.043	0.006	0.041	0.006	0.044	0.007	0.035	0.006	0.068	0.010
Communication	0.041	0.008	0.047	0.010	0.036	0.008	0.049	0.010	0.016	0.006
Financial	0.049	0.013	0.049	0.014	0.048	0.015	0.057	0.015	0.023	0.011
Real estate	0.044	0.009	0.042	0.011	0.046	0.008	0.047	0.010	0.034	0.008
Professional	0.087	0.012	0.096	0.016	0.077	0.010	0.101	0.014	0.040	0.006
Clerical	0.033	0.006	0.036	0.008	0.031	0.006	0.034	0.007	0.033	0.008
Public	0.071	0.008	0.062	0.009	0.080	0.010	0.073	0.009	0.063	0.009
Education	0.116	0.009	0.063	0.007	0.168	0.012	0.090	0.008	0.199	0.015
Health	0.115	0.009	0.047	0.005	0.183	0.013	0.090	0.008	0.197	0.016
Arts	0.017	0.002	0.014	0.002	0.020	0.003	0.013	0.002	0.031	0.005
Other community	0.013	0.002	0.011	0.002	0.016	0.003	0.011	0.002	0.020	0.004
<i>regions:</i>										
North East	0.040	0.007	0.042	0.009	0.038	0.007	0.040	0.007	0.039	0.010
North West	0.137	0.014	0.140	0.018	0.133	0.013	0.136	0.017	0.140	0.016
Yorkshire & The Humber	0.072	0.009	0.067	0.010	0.078	0.009	0.067	0.009	0.089	0.011
East Midlands	0.071	0.009	0.080	0.012	0.062	0.008	0.070	0.010	0.075	0.012
West Midlands	0.070	0.008	0.065	0.009	0.076	0.009	0.066	0.008	0.085	0.011
East Of England	0.094	0.010	0.104	0.014	0.085	0.010	0.093	0.011	0.097	0.013
London	0.155	0.016	0.171	0.021	0.139	0.014	0.172	0.018	0.099	0.011
South East	0.135	0.013	0.118	0.013	0.152	0.016	0.132	0.014	0.145	0.016
South West	0.088	0.011	0.082	0.013	0.093	0.011	0.086	0.012	0.092	0.011
Scotland	0.094	0.009	0.096	0.012	0.092	0.010	0.096	0.011	0.087	0.011
Wales	0.044	0.007	0.036	0.006	0.051	0.008	0.041	0.007	0.051	0.010
No. observations	17763		7875		9888		13003		4760	

*Source:* WERS 2011.

**Table A1.3. Descriptive statistics; full time and part-time, males and females, 2011.**

	Male full-time		Female full-time		Male part-time		Female part-time	
	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.
hourly pay	13.865	0.250	12.254	0.199	10.086	0.512	9.947	0.215
log hourly pay	2.499	0.018	2.377	0.015	2.087	0.035	2.120	0.018
potential experience	24.646	0.371	22.404	0.325	24.963	0.902	25.896	0.398
potential experience squared	756.382	18.598	654.652	14.902	900.893	46.504	846.399	19.115
training	2.644	0.065	2.741	0.075	1.927	0.131	1.804	0.067
education measures:								
none	0.036	0.004	0.019	0.003	0.051	0.013	0.032	0.004
vocational	0.128	0.007	0.098	0.006	0.144	0.016	0.131	0.008
cse25	0.101	0.006	0.075	0.005	0.097	0.016	0.093	0.006
cse1	0.252	0.010	0.281	0.010	0.196	0.021	0.332	0.011
gceae	0.032	0.003	0.048	0.004	0.045	0.009	0.054	0.006
gce2ae	0.073	0.004	0.098	0.006	0.092	0.012	0.097	0.007
degree	0.234	0.011	0.258	0.011	0.207	0.022	0.150	0.009
postgrad	0.111	0.009	0.105	0.007	0.111	0.016	0.066	0.006
other	0.032	0.003	0.018	0.002	0.058	0.011	0.045	0.005
child 0-4	0.157	0.007	0.071	0.006	0.109	0.016	0.169	0.010
child 5-11	0.123	0.006	0.068	0.004	0.080	0.016	0.159	0.009
child 12-18	0.120	0.006	0.104	0.005	0.055	0.008	0.143	0.007
married	0.723	0.009	0.649	0.009	0.567	0.026	0.696	0.012
disabled	0.011	0.002	0.013	0.002	0.016	0.006	0.018	0.003
ethnic	0.086	0.007	0.093	0.007	0.156	0.027	0.060	0.006
fixed term contract	0.031	0.004	0.038	0.004	0.071	0.015	0.035	0.004
current job tenure	5.765	0.115	5.484	0.088	4.480	0.200	5.609	0.099
trade union member	0.297	0.017	0.278	0.012	0.231	0.021	0.274	0.013
workplace age	38.741	2.007	40.785	2.394	34.819	3.062	38.819	1.930



**Table A1.3. Descriptive statistics; full time and part-time, males and females, 2011, continued.**

	Male full-time		Female full-time		Male part-time		Female part-time	
	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.
workplace size	684.953	112.553	691.368	82.616	484.491	123.950	481.258	53.815
multisite	0.732	0.020	0.742	0.017	0.739	0.030	0.729	0.018
foreign owned	0.191	0.022	0.135	0.017	0.064	0.018	0.071	0.016
increasing market	0.228	0.020	0.250	0.021	0.301	0.035	0.227	0.021
reward wages	0.275	0.019	0.386	0.020	0.310	0.031	0.381	0.020
family friendly index	1.614	0.040	1.674	0.033	1.455	0.059	1.500	0.037
employer interaction index	2.426	0.037	2.427	0.034	2.180	0.060	2.272	0.039
industrial relations index	1.819	0.046	1.756	0.038	1.628	0.064	1.606	0.039
equal opportunity	0.920	0.010	0.938	0.008	0.869	0.028	0.917	0.011
relative female workplace	0.329	0.010	0.643	0.009	0.463	0.018	0.751	0.009
relative female occupation	0.440	0.008	0.621	0.004	0.546	0.011	0.659	0.005
<i>occupations:</i>								
Managerial	0.110	0.008	0.084	0.006	0.032	0.008	0.018	0.003
Professional	0.203	0.014	0.200	0.010	0.125	0.017	0.133	0.009
Technical	0.188	0.010	0.190	0.009	0.108	0.016	0.095	0.009
Clerical	0.080	0.006	0.283	0.011	0.093	0.018	0.238	0.014
Craft Service	0.130	0.010	0.012	0.002	0.046	0.010	0.012	0.003
Personal Service	0.024	0.003	0.092	0.007	0.098	0.015	0.184	0.013
Sales&Customer	0.032	0.004	0.068	0.007	0.120	0.020	0.151	0.017
Operative&Assembly	0.129	0.014	0.016	0.004	0.042	0.013	0.008	0.003
Unskilled	0.104	0.009	0.055	0.006	0.337	0.028	0.160	0.011
<i>industries:</i>								
Manufacturing	0.205	0.022	0.077	0.010	0.028	0.008	0.027	0.005
Electricity	0.005	0.001	0.002	0.000	0.000	0.000	0.001	0.000
Water supply	0.010	0.004	0.004	0.002	0.003	0.002	0.001	0.001
Construction	0.062	0.011	0.018	0.004	0.014	0.005	0.011	0.003
Retail	0.121	0.016	0.122	0.017	0.226	0.034	0.198	0.021

**Table A1.3. Descriptive statistics; full time and part-time, males and females, 2011, continued.**

	Male full-time		Female full-time		Male part-time		Female part-time	
	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.
Transportation	0.102	0.015	0.029	0.006	0.099	0.023	0.012	0.003
Accommodation	0.031	0.006	0.039	0.008	0.132	0.023	0.052	0.008
Communication	0.049	0.011	0.048	0.011	0.021	0.012	0.015	0.005
Financial	0.053	0.014	0.062	0.017	0.016	0.010	0.025	0.014
Real estate	0.044	0.011	0.053	0.010	0.032	0.013	0.034	0.008
Professional	0.103	0.017	0.098	0.014	0.027	0.009	0.043	0.007
Clerical	0.034	0.008	0.032	0.008	0.056	0.020	0.028	0.007
Public	0.065	0.009	0.086	0.010	0.035	0.007	0.070	0.010
Education	0.054	0.007	0.141	0.012	0.140	0.019	0.214	0.016
Health	0.041	0.005	0.160	0.013	0.106	0.022	0.220	0.018
Arts	0.011	0.002	0.015	0.003	0.039	0.009	0.029	0.005
Other community	0.009	0.002	0.015	0.003	0.026	0.007	0.019	0.004
regions:								
North East	0.042	0.009	0.037	0.007	0.035	0.021	0.040	0.008
North West	0.138	0.020	0.133	0.016	0.163	0.030	0.134	0.015
Yorkshire & The Humber	0.064	0.010	0.072	0.010	0.092	0.018	0.088	0.011
East Midlands	0.080	0.013	0.054	0.008	0.073	0.019	0.076	0.012
West Midlands	0.064	0.009	0.069	0.009	0.076	0.016	0.087	0.012
East Of England	0.105	0.014	0.076	0.011	0.091	0.021	0.099	0.014
London	0.172	0.022	0.171	0.018	0.156	0.026	0.085	0.010
South East	0.117	0.014	0.154	0.017	0.125	0.021	0.150	0.018
South West	0.084	0.014	0.090	0.013	0.070	0.016	0.098	0.012
Scotland	0.099	0.013	0.094	0.011	0.076	0.015	0.090	0.013
Wales	0.036	0.006	0.049	0.009	0.042	0.012	0.054	0.011
No. observations	7048		5955		827		3933	

Source: WERS 2011.

**Table A1.4 Earning function estimates.**

log hourly pay	<u>Total sample</u>		<u>Females</u>		<u>Males</u>		<u>Male full-time</u>		<u>Female full-time</u>		<u>Male part-time</u>		<u>Female part-time</u>	
	coeff (1)	t-value (2)	coeff (3)	t-value (4)	coeff (5)	t-value (6)	coeff (7)	t-value (8)	coeff (9)	t-value (10)	coeff (11)	t-value (12)	coeff (14)	t-value (14)
Female	-0.071	-5.91*												
potential experience	0.022	14.07*	0.021	9.78*	0.024	10.71*	0.027	10.86*	0.027	10.67*	0.006	0.17	0.014	3.69*
pot exp sqd (x1000)	-0.342	-10.98*	-0.345	-7.91*	-0.373	-8.61*	-0.402	-8.40*	-0.456	-8.63*	-0.164	-1.54	-0.214	-2.91*
Training	0.003	1.96	0.005	2.23*	0.002	0.77	0.002	0.68	0.006	2.52*	0.005	0.42	0.002	0.52
Education minimal is omitted														
Vocational	0.074	2.42*	0.052	1.50*	0.092	2.06*	0.083	1.66	0.114	1.99*	0.162	2.19*	-0.018	-0.47
CSE25	0.140	4.10*	0.136	3.30*	0.135	2.79*	0.127	2.31*	0.221	3.55*	0.159	1.50	0.049	0.93
CSE1	0.137	4.34*	0.132	3.93*	0.136	2.77*	0.139	2.53*	0.217	3.96*	0.079	1.15	0.044	1.15
CEAE	0.181	5.70*	0.187	4.22*	0.170	2.91*	0.183	2.82*	0.239	3.59*	0.042	0.49	0.135	2.40*
CE2AE	0.192	5.61*	0.185	5.06*	0.191	3.58*	0.183	3.12*	0.284	4.81*	0.223	2.39*	0.073	1.56
Degree	0.289	8.55*	0.273	7.69*	0.297	5.64*	0.312	5.42*	0.353	6.30*	0.199	2.51*	0.193	4.10*
Postgrad	0.337	8.91*	0.363	9.19*	0.316	5.51*	0.342	5.53*	0.446	7.39*	0.134	1.38	0.264	4.71*
Other	0.042	1.14	0.055	1.09	0.037	0.73	0.038	0.67	0.215	2.22*	0.075	0.79	-0.073	-1.51
Child 0-4	0.043	2.92*	0.068	3.72*	0.016	0.77	0.029	1.36	0.062	2.53*	-0.072	-0.72	0.055	1.92
Child 5-11	0.007	0.39	-0.006	-0.25	0.007	0.38	0.016	0.89	0.003	0.10	-0.012	-0.15	-0.012	-0.38
Child 12-18	-0.011	-1.00	-0.036	-2.56*	0.006	0.38	0.002	0.14	-0.036	-2.14*	0.087	1.26	-0.035	-1.41
Married	0.052	5.31*	0.033	2.84*	0.077	5.39*	0.072	5.57*	0.037	2.68*	0.138	1.99*	0.037	1.71
Disabled	-0.087	-2.28*	-0.056	-1.31	-0.121	-1.76	-0.118	-1.53	-0.151	-2.58*	-0.017	-0.15	0.068	1.31
Ethnic	-0.063	-3.51*	-0.021	-0.75	-0.095	-3.73*	-0.087	-3.59*	-0.021	-0.71	-0.144	-1.93	-0.022	-0.38
Part-time	-0.066	-5.09*	-0.053	-3.97*	-0.088	-2.98*								
Tenure	0.013	8.68*	0.013	6.74*	0.012	5.94*	0.012	6.35*	0.011	4.79*	0.009	1.19	0.015	5.08*
Union	0.037	3.53*	0.057	4.43*	0.008	0.56	0.008	0.51	0.043	2.58*	0.036	0.72	0.066	2.95*
Fixed Contract	-0.051	-1.80	-0.060	-2.20*	-0.043	-0.99	-0.047	-0.96	-0.041	-1.21	0.018	0.25	-0.091	-2.19*

**Table A1.4 Earning function estimates, continued.**

	<u>Total sample</u>		<u>Females</u>		<u>Males</u>		<u>Male full-time</u>		<u>Female full-time</u>		<u>Male part-time</u>		<u>Female part-time</u>	
	coeff	t-value	coeff	t-value	coeff	t-value	coeff	t-value	coeff	t-value	coeff	t-value	coeff	t-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(14)	(14)
Clerical is omitted														
Managerial	0.323	12.58*	0.296	8.72*	0.372	11.44*	0.342	10.39*	0.274	7.64*	0.660	5.20*	0.342	4.54*
Professional	0.321	18.15*	0.302	13.85*	0.362	14.53*	0.331	12.98*	0.263	11.50*	0.724	6.33*	0.379	9.04*
Technical	0.217	12.86*	0.191	10.34*	0.274	10.47*	0.246	9.02*	0.161	8.60*	0.490	4.25*	0.260	6.82*
Craft	0.037	1.73	-0.090	-2.18*	0.100	3.56*	0.083	2.88*	-0.064	-1.19	0.186	1.56	-0.080	-1.46
Personal	-0.174	-9.20*	-0.196	-9.28*	-0.120	-3.25*	-0.154	-4.29*	-0.233	-8.95*	0.016	0.16	-0.139	-4.31*
Sales	-0.137	-4.81*	-0.186	-6.67*	0.004	0.08	0.037	0.60	-0.160	-5.78*	-0.140	-1.26	-0.197	-4.08*
Operative	-0.127	-5.52*	-0.246	-4.82*	-0.063	-2.02*	-0.080	-2.49*	-0.190	-3.23*	-0.019	-0.15	-0.385	-5.00*
Unskilled	-0.216	-10.05*	-0.245	-9.36*	-0.148	-4.36*	-0.169	-5.02*	-0.203	-5.86*	-0.084	-0.86	-0.263	-7.01*
Manufacturing is omitted														
Electricity	0.302	5.59*	0.319	5.39*	0.287	5.17*	0.285	5.06*	0.330	5.25*	0.437	0.99	0.238	2.72*
Water Supply	0.105	1.23	0.353	2.69*	0.028	0.52	0.010	0.15	0.336	2.81*	0.641	1.80	0.405	1.78
Construction	0.089	2.50*	0.028	0.34	0.096	2.68*	0.103	2.95*	0.075	0.98	-0.135	-0.63	-0.123	-0.73
Retail	-0.078	-2.71*	-0.085	-2.07*	-0.067	-1.81	-0.064	-1.69	-0.058	-1.23	-0.287	-1.35	-0.140	-1.99*
Transport	0.082	2.83*	0.135	3.03*	0.056	1.72	0.071	2.15*	0.087	1.75	-0.358	-1.64	0.224	2.81*
Accommodation	-0.201	-5.54*	-0.179	-3.59*	-0.214	-4.43*	-0.210	-4.08*	-0.264	-4.63*	-0.506	-2.50*	-0.128	-1.68
Communication	0.087	2.46*	0.034	0.75	0.129	2.77*	0.142	3.09*	0.035	0.74	-0.172	-0.71	-0.013	-0.10
Financial	0.153	3.96*	0.099	1.84	0.211	5.76*	0.213	5.40*	0.091	1.63	0.153	0.55	0.128	1.42
Real Estate	0.104	3.00*	0.115	2.60*	0.107	2.39*	0.115	2.49*	0.130	2.63*	-0.277	-1.16	0.045	0.6
Professional	0.119	3.74*	0.121	2.71*	0.123	3.10*	0.125	3.22*	0.111	2.36*	-0.114	-0.45	0.168	1.98*
Education	-0.079	-2.99*	-0.082	-2.13*	-0.049	-1.39	-0.031	-0.87	-0.038	-0.9	-0.548	-2.61*	-0.155	-2.32*
Health	-0.040	-1.46	-0.017	-0.45	-0.096	-2.46*	-0.070	-2.23*	-0.008	-0.20	-0.462	-2.15*	-0.069	-1.06
Arts	-0.146	-3.57*	-0.183	-2.94*	-0.081	-2.11*	-0.081	-2.06*	-0.192	-2.40*	-0.476	-2.27*	-0.206	-2.57*

**Table A1.4 Earning function estimates, continued.**

	<u>Total sample</u>		<u>Females</u>		<u>Males</u>		<u>Male full-time</u>		<u>Female full-time</u>		<u>Male part-time</u>		<u>Female part-time</u>	
	coeff	t-value	coeff	t-value	coeff	t-value	coeff	t-value	coeff	t-value	coeff	t-value	coeff	t-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(14)	(14)
Other Community	-0.057	-1.28	-0.056	-1.05	-0.067	-1.12	-0.043	-0.67	-0.072	-1.17	-0.516	-2.42*	-0.054	-0.69
Workplace Age	0.000	0.11	0.000	-0.33	0.000	0.15	0.000	0.13	0.000	0.10	0.000	0.06	0.000	-1.04
Workplace Size	0.000	5.68*	0.000	3.83*	0.000	4.76*	0.000	4.45*	0.000	3.03*	0.000	1.97*	0.000	3.76*
Multi Site	0.014	0.95	0.001	0.09	0.037	1.71	0.037	1.66	0.025	1.36	0.008	0.15	-0.028	-1.16
Foreign Owned	0.085	4.03*	0.098	3.57*	0.067	2.79*	0.071	2.98*	0.118	4.00*	0.082	0.9	0.021	0.43
Increasing Market	-0.040	-2.56*	-0.048	-2.63*	-0.020	-0.95	-0.008	-0.34	-0.061	-2.87*	-0.115	-2.43*	-0.026	-1.00
Reward Wages	0.017	1.29	0.024	1.63	0.016	0.76	0.007	0.36	0.023	1.39	0.044	0.90	0.033	1.46
Family Friendly Index	0.028	3.85*	0.029	3.35*	0.030	2.97*	0.034	3.25*	0.028	2.89*	0.009	0.39	0.033	2.49*
Interaction Index	0.025	3.40*	0.030	3.39*	0.018	1.62	0.013	1.19	0.035	3.64*	0.065	2.14*	0.022	1.68
Industrial Relations Index	0.012	1.58	0.000	0.01	0.025	2.42*	0.023	2.17*	-0.002	-0.19	0.038	1.31	0.005	0.39
Equal Opps	0.022	0.82	-0.005	-0.17	0.031	0.86	0.029	0.85	0.024	0.68	0.013	0.14	-0.025	-0.62
East Midlands is omitted														
North East	-0.008	-0.26	-0.048	-1.24	0.025	0.67	0.022	0.59	-0.038	-0.84	0.160	1.73	-0.058	-1.15
North West	-0.010	-0.43	-0.028	-0.89	0.018	0.52	0.033	0.97	-0.030	-0.76	-0.076	-0.87	-0.036	-0.86
Yorkshire & The Humber	0.008	0.26	-0.021	-0.58	0.050	1.11	0.045	0.93	-0.006	-0.11	0.167	1.78	-0.041	-0.96

**Table A1.4 Earning function estimates, continued.**

	Total sample		Females		Males		<u>Male full-time</u>		<u>Female full-time</u>		<u>Male part-time</u>		<u>Female part-time</u>	
	coeff	t-value	coeff	t-value	coeff	t-value	coeff	t-value	coeff	t-value	coeff	t-value	coeff	t-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(14)	(14)
West Midlands	-0.017	-0.63	-0.024	-0.66	-0.003	-0.09	0.000	0.01	-0.009	-0.19	0.010	0.10	-0.046	-0.94
East of England	0.052	1.84	0.019	0.53	0.086	2.26*	0.080	2.06*	0.017	0.38	0.185	1.91	0.017	0.33
London	0.167	5.84*	0.147	3.90*	0.192	5.23*	0.174	5.08*	0.171	3.96*	0.340	3.34*	0.101	1.79
South East	0.074	2.97*	0.054	1.70	0.104	3.28*	0.097	3.01*	0.064	1.58	0.185	2.25*	0.025	0.63
South West	0.010	0.36	-0.026	-0.72	0.050	1.50	0.041	1.20	-0.034	-0.76	0.180	2.00*	-0.001	-0.02
Scotland	0.071	2.84*	0.041	1.19	0.101	3.36*	0.101	3.41*	0.059	1.40	0.101	1.08	0.020	0.42
Wales	-0.024	-0.87	-0.066	-1.90	0.039	1.02	0.030	0.79	-0.068	-1.49	0.107	1.0	-0.072	-1.52
Constant	1.545	29.61*	1.584	24.73*	1.392	18.56*	1.385	17.31*	1.413	17.28*	1.664	7.54*	1.755	18.47*
PSUs		1820		1820		1820		1820		1820		1820		1820
No. observations		17763		9888		7875		7048		5955		827		3933
Degrees freedom		1819		1819		1819		1819		1819		1819		1819
R-squared		0.501		0.489		0.513		0.499		0.481		0.512		0.459

Source: WERS 2011. \*significant at a 95% confidence level or above.

**Table A2.1. Decompositions of the earnings gap by gender, and for full-time and part-time employment status, 2011.**

	Difference	Explained					Unexplained						Total
		Individual Characteristics	Occupation	Industry	Workplace	Region	Individual Characteristics	Occupation	Industry	Workplace	Region	Constant	
<b>Male versus Female</b>													
Individual characteristics	17.95	8.43					0.56					8.96	9.52
	(12.38)*	(9.00)*					(0.14)					(2.31)*	(7.39)*
+ workplace characteristics	17.95	3.19	3.44	3.13	0.66	0.43	6.08	-2.91	1.20	7.78	-0.35	-4.71	7.09
	(11.29)*	(5.76)*	(4.39)*	(5.03)*	(1.63)	(1.52)	(1.57)	(-3.60)*	(1.35)	(1.79)	(-0.89)	(-0.87)	(6.07)*
<b>Full Time versus Part Time</b>													
Individual characteristics	33.63	11.10					-7.79					30.31	22.53
	(19.85)*	(9.75)*					(-1.73)					(6.17)*	(14.20)*
+ workplace characteristics	33.63	6.21	11.90	5.42	2.33	1.20	13.91	-1.04	4.86	5.12	0.20	-16.46	6.59
	(18.13)*	(7.84)*	(14.53)*	(8.55)*	(5.47)*	(3.80)*	(3.33)*	(-1.00)	(2.70)*	(0.60)	(0.60)	(-2.20)*	(5.14)*

Notes: t statistics are in the parenthesis below each coefficient. \* indicates significance at the 5% level.

**Table A2.2. Decompositions of the earnings gap when changing the number of occupations, 2011.**

	Difference	Explained					Unexplained					Constant	Total
		Individual	Occupation	Industry	Workplace	Region	Individual	Occupation	Industry	Workplace	Region		
<b>Male Full Time versus Female Full Time</b>													
Individual characteristics	12.22	0.96					4.51					6.76	11.26
	(8.05)*	(1.06)					(1.11)					(1.57)	(8.49)*
+ occupations	12.22	1.63	-0.36				9.71	-3.59				4.84	10.95
	(7.95)*	(2.77)*	(-0.38)				(2.26)*	(-3.39)*				(1.09)	(8.06)*
+ workplace characteristics	12.22	1.85	0.55	1.92	0.20	-0.08	5.59	-2.06	0.72	1.51	-0.49	2.50	7.78
	(7.37)*	(3.59)*	(0.66)	(3.12)*	(0.46)	(-0.25)	(1.34)	(-1.98)*	(0.80)	(0.33)	(-1.09)	(0.44)	(6.55)*
+ 25 occupations	12.22	1.63	1.17				8.45	-1.91				2.87	9.42
	(7.95)*	(2.79)*	(1.17)				(1.91)	(-1.66)				(0.63)	(6.80)*
+ workplace, 25 occupations	12.22	1.80	0.60	1.61	0.19	-0.07	4.57	-2.07	0.39	2.02	-0.48	3.66	8.09
	(7.40)*	(3.53)*	(0.65)	(2.63)*	(0.45)	(-0.25)	(1.10)	(-1.97)*	(0.42)	(0.45)	(-1.10)	(0.64)	(6.80)*
<b>Male Part Time versus Female Part Time</b>													
Individual characteristics	-3.30	-6.56					-4.92					8.17	3.25
	(-0.92)	(-3.33)*					(-0.56)					(1.02)	(0.97)
+ occupations	-3.30	-4.87	-3.74				-3.90	-3.40				12.61	5.30
	(-0.93)	(-4.11)*	(-2.03)*				(-0.51)	(-1.70)				(1.54)	(1.79)
+ workplace characteristics	-3.30	-4.26	-2.64	0.52	-0.99	0.80	-8.17	-3.81	-8.51	16.40	-0.97	8.32	3.26
	(-0.96)	(-3.93)*	(-1.56)	(0.45)	(-1.66)	(1.36)	(-1.07)	(-1.98)*	(-2.01)*	(1.59)	(-0.93)	(0.58)	(1.20)
+ 25 occupations	-3.30	-4.25	-2.83				-5.36	-4.89				14.03	3.78
	(-0.94)	(-3.74)*	(-1.36)				(-0.75)	(-1.53)				(1.74)	(1.32)
+ workplace, 25 occupations	-3.30	-4.14	-1.98	0.58	-0.95	0.01	-9.60	-7.59	-6.89	12.45	-0.38	14.33	2.34
	(-0.97)	(-3.91)*	(-1.04)	(0.52)	(-1.59)	(1.41)	(-1.27)	(-2.05)*	(-1.47)	(1.25)	(-0.39)	(1.01)	(0.88)



**Table A2.2. Decompositions of the earnings gap when changing the number of occupations, continued.**

<b>Female Full Time versus Female Part Time</b>													
Individual characteristics	-25.74 (-14.59)*	-5.53 (-4.89)*					6.76 (1.40)					-26.97 (-5.27)*	-20.21 (-12.17)*
+ occupations	-25.74 (-14.22)*	-2.47 (-2.97)*	-13.73 (-13.43)*				-8.10 (-1.76)	1.56 (1.13)				-3.01 (-0.61)	-9.54 (-6.93)*
+ workplace characteristics	-25.74 (-13.57)*	-1.91 (-2.52)*	-11.51 (-13.18)*	-3.72 (-6.58)*	-1.90 (-4.72)*	-1.40 (-3.86)*	-11.33 (-2.47)*	2.84 (1.99)*	-3.12 (-1.96)*	-9.68 (-1.62)	-0.21 (-0.58)	16.20 (2.16)*	-5.31 (-3.98)*
+ 25 occupations	-25.74 (-14.17)*	-2.64 (-3.23)*	-16.31 (-14.35)*				-12.42 (-2.81)*	-1.51 (-0.89)				7.14 (1.42)	-6.79 (-4.97)*
+ workplace, 25 occupations	-25.74 (-13.65)*	-2.00 (-2.68)*	-12.94 (-12.63)*	-3.21 (-5.63)*	-1.86 (-4.67)*	-1.36 (-3.79)*	-12.77 (-2.83)*	0.82 (0.45)	-1.83 (-1.08)	-7.99 (-1.36)	-0.24 (-0.64)	17.63 (2.31)*	-4.38 (-3.37)*
<b>Male Full Time versus Male Part Time</b>													
Individual characteristics	-41.26 (-11.49)*	-13.35 (-6.46)*					-2.36 (-0.28)					-25.55 (-3.18)*	-27.91 (-8.15)*
+ occupations	-41.26 (-11.56)*	-10.54 (-7.04)*	-13.59 (-8.54)*				-20.13 (-2.70)*	-1.77 (-1.07)				4.77 (0.59)	-17.13 (-5.39)*
+ workplace characteristics	-41.26 (-11.71)*	-9.50 (-7.31)*	-12.54 (-8.55)*	-7.09 (-6.74)*	-2.91 (-3.90)*	-0.45 (-0.90)	-23.61 (-3.22)*	-1.08 (-0.66)	-10.38 (-2.57)*	5.04 (0.52)	-0.77 (-0.68)	22.02 (1.64)	-8.77 (-3.23)*
+ 25 occupations	-41.26 (-11.72)*	-10.48 (-7.12)*	-16.52 (-9.25)*				-24.28 (-3.36)*	-8.29 (-3.00)*				18.30 (2.27)*	-14.26 (-4.49)*
+ workplace, 25 occupations	-41.26 (-11.71)*	-9.26 (-7.29)*	-13.40 (-7.52)*	-6.87 (-6.11)*	-2.85 (-3.82)*	-0.46 (-0.92)	-25.62 (-3.49)*	-6.81 (-2.10)*	-6.48 (-1.46)	2.30 (0.24)	-0.11 (-0.10)	28.31 (2.12)*	-8.42 (-3.15)*

Source: WERS2011. Notes: t statistics are in the parenthesis below each coefficient. \* indicates significance at the 5% level.

**Table A2.3. Decompositions of the earnings gap for each occupation.**

	Difference	Explained				Unexplained					
		Individual	Industry	Workplace	Region	Individual	Industry	Workplace	Region	Constant	Total
<b>Managerial</b>											
<b>Male versus Female</b>											
Individual characteristics	15.99	3.73				13.91				-1.64	12.26
	(3.83)*	(1.62)				(0.67)				(-0.08)	(2.92)*
+ workplace characteristics	15.99	0.92	5.71	0.33	1.94	8.42	1.40	-29.96	-5.42	32.66	7.09
	(3.83)*	(0.48)	(3.31)*	(0.36)	(1.63)	(0.45)	(0.59)	(-2.08)*	(-2.63)*	(1.47)	(2.07)*
<b>Full Time versus Part Time</b>											
Individual characteristics	10.71	8.71				4.37				-2.37	2.00
	(1.35)	(1.67)				(0.15)				(-0.09)	(0.25)
+ workplace characteristics	10.71	6.23	4.06	2.19	2.75	-16.58	-8.33	-1.04	-1.59	23.03	-4.52
	(1.27)	(1.66)	(1.58)	(0.86)	(1.39)	(-0.51)	(-1.12)	(-0.04)	(-0.26)	(0.55)	(-0.62)
<b>Professional</b>											
<b>Male versus Female</b>											
Individual characteristics	12.06	4.21				53.85				-46.00	7.85
	(4.49)*	(3.19)*				(5.09)*				(-3.87)*	(3.04)*
+ workplace characteristics	12.06	1.10	3.30	0.85	0.19	35.64	6.09	4.34	1.19	-40.64	6.62
	(4.60)*	(0.83)	(2.18)*	(0.87)	(0.40)	(3.80)*	(1.77)	(0.36)	(1.40)	(-3.13)*	(3.11)*
<b>Full Time versus Part Time</b>											
Individual characteristics	8.97	-0.36				12.31				-2.98	9.33
	(2.57)*	(-0.16)				(0.68)				(-0.17)	(2.64)*
+ workplace characteristics	8.97	-2.58	5.16	2.02	1.26	5.50	12.98	-32.47	1.38	15.71	3.10
	(2.73)*	(-1.28)	(2.89)*	(1.96)*	(2.12)*	(0.32)	(1.85)	(-2.26)*	(1.32)	(0.85)	(1.12)

**Table A2.3. Decompositions of the earnings gap for each occupation, continued.**

<b>Technical</b>												
<b>Male versus Female</b>												
Individual characteristics	12.77	2.01				-0.34					11.09	10.76
	(5.15)*	(1.41)				(-0.04)					(1.35)	(4.10)*
+ workplace characteristics	12.77	1.19	1.86	0.75	0.61	0.01	1.77	7.59	0.48	-1.48	-1.48	8.36
	(5.06)*	(0.89)	(1.94)	(1.00)	(0.77)	(0.00)	(0.88)	(0.84)	(0.43)	(-0.13)	(-0.13)	(3.85)*
<b>Full Time versus Part Time</b>												
Individual characteristics	4.89	0.32				10.96					-6.39	4.57
	(1.19)	(0.14)				(0.61)					(-0.34)	(1.00)
+ workplace characteristics	4.89	-1.27	5.16	1.87	1.52	16.52	8.87	-1.48	-2.35	-23.95	-23.95	-2.39
	(1.15)	(-0.66)	(3.55)*	(1.75)	(1.55)	(1.30)	(2.75)*	(-0.12)	(-1.31)	(-1.25)	(-1.25)	(-0.59)
<b>Clerical</b>												
<b>Male versus Female</b>												
Individual characteristics	1.83	2.42				-9.55					8.96	-0.59
	(0.58)	(1.68)				(-1.12)					(1.00)	(-0.22)
+ workplace characteristics	1.83	1.42	0.66	-0.07	1.23	-11.95	-1.75	14.62	-1.37	-0.96	-0.96	-1.41
	(0.60)	(1.12)	(0.66)	(-0.08)	(1.31)	(-1.43)	(-0.79)	(1.18)	(-1.17)	(-0.06)	(-0.06)	(-0.59)
<b>Full Time versus Part Time</b>												
Individual characteristics	11.34	-2.31				-17.00					30.65	13.65
	(4.54)*	(-1.89)				(-1.24)					(2.19)*	(5.46)*
+ workplace characteristics	11.34	-2.28	1.60	1.06	0.55	-11.85	-0.97	-3.00	0.78	25.44	25.44	10.40
	(4.53)*	(-2.08)*	(1.99)*	(1.41)	(0.94)	(-1.01)	(-0.28)	(-0.34)	(0.99)	(1.67)	(1.67)	(4.83)*
<b>Craft Service</b>												
<b>Male versus Female</b>												
Individual characteristics	36.98	10.17				31.19					-4.39	26.80
	(8.27)*	(3.10)*				(1.95)					(-0.26)	(5.41)*
+ workplace characteristics	36.98	6.03	8.62	0.61	-0.29	7.97	17.59	27.66	0.12	-31.34	-31.34	22.00
	(7.83)*	(2.12)*	(3.27)*	(0.36)	(-0.20)	(0.66)	(3.08)*	(1.92)	(0.04)	(-1.91)	(-1.91)	(4.67)*

**Table A2.3. Decompositions of the earnings gap for each occupation, continued.**

<b>Full Time versus Part Time</b>											
Individual characteristics	27.66	17.45				2.12				8.09	10.21
	(4.08)*	(2.78)*				(0.09)				(0.32)	(1.64)
+ workplace characteristics	27.66	13.82	5.50	3.26	-0.04	16.83	27.73	-7.59	1.09	-32.95	5.11
	(3.75)*	(2.62)*	(1.45)	(1.90)	(-0.02)	(0.91)	(3.40)*	(-0.40)	(0.30)	(-1.35)	(0.95)
<b>Personal Service</b>											
<b>Male versus Female</b>											
Individual characteristics	6.45	-1.40				17.36				-9.52	7.85
	(1.95)	(-0.83)				(1.50)				(-0.82)	(2.45)*
+ workplace characteristics	6.45	-2.82	2.46	0.79	1.68	19.29	-10.16	26.24	-0.36	-30.66	4.34
	(2.05)*	(-1.79)	(1.46)	(0.86)	(1.70)	(1.91)	(-1.25)	(1.67)	(-0.24)	(-1.51)	(1.51)
<b>Full Time versus Part Time</b>											
Individual characteristics	5.42	0.92				19.05				-14.56	4.50
	(2.18)*	(0.69)				(1.71)				(-1.24)	(1.69)
+ workplace characteristics	5.42	0.54	1.18	1.10	0.97	19.58	-4.71	29.62	0.49	-43.34	1.63
	(2.10)*	(0.46)	(1.66)	(1.55)	(1.39)	(1.80)	(-0.67)	(2.11)*	(0.71)	(-2.87)*	(0.66)
<b>Sales&amp;Customer</b>											
<b>Male versus Female</b>											
Individual characteristics	24.77	8.09				11.21				5.47	16.68
	(4.33)*	(2.75)*				(0.77)				(0.39)	(3.82)*
+ workplace characteristics	24.77	4.09	4.33	1.01	0.04	-5.21	11.19	6.22	2.21	0.87	15.28
	(4.26)*	(1.76)	(2.32)*	(1.00)	(0.05)	(-0.43)	(1.67)	(0.38)	(0.92)	(0.05)	(3.88)*
<b>Full Time versus Part Time</b>											
Individual characteristics	35.86	13.38				-6.67				29.15	22.48
	(9.19)*	(4.82)*				(-0.60)				(2.53)*	(6.11)*
+ workplace characteristics	35.86	9.34	8.28	1.87	0.01	-11.24	10.94	31.00	1.51	-15.85	16.36
	(9.13)*	(3.85)*	(3.88)*	(1.33)	(0.01)	(-0.98)	(1.76)	(1.65)	(0.81)	(-0.79)	(4.67)*

**Table A2.3. Decompositions of the earnings gap for each occupation, continued.**

<b>Operative&amp;Assembly</b>												
<b>Male versus Female</b>												
Individual characteristics	24.03	6.43				51.30					-33.71	17.59
	(4.41)*	(1.62)				(2.75)*					(-1.83)	(4.56)*
+ workplace characteristics	24.03	5.93	2.55	-2.74	0.64	56.48	-17.63	-0.80	-1.44	-18.95	17.66	
	(3.94)*	(2.19)*	(1.69)	(-0.93)	(0.43)	(3.57)*	(-3.86)*	(-0.05)	(-0.52)	(-0.96)	(4.57)*	
<b>Full Time versus Part Time</b>												
Individual characteristics	35.04	15.56				4.86					14.62	19.48
	(7.21)*	(4.50)*				(0.19)					(0.58)	(3.91)*
+ workplace characteristics	35.04	11.99	6.37	1.43	-0.36	0.17	21.83	0.06	-22.27	15.82	15.60	
	(6.57)*	(3.34)*	(2.33)*	(0.55)	(-0.13)	(0.00)	(1.43)	(0.00)	(-1.61)	(0.27)	(3.07)*	
<b>Unskilled</b>												
<b>Male versus Female</b>												
Individual characteristics	20.73	10.79				2.27					7.67	9.94
	(7.66)*	(6.30)*				(0.24)					(0.79)	(3.63)*
+ workplace characteristics	20.73	6.35	8.20	0.36	1.05	2.06	-6.47	-14.08	-1.04	24.29	4.77	
	(7.85)*	(3.99)*	(5.09)*	(0.41)	(1.44)	(0.22)	(-1.96)*	(-1.52)	(-1.05)	(1.82)	(1.79)	
<b>Full Time versus Part Time</b>												
Individual characteristics	26.96	12.26				2.55					12.15	14.70
	(10.45)*	(6.85)*				(0.30)					(1.34)	(5.46)*
+ workplace characteristics	26.96	7.60	8.51	1.13	1.66	-12.16	-0.07	5.82	-0.39	14.85	8.06	
	(10.03)*	(4.23)*	(5.13)*	(1.29)	(2.19)*	(-1.45)	(-0.01)	(0.60)	(-0.43)	(0.99)	(2.94)*	

Source: WERS 2011. Notes: t statistics are in the parenthesis below each coefficient. \* indicates significance at the 5% level.

**Table A2.4. Decompositions of the earnings gap for manual and non-manual workers, 2011.**

	Difference	Explained				Unexplained					
		Individual Characteristics	Industry	Workplace	Region	Individual Characteristics	Industry	Workplace	Region	Constant	Total
<b>Manual Workers</b>											
<b>Male versus Female</b>											
Individual characteristics	27.41 (16.23)*	9.38 (8.53)*				13.00 (2.24)*				5.03 (0.85)	18.03 (10.53)*
+ workplace characteristics	27.41 (15.63)*	6.37 (6.41)*	7.49 (5.65)*	1.51 (1.96)*	0.26 (0.68)	14.32 (2.50)*	-1.77 (-0.71)	2.49 (0.42)	-0.83 (-2.05)*	-2.43 (-0.29)	11.78 (6.63)*
<b>Full Time versus Part Time</b>											
Individual characteristics	29.65 (17.45)*	14.84 (10.90)*				6.55 (1.19)				8.26 (1.40)	14.81 (8.69)*
+ workplace characteristics	29.65 (16.56)*	10.36 (8.08)*	7.42 (6.32)*	2.07 (2.84)*	0.20 (0.52)	10.32 (1.81)	4.22 (1.66)	10.34 (1.58)	0.13 (0.31)	-15.41 (-1.68)	9.60 (5.45)*
<b>Non Manual Workers</b>											
<b>Male versus Female</b>											
Individual characteristics	24.56 (14.23)*	10.83 (9.88)*				-1.86 (-0.32)				15.58 (2.63)*	13.73 (8.79)*
+ workplace characteristics	24.56 (13.55)*	7.54 (8.29)*	2.55 (3.81)*	0.99 (2.13)*	1.02 (2.34)*	3.16 (0.60)	-0.11 (-0.10)	9.87 (1.56)	-0.08 (-0.13)	-0.37 (-0.05)	12.46 (8.69)*
<b>Full Time versus Part Time</b>											
Individual characteristics	29.61 (12.94)*	10.11 (7.06)*				-21.43 (-3.00)*				40.94 (5.26)*	19.51 (9.30)*
+ workplace characteristics	29.61 (11.90)*	7.87 (6.33)*	5.35 (5.79)*	2.18 (4.09)*	1.60 (3.65)*	5.06 (0.83)	3.90 (1.84)	5.21 (0.63)	0.86 (1.42)	-2.40 (-0.22)	12.62 (6.85)*

Notes: t statistics are in the parenthesis below each coefficient. \* indicates significance at the 5% level.

**Table A2.5. Decompositions of the earnings gap for each industry.**

	Difference	Explained				Unexplained					
		Individual Characteristics	Occupation	Workplace	Region	Individual Characteristics	Occupation	Workplace	Region	Constant	Total
<b>Manufacturing</b>											
<b>Male versus Female</b>											
Individual characteristics	17.87	5.38				1.46				11.03	12.48
	(4.35)*	(2.07)*				(0.11)				(0.93)	(3.23)*
+ workplace characteristics	17.87	3.61	1.02	2.02	-0.07	7.22	-6.65	4.08	-2.91	9.55	11.29
	(4.39)*	(1.88)	(0.55)	(1.71)	(-0.11)	(0.82)	(-3.59)*	(0.41)	(-1.63)	(0.77)	(3.49)*
<b>Full Time versus Part Time</b>											
Individual characteristics	16.18	12.07				49.59				-45.48	4.11
	(1.66)	(2.77)*				(1.98)*				(-1.84)	(0.50)
+ workplace characteristics	16.18	8.96	3.74	2.82	0.24	76.86	5.79	20.54	7.49	-110.26	0.43
	(1.46)	(2.86)*	(1.43)	(1.20)	(0.19)	(4.18)*	(1.00)	(0.85)	(2.28)*	(-3.20)*	(0.05)
<b>Electricity</b>											
<b>Male versus Female</b>											
Individual characteristics	27.49	9.19				65.82				-47.51	18.31
	(5.35)*	(1.33)				(4.06)*				(-3.51)*	(2.05)*
+ workplace characteristics	27.49	3.30	16.72	1.19	-0.08	62.85	-7.98	40.79	2.42	-91.71	6.36
	(6.52)*	(0.48)	(4.23)*	(0.60)	(-0.03)	(3.97)*	(-0.76)	(0.86)	(0.21)	(-1.76)	(0.91)
<b>Full Time versus Part Time</b>											
Individual characteristics	34.99	22.81				-2160.90				2173.08	12.18
	(3.08)*	(2.16)*				(-105.42)*				(170.85)*	(1.01)
+ workplace characteristics	34.99	15.37	20.31	-0.33	1.99	-166.99	-13.61	221.04	-0.84	-41.95	-2.35
	(3.08)*	(1.30)	(3.66)*	(-0.09)	(0.50)	(-6.56)*	(-2.33)*	(10.73)*	(-0.15)	(-2.13)*	(-0.14)

**Table A2.5. Decompositions of the earnings gap for each industry, continued.**

<b>Water supply</b>											
<b>Male versus Female</b>											
Individual characteristics	-40.47	-39.19				25.50				-26.77	-1.28
	(-3.63)*	(-3.63)*				(0.76)				(-0.85)	(-0.17)
+ workplace characteristics	-40.47	-18.01	-4.08	-25.42	2.24	-44.10	-8.67	177.57	-9.08	-110.92	4.80
	(-3.18)*	(-2.63)*	(-0.89)	(-1.76)	(0.27)	(-1.28)	(-0.86)	(2.41)*	(-1.01)	(-1.94)	(0.66)
<b>Full Time versus Part Time</b>											
Individual characteristics	-56.63	-12.51				550.62				-594.74	-44.12
	(-2.76)*	(-0.72)				(26.12)*				(-63.13)*	(-2.18)*
+ workplace characteristics	-56.63	-5.86	3.90	-14.45	8.95	-198.83	-6.37	50.87	-18.55	123.70	-49.17
	(-2.87)*	(-0.70)	(1.16)	(-1.51)	(1.95)	(-12.13)*	(-0.95)	(1.55)	(-2.90)*	(3.69)*	(-2.59)*
<b>Construction</b>											
<b>Male versus Female</b>											
Individual characteristics	20.65	2.93				27.78				-10.06	17.72
	(2.97)*	(0.56)				(1.35)				(-0.48)	(4.26)*
+ workplace characteristics	20.65	4.15	0.50	4.35	1.64	27.56	9.64	12.14	-3.57	-35.77	10.00
	(2.86)*	(0.86)	(0.13)	(1.53)	(0.97)	(1.13)	(1.18)	(0.89)	(-0.58)	(-1.26)	(1.41)
<b>Full Time versus Part Time</b>											
Individual characteristics	27.74	2.84				-24.85				49.76	24.91
	(2.30)*	(0.47)				(-0.29)				(0.58)	(2.35)*
+ workplace characteristics	27.74	-1.92	4.85	8.50	1.07	-210.37	29.69	-116.80	43.24	269.49	15.24
	(1.94)	(-0.41)	(1.20)	(2.15)*	(0.45)	(-8.85)*	(0.91)	(-2.30)*	(1.14)	(22.35)*	(1.03)
<b>Retail</b>											
<b>Male versus Female</b>											
Individual characteristics	21.15	7.92				19.38				-6.15	13.23
	(5.10)*	(3.01)*				(1.89)				(-0.63)	(3.43)*
+ workplace characteristics	21.15	4.56	3.84	2.62	1.25	14.51	4.67	-3.76	-1.83	-4.72	8.88
	(4.78)*	(2.55)*	(2.17)*	(1.83)	(1.23)	(1.81)	(1.28)	(-0.35)	(-1.13)	(-0.33)	(2.69)*



**Table A2.5. Decompositions of the earnings gap for each industry, continued.**

<b>Full Time versus Part Time</b>											
Individual characteristics	38.92	16.23				1.95				20.74	22.69
	(10.35)*	(5.46)*				(0.21)				(2.29)*	(5.21)*
+ workplace characteristics	38.92	11.26	11.06	4.41	1.08	3.15	3.88	8.82	-0.99	-3.75	11.11
	(9.46)*	(5.06)*	(4.89)*	(2.51)*	(0.90)	(0.34)	(0.76)	(0.65)	(-0.59)	(-0.23)	(3.02)*
<b>Transportation</b>											
<b>Male versus Female</b>											
Individual characteristics	0.97	2.16				8.24				-9.43	-1.19
	(0.34)	(1.14)				(0.63)				(-0.74)	(-0.39)
+ workplace characteristics	0.97	2.16	-4.03	-1.17	0.89	0.22	-2.04	-26.63	1.08	30.49	3.13
	(0.35)	(1.61)	(-1.77)	(-0.90)	(0.90)	(0.02)	(-0.39)	(-1.53)	(0.38)	(1.59)	(1.14)
<b>Full Time versus Part Time</b>											
Individual characteristics	22.60	2.49				7.09				13.02	20.11
	(4.81)*	(1.43)				(0.38)				(0.67)	(4.29)*
+ workplace characteristics	22.60	2.82	6.14	0.38	0.29	-19.07	16.24	-80.11	0.04	95.86	12.97
	(5.99)*	(1.73)	(2.80)*	(0.18)	(0.19)	(-1.19)	(3.10)*	(-4.27)*	(0.01)	(3.53)*	(3.58)*
<b>Accommodation</b>											
<b>Male versus Female</b>											
Individual characteristics	10.37	2.65				13.34				-5.62	7.72
	(2.32)*	(1.14)				(1.04)				(-0.47)	(1.78)
+ workplace characteristics	10.37	-0.63	2.53	1.35	1.51	16.41	2.13	3.72	-12.36	-4.27	5.61
	(2.30)*	(-0.34)	(1.29)	(1.05)	(1.11)	(1.59)	(0.36)	(0.26)	(-3.22)*	(-0.22)	(1.42)
<b>Full Time versus Part Time</b>											
Individual characteristics	25.91	11.47				23.57				-9.12	14.44
	(5.51)*	(3.14)*				(1.90)				(-0.75)	(2.73)*
+ workplace characteristics	35.86	9.34	8.28	1.87	0.01	-11.24	10.94	31.00	1.51	-15.85	16.36
	(9.13)*	(3.85)*	(3.88)*	(1.33)	(0.01)	(-0.98)	(1.76)	(1.65)	(0.81)	(-0.79)	(4.67)*

**Table A2.5. Decompositions of the earnings gap for each industry, continued.**

<b>Communication</b>											
<b>Male versus Female</b>											
Individual characteristics	25.87	13.67									
	(4.16)*	(2.85)*									
+ workplace characteristics	25.87	7.88	10.23	-0.33	1.41	0.65	6.35	51.74	11.76	-63.82	6.68
	(4.21)*	(2.11)*	(3.54)*	(-0.18)	(0.46)	(0.05)	(1.40)	(2.45)*	(1.88)	(-2.80)*	(1.67)
<b>Full Time versus Part Time</b>											
Individual characteristics	36.86	2.72									
	(2.26)*	(0.32)									
+ workplace characteristics	36.86	0.79	19.87	2.80	7.99	-9.92	17.86	443.88	-21.49	-424.91	5.41
	(2.16)*	(0.14)	(2.46)*	(1.04)	(1.26)	(-0.23)	(0.70)	(2.47)*	(-0.71)	(-2.15)*	(0.57)
<b>Financial</b>											
<b>Male versus Female</b>											
Individual characteristics	35.64	10.46									
	(6.42)*	(2.66)*									
+ workplace characteristics	35.64	2.98	8.91	5.66	3.57	-24.75	3.55	311.06	-11.21	-264.14	14.52
	(6.64)*	(1.02)	(4.06)*	(1.17)	(1.34)	(-1.14)	(0.79)	(3.85)*	(-0.99)	(-3.93)*	(3.09)*
<b>Full Time versus Part Time</b>											
Individual characteristics	30.35	21.47									
	(2.83)*	(2.62)*									
+ workplace characteristics	30.35	11.39	11.79	10.55	-0.34	37.59	-13.32	59.34	-20.19	-66.47	-3.03
	(2.88)*	(2.03)*	(3.53)*	(1.70)	(-0.08)	(2.99)*	(-5.38)*	(3.06)*	(-1.60)	(-3.19)*	(-0.55)

**Table A2.5. Decompositions of the earnings gap for each industry, continued.**

<b>Real estate</b>											
<b>Male versus Female</b>											
Individual characteristics	14.76	6.92				-3.72				11.56	7.84
	(3.24)*	(2.17)*				(-0.26)				(0.82)	(2.13)*
+ workplace characteristics	14.76	2.89	5.88	0.30	2.61	-4.19	-2.66	16.73	2.27	-9.06	3.09
	(2.72)*	(1.53)	(2.00)*	(0.16)	(1.03)	(-0.26)	(-0.56)	(0.92)	(0.41)	(-0.35)	(0.97)
<b>Full Time versus Part Time</b>											
Individual characteristics	30.93	15.10				-3.55				19.38	15.83
	(5.02)*	(2.66)*				(-0.12)				(0.67)	(2.72)*
+ workplace characteristics	30.93	6.72	16.44	1.55	-1.66	20.26	0.41	-41.49	6.67	22.01	7.86
	(4.65)*	(1.80)	(5.20)*	(0.98)	(-0.71)	(0.86)	(0.07)	(-1.56)	(1.12)	(0.69)	(1.45)
<b>Professional</b>											
<b>Male versus Female</b>											
Individual characteristics	21.78	10.36				-21.41				32.84	11.43
	(4.84)*	(3.70)*				(-2.12)*				(3.12)*	(3.17)*
+ workplace characteristics	21.78	3.95	7.76	1.20	2.79	-5.59	9.54	1.64	-2.72	3.22	6.08
	(4.42)*	(1.58)	(4.92)*	(1.02)	(1.53)	(-0.53)	(1.32)	(0.11)	(-0.47)	(0.15)	(2.02)*
<b>Full Time versus Part Time</b>											
Individual characteristics	5.71	6.17				-32.53				32.07	-0.46
	(0.79)	(1.60)				(-1.23)				(1.24)	(-0.07)
+ workplace characteristics	5.71	-0.75	8.64	2.72	3.50	-52.78	-1.62	15.87	-1.14	31.28	-8.40
	(0.77)	(-0.26)	(4.49)*	(2.03)*	(2.18)*	(-2.49)*	(-0.22)	(0.75)	(-0.20)	(0.89)	(-1.53)

**Table A2.5. Decompositions of the earnings gap for each industry, continued.**

<b>Clerical</b>											
<b>Male versus Female</b>											
Individual characteristics	6.20	4.68									
	(0.61)	(0.72)									
+ workplace characteristics	6.20	-2.53	-5.06	2.25	2.50	1.95	2.88	-72.96	-3.15	80.32	9.03
	(0.54)	(-0.84)	(-0.77)	(0.91)	(0.69)	(0.16)	(0.42)	(-3.06)*	(-0.62)	(3.38)*	(1.32)
<b>Full Time versus Part Time</b>											
Individual characteristics	27.36	17.60									
	(2.12)*	(1.85)									
+ workplace characteristics	27.36	8.94	24.42	5.77	3.24	-9.30	-14.98	-52.88	-0.20	62.35	-15.01
	(1.82)	(2.14)*	(2.91)*	(1.47)	(0.82)	(-0.29)	(-0.90)	(-1.42)	(-0.01)	(1.23)	(-2.09)*
<b>Public</b>											
<b>Male versus Female</b>											
Individual characteristics	6.80	4.25									
	(2.32)*	(2.44)*									
+ workplace characteristics	6.80	1.30	6.57	0.06	-0.52	-10.02	-7.56	6.41	0.37	10.20	-0.60
	(2.56)*	(1.16)	(4.23)*	(0.13)	(-0.60)	(-1.21)	(-2.76)*	(0.51)	(0.30)	(0.62)	(-0.28)
<b>Full Time versus Part Time</b>											
Individual characteristics	8.48	1.39									
	(2.23)*	(0.69)									
+ workplace characteristics	8.48	0.14	6.05	0.13	0.25	-10.34	-4.94	33.30	-0.20	-15.91	1.92
	(2.12)*	(0.09)	(3.11)*	(0.33)	(0.24)	(-0.63)	(-1.46)	(1.84)	(-0.13)	(-0.64)	(0.76)

**Table A2.5. Decompositions of the earnings gap for each industry, continued.**

<b>Education</b>											
<b>Male versus Female</b>											
Individual characteristics	29.29	16.03				5.70				7.56	13.26
	(9.26)*	(9.95)*				(0.62)				(0.73)	(4.31)*
+ workplace characteristics	29.29	3.66	14.21	3.84	0.70	-3.82	5.67	26.50	-0.39	-21.09	6.88
	(9.06)*	(2.09)*	(8.31)*	(2.77)*	(1.85)	(-0.32)	(1.48)	(2.39)*	(-0.47)	(-1.45)	(3.00)*
<b>Full Time versus Part Time</b>											
Individual characteristics	35.13	16.83				16.88				1.42	18.30
	(14.11)*	(8.38)*				(1.23)				(0.10)	(8.21)*
+ workplace characteristics	35.13	6.35	17.55	3.17	0.75	15.43	-14.07	2.75	-0.72	3.92	7.31
	(13.76)*	(4.32)*	(10.55)*	(3.46)*	(1.80)	(1.26)	(-3.47)*	(0.15)	(-0.99)	(0.16)	(3.49)*
<b>Health</b>											
<b>Male versus Female</b>											
Individual characteristics	9.12	8.44				12.13				-11.44	0.68
	(2.31)*	(3.71)*				(1.00)				(-1.02)	(0.22)
+ workplace characteristics	9.12	2.24	4.92	0.06	1.77	16.64	-1.34	56.06	0.49	-71.72	0.13
	(2.12)*	(1.77)	(2.97)*	(0.04)	(2.31)*	(1.85)	(-0.46)	(3.76)*	(0.29)	(-3.74)*	(0.05)
<b>Full Time versus Part Time</b>											
Individual characteristics	20.88	6.35				-0.14				14.67	14.53
	(6.20)*	(2.80)*				(-0.01)				(1.24)	(4.39)*
+ workplace characteristics	20.88	1.99	9.89	4.54	1.99	15.90	1.80	-28.58	1.02	12.32	2.47
	(5.97)*	(1.67)	(6.06)*	(3.78)*	(2.42)*	(1.53)	(0.57)	(-2.40)*	(1.04)	(0.82)	(1.14)

**Table A2.5. Decompositions of the earnings gap for each industry, continued.**

<b>Arts</b>											
<b>Male versus Female</b>											
Individual characteristics	20.71	4.89				24.61				-8.79	15.82
	(3.71)*	(1.24)				(1.75)				(-0.61)	(3.13)*
+ workplace characteristics	20.71	1.40	5.80	6.00	0.00	23.71	-21.62	-55.86	0.61	60.67	7.51
	(3.60)*	(0.44)	(1.98)*	(1.56)	(0.00)	(1.48)	(-4.80)*	(-3.21)*	(0.17)	(3.03)*	(1.93)
<b>Full Time versus Part Time</b>											
Individual characteristics	24.16	6.03				-2.39				20.53	18.14
	(3.93)*	(1.48)				(-0.11)				(0.90)	(2.85)*
+ workplace characteristics	24.16	3.29	7.93	5.95	-0.08	5.47	-19.32	-3.38	3.90	20.40	7.08
	(4.16)*	(1.09)	(2.98)*	(2.13)*	(-0.05)	(0.34)	(-2.55)*	(-0.14)	(0.98)	(0.63)	(1.33)
<b>Other Community</b>											
<b>Male versus Female</b>											
Individual characteristics	16.99	11.56				-45.46				50.89	5.43
	(2.24)*	(2.01)*				(-2.73)*				(3.01)*	(1.15)
+ workplace characteristics	16.99	4.20	5.23	3.72	-1.61	-16.89	-1.80	6.12	0.57	17.45	5.45
	(2.27)*	(1.10)	(1.27)	(1.33)	(-0.83)	(-0.97)	(-0.36)	(0.30)	(0.14)	(0.65)	(1.03)
<b>Full Time versus Part Time</b>											
Individual characteristics	2.77	-9.96				24.24				-11.51	12.73
	(0.35)	(-1.59)				(0.95)				(-0.43)	(2.11)*
+ workplace characteristics	2.77	-5.50	2.08	9.44	-6.42	19.52	-3.87	5.54	2.06	-20.07	3.17
	(0.36)	(-1.22)	(0.55)	(3.14)*	(-2.21)*	(0.87)	(-0.79)	(0.36)	(0.43)	(-0.79)	(0.64)

Source: WERS 2011. Notes: t statistics are in the parenthesis below each coefficient. \* indicates significance at the 5% level.

**Table A2.6. Decompositions of the earnings gap for each region.**

	Difference	Explained				Unexplained					
		Individual Characteristics	Occupation	Industry	Workplace	Individual Characteristics	Occupation	Industry	Workplace	Constant	Total
<b>North East</b>											
<b>Male versus Female</b>											
Individual characteristics	16.71 (2.66)*	6.67 (1.42)				4.65 (0.33)				5.39 (0.36)	10.04 (2.45)*
+ workplace characteristics	16.71 (2.35)*	2.93 (1.22)	3.21 (0.95)	-1.01 (-0.28)	3.12 (1.04)	5.78 (0.39)	1.65 (0.60)	-8.78 (-2.13)*	-13.59 (-0.77)	23.40 (0.99)	8.46 (2.58)*
<b>Full Time versus Part Time</b>											
Individual characteristics	33.14 (5.63)*	11.24 (2.54)*				-0.59 (-0.05)				22.49 (1.87)	21.90 (5.86)*
+ workplace characteristics	33.14 (4.79)*	6.12 (2.13)*	10.03 (2.82)*	0.24 (0.08)	6.30 (1.98)*	27.63 (2.08)*	4.24 (0.60)	11.89 (1.15)	-16.67 (-0.96)	-16.64 (-0.70)	10.45 (2.93)*
<b>North West</b>											
<b>Male versus Female</b>											
Individual characteristics	16.60 (4.35)*	6.10 (2.12)*				7.24 (0.83)				3.26 (0.36)	10.50 (3.48)*
+ workplace characteristics	16.60 (3.68)*	2.16 (1.31)	4.47 (2.43)*	4.07 (2.50)*	1.10 (0.70)	4.24 (0.54)	-6.46 (-3.40)*	1.43 (0.50)	-7.47 (-0.57)	13.08 (0.86)	4.81 (1.76)
<b>Full Time versus Part Time</b>											
Individual characteristics	35.38 (7.49)*	12.91 (3.31)*				-11.88 (-1.16)				34.35 (3.15)*	22.47 (6.65)*
+ workplace characteristics	35.38 (6.44)*	6.20 (2.41)*	11.02 (5.97)*	4.99 (2.87)*	3.74 (1.93)	10.54 (1.11)	-5.76 (-2.73)*	14.26 (4.29)*	-34.21 (-2.56)*	24.62 (1.42)	9.45 (3.43)*

**Table A2.6. Decompositions of the earnings gap for each region, continued.**

<b>Yorkshire and Humber</b>												
<b>Male versus Female</b>												
Individual characteristics	24.11	9.62				14.52				-0.04	14.48	
	(4.70)*	(2.51)*				(1.35)				(-0.00)	(3.47)*	
+ workplace characteristics	24.11	3.15	4.44	8.17	3.09	26.33	-1.30	6.13	20.80	-46.70	5.25	
	(4.32)*	(1.52)	(1.61)	(3.89)*	(1.62)	(2.38)*	(-0.63)	(2.29)*	(1.57)	(-2.63)*	(1.61)	
<b>Full Time versus Part Time</b>												
Individual characteristics	28.42	12.93				7.60				7.90	15.49	
	(4.59)*	(3.04)*				(0.56)				(0.53)	(2.50)*	
+ workplace characteristics	28.42	5.76	9.63	7.31	1.81	12.48	-0.80	-9.09	48.85	-47.53	3.91	
	(4.02)*	(2.49)*	(2.78)*	(3.20)*	(1.14)	(1.07)	(-0.25)	(-2.59)*	(3.45)*	(-2.88)*	(1.05)	
<b>East Midlands</b>												
<b>Male versus Female</b>												
Individual characteristics	6.93	1.22				-21.25				26.96	5.71	
	(1.29)	(0.34)				(-1.29)				(1.82)	(1.28)	
+ workplace characteristics	6.93	0.00	1.94	7.30	-2.57	-30.89	-5.02	3.50	24.31	8.36	0.26	
	(1.31)	(0.00)	(0.64)	(2.64)*	(-1.03)	(-2.59)*	(-2.09)*	(1.14)	(1.93)	(0.52)	(0.07)	
<b>Full Time versus Part Time</b>												
Individual characteristics	18.66	2.71				-16.16				32.11	15.95	
	(3.08)*	(0.62)				(-1.26)				(2.45)*	(3.67)*	
+ workplace characteristics	18.66	0.27	9.53	7.65	-4.43	4.66	-11.04	0.39	39.24	-27.63	5.63	
	(2.79)*	(0.10)	(3.27)*	(2.75)*	(-2.12)*	(0.46)	(-3.14)*	(0.08)	(2.34)*	(-1.43)	(1.47)	
<b>West Midlands</b>												
<b>Male versus Female</b>												
Individual characteristics	13.16	6.43				-0.65				7.37	6.73	
	(3.21)*	(2.62)*				(-0.06)				(0.68)	(1.98)	
+ workplace characteristics	13.16	3.72	-3.09	3.37	2.75	2.91	-3.90	1.28	7.83	-1.71	6.41	
	(3.41)*	(2.33)*	(-1.08)	(1.51)	(1.56)	(0.26)	(-1.95)	(0.42)	(0.46)	(-0.10)	(1.84)	



**Table A2.6. Decompositions of the earnings gap for each region, continued.**

<b>Full Time versus Part Time</b>											
Individual characteristics	29.75	4.68								25.66	25.07
	(7.01)*	(1.78)								(2.07)*	(6.92)*
+ workplace characteristics	29.75	2.60	8.31	4.63	1.83	24.76	-1.93	-1.31	32.58	-41.72	12.39
	(6.59)*	(1.40)	(3.14)*	(2.23)*	(1.17)	(1.88)	(-0.81)	(-0.33)	(2.02)*	(-2.36)*	(3.49)*
<b>East of England</b>											
<b>Male versus Female</b>											
Individual characteristics	18.62	14.06								19.78	4.57
	(4.13)*	(4.71)*								(1.42)	(1.29)
+ workplace characteristics	18.62	5.77	-0.62	4.58	1.54	-3.68	-3.16	1.36	14.13	-1.30	7.35
	(4.02)*	(2.59)*	(-0.23)	(1.83)	(0.87)	(-0.29)	(-1.20)	(0.40)	(1.13)	(-0.09)	(2.10)*
<b>Full Time versus Part Time</b>											
Individual characteristics	31.89	8.62								49.02	23.26
	(6.04)*	(2.69)*								(3.19)*	(5.22)*
+ workplace characteristics	31.89	7.02	7.86	5.66	3.84	1.77	-2.15	-5.95	20.97	-7.13	7.51
	(5.68)*	(2.97)*	(2.71)*	(2.33)*	(2.12)*	(0.14)	(-0.66)	(-1.44)	(1.46)	(-0.40)	(1.87)
<b>London</b>											
<b>Male versus Female</b>											
Individual characteristics	11.48	6.20								14.65	5.28
	(2.84)*	(2.82)*								(1.23)	(1.39)
+ workplace characteristics	11.48	1.56	3.06	0.68	-0.55	0.00	-0.61	-6.32	21.03	-7.37	6.72
	(2.89)*	(1.22)	(1.75)	(0.31)	(-0.52)	(-0.00)	(-0.14)	(-2.19)*	(1.69)	(-0.45)	(2.04)*
<b>Full Time versus Part Time</b>											
Individual characteristics	29.01	10.62								24.73	18.39
	(4.88)*	(3.37)*								(1.51)	(3.23)*
+ workplace characteristics	29.01	5.50	14.43	6.22	2.35	11.85	-1.99	-7.06	19.50	-21.79	0.51
	(4.98)*	(2.61)*	(6.18)*	(2.94)*	(1.65)	(0.85)	(-0.60)	(-1.55)	(1.09)	(-0.89)	(0.11)

**Table A2.6. Decompositions of the earnings gap for each region, continued.**

<b>South East</b>												
<b>Male versus Female</b>												
Individual characteristics	22.08	11.10				8.61				2.37	10.98	
	(7.34)*	(5.19)*				(0.98)				(0.27)	(4.73)*	
+ workplace characteristics	22.08	4.07	8.85	2.49	0.53	8.78	-0.54	-1.33	4.82	-5.57	6.15	
	(7.05)*	(3.41)*	(5.44)*	(1.61)	(0.80)	(1.13)	(-0.34)	(-0.69)	(0.63)	(-0.55)	(2.84)*	
<b>Full Time versus Part Time</b>												
Individual characteristics	38.77	12.26				3.67				22.84	26.51	
	(10.59)*	(5.29)*				(0.37)				(2.15)*	(7.96)*	
+ workplace characteristics	38.77	5.85	15.18	6.51	2.20	23.98	0.04	8.01	6.30	-29.29	9.03	
	(10.11)*	(3.88)*	(8.67)*	(3.63)*	(2.34)*	(2.73)*	(0.02)	(3.16)*	(0.66)	(-2.34)*	(3.62)*	
<b>South West</b>												
<b>Male versus Female</b>												
Individual characteristics	22.84	10.91				-1.06				12.99	11.93	
	(5.46)*	(4.22)*				(-0.09)				(1.14)	(3.83)*	
+ workplace characteristics	22.84	4.30	3.66	2.64	1.56	10.73	-3.16	0.62	11.18	-8.70	10.68	
	(5.10)*	(2.64)*	(1.03)	(1.53)	(1.08)	(1.22)	(1.52)	(0.29)	(0.95)	(-0.52)	(3.83)*	
<b>Full Time versus Part Time</b>												
Individual characteristics	29.47	10.35				6.25				12.87	19.12	
	(6.24)*	(3.20)*				(0.47)				(0.92)	(4.72)*	
+ workplace characteristics	29.47	6.12	13.74	4.92	2.20	18.54	3.32	2.08	4.22	-25.66	2.49	
	(6.08)*	(2.60)*	(4.49)*	(2.27)*	(1.25)	(1.53)	(1.08)	(0.74)	(0.29)	(-1.28)	(0.83)	

**Table A2.6. Decompositions of the earnings gap for each region, continued.**

<b>Scotland</b>											
<b>Male versus Female</b>											
Individual characteristics	20.59	9.24				-7.17				18.52	11.35
	(5.12)*	(2.78)*				(-0.76)				(1.98)*	(3.71)*
+ workplace characteristics	20.59	6.80	2.63	3.36	1.03	-1.17	-0.74	1.63	12.70	-5.66	6.77
	(4.66)*	(3.20)*	(1.19)	(1.56)	(1.04)	(-0.13)	(-0.39)	(0.77)	(1.36)	(-0.52)	(2.84)*
<b>Full Time versus Part Time</b>											
Individual characteristics	37.01	12.94				-30.81				54.88	24.07
	(6.52)*	(3.02)*				(-2.93)*				(4.42)*	(5.58)*
+ workplace characteristics	37.01	8.40	8.13	6.79	1.49	-21.04	1.83	3.85	7.98	19.58	12.20
	(6.04)*	(2.74)*	(3.73)*	(3.16)*	(1.36)	(-1.57)	(0.71)	(1.07)	(0.72)	(1.25)	(4.15)*
<b>Wales</b>											
<b>Male versus Female</b>											
Individual characteristics	19.88	3.83				12.60				3.44	16.05
	(3.90)*	(1.03)				(0.87)				(0.24)	(4.07)*
+ workplace characteristics	19.88	2.49	3.06	-2.50	4.40	4.51	-9.20	4.70	-20.94	33.36	12.42
	(3.66)*	(1.31)	(0.92)	(-0.86)	(1.73)	(0.35)	(-3.64)*	(1.23)	(-1.10)	(1.33)	(3.59)*
<b>Full Time versus Part Time</b>											
Individual characteristics	28.24	11.36				4.41				12.47	16.88
	(4.51)*	(2.85)*				(0.31)				(0.91)	(3.48)*
+ workplace characteristics	28.24	8.08	9.57	-1.79	6.01	28.80	-2.79	15.83	-0.67	-34.79	6.38
	(4.76)*	(2.88)*	(2.17)*	(-0.54)	(2.02)*	(2.01)*	(-0.97)	(2.62)*	(-0.03)	(-1.54)	(1.78)

Source: WERS 2011. Notes: t statistics are in the parenthesis below each coefficient. \* indicates significance at the 5% level.

**Table A2.7. Decompositions of the earnings gap for high and low wage workplaces.**

	Difference	Explained					Unexplained						Total
		Individual Characteristics	Occupation	Industry	Workplace	Region	Individual Characteristics	Occupation	Industry	Workplace	Region	Constant	
<b>High Wage Workplaces</b>													
<b>Male versus Female</b>													
Individual characteristics	16.09 (8.91)*	6.13 (5.92)*					-1.66 (-0.26)					11.62 (1.63)	9.96 (5.41)*
+ workplace characteristics	16.09 (10.07)*	2.57 (3.00)*	5.12 (6.03)*	2.59 (3.81)*	0.10 (0.23)	-0.22 (-0.53)	-8.10 (-1.33)	-2.01 (-0.71)	1.09 (0.70)	20.01 (3.01)*	-0.37 (-0.36)	-4.69 (-0.52)	5.92 (3.75)*
<b>Full Time versus Part Time</b>													
Individual characteristics	14.21 (4.46)*	5.32 (3.29)*					-28.22 (-1.58)					37.10 (1.90)	8.89 (2.81)*
+ workplace characteristics	14.21 (4.53)*	1.93 (1.44)	8.21 (6.63)*	3.49 (4.48)*	0.56 (1.04)	0.44 (1.02)	1.71 (0.15)	-8.04 (-2.40)*	0.99 (0.35)	9.52 (0.79)	1.91 (1.50)	-6.51 (-0.35)	-0.42 (-0.18)
<b>Low Wage Workplaces</b>													
<b>Male versus Female</b>													
Individual characteristics	11.43 (6.10)*	4.50 (4.44)*					7.94 (1.38)					-1.01 (-0.17)	6.93 (4.13)*
+ workplace characteristics	11.43 (6.21)*	3.03 (3.77)*	1.03 (0.95)	2.99 (3.01)*	0.02 (0.05)	0.10 (0.33)	10.19 (1.72)	-1.12 (-0.97)	0.99 (0.49)	7.35 (1.43)	-1.12 (-1.76)	-12.02 (-1.42)	4.26 (2.33)*
<b>Full Time versus Part Time</b>													
Individual characteristics	21.89 (11.91)*	5.57 (4.98)*					2.56 (0.49)					13.77 (2.60)*	16.33 (8.49)*
+ workplace characteristics	21.89 (11.69)*	3.89 (3.96)*	5.11 (5.48)*	2.44 (3.21)*	0.22 (0.72)	-0.11 (-0.36)	3.50 (0.59)	1.05 (0.72)	-0.27 (-0.11)	6.99 (1.19)	-0.06 (-0.10)	-0.87 (-0.09)	10.34 (6.05)*

Source: WERS 2011. Notes: t statistics are in the parenthesis below each coefficient. \* indicates significance at the 5% level.

**Table A2.8. Decompositions of the earnings gap for high and low proportion female workplaces.**

	Difference	Explained					Unexplained						
		Individual Characteristics	Occupation	Industry	Workplace	Region	Individual Characteristics	Occupation	Industry	Workplace	Region	Constant	Total
<b>High Proportion Female Workplaces</b>													
<b>Male versus Female</b>													
Individual characteristics	17.40	11.06					6.31					0.03	6.34
	(6.94)*	(6.77)*					(0.86)					(0.00)	(3.40)*
+ workplace characteristics	17.40	4.15	6.26	1.37	0.98	0.64	7.37	-0.84	-2.37	15.74	0.37	-16.27	4.00
	(6.64)*	(4.58)*	(5.26)*	(1.52)	(1.82)	(1.40)	(1.01)	(-0.47)	(-0.75)	(1.79)	(0.50)	(-1.46)	(2.30)*
<b>Full Time versus Part Time</b>													
Individual characteristics	27.22	9.66					-8.60					26.16	17.56
	(11.62)*	(6.26)*					(-1.16)					(3.29)*	(7.84)*
+ workplace characteristics	27.22	4.70	11.59	2.77	2.08	0.96	7.39	-5.54	2.37	18.68	0.10	-17.86	5.14
	(10.85)*	(5.01)*	(8.56)*	(3.16)*	(3.60)*	(2.27)*	(1.19)	(-3.14)*	(0.57)	(2.04)*	(0.20)	(-1.67)	(3.18)*
<b>Low Proportion Female Workplaces</b>													
<b>Male versus Female</b>													
Individual characteristics	6.98	2.20					-6.10					10.89	4.79
	(2.72)*	(1.22)					(-0.74)					(1.45)	(1.79)
+ workplace characteristics	6.98	1.09	-1.03	0.59	0.01	-0.51	3.12	-0.76	-1.91	8.65	-0.12	-2.15	6.83
	(2.91)*	(0.87)	(-0.71)	(0.73)	(0.02)	(-1.26)	(0.48)	(-0.34)	(-0.72)	(1.18)	(-0.16)	(-0.21)	(2.87)*
<b>Full Time versus Part Time</b>													
Individual characteristics	16.46	4.92					10.77					0.77	11.54
	(3.43)*	(2.12)*					(0.70)					(0.05)	(2.22)*
+ workplace characteristics	16.46	5.79	7.15	4.02	2.81	-0.64	14.05	-0.66	1.38	3.12	2.39	-22.94	-2.67
	(3.54)*	(3.44)*	(4.25)*	(2.20)*	(2.73)*	(-1.10)	(0.90)	(-0.18)	(0.37)	(0.33)	(1.16)	(-1.25)	(-0.66)

Source: WERS 2011. Notes: t statistics are in the parenthesis below each coefficient. \* indicates significance at the 5% level.

**Table A3.1. Summary Statistics for Occupations in WERS and ASHE in 2011.**

	Mean Gender	Mean Gender	Number of Employees			
	Pay Gap	Pay Gap	Female		Male	
	WERS	ASHE	Part-Time	Full-Time	Part-Time	Full-Time
	(%)	(%)				
<b>Total</b>	15.67	24.5	5240	6767	1715	10654
<b>Occupation</b>						
Managerial	15.99	35.3	123	623	75	1473
Professional	12.06	17.1	778	1708	269	2231
Technical	12.77	23.1	363	1077	136	1752
Clerical	1.83	20.2	969	1416	102	587
Craft Service	36.98	33.0	75	116	107	1613
Personal Service	6.45	10.9	1051	828	152	302
Sales & Customer	24.77	15.0	822	475	286	455
Operative & Assembly	24.03	22.9	41	128	128	1155
Unskilled	20.73	19.0	1017	396	460	1087
<b>Industry</b>						
Manufacturing	18.87	26.2	117	387	61	1767
Electricity	27.49	39.9	9	34	4	132
Water Supply	-40.47	-6.3	6	18	0	88
Construction	20.65	25.2	63	83	36	688
Retail	21.15	30.9	924	761	385	1514
Transportation	0.97	2.7	67	155	63	770
Accommodation	10.37	18.1	400	252	222	359
Communication	25.87	25.8	69	217	37	606
Financial	35.64	74.8	122	387	18	560
Real Estate	14.76	32.4	50	107	16	123
Professional	21.78	40.9	183	440	61	703
Clerical	6.20	11.2	302	318	181	642
Public	6.80	19.8	186	481	54	646
Education	29.29	22.9	1330	1357	292	984
Health	9.12	42.1	1143	1523	154	642
Arts	29.29	30.0	110	97	74	155
Other Community	9.12	29.4	106	112	35	145

Source: WERS 2011, ASHE 2011