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THE EFFECTS OF THE FINANCIAL CRISIS ON UK WAGE INEQUALITY AND HOURS

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Abstract

In this paper we document differences in the distribution of wages and wage inequality before and after the Great Recession. Using data from the Annual Survey of Hours and Earnings we estimate Gini Coefficients and Generalised Entropy measures of inequality to explain what has happened to wage inequality and where in the distribution the changes have occurred. The analysis is disaggregated by industry, occupation and sector. Changes in hours of work and the likelihood of working full time are also considered. We find significant differences in the pre and post recession wage distributions, with fewer hours being worked and a lower propensity towards working full time.

Keywords: Wage distribution, Great Recession

JEL classification codes: D31

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1. Introduction

Rising inequality has been a pressing concern for Western Governments. In OECD countries, the share of the top 1% in total income increased from 7.1% in 1970 to 14.3% by 2005 (OECD, 2011). This trend was particularly pronounced in the United States and the United Kingdom (Atkinson et al., 2011). Wage inequality rose rapidly during the 1980s, with a widening out at all parts of the wage distribution, a trend that continued at a somewhat slower pace in the 1990s. In the 2000s the story became increasing one of polarisation (Goos and Manning, 2007). Those at the top of the wage distribution improved their position relative to the rest, a feature commonly attributed to skill biased technological change (Machin, 2008), whilst those at the bottom were protected by the introduction of the national minimum wage in 1999 (Machin, 2011).

The 'Great Recession' which began at the end of 2007 has had traumatic consequences for Western Economies. The UK has suffered its longest and deepest downturn in its post-war experience, with GDP falling by 6.5% between the beginning of 2008 and the third quarter of 2009. At the beginning of 2013 output remains almost 4% lower than its pre-recession peak, and the economy risks falling into a triple-dip recession. However, far from turning attention away from the issue of inequality, the Great Recession has intensified the focus since it has recently been argued that the increase in inequality may have served to destabilise OECD economies and to precipitate the crisis itself (U.S. Congress Joint Economic Committee, 2010). Clearly how income inequality has changed as a consequence of the Great Recession is of important public policy interest.

The impact of the recession on individual and family welfare has therefore been the subject of intense research. Recessions typically reduce both mean and median real incomes. However the impact on the distribution of income is not clear a priori. This will depend on who is most affected by the recession and where in the distribution of income they lie. Muriel and Sibieta (2009) analyse the distributional impact of the 1973–5, 1979–81, and 1990–2 UK recessions by examining the distribution of real equivalised net household income among individuals. In their analysis they point out that the incomes of working age individuals are likely to be most strongly affected by recessions, whereas there will be less impact on those who are retired or not strongly attached to the labour force. The impact of a recession will also depend on how it affects employment, hours, wage rates and how these impacts are mitigated by government action via the tax and benefit system.

The impact of the current recession on earnings, employment and household incomes has been examined by Joyce and Sibieta (2012). Their evidence from the New Earnings Survey (NES) suggests that although real incomes initially grew during the recession, they declined in 2009-10, leaving them unchanged from their 2007 level. They then use both the NES and the Labour Force Survey (LFS) to examine the evolution of income at the 90^{th} 50^{th} and 10^{th} percentiles. They conclude that neither survey shows a significant change in earnings inequality over the period to 2010. The analysis of Cribb, Joyce and Phillips (2012) extends the analysis of Joyce and Sibieta (2012) to include 2011. They found that pre-tax earnings of those employed fell in real terms by almost 7% in 2010–11. Post-tax earnings also showed a dramatic change. They computed that the Gini coefficient experienced its largest fall since at least 1962, falling to below its level in 1997–98. The cause of this drop in inequality was the large decline in income experienced by those at the top of the income distribution - real incomes fell by 15% at the 99^{th} percentile, 5.1% at the 90th percentile, 3.1% at the median

and by 1.1% at the 10th percentile. This was partly due to the introduction of the 50% marginal income tax rate on incomes exceeding £150,000 p.a. in April 2010 as income was brought forward to avoid the tax increase. Inequality as measured by the 90/10 and 50/10 ratios also fell drastically, to levels previously experienced in the late 1980s.

Employment has fallen to a lesser extent than might have been expected given the experience of previous recessions (Gregg and Wadsworth, 2010). However there is evidence that the average number of hours worked per employee has fallen, leaving GDP per hour worked almost unchanged between the start of 2008 and the end of 2010 (Joyce and Sibieta, 2012).

This paper seeks to further investigate the changes in wage inequality in the UK following the global financial crisis of 2008. It extends the analysis in Morris (2013) which examines changing UK wage inequality using the LFS over the period 1975-2011, which found significant underlying differences between industries and between occupations in both the level and trends in wage inequality. The present paper not only examines changes at an aggregate level, but also separately by (broad) industry, (1 digit) occupation and public/private sector. For real hourly wages, parametric distributions are fitted to the wage distribution, and standard measures of inequality are derived from the estimated parameters. A range of measures of inequality are estimated, including the standard Gini coefficient, and also those from the Generalised Entropy (GE) class which can reflect changes in inequality at different points in the distribution. Formal tests are made for changes in inequality pre- and post-recession. Inter-quantile regression techniques are then used to model the changes in percentile ratios and the specification allows the determinants of inequality to change over time, and in particular in the period since 2008. Finally, by examining different percentile ratios (i.e. 90:50, and 50:10), the analysis examines changes in inequality in the top and bottom of the distribution independently.

In order to fully analyse the impact of the 2008 crisis on earnings, the paper also documents changes in hours of work in the same period, and also the change in full-time/part-time status. In a similar approach to the analysis of the effects on wage inequality, we examine whether there is any evidence of a change after 2008, both in the raw data, and also once available controls have been included to take into account any compositional changes over time.

The remainder of the paper is structured as follows. In section 2, we describe the data and present summary statistics. Section 3 presents the main results of the paper. The final section concludes.

2. Data and Methods

2.1 The Annual Survey of Hours and Earnings (ASHE)

This study uses micro-data from the Annual Survey of Hours and Earnings (ASHE) from 2005-2011. ASHE is a random 1% sample of all employees in the UK whose pay is above the income tax threshold. Information is collected from employers for a reference week in the April of each year and completion of the survey is compulsory.

In this paper, the focus is on wages and hours of work. The wage variable consists of all aspects of the employees pay; their basic pay, incentive pay, overtime pay, and other pay which consists of, for example, additional payments for working at 'unsociable' hours. This total earnings figure is divided by basic hours plus overtime hours. The wage variable is adjusted for inflation using the Retail Prices Index (RPI) at 2011 prices.

2.2. Methods

Parametric modelling of the wage distribution involves choosing and imposing a specific functional form on the data, and estimating the parameters of the chosen functional form by an appropriate estimation technique. Appropriate distributions for modelling wage data are those which are supported for all strictly positive values of the wage and are positively skewed to allow for outliers in the upper tail of the distribution.

Three parameter distributions represent a compromise between two parameter variants (which are simple to estimate and interpret, but relatively inflexible and provide poorer fits) and four or five parameter distributions (which provide better fits to data but are more difficult to estimate and interpret). A common finding in the literature (e.g. Majumder and Chakravarty, 1990; McDonald and Mantralla, 1995; McDonald and Xu, 1995) is that the Dagum (1977) distribution is the best fitting three parameter distribution to income/wage data (and often performs just as well as the four parameter Generalised Beta 2 distribution). Thus, the Dagum distribution will be used to model the distribution of wages in the UK. The probability density and cumulative distribution functions for the Dagum model are given by:

$$f(x;a,b,p) = \frac{apx^{ap-1}}{b^{ap}\left[1+\left(\frac{x}{b}\right)^{a}\right]^{p+1}}, \quad a,b,p>0; x \in (0,\infty)$$

and

$$F(x;a,b,p) = \left[1+\left(\frac{x}{b}\right)^{-a}\right]^{-p}, \qquad a,b,p>0; x \in (0,\infty)$$

The lognormal distribution can also be used to model the wage distribution. While the lognormal distribution is generally considered unsuitable for the estimation of the aggregate wage distribution due to poor fit, it is used here for two reasons; firstly, for its ease of interpretation; secondly, Harrison (1981) finds, when using the NES data at more disaggregated levels, that the lognormal distribution performs better at modelling the upper tail of the distribution. The density and distribution functions for the lognormal distribution are given by:

$$f(x;\,\mu,\sigma) = \frac{1}{\sigma x\sqrt{2\pi}}\, exp - \frac{(ln(x)-\mu)^2}{2\sigma^2}, x \in (0,\infty)$$

and

$$F(x;\mu,\sigma) = \Phi\left[\frac{\ln(x)-\mu}{\sigma}\right], x \in (0,\infty)$$

respectively.

The parameters of the Dagum and lognormal distributions are estimated by maximum likelihood (ML). The resulting parameters are then used to calculate estimates of measures of inequality. The measures which are presented are the Gini coefficient and four indices

from the generalised entropy (GE) family of inequality measures. The GE measures - denoted I(γ) – are calculated for γ = -1, 0, 1, and 2. The parameter γ indicates the sensitivity of the GE measure to inequality at the top of the distribution, with the sensitivity increasing with the value of γ. The formulae for obtaining the GE measures from the Dagum distribution are adapted from those presented by Jenkins (2009) for the GB2 distribution. The Gini coefficient for this distribution was first derived by Dagum (1977).

The methodological approach in the paper is to first present summary statistics describing the changes in the raw data on wages over the period 2005-2011, distinguishing between the period before and the period after the 2008 crisis. We then turn to estimate the parametric distributions described above as fitted to the empirical distributions in order that statistical tests can be conducted on changes in the estimated parameters and measures of inequality over time. Finally, we condition the distributions on workers' and firms' characteristics in order to take account of compositional changes in the characteristics of employees over time, and again investigate whether there have been changes over time, with a particular focus on the post-2008 period.

All of the analysis is aggregated over all employees, and then disaggregated by industry, occupation and public/private sector. The 5-category industrial classification is derived from SIC03/92:

1. Primary (agriculture, fishing, construction, and mining (SIC03 Groups A, B, C, F)
2. Manufacturing (SIC03 Group D)
3. Finance (SIC03 Group J)
4. Business activities (SIC03 Group K)
5. Other services (SIC03 Groups E, G, H, I, L, M, and N)

Occupation is distinguished at the 1-digit level of SOC2000. There are 9 categories defined as follows:

1. Managers and Senior Officials
2. Professional Occupations
3. Associate Professional and Technical
4. Administrative and Secretarial
5. Skilled Trades
6. Personal Services
7. Sales and Customer Services
8. Process, Plant, and Machine Operatives
9. Elementary Occupations

Finally, statistics are presented separately for public and private sectors since much of the contemporary debate (e.g. Hutton, 2011) has focussed on differences between the public and private sector, and there has been a wide-spread pay freeze/restraint imposed on public sector workers in the post-crisis period. The public sector includes public corporations, central government and local government.

2.3 Descriptive statistics

2.3.1 Wages

Table A reports mean and median growth in real hourly wages in aggregate and by industry, occupation and sector for 2005-2011. Growth rates are also presented that distinguish between the pre-2008 and post-2008 crisis.

In aggregate, real mean (median) wages fell by 2.0% (2.5%) over the whole period, but increased by 1.0% (0.9%) over 2005-2007 and fell by 2.6% (2.7%) in the 2008-2011 period. This pattern is in general observed for all industry, occupation, and sector groups; increasing average wages before the recession period and decreasing average wages after, resulting in an overall decrease in average real wages between 2005 and 2011.

Exceptions to this pattern are observed in the professional and associate professional and technical occupational groups and also for manufacturing industry, for which average real wages were also (marginally) falling prior to the recession. The finance industry is also an exception, being the only industry which has consistently seen increasing real wages since 2005. Finally, the public sector experienced a small fall in mean wages over 2005-2008, and an increase since 2008.

2.3.2 Hours of work

Table B reports similar statistics to Table A for weekly hours of work. At the aggregate level, mean hours have decreased over the whole period, but this is driven by decreases in the 2008-2011 period which have offset a small positive growth in mean hours during 2005-2007.

Over the whole period, mean hours have fallen by twice as much in the private as in the public sector, with a fairly steady fall throughout the period for the public sector, and almost constant, followed by sharply decreasing hours in the private sector.

At the industry and occupational levels, there is some variation in what has happened in mean hours. With the exception of the primary sector, all industries saw stable or slightly increasing mean hours prior to 2008, followed by decreasing hours post-2008. In the primary sector, mean hours fell throughout the period 2005-2011, but with a more rapid fall post-2008.

For occupations, only professional and sales operatives saw a net increase in average hours over the whole period 2005-2011. While there are differences in the period prior to 2008, for all occupational groups, mean hours fell post-2008 with the exception of sales operatives.

The changes in median hours are small in general, with a small fall in the public sector offset by a small rise in the private sector.

3. Results

3.1 Wages: Unconditional distributions

Tables C and D respectively show estimates of the lognormal and Dagum distribution parameters as fitted to the wage distribution. The estimated μ parameter of the lognormal distribution shows the mean of the log wage. Conditioning this parameter on a dummy variable for the recession period (d2008+, i.e. the period 2008-2011) highlights the difference in the mean of the wage distributions between these two periods and their statistical significance. In all cases μ changed significantly, indicating that the differences in the mean wage evident in the summary statistics presented above are statistically significant. The mean significantly fell in aggregate and for all disaggregated sub-groups with the exception of the public sector and the finance industry, as suggested by the raw data.

The standard deviation, σ, measures the spread, and gives an indication of whether or not wage inequality has changed. Inequality measures for the lognormal distribution are increasing functions of this parameter. At the aggregate level, σ did not change significantly. However, at the industry level, it is significantly higher in the recession period in finance and significantly lower in other services. At the occupational level, σ is significantly higher for managers and senior officials and administrative and secretarial workers in the recession period and lower for sales and customer service and elementary occupations. At the sectoral level, there is no significant difference for the private sector but the value of σ is significantly lower post-recession for the public sector.

Conditioning the three parameters of the more flexible Dagum distribution (a, b, and b) on the time dummy d2008+ in this way suggests that more industry/occupational groups have seen significant changes in wage inequality than is suggested by the lognormal distribution. All estimated distributions have at least one parameter which differs significantly between the two time periods, and at the aggregate level and for five occupational groups, all three parameters differ significantly over time. The only exceptions are the manufacturing and business activities industrial groups in which no parameters differ significantly between the two time periods. With these exceptions, either/both of the ‘a’ or ‘p’ parameters (the parameters which determine the value of inequality measures calculated from the Dagum distribution) differ significantly over time, suggesting that in most sub-groups and in aggregate, wage inequality has changed significantly.

Estimates of measures of inequality are presented in Tables E and F. Table E shows Gini coefficients calculated from the lognormal distribution parameters presented in Table C, while Table F shows Gini coefficients and Generalised Entropy measures calculated from the Dagum distribution parameters as presented in Table D.

Lognormal distribution estimates of wage inequality using the Gini coefficient suggest that there is no overall difference between the pre and post recession periods in terms of the level of wage inequality. The Gini coefficient significantly increased in finance and for managers and senior officials and administrative and secretarial occupations. By contrast, the Gini coefficient significantly declined in other services and for associate professional and technical, sales and customer services, and elementary occupations. With the exception of associate professional and technical occupations, these results conform to how inequality

would be expected to change based on the analysis of the σ parameter of the lognormal distribution.

Estimates of inequality measures derived from the Dagum distribution indicate that inequality changed in more occupational groups, and did also change at the aggregate level. Estimates of the Generalised Entropy measures I(-1), I(0), I(1), and I(2) allow an analysis of where in the distribution changes in inequality took place. At the aggregate level, the Gini coefficient did not change significantly (consistent with the lognormal distribution estimates). However, the I(1) and I(2) measures both increased significantly in the post recession period, indicating that inequality did increase, driven by increasing inequality in the top of the distribution.

At the industry level, there were no significant changes in inequality by any of the measures for any industry except finance (unlike with the lognormal estimates there is no evidence of significantly changing wage inequality in other services, including with the Gini coefficient). Wage inequality in finance increased significantly in the post-recession period by the Gini coefficient, I(-1), I(0), and I(1).

The occupations for which wage inequality significantly changed according to the lognormal distribution also do so according to the Dagum distribution results (i.e. higher for managers and senior officials and administrative and secretarial workers in the recession period and lower for sales and customer service and elementary occupations). The direction of change is the same and significant for each of the Gini coefficient and four Generalised Entropy indices, indicating changes in inequality occurring throughout the wage distributions for these occupations. Changes in all five inequality measures are also positive and significant for the professional occupations. There is evidence of greater inequality in the recession period in the skilled trades and personal services occupations for the I(2) measure, and so driven by the top of the distribution – and in the process, plant, and machine operatives occupations (significant increases in I(0), I(1), and I(2) following the recession). The associate professional and technical occupational group exhibits some evidence of decreased wage inequality after the recession due to changes at the bottom of the distribution (only I(-1) changed significantly).

3.2 Wages: Conditional distributions

This subsection presents the results from modelling the lognormal distribution parameters as functions of individual characteristics. Both the μ and σ parameters are modelled as a function of the dummy variable for the post recession period (d2008+, age, age squared, gender, the log of firm size, regional dummies for London, Southeast and East, and a set of interaction terms with d2008+. The key determinant of wages which is missing from this model is education, which is a limitation of the ASHE data.

Despite the superior fit of the Dagum distribution to the wage data, the lognormal distribution is used because the parameters are more easily interpretable (i.e. μ as the mean of log wages and σ as a measure of the dispersion of the data, the standard deviation of log wages). The individual Dagum distribution parameters have no direct economic interpretation – the disadvantage of the more heavily parameterised distributions.

Tables G and H report the estimates of the μ and σ equations respectively. The coefficients of the μ equation are interpretable as the coefficients of an OLS log-linear wage equation i.e.

the marginal effect of a change in the covariate on the logarithm of the wage. Interpreted as such, the coefficients generally have the expected sign and significance. The quadratic term in age (as a proxy for labour market experience) suggests expected log wages increase with age at a decreasing rate and is significant at the aggregate level and for all population sub-groups. Female log wages are significantly lower and there is a positive return to working in London and the South-east in all regressions (also to working in the East in all regressions except for professional occupations. Generally, larger firms also pay higher wages ceteris paribus. The exceptions are for sales and customer services, finance, and the public sector.

These covariates and their changes over time do not fully capture the difference in mean wages pre and post-recession. The dummy variable for measuring this has a significant coefficient at the aggregate level and in finance, other services, managers, professional, personal services, sales, process, plant, and machine operatives, elementary occupations, and the public sector (negative) and primary industries and skilled trades (positive).

The relationship between the covariates and the standard deviation of the wage distribution is qualitatively similar to the relationship between the covariates and the mean. Age is generally associated with a higher expected standard deviation of log wages (although age is not significant for technical, personal services, and process, plant, and machine operatives. In skilled trades however, the estimated coefficient is significantly negative. In aggregate there is a significant quadratic in age, with a negative coefficient for age squared. This is true for each of the five industries and the public and private sectors, but just three occupations (managers and senior officials, sales and customer services, and elementary occupations). The quadratic for skilled trades is also significant with a positive coefficient on age squared.

All coefficients for log firm size are significant in explaining the standard deviation of wages. At the aggregate level this is positive but differs across the subsectors, being positive for skilled trades, personal services, process, plant, and machine operatives, elementary occupations and each industry with the exception of finance. In all other regressions the coefficient is negative. The gender dummy suggests that there is less wage dispersion amongst females (with no significant differences in the primary and manufacturing industries, the public sector, or skilled trades). Working in London is associated with significantly greater wage dispersion at the aggregate level and in all industries and occupations (but not significantly so for the process, plant, and machine operatives occupational group). At the sectoral level however, the coefficient is negative and significant in the public sector equation.

3.3 Hours of work

3.3.1 Continuous Hours

Table I reports the results of random effects regressions of total weekly hours worked. Controlling for the individuals' wage (which we recognise is endogenous), age, gender, region, and the log of the size of the firm the individual is employed in, there is evidence of significantly different hours of work in the post recession period.

At the aggregate level there is no significant change in average weekly hours between the two periods, however in the disaggregated regressions there are significant coefficients for

the 2008+ dummy. Average weekly hours are significantly lower following the recession in the business activities, finance, and manufacturing industries, with the largest fall in manufacturing. Similarly, in the occupation regressions, hours are lower in the post recession period for all occupations with the exception of skilled trades and sales and customer services.

In terms of the other explanatory variables, the coefficient for the gender dummy (equal to 1 for females) is negative and significant at the aggregate level and for each industry and occupation. The dummy indicating that the individual works in London is typically found to have a positive and significant relationship with weekly hours (with the exception of manufacturing, skilled trades, and process, plant, and machine operatives which are insignificant and in the first case, negative but insignificantly different from zero).

The effect of firm size is more ambiguous. At the aggregate level, log firm size has a significantly negative effect on hours worked. This is also found in the finance and other services industries and sales and elementary occupations. A significantly positive relationship is found however in the case of the primary, manufacturing industries and business activities, and managers, associate professional and technical, administrative and secretarial, and process, plant, and machine operatives occupations.

A higher hourly wage is negatively correlated with fewer hours of labour supply in all regressions with the exceptions of skilled trades and process, plant, and machine operatives (where the coefficient is insignificant) and sales and elementary occupations. In each case the coefficient for age squared is opposite in sign to the coefficient for age implying a decreasing marginal effect of the wage on hours worked. Similarly, there is a decreasing marginal effect of age on hours worked. In this case, the coefficients for age are positive and significant in all regressions except for the finance industry.

3.3.2 Discrete Hours

Results of the marginal effects from probit models analysing the propensity for working full time rather than part time are presented in Table J. The functional form of the probit regressions is the same as that for the continuous hours regressions.

In terms of the dummy variable for the post recession period, individuals are significantly less likely to be working full time at the aggregate level following the recession. This is also true at the industry level, with the exception of the finance industry. The probability of working full time is also significantly lower for managers and senior officials, associate professional and technical, administrative and secretarial, personal services, and process, plant, and machine operatives occupations. In all other occupations, the probability of working full time was also lower following the recession but not significantly so.

A higher hourly wage is associated with a higher (though diminishing marginal) probability of working full time in all regressions except for the primary industries (where the effect of the quadratic in the wage is insignificant) and the managers and professional occupations (where the effect of the wage is significantly negative). The findings are similar for the quadratic in age, with the exceptions being the finance industry and the administrative and personal services occupations.

As in the case of the continuous hours regressions, the effect of firm size differs by industry/occupation (on aggregate, larger firm size means a significantly reduced probability of working full time). In the primary, manufacturing, and business activities industries and the managers, professional, technical, administrative, skilled trades, and process plant and machine operatives occupations, the effect of firm size on the probability of working full time is positive. The effect is negative for finance, other services, personal services, sales, and elementary occupations.

Females have a significantly lower probability of being employed full time in all industries and occupations, consistent with the result that females work significantly fewer hours as shown in the random effects regressions. The probability of an individual working full time is higher if they work in London (at the aggregate level). The London coefficient is significant for the finance, business activities, and other services industries, and positive in each case. At the occupational level, working in London is associated with a higher probability of full time employment in the managers, professional, and technical occupations, but a significantly lower probability in the sales and process, plant, and machine operatives occupations.

4. Conclusions

In this paper we have highlighted the changes in the wage distribution and the hours of work over the 2005-2011 period. This analysis has been conducted at the level of industries, occupations, and the public and private sectors.

The aggregate and disaggregated wage distributions all differ significantly across the 2005-2007 and 2008-2011 periods. Mean real wages have significantly decreased on aggregate following the recession, and in almost all sections of the economy, the notable exceptions to this result being the finance industry and public sector. Significant differences in the lognormal parameters between the two periods were still found even when conditioning on a number of individual characteristics.

Aggregate wage inequality has increased when considering the more top-sensitive inequality measure of the Generalised Entropy family. At the industry level, inequality only differed significantly in the finance industry and by all measures except I(2). At the occupational level there is evidence of different trends in inequality, with increases in inequality amongst managers and senior officials, professional occupations, and administrative and secretarial occupations, and also decreases in inequality amongst sales and customer services, and elementary occupations. In these occupations, changes in inequality were significant for all estimated measures.

In terms of hours, there is evidence of significantly lower numbers of hours being worked across the economy following the recession (except in the case of the public sector). There is also a significantly increased probability of individuals working part time.

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Table A: Growth in Mean and Median Wages

			INDUSTRY					SECTOR	
		AGGREGATE	Primary	Manuf.	Finance	Business	Services	Public	Private
growth	Mean	-2.0%	-2.5%	-3.8%	12.3%	-5.1%	-2.2%	0.2%	-3.0%
2005-11	Median	-2.5%	-2.8%	-3.2%	11.4%	-4.4%	-2.1%	1.3%	-5.0%
growth	Mean	1.0%	4.6%	-0.3%	3.5%	1.5%	0.5%	-0.7%	1.9%
2005-07	Median	0.9%	2.5%	-0.1%	3.6%	1.0%	0.6%	0.1%	1.4%
growth	Mean	-2.6%	-5.5%	-6.4%	5.0%	-5.1%	-1.6%	2.6%	-5.2%
2008-11	Median	-2.7%	-4.2%	-4.2%	3.4%	-3.5%	-2.0%	2.2%	-5.2%

		OCCUPATION								
		Managers	Prof.	Technical	Admin	Skilled	Personal	Sales	Process	Element.
growth	mean	-3.6%	-6.2%	-5.6%	-2.1%	-4.1%	-3.2%	-1.4%	-5.8%	-5.0%
2005-11	median	-4.3%	-7.2%	-5.9%	-3.2%	-4.8%	-2.8%	-0.6%	-5.5%	-4.2%
growth	mean	0.7%	-1.7%	-0.9%	0.9%	1.4%	0.2%	1.8%	1.0%	0.9%
2005-07	median	0.1%	-2.2%	-1.7%	0.5%	0.7%	0.7%	1.9%	1.0%	1.5%
growth	mean	-2.6%	-2.5%	-6.5%	-2.4%	-5.2%	-3.9%	-1.5%	-5.8%	-4.5%
2008-11	median	-3.0%	-3.4%	-3.9%	-2.1%	-5.1%	-3.4%	-1.1%	-4.9%	-4.0%

Source: ASHE 2005-2011

Table B: Growth in Mean and Median Hours

			INDUSTRY					SECTOR	
		AGGREGATE	Primary	Manuf.	Finance	Business	Services	Public	Private
growth	Mean	-1.1%	-2.2%	0.1%	1.6%	-0.8%	-0.6%	-0.6%	-1.2%
2005-11	Median	0.0%	0.0%	0.6%	0.0%	1.3%	0.7%	-0.3%	0.3%
growth	Mean	0.1%	-0.6%	0.6%	1.1%	0.0%	0.2%	-0.6%	0.4%
2005-07	Median	0.0%	0.0%	1.2%	0.0%	1.0%	1.0%	0.0%	0.3%
growth	Mean	-1.6%	-2.4%	-0.8%	-0.1%	-1.7%	-0.9%	-0.7%	-1.9%
2008-11	Median	0.0%	0.0%	-0.7%	-0.1%	0.0%	-0.8%	-0.6%	0.0%

		OCCUPATION								
		Managers	Prof.	Technical	Admin	Skilled	Personal	Sales	Process	Element.
growth	mean	-1.1%	0.7%	-0.2%	-1.7%	-1.5%	-0.1%	0.4%	-1.4%	-2.8%
2005-11	median	0.3%	2.9%	1.1%	0.1%	0.0%	-0.3%	3.1%	0.3%	-1.4%
growth	mean	-0.4%	0.3%	0.1%	0.0%	-0.3%	-0.5%	0.1%	0.8%	0.8%
2005-07	median	0.3%	0.7%	0.4%	0.8%	0.0%	-1.0%	0.0%	2.4%	2.8%
growth	mean	-0.9%	-0.3%	-0.7%	-2.1%	-2.0%	-0.2%	0.3%	-2.4%	-4.4%
2008-11	median	0.0%	0.0%	-0.1%	-1.3%	0.0%	-0.3%	3.1%	-2.2%	-5.0%

Source: ASHE 2005-2011

Table C: Lognormal Distribution Parameters

			INDUSTRY					SECTOR	
Parameter		**AGGREGATE**	Primary	Manuf.	Finance	Business	Services	Public	Private
μ	cons	2.539***	2.570***	2.586***	2.865***	2.659***	2.476***	2.648***	2.489***
	p-value	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
	d2008+	-0.010***	-0.014**	-0.015***	0.059***	-0.026***	-0.008***	0.008***	-0.020***
	p-value	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
σ	cons	0.775***	0.670***	0.691***	0.900***	0.857***	0.749***	0.700***	0.799***
	p-value	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
	d2008+	-0.001	-0.004	-0.004	0.019**	-0.006	-0.006***	-0.015***	0.002
	p-value	*0.60*	*0.56*	*0.26*	*0.00*	*0.12*	*0.00*	*0.00*	*0.28*

		OCCUPATION								
Parameter		Managers	Prof.	Technical	Admin	Skilled	Personal	Sales	Process	Element.
μ	cons	3.013***	3.081***	2.730***	2.351***	2.441***	2.181***	2.028***	2.331***	2.064***
	p-value	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
	d2008+	-0.031***	-0.039***	-0.021***	-0.010***	-0.019***	-0.004*	-0.005**	-0.028***	-0.025***
	p-value	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.05*	*0.01*	*0.00*	*0.00*
σ	cons	0.822***	0.606***	0.559***	0.452***	0.509***	0.426***	0.408***	0.457***	0.412***
	p-value	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
	d2008+	0.008*	0.001	-0.007	0.013***	-0.004	0.000	-0.022***	0.001	-0.014***
	p-value	*0.03*	*0.72*	*0.06*	*0.00*	*0.41*	*0.92*	*0.00*	*0.81*	*0.00*

Source: ASHE 2005-2011

Table D: Dagum Distribution Parameters

			INDUSTRY					SECTOR	
Parameter		**AGGREGATE**	Primary	Manuf.	Finance	Business	Services	Public	Private
a	cons	2.362***	3.039***	2.708***	2.025***	2.101***	2.442***		
	p-value	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		
	d2008+	-0.025*	-0.0639	0.032	-0.097***	-0.015	-0.013		
	p-value	*0.01*	*0.14*	*0.22*	*0.00*	*0.56*	*0.28*		
b	cons	3.952***	8.242***	5.848***	3.714***	3.664***	3.790***		
	p-value	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		
	d2008+	-0.589***	-0.806**	0.229	-0.781	-1.013	-0.515*		
	p-value	*0.00*	*0.01*	*0.42*	*0.22*	*0.09*	*0.01*		
p	cons	9.296***	2.763***	5.684***	13.47***	10.30***	9.653***		
	p-value	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		
	d2008+	3.380**	0.606*	-0.585	6.861	8.043	3.481*		
	p-value	*0.00*	*0.02*	*0.29*	*0.30*	*0.09*	*0.02*		

		OCCUPATION								
Parameter		Managers	Prof.	Technical	Admin	Skilled	Personal	Sales	Process	Element.
a	cons	2.581***	4.212***	4.457***	4.588***	4.777***	4.973***	5.372***	4.312***	4.925***
	p-value	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
	d2008+	-0.061**	-0.140***	-0.042	-0.122***	-0.287***	-0.145*	0.165***	-0.208***	0.187***
	p-value	*0.00*	*0.00*	*0.36*	*0.00*	*0.00*	*-0.01*	*0.00*	*0.00*	*0.00*
b	cons	14.28***	21.01***	14.53***	7.887***	11.19***	6.685***	5.567***	7.417***	5.446***
	p-value	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
	d2008+	-0.804**	-1.332***	-0.615***	-0.173	-0.997***	-0.423**	-0.199*	-1.160***	-0.005
	p-value	*0.00*	*0.00*	*0.00*	*0.11*	*0.00*	*0.01*	*-0.01*	*0.00*	*0.97*
p	cons	1.882***	1.091***	1.158***	2.558***	1.087***	2.727***	3.377***	2.802***	3.889***
	p-value	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
	d2008+	0.072	0.077**	0.078*	0.040	0.261***	0.656*	0.732**	1.565***	-0.172
	p-value	*0.23*	*0.01*	*0.01*	*0.73*	*0.00*	*0.02*	*0.00*	*0.00*	*0.59*

Table E: Lognormal Distribution Inequality Measures

			INDUSTRY					SECTOR	
Inequality measure		**AGGREGATE**	Primary	Manuf.	Finance	Business	Services	Public	Private
Gini	pre2008	0.408***	0.360***	0.370***	0.465***	0.448***	0.393***	0.370***	0.419***
	post2008	0.408***	0.360***	0.370***	0.476***	0.447***	0.391***	0.365***	0.420***
	Δ	-0.001	0.000	0.000	0.011***	-0.001	-0.002**	-0.005***	0.001

		OCCUPATION								
Inequality measure		Managers	Prof.	Technical	Admin	Skilled	Personal	Sales	Process	Element.
Gini	pre2008	0.439***	0.330***	0.305***	0.250***	0.277***	0.238***	0.229***	0.253***	0.231***
	post2008	0.442***	0.331***	0.300***	0.258***	0.277***	0.239***	0.216***	0.254***	0.221***
	Δ	0.004*	0.001	-0.005**	0.008***	0.000	0.000	-0.014***	0.001	-0.010***

Source: ASHE 2005-2011

Table F: Dagum Distribution Inequality Measures

			INDUSTRY					SECTOR	
Inequality measure		**AGGREGATE**	Primary	Manuf.	Finance	Business	Services	Public	Private
Gini	pre2008	0.350***	0.282***	0.305***	0.415***	0.399***	0.337***		
	post2008	0.352***	0.284***	0.303***	0.437***	0.399***	0.336***		
	Δ	0.002	0.002	-0.002	0.022***	0.000	0.000		
I(-1)	pre2008	0.199***	0.131***	0.149***	0.291***	0.267***	0.183***		
	post2008	0.200***	0.131***	0.147***	0.327***	0.265***	0.182***		
	Δ	0.001	0.000	-0.002	0.037***	-0.003	-0.001		
I(0)	pre2008	0.201***	0.130***	0.152***	0.285***	0.263***	0.186***		
	post2008	0.203***	0.132***	0.150***	0.317***	0.263***	0.186***		
	Δ	0.002	0.001	-0.002	0.032***	-0.001	0.000		
I(1)	pre2008	0.264***	0.154***	0.189***	0.404***	0.365***	0.241***		
	post2008	0.269***	0.157***	0.185***	0.464***	0.368***	0.242***		
	Δ	0.005*	0.003	-0.004	0.060***	0.003	0.001		
I(2)	pre2008	0.798***	0.250***	0.375***	12.88	3.121***	0.637***		
	post2008	0.858***	0.264***	0.358***	3.615**	3.659***	0.654***		
	Δ	0.059*	0.015	-0.017	-9.264	0.537	0.017		

Table F (continued): Dagum Distribution Inequality Measures

		OCCUPATION								
Inequality measure		Managers	Prof.	Technical	Admin	Skilled	Personal	Sales	Process	Element.
Gini	pre2008	0.350***	0.232***	0.216***	0.184***	0.205***	0.167***	0.151***	0.194***	0.164***
	post2008	0.358***	0.237***	0.215***	0.188***	0.208***	0.169***	0.144***	0.197***	0.158***
	Δ	0.008***	0.004**	-0.001	0.005***	0.003	0.002	-0.007***	0.003	-0.006***
I(-1)	pre2008	0.221***	0.097***	0.082***	0.054***	0.074***	0.044***	0.036***	0.060***	0.042***
	post2008	0.231***	0.100***	0.080***	0.057***	0.073***	0.045***	0.033***	0.061***	0.039***
	Δ	0.010***	0.003*	-0.002*	0.003***	-0.001	0.001	-0.003***	0.001	-0.003***
I(0)	pre2008	0.204***	0.090***	0.078***	0.055***	0.070***	0.046***	0.037***	0.061***	0.044***
	post2008	0.213***	0.093***	0.077***	0.058***	0.071***	0.047***	0.034***	0.063***	0.041***
	Δ	0.009***	0.003**	-0.001	0.003***	0.001	0.001	-0.003***	0.002*	-0.003***
I(1)	pre2008	0.245***	0.094***	0.082***	0.060***	0.072**	0.050***	0.041***	0.068***	0.048***
	post2008	0.256***	0.097***	0.080***	0.063***	0.073***	0.051***	0.037***	0.071***	0.045***
	Δ	0.011***	0.002**	-0.001	0.003***	0.001	0.001	-0.003***	0.003*	-0.003***
I(2)	pre2008	0.531***	0.115***	0.098**	0.074***	0.084***	0.059***	0.047***	0.085***	0.058***
	post2008	0.600***	0.123***	0.098***	0.079***	0.091***	0.062***	0.043***	0.092***	0.053***
	Δ	0.069**	0.008***	0.000	0.005***	0.007**	0.002*	-0.004***	0.007**	-0.005***

Source: ASHE 2005-2011

Table G: Lognormal Distribution Conditional on Characteristics – μ Parameter

		INDUSTRY					SECTOR	
Coefficient	**AGGREGATE**	Primary	Manuf.	Finance	Business	Services	Public	Private
d2008+	-0.052***	0.124**	-0.000	-0.226***	0.028	-0.087***	-0.132***	-0.023
age	0.086***	0.068***	0.071***	0.111***	0.097***	0.083***	0.058***	0.087***
age2/1000	-0.961***	-0.734***	-0.781***	-1.270***	-1.100***	-0.915***	-0.643***	-0.979***
female	-0.195***	-0.216***	-0.217***	-0.280***	-0.193***	-0.157***	-0.195***	-0.226***
lnsize	0.013***	0.048***	0.052***	-0.005**	0.001	0.014***	-0.030***	0.006***
london	0.349***	0.249***	0.347***	0.534***	0.401***	0.262***	0.236***	0.393***
southeast	0.123***	0.103***	0.185***	0.093***	0.192***	0.090***	0.036***	0.158***
East	0.053***	0.060***	0.101***	0.048***	0.066***	0.038***	0.024**	0.074***
d2008+×age	-0.001*	-0.008***	-0.003*	0.000	-0.005**	0.000	0.001	-0.003***
d2008+×age2/1000	0.033***	0.097***	0.060**	0.036	0.091***	0.012	-0.015	0.054***
d2008+×female	0.018***	-0.011	0.017**	0.002	0.023***	0.022***	0.011**	0.016***
d2008+×lnsize	0.003***	0.006***	0.002	0.018***	-0.002	0.004***	0.012***	0.000
d2008+×london	-0.005	-0.010	-0.025*	0.046***	-0.006	-0.011**	0.013**	-0.007
d2008+×southeast	-0.011***	-0.022	-0.022**	0.007	-0.024**	-0.001	-0.003	-0.013***
d2008+×east	-0.007*	-0.006	-0.012	0.005	-0.019*	-0.001	-0.001	-0.011**
cons	0.699***	0.892***	0.765***	0.657***	0.673***	0.682***	1.789***	0.717***

	OCCUPATION								
Coefficient	Managers	Prof.	Technical	Admin	Skilled	Personal	Sales	Process	Element.
d2008+	-0.156**	-0.154***	-0.045	0.001	0.102**	-0.045*	-0.115***	-0.095**	-0.031*
age	0.099***	0.067***	0.064***	0.037***	0.049***	0.021***	0.030***	0.035***	0.030***
age2/1000	-1.050***	-0.678***	-0.697***	-0.408***	-0.538***	-0.230***	-0.359***	-0.392***	-0.321***
female	-0.239***	-0.072***	-0.109***	-0.097***	-0.364***	-0.084***	-0.088***	-0.222***	-0.186***
lnsize	0.024***	0.028***	0.014***	0.008***	0.028***	0.021***	-0.007***	0.031***	0.012***
london	0.403***	0.237***	0.269***	0.276***	0.158***	0.221***	0.123***	0.122***	0.099***
southeast	0.159***	0.058***	0.064***	0.090***	0.080***	0.039***	0.055***	0.045***	0.054***
East	0.065***	0.010	0.045***	0.035***	0.046***	0.023**	0.037***	0.027***	0.026***
d2008+×age	0.002	0.005*	-0.001	-0.004***	-0.007***	0.001	0.002*	0.002	-0.001
d2008+×age2/1000	0.001	-0.041	0.021	0.052***	0.084***	-0.000	-0.013	-0.016	0.018*
d2008+×female	0.014*	0.011*	0.012**	0.004	0.013	0.011*	0.005	0.015*	0.024***
d2008+×lnsize	0.003**	0.000	0.003***	0.005***	0.001	0.000	0.006***	-0.002	-0.001
d2008+×london	0.022**	0.004	-0.010	0.002	-0.032**	0.004	-0.010	0.050***	-0.016**
d2008+×southeast	-0.007	-0.010	-0.002	-0.008	-0.009	-0.023***	-0.010*	0.005	-0.020***
d2008+×east	0.015	0.000	-0.010	0.006	-0.007	-0.014*	-0.010	0.009	0.003
cons	0.643***	1.343***	1.269***	1.560***	1.257***	1.619***	1.585***	1.447***	1.444***

Table H: Lognormal Distribution Models Conditional on Characteristics – σ Parameter

		INDUSTRY					SECTOR	
Coefficient	**AGGREGATE**	Primary	Manuf.	Finance	Business	Services	Public	Private
d2008+	-0.058**	0.110	0.056	-0.090	-0.097*	-0.069**	-0.144***	-0.076***
age	0.021***	0.011***	0.014***	0.022***	0.026***	0.022***	0.016***	0.023***
age2/1000	-0.162***	-0.080**	-0.099***	-0.137**	-0.184***	-0.175***	-0.107***	-0.175***
female	-0.041***	0.022	0.002	-0.070***	-0.078***	-0.038***	0.001	-0.057***
lnsize	0.004***	0.010***	0.008***	-0.011***	0.004**	0.004***	-0.008***	0.002**
london	0.140***	0.085**	0.124***	0.100***	0.153***	0.053***	-0.039***	0.215***
southeast	0.044***	0.022	0.063***	-0.025	0.055***	0.022***	0.003	0.068***
East	0.027***	0.025	0.020	-0.022	0.029**	0.022***	0.012	0.036***
d2008+×age	0.0021*	-0.008*	-0.003	-0.001	0.004	0.002	0.003	0.003**
d2008+×age2/1000	-0.024*	0.109*	0.003	0.009	-0.054	-0.021	-0.047*	-0.028**
d2008+×female	-0.003	-0.026	0.005	0.005	0.012	0.002	-0.012*	-0.002
d2008+×lnsize	0.002**	0.007**	-0.000	0.009***	0.003	0.002	0.008***	0.001
d2008+×london	0.019***	-0.007	0.001	0.046***	0.006	0.017**	0.033***	0.021***
d2008+×southeast	-0.003	0.004	-0.034**	0.046*	-0.015	0.008	0.005	-0.006
d2008+×east	-0.007	0.010	0.009	0.032	0.006	-0.016*	-0.019*	-0.003
cons	0.084***	0.208***	0.121***	0.161*	0.014	0.058**	0.269***	0.059**

	OCCUPATION								
Coefficient	Managers	Prof.	Technical	Admin	Skilled	Personal	Sales	Process	Element.
d2008+	-0.012	-0.090	-0.093*	0.039	-0.082	0.017	-0.168***	-0.034	-0.016
age	0.014***	0.006*	-0.000	0.003**	-0.008***	0.002	0.004***	-0.001	0.002**
age2/1000	-0.083**	-0.014	0.027	-0.021	0.067**	-0.021	-0.044***	0.005	-0.02**
female	-0.041***	-0.037***	-0.059***	-0.068***	0.004	-0.025**	-0.045***	-0.048***	-0.055***
lnsize	-0.007***	-0.012***	-0.010***	-0.007***	0.007***	0.005***	-0.020***	0.006***	0.002*
london	0.105***	0.081***	0.063***	0.068***	0.068***	0.127***	0.040***	0.020	0.054***
southeast	0.041***	0.007	0.022*	0.026***	0.032**	0.030**	0.012	0.010	0.029**
East	0.035**	0.028*	0.027**	0.020*	0.020	0.030*	0.012	-0.015	0.022*
d2008+×age	-0.001	0.001	0.003	-0.002	0.004	-0.001	0.004***	0.002	0.000
d2008+×age2/1000	0.009	0.002	-0.034	0.018	-0.051	0.017	-0.050***	-0.017	-0.001
d2008+×female	-0.001	0.009	-0.005	-0.012	-0.007	-0.012	0.008	0.011	-0.008
d2008+×lnsize	0.001	0.002	0.001	0.003***	0.001	-0.001	0.008***	-0.000	0.002
d2008+×london	0.023*	-0.005	0.028**	0.025***	0.020	0.036**	0.011	0.021	0.000
d2008+×southeast	-0.006	-0.012	0.009	-0.001	-0.002	-0.023*	-0.004	-0.012	-0.014
d2008+×east	-0.009	-0.014	-0.012	-0.005	0.003	-0.016	-0.009	0.011	-0.022
cons	0.329***	0.442***	0.551***	0.399***	0.572***	0.304***	0.495***	0.402***	0.307***

Table I: Continuous Hours Regressions

				INDUSTRY			SECTOR	
Coefficient	**AGGREGATE**	Primary	Manuf.	Finance	Business	Services	Public	Private
d2008+	0.132	-1.694	-3.669***	-2.446***	-1.886***	-0.575	-6.208***	0.723**
wage	-0.077***	-0.248***	-0.151***	-0.030***	-0.067***	-0.111***	-0.142***	-0.058***
wage2/1000	0.039***	0.471***	0.261***	0.041***	0.031***	0.080***	-0.032	0.029***
age	1.212***	0.560***	0.562***	0.058	0.701***	1.378***	0.471***	1.300***
age2	-0.014***	-0.007***	-0.007***	-0.002*	-0.009***	-0.016***	-0.006***	-0.015***
female	-8.343***	-12.52***	-6.794***	-3.542***	-6.642***	-7.843***	-7.295***	-8.425***
lnsize	-0.216***	0.514***	0.137***	-0.251***	0.103***	-0.160***	-0.076**	-0.249***
london	1.060***	1.340***	-0.209	0.914***	1.077***	1.387***	1.699***	0.830***
southeast	0.026	-0.019	0.097	0.161	0.356**	0.094	-0.294*	0.034
East	0.014	-0.104	0.224	-0.138	-0.440*	0.185	-0.586***	0.081
d2008+×wage	0.011***	0.018	0.047***	0.004	0.009*	0.002	-0.018***	0.014***
d2008+×wage2/1000	-0.028***	-0.017	-0.243***	-0.020	0.011*	-0.010	0.140**	-0.022***
d2008+×age	-0.056***	0.032	0.103***	0.100**	0.054	-0.018	0.317***	-0.095***
d2008+×age2	0.001***	-0.000	-0.001***	-0.001**	-0.001	0.000	-0.004***	0.001***
d2008+×female	0.372***	0.403*	0.216*	-0.276**	0.023	0.449***	0.277***	0.198***
d2008+×lnsize	0.066***	0.105***	0.067***	0.053**	0.059***	0.046***	-0.018	0.064***
d2008+×london	-0.014	-0.497	-0.112	0.016	0.153	-0.013	0.255**	-0.078
d2008+×southeast	0.028	0.029	-0.239*	-0.071	-0.102	0.091	0.161	0.002
d2008+×east	0.099*	0.540*	0.012	0.136	0.230	0.067	0.002	0.113
cons	16.89***	34.01***	31.86***	38.18***	25.38***	12.07***	31.01***	15.47***
N	1,027,998	45,977	115,887	55,221	144,671	666,242	283,242	674,799

	OCCUPATION								
Coefficient	Managers	Prof.	Technical	Admin	Skilled	Personal	Sales	Process	Element.
d2008+	-4.368***	-4.264***	-4.454***	-5.035***	-1.003	-5.891***	-0.345	-5.922***	-3.881***
wage	-0.090***	-0.283***	-0.100***	-0.130***	-0.025	-0.387***	0.282***	-0.098	0.128**
wage2/1000	0.059***	0. 553***	0.080***	0.072	-0.953**	1.070***	-3.070**	-2.910	-1.980*
age	0.186***	0.633***	0.328***	0.317***	0.541***	0.315***	1.474***	0.807***	1.200***
age2	-0.003***	-0.009***	-0.005***	-0.005***	-0.007***	-0.004***	-0.018***	-0.010***	-0.014***
female	-3.568***	-5.729***	-5.032***	-4.401***	-9.191***	-5.698***	-5.580***	-7.958***	-13.01***
lnsize	0.065***	0.022	0.170***	0.267***	0.007	-0.025	-0.443***	0.087**	-0.176***
london	0.449***	1.057***	0.959***	0.975***	0.039	1.270***	0.909***	0.465	1.389***
southeast	0.220*	0.243	0.360**	-0.234	0.073	-0.493*	0.140	0.513*	0.0258
East	0.106	-0.393*	0.452*	-0.231	0.108	-0.582*	-0.236	0.934***	-0.010
d2008+×wage	0.010**	0.038***	0.034***	-0.025	-0.058*	-0.094***	0.024	0.117	0.147*
d2008+×wage2/1000	-0.004	-0.260***	-0.069***	0.095**	0.991***	0.463***	-1.800	-2.890	-4.410
d2008+×age	0.175***	0.177***	0.200***	0.254***	0.035	0.292***	-0.007	0.210***	0.0711*
d2008+×age2	-0.002***	-0.002***	-0.002***	-0.003***	-0.000	-0.003***	0.000	-0.002***	-0.001
d2008+×female	-0.168*	-0.141	0.084	-0.229**	-0.411	0.363*	0.066	0.335	1.032***
d2008+×lnsize	0.078***	0.014	-0.018	0.053***	0.068**	0.097***	0.009	0.000	0.041*
d2008+×london	-0.101	0.162	0.062	0.392***	-0.225	0.049	-0.248	-0.745**	-0.310
d2008+×southeast	-0.063	-0.015	-0.010	0.085	0.013	0.171	-0.299	-0.348	0.045
d2008+×east	-0.005	0.210	-0.117	0.066	0.211	0.036	0.150	-0.157	0.301
cons	37.44***	30.72***	32.98***	30.51***	32.45***	32.43***	6.187***	29.06***	14.47***
N	142,840	120,536	147,481	164,928	65,913	82,641	102,466	66,155	135,038

Table J: Probit Model Marginal Effects – Probability of Full Time Employment

		INDUSTRY					SECTOR	
Coefficient	**AGGREGATE**	Primary	Manuf.	Finance	Business	Services	Public	Private
d2008+	-0.442***	-0.690**	-0.360*	-0.062	-0.250**	-0.420***		
wage	0.025***	-0.003	0.007***	0.022***	0.029***	0.026***		
wage2/1000	-0.038**	0.001	-0.030*	-0.030***	-0.072***	-0.034***		
age	0.096***	0.052***	0.077***	-0.024*	0.054***	0.108***		
age2	-0.001***	-0.001***	-0.001***	0.000	-0.001***	-0.001***		
female	-1.002***	-1.479***	-1.068***	-1.080***	-0.796***	-0.936***		
lnsize	-0.024***	0.102***	0.040***	-0.026***	0.012***	-0.018***		
london	0.108***	0.065	-0.072	0.271***	0.085***	0.142***		
southeast	-0.020*	-0.034	0.028	0.018	0.024	-0.013		
east	-0.077***	-0.136*	0.066	-0.062	-0.147***	-0.072***		
public	-0.012							
d2008+×public	-0.016							
d2008+×wage	0.004**	0.006	0.001	-0.005	-0.003	-0.004**		
d2008+×wage2/1000	-0.015	-0.006	-0.029	0.004	0.026	0.020***		
d2008+×age	0.012***	0.023*	0.013	0.002	0.008	0.012***		
d2008+×age2	-0.000***	-0.000*	-0.000*	-0.000	-0.000	-0.000***		
d2008+×female	0.070***	-0.014	0.044	0.015	0.071***	0.066***		
d2008+×lnsize	0.010***	0.040***	0.021***	0.019**	0.010**	0.008***		
d2008+×london	-0.006	0.091	-0.089	0.052	0.045	-0.017		
d2008+×southeast	-0.005	-0.075	-0.052	0.027	-0.013	0.004		
d2008+×east	0.030**	0.109	-0.022	0.075	0.018	0.040**		
cons	-0.571***	0.672***	0.209	2.367***	0.064	-1.066***		
N	1,027,998	45,977	115,887	55,221	144,671	666,242		

	OCCUPATION								
Coefficient	Managers	Prof.	Technical	Admin	Skilled	Personal	Sales	Process	Element.
d2008+	-0.414*	-0.089	-0.674***	-0.407***	-0.511	-0.246*	-0.355	-0.943***	-0.228
wage	-0.002*	-0.006***	0.004*	0.096***	0.081***	0.155***	0.238***	0.057***	0.364***
wage2/1000	0.000	-0.022*	-0.007***	-1.080**	-0.002**	-3.980***	-4.040***	-1.260**	-10.3***
age	0.065***	0.034***	0.006	-0.020***	0.078***	-0.008	0.095***	0.106***	0.088***
age2	-0.001***	-0.001***	-0.000***	0.000	-0.001***	-0.000	-0.001***	-0.001***	-0.001***
female	-0.974***	-0.842***	-1.042***	-0.759***	-1.296***	-0.758***	-0.631***	-0.809***	-1.168***
lnsize	0.058***	0.023***	0.028***	0.033***	0.013*	-0.033***	-0.064***	0.020***	-0.050***
london	0.174***	0.112***	0.243***	-0.004	-0.085	0.058	-0.146***	-0.178***	-0.009
southeast	0.079*	-0.018	0.055*	-0.089***	0.007	-0.141***	-0.048	-0.042	-0.031
East	-0.012	-0.229***	-0.036	-0.139***	-0.073	-0.140***	-0.032	0.066	-0.061*
d2008+×wage	0.004***	-0.003	-0.003	-0.036**	0.106*	-0.011	-0.023	0.160***	-0.044
d2008+×wage2/1000	-0.004**	0.009	0.003	1.010*	-2.85	0.101	1.02	-4.900***	2.610
d2008+×age	0.005	0.005	0.032***	0.026***	-0.019	0.013*	0.019***	0.000	0.011**
d2008+×age2	-0.000	-0.000	-0.000***	-0.000***	0.000	-0.000*	-0.000**	-0.000	-0.000*
d2008+×female	0.083**	0.016	0.059**	0.061**	0.037	0.051	0.019	0.170***	0.095***
d2008+×lnsize	0.020***	-0.004	0.011**	0.014***	0.020**	0.004	0.007*	-0.020**	0.015***
d2008+×london	0.006	0.047	0.041	0.049	-0.086	-0.003	0.041	-0.089	-0.025
d2008+×southeast	-0.051	-0.040	-0.019	-0.005	0.001	0.051	0.020	-0.010	0.033
d2008+×east	0.036	0.061	-0.027	0.037	0.116*	0.051	-0.010	-0.030	0.081**
cons	0.621***	1.200***	1.545***	0.779***	-0.250	0.249*	-2.317***	-0.873***	-2.579***
N	142,840	120,536	147,481	164,928	65,913	82,641	102,466	66,155	135,038