

Pay Gaps Across Equalities Areas

Simonetta Longhi and Lucinda Platt

Institute for Social and Economic Research
University of Essex

This report highlights new insights into pay gaps and pay penalties by gender and ethnicity, religion, disability, sexual orientation and age, based upon secondary analysis of pay data in the Labour Force Survey.

WHAT IS ALREADY KNOWN ON THIS TOPIC:

- The gender pay gap is substantial and slowly declined until 2007/08 when it slightly increased. Pay penalties persist for women.
- There is only limited evidence on pay gaps and pay penalties by gender and ethnicity, religion, sexual orientation and disability.

WHAT THIS REPORT ADDS:

- This is the first study to analyse average hourly pay gaps and pay penalties by gender and ethnicity, religion, disability, sexual orientation and age.
- Gender pay gaps and penalties tend to persist, regardless of group. Most groups of ethnic minority women and men (though not all) experience pay gaps and pay penalties, but the variation across groups stands out.
- Disabled women and men experience substantial pay gaps and pay penalties.
- Younger and older workers experience pay gaps, but do not tend to suffer pay penalties.
- The findings on religion and sexual orientation are mixed.
- The higher qualified you are, the less likely you are to suffer pay gaps and pay penalties, though this does not hold for every group.

Pay Gaps Across Equalities Areas

**An analysis of pay gaps and pay penalties by
sex, ethnicity, religion, disability, sexual
orientation and age using the Labour Force
Survey**

**Simonetta Longhi and Lucinda Platt
Institute for Social and Economic Research
University of Essex**



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First published Winter 2008

ISBN 978 1 84206 078 0

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Research Team
Equality and Human Rights Commission
Arndale House
Arndale Centre
Manchester
M4 3AQ

Email: research@equalityhumanrights.com

Telephone: 0161 829 8500

Website: www.equalityhumanrights.com

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ACKNOWLEDGEMENTS

We are grateful to the project manager, Sue Botcherby, for this research and her close engagement and helpful suggestions.

We are grateful to the Office for National Statistics, the Northern Ireland Statistics and Research Agency and to the UK Data Archive for permission to use and access the Labour Force Survey data. These organisations, however, bear no responsibility for the further analysis or interpretation. Crown copyright material is reproduced with the permission of the Controller of Her Majesty's Stationery Office and the Queen's Printer for Scotland.

The data sets we have drawn on for this study are as follows:

Office for National Statistics. Social and Vital Statistics Division and Northern Ireland Statistics and Research Agency. Central Survey Unit, *Quarterly Labour Force Survey, January - March, 2006* [computer file]. Colchester, Essex: UK Data Archive [distributor], June 2006. SN: 5369.

Office for National Statistics. Social and Vital Statistics Division and Northern Ireland Statistics and Research Agency. Central Survey Unit, *Quarterly Labour Force Survey, October - December, 2004* [computer file]. Colchester, Essex: UK Data Archive [distributor], August 2006. SN: 5425.

Office for National Statistics. Social and Vital Statistics Division and Northern Ireland Statistics and Research Agency. Central Survey Unit, *Quarterly Labour Force Survey, January - March, 2005* [computer file]. Colchester, Essex: UK Data Archive [distributor], August 2006. SN: 5426.

Office for National Statistics. Social and Vital Statistics Division and Northern Ireland Statistics and Research Agency. Central Survey Unit, *Quarterly Labour Force Survey, April - June, 2005* [computer file]. *2nd Edition*. Colchester, Essex: UK Data Archive [distributor], October 2007. SN: 5427.

Office for National Statistics. Social and Vital Statistics Division and Northern Ireland Statistics and Research Agency. Central Survey Unit, *Quarterly Labour Force Survey, July - September, 2005* [computer file]. Colchester, Essex: UK Data Archive [distributor], August 2006. SN: 5428.

Office for National Statistics. Social and Vital Statistics Division and Northern Ireland Statistics and Research Agency. Central Survey Unit, *Quarterly Labour Force Survey, October - December, 2005* [computer file]. Colchester, Essex: UK Data Archive [distributor], August 2006. SN: 5429.

Office for National Statistics. Social and Vital Statistics Division and Northern Ireland Statistics and Research Agency. Central Survey Unit, *Quarterly Labour Force Survey, April - June, 2006* [computer file]. *2nd Edition*. Colchester, Essex: UK Data Archive [distributor], November 2006. SN: 5466.

Office for National Statistics. Social and Vital Statistics Division and Northern Ireland Statistics and Research Agency. Central Survey Unit, *Quarterly Labour Force Survey, July - September, 2006* [computer file]. Colchester, Essex: UK Data Archive [distributor], November 2006. SN: 5547.

Office for National Statistics. Social and Vital Statistics Division and Northern Ireland Statistics and Research Agency. Central Survey Unit, *Quarterly Labour Force Survey, October - December, 2006* [computer file]. Colchester, Essex: UK Data Archive [distributor], April 2007. SN: 5609.

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Office for National Statistics. Social and Vital Statistics Division and Northern Ireland Statistics and Research Agency. Central Survey Unit, *Quarterly Labour Force Survey, April - June, 2007* [computer file]. Colchester, Essex: UK Data Archive [distributor], October 2007. SN: 5715.

Office for National Statistics. Social and Vital Statistics Division and Northern Ireland Statistics and Research Agency. Central Survey Unit, *Quarterly Labour Force Survey, July - September, 2007* [computer file]. Colchester, Essex: UK Data Archive [distributor], December 2007. SN: 5763.

EXECUTIVE SUMMARY

Introduction

The pay gap is a way of summarising the absolute difference in average pay for different groups of people.

We know a lot about the gender pay gap, but far less about other pay gaps. This report analyses the pay gap across the EHRC equalities areas: gender, ethnicity, religion, sexual orientation,¹ age and disability among those who are full-time employees.

The pay gap captures all the potential reasons why one group has lower average pay than another. The factors contributing to the gender pay gap include: differences in educational qualifications; differences in length and type of work experience; concentrations in lower paying industries or occupations, or ‘occupational segregation’; employment in workplaces with high proportions of women; differences in sector of employment – public versus private; differences in hours spent on the job; and differences in access – time spent commuting, and employer discrimination, both at recruitment and during employment (the ‘glass ceiling’).

These factors may also apply to other group comparisons. The relative contribution of factors varies according to the groups being compared. For example, for some minority groups, large differences in average qualifications are likely to be an important source of average pay disadvantage – or advantage. For others, occupational segregation may be a critical factor.

Pay gaps summarise disadvantage in employment (among full-time employees) but not necessarily discrimination. Discrimination can be a contributing factor and may influence other routes to lower pay such as occupational segregation.

The gender pay gap is described as the difference between men’s average pay in full-time work and women’s average pay in full-time work. In this research, for the other equalities areas we compare the average full-time pay for men and women from each potentially disadvantaged group to the average

¹ In this sample, these groups of same sex couples are not representative of the lesbian, gay and bisexual population. They are in same sex couples and have volunteered this information in surveys. They are therefore a particular sub-group of the lesbian, gay and bisexual population.

pay of men from the majority group. Therefore, we use the following reference groups for the equalities areas:

Equalities Area	Reference Category
Women	Men
Ethnicity	White British men
Religion	Christian men
Disability	Non-disabled men
Same sex couples	Married men
Age	Men aged 40-44

It is also possible to observe pay gaps for women compared to men in the same group. For example, we can see if there is a pay gap for Indian women compared to Indian men.

Key messages

The main messages that emerged from this study were:

- Women and men in most groups experience pay gaps compared to men from the majority reference group. However, this is not a given. Some groups of women and men do not suffer pay gaps compared to men from the majority reference group. When the consequences of differences in qualification or occupation are removed, some groups of women and men experience pay penalties linked to their gender, race, disability and so on. One contributory factor is likely to be discrimination.
- There is persistent gender disadvantage across equalities areas. For example, on average, disabled men can expect to be paid better not only than disabled women but also than non-disabled women.
- All groups of ethnic minority women and men, except Indian and Chinese men, experience pay gaps relative to White British men.
- Disabled men and disabled women are disadvantaged compared to non-disabled men. Disabled women are particularly disadvantaged regardless of whether they have low or high qualifications, relative to similarly qualified non-disabled men.

- Pay gaps for people with higher level qualifications tend to be smaller. For example, after controlling for other characteristics, the gender pay penalty among those with higher qualifications was substantially reduced. However, there were some exceptions. Among Black African and Chinese men, Black Caribbean women and disabled people, it was those who were more highly qualified who experienced a pay penalty (relative to comparators with higher qualifications), not those without qualifications.
- The pay disadvantage associated with being older largely disappeared when we controlled for relevant characteristics. This means that it is unlikely to be age that is a key factor determining pay gaps, and the explanation is that older people are different – with different jobs, different (and on average lower) levels of qualifications – than those who are currently in their prime earning years.

Key findings

Average pay gaps

Ethnicity

- All ethnic minority women had pay gaps relative to White British men, but they were lowest for Chinese (9%) and Black Caribbean (14%) women, and highest for Pakistani women (26%).
- Pakistani men had a pay gap of around 23% compared to White British men.
- Pay gaps were also high for Bangladeshi and Black African men (around 21% and 18% respectively).
- Indian and Chinese men did not appear to have a pay gap relative to White British men, and possibly had a pay advantage.
- Pay gaps between men and women of the same ethnic group were not observed for most groups. They were apparent only for White British women compared to White British men (17%) and Indian women compared to Indian men (around 18%).

Religion

- Women of all religious denominations (and those with none) had pay gaps relative to Christian men and these were highest for Sikh and Muslim women (22%).
- Muslim men had a pay gap of around 17% relative to Christian men.

- Jewish men had a pay advantage of around 37% relative to Christian men.

Disability

- Disabled women had a pay gap of 22% relative to non-disabled men.
- Disabled men had a pay gap of 11% relative to non-disabled men.
- The pay gap for disabled men relative to non-disabled men was still smaller than the gap experienced by non-disabled women relative to non-disabled men (16%).

Same sex couples

- Women in same sex couples did not experience a pay gap relative to married men. Married women experienced a pay gap of 18% and single women a 36% pay gap relative to married men.
- Men in same sex couples did not experience a pay gap relative to married men. Single men had a pay gap of 39% relative to married or cohabiting men.

Age

- Women's pay fell behind in their late 30s and from this age onwards they experienced substantial pay gaps relative to prime age men (40-44).
- Pay gaps compared to men aged 40-44 were lowest for women aged 35-39 (16%); then 21% for women aged 40-44; around 23% for women aged 45-49 and 50-54; and 28% for women aged 55-59.
- Younger men and women had comparable pay gaps relative to prime age men (40-44) of around 66% for those aged 16-19; around 47% for those aged 20-24; and around 28% for those aged 25-29.
- Older men had pay gaps relative to prime age men. Men aged 50-54 had a pay gap of around 4%; those aged 55-59 had a pay gap of 13%; while men aged 60-64 had a pay gap of 24%.

Pay penalties

We know that differences in average pay occur for a range of reasons, including age profiles, levels of disability, occupational distribution, discrimination and, crucially, qualifications. It is possible to identify if pay

penalties still persist when comparing those who have similar characteristics in these areas.²

Pay penalties were identified for the following groups:³

- Women of all ethno-religious groups compared to White British Christian men.
- Indian Hindu men; Pakistani Muslim men; Bangladeshi Muslim men, Black African Christian men and Chinese men of no religion compared to White British Christian men.
- Disabled men and disabled women compared to non-disabled men.
- Single men relative to married or cohabiting men; and single women, married or cohabiting women, and women in same sex couples relative to married or cohabiting men.
- Men aged 39 and under and aged 60-64 relative to men aged 40-44; and women of all ages relative to men aged 40-44.
- White British Jewish men maintained a significant pay advantage relative to White British Christian men. We noted, however, that qualifications for each general category of qualifications were higher on average for Jewish men.

Pay penalties for those with lower and higher qualifications

It is important to question whether pay penalties are equal across types of work and those more qualified and less qualified. Can we observe 'glass ceilings' or breaks on progress for those with higher levels of qualification? Or are penalties more significant among those with lower qualifications and in more routine occupations?

² We explored penalties in pay that could be found once we compared those who were otherwise similar in a number of respects. In this part of the analysis, we held constant for our comparisons a (non-exhaustive) range of characteristics that have been shown to be relevant to the amount of pay people receive. Characteristics we controlled for were: educational qualifications, broad occupational grouping, age, religious affiliation, ethnic group, health status, marital/partnership status, presence of children, and whether UK born. We were not however able to take account of a number of other factors that may be relevant to pay, in particular, work experience, length of time in current job or particular skills and specialisations, as well as unobservable characteristics such as motivation and commitment.

³ Given the way in which ethnicity and religion overlap (for example, the vast majority of Pakistanis and Bangladeshis are Muslims), we combined the effects of religion and ethnicity for particular ethnic and religious groups, using the religious affiliation that was the majority one for that ethnic group.

For those with no qualifications (and controlling for other characteristics, as before), pay penalties were still found for:

- White British Christian women, Indian Hindu women, Indian Sikh women, Pakistani Muslim women, Bangladeshi Muslim women, Black African Christian women and Chinese women of no religion compared to White British Christian men;
- Pakistani Muslim and Bangladeshi Muslim men compared to White British Christian men;
- Disabled women compared to non-disabled men;
- Single men and women compared to married or cohabiting men;
- Married or cohabiting women compared to married or cohabiting men;
- Men aged 29 and under compared to men aged 40-44;
- Women of all ages compared to men aged 40-44.

For those with level 4 qualifications or higher (and controlling for other characteristics), pay penalties were still found for:

- White British Christian, Indian Hindu, Pakistani Muslim, Black Caribbean and Black African women compared to White British Christian men;
- Indian Hindu men, Black African Christian men and Chinese men relative to White British Christian men;
- Disabled men and women relative to non-disabled men;
- Single men and women and married or cohabiting women relative to married or cohabiting men;
- Younger men and women (20-34) and 60-64 year old men relative to 40-44 year old men.

This meant that:

- The penalties for women were greater at lower levels of qualifications – we saw a clustering of disadvantage.
- Women with higher levels of qualifications experienced reduced pay penalties.
- The penalties were greater for disabled people at higher levels of qualification.
- Pakistani and Bangladeshi Muslim men with lower qualifications experienced substantial pay penalties.
- Indian Hindu, Chinese and Black African men with higher qualifications experienced pay penalties.

Conclusions and implications

Pay gaps are an issue for several equalities groups. For women, certain ethnic minorities and disabled people, there appear to be clear pay penalties. While increasing educational levels may do much to address pay differentials, it appears that it would have a greater impact on women and on Pakistani and Bangladeshi ethnic minority groups. Disabled men and women with higher qualifications and Black African, Indian and Chinese men with higher qualifications face a clear pay penalty despite the presence of those qualifications. Gaining higher qualifications has an impact on pay gaps, though it is clearly not the whole solution.

The sample of men in same sex couples did not experience pay disadvantage in this analysis. The sample of women in same sex couples did not experience pay gaps relative to married/cohabiting heterosexual men, though when other factors were controlled for, they did experience pay penalties compared to married/cohabiting heterosexual men and men in same sex couples. This suggests gender disadvantage. Additionally, the disadvantage experienced by religious minorities is not clear cut, partly because it overlaps with ethnicity. There does appear to be a Muslim pay gap but this is not as great as that experienced by Pakistani or Bangladeshi men. On the other hand Jewish men do particularly well in terms of pay, partly associated with their high average levels of qualifications. Age is not itself particularly associated with pay penalties and the explanation is that older people are different – with different jobs, different (and on average lower) levels of qualifications – than those who are currently in their prime earning years.

We need to understand more about what is driving the pay gaps and penalties for different groups. This analysis indicates that a range of measures are needed to reduce pay gaps and pay penalties. Measures to increase educational attainment are likely to reduce pay disadvantage for those with lower qualifications and women. Those more highly educated cohorts who are currently young and with little labour market experience, are likely to see a reduction in their pay gaps as they age. It is necessary to continue to take action to address unequal pay, workplace discrimination and develop measures to equalise pay in similar jobs across sectors. Tackling the gender pay gap requires social change, including further strategies to enable women and men to harmonise and share work and family life (see Manning and Petrongolo 2008). Pay gaps and pay penalties for disadvantaged groups are unlikely to diminish if large proportions of those groups out of the labour market, or in part-time work, move into low-paid, full-time work.

1. INTRODUCTION, DATA DEFINITIONS AND APPROACH

1.1 Introduction

This report describes the pay gaps experienced across equalities areas: sex, ethnicity, religion, disability, age and sexual orientation. It looks at whether and by what proportion pay is lower for those from potentially vulnerable groups relative to the majority. Individual pay is an important issue on a number of levels. It is the main component of income among working age families; and thus levels of pay are the major determinant of standards of living for individuals or their families. More importantly, pay gaps tell us something about the ways in which individuals with particular characteristics are disadvantaged in work. People experience differences in pay related to their skills, qualifications, experience, access to particular labour markets, hours constraints, region of residence, job preferences and discrimination. Pay gaps are not (in and of themselves) indications of labour market or workplace discrimination, but they demonstrate that there are factors (of which labour market or workplace discrimination may be one) that need addressing if the chances for equality in work are to be achieved.

Analysis of gender pay gaps nationally and at the level of the workplace identify three main sources of pay disadvantage for women relative to men: occupational segregation, whereby women are concentrated in particular – and less well-remunerated – occupations (Blackwell 2003; Blackwell and Guinea-Martin 2005; Manning and Petrongolo 2008);⁴ interrupted employment histories (Olsen and Walby 2004); and employer discrimination, as well as variation between men and women in such characteristics as the level and type of educational qualifications (Commission of the European Communities 2007; Women and Work Commission 2006). None of these are entirely independent of each other, but separating them out has proved helpful for thinking about causes and how to tackle them. Organisations such as the former Equal Opportunities Commission attempted to tackle these three areas. In addition, all three are embedded in social expectations, gender roles, the organisation of career and employment structures and so on, in often reinforcing ways. Identifying pay gaps raises questions about the way society is organised. This has been demonstrated effectively through investigation and tackling of the gender pay gap over the last few decades. For example, if women face lower pay in part because of interrupted work histories due to family care then it is necessary to question why women

⁴ Though the extent to which horizontal segregation does in fact lead to disadvantage is contested (Blackburn and Jarman 2006).

continue to be the primary carers of children. It also raises questions of the valuation of continuous work and labour market responses to women 'returners'. Comparisons with other countries show that there is a relationship between women working part-time and the unavailability of high quality full-time childcare.

Investigating gender pay gaps and the factors that contribute to them has been important in informing policy options for reducing the gap (Women and Work Commission 2006). Gender pay gaps analysis has been successful in focusing attention on multiple sources of women's disadvantage in work and in raising challenges for policy. The Equality and Human Rights Commission (the Commission) was established in October 2007 and its remit is to consider all the equalities areas of sex, race and ethnicity, disability, religion or belief, age and sexual orientation together, as well as comparisons between them and, importantly, their intersections. People's lives cannot be separated according to individual characteristics, and it is recognised that they need to be considered as a whole.

The Equalities Review explored labour market disadvantage and demonstrated how employment deficits could be compared and contrasted across a range of characteristics. There is, then, ongoing exploration of the ways in which different equalities areas are associated with particular forms of disadvantage or discrimination, the extent to which they can be compared and whether a common approach to – or framework for – understanding disadvantage can be employed effectively across these areas.

This report can be seen, then, as an extension of analyses of gender pay gaps and of the comparative consideration of labour market disadvantage in the Equalities Review. It brings together and compares pay across the equalities areas and at (some of their) intersections, and raises questions about how we can begin to understand patterns of pay disadvantage and interpret their implications.

1.2 Defining pay gaps in the analysis

The pay gap is a way of summarising the absolute difference in average full-time pay for different groups of people. It therefore excludes part-time work and self-employment. Earnings or salary are calculated in terms of an hourly rate, given the hours worked, even if they are paid weekly or monthly. Pay gaps are a proportion of the group's pay and are expressed as %ages. As a single number, pay gaps are transparent, apparently easy to grasp, and are

susceptible to comparisons over time (whether things are ‘getting better’) and across countries (whether the UK is ‘worse’ than other countries), as well as between groups (are disabled men ‘more or less disadvantaged’ than non-disabled women) (Commission of the European Communities 2007).

1.3 Data

For this study we have pooled 12 consecutive quarters of the *Labour Force Survey* (LFS), covering the three years from the final quarter of 2004 (October-December 2004) to the third quarter of 2007 (July-September 2007). Calendar quarters are now available for all these 12 quarters and they cover the most recent three-year period, thus offering the best compromise between number of pooled quarters and timeliness of results, and avoiding the problem of combining seasonal and calendar quarters.⁵

The LFS is the best source for these pay gap analyses since it contains sufficient information to enable us to examine pay gaps across equalities areas. However, it is not the source that is typically used to calculate the gender pay gap, for which the Annual Survey of Hours and Earnings (ASHE) is used. There tend to be slight differentials in the gender pay gap calculated in the LFS compared to that provided by ASHE, with the LFS tending to produce a slightly smaller gap than ASHE (Olsen and Walby 2004; Platt 2006b). For example, in recent years ASHE has produced a mean pay gap

⁵ The LFS is a sample survey of UK residents living in private households. It is conducted quarterly, with around 60,000 interviews carried out each quarter. The survey has a semi panel design with respondents being re-interviewed for the subsequent four quarters, giving a total of five waves for each respondent. Earnings information is only asked in the first and fifth wave and an hourly earnings variable is created using information on both pay and hours. This is not calculated for those in self-employment. Information on earnings is typically collected for about two-thirds of those in paid employment. Weights are calculated and included in the data to adjust for non-response patterns across the survey as a whole and a further set of weights adjust for non-response in relation to the earnings information. We retain only those respondents who are being interviewed for the first time (wave one) for each of the quarters. These respondents have income information and give us a data set of unique individuals. We retain all those of working age (men aged 16-64 and women aged 16-59). The LFS quarterly design used to be organised around seasonal quarters running between March-May (spring) and November-February (winter). Since 2006, the LFS has moved to calendar quarters running from January-March to October-December. Some of the earlier LFS data has been reconstructed as calendar quarters to allow the harmonised pooling of quarters. At the time of the research, the furthest back these calendar quarters currently reach is October-December 2004. Since it is important to pool quarters in multiples of four (that is, in years), we have pooled 12 quarters from October-December 2004 to July-September 2007.

between men and women of around 17% (National Statistics 2008; Women and Work Commission 2006), while the LFS gives a figure of around 16%.

1.4 Definitions

The question of how to define individuals who come within the remit of the Commission is not always straightforward to answer and, in an analysis such as this, is subject to the questions asked of respondents in the data source used. For clarity, we briefly set out the categories we employ to define those considered in each of the equalities areas.

Sex: A question on sex is asked in all surveys and we use that to distinguish between men and women.

Ethnic group: We use the 2001 Census ethnic group categories, asked in the LFS since 2001. We present results for White British, Indian, Pakistani, Bangladeshi, Black Caribbean, Black African and Chinese.⁶

Religious affiliation: We use standard categories asked since 2002 for measuring religious affiliation. We present results for Christian, Buddhist, Hindu, Jewish, Muslim, Sikh and No religion.⁷

Disability: We measure disability using a question on whether the respondent has a long-standing illness question in combination with a question on whether the illness limits activities. The follow-up question on limits on activity is intended only to cover those who say 'yes' to the long-standing illness question. We define disabled people as those who did actually answer 'yes' to both questions. Our comparison group is those who answered no to the first question (and therefore did not get asked the second question). These we call non-disabled.⁸

⁶ The individual 'mixed' groups are all too small for distinct analysis and combination of them is not meaningful, while the various 'other' groups (including 'White other') combine heterogeneous groups. The different form of the ethnic group question in Northern Ireland means that it is not possible to include Northern Ireland in the analysis of ethnic group differences. Hence, Northern Ireland is excluded from the whole analysis in this report.

⁷ We exclude from our analysis those affiliating to 'any other religion' since, as an aggregate category, it is not meaningful.

⁸ It is worth noting that this comparative group of 'non-disabled' does not include everybody who is not 'disabled' (according to our definition) since those who say they have a long-standing illness or disability but do not define it as activity limiting are excluded. However, this reference category is appropriate as a comparison as it gives the clearest contrast and allows

Sexual Orientation: The LFS does not measure people's sexual orientation. Same-sex couples can identify as cohabiting, if they choose to do so.⁹ Since 2006, registered civil partnerships have been measured in the LFS. Thus we use the variable on cohabitation to identify (self-identifying) same sex couples for the quarters before spring 2006, and we use the information on civil partnerships (in the marital status variable) combined with the information on cohabitation to identify same-sex couples for the quarters from spring 2006. In our sample, only 340 men and 285 women declared themselves as living in a same sex couple.

Age: We use five year age bands from age 20 to state retirement age (59 for women and 64 for men), the lowest age band goes from 16-19 and so is only four years. There are also relatively small proportions of people employed in this youngest age band.

1.5 Structure of report

In Chapter 2 we describe employment profiles for men and women by equalities areas (ethnicity, religion, disability, sexual orientation and age) from the LFS data. This provides an important context for the analysis of pay gaps, as it shows the wide divergence in proportions in full-time work across the various groups considered.

In Chapter 3 we analyse and discuss pay gaps for men and women and by ethnicity, religion, disability, sexual orientation and age.

We know that differences in average pay occur for a range of reasons, including age profiles, levels of disability, occupational distribution, discrimination and, crucially, qualifications. In Chapter 4 we identify if pay penalties still persist by comparing those who have similar characteristics in these areas. We therefore estimate pay taking account of relevant characteristics.

a straightforward interpretation of the pay gap for disabled people. It is consistent with our use of White British men as the reference category for each minority ethnic group, rather than the combining men from all other ethnic groups ('all those not Black Caribbean', 'all those not Bangladeshi') as the appropriate reference category for ethnic pay gaps for each ethnic group.

⁹ This question has been used for analysis of 'gay pay', comparing men and women in such couples with men and women in heterosexual couples (married or cohabiting).

In Chapter 5 we consider the intersection between educational qualifications and equalities areas by estimating pay at different qualifications levels.

In Chapter 6 we look at the distribution of pay itself and explore whether pay deficits are larger or smaller for certain groups at different levels of pay.

In Chapter 7 we summarise the main findings of the report and how we should interpret them.

1.6 Approach and how to read the report

In this report we follow the model developed in Platt (2006) for describing pay gaps both numerically and graphically. In Chapter 3 we give the pay and the pay gaps separately for men and women and compare in all cases to men from the relevant reference category. Thus we compare with White men when looking at ethnic groups' pay gaps, with Christian men when looking at gaps by religious affiliation; with non-disabled men when looking at disabled men and women's pay gaps; with men living in heterosexual couples when looking at the pay of same sex couples; and with men of prime earning age when looking at pay across age bands. In our pay gap calculations we place considerable emphasis on the extent to which our results are robust, or can be evaluated with confidence as many of the samples for which we are calculating pay are relatively small.¹⁰ The graphs clearly illustrate these ranges and make it straightforward to see, where they do not overlap with the reference category, that there is a distinct pay gap.

¹⁰ Unlike with the analysis of gender pay gaps, many of the samples for which we are calculating pay are relatively small. They are subject both to the influence of outliers and incorporate substantial within-group variation. This means that we illustrate the pay gaps primarily as ranges of values that include the possible true value rather than as a single number. Generally speaking the larger the sample size, the smaller these ranges become, so that it is possible to think of the gender pay gap as approximately a single number, but the gap for Chinese women, for example, is very broad covering a nearly 20% range of possible values.

2. EMPLOYMENT STATUS BY EQUALITY AREAS

2.1 Introduction

We start with the analysis of employment status in the pooled LFS data set. This provides the context for the analysis of pay gaps as it shows what proportion of each of the groups is in full-time paid employment. The tables below show this proportion ranges from under 15% to over 70%. The remainder are either in part-time work, self-employed, unemployed or economically inactive (for example for health reasons or due to caring responsibilities).

Those in full-time paid employment are likely to differ in certain important respects from those not in full-time paid employment (for example in terms of where they live, what qualifications they have, their work histories etc). Thus, where the proportion of the group in full-time paid employment is low, those who are full-time employed may be rather untypical of the group as a whole. The extent to which those who are not in full-time employment are in other sorts of work, such as part-time or self-employment compared to being unemployed or inactive may also be relevant. High rates of unemployment or inactivity could be interpreted as representing barriers to employment. In such cases, those who do work in full-time employment could be expected to have characteristics which allow them to overcome such barriers, such as motivation to work against the odds, or particularly marketable skills, which could also have implications for the average pay of such a group.

Conversely, where there are high rates of self-employment or part-time work, while for some these could represent alternatives to full-time work in the face of barriers to employment, they could also represent preferred forms of occupation associated with more highly rewarded skills, for example, managing one's own business or being able to negotiate flexible working. In fact, many forms of self-employment are not highly remunerated and do not represent highly desirable employment, as is also the case for part-time work. But in some cases, such as among older workers, the 'move' to self-employment may mean that potentially the most highly paid workers are no longer among the full-time employed. Similarly, highly qualified, professional mothers may be able to negotiate flexible working and reduced hours.

What we have when we look at pay gaps is the pay deficit for a 'selected sample' of the group as a whole. We call the difference between average

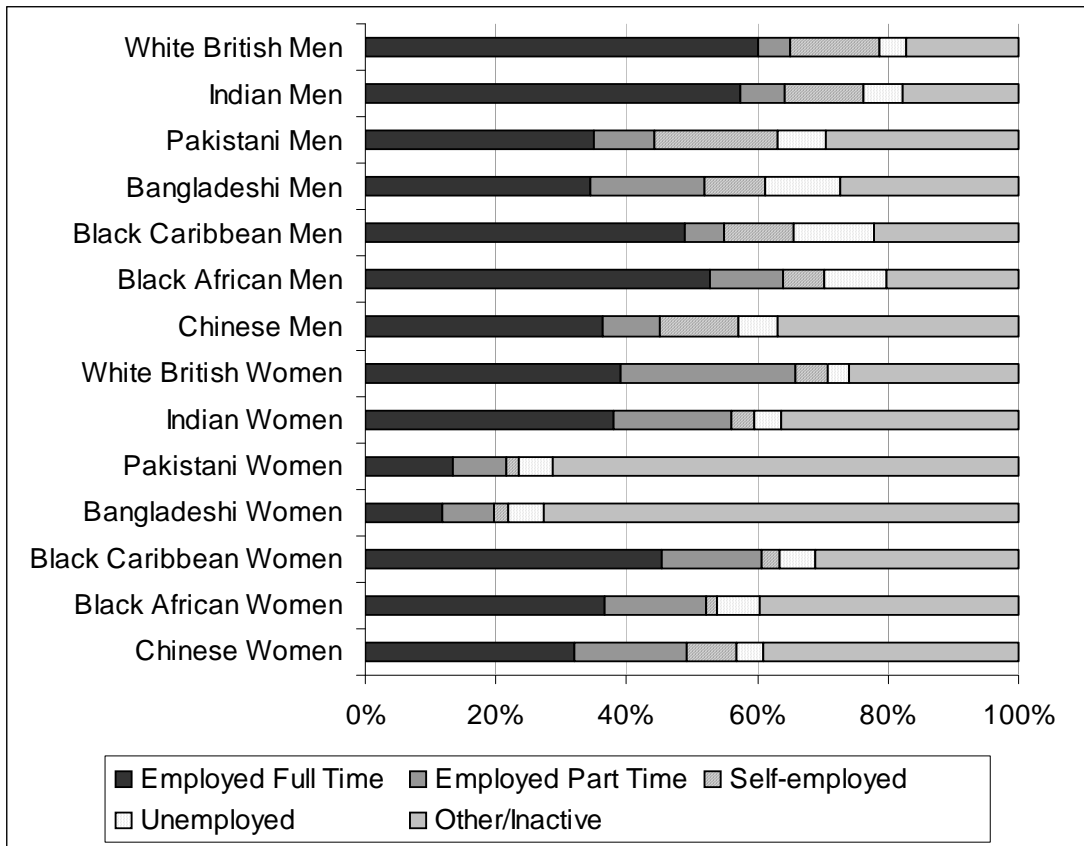
earnings of those actually in work and these 'potential' earnings of all the group selection effects.

2.2. Employment status by gender and ethnicity

Figure 2.1 below and Table A2.1 in the Appendix show the employment status of people in Britain by gender and ethnicity. There are clear differences in employment status across ethnic groups. White British men are more likely to be in full-time employment than other ethnic groups. While 60.2% of White British men, 57.5% of Indian, and 52.7% of Black African men are in full-time employment, only 34.4% of Bangladeshi and 36.2% of Chinese men are. Men belonging to ethnic minorities seem to be more likely to work part-time than White British men. While the proportion of part-timers is less than 5% among White British men, it is 11.2% for Black African, and 17.4% for Bangladeshi men. The proportion of those self-employed is relatively high among Pakistani men (18.6%) compared to 13.6% for White British men, while it is relatively low for Black African and Bangladeshi men. Self-employment among Pakistani men has been associated with barriers to employment – adopting independent contractor work such as taxi driving and chauffeuring as an alternative to unemployment (Clark and Drinkwater 2000). For other groups, self-employment may be more of a positive choice.

The proportion of men in some form of employment is highest for White British men (78.6%), followed very closely by Indian men (76.2%), but falls dramatically for the other ethnic groups. Similarly, unemployment and inactivity are lowest amongst White British. The proportion of unemployed is highest for Black Caribbean and Bangladeshi men (12.2% and 11.4%), whereas the proportion of inactive men is highest among Chinese and Pakistani men (37% and 29.6%). For Chinese men, the inactivity rates are influenced by the large numbers of students among this group (Clark and Drinkwater 2007), while ill-health plays a significant role in the inactivity rates of Pakistani and Bangladeshi men (Salway et al 2007).

Figure 2.1 Employment status by gender and ethnicity



Compared to men, overall, women are less likely to be in full-time employment and, with some exceptions, more likely to be in part-time employment. Women are less likely than their male counterparts to be self-employed or unemployed, and more likely to be out of the labour force.

However, the proportion of Chinese and Black Caribbean women in full-time employment is very similar to the proportion of men from those groups in full-time employment. Pakistani and Bangladeshi men seem more likely than women from those groups not only to work full-time, but also to work part-time.

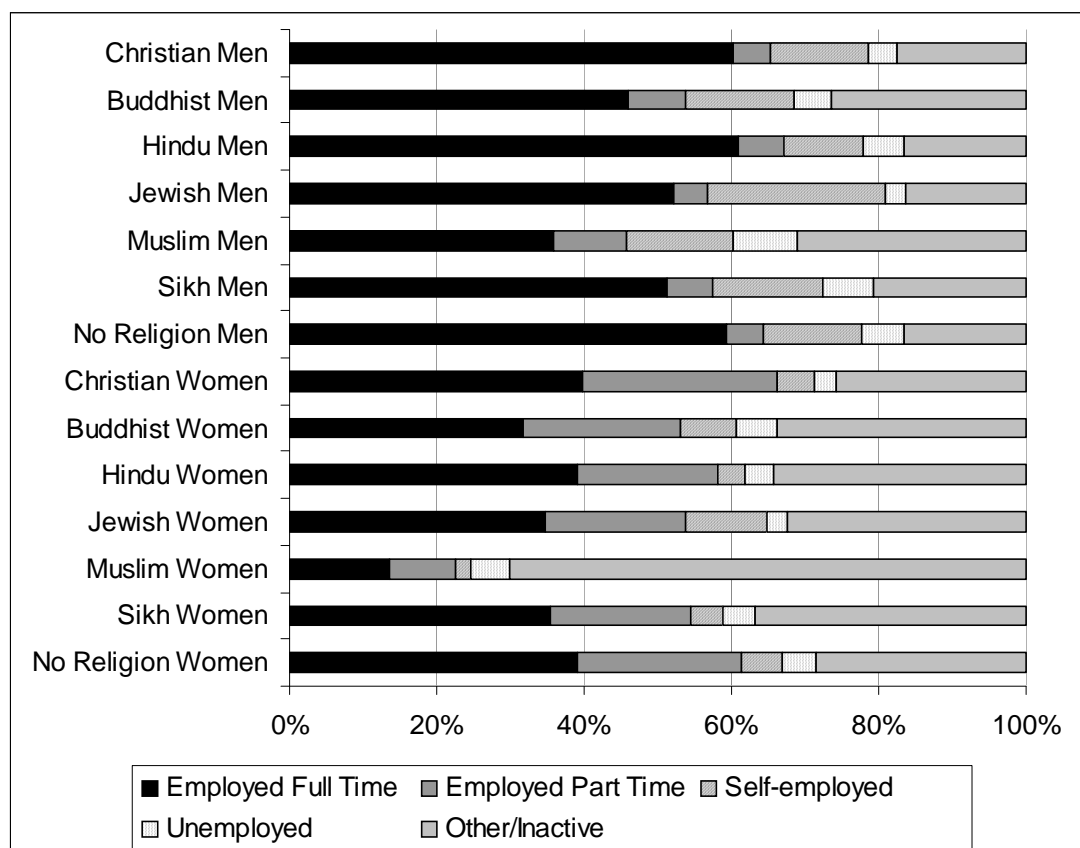
Black Caribbean women are the most likely of all women to work full-time (45%) though the proportion of inactive women is lowest for White British women (26%). Inactivity is strikingly high for Pakistani and Bangladeshi women (71% and 73%).

Such differences in employment status across ethnic groups have to be born in mind when analysing pay gaps of workers in full-time employment across ethnic groups.

2.3 Employment status by gender and religious affiliation

Employment status by gender and religious affiliation is shown in Figure 2.2 below and in Table A2.2 in the Appendix.

Differences in employment status across religious affiliation and by gender are smaller than differences across ethnic groups. Only Muslim men and women seem to have a clearly contrasting pattern of employment status. This corresponds to the employment patterns of Pakistani and Bangladeshi men and women who make up around 60% of British Muslims (Dobbs et al 2006). Alternatively, one might consider that over 90% of Bangladeshi and Pakistani men and women are Muslim and so their employment patterns reflect the overall employment patterns for Muslims. The lack of distinctive employment patterns across religious affiliations is in part due to the fact that in many cases different ethnic groups – and hence different patterns of employment status – are combined in the same religious group, with larger minorities within the religious group having a larger impact. Attention is being paid increasingly to constructing ethno-religious groups for analysis of labour market outcomes (Dobbs et al 2006; Platt 2005b), or to considering the two aspects of identity together (Clark and Drinkwater 2007). We will turn to the question of disaggregating ethno-religious categories for the purposes of pay gap analysis in Chapter 4.

Figure 2.2 Employment status by gender and religious affiliation

2.4 Employment status by gender and disability

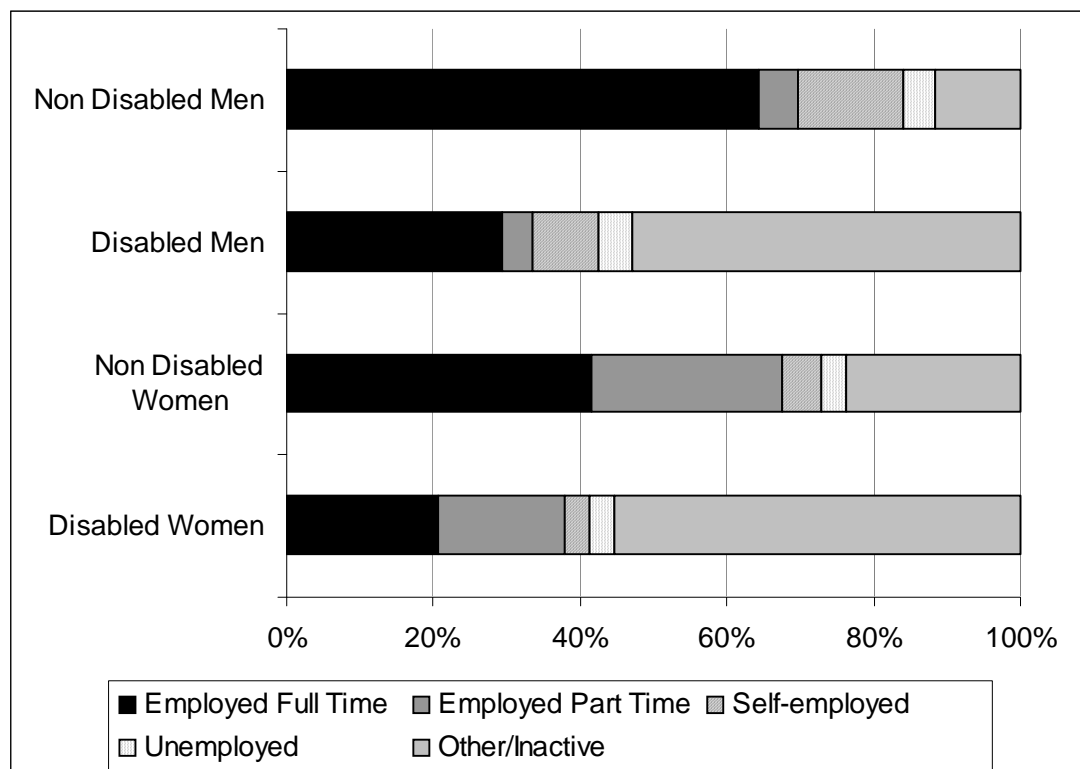
Figure 2.3 below and Table A2.3 in the Appendix report the employment status of people in Britain by gender and disability. As noted in Chapter 1, our measure of disability is those with a long-term illness or disability which limits activity. The reference category of 'non-disabled' is those who do not have a long-term illness or disability at all. We exclude from our analysis those who identify as having a long-term illness or disability but say that it does not limit their day-to-day activity.

As the figure clearly shows, non-disabled men and women have high rates of economic activity, though there is a clear gender difference, particularly for full-time work (64% compared to 42%). Disabled men and women have low and similar rates of overall economic activity (47% and 45% respectively), though disabled men are more likely to be in full-time work than disabled women (29% compared to 21%). They are still, however, less likely to be in full-time work than non-disabled women. The combination of gender and disability means that the full-time employment rates for disabled women are very low overall, and nearly as low as those among Muslim women.

Unemployment rates do not appear to be influenced by disability status. This may be because of the way that long-term unemployment is susceptible to becoming – or being reclassified by respondents as – economic inactivity. We know that those who are out of work and with a chronic health condition are more likely to define themselves as inactive rather than unemployed, even if they may be interested in working should the opportunity arise.

Overall, we can see that disabled employees in full-time work are a small proportion of disabled people of working age and are thus likely to have particular characteristics (for example highly marketable skills) or particular environments (for example adjustments in the workplace) that facilitate remaining in full-time work.

Figure 2.3 Employment status by gender and disability



2.5 Employment status by gender and sexual orientation

Employment status by gender and sexual orientation (same sex couples) is shown in Figure 2.4 below and in Table A2.4 of the Appendix. The figure suggests that men in a same sex couple seem to be in an intermediate position between married and single men.¹¹ The differences between married

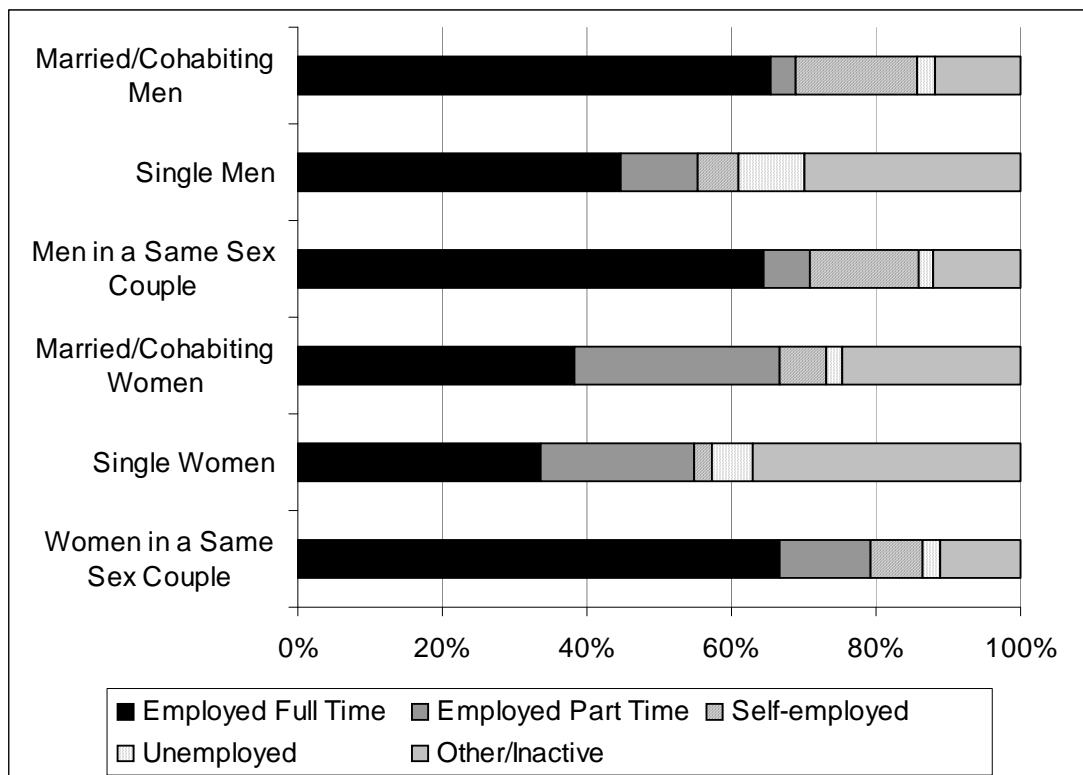
¹¹ People who are separated, divorced, or widowed are included in the group as ‘single’.

men and men living in a same sex couple are much less marked than differences between married and non-married men.

Although the proportion of those self-employed is very similar between married men and men in a same sex couple, the proportion of unemployed seems much lower for men in a same sex couple. The low proportion of single men in full-time employment is likely to be in part an age-related effect, in that young men are more likely to be in full-time education.

The pattern of employment status across groups differs by gender. Women in a same sex couple seem more likely than married and single women to be in full-time employment or self-employment, while they seem less likely to be in part-time employment, unemployment, or out of the labour market.

Figure 2.4 Employment status by gender and sexual orientation



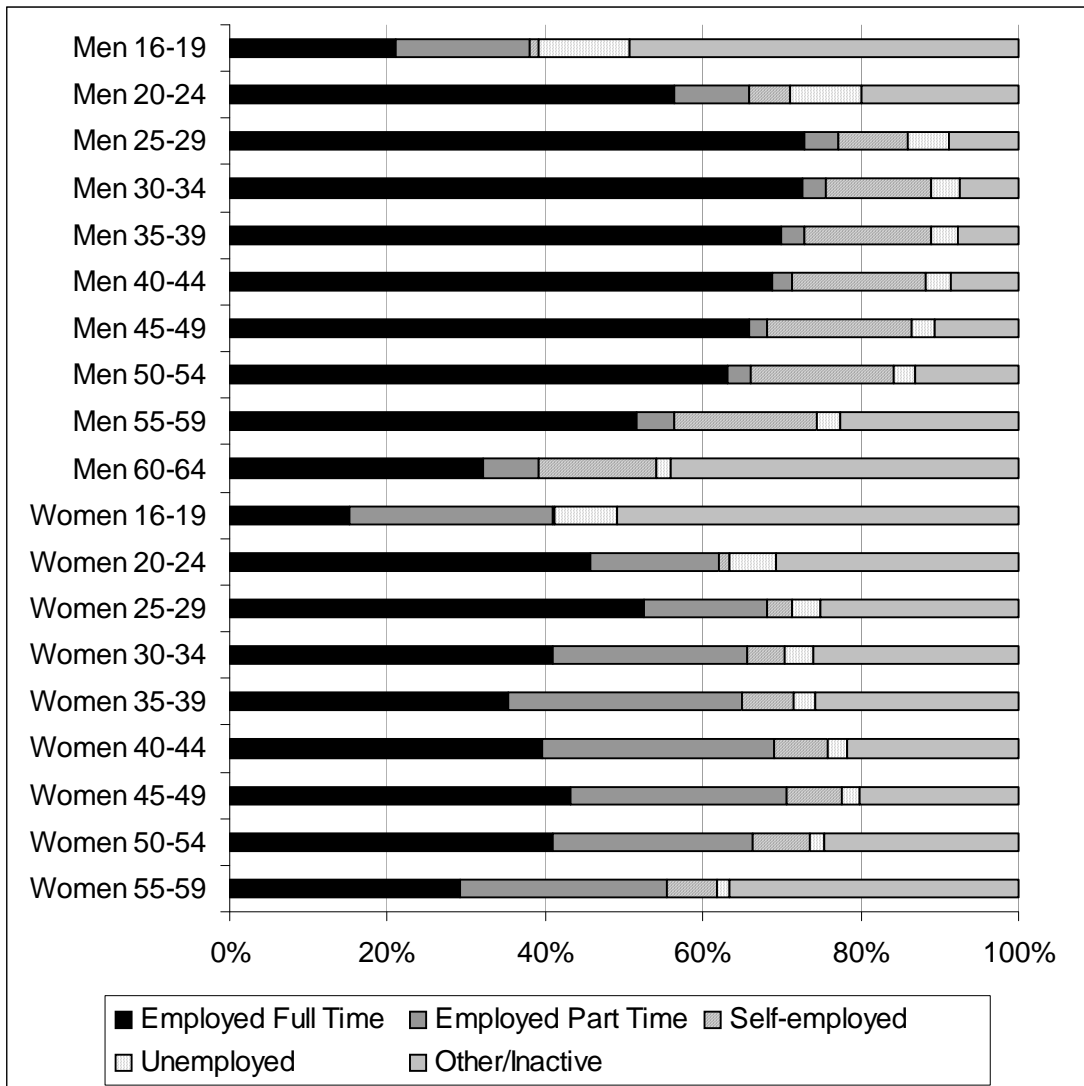
2.6 Employment status by age bands

In the analysis of age we use five-year age bands, defined in the same way for men and women. Here we do not make any prior assumption about life-cycle and the different employment decisions that men and women might make. Employment status by gender and age bands is shown in Figure 2.5 below and Table A2.5 of the Appendix.

The figures show that employment increases dramatically for both men and women from age 20-24. This is the age in which most people complete education and take up full-time employment. For both men and women full-time employment is at its maximum at age 25-29, although the proportion of economically active women is clearly lower than their male counterparts.

Male full-time employment decreases slowly but steadily from age 30-34 up to age 50-54, after which it drops dramatically. However, if we look at the pattern of self-employment it increases up to age 54 and thus modifies the picture of declining full-time employment up to age 54. It is impossible to distinguish whether this is an age effect (older people take up self-employment) or a cohort effect (people born 50 years ago are more likely to be self-employed), but it seems likely that it represents, at least in part, moves into self-employment across the working life. It would, though, require panel data to show whether this was the case. Female full-time employment seems to have a more erratic pattern than men's which is probably due to fertility decisions affecting women's labour market attachment.

Figure 2.5 Employment status by gender and age bands



Overall, this section has illustrated the wide diversity in labour market status and rates of full-time employment in particular, which should be borne in mind when reading the rest of the report.

3. PAY GAPS ACROSS EQUALITY AREAS

3.1 Introduction

In this chapter we describe the pay gaps for men and women by the other equalities areas for those in full-time work. As noted in Chapter 1, pay gaps are calculated relative to men on the model of the gender pay gap, but additionally the point of comparison depends on the equalities area under consideration. Thus the pay gaps for ethnic minority groups are calculated relative to White British men; those for disabled persons are calculated relative to non-disabled men and so on. This means that in no case does the reference category include those for whom the pay gaps are calculated. For the analysis of gaps by sexual orientation, given that we only have information on those in same sex cohabiting couples (and civil partnerships), the appropriate reference category is married or cohabiting men. While using this as the basis on which the gaps are calculated, we also include information on the gaps for single men and women as a point of comparison.

3.2 What is a pay gap?

The gender pay gap was developed as a way of comparing women's average pay with men. It involves calculating the average pay of women as a %age of men's average pay and the gap is the distance of that %age from 100%. Thus if women's average full-time hourly earnings were 84% of men's then that would give us a pay gap of 16%. The average most commonly used in the UK is mean earnings, though for international comparisons the median is more commonly used and the median has begun to be preferred in some national analyses also (see, for example, Leaker 2008). The median has the advantage that it is not overly influenced by small numbers of high earning men at the top of the income distribution. On the other hand, the advantage of the mean (the measure preferred by the Commission, and before it the Equal Opportunities Commission) is that it acknowledges the fact that gaps in pay may be driven in part by the more extended earnings distribution among men – that there are not only more higher earners among men but that even high earning women do not earn the large sums that some high-earning men can earn. Here we calculate pay gaps on the basis of differences in mean hourly earnings.

The pay gap is typically based on hourly pay, but pay gaps for weekly and annual pay can also be calculated. Given that men tend to work more hours on average than women, weekly and annual pay gaps are typically larger than hourly ones. However as they combine the effects of differences in hourly pay

with differences in the numbers of hours worked, they are less useful for trying to understand differences in rates of pay and what drives those differences.

3.3 Small sub-populations and confidence intervals

Despite the fact that we have pooled a number of quarters of a large sample survey, this analysis is focusing on some relatively small sub-populations: those of minority ethnicity, those of minority religious affiliation, disabled persons and those living in same sex couples. And in all cases we are looking separately at the gaps for men and women within these sub-populations. For that reason the estimates of pay gaps we provide cannot always be offered with the level of certainty associated with the calculation of the gender pay gap.

In all cases, alongside the estimates of the pay gaps based on average pay, we provide the values representing the bounds of confidence – or confidence intervals (CI) – associated with those gaps, at the standard 95% level. This means that we are confident that the real gap falls within the range represented by the two values, but we cannot be certain of its precise value. The estimate of the gap as a single number should therefore be treated with caution, especially where the confidence range is large. We should instead pay attention to the extent to which the ranges do or do not overlap with each other and with the reference category value. In particular, we cannot be confident that the gaps exist at all if the range of the intervals includes the value of zero, which would mean no gap between the particular group and the reference category. The confidence intervals are provided in the tables, but are shown particularly clearly in the illustrative graphs, where it is easy to see if the bars representing the range of values containing the actual pay gap cross the zero line – and also whether they overlap with the other groups.

3.4 The gender pay gap

As a baseline, we start by analysing the gender pay gap without making any comparisons among disadvantaged groups. On average, over the three years, men working full-time earned wages around £12.86 an hour, while women working full-time earned £10.89 an hour.¹² The gender pay gap amounts therefore to 15.4%, with a confidence interval ranging from 14.5% to 16.2%. This is close to, although smaller than, that suggested by the official figure from ASHE for 2007, which was 17.2%. Compared to previous studies using the LFS, these figures suggest a slight reduction in the gender pay gap,

¹² Pay rates are at 2007 prices.

although the upper bound of the 95% confidence interval coincides with the pay gap computed by Platt (2006b).

3.5 Pay gaps by gender and ethnicity

Table 3.1 shows average hourly pay and average pay gaps by gender across the different ethnic groups compared to White British men. The table also shows the 95% confidence interval of the pay gaps.

Only Indian men seem to have higher pay on average than White British men, with an average negative pay gap of -4.3%. This gap, however, might range between -9.9% and +1.3%. Hence, the gap is not statistically significant, which means that we cannot be sure that a true difference exists between pay of Indian men and pay of White British men. Similarly, Chinese men also seem to have slightly higher pay than White British men, but the gap is very small at only -0.5% on average and might range from -12.7% to +11.8% .

Table 3.1 Pay gaps by gender and ethnicity compared to White British men

	Average Pay	Pay Gap	Pay Gap Range (95% CI)	
			Lower Limit	Upper Limit
Men				
White British	12.94	Ref		
Indian	13.49	-4.3% NS	-9.9	1.3
Pakistani	9.98	22.9%	16.1	29.6
Bangladeshi	10.24	20.9%	3.5	38.2
Black Caribbean	12.27	5.1% NS	-2.0	12.3
Black African	10.63	17.8%	12.8	22.9
Chinese	13.00	-0.5% NS	-12.7	11.8
Women				
White British	10.84	16.2%	15.3	17.1
Indian	11.09	14.3%	10.0	18.6
Pakistani	9.61	25.7%	18.0	33.4
Bangladeshi	10.63	17.9%	6.0	29.7
Black Caribbean	11.14	13.9%	9.4	18.4
Black African	10.23	20.9%	16.3	25.6
Chinese	11.72	9.4%	0.1	18.8

Notes:

NS = the gap is not statistically significant

Ref = reference group

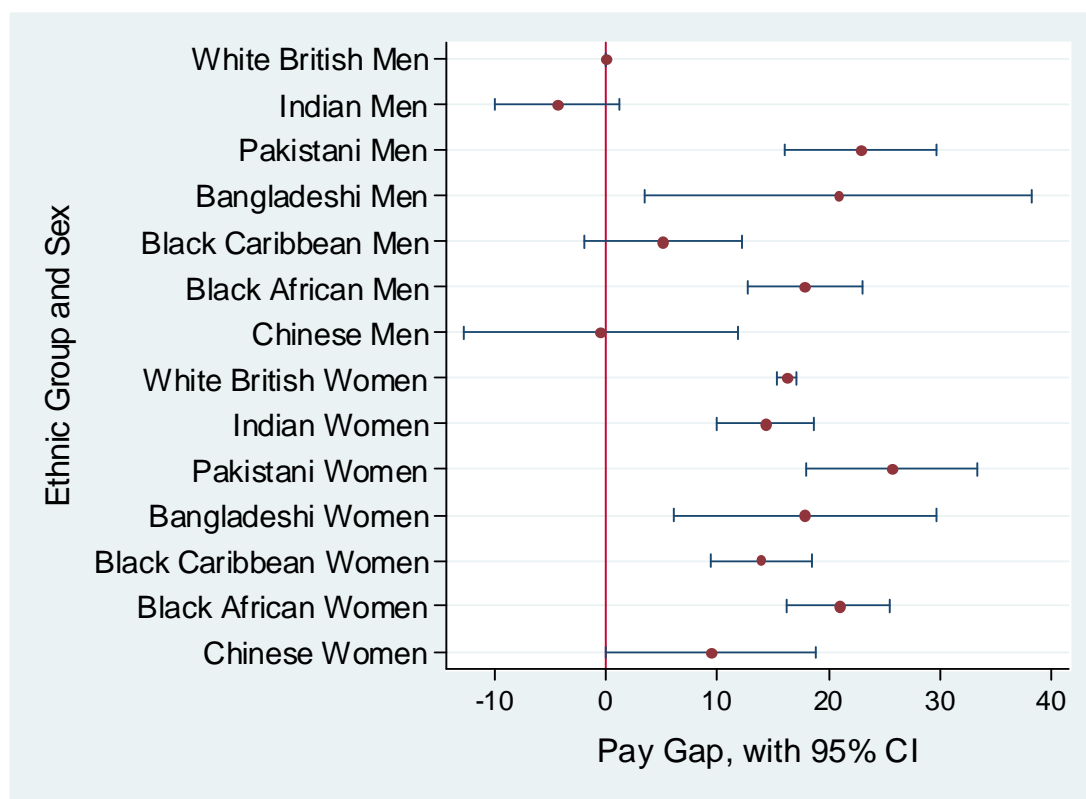
All other groups have lower pay than White British men. The highest gaps are experienced by Pakistani workers, with pay for Pakistani men on average 22.9% lower and pay of Pakistani women on average 25.7% lower than White British men. The average pay of Bangladeshi men and Black African women is almost 21% lower than the average pay of White British men, while the gap for Black African men and Bangladeshi women is almost 18%.

Figure 3.1 gives a graphical representation of the pay gaps and their confidence intervals. The average pay of Indian men, Black Caribbean men, Chinese men and to a lesser extent Chinese women cannot be considered statistically significantly different from the average pay of White British men. This could be a result of small cell sizes or large variations in pay within the same gender-ethnic group. For women from all other groups, however, the gender pay gap is clear.

Similar to the pattern among men for these groups, Indian and Chinese women seem to have on average higher pay than White British women. Furthermore, despite the clear gender gap, the average pay of men in certain ethnic groups (Pakistani, Bangladeshi and Black African) seem to be lower than the average pay of White British women, though these differences are unlikely to be statistically significant.

Pakistani women are disadvantaged, not only relative to White British men but also relative to White British women, and we can be confident that this difference is real at the 95% level.

Figure 3.1 Pay gaps by gender and ethnicity compared to White British men



Interestingly, despite general consistency with earlier findings on pay gaps across ethnic groups (Platt 2006), which looked at the period 2001-2005, there seem to be some shifts since the earlier study. Consistent results with the earlier study are found in relation to the relative advantage of Indian men, the particular disadvantage of Pakistani women and the overall disadvantage of ethnic minority men (with the exception of Indian men) and all women relative to White British men. The lack of a clear advantage of White women relative to ethnic minority women is also consistent with the earlier study. (Note that the earlier study did not examine pay gaps for Chinese men and women.) However, there are also some differences in comparison with the earlier study. In the 2001-2005 period, the pay disadvantage of Bangladeshi men was the greatest for any ethnic-gender group. In the current study, Bangladeshi and Pakistani men’s pay is no longer distinctly different and, indeed, Bangladeshi men appear to have a slight advantage, though the confidence intervals are extremely wide. In the earlier study Black Caribbean men and women’s pay gaps were very similar, but in the present study Black Caribbean men appear to have something of an advantage over Black Caribbean women. Black Caribbean women have moved closer to the overall

gender pay gap position and Black Caribbean men have moved closer to average men's pay. On the other hand it is now Black African men and women's pay that appears very similar, and Black African men and women's gaps are unambiguously greater than Black Caribbean men's when they were almost identical in the earlier study. As we have noted, the relatively small cell sizes on which some of these analyses are based may result in apparent changes over time which are not in fact robust and we have drawn attention to the wide confidence intervals in some circumstances. Moreover, shifts between self-employment and employment, and between part-time and full-time work across the groups over the period could influence the pattern of these full-time pay gaps.

Turning to other research, the relative pay advantage of Indian men is consistent with other studies, and the relatively high incomes of Chinese men is also supported by other studies and by, for example, the Millennium Cohort Study data. However, Clark and Drinkwater (2007) show that this earnings advantage translates into an earnings deficit once relevant controls, including occupation, are taken into account. Deficits for those from other minority groups remain once occupation is taken account of, even if they are reduced. This suggests that occupational segregation is not the principle determinant of pay differentials. (See also Chapter 4 of our discussion.)

Research tends to suggest that where there is a difference between Pakistani and Bangladeshi families and individuals, the disadvantage of Bangladeshis is, if anything, greater than that of Pakistanis (Platt 2006a; Platt 2007). The results here may be a temporary artefact of the particular years of data we have combined or may suggest a genuine shift, that is, that Bangladeshi people are experiencing a transition to being slightly less disadvantaged (Clark and Drinkwater 2002; Platt 2005a).

3.6 Pay gaps by gender and religious affiliation

Average pay, pay gaps by gender and religious affiliation, as well as their 95% confidence intervals are shown in Table 3.2 and Figure 3.2. We use Christian men as the reference group, as representing the majority religion. An alternative would have been to choose those selecting no religion. However, that is a smaller group and cannot be claimed to represent majority affiliation in the same way.

Table 3.2 shows that, compared to Christian men, only Jewish men and women and Hindu men earn higher hourly pay on average. The pay gaps are

-36.8%, -7.7%, and -2.5% respectively. However as Figure 3.2 makes clear, it is only for Jewish men that the confidence interval shows a statistically significant difference in average pay.

Among those earning less on average than Christian men, only the pay gap of Muslim men (16.5%) is distinctively different when we take account of the 95% confidence intervals.

Men who declare no religious affiliation are the most similar to Christian men in terms of average wages, with a pay gap of only 1.2%. The same applies to the comparison of Christian women, with women declaring no religious affiliation.

In terms of the gender pay gap, only Jewish women do not seem to be penalised compared to Christian men. On average, Jewish, Buddhist and Hindu women seem to earn more than Christian women, although the gap is statistically significant only for Jewish women. This may reflect differences in qualification levels and work histories, as well as possibly other factors such as differences in caring and domestic responsibilities, though evidence on these ethno-religious differences is limited.

Table 3.2 Pay gaps by gender and religious affiliation compared to Christian men

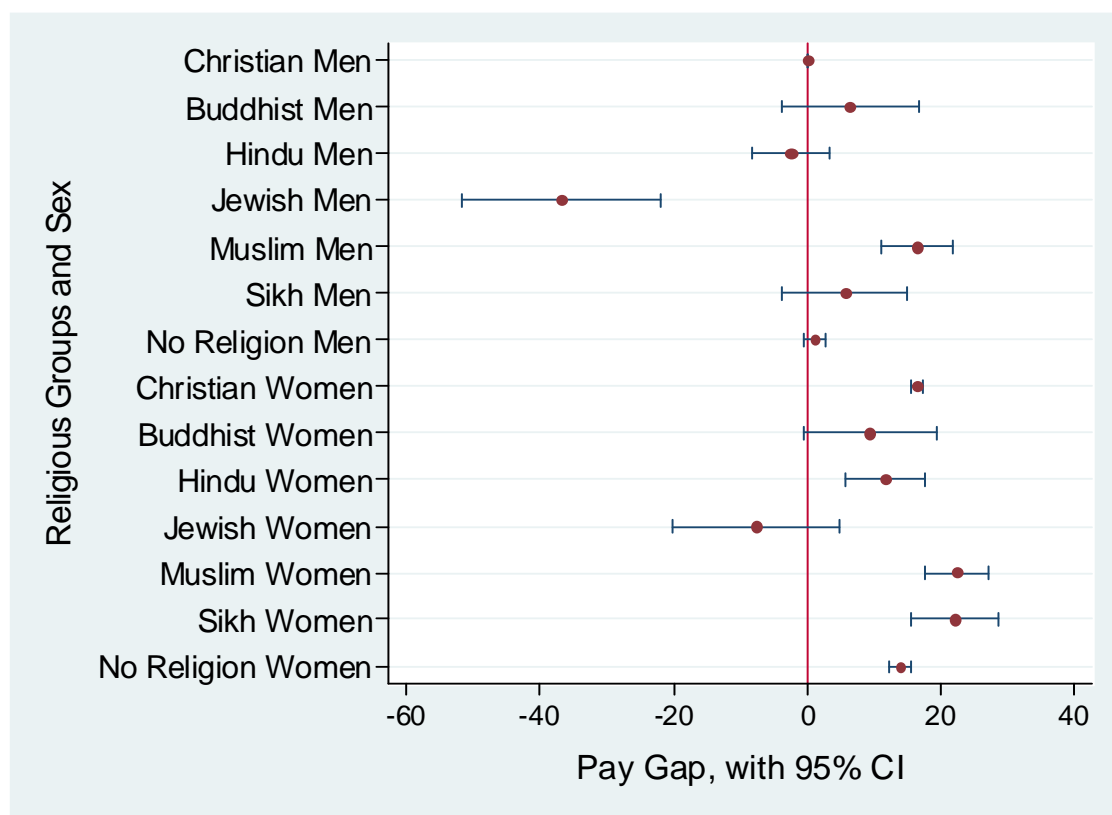
	Average Pay	Pay Gap	Pay Gap Range (95% CI)	
			Lower Limit	Upper Limit
Men				
Christian	12.94	Ref		
Buddhist	12.10	6.5% NS	-3.8	16.7
Hindu	13.25	-2.5% NS	-8.4	3.5
Jewish	17.69	-36.8%	-51.7	-21.8
Muslim	10.81	16.5%	11.0	22.0
Sikh	12.22	5.6% NS	-3.7	14.8
No Religion	12.79	1.2% NS	-0.5	2.8
Women				
Christian	10.81	16.4%	15.4	17.4
Buddhist	11.72	9.4% NS	-0.6	19.4
Hindu	11.43	11.7%	5.7	17.6
Jewish	13.93	-7.7% NS	-20.3	4.9
Muslim	10.04	22.4%	17.6	27.2
Sikh	10.08	22.1%	15.5	28.7
No Religion	11.13	14.0%	12.3	15.7

Notes:

NS = the gap is not statistically significant

Ref = reference group

Figure 3.2 Pay gaps by gender and religious affiliation compared to Christian men



Analysis of religious affiliation and its relationship to disadvantage is less well developed than analysis of ethnicity and ethnic minority disadvantage. It also raises problems of interpretation in terms of proposed causal impact (Brown 2000). Nevertheless, it is considered increasingly important as a means to understand the composition of and potential cleavages within British society and the labour market disadvantage of Muslims, in particular, has been widely noted (Open Society Institute EU Monitoring and Advocacy Program 2004). Increasingly, however, it is recognised that analysis and interpretation should focus on the intersection between ethnicity and religious affiliation, or the experience of ‘ethno-religious groups’ (Clark and Drinkwater 2005; Dobbs et al 2006; Lindley 2002). We take this approach in Chapter 4 of this report.

3.7 Pay gaps by gender and disability

We compare non-disabled men (and women) to disabled men (and women). According to our definitions of disabled and of non-disabled, we exclude from our comparison those who identify as having a limiting long-term illness or disability but who do not regard it as limiting their day to day activity.

Pay gaps by gender and disability are shown in Table 3.3, while Figure 3.3 graphically illustrates pay gaps for disabled men and women.

Table 3.3 Pay gaps by gender and disability compared to non-disabled men

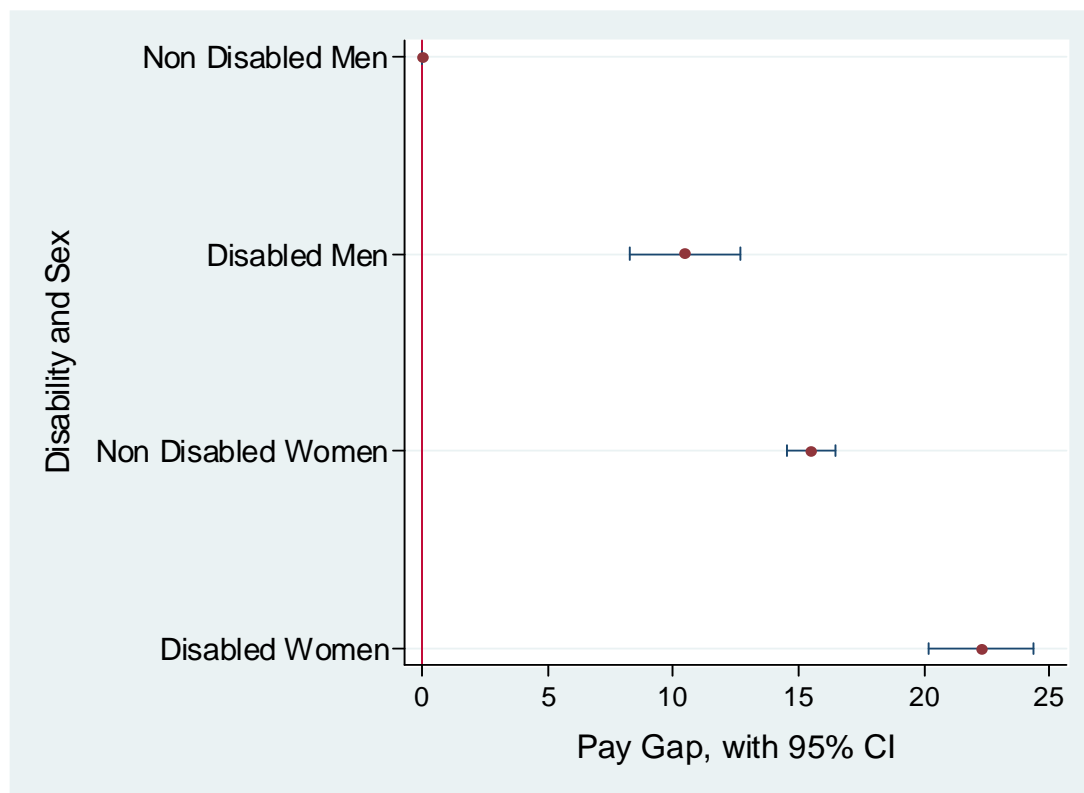
	Average Pay	Pay Gap	Pay Gap Range (95% CI)	
			Lower Limit	Upper Limit
Men				
Non-disabled	12.99	Ref		
Disabled	11.63	10.5%	8.2	12.7
Women				
Non-disabled	10.98	15.5%	14.5	16.5
Disabled	10.10	22.3%	20.2	24.3

Note:

Ref = reference group

Compared to pay gaps by ethnicity or religion, pay gaps by gender and disability all seem to be more precisely estimated. Disabled workers have a large pay gap, compared to non-disabled workers. However, gender pay gaps are larger than those for disabled men. Not only do disabled women earn less than disabled men, but non-disabled women in full-time work also earn less on average than disabled men in full-time work. To this extent gender seems to 'trump' disability among full-time workers in relation to pay deficits. However, we should remember from the descriptive statistics in Chapter 2 that those who are both disabled and in full-time work are a small sub-sample of the overall group.

Figure 3.3 Pay gaps by gender and disability



The findings on disability and pay are consistent with what we already know about employment penalties from other sources (Berthoud 2006; Salway et al 2007).

3.8 Pay gaps by gender and sexual orientation

In Table 3.4 and Figure 3.4 we show average hourly pay, pay gaps and their 95% confidence interval by gender and sexual orientation. Lesbian, gay and bisexual women and men cannot be identified in our data, instead, as discussed previously, we focus on men and women in same sex couples and take married or cohabiting men as the reference group for the calculation of pay gaps. As a point of comparison we also include the pay gaps for single men and women relative to married/cohabiting men.

Consistent with the previous literature (Arabsheibani et al 2005), men in a same sex couple seem to earn higher pay on average than married men, and women in a same sex couple earn higher pay than married women. For women living in a same sex couple the pay gap, compared to married/cohabiting men, is 3.5% and not statistically significant. This is much lower than the pay gap for married/cohabiting women, compared to

married/cohabiting men, which is 17.9%. Men in a same sex couple seem to have a pay advantage of 8.1% compared to married/cohabiting men, though this is not statistically significant. Previous studies showed that part of the pay advantage could be attributed to the higher average qualifications of men in same sex couples, and, given their characteristics, gay men face employment disadvantage, potentially attributable to discrimination (Arabsheibani et al 2005; Frank 2006). In Chapter 4, we examine pay gaps controlling for characteristics including educational qualifications levels.

The result that single men and women all seem to earn much lower pay than married or cohabiting men is likely to be due in part at least to age differences. Younger workers are less likely to be partnered and therefore the differences may be reflecting the fact that younger workers earn substantially less than those in the middle years, as section 3.7 illustrates.

Table 3.4a Pay gaps by gender and sexual orientation compared to married/cohabiting men

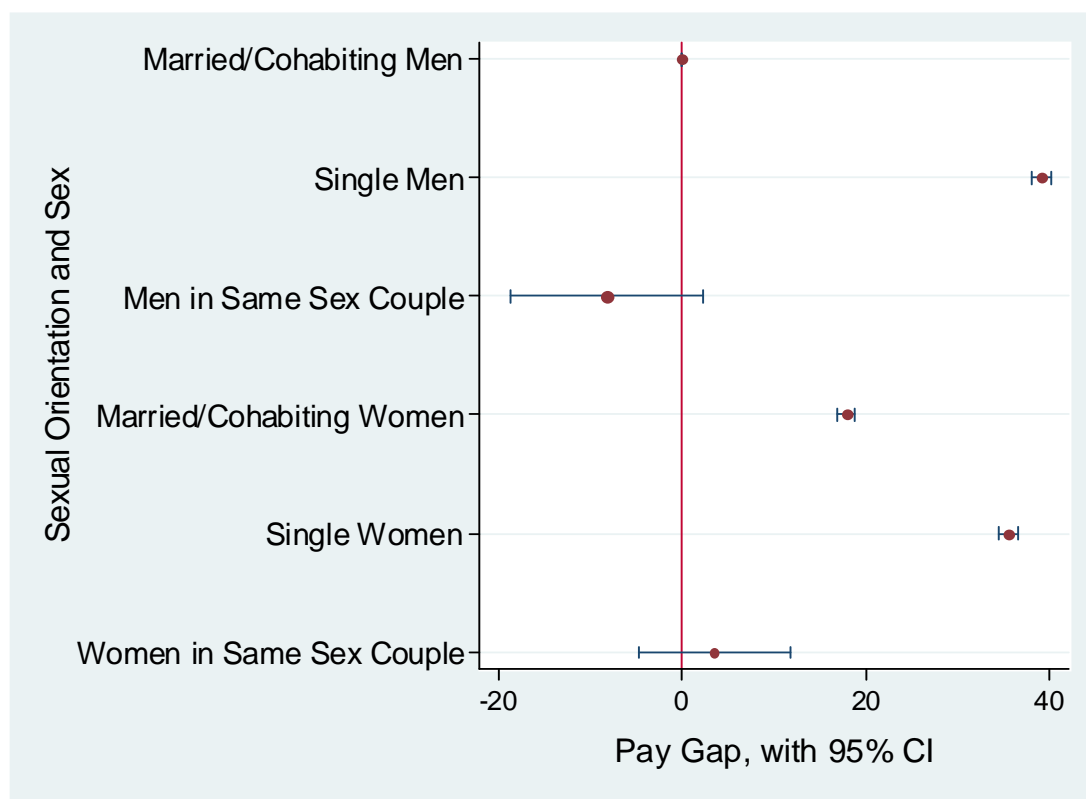
	Average Pay	Pay Gap	Pay Gap Range (95% CI)	
			Lower Limit	Upper Limit
Men				
Married/Cohabiting	13.83	Ref		
Single	8.42	39.1%	38.0	40.2
In same sex couple	14.96	-8.1% NS	-18.6	2.4
Women				
Married/Cohabiting	11.36	17.9%	16.9	18.9
Single	8.91	35.6%	34.6	36.7
In same sex couple	13.34	3.5% NS	-4.7	11.7

Notes:

NS = the gap is not statistically significant

Ref = reference group

Figure 3.4a Pay gaps by gender and sexual orientation compared to married/cohabiting men



It might be argued that, especially for women, the pay gap would depend on whether there are children in the household. If single people and same sex couples are less likely to have dependent children, then the figures in Table 3.4a and in Figure 3.4a might be misleading.¹³ From the LFS, we can identify the presence of dependent children in the household.¹⁴ The figures suggest that among married or cohabiting men working full-time, 52% have dependent children. This proportion decreases to 31% for men working full-time who are in a same sex couple and to 22% for single men working full-time. This pattern is reversed for women. Among married or cohabiting women working full-time, the proportion of those with dependent children is only 37%. This proportion increases to 42% among single women working full-time, and to 45% for women working full-time and living in a same sex couple. This might reflect the fact that married or cohabiting women are more likely than single women

¹³ It has to be noted, however, that all pay gaps computed in this section are bivariate statistics and do not account for specific individual and job characteristics such as education and occupation. These will be taken into account in Chapter 4.

¹⁴ Dependent children are defined in the standard way as under 16 or 16-19 and in full-time education and unmarried.

to leave the labour force and/or to work only part time when there are children in the household.

Although this reduces the number of cases and the precision of the estimates, we also show pay gaps restricted to only those households with no dependent children under the age of 19. These alternative pay gaps are shown in Table 3.4b and Figure 3.4b. The impact of children on full-time workers is reflected more fully in the next chapter in the analysis of pay penalties by age (Table 4.4).

Table 3.4b Pay gaps by gender and sexual orientation in households without dependent children, compared to married men

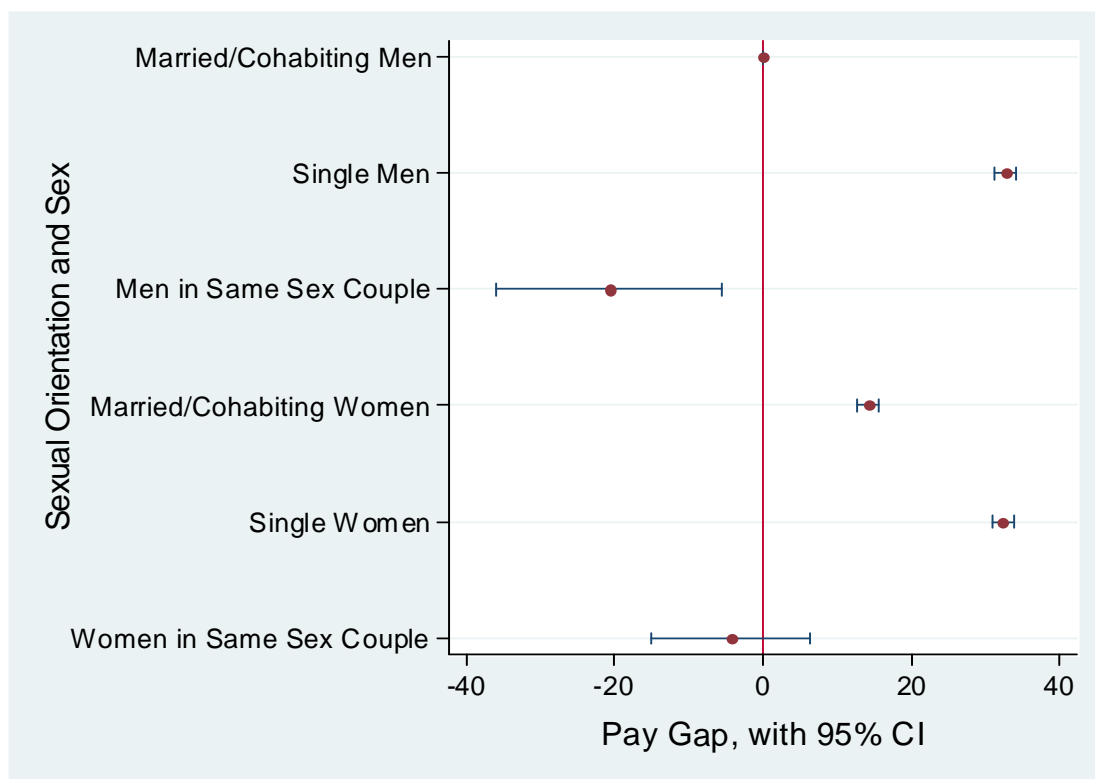
	Average Pay	Pay Gap	Pay Gap Range (95% CI)	
			Lower Limit	Upper Limit
Men				
Married/Cohabiting	12.97	Ref		
Single	8.72	32.7%	31.3	34.2
In same sex couple	15.64	-20.6%	-35.9	-5.4
Women				
Married/Cohabiting	11.13	14.2%	12.8	15.5
Single	8.77	32.4%	31.0	33.8
In same sex couple	13.52	-4.3% NS	-15.0	6.5

Notes:

NS = the gap is not statistically significant

Ref = reference group

Figure 3.4b Pay gaps by gender and sexual orientation in households without dependent children, compared to married men



The average pay of a married or cohabiting man who lives in a household without dependent children and works full-time is £12.97 per hour. This figure is lower than that shown in Table 3.4a, probably in part as a result of average age effects. That is, married men without children will include those who have not had children yet or will not have them at all, but it will also include those whose children have grown up. The latter group will be of an older generation, which might receive on average lower pay.

Among same sex couples the age profile is dominated by those who are younger, but they are clearly distinct from the single men who will tend to be younger still on average and few of whom will be at their prime earning age. As the analysis in the next chapter reveals, these men in same sex couples also tend to be more highly educated which influences their earning potential. This restriction to those without dependent children also has an impact on the computed pay gaps, though the overall pattern remains very similar. Compared to Table 3.4a, Table 3.4b shows a smaller pay gap for single men, who are now more like the married men without children. Figures 3.4a and 3.4b confirm that men in a same sex couple (without dependent children) earn

more than married or cohabiting men without dependent children. The difference in pay is, in this case, statistically significant. Pay gaps for both married and single women are also lower than in the previous table. The differences between them and married men are reduced, though not enormously, when children are taken out of the equation. While some of these women will never have (have had) children, others will have experienced the interrupted work histories associated with having children in the past. The reduced gap is more to do with the reference category being dominated by older men – whose earnings tend to reduce with age, while women’s full-time earnings remain much more static from mid-life (see section 3.7) – rather than absence of children in itself. Women in a same sex couple without dependent children seem to earn more than married or cohabiting men without dependent children. This can also be understood in part as a cohort effect. Note, though, that both Figure 3.4a and Figure 3.4b show that the difference in pay between women in a same sex couple and married or cohabiting men is not statistically significant.

3.9 Pay gaps by age groups

Finally we analyse pay gaps by age, by comparing workers by five-year age bands. The reference group in this case are men aged between 40 and 44, which is the most numerous group.

Table 3.5 and Figure 3.5 show that the average pay of men belonging to younger cohorts tends to increase up to the age band 40-44, while wages of older cohorts seem to be lower than the cohort in the age band 40-44. The differences between the age bands 35-39, 40-44, 45-49, and 50-54 are very small and in most cases are not statistically significant.

The average pay of women follows a similar path, although the highest pay is reached by the 35-39 cohort (compared to the 40-44 cohort for men). The gender pay gap is relatively small for the younger age bands, but starts to increase significantly from the age band 30-34, consistent with the position of Leaker (2008) and Age Concern (2005).

Table 3.5 Pay gaps by gender and age bands

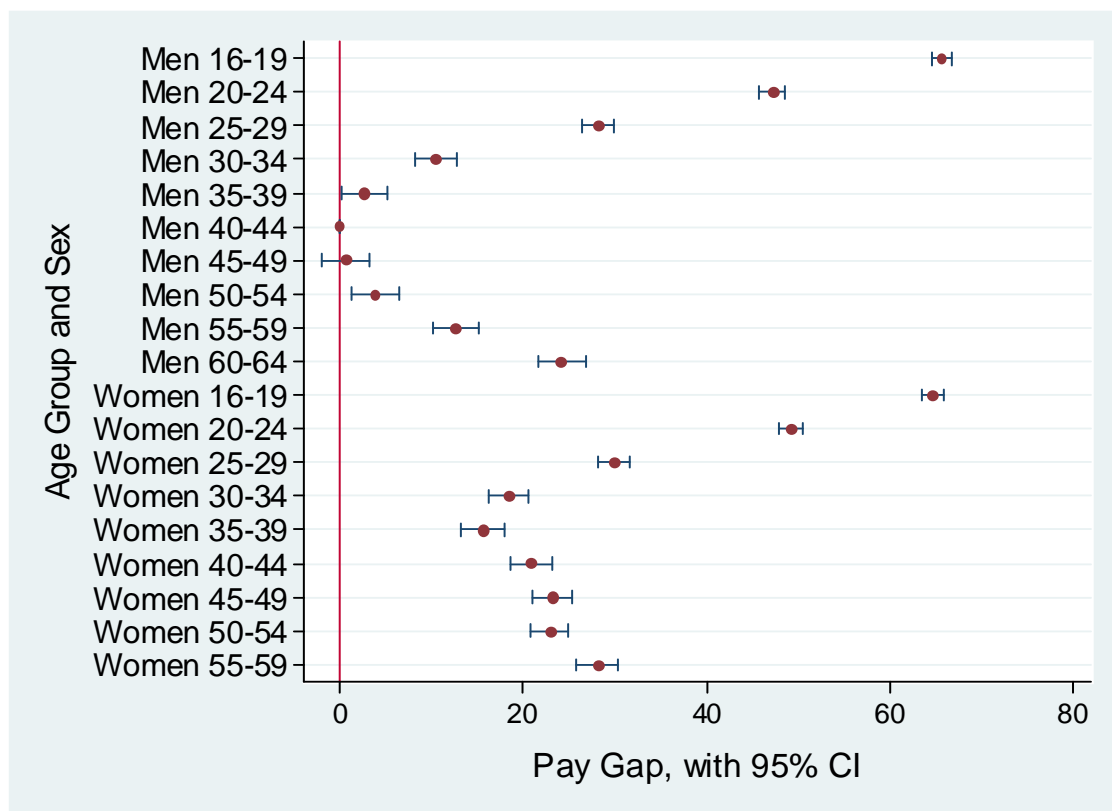
	Average Pay	Pay Gap	Pay Gap Range (95% CI)	
			Lower Limit	Upper Limit
Men				
16-19	5.17	65.6%	64.6	66.7
20-24	7.93	47.2%	45.8	48.6
25-29	10.78	28.2%	26.5	30.0
30-34	13.44	10.6%	8.3	12.8
35-39	14.60	2.9%	0.4	5.3
40-44	15.03	Ref		
45-49	14.90	0.8% NS	-1.8	3.4
50-54	14.44	3.9%	1.3	6.5
55-59	13.11	12.8%	10.3	15.2
60-64	11.39	24.2%	21.6	26.9
Women				
16-19	5.32	64.6%	63.4	65.8
20-24	7.62	49.3%	48.0	50.5
25-29	10.52	30.0%	28.3	31.6
30-34	12.23	18.6%	16.4	20.8
35-39	12.67	15.7%	13.3	18.1
40-44	11.88	21.0%	18.8	23.2
45-49	11.53	23.3%	21.2	25.4
50-54	11.58	23.0%	20.8	25.1
55-59	10.79	28.2%	26.0	30.4

Notes:

NS = the gap is not statistically significant

Ref = reference group

Figure 3.5 Pay gaps by gender and age bands



We can interpret these figures in terms of the life cycle. It appears that there is a period where both men and women face a deficit compared to ‘prime age’ men, and these are the years between 16 and 29 where younger people are acquiring qualifications and/or labour market experience. After 29, men’s earnings start to approach the high earnings point of the 40-44 age band, while women’s earnings start to fall back relative to men’s and the gender pay gap comes into force. From the age of 50, older men once again appear to face a pay deficit relative to the high earnings age range. Older women also see some falling off in their pay, but not to the same extent. It is important, however, to be aware that these are as much cohort effects as age effects. That is, people who are currently older have had very different life experiences, as well as different qualifications, occupations, and employment histories than what current young people will experience by the time they reach their 50s. Thus, we should be wary of seeing these effects as necessarily age related. In the next section we see how age-related differences in pay are modified when we take account of other relevant characteristics. However, as noted before, we are not able to take account of individuals’ histories, which may potentially be the most important impact on current earnings among older workers.

4. EVALUATING PAY PENALTIES

4.1 Introduction

We noted in Chapter 1 that the pay gap summarises a range of interlocking factors that lead to pay deficits. In this section we estimate pay for men and for women controlling for – or holding constant – disability, ethnic group, religious affiliation, sexual orientation and age. We also hold constant important additional factors that are known to have an influence on pay, that is, qualifications, occupation and family status. This means that when we look at the impact of a particular characteristic associated with one of the equalities areas, we are doing so for *otherwise similar individuals*. Thus we can identify the extent to which each equality area is associated with a pay deficit over and above differences in educational qualifications, occupation and so on that vary across the sub-populations. We describe these as a pay penalty and identify whether women and men experience pay penalties as a result of their disability, ethnic group, religious affiliation, sexual orientation or age.

The existence of pay penalties suggest, far more than pay gaps, that there is a case to answer in relation to the disadvantage relating to the different equalities areas. They might imply the presence of discrimination. However, they may also represent differences in critical characteristics that we have not included in our analysis. We could not control for work (and life) histories, which have already been identified as being a major influence on the gender pay gap. There may also be differences in the labour markets (and therefore the pay) that different groups have access to, either through geographical variation in residence or through skills specialisation. Nevertheless, we would suggest that the existence of pay penalties raises concerns about the fairness of the labour market and pay for different groups.

4.2 Regression framework for the analysis

For this analysis we use a regression framework where we explain differences in the hourly pay¹⁵ of each person by:

- Own gender: women compared to men;
- Own ethnicity: Indian, Pakistani, Bangladeshi, Black Caribbean, Black African or Chinese compared to White British;
- Whether born outside the UK, compared to whether born in the UK;
- Own religious affiliation: Buddhist, Hindu, Jewish, Muslim, Sikh, or no religion compared to Christians;

¹⁵ In fact, for technical reasons we examine the relationship with the natural log of pay rather than the unadjusted hourly values.

- Own disability status: whether disabled compared to non-disabled workers;
- Whether single or in a same sex couple, compared to married or cohabiting;
- Whether there are dependent children in the household;
- Own age: 16-19, 20-24, 25-29, 30-34, 35-39, 45-49, 50-54, 55-59, 60-64 compared to workers aged 40-44;
- Own occupation: manager, professional, technical, admin/secretarial, skilled trade, personal services, sales, machine operatives compared to workers employed in elementary occupations;
- Own educational qualifications levels: level 4 or more, level 3, level 2, less than level 2, other qualifications or no qualifications.

We run separate regressions for men and women to allow the coefficients of the other characteristics on pay to be different for men and women.¹⁶ The regressions produce a value or coefficient for the (net) impact of each characteristic on pay rates. From the regression coefficients we are able to calculate what pay someone with a given collection of characteristics might expect to earn, effectively by summing the coefficients for the set of characteristics we are interested in. These are called predicted pay rates. In the previous analysis the averages that we observed compounded all the factors relating to pay that were associated with a particular group. Thus, given that disabled people have lower average qualifications than non-disabled people, their average pay and their pay gaps combined the influence of age and qualifications on pay as well as disability. The regressions allow us to establish the pay that someone might expect to receive with a specified set of characteristics and then evaluate the influence of the equalities areas by simply changing that characteristic. Thus, we can look at a White British man with mid-level qualifications, of mid-age, Christian, non-disabled, married and so on. We can then compare his predicted pay with that for someone who is identical except that he is Indian, or disabled, or older, or a woman. This therefore provides us with a powerful way of demonstrating the effect of the characteristics *net* of the other characteristics.

Below we show the predicted pay in this way making the comparison by each equalities area in turn and for men and women separately. The tables and figures also include the ranges that represent the 95% confidence intervals, that is the range of values that we can be confident represent the possible

¹⁶ The regressions for men and women are shown in the Appendix in Table A4.1.

values of pay for the set of characteristics. Ranges which do not overlap can be considered statistically significantly different from each other and thus represent true differences and pay penalties for those groups. For example, disabled women compared to non-disabled men (see Table 4.2 below). The tables also include the pay gap calculated from the predicted pay levels and relative to the relevant reference category. Only pay gaps based on statistically significant differences in pay have been included. The others have been noted as not being statistically significant (NS). As in Chapter 3, a positive pay gap represents a pay deficit and a negative pay gap represents a pay advantage.

4.3 Predicted pay and pay penalties, by gender, ethnicity and religion

We show the range of predicted pay in Table 4.1 for men and women from different ethnic and religious backgrounds. Because in many cases it is not meaningful to separate religion and ethnicity, we compare the predicted pay of White British Christian men with the predicted pay of White British Christian women, White British Jewish, Indian Hindu, Indian Sikh, Pakistani Muslim, Bangladeshi Muslim, Black Caribbean Christian, Black African Christian, and Chinese men and women declaring no religion. We focus here on an 'average worker' aged 40-44, born in the UK, who is not disabled, is married or cohabiting, but without dependent children. Predicted pay rates for those with these combinations of characteristics are shown in Table 4.1, while Figure 4.1 gives a graphic representation of the range of predicted pay. The final column of Table 4.1 gives the estimated pay penalty (calculated in the same way as the pay gap, but on the basis of the estimates of predicted pay). These penalties are only included where the confidence intervals of predicted pay for the group do not overlap those of the reference category, in this case, White British Christian men.

We see from Table 4.1 and Figure 4.1 that substantial pay penalties are experienced by women from all the illustrated ethno-religious groups. Given that White British Christian men and women form the largest population groups by a substantial margin, the pay penalty for White British Christian women approximates that for all women. We can see that when we take account of age, disability, educational qualifications and so on the pay gap for women is bigger than when we do no control for any of these factors. There is no substantial variation among the pay penalties for women, once we take account of the disadvantage associated with being women. However, Pakistani Muslim women would appear to be more disadvantaged than other women and White British Jewish women less so.

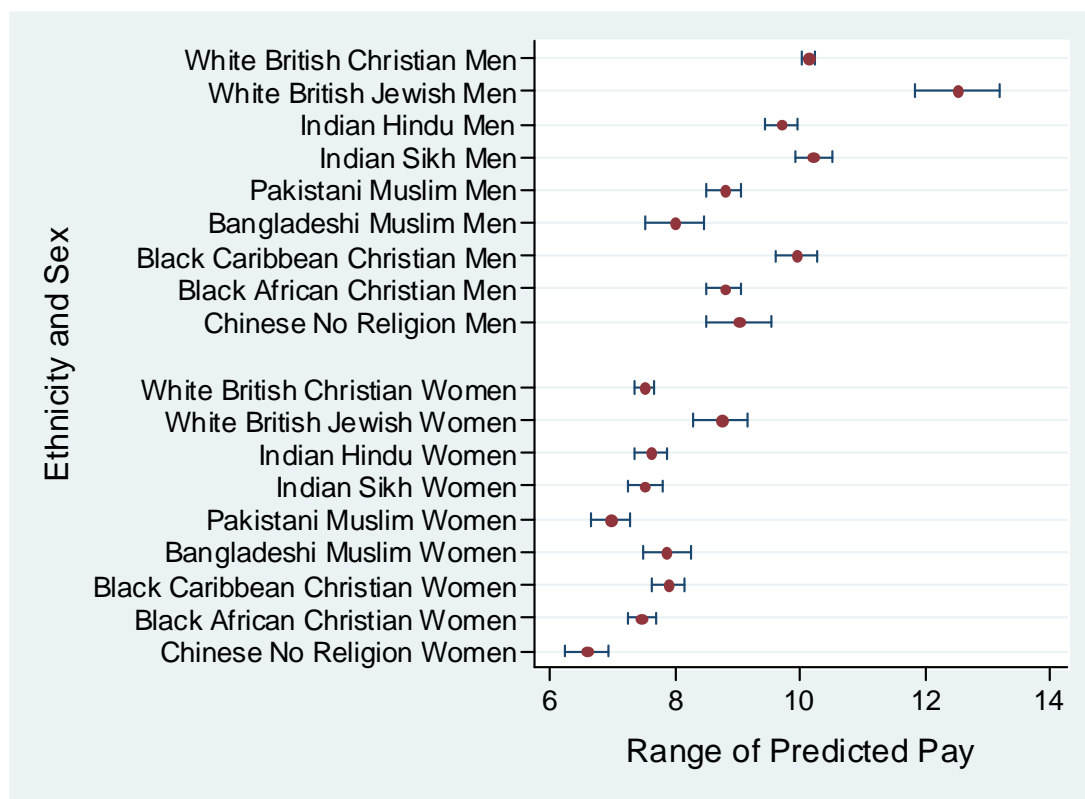
Among men, some pay penalties remain after the influence of other characteristics is taken into account. In particular the low rates of pay experienced by Bangladeshi Muslim men stand out, with an estimated penalty approaching the size of that experienced by women. This can be clearly seen in Figure 4.1. Black African Christian, Chinese and Pakistani Muslim men also experience pay penalties. It is not possible to further investigate whether the pay penalty for Pakistani and Bangladeshi is a 'Muslim' penalty rather than an 'ethnic' penalty. Figure 4.1 shows that for most groups the pay of men is higher than that of similar women, for the same group, though this may not be the case for Bangladeshi men and women.

Table 4.1 Predicted pay and pay penalties by gender, ethnicity and religion

	Pay	Lower Bound	Upper Bound	Pay Penalty
Men				
White British, Christian	10.13	10.03	10.23	Ref
White British, Jewish	12.51	11.82	13.21	-23.5%
Indian, Hindu	9.70	9.44	9.95	4.3%
Indian, Sikh	10.20	9.90	10.51	NS
Pakistani, Muslim	8.77	8.51	9.04	13.4%
Bangladeshi, Muslim	7.98	7.51	8.45	21.2%
Black Caribbean, Christian	9.93	9.59	10.26	NS
Black African, Christian	8.77	8.51	9.04	13.4%
Chinese, No Religion	9.02	8.51	9.54	10.9%
Women				
White British, Christian	7.50	7.34	7.66	25.9%
White British, Jewish	8.72	8.28	9.16	13.9%
Indian, Hindu	7.60	7.33	7.87	25.0%
Indian, Sikh	7.51	7.23	7.78	25.9%
Pakistani, Muslim	6.95	6.63	7.26	31.4%
Bangladeshi, Muslim	7.85	7.47	8.24	22.4%
Black Caribbean, Christian	7.88	7.62	8.15	22.2%
Black African, Christian	7.45	7.22	7.69	26.4%
Chinese, No Religion	6.58	6.23	6.92	35.0%

*Notes: NS = the penalty is not statistically significant Ref = reference group
Other characteristics are set to: born in the UK; non-disabled; married or cohabiting, without dependent children; aged 40-44; level 2 qualifications; in a skilled trade occupation.*

Figure 4.1 Predicted pay by ethnicity and religion



Note:

Other characteristics: born in the UK; non-disabled; married or cohabiting, without dependent children; aged 40-44; level 2 qualifications; in a skilled trade occupation.

4.4 Predicted pay and pay penalties by gender and disability

Table 4.2 and Figure 4.2 illustrate the effect of disability on predicted pay. We see here that once other characteristics are taken into account, the pay penalties *within* gender are not substantial, though there is still around an 8% pay penalty for disabled men compared to non-disabled men. The pay penalties between the sexes remain substantial with the pay gap for non-disabled women compared to non-disabled men at 25%. The size of the gender penalty means that the predicted pay for a disabled man is still substantially higher than that for a non-disabled woman, and this difference has been increased, not reduced, by controlling for some core characteristics including educational qualifications.

The small differences between disabled and non-disabled men and disabled and non-disabled women might be explained by the fact that the average

qualifications of disabled people are lower than those of non-disabled people (Berthoud 2006). This has some influence on overall labour market disadvantage and will relate to expected pay, given the overall importance of qualifications on pay rates. Therefore, once we control for qualifications we see that the penalty associated with disability is lower than the overall pay gap illustrated in the previous section. However, the picture becomes more complicated when we consider whether the effect of qualifications itself might be different for different groups, as Chapter 5 investigates.

Table 4.2 Predicted pay and pay penalties by gender and disability

	Pay	Lower Bound	Upper Bound	Pay Penalty
Men				
Non-disabled	10.13	10.03	10.23	Ref
Disabled	9.33	9.21	9.45	7.9%
Women				
Non-disabled	7.50	7.34	7.66	25.9%
Disabled	7.03	6.87	7.19	30.6%

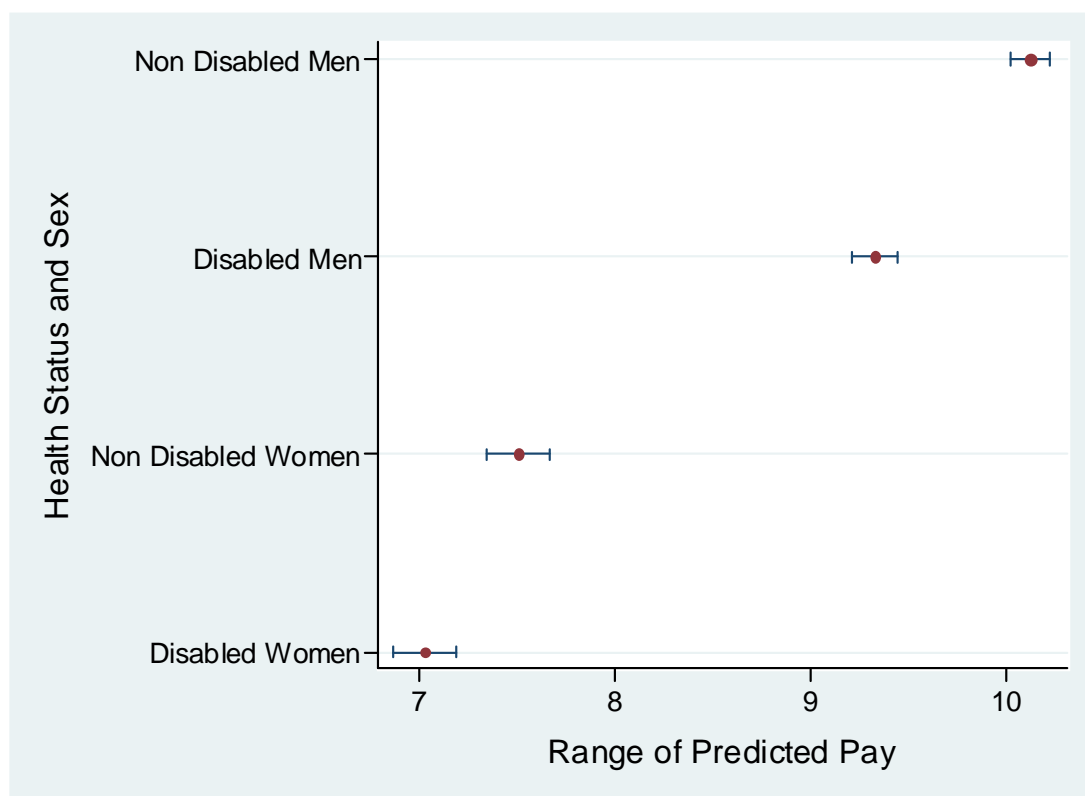
Notes:

NS = the penalty is not statistically significant

Ref = reference group

Other characteristics: White British; Christian; born in the UK; married or cohabiting, without dependent children; aged 40-44; level 2 qualifications; in a skilled trade occupation.

Figure 4.2 Predicted pay by gender and disability



Note:

Other characteristics: White British; Christian; born in the UK; married or cohabiting, without dependent children; aged 40-44; level 2 qualifications; in a skilled trade occupation.

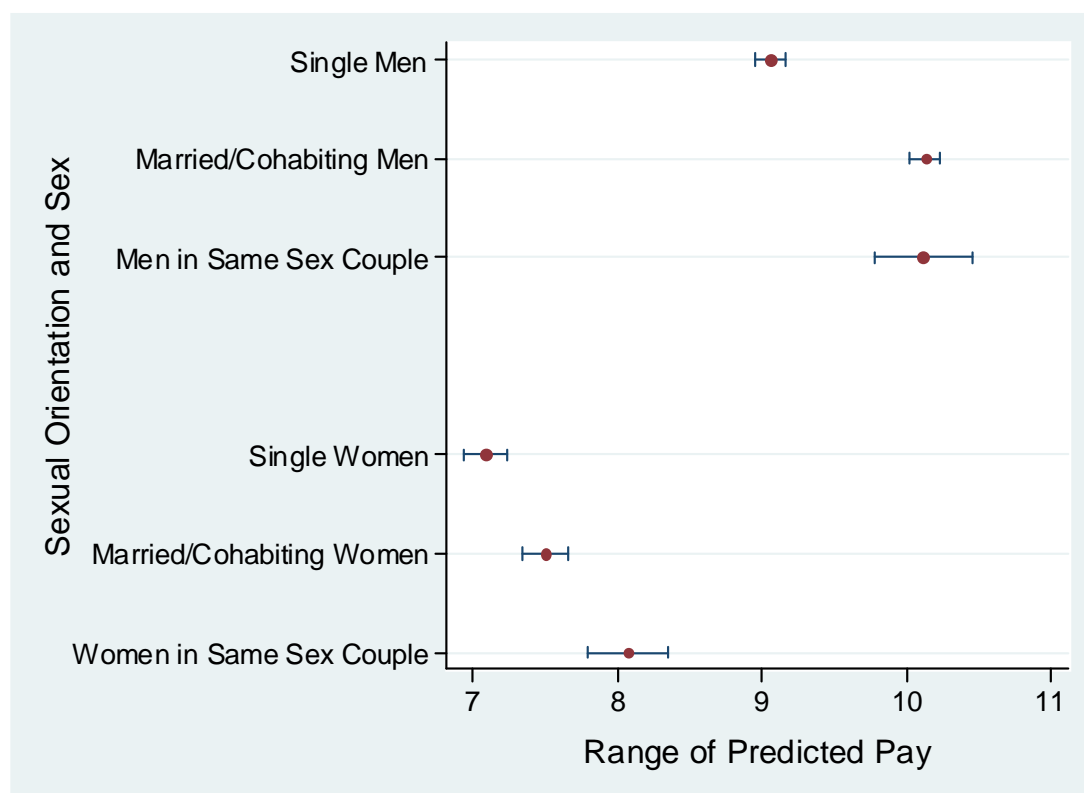
4.5 Predicted pay and pay penalties by gender and sexual orientation

The analysis indicates that both single men and single women suffer a pay penalty relative to married/cohabiting men. As we see from Table 4.3 and Figure 4.3, men in same sex couples are not disadvantaged relative to heterosexual married/cohabiting men. Single and married/heterosexual women and women in same sex couples experience substantial pay penalties compared to married/cohabiting heterosexual men. Women in same sex couples experience pay penalties compared to men in same sex couples.

Table 4.3 Predicted pay and pay penalties by gender and sexual orientation

	Pay	Lower Bound	Upper Bound	Pay Penalty
Men				
Single	9.06	8.95	9.17	10.5%
Married/Cohabiting	10.13	10.03	10.23	Ref
Same Sex Couple	10.11	9.78	10.45	NS
Women				
Single	7.09	6.94	7.25	30.0%
Married/Cohabiting	7.50	7.34	7.66	25.9%
Same Sex Couple	8.07	7.80	8.35	20.3%

Notes: NS = the penalty is not statistically significant Ref = reference group
 Other characteristics: White British; Christian; born in the UK; non-disabled;
 without dependent children; aged 40-44; level 2 qualifications; in a skilled
 trade occupation.

Figure 4.3 Predicted pay by gender and sexual orientation

Note: Other characteristics: White British; Christian; born in the UK; non-disabled; without dependent children; aged 40-44; level 2 qualifications; in a skilled trade occupation.

4.6 Predicted pay and pay penalties by gender and age

When analysing age we explore the predicted pay for those who are single and not cohabiting alongside those who are married and with children, in order to examine the influence of relationship status and children.

The penalties for women are greater than those for equivalent men at every age, whether they are single with no kids, or married with children. The penalties are greatest of all for married women with children.

At all ages men can still expect to be paid more than otherwise similar women. The gender pay penalty is smaller in youth when pay is low for all, and is also smaller at older ages when men's pay declines relative to the reference age, but women's holds at a similar low level. Therefore the evidence for 'age effects' is only moderate. And, as we show in Chapter 5, is even less clear cut when we take into account the impact of educational qualifications according to age.

Table 4.4 Predicted pay and pay penalties by age bands for men and women who are single with no dependent children and married with dependent children

	Single No Children				Married with Children			
	Pay	Lower Bound	Upper Bound	Pay Penalty	Pay	Lower Bound	Upper Bound	Pay Penalty
Men								
16-19	4.92	4.85	5.00	45.7%	5.76	5.67	5.86	45.7%
20-24	6.47	6.41	6.54	28.6%	7.58	7.49	7.66	28.6%
25-29	7.25	7.17	7.33	20.0%	8.49	8.40	8.57	20.0%
30-34	8.25	8.15	8.34	9.0%	9.65	9.56	9.75	9.0%
35-39	8.78	8.68	8.88	3.1%	10.28	10.18	10.37	3.1%
40-44	9.06	8.95	9.17	Ref	10.61	10.51	10.71	Ref
45-49	9.28	9.17	9.39	NS	10.86	10.76	10.96	2.4%
50-54	9.23	9.12	9.34	NS	10.80	10.69	10.92	NS
55-59	8.84	8.73	8.95	NS	10.34	10.23	10.46	2.5%
60-64	8.35	8.23	8.47	7.8%	9.78	9.65	9.90	7.8%
Women								
16-19	4.57	4.45	4.69	49.6%	4.64	4.52	4.76	56.3%
20-24	5.25	5.13	5.36	42.1%	5.33	5.21	5.44	49.8%
25-29	5.97	5.84	6.10	34.1%	6.06	5.93	6.20	42.8%
30-34	6.64	6.50	6.79	26.7%	6.74	6.60	6.89	36.4%
35-39	7.19	7.02	7.35	20.7%	7.29	7.14	7.45	31.2%
40-44	7.09	6.94	7.25	21.7%	7.09	6.94	7.25	33.2%
45-49	6.95	6.80	7.10	23.3%	7.05	6.90	7.20	33.5%
50-54	6.98	6.82	7.13	23.0%	7.08	6.92	7.24	33.3%
55-59	6.82	6.67	6.98	24.7%	6.92	6.76	7.08	34.7%

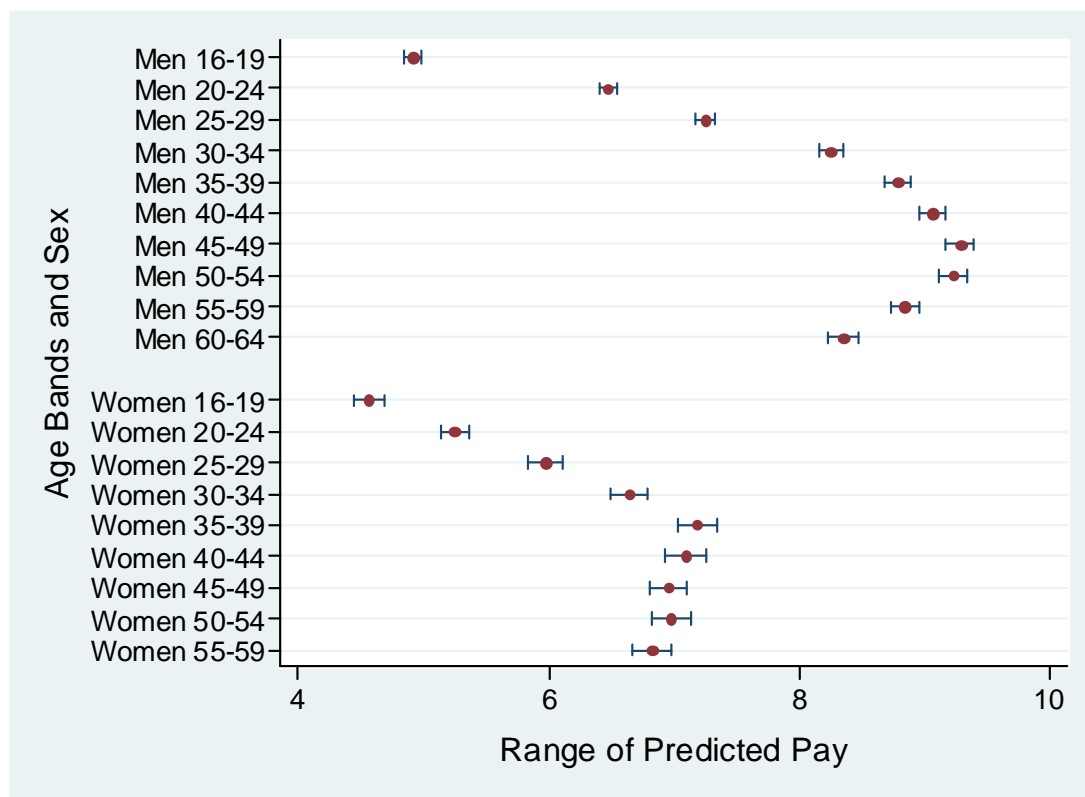
Notes:

NS = the penalty is not statistically significant

Ref = reference group

Other characteristics: White British; Christian; born in the UK; non-disabled; level 2 qualifications; in a skilled trade occupation.

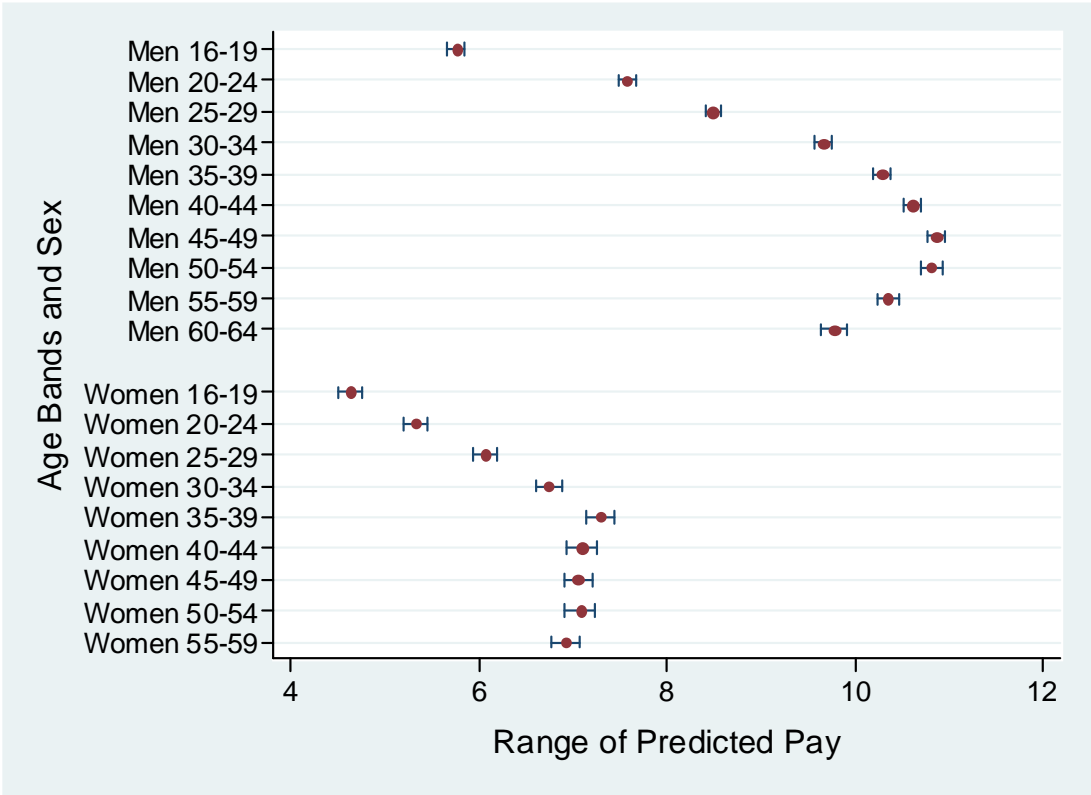
Figure 4.4a Predicted pay by age for men and women who are single, with no dependent children



Note:

Other characteristics: White British; Christian; born in the UK; non-disabled; level 2 qualifications; in a skilled trade occupation.

Figure 4.4b Predicted pay by age for men and women who are married/cohabiting with dependent children



Note:
Other characteristics: White British; Christian; born in the UK; non-disabled; level 2 qualifications; in a skilled trade occupation.

5. INTERSECTIONS: CLUSTERING OF DISADVANTAGE OR DIVERGING REWARDS?

5.1 Introduction

In this section we build on the analysis in the previous section to consider whether pay penalties for people in different groups are larger or smaller at different levels of qualifications. This enables us to examine whether higher level qualifications 'protect' some groups from pay penalties and lower level qualifications increase them. This chapter shows there is no consistent pattern across equalities areas in relation to whether there is clustering of disadvantage (at lower levels of qualifications) or diverging rewards (at higher levels of qualifications).

5.2 Regression analysis

Regressions are carried out as in Chapter 4, but instead of including education as a control variable and thus assuming its effect is consistent across all the other variables, the regressions are computed separately by education levels (level 4 or more; level 3; level 2; less than level 2; other qualifications; no qualifications). This enables the computation of pay penalties that are specific to each level of education. The regression coefficients and their (robust) standard errors are shown in Tables A5.1a and A5.1b of the Appendix. While Table A5.1a shows the effect of different characteristics on pay among men, Table A5.1b shows the effects among women. The R^2 at the bottom of the tables suggest that these individual characteristics explain around 30-40% of the variability of individual pay.

The remainder of the chapter focuses upon examining pay penalties across the equalities areas, for those people with no qualifications working in elementary occupations, and for those with level 4 or higher qualifications working in professional occupations.

5.3 Predicted pay and pay penalties by gender, ethnicity and religion for those with lower and higher qualifications

As in Chapter 4 we compare predicted pay of White British Christian men with predicted pay of White British Christian women, White British Jewish, Indian Hindu, Indian Sikh, Pakistani Muslim, Bangladeshi Muslim, Black Caribbean Christian, Black African Christian and Chinese declaring no religion men and women. We focus on an 'average worker' aged 40-44, born in the UK, who is non-disabled, married or cohabiting, but without dependent children.

The range of expected pay, the mean predicted pay, and the pay penalty – where statistically significant – are illustrated for those with lower and those with higher levels of qualifications. Table 5.1a and Figure 5.1a refer to pay of workers with no education who work in elementary occupations, while Table 5.1b and Figure 5.1b refer to workers with level 4 or higher qualifications, who work in professional occupations.

Among men with no qualification who work in elementary occupations, only those who are Pakistani and Bangladeshi seem to suffer a pay penalty compared to White British Christian men. All men belonging to other ethnic minority groups do not seem to experience pay penalties relative to White British Christian men.¹⁷ For women with no qualifications, the results clearly suggest a large gender pay penalty compared to White British Christian men. Only White British Jewish and Black Caribbean Christian women do not seem to suffer a pay penalty compared to White British men. Women belonging to the other ethnic minorities (especially Indian Hindu and Chinese) experience larger penalties, compared to White British Christian men, than White British Christian women. While the ethno-religious pay penalty for Pakistani Muslim women is similar to that for Pakistani Muslim men, the ethno-religious pay penalty for Bangladeshi Muslim women seems smaller than that for Bangladeshi men.

¹⁷ It is important to note that the range of expected pay for White British Jewish men and women with no qualifications and working in elementary occupations, and shown in Figure 5.1a is extremely large. This is likely to be due to the small cell size.

Table 5.1a Predicted pay and pay penalties by gender, ethnicity and religion: no qualifications

No Qualification; Elementary Occupations				
	Predicted Pay	Lower Bound	Upper Bound	Pay Penalty
Men				
White British, Christian	7.24	7.02	7.45	Ref
White British, Jewish	8.93	6.45	11.40	NS
Indian, Hindu	7.05	6.50	7.60	NS
Indian, Sikh	6.85	6.43	7.28	NS
Pakistani, Muslim	5.44	4.95	5.93	24.8%
Bangladeshi, Muslim	4.24	3.45	5.03	41.4%
Black Caribbean, Christian	7.20	6.21	8.19	NS
Black African, Christian	7.53	6.86	8.20	NS
Chinese, No Religion	7.11	5.73	8.49	NS
Women				
White British, Christian	5.83	5.64	6.02	19.4%
White British, Jewish	6.82	5.38	8.26	NS
Indian, Hindu	4.60	4.05	5.16	36.4%
Indian, Sikh	5.44	5.03	5.84	24.9%
Pakistani, Muslim	5.29	4.65	5.92	26.9%
Bangladeshi, Muslim	5.96	5.25	6.68	17.6%
Black Caribbean, Christian	6.78	6.09	7.46	NS
Black African, Christian	5.47	5.00	5.94	24.4%
Chinese, No Religion	3.84	3.19	4.49	46.9%

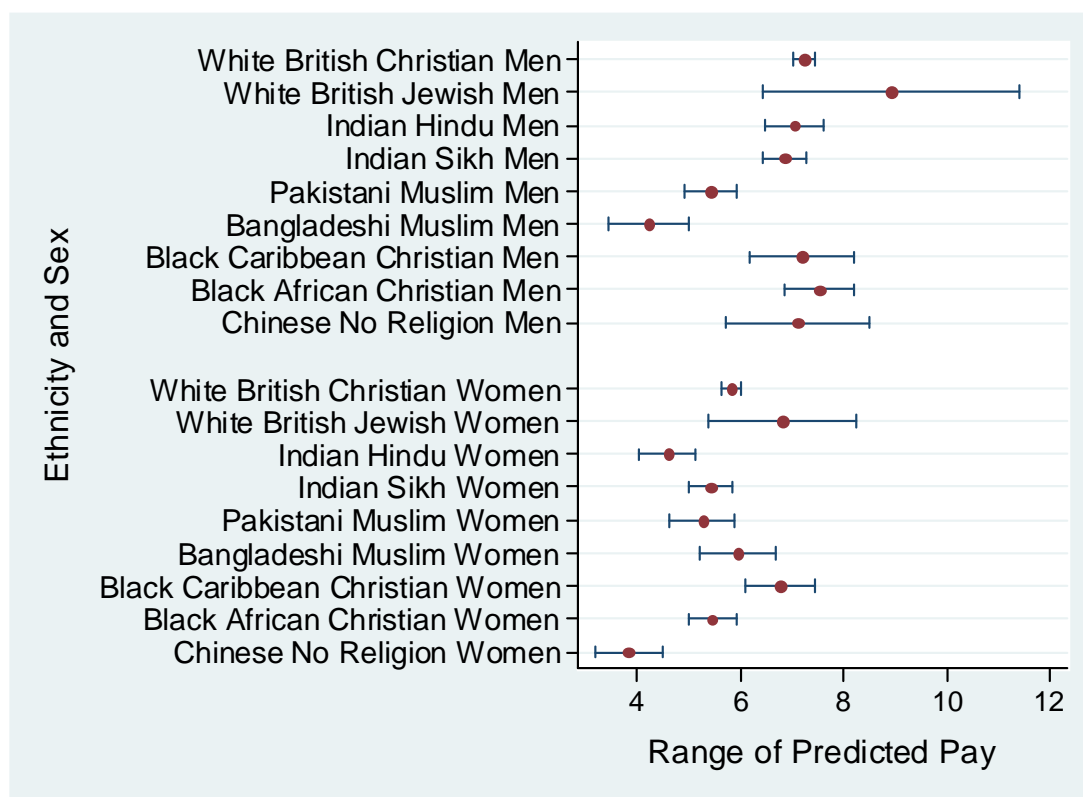
Notes:

NS = the penalty is not statistically significant

Ref = reference group

Other characteristics: aged 40-44; born in the UK; non-disabled; married or cohabiting; without dependent children.

Figure 5.1a Range of predicted pay by gender, ethnicity and religion: no qualifications



Note:

Other characteristics: aged 40-44; in elementary occupations; born in the UK; non-disabled; married or cohabiting; without dependent children.

We now turn to the highly educated who work in professional occupations. Table 5.1b and Figure 5.1b show that White British Jewish men and women have a clear advantage compared to White British Christian men and women. This is likely to be due to the comparatively higher level of education of Jewish people. For example, in our data the average proportion of full-time Jewish workers with a degree is around 48%, while among all full-time workers the proportion of those with a degree is only 25%.

Although White British Christian women suffer a gender pay penalty compared to White British Christian men, White British Jewish women show no pay penalty, though a penalty remains when compared to White British Jewish men. White British Jewish men seem to earn 22% more than White British Christian men, and although this does not appear to be associated with

particular occupational clustering, it is likely to be related to their higher qualifications.

Indian Hindu, Black African Christian, and Chinese men declaring no religion seem to suffer pay penalties compared to White British Christian men, when we look only at these highly educated workers. The pay penalties for Black African and Chinese men seem larger than the pay penalty for White British Christian women. The pay penalty of Indian Hindu women compared to White British Christian men is rather similar to the pay penalty of Indian Hindu men. This suggests no gender pay penalty between Indian Hindu men and women.

Interestingly among these highly educated workers, White British Jewish, Indian Sikh, Bangladeshi Muslim and Chinese women do not seem to suffer a pay penalty compared to White British Christian men.

The comparison between workers with no qualification working in elementary occupations (Table 5.1a and Figure 5.1a) and workers with level 4 or higher qualifications working in professional occupations (Table 5.1b and Figure 5.1b) is particularly interesting. In almost all cases pay penalties are reduced among the highly educated workers, suggesting that higher levels of education might (at least partly) reduce ethno-religious pay penalties for women and men.

These results are broadly in line with Bjerck (2007) who finds that in the US there is no Black-White pay gap for workers employed in white collar occupations, although the gap still persists in blue collar occupations.

Table 5.1b Predicted pay and pay penalties by gender, ethnicity and religion: level 4+ qualifications

	Level 4 or more; Professional Occupations			
	Predicted Pay	Lower Bound	Upper Bound	Pay Penalty
Men				
White British, Christian	18.55	18.24	18.86	Ref
White British, Jewish	22.68	21.31	24.06	-22.3%
Indian, Hindu	17.22	16.49	17.95	7.2%
Indian, Sikh	19.19	18.30	20.08	NS
Pakistani, Muslim	17.70	16.79	18.61	NS
Bangladeshi, Muslim	17.79	16.29	19.29	NS
Black Caribbean, Christian	16.88	15.40	18.35	NS
Black African, Christian	15.78	15.05	16.50	14.9%
Chinese, No Religion	16.45	15.32	17.57	11.3%
Women				
White British, Christian	16.74	16.47	17.01	9.8%
White British, Jewish	18.87	17.80	19.94	NS
Indian, Hindu	17.25	16.51	17.99	7.0%
Indian, Sikh	18.52	17.52	19.52	NS
Pakistani, Muslim	17.21	16.26	18.17	7.2%
Bangladeshi, Muslim	19.18	17.98	20.37	NS
Black Caribbean, Christian	16.59	15.83	17.36	10.5%
Black African, Christian	16.97	16.33	17.61	8.5%
Chinese, No Religion	18.21	17.41	19.01	NS

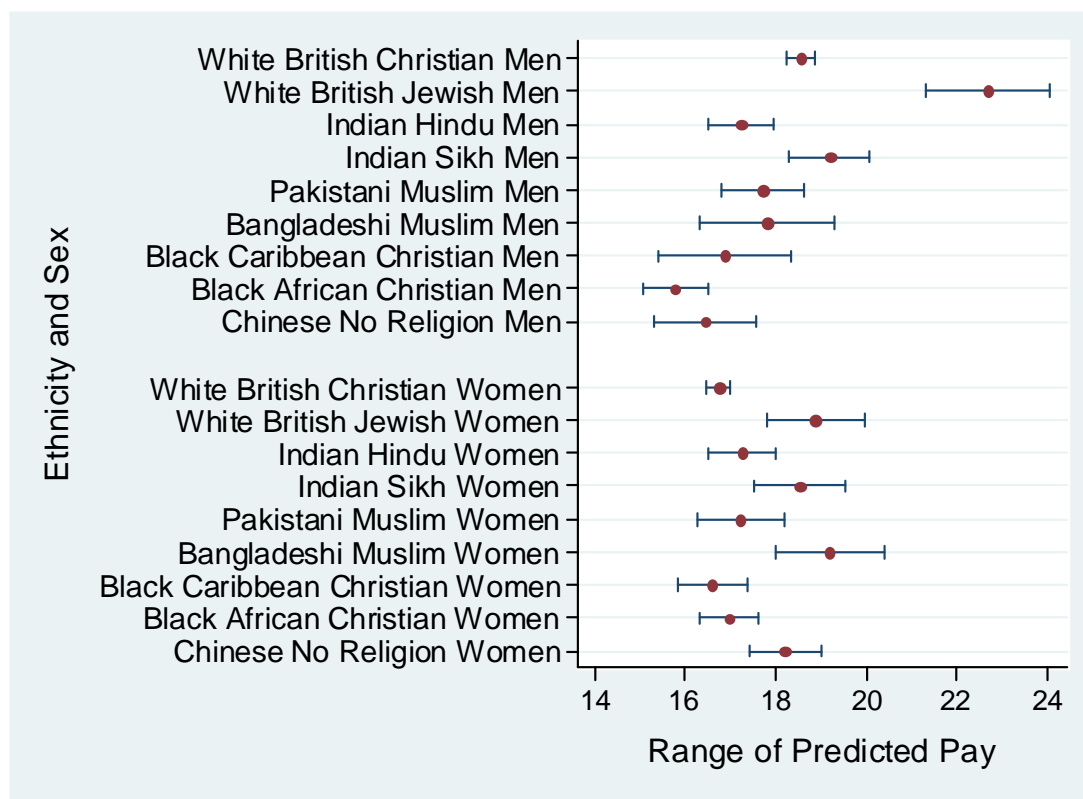
Notes:

NS = the penalty is not statistically significant

Ref = reference group

Other characteristics: aged 40-44; born in the UK; non-disabled; married or cohabiting; without dependent children.

Figure 5.1b Range of predicted pay by gender, ethnicity and religion: level 4+ qualifications



Note:

Other characteristics: aged 40-44; in professional occupations; born in the UK; non-disabled; married or cohabiting; without dependent children.

5.4 Predicted pay and pay penalties by gender and disability for those with lower and higher qualifications

Again we compare workers with no qualification, working in elementary occupations (Table 5.2a and Figure 5.2a) to workers with level 4 or higher qualifications, working in professional occupations (Table 5.2b and Figure 5.2b). We use as our reference group White British, Christian workers aged 40-44, born in the UK, who are married or cohabiting, but without dependent children.

As before, the results suggest a larger gender pay penalty among disabled workers with no qualification working in elementary occupations, than among disabled workers with level 4 or higher qualifications working in professional occupations.

However, and perhaps surprisingly, while non-disabled women with higher qualifications experience half the pay penalty that their low qualified counterparts experience, the disability pay penalty operates in the opposite direction. Penalties for highly qualified disabled men are slightly higher than they are for lower qualified disabled men, and higher qualified disabled women have a clear disadvantage relative to non-disabled women, that is not there for lower qualified disabled women. The net result of the gender and disability effects is that lower qualified disabled men can expect to earn more than non-disabled (as well as disabled) women, but that higher qualified disabled men can expect to earn about the same as non-disabled women (and a bit less than non-disabled men). Similarly lower qualified disabled women face a substantial pay penalty relative to lower qualified non-disabled men, but their earnings are comparable to those of lower qualified non-disabled women. However, more highly qualified disabled women suffer a pay penalty relative to other highly qualified women who are non-disabled.

Since these results seemed slightly surprising, we investigated whether there was any apparent association between the type of disability and occupation/education groups that might help us understand it. We could not, however, identify any clear association. Among those working in elementary occupations 18.71% say their main problem is 'chest, breathing problems', while 17.54% say that their main problem is 'heart, blood, pressure, circulation problems'. All other problems are less than 10%. Among those working in professional occupations 15.43% say that their main problem is 'heart, blood, pressure, circulation', 13.52% have 'other problems, disabilities', while 11.24% have 'back or neck' problems. We could speculate that support for disabled people might be greater among those in higher level occupations and with more qualifications, enabling them to stay in work even with relatively serious health conditions or disabilities.

Table 5.2a Predicted pay and pay penalties by gender and disability: no qualifications

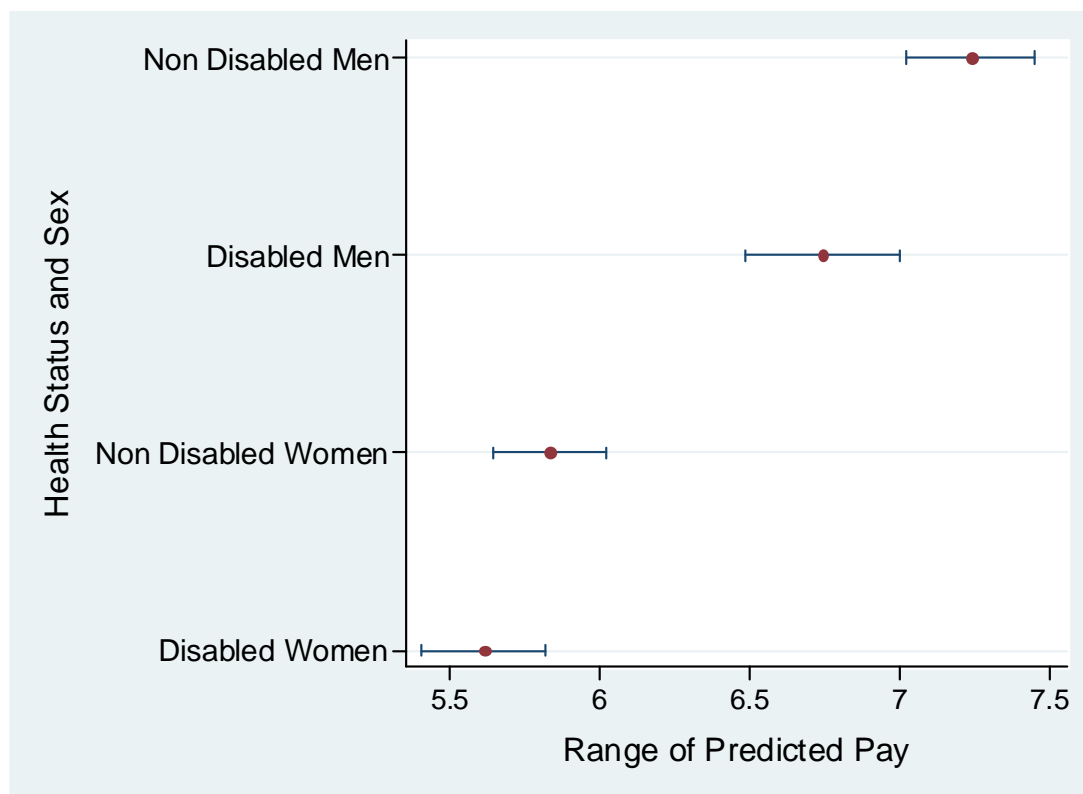
No Qualification; Elementary Occupations				
	Predicted Pay	Lower Bound	Upper Bound	Pay Penalty
Men				
Non-disabled	7.24	7.02	7.45	Ref
Disabled	6.74	6.49	6.99	6.9%
Women				
Non-disabled	5.83	5.64	6.02	19.4%
Disabled	5.62	5.41	5.82	22.4%

Notes:

Ref = reference group

Other characteristics: White British; Christian; aged 40-44; born in the UK; married or cohabiting; without dependent children.

Figure 5.2a Range of predicted pay by gender and disability: no qualifications



Note: Other characteristics: aged 40-44; in elementary occupations; White British; Christian; born in the UK; married or cohabiting; without dependent children.

Table 5.2b Predicted pay and pay penalties by gender and disability: level 4+ qualifications

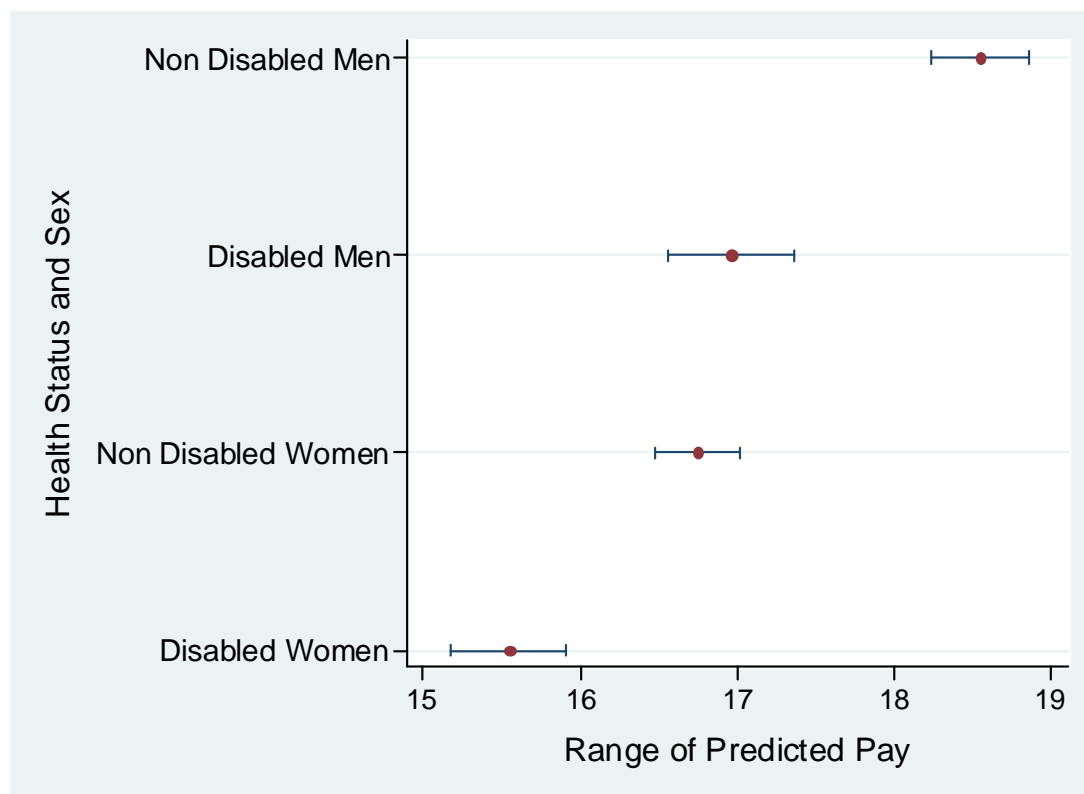
Level 4 or more; Professional Occupations				
	Predicted Pay	Lower Bound	Upper Bound	Pay Penalty
Men				
Non-disabled	18.55	18.24	18.86	Ref
Disabled	16.96	16.56	17.36	8.6%
Women				
Non-disabled	16.74	16.47	17.01	9.8%
Disabled	15.55	15.18	15.91	16.2%

Notes:

Ref = reference group

Other characteristics: aged 40-44; White British; Christian; born in the UK; married or cohabiting; without dependent children.

Figure 5.2b Range of predicted pay by gender and disability: level 4+ qualifications



Note: Other characteristics: aged 40-44; working in professional occupations; White British; Christian; born in the UK; married or cohabiting; without dependent children.

5.5 Predicted pay by gender and sexual orientation for those with lower and higher qualifications

The range of predicted pay for an average worker with no qualifications working in elementary occupations is shown in Table 5.3a and Figure 5.3a; the range of predicted pay for an average worker with level 4 or higher qualifications working in professional occupations is shown in Table 5.3b and Figure 5.3b. Once again we predict pay for a hypothetical average worker, who is White British, Christian, aged 40-44, born in the UK, non-disabled and without dependent children.

Both figures and tables show that single men earn less than married or cohabiting men, while there seemed to be no clear difference in pay for men in a same sex couple. The so-called ‘marriage premium’ seems slightly larger among male workers with level 4 or higher qualifications working in professional occupations than among male workers with no qualification working in elementary occupations.

When we focus on workers with no qualification, working in elementary occupations (Table 5.3a and Figure 5.3a) we can see a clear gender pay penalty for single women compared to single men and married/cohabiting women compared to married/cohabiting men. Women in a same sex relationship with no qualifications do not experience a pay penalty, compared to men in a same sex relationship, or married/ cohabiting men.

When we focus on workers with level 4 or higher qualifications working in professional occupations (Table 5.3b and Figure 5.3b), we can see no clear gender penalty between single men and women, although a distinct gender pay penalty remains for married/cohabiting women compared to married/cohabiting men. Women in a same sex relationship do not experience a pay penalty compared to married/cohabiting men with level 4 or higher qualifications.

The comparison of pay gaps among workers with no qualifications, working in elementary occupations and among workers with level 4 or higher qualifications, working in professional occupations suggests, again, that (gender) pay gaps are reduced at the higher levels of education. The absolute patterns of pay gaps we saw in Chapter 3 appeared to have been influenced by women’s qualifications levels. For women, disadvantage is compounded by lack of qualifications, whereas higher qualified women seem relatively immune

to pay penalties. Once again, though, we should be cautious about extrapolating from these results to younger generations. Those older women who are in full-time work may differ substantially from younger women who remain in full-time work throughout their lifecourse, and patterns of advantage and disadvantage may differ over time correspondingly.

It is important to note that in both figures the mean pay of men living in a same sex couple appears to be higher than the mean pay of married and cohabiting men. However, because of variation in pay within the group, or small cell sizes for people in same sex relationships, the range of predicted pay is so large that it becomes uninformative.

Table 5.3a Predicted pay and pay penalties by gender and sexual orientation: no qualifications

No Qualification; Elementary Occupations				
	Predicted Pay	Lower Bound	Upper Bound	Pay Penalty
Men				
Single	6.65	6.43	6.86	8.1%
Married/Cohabiting	7.24	7.02	7.45	Ref
Same Sex Couple	7.93	6.97	8.89	NS
Women				
Single	5.55	5.33	5.77	23.3%
Married/Cohabiting	5.83	5.64	6.02	19.4%
Same Sex Couple	7.05	6.18	7.91	NS

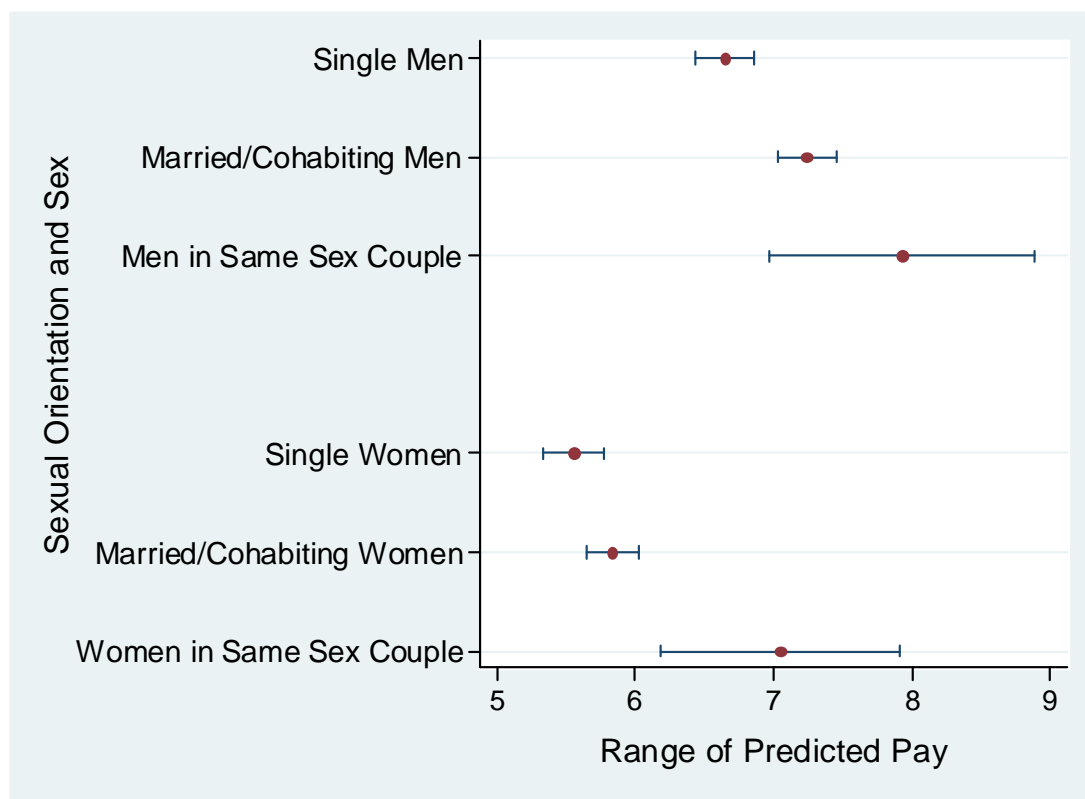
Notes:

NS = the penalty is not statistically significant

Ref = reference group

Other characteristics: White British; Christian; aged 40-44; born in the UK; non-disabled; without dependent children.

Figure 5.3a Range of predicted pay by gender and sexual orientation: no qualifications



Note:

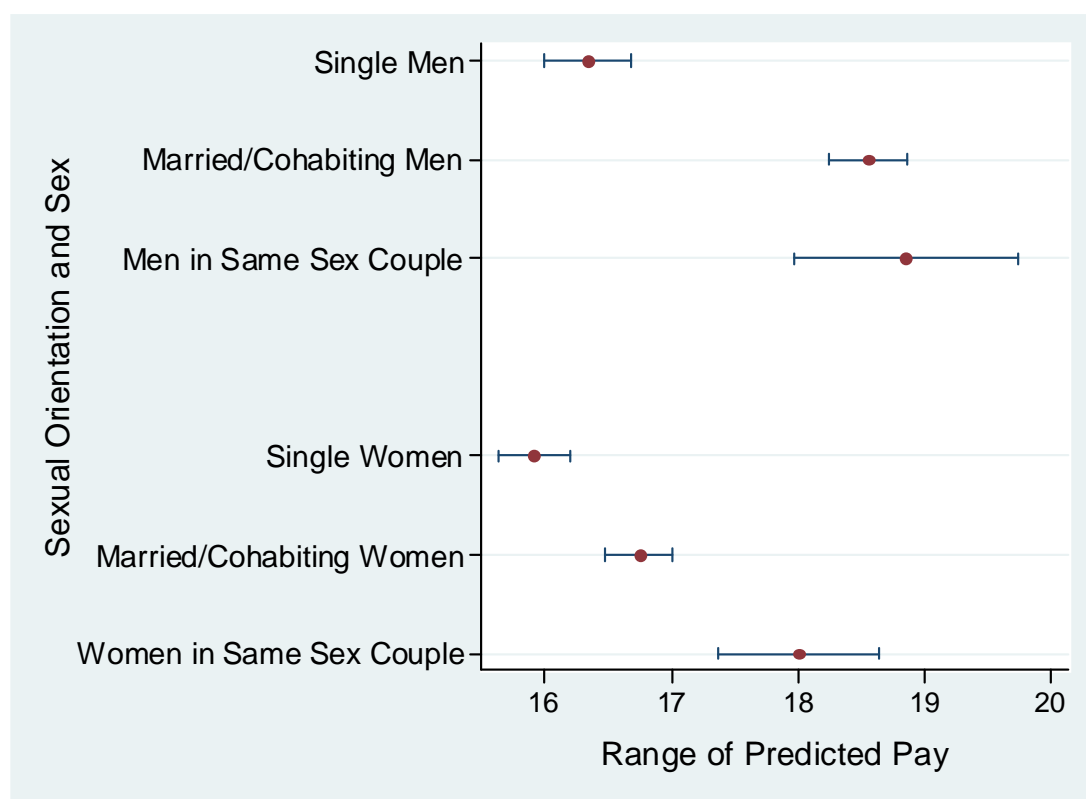
Other characteristics: aged 40-44; with no qualification; in elementary occupations; White British; Christian; born in the UK; non-disabled; without dependent children.

Table 5.3b Predicted pay and pay penalties by gender and sexual orientation: level 4+ qualifications

Level 4 or more; Professional Occupations				
	Predicted Pay	Lower Bound	Upper Bound	Pay Penalty
Men				
Single	16.34	15.98	16.69	11.9%
Married/Cohabiting	18.55	18.24	18.86	Ref
Same Sex Couple	18.85	17.97	19.74	NS
Women				
Single	15.91	15.63	16.20	14.2%
Married/Cohabiting	16.74	16.47	17.01	9.8%
Same Sex Couple	18.00	17.36	18.64	NS

Notes: NS = the penalty is not statistically significant Ref = reference group
 Other characteristics: White British; Christian; aged 40-44; born in the UK; non-disabled; without dependent children.

Figure 5.3b Range of predicted pay by gender and sexual orientation: level 4+ qualifications



Note: Other characteristics: aged 40-44; in professional occupations; White British; Christian; born in the UK; non-disabled; without dependent children.

5.6 Predicted pay and pay penalties by gender and age bands for those with lower and higher qualifications

To analyse how predicted pay varies by gender and age bands, we first focus on an average White British Christian worker, born in the UK, non-disabled, who is single and without dependent children. The ranges of predicted pay for workers with no qualification, working in elementary occupations are shown in Table 5.4a and Figure 5.4a. The ranges of predicted pay for workers with level 4 or higher qualifications working in professional occupations are shown in Table 5.4b and Figure 5.4b. Because almost nobody reaches qualifications equal to level 4 before age 20, we do not compute predicted pay for the youngest workers in this latter case.

Probably because of lower labour market experience, younger workers receive on average lower pay than older workers. Among men, older workers do seem to suffer pay penalties compared to men aged 45-49/50-54. However, it has to be stressed here that we are comparing different cohorts of men who presumably have entered the labour market in different points of the business cycle and, because of this have probably had different career opportunities. A better analysis of age gaps – rather than cohort – should use panel data.

Among workers with no qualification who are working in elementary occupations (Table 5.4a and Figure 5.4a) there is a clear gender pay penalty at almost all ages. Furthermore, this pay gap seems to increase at older ages. Among workers with level 4 or higher qualifications who are working in professional occupations (Table 5.4b and Figure 5.4b), there did not appear to be a gender pay penalty at any particular age.

Table 5.4a Predicted pay and pay penalties by gender and age (single without dependent children): no qualifications

No Qualification; Elementary Occupations				
	Predicted Pay	Lower Bound	Upper Bound	Pay Penalty
Men				
16-19	4.42	4.25	4.59	33.5%
20-24	5.70	5.50	5.90	14.3%
25-29	5.80	5.59	6.00	12.8%
30-34	6.62	6.41	6.83	NS
35-39	6.80	6.60	7.00	NS
40-44	6.65	6.43	6.86	Ref
45-49	7.36	7.15	7.58	-10.8%
50-54	7.30	7.11	7.50	-9.8%
55-59	6.92	6.72	7.11	NS
60-64	6.62	6.43	6.81	NS
Women				
16-19	4.44	4.19	4.70	33.2%
20-24	5.08	4.87	5.29	23.6%
25-29	5.70	5.37	6.03	14.3%
30-34	5.56	5.34	5.78	16.4%
35-39	5.50	5.24	5.76	17.3%
40-44	5.55	5.33	5.77	16.5%
45-49	5.83	5.66	6.00	12.3%
50-54	5.71	5.54	5.88	14.1%
55-59	5.87	5.70	6.03	11.8%

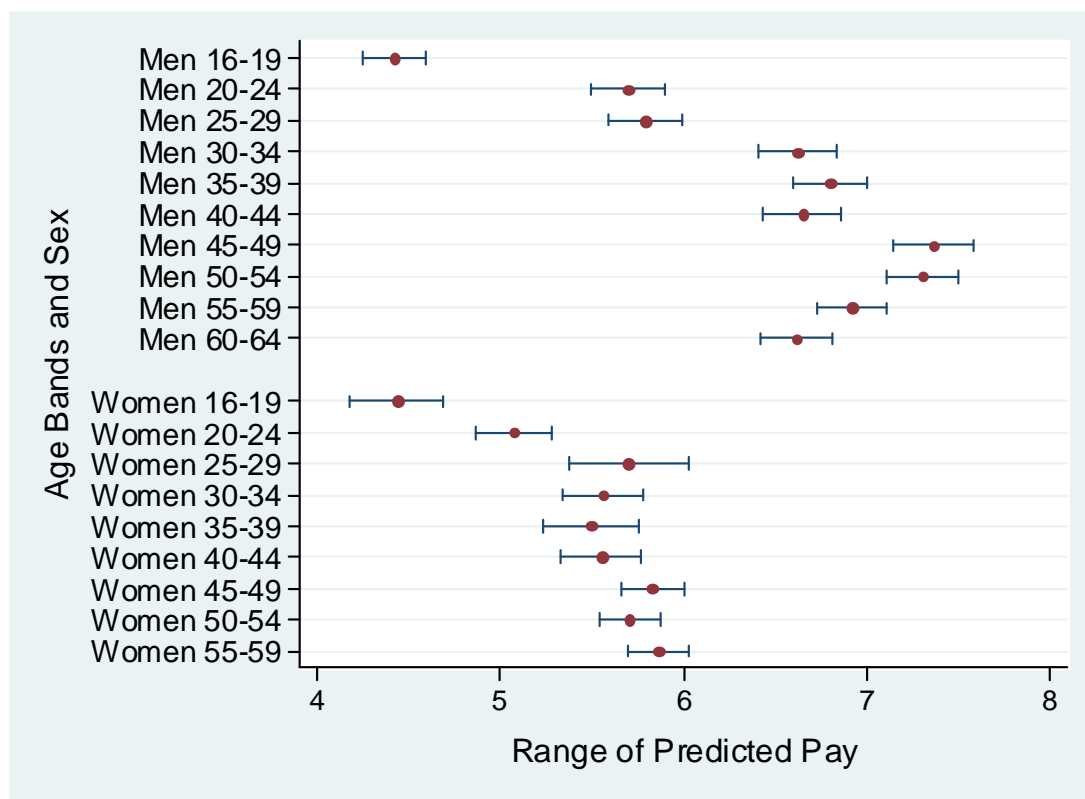
Notes:

NS = the penalty is not statistically significant

Ref = reference group

Other characteristics: White British; Christian; born in the UK; non-disabled.

Figure 5.4a Range of predicted pay by gender and age bands (single without dependent children): no qualifications



Note:

Other characteristics: in elementary occupations; White British; Christian; born in the UK; non-disabled.

Table 5.4b Predicted pay and pay penalties by gender and age (single without dependent children): level 4+ qualifications

Level 4 or more; Professional Occupations				
	Predicted Pay	Lower Bound	Upper Bound	Pay Penalty
Men				
20-24	10.36	10.16	10.55	36.6%
25-29	12.44	12.23	12.65	23.9%
30-34	14.76	14.47	15.04	9.7%
35-39	15.95	15.62	16.27	NS
40-44	16.34	15.98	16.69	Ref
45-49	16.61	16.26	16.96	NS
50-54	16.77	16.41	17.13	NS
55-59	16.02	15.64	16.40	NS
60-64	14.54	14.03	15.05	11.0%
Women				
20-24	10.70	10.54	10.87	34.5%
25-29	12.86	12.67	13.05	21.3%
30-34	14.70	14.46	14.94	10.0%
35-39	16.39	16.09	16.70	NS
40-44	15.91	15.63	16.20	NS
45-49	15.92	15.65	16.19	NS
50-54	16.05	15.77	16.33	NS
55-59	15.77	15.44	16.10	NS

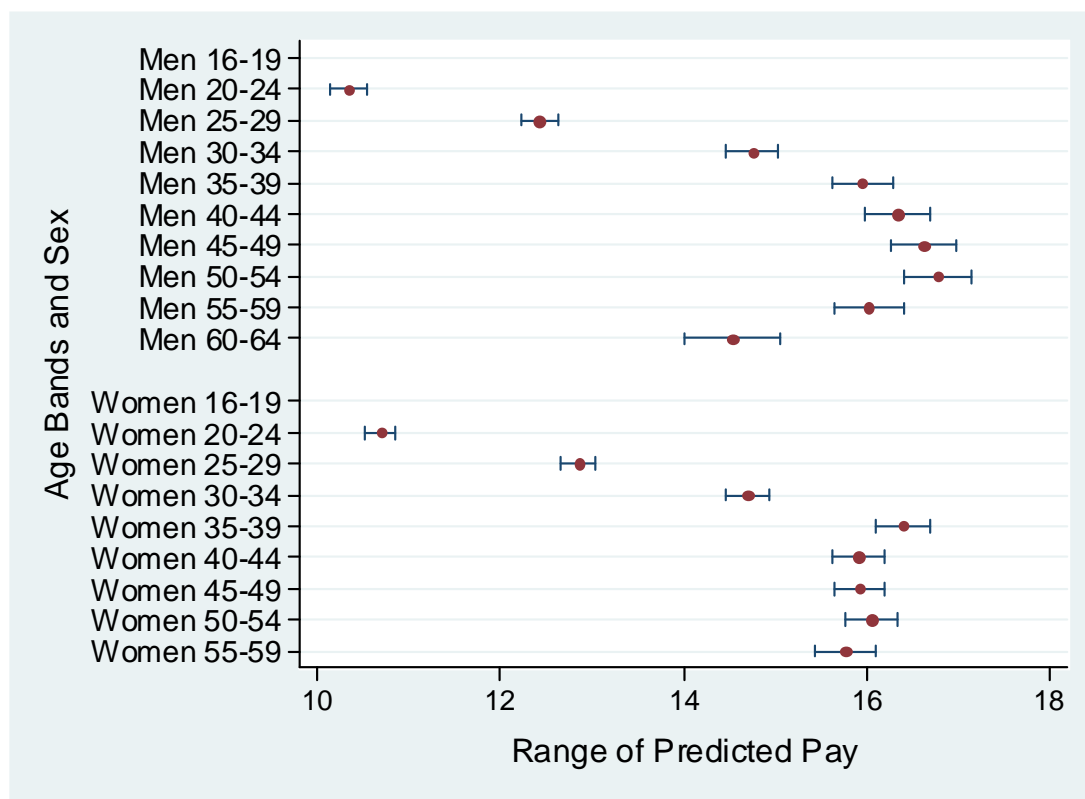
Notes:

NS = the penalty is not statistically significant

Ref = reference group

Other characteristics: average White British; Christian; born in the UK; non-disabled.

Figure 5.4b Range of predicted pay by gender and age bands (single without dependent children): level 4+ qualifications



Note:

Other characteristics: working in professional occupations; White British; Christian; born in the UK; non-disabled.

Because the presence of dependent children in the household has an impact on pay that differs by gender and age band, we now focus on White British, Christian workers, born in the UK, non-disabled, who are married or cohabiting and have dependent children. The ranges of predicted pay for workers with no qualification working in elementary occupations are shown in Table 5.5a and Figure 5.5a; while the ranges of predicted pay for workers with level 4 or higher qualifications working in professional occupations are shown in Table 5.5b and Figure 5.5b.

As already mentioned, married or cohabiting men and women generally earn more on average than single men and women. Furthermore, men in households with dependent children seem to earn more than married or cohabiting men with no dependent children in the household, while the reverse applies to women. The results below suggest that this makes a larger impact on highly educated women working in professional occupations than

on women with no qualifications working in elementary occupations. Indeed, while Figure 5.5a is rather similar to Figure 5.4a, Figure 5.5b clearly differs from Figure 5.4b.

The comparison between Tables 5.4a and b, and Tables 5.5a and b suggests that married or cohabiting women with children seem to be paid slightly more – at least not less – than single women without children. However, in relative terms married or cohabiting women with dependent children seem to lose out compared to married or cohabiting men with children. Not only pay penalties compared to the reference group (men aged 40-44) increase, but also gender pay penalties compared to men in the same age group.

It is interesting to note that while highly educated single women without dependent children working in professional occupations do not show statistically significant gender pay penalties (Table 5.4b), highly educated women working in professional occupations who are married or cohabiting and have dependent children in the household seem to suffer significant gender pay penalties (Table 5.5b). Such penalties are even larger than gender pay penalties for married or cohabiting women with dependent children, with no qualifications and working in elementary occupations (Table 5.5a).

Table 5.5a Predicted pay and pay penalties by gender and age (married/cohabiting, with dependent children): no qualifications

	No Qualification; Elementary Occupations			
	Pay	Lower Bound	Upper Bound	Pay Penalty
Men				
20-24	6.25	5.99	6.51	14.3%
25-29	6.36	6.16	6.56	12.8%
30-34	7.26	7.06	7.47	NS
35-39	7.46	7.26	7.66	NS
40-44	7.29	7.10	7.49	Ref
45-49	8.08	7.87	8.29	-10.8%
50-54	8.01	7.81	8.22	-9.8%
55-59	7.59	7.38	7.80	NS
60-64	7.26	7.05	7.47	NS
Women				
20-24	5.35	5.12	5.59	26.6%
25-29	6.01	5.65	6.36	17.7%
30-34	5.86	5.65	6.07	19.7%
35-39	5.79	5.58	6.00	20.6%
40-44	5.55	5.33	5.77	23.9%
45-49	6.14	5.97	6.31	15.8%
50-54	6.01	5.83	6.20	17.5%
55-59	6.18	6.00	6.36	15.3%

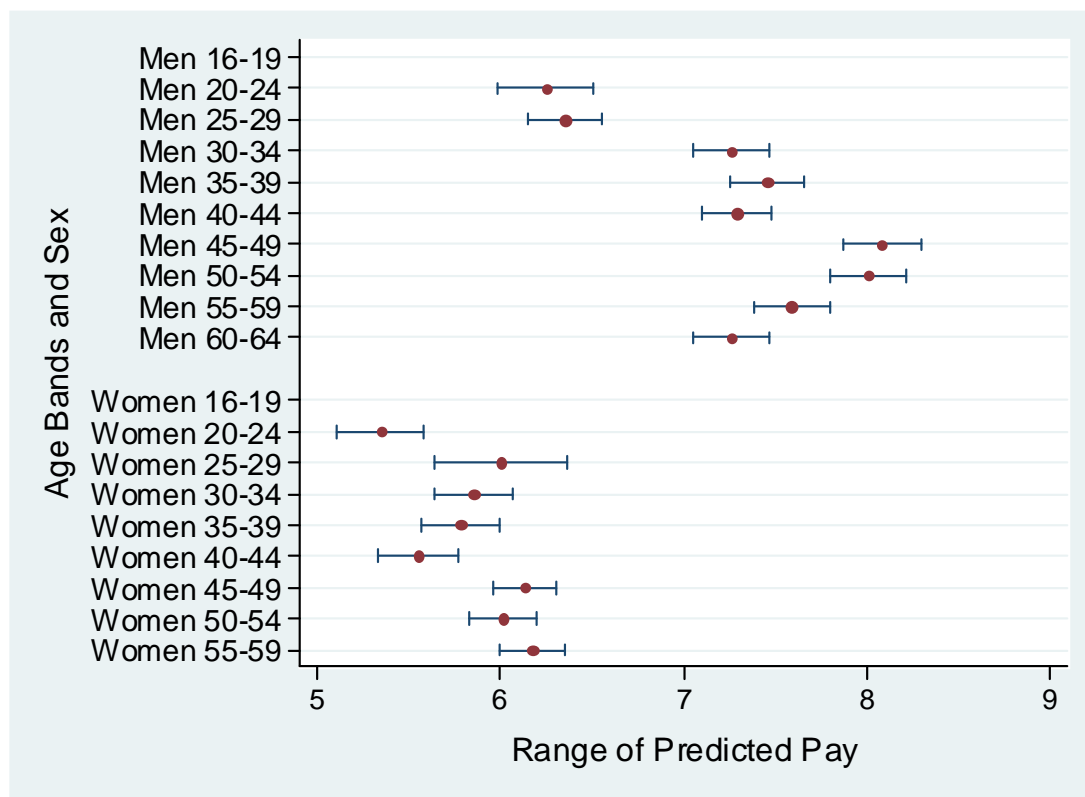
Notes:

NS = the penalty is not statistically significant

Ref = reference group

Other characteristics: White British; Christian; born in the UK; non-disabled; married or cohabiting; with dependent children.

Figure 5.5a Range of predicted pay by gender and age bands (married/cohabiting with dependent children): no qualifications



Note:

Other characteristics: working in elementary occupations; White British; Christian, born in the UK, non-disabled.

Table 5.5b Predicted pay and pay penalties by gender and age (married/cohabiting, with dependent children): level 4+ qualifications

Level 4 or more; Professional Occupations				
	Pay	Lower Bound	Upper Bound	Pay Penalty
Men				
20-24	12.66	12.39	12.93	36.6%
25-29	15.21	14.97	15.45	23.9%
30-34	18.04	17.79	18.30	9.7%
35-39	19.50	19.24	19.76	n.s.
40-44	19.98	19.67	20.28	Ref.
45-49	20.31	20.01	20.61	n.s.
50-54	20.51	20.17	20.85	n.s.
55-59	19.59	19.20	19.98	n.s.
60-64	17.78	17.19	18.36	11.0%
Women				
20-24	10.79	10.58	10.99	46.0%
25-29	12.96	12.76	13.16	35.1%
30-34	14.81	14.59	15.04	25.8%
35-39	16.52	16.26	16.77	17.3%
40-44	15.91	15.63	16.20	20.3%
45-49	16.04	15.82	16.26	19.7%
50-54	16.17	15.91	16.44	19.0%
55-59	15.89	15.56	16.22	20.5%

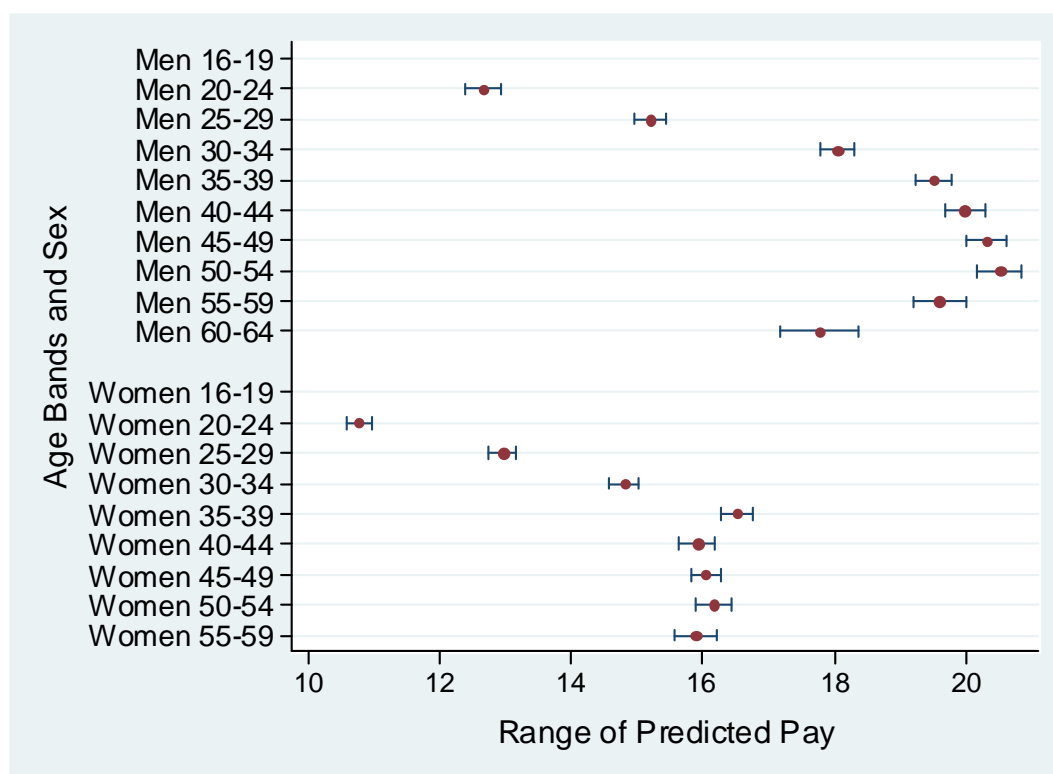
Notes:

NS = the penalty is not statistically significant

Ref = reference group

Other characteristics: White British; Christian; born in the UK; non-disabled.

Figure 5.5b Range of predicted pay by gender and age bands (married/cohabiting, with dependent children): level 4+ qualifications



Note:

Other characteristics: working in professional occupations; White British; Christian, born in the UK, non-disabled.

Since it appears that single people have lower wages than married people and that the presence of children reduces women's pay compared to men's pay, we also examine the position of single people living with dependent children compared to married people. We do this by computing a series of gender-education regressions including the interaction between the variable identifying single people with the one identifying the presence of dependent children in the household. The regression coefficient of the interaction term is not statistically significant and does not substantially change the coefficient for the 'single' and 'children' variables. This suggests that the impact on pay of the presence of dependent children is the same for single and married people, at the same time, the lower pay of single people does not seem to be related to the presence of dependent children in the household. Clearly, however, this result only applies to the sample of single parents working full-time, which might be a selected sample. For example, a single parent might work full-time if he/she has support from other family members, or if the children are of an older age.

5.7 Intersecting pay penalties

In the above analysis apart from education and sex, which we analysed separately, we have assumed that the influence of one characteristic was constant across each other variable. That is, that the impact of disability on pay was the same for ethnic minorities as it was for the majority and so on. However, it has been posited that it is not just the accumulation of vulnerable characteristics that is important but also their intersections, that is, the way they come together. For example, being disabled and female and from a minority group may mean that you have the disadvantage associated with all three characteristics, and that the disadvantage for disability is the same for minority and majority groups. On the other hand, the impact of disability may be different for minority group women than for majority group men, for example. Our analysis has so far assumed the former position – that disadvantages are additive – though we have consistently allowed the impact of other equalities areas to be different for men and women. That is, we have not assumed that disability has either the same or a different impact on men and women, but we have allowed any such differences to emerge in the previous analysis and discussion.

There is not much evidence that the disadvantage associated with different equalities areas does impact in different ways on the other groups (Berthoud 2003). Nevertheless, it is a question that is regularly raised.

We therefore considered extending our analysis to enable identification of such intersections by analysing the influence of the different equalities areas for each category in turn. This would enable us to look at, for example whether the impact of disability was different for Indian than for White British men. However, sample sizes were too small for most of the sub-populations except for the disabled/non-disabled. We did run regressions for non-disabled and disabled men and women separately.¹⁸ And we examined predicted pay for different ethno-religious groups according to disability status and sex¹⁹ and for different age ranges according to disability and sex.²⁰ However, partly because of small sizes in any given combination, the results of both intersection analyses are not very informative. We are therefore unable to draw any conclusions at this stage. The issue of intersections and the

¹⁸ The regression coefficients and their (robust) standard errors are shown in the Appendix. Table A5.2a explains differences in pay among men and Table A5.2b explains differences in pay among women.

¹⁹ See Appendix, Table A5.3 and Figures A5.1a and A5.1b.

²⁰ See Appendix, Table A5.4 and Figures A5.2a and A5.2b.

possibilities for accumulation of disadvantage remains a relevant and important one, but cannot be adequately explored within this study.

6. PAY PENALTIES AT DIFFERENT PARTS OF THE INCOME DISTRIBUTION

6.1 Introduction

A question related to those considered in the previous analysis is the extent to which pay gaps are more or less severe, the higher paid you are. We also look at whether gaps are larger or smaller at particular points on the distribution of hourly full-time earnings. That is, do those people across the equalities areas on low earnings, such as those in the bottom 10% of the earnings distribution experience larger or smaller penalties relative to those on high earnings, such as those in the top 10% of earnings? We also consider the intermediate points of the income distribution, those in the bottom quarter, in the bottom half and in the top quarter of the earnings distribution. Overall, we can see whether there is a trend towards greater or lesser penalties across the distribution of pay for those who are similar, holding characteristics constant as in the previous two chapters.²¹

6.2 Regression analysis

Once again, we run separate regressions to allow the contribution of particular characteristics (such as age and qualifications) to be different for men and women. We already know from the earlier analysis that age, for example, has a different relationship with pay for men and women. We estimate the impact of different characteristics on pay (holding other values constant) at different points on the earnings distribution using quantile regression. Given the greater complexity of these models to allow for this variation across earnings, it is not straightforward to extract predicted probabilities and illustrate them together for both men and women as we did with the earlier regressions. Instead we show the actual coefficients from the two models. This means that we can only interpret the effect for men relative to men with the baseline characteristics, and for women relative to women with the baseline characteristics. We cannot show how women compare with men in this instance. The results are therefore easier to interpret for the first regression where we discuss the impact of the various equalities areas on pay relative to men with baseline characteristics. Nevertheless, we think the results are informative from both models, and the importance of the question of whether there are greater gaps among higher or lower earners warrants displaying them fully.

²¹ The Appendix includes the actual, raw values across the groups at these different points on the income distribution, without controlling for education, age and so on (Tables A6.1-A6.4).

We therefore discuss the results from the two quantile regressions shown in Tables 6.1 and 6.2 and interpret them in the following way: where we see (statistically significant) coefficients decreasing (become more negative) across the various percentiles, we can interpret that as pay penalties increasing with income. Where coefficients become less negative across the distribution, then we can see that pay penalties decrease with income and are concentrated at the bottom of the distribution.

For example, among men (Table 6.1) we can see that the coefficient for Black Africans becomes more negative across the distribution. Those who are low paid still suffer a pay penalty but the penalty is much greater among the higher paid (controlling for other characteristics). Being born outside the UK by contrast runs from a negative to a positive relationship. Those who are low-paid face a penalty, relative to UK-born, but among the high paid who were born outside the UK there is actually a pay advantage. This is consistent with other research that shows that migrant employment is very polarised and in many cases results in a pay premium (Gott and Johnston 2002; Kyambi 2005). It is interesting, however, to see that it can be identified in these models where we have controlled for some relevant factors such as occupations, qualifications, age and disability status. Also, the pay advantage of Jewish men can be observed at all levels of the pay distribution – this is not simply a question of the average advantage being influenced by high earners. Similarly the disadvantage associated with being Muslim also covers the whole of the income distribution, though it appears more pronounced among low earners. Sikhs only appear to be disadvantaged at the higher end of the income distribution and experience pay advantage among lower paid workers. In relation to age, apart from the youngest band, younger people experience increasing disadvantage across the distribution, which may be related to issues of lack of current promotion and need for longer job tenure to gain pay awards in high paying work. Low paid (and less skilled work) is likely to place less of a premium on experience. The effect of disability is (negatively) stable across the distribution and, consistent with research on employment disadvantage (Berthoud 2008), qualifications enhance earnings at all points of the income distribution. Having children is a premium across the income distribution, but it increases for those who are better paid, though probably constitutes a similar proportion of pay given that pay is increasing at the same time.

Table 6.1 Influences on pay across the income distribution (men)

		P_10	P_25	P_50	P_75	P_90	
Ethnicity [While British]	Indian	-0.016 (0.040)	-0.005 (0.027)	0.010 (0.036)	0.090*** (0.033)	0.052 (0.042)	
	Pakistani	0.032 (0.068)	-0.011 (0.054)	-0.017 (0.043)	0.006 (0.045)	-0.071 (0.070)	
	Bangladeshi	-0.154 (0.126)	-0.141** (0.071)	-0.056 (0.076)	-0.070 (0.070)	-0.110 (0.111)	
	Black Caribbean	-0.028 (0.073)	0.022 (0.047)	0.004 (0.034)	-0.005 (0.034)	-0.058 (0.051)	
	Black African	-0.063** (0.031)	-0.098** (0.039)	-0.113*** (0.027)	-0.127*** (0.027)	-0.182*** (0.038)	
	Chinese	-0.128 (0.143)	-0.074 (0.057)	-0.133** (0.058)	-0.064 (0.072)	-0.087 (0.089)	
	Born Outside UK	-0.084*** (0.013)	-0.063*** (0.013)	-0.013 (0.011)	0.037*** (0.010)	0.055*** (0.019)	
	Religion [Christian]	Buddhist	-0.038 (0.079)	-0.086** (0.037)	-0.093* (0.048)	-0.116* (0.059)	-0.038 (0.109)
	Hindu	-0.031 (0.050)	-0.020 (0.031)	-0.032 (0.034)	-0.112*** (0.033)	-0.094** (0.047)	
	Jewish	0.160** (0.072)	0.138** (0.055)	0.198*** (0.063)	0.274*** (0.103)	0.336*** (0.074)	
Muslim	-0.132*** (0.039)	-0.096** (0.042)	-0.097** (0.041)	-0.119*** (0.032)	-0.078 (0.056)		
Sikh	0.102** (0.049)	0.041 (0.042)	-0.011 (0.048)	-0.128*** (0.045)	-0.122* (0.066)		
No Religion	-0.001 (0.010)	-0.013** (0.006)	-0.006 (0.006)	-0.001 (0.006)	-0.000 (0.010)		
Disability ²² [Non-disabled]	Illness	-0.032*** (0.009)	-0.019*** (0.007)	-0.023*** (0.005)	-0.015*** (0.006)	-0.020* (0.012)	
	Disability	-0.047*** (0.013)	-0.045*** (0.009)	-0.054*** (0.010)	-0.061*** (0.010)	-0.057*** (0.019)	
Sexual Orient. [Married/Cohab.]	Single	-0.101*** (0.011)	-0.111*** (0.008)	-0.096*** (0.008)	-0.100*** (0.008)	-0.121*** (0.011)	
	Same Sex C.	-0.028	0.008	-0.033	-0.041	0.002	

²² Note that, due to the way we have constructed our groups of disabled and non-disabled, the effect for disabled is a combination of that for illness and disability. Here we can see that the coefficients are consistent with each other and that adding them together leads to a stable disadvantage across pay as we note in the text.

PAY PENALTIES AT DIFFERENT PARTS OF THE INCOME DISTRIBUTION

		(0.042)	(0.038)	(0.036)	(0.038)	(0.097)
Children		0.029 ^{***}	0.037 ^{***}	0.046 ^{***}	0.047 ^{***}	0.061 ^{***}
		(0.007)	(0.006)	(0.005)	(0.006)	(0.008)
Age Bands	16-19	-0.778 ^{***}	-0.627 ^{***}	-0.567 ^{***}	-0.577 ^{***}	-0.549 ^{***}
[40-44]		(0.041)	(0.019)	(0.018)	(0.018)	(0.021)
	20-24	-0.293 ^{***}	-0.309 ^{***}	-0.323 ^{***}	-0.349 ^{***}	-0.363 ^{***}
		(0.015)	(0.012)	(0.009)	(0.012)	(0.022)
	25-29	-0.163 ^{***}	-0.195 ^{***}	-0.215 ^{***}	-0.240 ^{***}	-0.263 ^{***}
		(0.012)	(0.009)	(0.011)	(0.010)	(0.014)
	30-34	-0.074 ^{***}	-0.097 ^{***}	-0.097 ^{***}	-0.101 ^{***}	-0.114 ^{***}
		(0.013)	(0.010)	(0.010)	(0.010)	(0.015)
	35-39	-0.038 ^{***}	-0.038 ^{***}	-0.032 ^{***}	-0.033 ^{***}	-0.024
		(0.014)	(0.009)	(0.011)	(0.012)	(0.016)
	45-49	0.015	0.009	0.022 [*]	0.025 ^{**}	0.018
		(0.015)	(0.009)	(0.012)	(0.011)	(0.016)
	50-54	0.015	0.005	0.027 ^{***}	0.008	0.024
		(0.016)	(0.010)	(0.010)	(0.012)	(0.016)
	55-59	-0.047 ^{***}	-0.039 ^{***}	-0.016	-0.026 ^{***}	-0.005
		(0.015)	(0.014)	(0.011)	(0.009)	(0.018)
	60-64	-0.085 ^{***}	-0.071 ^{***}	-0.080 ^{***}	-0.091 ^{***}	-0.096 ^{***}
		(0.020)	(0.012)	(0.015)	(0.012)	(0.017)
Occupation	Manager	0.404 ^{***}	0.507 ^{***}	0.608 ^{***}	0.697 ^{***}	0.798 ^{***}
[Elementary		(0.012)	(0.011)	(0.010)	(0.013)	(0.017)
Occupations]	Professional	0.498 ^{***}	0.550 ^{***}	0.577 ^{***}	0.603 ^{***}	0.643 ^{***}
		(0.015)	(0.013)	(0.012)	(0.015)	(0.020)
	Technical	0.344 ^{***}	0.361 ^{***}	0.394 ^{***}	0.431 ^{***}	0.479 ^{***}
		(0.010)	(0.013)	(0.011)	(0.012)	(0.015)
	Admin/Secretarial	0.181 ^{***}	0.182 ^{***}	0.194 ^{***}	0.213 ^{***}	0.220 ^{***}
		(0.016)	(0.013)	(0.012)	(0.011)	(0.017)
	Skilled Trade	0.152 ^{***}	0.164 ^{***}	0.190 ^{***}	0.190 ^{***}	0.194 ^{***}
		(0.012)	(0.009)	(0.008)	(0.009)	(0.015)
	Pers. Services	-0.052 ^{**}	0.006	-0.006	-0.010	-0.002
		(0.026)	(0.017)	(0.013)	(0.018)	(0.034)
	Sales	0.020	0.040 ^{***}	0.060 ^{***}	0.094 ^{***}	0.101 ^{***}
		(0.018)	(0.013)	(0.013)	(0.017)	(0.022)
	Machine Op.	0.074 ^{***}	0.076 ^{***}	0.075 ^{***}	0.095 ^{***}	0.097 ^{***}
		(0.009)	(0.010)	(0.008)	(0.008)	(0.012)
Qualif. Level	Level 4 or More	0.272 ^{***}	0.309 ^{***}	0.326 ^{***}	0.341 ^{***}	0.353 ^{***}
[No Qualif.]		(0.014)	(0.012)	(0.011)	(0.015)	(0.019)
	Level 3	0.156 ^{***}	0.172 ^{***}	0.184 ^{***}	0.193 ^{***}	0.182 ^{***}

		(0.015)	(0.011)	(0.010)	(0.012)	(0.015)
	Level 2	0.106 ^{***}	0.117 ^{***}	0.117 ^{***}	0.129 ^{***}	0.125 ^{***}
		(0.011)	(0.009)	(0.008)	(0.012)	(0.018)
	Below Level 2	0.067 ^{***}	0.066 ^{***}	0.077 ^{***}	0.087 ^{***}	0.069 ^{***}
		(0.015)	(0.011)	(0.010)	(0.014)	(0.018)
	Other Qualif.	0.032 ^{**}	0.044 ^{***}	0.055 ^{***}	0.075 ^{***}	0.074 ^{***}
		(0.015)	(0.012)	(0.011)	(0.013)	(0.019)
	Intercept	1.682 ^{***}	1.845 ^{***}	2.016 ^{***}	2.213 ^{***}	2.418 ^{***}
		(0.015)	(0.011)	(0.012)	(0.012)	(0.021)

*Observations: 33178. Robust standard errors in parenthesis; * Significant at 10%, ** Significant at 5%, *** Significant at 1%. P_10= bottom 10%, P_25= bottom 25%, P_50=bottom 50%; P_75=top 25% and P_90=top 10% of earnings.*

Turning to women in Table 6.2, we can see that Black Caribbean women's pay advantage relative to White women is clustered at the lower end of the distribution and declines as pay increases. Interestingly, and perhaps counter-intuitively, Pakistani and Bangladeshi women at the very bottom of the income distribution have an advantage over very low paid White women with similar characteristics. As with men, Jewish women experience a pay advantage across the distribution and it also shows some indication of increasing at the upper end of the distribution. The penalties associated with disability are relatively stable. The pay advantage that we saw for women in a same sex couple is concentrated around the low to middle end of the distribution and does not appear elsewhere, though this might be in part to do with sample sizes. Children, as might be expected, have a negative impact across the distribution for women, but it seems potentially largest among lower earners, as we might expect. Age effects are similar to those for men, as is the influence of qualifications.

Table 6.2 Influences on pay across the income distribution (women)

		P_10	P_25	P_50	P_75	P_90	
Ethnicity [While British]	Indian	0.082** (0.037)	0.027 (0.041)	0.010 (0.048)	-0.010 (0.026)	0.015 (0.057)	
	Pakistani	-0.119 (0.109)	-0.035 (0.073)	-0.056 (0.050)	-0.131 (0.089)	-0.055 (0.084)	
	Bangladeshi	0.245** (0.113)	0.107* (0.061)	0.028 (0.080)	-0.088 (0.068)	-0.101 (0.082)	
	Black Caribbean	0.105* (0.054)	0.097*** (0.022)	0.072*** (0.021)	0.065** (0.032)	0.064 (0.050)	
	Black African	0.034 (0.033)	0.024 (0.037)	0.035 (0.021)	-0.041* (0.022)	-0.088** (0.044)	
	Chinese	-0.125 (0.118)	-0.105* (0.053)	-0.069 (0.055)	-0.025 (0.056)	-0.137*** (0.049)	
	Born Outside UK	0.011 (0.015)	0.016* (0.009)	0.036*** (0.010)	0.058*** (0.011)	0.094*** (0.022)	
	Religion [Christian]	Buddhist	-0.157 (0.097)	-0.001 (0.079)	-0.009 (0.047)	-0.021 (0.047)	0.129 (0.135)
	Hindu	-0.046 (0.046)	-0.029 (0.041)	0.020 (0.050)	0.022 (0.040)	-0.045 (0.070)	
	Jewish	0.115 (0.074)	0.095* (0.050)	0.138* (0.077)	0.205*** (0.061)	0.165*** (0.037)	
Muslim	-0.097 (0.076)	-0.003 (0.039)	-0.015 (0.043)	0.080 (0.051)	0.031 (0.055)		
Sikh	-0.051 (0.051)	-0.042 (0.053)	-0.008 (0.062)	0.037 (0.062)	-0.006 (0.076)		
No Religion	0.015 (0.011)	-0.001 (0.009)	0.007 (0.006)	0.002 (0.006)	0.016 (0.013)		
Disability ²³ [Non-disabled]	Illness	-0.009 (0.011)	-0.017** (0.007)	-0.018** (0.009)	-0.020** (0.010)	-0.022* (0.012)	
	Disability	-0.049** (0.022)	-0.039*** (0.012)	-0.034*** (0.013)	-0.033** (0.013)	-0.045** (0.019)	
Sexual Orient. [Married/Cohab.]	Single	-0.038*** (0.011)	-0.041*** (0.007)	-0.048*** (0.006)	-0.055*** (0.007)	-0.055*** (0.010)	
	Same Sex C.	0.035	0.091**	0.057**	0.057	0.077	

²³ Note that, due to the way we have constructed our groups of disabled and non-disabled, the effect for disabled is a combination of that for illness and disability. Here we can see that the coefficients are consistent with each other and that adding them together leads to a stable disadvantage across pay as we note in the text.

PAY GAPS ACROSS EQUALITIES AREAS

		(0.045)	(0.036)	(0.028)	(0.039)	(0.053)
Children		-0.068***	-0.033***	-0.019***	-0.016**	-0.024***
		(0.009)	(0.008)	(0.005)	(0.007)	(0.009)
Age Bands	16-19	-0.591***	-0.404***	-0.354***	-0.355***	-0.440***
[40-44]		(0.050)	(0.031)	(0.016)	(0.017)	(0.023)
	20-24	-0.242***	-0.248***	-0.249***	-0.274***	-0.344***
		(0.017)	(0.010)	(0.010)	(0.012)	(0.018)
	25-29	-0.101***	-0.130***	-0.140***	-0.157***	-0.202***
		(0.019)	(0.009)	(0.011)	(0.011)	(0.016)
	30-34	-0.027*	-0.041***	-0.047***	-0.051***	-0.084***
		(0.015)	(0.011)	(0.011)	(0.011)	(0.021)
	35-39	0.023*	0.003	0.009	0.022**	0.038**
		(0.013)	(0.012)	(0.013)	(0.010)	(0.018)
	45-49	0.012	-0.008	-0.015	-0.014	-0.049***
		(0.011)	(0.011)	(0.011)	(0.009)	(0.019)
	50-54	0.010	-0.007	-0.000	0.003	-0.026
		(0.014)	(0.012)	(0.012)	(0.015)	(0.021)
	55-59	-0.008	-0.008	-0.008	-0.016	-0.056***
		(0.018)	(0.014)	(0.013)	(0.014)	(0.021)
Occupation	Manager	0.363***	0.467***	0.620***	0.717***	0.799***
[Elementary		(0.020)	(0.013)	(0.015)	(0.016)	(0.021)
Occupations]	Professional	0.575***	0.612***	0.688***	0.687***	0.701***
		(0.021)	(0.012)	(0.015)	(0.016)	(0.021)
	Technical	0.417***	0.421***	0.484***	0.483***	0.490***
		(0.017)	(0.012)	(0.013)	(0.017)	(0.018)
	Admin/Secret.	0.284***	0.270***	0.296***	0.279***	0.301***
		(0.015)	(0.009)	(0.012)	(0.013)	(0.015)
	Skilled Trade	0.048	0.052***	0.083***	0.069**	0.113***
		(0.033)	(0.019)	(0.022)	(0.027)	(0.037)
	Pers. Services	0.027	0.039***	0.093***	0.085***	0.099***
		(0.018)	(0.009)	(0.011)	(0.015)	(0.016)
	Sales	0.074***	0.065***	0.107***	0.115***	0.144***
		(0.018)	(0.013)	(0.014)	(0.016)	(0.019)
	Machine Op.	0.100***	0.056***	0.076***	0.072***	0.102***
		(0.019)	(0.014)	(0.014)	(0.022)	(0.030)
Qualif. Level	Level 4+	0.271***	0.315***	0.346***	0.349***	0.352***
[No Qualif.]		(0.017)	(0.011)	(0.011)	(0.015)	(0.019)
	Level 3	0.165***	0.156***	0.180***	0.198***	0.220***
		(0.019)	(0.012)	(0.013)	(0.013)	(0.019)
	Level 2	0.106***	0.101***	0.134***	0.131***	0.125***

PAY PENALTIES AT DIFFERENT PARTS OF THE INCOME DISTRIBUTION

	(0.017)	(0.009)	(0.011)	(0.012)	(0.016)
Below Level 2	0.087 ^{***}	0.067 ^{***}	0.078 ^{***}	0.085 ^{***}	0.088 ^{***}
	(0.015)	(0.010)	(0.014)	(0.014)	(0.018)
Other Qualif.	0.047 [*]	0.057 ^{***}	0.099 ^{***}	0.100 ^{***}	0.098 ^{***}
	(0.026)	(0.015)	(0.013)	(0.018)	(0.022)
Intercept	1.490 ^{***}	1.658 ^{***}	1.768 ^{***}	1.965 ^{***}	2.174 ^{***}
	(0.017)	(0.014)	(0.013)	(0.016)	(0.021)

*Observations: 21838. Robust standard errors in parenthesis; * Significant at 10%, ** Significant at 5%, *** Significant at 1%. P_10= bottom 10%, P_25= bottom 25%, P_50=bottom 50%; P_75=top 25% and P_90=top 10% of earnings.*

7. CONCLUSIONS AND IMPLICATIONS

7.1 Introduction

In this report we have analysed the average pay gap across the equalities areas: gender, ethnicity, religion, sexual orientation, age and disability. In order to try to determine whether women and men experience pay penalties by being members of these groups, it is important to eliminate a number of factors that have been shown to be relevant to the amount of pay people receive. These include the range of educational qualifications, broad occupational grouping, age, religious affiliation, ethnic group, disability, marital/partnership status, presence of children and whether UK born. We therefore computed differences in expected pay by holding these factors constant. We also investigated expected pay and pay penalties for women and men with different levels of qualification and at different levels of pay, holding those characteristics constant.

7.2 Key results

One of the key results is the persistence of gender disadvantage across equalities areas. In many circumstances, and especially when they have low education, women suffer a pay gap compared to men of the same ethnicity, religious group, age, disability status and sexual orientation. We also found that, among those in full-time employment, disabled men can expect to be paid better not only than disabled women but also than non-disabled women.

The second key result is that qualifications have an important levelling power. Overall pay gaps across equality areas are partly due to different average levels of qualifications across the groups compared. Furthermore, pay gaps vary considerably across the range of qualifications. For example, once controlling for other characteristics, the gender pay penalty of women with higher qualifications compared to men with higher qualifications is substantially smaller than the pay penalty among those with lower qualifications. In terms of ethnicity, more highly qualified Bangladeshi and Pakistani men do not seem to experience a pay penalty relative to higher qualified White British men, but those without qualifications experienced a substantial pay penalty relative to White British men without qualifications. Clearly, exceptions still remain. Among Black African and Chinese men and Black Caribbean women and among disabled men, those who were more highly qualified seem to experience a pay penalty (relative to comparators with higher qualifications), but not those without qualifications.

The third key result is when we look at age. Pay disadvantage associated with older people largely disappears when we control for relevant characteristics. This suggests that this pay gap is likely to represent differences in qualifications. Age-related gaps more generally are likely to represent these and other differences in characteristics across cohorts, such as lack of work experience for younger cohorts or different types of work histories for older cohorts. Hence, a better analysis of pay gaps across age groups should be done using panel data, which follows individuals over time. Only in this way it is possible to see whether people's pay really decreases as they get older.

We have also explored the extent to which pay penalties varied or were consistent across different levels of pay, comparing men with other men and women with other women. We found that for Black African men pay penalties (relative to White British men) increase among the more highly paid. Black Caribbean women experience a relative advantage (compared to White British women) towards the lower part of the pay distribution; but it disappears at the top end of the pay distribution. Jewish women's pay advantage compared to White British Christian women increases at higher levels of pay. Non-UK born men experience a pay penalty at the lower end of the pay distribution, but an advantage in pay among the more highly paid. For men there is a pay premium associated with children, which increases up the pay distribution. For women, children represent a declining disadvantage in pay as pay increases. In addition, qualifications are an advantage at every part of the pay distribution for both men and women.

7.3 Implications

The general suggestion for future research is that longitudinal investigation will increase our understanding of pay gaps and pay penalties, especially for younger and older people. A more detailed analysis of pay and where people in equalities groups are concentrated in occupations would give us better insights into pay gaps and pay penalties. If it were possible to carry out effective analysis using a more detailed breakdown of educational qualifications, this would give us a more sensitive picture of the nature of some pay gaps and pay penalties.

Finally, it is important to keep in mind that in this report, pay gaps only summarise disadvantage among those who are full-time employees. Pay gaps will better summarise disadvantage across the whole group where rates of full-time employment are higher. But the rate of full-time employment varies, sometimes dramatically, across different sub-populations. Where rates of full-

time employment are low, pay gaps may be misleading as a measure of employment disadvantage in that they do not illustrate the pay disadvantage that might be experienced by other members of the group, were they in full-time employment. Furthermore, pay gaps summarise disadvantage in employment (among full-time employees) but not necessarily discrimination, although discrimination may contribute not only directly to pay gaps but also via some of the other routes to lower pay such as occupational segregation.

The main implications of the findings are therefore as follows:

- Pay gaps affect a large number of vulnerable groups and can be very sizeable, in many cases representing around a fifth of the reference wage.
- However, there can be no 'one-size-fits-all' approach across the equalities strands.
- Improving the average level of qualifications among disadvantaged groups is important for tackling pay gaps. But it will affect some more than others.
- Tackling 'glass ceilings' that appear to operate for more highly qualified disabled people, as well as for some minority ethnic groups, is also necessary.
- This will probably involve implementing anti-discrimination processes (such as those currently proposed for the public sector only) across employment, and tackling particular workplace cultures (such as long hours) that are likely to impact adversely on certain groups, particularly those with caring responsibilities or health problems.
- Pay gaps should be seen in the context of wider employment disadvantage. They are only one aspect of employment disadvantage and measures to tackle pay gaps need to be harmonised with measures to address lower full-time employment rates among some groups.

Expanding on these issues, we can see that pay gaps are an issue for a number of those groups covered by the Commission. For women, certain ethnic minorities and disabled people there appear to be clear pay penalties. While increasing educational levels may do much to address pay differentials, it appears that it would have a greater impact on women and on Pakistani and Bangladeshi minority ethnic groups. Disabled men and women with higher qualifications and Black African, Indian and Chinese men with higher qualifications face a clear pay deficit despite the presence of those qualifications. Even for those for whom increasing qualifications is likely to

have a substantial impact on their pay gaps, it is clearly not the whole solution.

For the sample of men in same sex couples in this analysis, there is no evidence of pay disadvantage. The sample of women in same sex couples did not experience pay gaps relative to married/cohabiting heterosexual men, though when other factors were controlled for, they did experience pay penalties compared to married/cohabiting heterosexual men and men in same sex couples. This suggests a gender penalty. Care must be taken not to generalise these findings as representative of the lesbian, gay and bisexual population. Similarly, the disadvantage experienced by religious minorities is not clear cut, partly because it overlaps with ethnicity in many cases. There does appear to be a pay gap for Muslim men, but this is not as great as that experienced by Pakistani or Bangladeshi men. On the other hand Jewish men do particularly well in terms of pay, partly associated with their high average levels of qualifications even within broad groupings of qualifications. Age is not itself particularly associated with pay penalties. Pay gaps by age primarily represent the fact that older people are different – with different jobs, different (and on average lower) levels of qualifications – than those who are currently in their prime earning years. The exception would appear to be those on the brink of retirement age, where there may be some pay deficit associated with age, or with the stage in life that they have reached.

The implication is that measures to address pay need to be targeted to the specific groups of concern and the factors in their experience that are associated with the pay deficit. We also need to understand more about what is driving the pay deficits for the different vulnerable groups. Across the board measures to increase educational attainment among those where it is lower and among women, are likely to have an effect in the future. Moreover, those more highly educated cohorts who are currently young and with little labour market experience are likely to see a reduction in their pay gaps as they age. At the same time tackling discrimination, the work culture that enables some to get on and leaves others behind, and some of the differences in pay across occupations that require similar levels of human capital, will be needed if pay gaps and pay penalties are to show a substantial reduction for those where they are highest. An additional factor is the ways in which couples manage their work and family time. As has been pointed out in the past, if we want to see changes in the relative earnings of men and women, we might want to see men taking on some of the lifecourse patterns and harmonisation of work

and family life that women currently undertake (Manning and Petrongolo 2008).

Related to this is the fact that the proportion of people in full-time work in the different groups varies dramatically. If employment policies are successful in moving more people from disadvantaged groups into full-time work, this may change the pay profile for those groups. Attention needs to be given to the sorts of jobs and working environments that those who are out of the labour market, or who are in part-time work, are supported to join.

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APPENDIX 1: DETAILED TABLES

Table A2.1: Employment status by gender and ethnicity

	White British	Indian	Pakistani	Bangladeshi	Black Caribbean	Black African	Chinese
Men							
Employed Full-time	60.2	57.5	34.9	34.4	48.8	52.7	36.2
Employed Part-time	4.9	6.6	9.5	17.4	6.2	11.2	8.9
Self-employed	13.6	12.1	18.6	9.4	10.6	6.4	12.0
Unemployed	4.1	6.0	7.4	11.4	12.2	9.5	5.8
Other/Inactive	17.3	17.8	29.6	27.5	22.3	20.3	37.0
	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Women							
Employed Full-time	39.2	37.9	13.3	11.6	45.4	36.5	32.0
Employed Part-time	26.5	18.1	8.3	8.0	15.2	15.8	17.1
Self-employed	5.2	3.6	2.0	2.2	2.7	1.7	7.7
Unemployed	3.0	4.2	5.1	5.4	5.6	6.4	4.1
Other/Inactive	26.1	36.3	71.3	72.8	31.1	39.6	39.0
	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Table A2.2: Employment status by gender and religious affiliation

	Christian	Buddhist	Hindu	Jewish	Muslim	Sikh	No Religion
Men							
Employed Full-time	60.1	46.1	60.8	52.1	35.8	51.2	59.3
Employed Part-time	5.1	7.8	6.3	4.7	9.9	6.3	5.1
Self-employed	13.3	14.7	10.8	24.2	14.4	14.8	13.4
Unemployed	3.9	4.9	5.6	2.7	8.9	6.9	5.7
Other/Inactive	17.5	26.5	16.5	16.3	31.0	20.7	16.6
	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Women							
Employed Full-time	39.8	31.7	39.1	34.6	13.7	35.3	39.2
Employed Part-time	26.5	21.4	19.0	19.1	8.8	19.3	22.3
Self-employed	5.0	7.6	3.8	11.0	2.2	4.2	5.5
Unemployed	3.0	5.6	3.9	2.9	5.3	4.5	4.6
Other/Inactive	25.8	33.7	34.2	32.4	70.1	36.8	28.4
	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Table A2.3: Employment status by gender and disability

	Disabled	Non-disabled
Men		
Employed Full-time	29.3	64.2
Employed Part-time	4.3	5.5
Self-employed	8.8	14.2
Unemployed	4.6	4.5
Other/Inactive	53.0	11.6
	<i>100.0</i>	<i>100.0</i>
Women		
Employed Full-time	20.5	41.6
Employed Part-time	17.3	25.9
Self-employed	3.4	5.3
Unemployed	3.3	3.3
Other/Inactive	55.4	23.9
	<i>100.0</i>	<i>100.0</i>

Table A2.4: Employment status by gender and sexual orientation

	Married	Single	In a Same Sex Couple
Men			
Employed Full-time	70.1	44.6	64.5
Employed Part-time	2.7	10.8	6.4
Self-employed	15.1	5.6	15.0
Unemployed	3.8	9.1	2.1
Other/Inactive	8.3	30.0	12.0
	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Women			
Employed Full-time	52.6	33.5	66.6
Employed Part-time	20.1	21.3	12.6
Self-employed	5.0	2.5	7.1
Unemployed	3.2	5.6	2.5
Other/Inactive	19.1	37.1	11.1
	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Table A2.5: Employment status by gender and age bands

	Age 16-19	Age 20-24	Age 25-29	Age 30-34	Age 35-39	Age 40-44	Age 45-49	Age 50-54	Age 55-59	Age 60-64
Men										
Employed Full-time	21.1	56.4	72.8	72.5	70.0	68.7	65.8	63.0	51.5	32.1
Employed Part-time	17.0	9.3	4.3	3.0	2.8	2.5	2.3	3.0	4.9	7.0
Self-employed	1.1	5.3	8.9	13.5	16.0	17.0	18.3	18.1	17.9	15.0
Unemployed	11.6	9.1	5.2	3.6	3.5	3.2	3.0	2.7	2.9	1.8
Other/Inactive	49.2	19.8	8.7	7.4	7.7	8.5	10.6	13.2	22.7	44.1
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Women										
Employed Full-time	15.2	45.6	52.6	41.0	35.4	39.5	43.1	40.9	29.3	-
Employed Part-time	25.7	16.4	15.6	24.6	29.6	29.4	27.6	25.5	26.1	-
Self-employed	0.3	1.2	3.1	4.9	6.5	6.8	6.9	7.1	6.5	-
Unemployed	7.9	5.9	3.7	3.5	2.8	2.4	2.2	1.9	1.5	-
Other/Inactive	50.9	30.9	25.0	26.0	25.7	21.8	20.2	24.6	36.7	-
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	000.0

Table A4.1: Wage equations for men and women

		Men	Women
Ethnicity [White British]	Indian	0.028 (0.027)	0.018 (0.031)
	Pakistani	-0.035 (0.040)	-0.078 (0.058)
	Bangladeshi	-0.130** (0.064)	0.045 (0.056)
	Black Caribbean	-0.020 (0.033)	0.050* (0.026)
	Black African	-0.144*** (0.028)	-0.006 (0.023)
	Chinese	-0.114** (0.056)	-0.142*** (0.048)
	Born Outside UK	-0.003 (0.010)	0.044*** (0.011)
Religion [Christian]	Buddhist	-0.101** (0.050)	0.013 (0.051)
	Hindu	-0.071** (0.028)	-0.005 (0.034)
	Jewish	0.211*** (0.054)	0.151*** (0.046)
	Muslim	-0.108*** (0.029)	0.001 (0.043)
	Sikh	-0.020 (0.036)	-0.017 (0.042)
	No Religion	-0.002 (0.006)	0.011 (0.007)
Disability [Non-disabled]	Illness	-0.017*** (0.007)	-0.019** (0.008)
	Disability	-0.065*** (0.010)	-0.045*** (0.011)
Sexual Orientation [Married/Cohabiting]	Single	-0.111*** (0.008)	-0.056*** (0.006)
	Same Sex Couple	-0.001 (0.032)	0.073*** (0.027)
Children		0.046*** (0.005)	-0.041*** (0.006)
Age Bands	16-19	-0.610***	-0.439***

[40-44]		(0.017)	(0.019)
	20-24	-0.336***	-0.301***
		(0.011)	(0.011)
	25-29	-0.223***	-0.171***
		(0.010)	(0.010)
	30-34	-0.094***	-0.065***
		(0.009)	(0.011)
	35-39	-0.032***	0.013
		(0.009)	(0.011)
	45-49	0.024**	-0.020**
		(0.010)	(0.010)
	50-54	0.018*	-0.016
		(0.010)	(0.011)
	55-59	-0.025**	-0.039***
		(0.011)	(0.012)
	60-64	-0.082***	
		(0.013)	
Occupation	Manager	0.594***	0.588***
[Elementary		(0.010)	(0.013)
Occupations]			
	Professional	0.562***	0.637***
		(0.011)	(0.013)
	Technical	0.403***	0.451***
		(0.009)	(0.012)
	Admin/Secretarial	0.198***	0.280***
		(0.011)	(0.011)
	Skilled Trade	0.171***	0.071***
		(0.008)	(0.021)
	Personal Services	-0.012	0.058***
		(0.016)	(0.012)
	Sales	0.071***	0.099***
		(0.013)	(0.013)
	Machine Operatives	0.088***	0.088***
		(0.008)	(0.015)
Qualification Level	Level 4 or More	0.342***	0.359***
[No Qualifications]		(0.010)	(0.012)
	Level 3	0.192***	0.198***
		(0.010)	(0.012)
	Level 2	0.125***	0.130***
		(0.009)	(0.011)

	Less than 2	0.081*** (0.010)	0.089*** (0.011)
	Other	0.061*** (0.011)	0.089*** (0.015)
Intercept		2.018*** (0.012)	1.814*** (0.014)
Adjusted R ²		0.445	0.448
Observations		33178	21838

Notes:

Robust standard errors in parenthesis

* *Significant at 10%*

** *Significant at 5%*

*** *Significant at 1%*

Table A5.1a: Wage equations by education level (men)

		Level 4 or More	Level 3	Level 2	Less than Level 2	Other Qualifications	No Qualifications
Ethnicity [While British]	Indian	-0.005 (0.039)	0.119 (0.139)	0.100 (0.081)	-0.053 (0.150)	0.010 (0.046)	0.132 (0.081)
	Pakistani	0.071 (0.066)	-0.209* (0.115)	0.015 (0.157)	0.032 (0.158)	-0.075 (0.069)	-0.119 (0.095)
	Bangladeshi	0.076 (0.094)	-0.078 (0.164)	-0.228 (0.216)	-0.207 (0.128)	-0.136 (0.105)	-0.369* (0.191)
	Black Caribbean	-0.095 (0.087)	0.007 (0.075)	-0.013 (0.050)	0.088 (0.056)	-0.116 (0.087)	-0.005 (0.134)
	Black African	-0.162*** (0.043)	0.003 (0.092)	-0.113** (0.051)	0.183 (0.142)	-0.172*** (0.063)	0.039 (0.084)
	Chinese	-0.112* (0.066)	0.220*** (0.047)	-0.872*** (0.235)	-0.162 (0.119)	0.023 (0.085)	-0.022 (0.191)
	Born Outside UK	-0.011 (0.017)	0.009 (0.031)	-0.039 (0.025)	-0.046 (0.037)	0.010 (0.024)	-0.050* (0.027)
Religion [Christian]	Buddhist	-0.148* (0.083)	0.071 (0.069)	0.036 (0.089)	-0.176 (0.115)	-0.021 (0.096)	-0.295 (0.218)
	Hindu	-0.069 (0.043)	-0.066 (0.152)	-0.088 (0.076)	-0.000 (0.130)	-0.023 (0.048)	-0.158* (0.082)
	Jewish	0.201***	0.111	0.393**	0.354	0.264*	0.210

		(0.059)	(0.187)	(0.161)	(0.265)	(0.159)	(0.277)
	Muslim	-0.118**	-0.003	-0.024	-0.045	-0.116**	-0.166***
		(0.051)	(0.093)	(0.133)	(0.112)	(0.049)	(0.061)
	Sikh	0.039	-0.069	0.050	0.033	-0.039	-0.186*
		(0.053)	(0.147)	(0.146)	(0.175)	(0.077)	(0.097)
	No Religion	-0.008	0.002	-0.009	-0.005	0.042*	0.005
		(0.011)	(0.014)	(0.013)	(0.015)	(0.021)	(0.018)
Disability	Illness	-0.016	-0.017	0.001	-0.033*	0.001	-0.037**
[Non-disabled]		(0.013)	(0.017)	(0.013)	(0.017)	(0.021)	(0.019)
	Disability	-0.073***	-0.074***	-0.081***	-0.041	-0.057*	-0.034
		(0.021)	(0.025)	(0.020)	(0.025)	(0.030)	(0.027)
Sexual Orientation	Single	-0.127***	-0.108***	-0.105***	-0.117***	-0.091***	-0.085***
[Married/Cohabiting]		(0.015)	(0.018)	(0.017)	(0.019)	(0.026)	(0.022)
	Same Sex Couple	0.016	0.028	0.080	-0.229*	-0.028	0.091
		(0.045)	(0.122)	(0.060)	(0.119)	(0.111)	(0.117)
Children		0.074***	0.043***	0.018	0.018	0.035*	0.008
		(0.010)	(0.012)	(0.011)	(0.013)	(0.020)	(0.018)
Age Bands	16-19	-0.603***	-0.624***	-0.689***	-0.605***	-0.375***	-0.408***
[40-44]		(0.093)	(0.039)	(0.031)	(0.032)	(0.080)	(0.046)
	20-24	-0.456***	-0.357***	-0.302***	-0.299***	-0.210***	-0.154***
		(0.023)	(0.026)	(0.023)	(0.026)	(0.039)	(0.044)
	25-29	-0.273***	-0.221***	-0.172***	-0.197***	-0.166***	-0.137***
		(0.018)	(0.022)	(0.020)	(0.023)	(0.034)	(0.035)

	30-34	-0.102 ^{***}	-0.098 ^{***}	-0.108 ^{***}	-0.110 ^{***}	-0.054 [*]	-0.004
		(0.017)	(0.022)	(0.022)	(0.024)	(0.033)	(0.032)
	35-39	-0.024	-0.028	-0.017	-0.055 ^{***}	-0.089 ^{***}	0.022
		(0.017)	(0.024)	(0.020)	(0.021)	(0.033)	(0.031)
	45-49	0.017	0.051 ^{**}	0.004	-0.026	0.016	0.102 ^{***}
		(0.018)	(0.024)	(0.020)	(0.025)	(0.031)	(0.032)
	50-54	0.026	0.026	-0.007	0.019	-0.046	0.094 ^{***}
		(0.019)	(0.025)	(0.023)	(0.028)	(0.032)	(0.030)
	55-59	-0.020	-0.016	-0.054 ^{**}	0.026	-0.073 ^{**}	0.040
		(0.022)	(0.027)	(0.022)	(0.033)	(0.036)	(0.031)
	60-64	-0.117 ^{***}	-0.151 ^{***}	-0.080 ^{***}	-0.134 ^{***}	-0.034	-0.004
		(0.033)	(0.036)	(0.025)	(0.042)	(0.035)	(0.032)
Occupation [Elementary Occupations]	Manager	0.791 ^{***}	0.603 ^{***}	0.501 ^{***}	0.498 ^{***}	0.611 ^{***}	0.460 ^{***}
		(0.028)	(0.028)	(0.021)	(0.022)	(0.035)	(0.041)
	Professional	0.694 ^{***}	0.565 ^{***}	0.541 ^{***}	0.536 ^{***}	0.755 ^{***}	0.523 ^{***}
		(0.028)	(0.032)	(0.034)	(0.044)	(0.041)	(0.079)
	Technical	0.506 ^{***}	0.446 ^{***}	0.417 ^{***}	0.414 ^{***}	0.537 ^{***}	0.456 ^{***}
		(0.028)	(0.027)	(0.019)	(0.023)	(0.033)	(0.041)
	Admin/Secretarial	0.309 ^{***}	0.251 ^{***}	0.199 ^{***}	0.201 ^{***}	0.207 ^{***}	0.216 ^{***}
		(0.033)	(0.028)	(0.021)	(0.029)	(0.041)	(0.039)
	Skilled Trade	0.266 ^{***}	0.249 ^{***}	0.179 ^{***}	0.100 ^{***}	0.176 ^{***}	0.135 ^{***}
	(0.033)	(0.025)	(0.016)	(0.018)	(0.027)	(0.020)	
	Personal Services	0.072	0.005	0.031	-0.056	0.101 ^{**}	-0.061

		(0.045)	(0.040)	(0.028)	(0.036)	(0.046)	(0.054)
	Sales	0.169 ^{***}	0.119 ^{***}	0.115 ^{***}	0.023	0.010	0.057
		(0.040)	(0.034)	(0.024)	(0.030)	(0.039)	(0.036)
	Machine Operatives	0.067 [*]	0.097 ^{***}	0.087 ^{***}	0.087 ^{***}	0.132 ^{***}	0.099 ^{***}
		(0.041)	(0.028)	(0.017)	(0.016)	(0.018)	(0.017)
Intercept		2.227 ^{***}	2.173 ^{***}	2.169 ^{***}	2.152 ^{***}	2.023 ^{***}	1.979 ^{***}
		(0.031)	(0.030)	(0.022)	(0.022)	(0.029)	(0.029)
Adjusted R ²		0.307	0.363	0.321	0.393	0.291	0.221
Observations		10680	5173	7206	4146	2942	3031

Notes:

Robust standard errors in parenthesis

** Significant at 10%*

*** Significant at 5%*

**** Significant at 1%*

Reference groups in brackets

Table A5.1b: Wage equations by education level (women)

		Level 4 or More	Level 3	Level 2	Less than Level 2	Other Qualifications	No Qualifications
Ethnicity [White British]	Indian	0.019 (0.046)	0.080 (0.079)	-0.012 (0.149)	0.018 (0.119)	-0.002 (0.061)	0.031 (0.116)
	Pakistani	0.047 (0.095)	-0.298 ^{***} (0.114)	-0.288 [*] (0.170)	0.005 (0.137)	-0.108 (0.221)	-0.180 (0.163)
	Bangladeshi	0.155 [*] (0.088)	-0.144 (0.099)	0.155 (0.095)	-0.002 (0.150)	-	-0.060 (0.048)
	Black Caribbean	-0.009 (0.045)	-0.094 (0.087)	0.134 ^{***} (0.043)	0.144 ^{**} (0.056)	0.044 (0.080)	0.151 (0.096)
	Black African	0.014 (0.034)	-0.037 (0.096)	-0.025 (0.067)	0.088 (0.099)	-0.009 (0.051)	-0.064 (0.077)
	Chinese	0.078 [*] (0.041)	-0.107 (0.208)	-0.540 ^{**} (0.270)	-0.458 (0.301)	-0.347 ^{***} (0.089)	-0.415 ^{**} (0.166)
	Born Outside UK	0.011 (0.016)	-0.025 (0.038)	0.053 [*] (0.029)	-0.007 (0.040)	0.108 ^{***} (0.030)	0.076 ^{**} (0.032)
Religion [Christian]	Buddhist	0.003 (0.051)	0.142 (0.251)	0.123 (0.238)	0.184 (0.313)	-0.092 (0.117)	0.024 (0.149)
	Hindu	0.011 (0.049)	0.048 (0.086)	0.090 (0.144)	0.082 (0.120)	0.019 (0.074)	-0.267 ^{**} (0.134)
	Jewish	0.120 ^{**}	0.149	0.153 ^{**}	0.313	0.139	0.156

		(0.055)	(0.151)	(0.069)	(0.208)	(0.278)	(0.208)
	Muslim	-0.020	0.110	0.019	-0.101	-0.072	0.082
		(0.081)	(0.078)	(0.090)	(0.120)	(0.130)	(0.113)
	Sikh	0.082	-0.176*	-0.085	0.130	-0.131	-0.101
		(0.068)	(0.106)	(0.154)	(0.131)	(0.108)	(0.134)
	No Religion	0.006	0.004	0.003	0.030	0.030	-0.003
		(0.011)	(0.018)	(0.016)	(0.019)	(0.031)	(0.027)
Disability	Illness	-0.009	-0.005	-0.014	-0.041**	-0.033	-0.040*
[Non-disabled]		(0.013)	(0.022)	(0.016)	(0.017)	(0.036)	(0.024)
	Disability	-0.065***	-0.025	-0.099***	-0.003	0.005	0.003
		(0.021)	(0.029)	(0.024)	(0.027)	(0.048)	(0.031)
Sexual Orientation	Single	-0.051***	-0.057***	-0.054***	-0.035**	-0.096***	-0.049**
[Married/Cohabiting]		(0.010)	(0.015)	(0.013)	(0.017)	(0.028)	(0.021)
	Same Sex Couple	0.072**	0.093	-0.018	0.188**	0.056	0.189
		(0.033)	(0.087)	(0.078)	(0.080)	(0.040)	(0.119)
Children		-0.043***	-0.066***	-0.059***	-0.052***	-0.061**	0.003
		(0.011)	(0.016)	(0.014)	(0.014)	(0.029)	(0.022)
Age Bands	16-19	-0.515***	-0.519***	-0.455***	-0.485***	-0.229***	-0.223***
[40-44]		(0.075)	(0.040)	(0.031)	(0.042)	(0.081)	(0.063)
	20-24	-0.397***	-0.353***	-0.231***	-0.230***	-0.273***	-0.089*
		(0.019)	(0.027)	(0.021)	(0.031)	(0.052)	(0.046)
	25-29	-0.213***	-0.197***	-0.143***	-0.088***	-0.176***	0.026
		(0.016)	(0.026)	(0.025)	(0.028)	(0.044)	(0.060)

	30-34	-0.079 ^{***}	-0.143 ^{***}	-0.045 [*]	-0.050 ^{**}	-0.066	0.002
		(0.017)	(0.032)	(0.023)	(0.025)	(0.043)	(0.039)
	35-39	0.030 [*]	-0.031	0.009	-0.011	0.059	-0.010
		(0.018)	(0.029)	(0.024)	(0.024)	(0.050)	(0.043)
	45-49	0.000	-0.103 ^{***}	-0.045 ^{**}	0.003	-0.049	0.048
		(0.016)	(0.032)	(0.022)	(0.021)	(0.045)	(0.032)
	50-54	0.009	-0.087 ^{***}	-0.029	-0.025	-0.039	0.028
		(0.018)	(0.032)	(0.026)	(0.026)	(0.041)	(0.033)
	55-59	-0.009	-0.138 ^{***}	-0.059 ^{**}	-0.055 ^{**}	-0.075	0.055 [*]
		(0.022)	(0.036)	(0.029)	(0.025)	(0.047)	(0.033)
Occupation [Elementary Occupations]	Manager	0.812 ^{***}	0.527 ^{***}	0.498 ^{***}	0.477 ^{***}	0.572 ^{***}	0.427 ^{***}
		(0.038)	(0.039)	(0.032)	(0.033)	(0.045)	(0.048)
	Professional	0.767 ^{***}	0.572 ^{***}	0.561 ^{***}	0.571 ^{***}	0.807 ^{***}	0.776 ^{***}
		(0.036)	(0.054)	(0.055)	(0.050)	(0.050)	(0.208)
	Technical	0.581 ^{***}	0.466 ^{***}	0.439 ^{***}	0.384 ^{***}	0.569 ^{***}	0.409 ^{***}
		(0.036)	(0.038)	(0.028)	(0.030)	(0.040)	(0.039)
	Admin/Secretarial	0.334 ^{***}	0.302 ^{***}	0.264 ^{***}	0.290 ^{***}	0.379 ^{***}	0.282 ^{***}
		(0.037)	(0.035)	(0.025)	(0.023)	(0.029)	(0.025)
	Skilled Trade	0.056	0.124 ^{**}	0.045	0.084 [*]	0.171 ^{***}	0.024
		(0.084)	(0.057)	(0.042)	(0.049)	(0.048)	(0.045)
Personal Services	0.188 ^{***}	0.063 [*]	0.022	0.060 ^{**}	0.053	0.061 ^{**}	
	(0.038)	(0.036)	(0.026)	(0.028)	(0.039)	(0.028)	
Sales	0.176 ^{***}	0.201 ^{***}	0.105 ^{***}	0.057 ^{**}	0.061	0.029	

		(0.043)	(0.041)	(0.028)	(0.027)	(0.038)	(0.027)
	Machine Operatives	0.299 ^{***}	0.148 ^{**}	0.077 ^{**}	0.075 ^{**}	0.081 ^{**}	0.066 ^{***}
		(0.087)	(0.071)	(0.038)	(0.033)	(0.032)	(0.025)
Intercept		2.051 ^{***}	2.069 ^{***}	1.978 ^{***}	1.916 ^{***}	1.850 ^{***}	1.763 ^{***}
		(0.038)	(0.041)	(0.030)	(0.027)	(0.041)	(0.032)
Adjusted R ²		0.331	0.319	0.303	0.280	0.351	0.196
Observations		8579	3059	4165	3075	1358	1602

*Notes:**Robust standard errors in parenthesis*** Significant at 10%**** Significant at 5%***** Significant at 1%**Reference groups in brackets*

Table A5.2a: Wage equations by disability status (men)

		Non-disabled	Disabled
Ethnicity [White British]	Indian	0.027 (0.028)	-0.025 (0.114)
	Pakistani	-0.032 (0.041)	0.059 (0.123)
	Bangladeshi	-0.089 (0.063)	-0.454*** (0.099)
	Black Caribbean	-0.029 (0.038)	0.115 (0.070)
	Black African	-0.140*** (0.029)	-0.194 (0.130)
	Chinese	-0.171*** (0.058)	0.109 (0.290)
	Born Outside UK	-0.006 (0.011)	-0.017 (0.040)
Religion [Christian]	Buddhist	-0.086* (0.048)	-0.353 (0.288)
	Hindu	-0.057* (0.030)	-0.188 (0.127)
	Jewish	0.189*** (0.061)	0.283 (0.233)
	Muslim	-0.113*** (0.032)	-0.127 (0.094)
	Sikh	-0.024 (0.041)	0.041 (0.129)
	No Religion	-0.003 (0.007)	0.039* (0.020)
Sexual Orientation [Married/Cohabiting]	Single	-0.114*** (0.009)	-0.118*** (0.030)
	Same Sex Couple	0.001 (0.035)	0.047 (0.146)
Children		0.040*** (0.006)	0.079*** (0.019)
Age Bands [40-44]	16-19	-0.622*** (0.018)	-0.468*** (0.072)
	20-24	-0.346*** (0.012)	-0.271*** (0.048)

	25-29	-0.232***	-0.108**
		(0.011)	(0.044)
	30-34	-0.096***	-0.060*
		(0.011)	(0.035)
	35-39	-0.034***	-0.009
		(0.010)	(0.035)
	45-49	0.021*	0.065*
		(0.011)	(0.033)
	50-54	0.011	0.089***
		(0.012)	(0.033)
	55-59	-0.045***	0.059*
		(0.014)	(0.034)
	60-64	-0.110***	-0.005
		(0.017)	(0.039)
Qualification Level	Level 4 or More	0.339***	0.302***
[No Qualifications]		(0.012)	(0.034)
	Level 3	0.190***	0.161***
		(0.012)	(0.031)
	Level 2	0.060***	0.054***
		(0.005)	(0.014)
	Less than 2	0.078***	0.081***
		(0.012)	(0.031)
	Other	0.060***	0.044
		(0.013)	(0.034)
Occupation	Manager	0.591***	0.571***
[Elementary		(0.011)	(0.036)
Occupations]	Professional	0.555***	0.633***
		(0.012)	(0.037)
	Technical	0.396***	0.450***
		(0.011)	(0.034)
	Admin/Secretarial	0.201***	0.212***
		(0.013)	(0.039)
	Skilled Trade	0.168***	0.182***
		(0.010)	(0.030)
	Personal Services	0.002	-0.021
		(0.019)	(0.044)
	Sales	0.073***	0.040
		(0.015)	(0.040)
	Machine Operatives	0.087***	0.100***
		(0.009)	(0.029)

Intercept	2.035*** (0.013)	1.870*** (0.041)
Adjusted R ²	0.447	0.409
Observations	25346	2596

Notes:

Robust standard errors in parenthesis

** Significant at 10%*

*** Significant at 5%*

**** Significant at 1%*

Table A5.2b: Wage equations by disability status (women)

		Non-disabled	Disabled
Ethnicity [While British]	Indian	-0.004 (0.033)	0.009 (0.095)
	Pakistani	-0.080 (0.065)	0.032 (0.137)
	Bangladeshi	0.110* (0.064)	-0.208* (0.116)
	Black Caribbean	0.012 (0.031)	0.232** (0.091)
	Black African	-0.008 (0.024)	0.181** (0.081)
	Chinese	-0.159*** (0.056)	0.068 (0.087)
	Born Outside UK	0.044*** (0.012)	0.002 (0.048)
Religion [Christian]	Buddhist	0.009 (0.059)	0.146* (0.088)
	Hindu	-0.003 (0.038)	0.073 (0.098)
	Jewish	0.159*** (0.058)	0.047 (0.105)
	Muslim	-0.030 (0.050)	0.067 (0.092)
	Sikh	-0.010 (0.046)	0.100 (0.119)
	No Religion	0.004 (0.008)	0.020 (0.026)
Sexual Orientation [Married/Cohabiting]	Single	-0.050*** (0.007)	-0.083*** (0.022)
	Same Sex Couple	0.082*** (0.031)	0.103 (0.095)
Children		-0.048*** (0.007)	-0.058*** (0.022)
Age Bands [40-44]	16-19	-0.456*** (0.021)	-0.409*** (0.066)
	20-24	-0.308*** (0.012)	-0.275*** (0.042)
	25-29	-0.172***	-0.185***

		(0.011)	(0.041)
	30-34	-0.070***	-0.107***
		(0.012)	(0.040)
	35-39	0.011	0.008
		(0.012)	(0.035)
	45-49	-0.029**	-0.022
		(0.011)	(0.030)
	50-54	-0.025**	0.014
		(0.013)	(0.035)
	55-59	-0.040***	-0.067*
		(0.014)	(0.037)
Qualification Level	Level 4 or More	0.352***	0.345***
[No Qualifications]		(0.014)	(0.035)
	Level 3	0.192***	0.218***
		(0.014)	(0.035)
	Level 2	0.066***	0.034**
		(0.007)	(0.017)
	Less than 2	0.089***	0.092***
		(0.014)	(0.034)
	Other	0.092***	0.090**
		(0.017)	(0.041)
Occupation	Manager	0.599***	0.527***
[Elementary		(0.015)	(0.042)
Occupations]	Professional	0.638***	0.651***
		(0.015)	(0.046)
	Technical	0.450***	0.512***
		(0.013)	(0.036)
	Admin/Secretarial	0.274***	0.314***
		(0.013)	(0.030)
	Skilled Trade	0.072***	0.077
		(0.026)	(0.051)
	Personal Services	0.053***	0.105***
		(0.014)	(0.036)
	Sales	0.097***	0.115***
		(0.015)	(0.039)
	Machine Operatives	0.090***	0.097**
		(0.018)	(0.043)
Intercept		1.826***	1.756***
		(0.016)	(0.039)

Adjusted R ²	0.452	0.402
Observations	17002	1843

Notes:

Robust standard errors in parenthesis

** Significant at 10%*

*** Significant at 5%*

**** Significant at 1%*

Table A5.3: Predicted pay and pay gaps by disability, gender, ethnicity and religion

	Men				Women			
	Predicted Pay	Lower Bound	Upper Bound	Pay Penalty	Predicted Pay	Lower Bound	Upper Bound	Pay Penalty
Non-disabled								
White British, Christian	9.60	9.49	9.72	Ref	7.13	6.95	7.31	-24.9%
White British, Jewish	11.60	10.89	12.32	20.8%	8.36	7.83	8.89	-11.9%
Indian, Hindu	9.32	9.06	9.58	NS	7.08	6.79	7.38	-25.4%
Indian, Sikh	9.63	9.30	9.97	NS	7.03	6.74	7.33	-25.9%
Pakistani, Muslim	8.31	8.05	8.57	-13.5%	6.39	6.07	6.71	-32.7%
Bangladeshi, Muslim	7.85	7.40	8.30	-18.3%	7.72	7.32	8.13	-18.6%
Black Caribbean, Christian	9.33	8.96	9.70		7.21	6.93	7.50	-24.0%
Black African, Christian	8.35	8.08	8.61	-13.1%	7.07	6.83	7.31	-25.5%
Chinese, No Religion	8.07	7.58	8.55	-16.0%	6.11	5.73	6.48	-35.7%
Disabled								
White British, Christian	8.22	7.92	8.52	Ref	6.46	6.11	6.81	-21.4%
White British, Jewish	10.91	8.31	13.51	NS	6.77	5.98	7.56	-17.6%
Indian, Hindu	6.64	5.65	7.64	-19.2%	7.01	6.34	7.68	-14.7%
Indian, Sikh	8.35	7.63	9.08	NS	7.20	6.49	7.92	-12.4%
Pakistani, Muslim	7.68	6.91	8.45	-6.6%	7.13	6.25	8.02	-13.2%
Bangladeshi, Muslim	4.60	4.26	4.94	-44.0%	5.61	5.08	6.15	-31.7%
Black Caribbean, Christian	9.23	8.49	9.96	NS	8.14	7.27	9.02	NS
Black African, Christian	6.77	5.86	7.69	-17.6%	7.74	6.97	8.51	-5.9%

Chinese, No Religion	9.53	6.74	12.33	NS	7.05	6.33	7.78	-14.2%
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Notes:

Workers aged 40-44; born in the UK; married or cohabiting, but without dependent children; with Level 2 qualification or apprenticeship; working in skilled/trade occupations.

NS = the gap is not statistically significant

Ref = reference group

Table A5.4: Predicted pay and pay gaps by disability, gender and age (singles with no children)

Non-Disabled	Men				Women			
	Predicted Pay	Lower Bound	Upper Bound	Pay Penalty	Predicted Pay	Lower Bound	Upper Bound	Pay Penalty
16-19	4.60	4.53	4.68	-46.3%	4.30	4.17	4.43	-49.8%
20-24	6.07	6.00	6.14	-29.2%	4.99	4.86	5.11	-41.8%
25-29	6.80	6.72	6.88	-20.7%	5.71	5.57	5.86	-33.4%
30-34	7.78	7.68	7.89	-9.2%	6.33	6.16	6.49	-26.2%
35-39	8.29	8.18	8.40	NS	6.86	6.68	7.04	-20.0%
40-44	8.57	8.46	8.69	Ref	6.78	6.61	6.96	-20.9%
45-49	8.75	8.63	8.87	NS	6.59	6.42	6.76	-23.1%
50-54	8.67	8.54	8.79	NS	6.62	6.44	6.79	-22.8%
55-59	8.19	8.07	8.31	-4.4%	6.52	6.34	6.69	-24.0%
60-64	7.68	7.54	7.82	-10.4%				
Disabled								
16-19	4.57	4.29	4.86	-37.4%	3.95	3.65	4.24	-45.9%
20-24	5.57	5.31	5.83	-23.8%	4.52	4.26	4.78	-38.2%
25-29	6.56	6.22	6.89	-10.3%	4.94	4.64	5.25	-32.3%
30-34	6.88	6.58	7.18	NS	5.34	5.03	5.66	-26.8%
35-39	7.24	6.91	7.57	NS	6.00	5.66	6.33	-17.9%
40-44	7.31	6.96	7.65	Ref	5.95	5.61	6.28	-18.6%
45-49	7.80	7.47	8.12	NS	5.82	5.51	6.13	-20.4%
50-54	7.98	7.67	8.30	9.3%	6.03	5.69	6.37	-17.5%

55-59	7.75	7.44	8.06	NS	5.56	5.25	5.87	-23.9%
60-64	7.27	6.95	7.59					

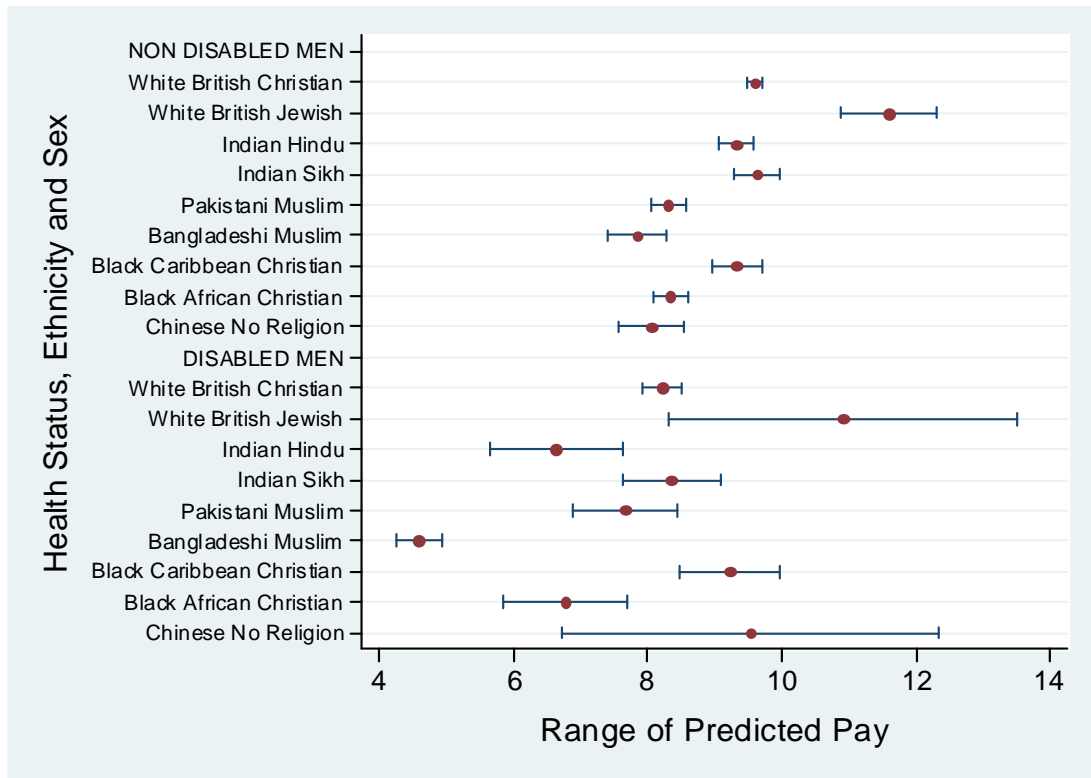
Notes:

Other characteristics: White British; Christian workers; born in the UK; single and without dependent children; with Level 2 qualification or apprenticeship; working in skilled/trade occupations.

NS = the gap is not statistically significant

Ref = reference group

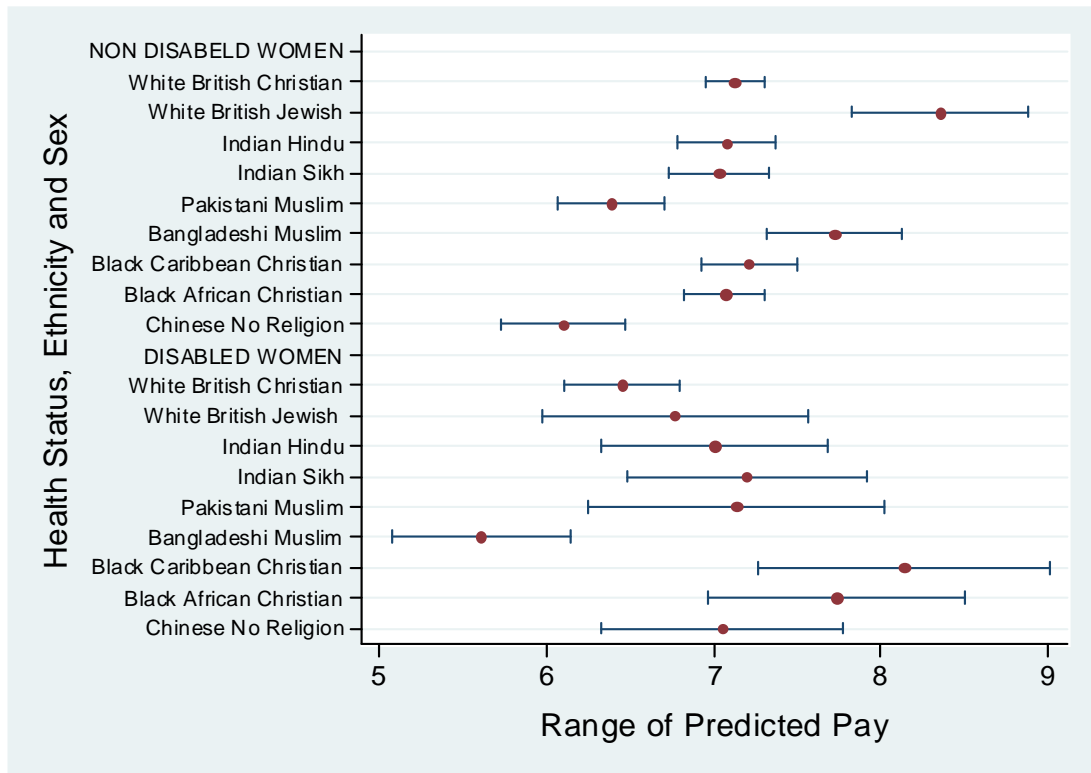
Figure A5.1a: Range of predicted pay by disability, ethnicity and religion: men



Note:

Other characteristics: aged 40-44; born in the UK; with Level 2 qualification and working in skilled/trade occupations; who are single and without dependent children.

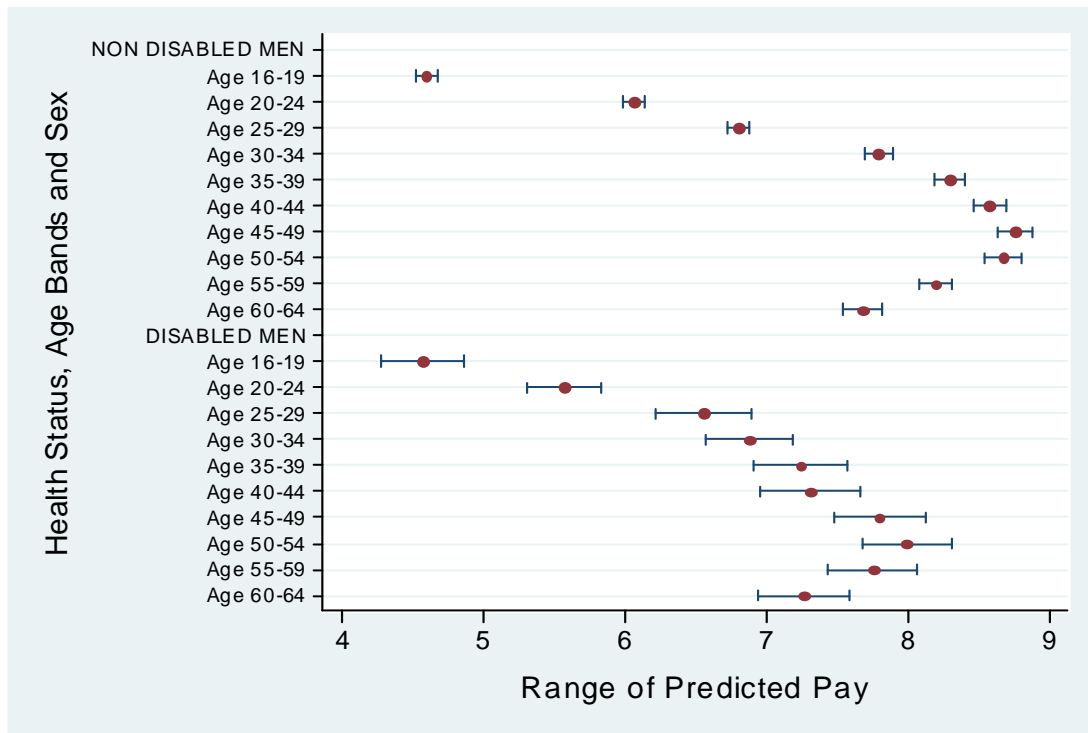
Figure A5.1b: Range of predicted pay by disability, ethnicity and religion: women



Note:

Other characteristics: aged 40-44; born in the UK; with Level 2 qualification and working in skilled/trade occupations; who are single and without dependent children.

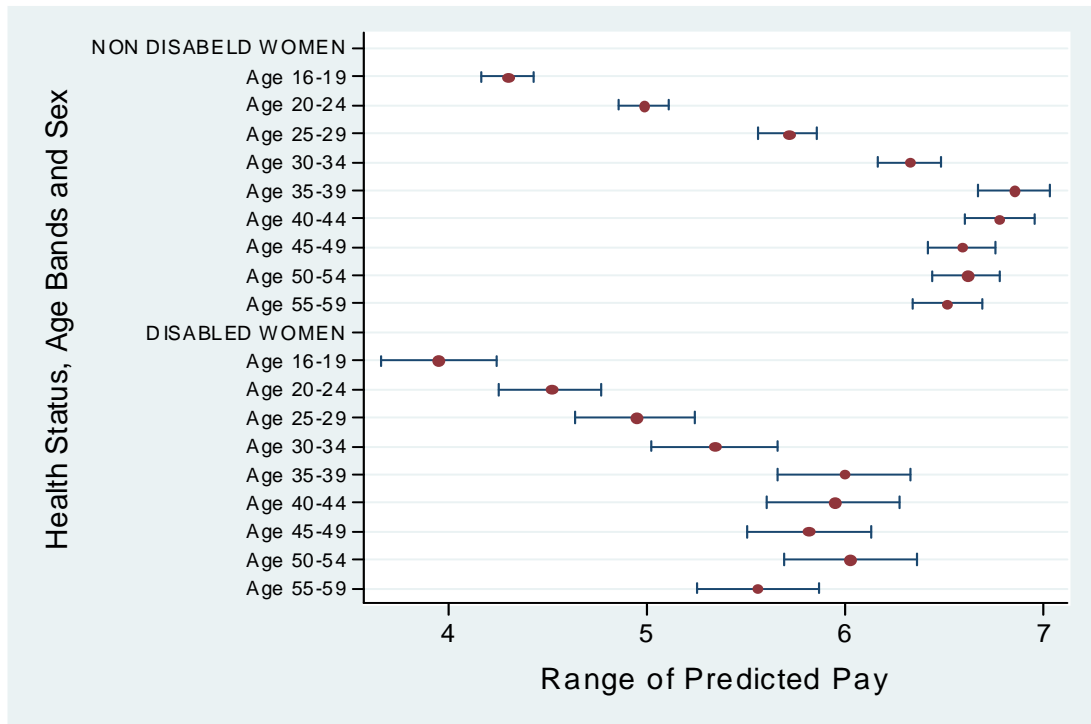
Figure A5.2a: Range of predicted pay by disability and age bands: men



Note:

Other characteristics: White British Christian workers born in the UK; with Level 2 qualification and working in skilled/trade occupations; single and without dependent children.

**Figure A5.2b: Range of predicted pay by disability and age bands:
women**



Note:

Other characteristics: White British Christian workers born in the UK; with Level 2 qualification and working in skilled/trade occupations; single and without dependent children.

Table A6.1: Wage distributions by gender and ethnicity

	N	p10	p25	p50	p75	P90	St. Dev.
Men							
White British	33451	6.03	7.82	10.96	16.18	23.08	10.53
Indian	756	5.69	7.52	11.19	17.12	24.17	8.71
Pakistani	291	4.90	6.05	7.95	12.03	19.61	7.36
Bangladeshi	68	4.91	5.59	7.41	13.08	17.11	6.50
Black Caribbean	236	5.81	7.78	10.42	14.86	20.58	6.61
Black African	318	5.33	6.75	9.57	13.59	19.69	6.85
Chinese	96	5.20	7.76	12.43	18.45	23.36	8.17
Women							
White British	22100	5.48	6.89	9.33	13.55	18.41	6.50
Indian	497	5.62	7.04	9.69	13.99	19.34	8.02
Pakistani	121	4.78	5.89	7.80	12.75	15.95	5.49
Bangladeshi	33	6.13	7.40	10.26	13.34	17.15	4.41
Black Caribbean	299	5.87	7.74	10.06	14.23	17.43	4.80
Black African	283	5.30	7.13	9.54	12.67	16.14	4.75
Chinese	110	4.56	6.69	10.58	14.41	21.17	6.23

Table A6.2: Wage distribution by gender and religion

	N	p10	p25	p50	p75	P90	St. Dev.
Men							
Christian	28273	5.97	7.78	10.90	16.16	23.09	10.19
Buddhist	110	5.31	7.38	10.52	14.55	21.96	7.50
Hindu	496	5.77	7.36	11.45	17.67	23.95	8.43
Jewish	100	8.22	12.06	17.19	23.48	29.98	9.68
Muslim	688	4.98	6.08	8.23	13.06	19.69	7.94
Sikh	184	5.75	6.96	9.94	14.78	21.55	8.35
No Religion	8047	5.95	7.66	10.86	16.11	23.08	11.12
Women							
Christian	19947	5.46	6.87	9.32	13.49	18.38	6.80
Buddhist	90	5.05	7.49	10.92	14.82	19.22	6.37
Hindu	300	5.66	7.11	9.81	15.34	20.41	6.82
Jewish	83	6.48	9.87	13.17	17.46	23.40	6.67
Muslim	277	4.98	6.35	8.53	13.09	16.64	8.70
Sikh	136	5.44	6.64	8.37	12.05	16.59	4.92
No Religion	4574	5.45	6.98	9.49	13.89	18.89	6.83

Table A6.3: Wage distribution by gender and disability

	N	p10	p25	p50	p75	P90	St. Dev.
Men							
Non-disabled	29006	5.95	7.79	11.01	16.30	23.38	10.88
Disabled	3044	5.67	7.21	9.85	14.09	20.34	7.34
Women							
Non-disabled	19728	5.49	6.95	9.46	13.75	18.70	6.87
Disabled	2247	5.19	6.48	8.72	12.52	17.02	6.75

Table A6.4a: Wage distribution by gender and sexual orientation

	N	p10	p25	p50	p75	P90	St. Dev.
Men							
Married/Cohabiting Men	28166	6.42	8.30	11.66	17.15	24.41	11.11
Single Men	5255	4.44	5.65	7.42	9.99	13.93	5.01
Men in a Same Sex Couple	174	6.56	9.17	13.20	17.34	22.57	8.82
Women							
Married/Cohabiting Women	16212	5.65	7.18	9.72	14.17	19.02	7.20
Single Women	5736	4.94	6.00	7.84	10.90	15.20	5.12
Women in a Same Sex Couple	159	5.98	7.67	12.39	18.11	21.46	6.76

Table A6.4b: Wage distribution by gender and sexual orientation, excluding households with dependent children

	N	p10	p25	p50	p75	P90	St. Dev.
Men							
Married/Cohabiting Men	13352	6.31	8.05	11.03	15.76	22.24	9.13
Single Men	4046	4.83	5.93	7.70	10.27	14.08	4.85
Men in a Same Sex Couple	118	7.76	9.72	13.26	17.68	25.61	9.79
Women							
Married/Cohabiting Women	10123	5.73	7.23	9.63	13.74	18.44	7.12
Single Women	3269	5.02	6.05	7.86	10.56	14.50	4.90
Women in a Same Sex Couple	87	5.95	8.37	13.13	18.21	20.70	5.91

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