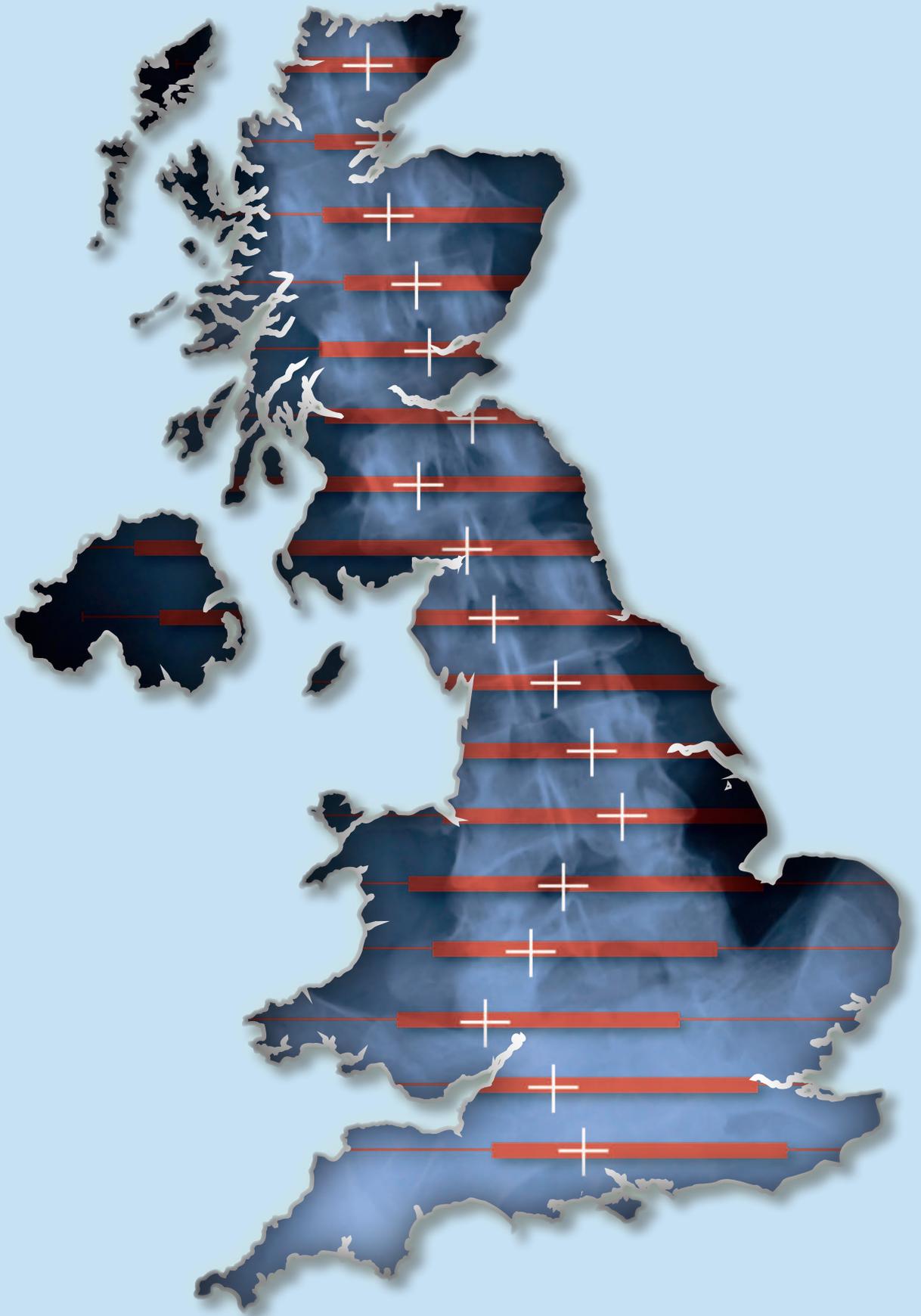


# An Anatomy of Economic Inequality in the UK

Report of the National Equality Panel





# An anatomy of economic inequality in the UK: Report of the National Equality Panel

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# Foreword



Equality matters:

**For individuals**, who deserve to be treated fairly and have the opportunity to fulfil their potential and achieve their aspirations;

**For the economy**, because the economy that will succeed in the future is one that draws on the talents of all, not one which is blinkered by prejudice and marred by discrimination;

**For society**, because an equal society is more cohesive and at ease with itself.

We are determined to tackle the unfairness that holds people back and give everyone the opportunity to succeed – make sure everyone has a fair chance.

We know that disadvantage can come from your gender or ethnicity; your sexual orientation or your disability; your age or your religion or belief or any combination of these. But overarching and interwoven with this is the persistent inequality of social class – your family background and where you were born.

Action to tackle inequality must be based on the most robust and sophisticated analysis of its roots and how it affects people's lives. In order to provide that detailed and profound analysis, in 2008, the Government set up the National Equality Panel, chaired by Professor John Hills.

This report of the National Equality Panel shows clearly how inequality is cumulative over an individual's lifetime and is carried from one generation to the next.

But the report also shows that public policy intervention works. It has played a major role in halting the rise in inequality which was gaining ground in the 1980s. Public policy has narrowed gaps in educational attainment, narrowed the gap between men and women's pay and tackled poverty in retirement.

The National Equality Panel Report shows the key stages in people's lives where public policy intervention is most important and most effective – during the pre-school years, at the transition from education to the workplace and re-entering the labour market after having children.

This National Equality Panel Report sets out undoubted challenges. The important thing now is to acknowledge the importance of those challenges and to use the National Equality Panel's report as the guide to addressing them.

In response to the challenge set out in this report, the Government, building on substantial progress to date, will continue to make the choices that prioritise fairness and aspiration. This challenge will need to be addressed by Government, but also by working in partnership with others including with local government and the voluntary sector. The scale of the challenge set out in the National Equality Panel Report cannot be addressed overnight. It will demand sustained public policy commitment.

I want to warmly thank Professor Hills and his panel for their comprehensive report. This is important work done to the highest standard of professionalism. It is the responsibility of we in Government to match the scale of the challenges with the commensurate focus of Government action.

The work of the National Equality Panel will underpin the response by all strategic public authorities to Clause One of the Equality Bill which places a new legal duty on key public bodies to consider, in all the important decisions they make and all important actions they take, how they can tackle socio-economic inequality.

This is a big challenge which requires sustained and focused action. But for the sake of the right of every individual to reach their full potential, for the sake of a strong and meritocratic economy and to achieve a peaceful and cohesive society, that is the challenge which must be met.



**Harriet Harman**  
**Minister for Women and Equality**  
**January 2010**

# Acknowledgements

As will be evident from the amount of material we are able to present in this volume, we have been greatly supported in our work by a very wide range of organisations and individuals, to all of whom we are most grateful. However, the views and opinions in the Report are those of the Panel and are not necessarily shared by those who have supported us or whose analysis or research we draw upon.

First, we would like to thank the Government Equalities Office for the funding, personnel and other support it has given to us since we started work in October 2008, at the same time as it has rigorously respected our independence.

Second, we are very grateful to all those who submitted evidence to us or came to the consultative events which we organised (see Appendices 5 and 6). These gave us the benefit of their expertise and perspectives and raised many important issues on which we hope the information we present here sheds some more light.

Early in our work we were very generously hosted by a series of universities, research organisations, government departments and the devolved administrations, whose members took great trouble to present relevant research and material focussed on the questions we were asked to investigate (see Appendix 4). As will be seen, we draw on much of this research, and on follow-up work kindly carried out for us. In particular, we are grateful to James Banks and Gemma Tetlow of the Institute for Fiscal Studies for analysis of the distribution of wealth within the English Longitudinal Survey of Ageing.

We also commissioned researchers to carry out specific pieces of detailed research which have pushed forward understanding in this area (see Appendix 7). Thanks to the quality and speed of these exercises, we have been able to draw extensively on their results throughout our Report. The resulting research reports are available on our website.

Throughout our work, our requests for analysis, data and information have been generously and patiently met by officials in a number of government departments and agencies. In particular, we are grateful for analysis carried out for us by the *Households Below Average Income* team in the Department for Wealth and Pensions, by the *Wealth and Assets Survey* team at the Office for National Statistics, officials in the Department for Children, Schools and Families and in the devolved administrations concerned with pupil outcomes at school, and those in what is now the Department of Business, Innovation and Skills concerned with entry into higher education.

We are very grateful for permission from their editors to reproduce figures from the most recent report of the English Longitudinal Survey of Ageing (Figure 11.24) and from *Top Incomes over the Twentieth Century* edited by A.B. Atkinson and T. Piketty (Figures 2A and 2B) and from the Institute for Fiscal Studies to reproduce Figures 11.7 and 11.20.

In preparing the report for publication, the designers and staff of CDS have carried out an exceptional job in helping us to make the material as accessible as possible, and have done so to a very tight timetable.

As a Panel, however, our greatest debt is to our Secretariat and the staff of the Centre for Analysis of Social Exclusion at the London School of Economics who have so ably supported us throughout: Antonino Barbera Mazzola, Jack Cunliffe, Jane Dickson, Zoë Palmer, Cindy Smith and Anna Tamas, led by Giovanni Razzu. Without them it would have been impossible to have embarked on this exercise, let alone to have completed it.

John Hills  
Chair, National Equality Panel

January 2010

# Glossary of terms

## **After Housing Costs (AHC) Income**

The income after deducting housing costs, such as rent, water rates and charges, mortgage payments etc, have been deducted.

## **Age cohort**

A group of people born in the same year or other period.

## **Before Housing Costs (BHC) Income**

The income before deducting housing costs (e.g. rents, mortgage payments etc).

## **Disposable income**

The income left over after income tax and National Insurance are deducted, but including social security benefits and tax credits.

## **Earnings**

The remuneration (wages and salaries) provided directly by employers to employees in return for their supplied labour. In this report, we generally use 'earnings' to refer to weekly amounts and 'wages' to refer to hourly pay.

## **Equality strands**

Social groups covered by equalities legislation including gender, age, ethnicity, religion or belief, disability status, sexual orientation and transgender.

## **Equivalent net income**

Comprises total income from all sources of all household members including dependants, after deducting direct taxes. Income is adjusted for household size and composition, using equivalence scales, which reflect the extent to which households of different size and composition require a different level of income to achieve the same standard of living (see Box 2.1).

## **Gini coefficient**

A international summary indicator of inequalities. It can take values from zero to 100 (in percentage terms) or from zero to one. Zero indicates perfect equality, with every household or individual having the same amount; a value of 100 or one would imply that one household or individual had all of the country's income or wealth.

### **Household reference person (HRP)**

The person responsible for the accommodation. In the case of joint householders, it is the person with the highest income. If there are two or more members with the same income, the HRP is the eldest. In households with a sole householder that person is the household reference person.

### **Individual income**

Income received by each adult in her or his own right from all sources, both before (total) and after (net) deducting direct taxes.

### **Key Stages**

The National Curriculum is divided into four Key Stages according to pupils' ages: Key Stage 1 – Infant School (6-7 years); Key Stage 2 – Junior School (7-11 years); Key Stage 3 – Lower Secondary School (12-13 years); Key Stage 4 – Upper Secondary School (14-16 years).

### **Median, Income**

Median household income divides the population of individuals, when ranked by equivalent net income, into two equal sized groups. The median of the whole population is the same as the 50<sup>th</sup> percentile. The term is also used for the midpoint of the subsets of the income distribution.

### **National Minimum Wage**

A minimum rate of pay that employers are legally obliged to pay their workers. In the UK, the National Minimum Wage from October 2009 for workers over 21 is £5.80 an hour.

### **Pay gap**

The raw gap in pay between two groups, for instance between men and women (gender pay gap) or disabled and non-disabled people (disability pay gap)

### **Pay penalty**

Unexplained component/factor of pay gaps. The pay gap could be accounted for by factors such as different educational qualifications, occupation, etc: what cannot be accounted for by those factors has been defined as representing the pay penalty.

### **Percentiles**

The values which divide a distribution, when ranked by an outcome, such as income, into 100 equal-sized groups. Ten per cent of the population have incomes below the 10<sup>th</sup> percentile, 20 per cent have incomes below the 20<sup>th</sup> percentile and so on.

**Wealth**

The stock of assets of households. Depending on the definition, these can include financial assets, material, property or housing assets (net of liabilities owed), and private pension rights.

**90:10 ratio**

A summary measure of inequality. This is the ratio between the values of an outcome for people 10 per cent from the top and the 10 per cent from the bottom of a distribution. The greater this '90:10 ratio', the more unequal a distribution across most of its range.



# Part 1

## Overall economic inequalities in the UK

### Chapter 1 Introduction

Britain is an unequal country, more so than many other industrial countries and more so than a generation ago. This is manifest in many ways – most obviously in the gap between those who are well off and those who are less well off. But inequalities in people’s economic positions are also related to their characteristics – whether they are men or women, their ages, ethnic backgrounds, and so on. The independent National Equality Panel, was established at the invitation of the Rt. Hon. Harriet Harman, Minister for Equality to report on the relationships between inequalities in economic outcomes and differences related to people’s characteristics.<sup>1</sup>

#### Inequality matters

Readers from different philosophical and political perspectives will come to the material in this report with both varied expectations for what they will see and varied views of what kinds of inequality are justified or unjustified.

Some might argue that inequalities of the kind we describe are inevitable in a modern economy, or are functional in creating incentives that promote overall economic growth. However, comparisons of the kind we make in Chapter 2 with other equally or more economically successful countries, but with lower inequality, undermine arguments about the inevitability or functionality of the extent of the inequalities in the UK that we document. Moreover, the view that greater equality would stifle diversity has to be set against the counter view that it is inequality that suppresses the ability of individuals to develop their talents.<sup>2</sup> Where only certain achievements are valued, and where large disparities in material rewards are used as the yardstick of success and failure, it is hard for those who fall behind to flourish.

<sup>1</sup> Appendix 1 and 2 list the membership of the Panel and present our terms of reference.

<sup>2</sup> As R.H. Tawney wrote, “individual differences, which are a source of social energy, are more likely to ripen and find expression if social inequalities are, as far as is practicable, diminished” (1964, p.57).

For many readers, the sheer scale of the inequalities in outcomes which we present will be shocking. Whether or not people's positions reflect some form of 'merit' or 'desert', the sheer degree of difference in wealth, for instance, may imply that it is impossible to create as cohesive a society as they would like. Wide inequalities erode the bonds of common citizenship and recognition of human dignity across economic divides. A number of analysts have pointed to the ways in which large inequalities in the kinds of economic outcome we look at are associated with societies having lower levels of happiness or well-being in other respects, and to the social problems and economic costs resulting from these.<sup>3</sup>

When considering whether the degree of inequality is 'justified' or not, an important distinction lies in how people judge inequalities between groups such as those between women and men or between ethnic groups, and inequalities within those groups. Where differentials in, say earnings, reflect differences in work experience, creating differences by age, this might be seen as reasonable. But systematic differences between groups – for instance, by gender, ethnicity or religion – unrelated to experience or qualifications, constitute what would be seen by some as being the most central issue, violating fundamental principles of social justice, rooted in recognition of equal worth and respect. At the same time, even if such differences were eliminated completely so that, for instance, men and women enjoyed equal incomes, but there remained large gaps between low and high income men and low and high income women respectively, many would still not regard the resulting distribution as fair, as society as a whole would remain more unequal than they thought was just.

This is, in part, because a crucial test of whether inequalities in outcomes are seen as fair or unfair will depend on whether they reflect choices made against a background where the opportunities open to people were equal to start with, or whether they stem from aspects of their lives over which they have manifestly little control. Most people and all the main political parties in Britain subscribe to the ideal of 'equality of opportunity'. The systematic nature of many of the differentials we present, and the ways in which advantages and disadvantages are reinforced across the life cycle (as we describe in Chapter 11), make it hard, however, to sustain an argument that what we show is the result of personal choices against a background of equality of opportunity, however defined. Inequality in turn then acts as a barrier to social mobility.

## Aims of this report

This report documents the relationships between the distributions of various kinds of economic outcome on the one hand and people's characteristics and circumstances on the other. In addition to documenting the extent of inequalities overall, it also addresses questions such as: how far up or down do people with different characteristics typically come in the distributions of, say, earnings or of wealth? Specifically, the outcomes we examine are:

- educational outcomes, including the range of achievement of young people at 16 (GCSE points scores or their equivalent) and the highest educational qualifications of adults;

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<sup>3</sup> See the extensive evidence in Layard (2005) or Pickett and Wilkinson (2009).

- employment status of the adult population;
- earnings of those in paid employment, both hourly wages and weekly earnings;
- individual incomes, received by each adult in their own right from all sources in total, both before and after deducting direct taxes;
- equivalent net income – income calculated as the total receipts of the household of which someone is a member, adjusted for the size of the household and after allowing for benefits and direct taxes (the measure of income that is used in the UK’s official income distribution statistics); and
- wealth – the stock of assets of households taking the form of financial, property or housing assets (net of liabilities), including private pension rights.

We present information on the distributions of these outcomes for the population as a whole, with indications, where possible, of how they have changed in the last decade or more, and of how the UK compares with other industrialised countries. But our main focus is on the position of different social groups within the distributions of each outcome. We present the information that we have been able to assemble showing breakdowns not only relating to six of the ‘strands’ covered by equalities legislation – gender, age, ethnicity, religion or belief, disability status, and sexual orientation – but also by socio-economic class, housing tenure, nation or region, and area (by level of deprivation in the neighbourhood).<sup>4</sup>

## Structure of the report

The structure of the main body of the report is as follows. In Chapter 2, we describe the overall inequalities which we then break down in later chapters. What do the distributions look like of educational outcomes, employment, earnings, individual incomes, household incomes, and wealth? As a reference point for the later analysis, we highlight people who are at different positions along the range from the lowest to the highest. For instance, how much larger are the earnings of people a tenth of the way from the top than the earnings of people a tenth of the way from the bottom? Similarly, how much greater is the wealth of someone a tenth of the way from the top of the distribution than that of a person in the middle? We summarise how these distributions and levels of inequality within them have changed over time, and how the UK compares internationally.

In Part 2, Chapters 3 to 8, we break these distributions down to look at the positions of different social groups within the overall distribution. First, we compare differences by gender and then, for men and women separately, by other characteristics, such as age or ethnicity. In each case, we present information not just on the position of someone in the middle of the range for that group (the ‘median’ for the group) in terms of the overall distribution for the population as a whole, but also for the spread of outcomes within the group.<sup>5</sup> One of the

<sup>4</sup> See Box 9.1 for discussion of the position of the trans population.

<sup>5</sup> A separate Statistical Appendix, available on our website, contains more detailed tables of the material we analyse here. The Statistical Appendix also contains downloadable data in spreadsheet form. Spreadsheet versions of the figures and tables we have produced for the report will be available on our website.

things immediately apparent from this analysis is the large extent of inequalities between members of the same group, even by comparison with the systematic differences we find between those in the middle of different groups.

In Chapter 9, we present a cross-cutting analysis of the considerable amount of information contained in Chapters 3 to 8, looking at the patterns of all the outcomes for each group when the population is divided in different ways. We summarise here, for instance, gender differences across educational achievement, employment, earnings, and incomes. Parts of the chapter look at the extent to which gaps in outcomes, particularly earnings, between particular groups can be explained by factors such as qualifications or age, or whether they represent unexplained ‘penalties’ related to other characteristics. An important issue which the summaries here shed light on is whether each group is equally advantaged or disadvantaged within the range for each of the different outcomes. Are particular ethnic groups found in the same positions within the separate rankings defined by educational qualifications, earnings and incomes, for instance?

In Part 3, we look at different aspects of time. In Chapter 10, we present analysis of changes over time in inequalities in outcomes between particular groups and, where possible, how inequalities have changed within each group. We examine how the positions of different types of people in the overall distributions of earnings and income have changed over time. Has the relative position of women improved over time, for instance? Because many of the data of the kind we need have only recently become available, these comparisons generally cover only the last decade or so (and for many breakdowns, not even this is possible). We also present findings from analysis about the extent to which changes (mostly increases) in the inequality of incomes and of earnings over the last four decades have been more associated with changes in inequalities *between* groups or those *within* groups. We also discuss how the recession may affect some of the groups in which we are interested.

In Chapter 11, we look at how differences in outcomes evolve across the life cycle. We start by presenting information about intergenerational links between the socio-economic positions of parents and their children. We then trace how differences across individuals narrow or widen in the pre-school years, at school, over people’s working lives, and into retirement and later life. We examine the extent to which differences in, say, earnings can be accounted for by differences in educational qualifications. This approach allows us to isolate some of the life stages and transitions at which inequalities emerge or widen. This helps suggest what mechanisms are at work, and so the points at which policy intervention may be most appropriate.

Finally, in Chapter 12, we summarise our key findings and draw out what we see as being the key challenges which the material presented suggests for policy development. A separate Summary also contains this material, together with some of the figures and tables that are central to the analysis.

## Limitations

We present a large amount of information, most of it never analysed in this way before. But we should acknowledge that the data have some limitations. In order to present the level of detail that we do, we primarily depend on analysis of large scale national sample surveys, such as the Labour Force Survey (LFS) or the Family Resources Survey (FRS), or of administrative sources (such as the National Pupil Database (NPD), based on the Pupil Level Annual School Census). This has three implications. First, the data collected are usually for those living in *private households*: the non-household population – around 2 per cent of all residents or over one million people – is usually excluded from such surveys. This means that important groups are not covered in our main comparisons – such as those living in residential care homes, those sleeping rough, or members of the armed forces living in barracks. Appendix 3 discusses the implications of this, concluding that the data on the household population, while incomplete, can still present a fair picture of the population as a whole.

Second, the social groups and the terms used to describe particular groups are those used in the original surveys. Such categories are often contested and come with particular connotations or cultural loadings.<sup>6</sup> However, it is up to us to report what the data show, giving the responses chosen when people have been presented with particular categories, even if those are not ideal or are incomplete. At the same time, the survey questions do not necessarily allow all the social groups in which we are interested to be distinguished. The very rich data now available on assessments of pupils throughout their school careers include gender and ethnicity, for instance, and whether they receive Free School Meals or have Special Educational Needs, but do not include information on, say, broader measures of parental background or religious affiliation. While the LFS has asked for a number of years whether people live in a same sex couple, this is only a very limited measure of sexual orientation, and other surveys do not include even this question. While the often highly disadvantaged position of members of the Gypsy and Traveller communities is revealed by some surveys, it is not in others (see Box 3.2 in Chapter 3). Similarly, the surveys we use do not identify whether respondents are asylum-seekers or refugees, so we cannot distinguish the position of this group, although qualitative evidence suggests some may be highly disadvantaged (Box 9.4). Appendix 13 at the end of the report describes the social groups that can be identified in the surveys used and gaps in them, as well as plans by the Office for National Statistics (ONS) to improve information routinely collected in future. Box 12.1 in the final chapter contains some suggestions for future data collection and analysis.

<sup>6</sup> This particularly applies to the ways in which surveys ask people about their race, ethnicity or religion. For example, it was put to us that some people should be described as ‘British African Caribbean’, rather than using racialised categories such as ‘Black British’ or ‘Black Caribbean’, the use of which could be considered to perpetuate discrimination and inequalities. However, that was not a category offered to respondents in the original surveys on which we report. Other differences in labels might be taken to imply that some citizens were British and others were not. Similarly, there is ambiguity in survey questions about religion and belief (or non-belief), which we discuss below. For the most part, the questions relate to religious affiliation in general or cultural terms, rather than necessarily implying that people subscribe to a particular set of beliefs or participate in religious practices.

Third, by their very nature, sample surveys, even large ones of the kind we use, can only produce reliable information on groups containing sufficiently large numbers of respondents. This is a particular constraint where we summarise not only the position of an ‘average’ member of a group or sub-group, but also the often very important differences within a group.<sup>7</sup> This means that groups that are relatively small in number (or whose numbers are simply unknown) cannot be covered in this way. An example of this problem is the position of the trans population, on which other kinds of information can shed some light (see Box 9.1 in Chapter 9), but not in a form that we can compare with the other groups covered here. Where we can, we draw on qualitative information where it helps to fill gaps of this kind or sheds light on the picture presented by the quantitative data.

It should also be noted that, although we do look at the position of children in their early years and educational outcomes while at school, our focus on economic outcomes often implies that we are looking at the position of adults rather than of children, except in respect of their membership of a household with particular income levels. Other kinds of information on, for instance, their health or social relationships would be necessary to give a more rounded picture of the well-being of children, enabling better understanding of childhood inequality alongside the well established focus on child poverty.<sup>8</sup>

Where possible, our coverage is of the whole of the UK, although we also present comparisons between England, Scotland, Wales and Northern Ireland, as well as the English regions. However, some data are only available for Great Britain (excluding Northern Ireland), or only for England. In some cases policies vary across the devolved administrations so that, while similar information can be presented for each nation, it is not directly comparable and so cannot be aggregated to UK level. This is most relevant for educational achievement at age 16, where examination systems differ, but also affects measures based on neighbourhood deprivation, since the indices used have a different basis. On the other hand, there may be cases where differences in outcome may reflect differences in policy, which then potentially suggest useful lessons from what are, in effect, national experiments.

Where we present information on the ‘latest’ position we are generally able to use data collected up to 2008 or until the financial year 2007-08 (that is, up to March 2008). This, therefore, generally represents the position immediately before the full extent of the financial crisis became clear or the economic recession started. Because the changes may have what turn out to be temporary effects (at least in distributional terms), it is in some ways better that we use data that were collected before the recent turmoil. This timing issue should be borne in mind in interpreting our findings. In Section 10.5 of Chapter 10, we discuss some early evidence on the effects of the recession on the inequalities we examine and any lessons from previous recessions on which groups may be worst affected. This issue also affects the interpretation of time trends: those available over a ten-year period, for instance, show what happened during a continuing upturn, rather than over a complete economic cycle.

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<sup>7</sup> For reasons of reliability, we only present the median and mean values from sample surveys where they reflect the position of at least 30 respondents. To show the position of the 30<sup>th</sup> and 70<sup>th</sup> percentiles we require there to be at least 100 respondents in the relevant group, and to show data on the 10<sup>th</sup> and 90<sup>th</sup> percentiles we require at least 200 respondents.

<sup>8</sup> See, for instance, Burchardt, Tsang and Vizard (2009) or Bradshaw (2005).

## Relationship with other inquiries and reports

While compiling this report has been a challenging exercise, our remit is, in many respects, a narrow one. We focus on economic inequalities. These are not necessarily the most important aspects of people's lives, well-being or happiness. There are others that may be far more so – health, life expectancy or freedom from fear of violence, for instance. For marginalised groups, lack of equality of recognition and respect will often be of fundamental importance. Nevertheless, economic inequalities shape, and are intertwined with, these other aspects of people's lives. Therefore, our work has implications for parallel inquiries. Our work follows on from the Equalities Review, chaired by Trevor Phillips, which reported in 2007. That review recommended that government and other bodies examine progress in reducing inequalities within an 'equalities measurement framework' covering important freedoms or capabilities across ten dimensions or domains. That framework has since been developed further by, and for, the Equality and Human Rights Commission (EHRC) and the Government Equalities Office (GEO) (see Box 1.1 at the end of this chapter). It will be applied by the EHRC when it presents its Triennial Review, expected in late 2010. Our report draws on the Equalities Review and on research of different kinds that has been commissioned by EHRC in the last two years. In turn, we hope that the information presented here will help EHRC in its broader remit. For, while economic outcomes are directly measured in only three of the ten domains within the framework, within our society economic resources and educational qualifications are often crucial to people's capabilities in other respects, and the lack of them to constraining those capabilities.

The association between economic and other outcomes is most obvious so far as health and life expectancy are concerned. We present, at the end of Chapter 11, what will be for many startling evidence from the English Longitudinal Survey of Ageing on the relationship between mortality rates after age 50 and levels of wealth. Health inequalities – and policies that might help reduce them – are the focus of the parallel Strategic Review of Health Inequalities in England post 2010, led by Sir Michael Marmot, which will be published shortly, so we do not focus on them directly in this report, but we have been grateful for the opportunity to share related parts of our analyses during the writing of this report.

We have also been able to draw on two other recent exercises that relate in particular to the links between generations: the Cabinet Office's review of social mobility and the subsequent White Paper,<sup>9</sup> and the Panel on Fair Access to the Professions, chaired by Rt. Hon. Alan Milburn, MP, whose final report, *Unleashing Aspiration*, was published in July 2009.

As we write (November 2009), the Equality Bill is proceeding through Parliament. Although our report is not about the specific actions that public bodies and others might take, we hope that the baseline information we present and the highlighting of areas of particular concern could be useful in implementing the 'socio-economic duty', if the Bill is enacted.<sup>10</sup>

<sup>9</sup> Cabinet Office (2008, 2009a).

<sup>10</sup> The Equality Bill will introduce a new duty on certain public bodies to have regard to the desirability of reducing socio-economic inequalities. The duty will apply to: ministers; central government departments; regional development agencies; local authorities; police authorities; strategic health authorities; and primary care trusts. The duty will apply when those organisations are making decisions of a strategic nature, such as when deciding priorities, setting targets, allocating resources, and commissioning services. It is intended both to support work to tackle differential outcomes associated with the various 'equalities strands' and to close a gap in existing equalities legislation, by addressing the needs of those who are not currently protected.

### Ways of working and sources of information

As will be clear from the Acknowledgements, we have been helped by a very large number of organisations and individuals, taking in particular the following forms:

- Members of the Panel and its Secretariat visited universities, other research organisations, government departments, and the devolved administrations in Edinburgh, Cardiff and Belfast, which provided invaluable presentations on and material from relevant existing research (see Appendix 4).
- We issued a Call for Evidence and received very helpful responses from a wide range of representative organisations and individuals (listed in Appendix 5). Twenty-four of these submissions are available on the panel's website ([http://www.equalities.gov.uk/national\\_equality\\_panel/call\\_for\\_evidence.aspx](http://www.equalities.gov.uk/national_equality_panel/call_for_evidence.aspx)).
- Following the response to the Call for Evidence, we held a first seminar at which representatives of interested organisations presented what they saw as the most important evidence and issues from their perspectives, with other participants adding their views and debating the issues involved. At a second event, members of the Panel presented some of what we saw as key recent evidence on the ways in which inequalities develop across the life cycle (see Chapter 11), again with participants adding their views and perspectives. Appendix 6 gives more information on these events, and summaries of the points made at each of these events are also available on our website.
- Following our initial review of evidence, we commissioned ten research projects to examine particular issues in detail (see Appendix 7). The final reports from these projects are available on our website and from the research institutions involved. We refer extensively to their findings below.
- We were also greatly assisted by statistical analysis carried out for us by the Department for Children, Schools and Families (DCSF) and the devolved administrations (on educational outcomes), the former Department for Innovation, Universities and Skills, the Department for Work and Pensions (DWP) (particularly on household incomes) and the ONS (on very recently available data on wealth and assets). Our secretariat carried out extensive analysis of data from these sources and from the LFS.
- We met as a full Panel nine times between October 2008 and November 2009 to consider this evidence, to discuss the research carried out for us, and to agree this report.

### Conclusion

In this report, we bring together in one place for the first time a consistent analysis of the relationships between economic inequalities and people's characteristics and circumstances, how these interact, and how they develop across the life cycle. We hope that this material will contribute to understanding of the economic and social structure of the country, inform debates over the fairness or otherwise of the outcomes for different population groups, and assist the formulation and design of relevant policies.

### Box 1.1: The EHRC/GEO Equalities Measurement Framework

The EHRC and Government Equalities Office (GEO) are developing a new framework for the measurement of inequality in England, Scotland and Wales.<sup>11</sup>

The core building blocks of the Equalities Measurement Framework (EMF) consist of three aspects of equality, covering ten areas of peoples lives ('domains'), and the characteristics by which differences will be analysed.

The EMF aims to measure inequality of 'substantive freedoms' in outcomes (achievements), processes (unequal treatment, discrimination, lack of dignity and respect) and autonomy (empowerment or choice and control). In this way, it covers much wider aspects of inequality than the economic outcomes covered in this report.

It covers ten dimensions: life; health; physical security; legal security; education and learning; standard of living; productive and valued activities; participation, influence and voice; individual, family and social life; identity, expression and self respect. These have been based on international human rights covenants and derived through extensive consultation with groups at risk of disadvantage.

The framework covers all seven of the equality groups set out in the Equality Act 2006 (gender, age, ethnicity, disability, religion or belief, sexual orientation, transgender), with the addition of social class.

The first part of the Framework contains 48 indicators to measure outcomes and processes. Questions for the collection of data on autonomy are being developed and tested.

Once fully developed, the EMF will be a monitoring tool that allows measurement, evaluation and comparison of inequality between individuals and groups. For example, the EMF could be used to evaluate the health of older people in terms of:

- outcomes, such as health status;
- autonomy, such as questioning whether they experience choice and control in relation to their medical treatment, including issues of information and consent; and
- process, such as exploring whether older people experience explicit discrimination or other forms of unequal treatment, such as a lack of dignity and respect.

The EMF is intended to be used as a tool to measure inequality, but the overall framework can also be used to assess policy interventions and underlying causes of inequality. The freedoms that individuals or groups have can be widened or constrained by, for example, their access to resources, and by how well they are able to use those resources (which can vary between people as a result of personal, legal and institutional reasons).

<sup>11</sup> See Alkire *et al.* (2009) for a detailed discussion.



## Chapter 2 Economic inequalities in the UK

In later chapters, we look at the distributions of economic outcomes amongst members of different population groups. To set this in context, this chapter looks at the population as a whole.<sup>12</sup> We look at the distributions of educational outcomes (attainment at age 16, and highest qualifications of adults), employment status, hourly wages and weekly earnings, individual incomes, incomes on a household basis, and household wealth. Where information is available, we look at trends over time and compare the position in the UK with that in other countries. We also summarise what has happened to incomes right at the top and at the bottom of the income distribution and look at the impact of the tax and benefit systems on income distribution.

We present this information in two ways. The first kind of diagram (such as Figure 2.1(a)) shows what percentage of the population can be found within a particular range. Generally speaking there are more people to be found round the middle of the distribution, but fewer a long way above or below the middle. This means that the figures show a characteristically ‘humped’ shaped picture, with ‘tails’ extending on either side. If most people have much the same outcome, the hump is tall but narrow, with only small tails on either side. But if outcomes are unequal, the hump in the middle is less pronounced, and the tails extend further from it.

Within each of these diagrams we highlight the outcome for someone who comes exactly half way up the distribution – the so-called *median* outcome, where 50 per cent of the population do worse and 50 per cent do better (also known as the 50<sup>th</sup> percentile). We also highlight the outcomes for those where only 10 per cent or 30 per cent do worse (the 10<sup>th</sup> and 30<sup>th</sup> percentiles) and, at the other end, those values which exceed the outcome for 70 per cent or 90 per cent of the population (the 70<sup>th</sup> and 90<sup>th</sup> percentiles). Comparison of the 90<sup>th</sup> and 10<sup>th</sup> percentiles gives one summary measure of the inequality of a distribution: the greater this ‘90:10 ratio’, the more unequal a distribution across most of its range.<sup>13</sup>

We focus on these measures because we need to summarise information about the distribution of outcomes within each of a number of groups, between those groups, and across the population as a whole. Using measures such as percentiles, medians, and the 90:10 ratio allows us to do this in a robust way, even for relatively small population groups.

<sup>12</sup> Subject to the limitations noted in Chapter 1, in particular that coverage usually relates to the private household population.

<sup>13</sup> This is just one summary measure of inequality. Others, such as the well-known ‘Gini coefficient’, are affected by all outcome values, throughout the range from bottom to top. By construction the 90:10 ratio depends on the two values of the 10<sup>th</sup> and 90<sup>th</sup> percentiles. For further discussion of issues involved in measuring inequality and distribution, see Atkinson (1983), Cowell (1995 and 2000), Jenkins and Micklewright (2008), and Jenkins and Van Kerm (2009). Recent trends in the UK are discussed in Brewer, Muriel, Phillips and Sibieta (2009).

The second kind of diagram (such as Figure 2.1(b)) shows what proportion of the population has an outcome below a particular value.<sup>14</sup> This is helpful in allowing one to read off how high up the overall distribution a particular value comes – are someone’s earnings half-way up the distribution, for instance, or two-thirds of the way up? Where possible, we show the outcome for each percentile (cut-off for each hundredth) of the distribution but, in the case of wealth distribution, the values for the top few per cent of households are so high that they cannot be fitted into a figure that shows the variation within the rest of the population. Again, we highlight the 10<sup>th</sup>, 30<sup>th</sup>, 50<sup>th</sup> (median), 70<sup>th</sup>, and 90<sup>th</sup> percentiles.

Where data are available we summarise some of the trends in inequality measures over time, and show how the UK compares with other industrialised countries. In general the data presented are for the UK (broken down between its constituent nations in Chapters 3 to 8) but, for school outcomes in Section 2.1(a), we show separate pictures for England, Scotland, Wales and Northern Ireland, as educational systems differ between them.

The order in which we discuss the outcomes in this chapter (and elsewhere in the report) follows the logic of some of the main relationships between them:

- We start with **education** because, although it is not in itself an economic outcome, it plays such an important role in determining people’s position in the labour market. To maximise the proportion of the population covered, we concentrate on results at age 16 (Key Stage 4 or GCSEs in England and Wales and Secondary 4 in Scotland) and on the highest qualifications of the adult population. In Chapter 11, we look at development in achievements at other ages.
- We then look at **employment status** – whether or not people have paid work; if so, is this full-time or part-time and is it as an employee or self-employed; and if not, what is the main reason for non-employment, such as full-time education, retirement, or unemployment looking for work?
- For employees (but not the self-employed), we show the distribution of **hourly wages** and **weekly earnings**. In this chapter, we show results for a variety of groups of workers, but in our main analysis we concentrate on the hourly wages of all employees, giving direct comparison between part-time and full-time workers (particularly important in comparisons between men and women), and on weekly earnings for full-time employees.
- Combining income from weekly earnings with that which individuals receive from other sources (such as from benefits, pensions or investments) gives **total individual income**. Deducting direct taxes (income tax and employee National Insurance contributions) gives **net individual income**.

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<sup>14</sup> In the case of incomes, this kind of diagram is sometimes known as ‘Pen’s parade’, after the Dutch economist, Jan Pen (1971), who imagined the income distribution in the form of a parade, where the heights of those marching past had been adjusted in proportion to their incomes, making the point that in such a parade, the majority has incomes below the average (mean), but a few giants have incomes that are many times the average.

- While individual incomes are important in showing the potential control that individuals may have over economic resources, in many circumstances it will be the total income of the family or household that has most effect on people's standard of living. But this will also be affected by household size – £2,000 per month provides a higher standard of living for a single person living alone than it does for a family of four. We, therefore, next show income in terms of total net income of a person's household, adjusted for household size, known technically as **equivalent net income**.<sup>15</sup>
- Finally, the accumulation over people's lifetimes, either from savings out of income or from inheritance (or other transfers), or from the return on investments, creates people's stock of wealth or other assets. Because it is so hard to judge how ownership of wealth is divided within a household or how to compare between households of different sizes, we look at **household wealth**, defined in different ways.

While the main relationships do follow the sequence indicated by the arrows above for many, some go, of course, in the opposite direction. For instance, wealth levels directly affect people's incomes through the interest or dividends they may receive from that wealth. Less directly, higher incomes may make it easier for people to invest longer periods of time in education. In Chapter 11, we look at the way some of these relationships evolve across the life cycle. There is also, of course, a close – but by no means exact – relationship between someone's position in the distribution of one outcome and their position in the distribution of another. Appendix 8 shows what some of these relationships look like, where we have data on more than one outcome in the same survey.

## 2.1 Educational outcomes

### (a) Results at Key Stage 4

Discussion of achievement at age 16 is often (in English terms) dominated by whether pupils achieve five or more 'good' GCSEs (graded C or above) or not. This provides a rather crude measure of the range of achievement – a simple yes or no, dividing the population into two groups. Figures 2.1(a) and (b) give a more sensitive measure of achievement for 16 year-olds in state ('maintained') schools in England in 2008, showing the range of *total* scores in up to eight GCSEs (or the equivalent in other qualifications) according to a calculation used by the Department for Children, Schools and Families (DCSF).<sup>16</sup> The minimum number of points for

<sup>15</sup> As we discuss below, this measure is based on an *assumption* that income is equally shared within the household. Often it is not. Individual income and equivalent household income give measures of command over economic resources that are in some ways opposite ends of the assumptions one could make about sharing – equally shared in the latter case, or not pooled at all in the former. In some cases, though, one person may have control over income coming in regardless of who receives it, in which case even looking at individual incomes would understate the degree of inequality.

<sup>16</sup> This system awards 16 points for a pass at G, 22 for an F up to 52 for an A and 58 for an A\*. The capping is based on the 'best' 8 GCSEs or equivalent standardised points from other qualifications. DCSF argues that capping the scores at up to 8 GCSEs (or equivalent) gives the best measure of overall achievement. Allowing scores for more subjects to count – as is done in the results for Scotland and Wales – would mean that there was more spread at the top of the distribution.

5 passes at C or above is 200, while 8 A\*s would give a total of 464. Including the nearly 2 per cent of pupils who have no points at all,<sup>17</sup> the median points score was 329, corresponding, to 7 passes at grade B. Around this there was, however, quite a range, with a long tail of low achievement. A tenth of pupils had fewer than 160 points, which is half of the median score, and 30 per cent had less than 284 points.<sup>18</sup> At the other end, a tenth of state school pupils achieved 416 points and just over 1 per cent achieved 462 or more points – unlike incomes or wealth, the distribution of test results like this has an upper limit (no-one can get more points than the 464 for 8 A\*s).

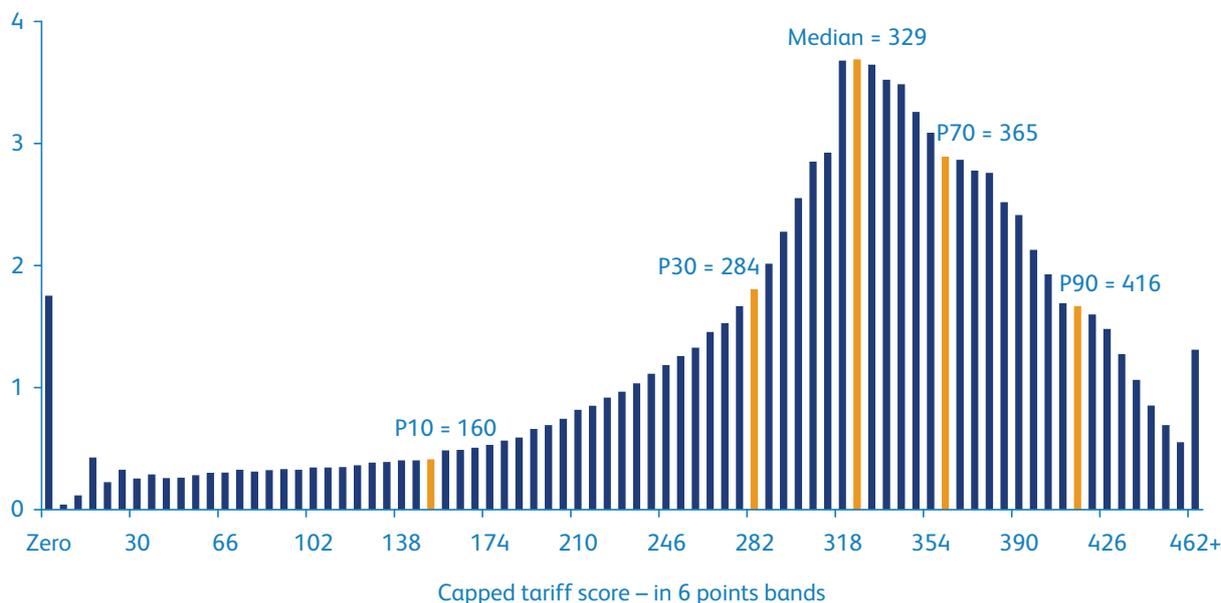
We present results for state schools, because it is only these results that we can break down by the characteristics of pupils in Chapter 3. However, this represents only 93 per cent of the age group. As Figure 2.1(c) shows, the results for those in English independent (private) schools are rather different. Half of all such pupils achieve 386 points or more at age 16 (equivalent to the top 20 per cent in state schools) and 30 per cent of them achieve 417 points or more (equivalent to the top 10 per cent in state schools). Nearly 7 per cent of the private pupils achieve 462 or more points, the maximum shown in the figures. If the independent school population had the same spread of characteristics as the whole population, their omission would not affect our later analysis. However, the private school population comes not just from more affluent households, but also disproportionately from particular ethnic groups. It should be borne in mind therefore that the breakdowns in Chapter 3 omit, for instance, up to a fifth of the highest-achieving 10 per cent of pupils as a whole.

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<sup>17</sup> This includes both those who fail any exams they take and those who are in the school system but take no exams at all. It does not include those who have dropped out of the school system by 16 because they have moved abroad or are educated at home or are in the country but not in education. We do not have any information on how many children are in these situations.

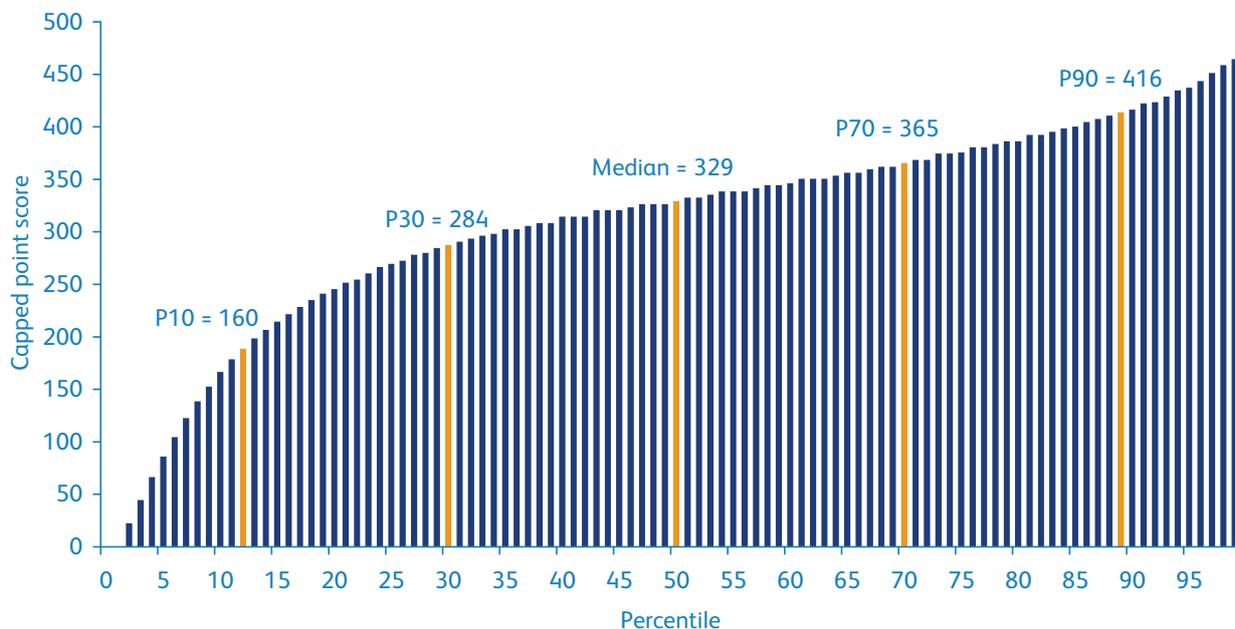
<sup>18</sup> Although 70 per cent of pupils had tariff scores above 284, only 65 per cent had more than 5 GCSEs at grades of C or above, even though this could theoretically be achieved with a smaller aggregate score. This is because some pupils will have scores from up to 8 GCSEs contributing to their aggregate score, but with 4 or fewer at Grade C or above.

Figure 2.1(a): Key Stage 4 results, England, 2008:  
Maintained schools, percentage with results in each band



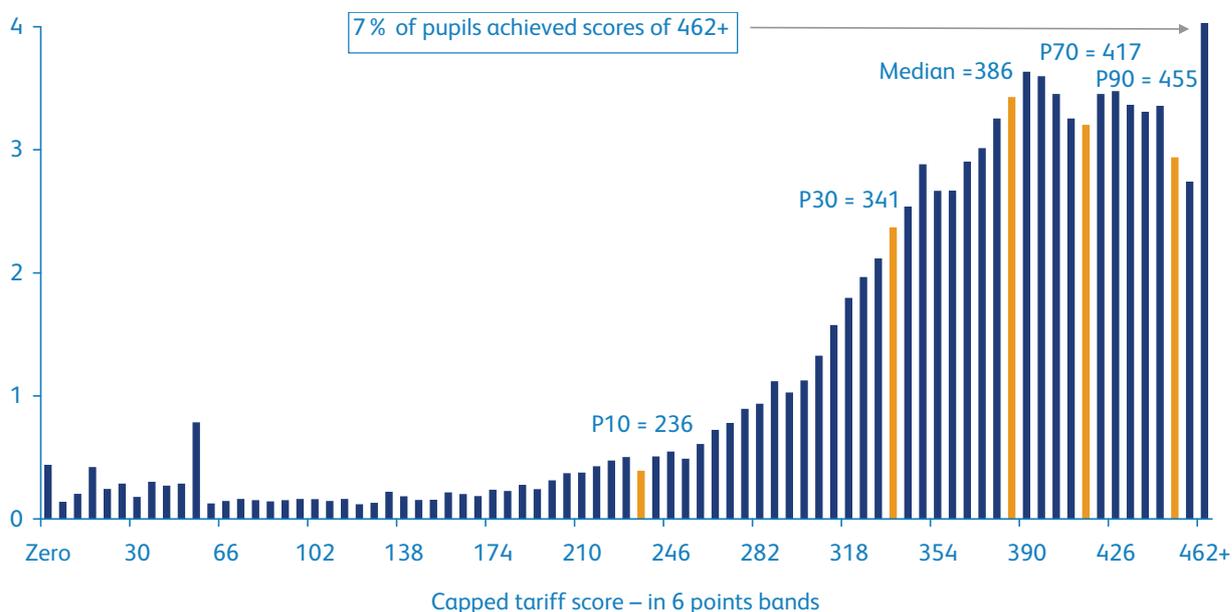
Source: DCSF, based on National Pupil Database (NPD).

Figure 2.1(b): Key Stage 4 results, England, 2008:  
Maintained schools, level reached at each percentile of population



Source: DCSF, based on NPD.

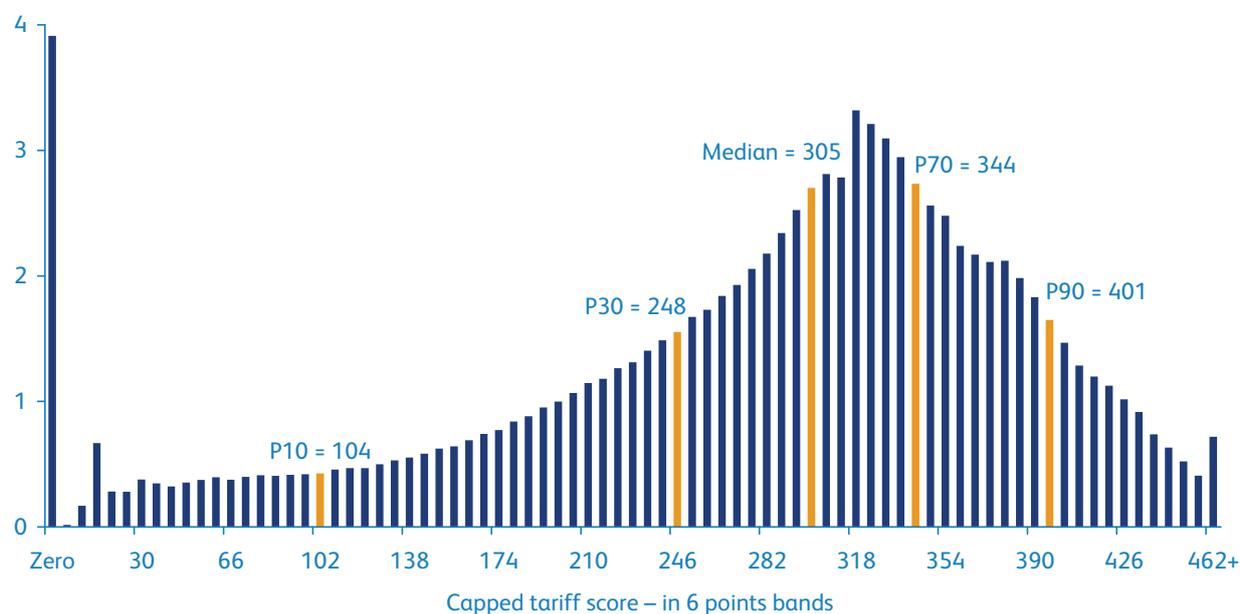
Figure 2.1(c): Key Stage 4 results, England, 2008:  
Independent schools, percentage with results in each band



Source: DCSF, based on NPD.

These patterns have changed over time. Figure 2.1(d) shows the corresponding distribution for state school pupils in 2004. Comparing this with the 2008 results, measured achievement improved at all levels over those four years, notably at the lower levels. The proportion with no graded results at all halved; while the cut-off for the bottom tenth rose from 104 to 160 points and the median score rose from 305 to 329. This is part of a longer-term trend in GCSE attainment: whereas 46 per cent of pupils achieved 5 or more passes at C or above in 1998, this had risen to 54 per cent in 2004 and 65 per cent in 2008 (see Chapter 10). There is controversy over the extent to which these increases represent 'genuine' improvement or are the result of changes to curriculum and assessment. The development and inclusion in the data of a wider range of vocational and functional qualifications and their inclusion in the GCSE equivalent data is likely to account for some of the improvement at the bottom end of the distribution. However, our main concern here is with the position of different groups within the distribution. The *ranking* of different groups – such as those receiving or not receiving Free School Meals – should be less affected by this kind of problem.

Figure 2.1(d): Key Stage 4 results, England, 2004:  
Percentage with results in each band

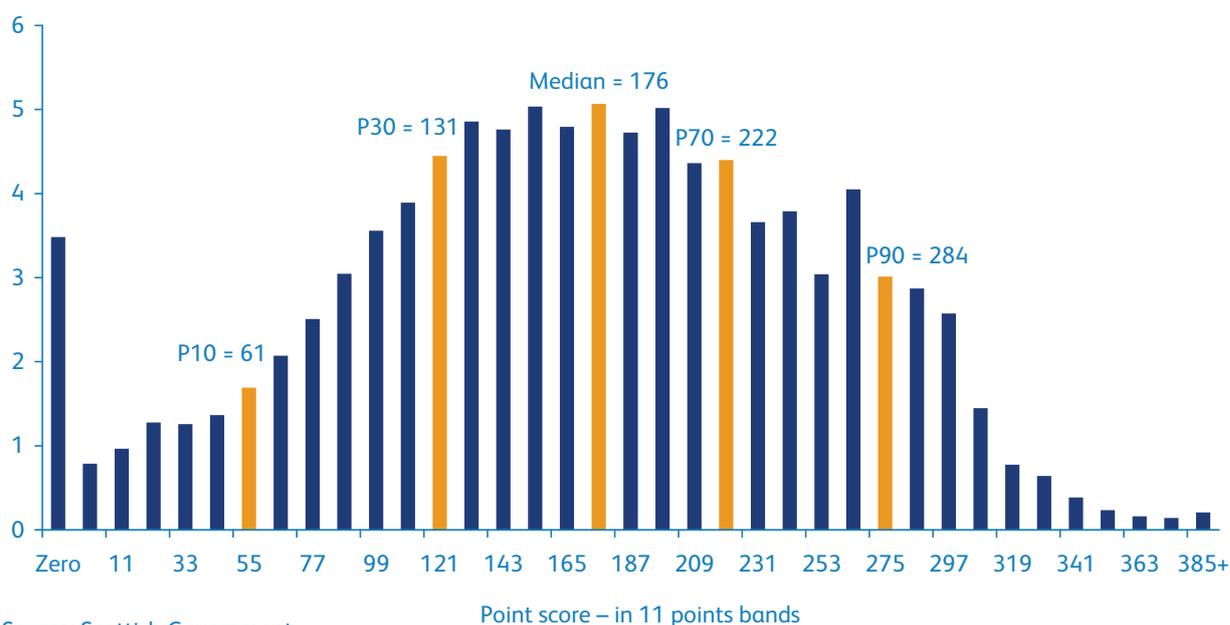


Source: DCSF, based on NPD; maintained schools.

The system in Scotland is different, as is the scoring system used by the Scottish Government.<sup>19</sup> The distribution of results shown in Figure 2.1(e) shows *cumulative* points from qualifications obtained by the end of ‘Secondary 4’ in Scottish state schools in 2008 (with no capping of number of subjects included). The distribution on this basis is more widely spread than that in England (partly because scores are uncapped at the top, and because there is less weight given to relatively low-level passes at the bottom). The median score of 176 points corresponds to 8 Standard Grade passes at grade 3, but 10 per cent of pupils achieved fewer than 61 points, while 10 per cent achieved 284 or more points. As in England, these scores have improved over time: the median result in Scotland in 2003 on this basis was 170 points, with nearly 5 per cent achieving no graded results, compared to the 3.5 per cent in 2008 shown in the figure.

<sup>19</sup> In Scotland, the tariff score of a pupil is calculated by simply adding together all the tariff points accumulated from all the different course levels and awards the pupil attains. Therefore, all exams taken in previous years are included and any level of exams may be included (e.g. Access 3, Standard Grades, Intermediate 1 and 2, Highers and Advanced Highers). A pupil getting 5 Standard Grades would collect between 40 and 190 points, based on lowest to highest possible results.

Figure 2.1(e): Secondary 4 results, Scotland, 2008:  
Percentage with results in each band



Wales uses GCSEs like England, but the Welsh Assembly Government uses a different scoring system for the grades.<sup>20</sup> Figure 2.1(f) shows the distribution of results for Welsh state schools in 2008. The median result was 44 points (equivalent to, for instance, seven passes at grade B, as with the English median result). Again, there appear to be somewhat more pupils with low levels of achievement compared to the median than in England, a tenth having fewer than 6 points, including nearly 6 per cent with no graded results at all, but a tenth scored more than 69 points.<sup>21</sup> The most significant change from corresponding results for 2005 was that, in the earlier year, nearly 8 per cent of pupils had achieved no graded results.

<sup>20</sup> In Wales, the system does not cap the number of qualifications that contribute to point scores. It awards 1 point for a pass at G, 2 for an F up to 7 for an A and 8 for an A\*.

<sup>21</sup> In Wales, the National Pupil Database from which the results have been drawn includes only some approved qualifications, mainly GCSEs, GNVQs and some NVQs. Therefore, some of the 6 per cent reported as having no results may actually have achieved entry level qualifications in some other vocational qualifications not counted in the database. In 2007-08, 2.5 per cent of pupils achieved no recognised qualification.

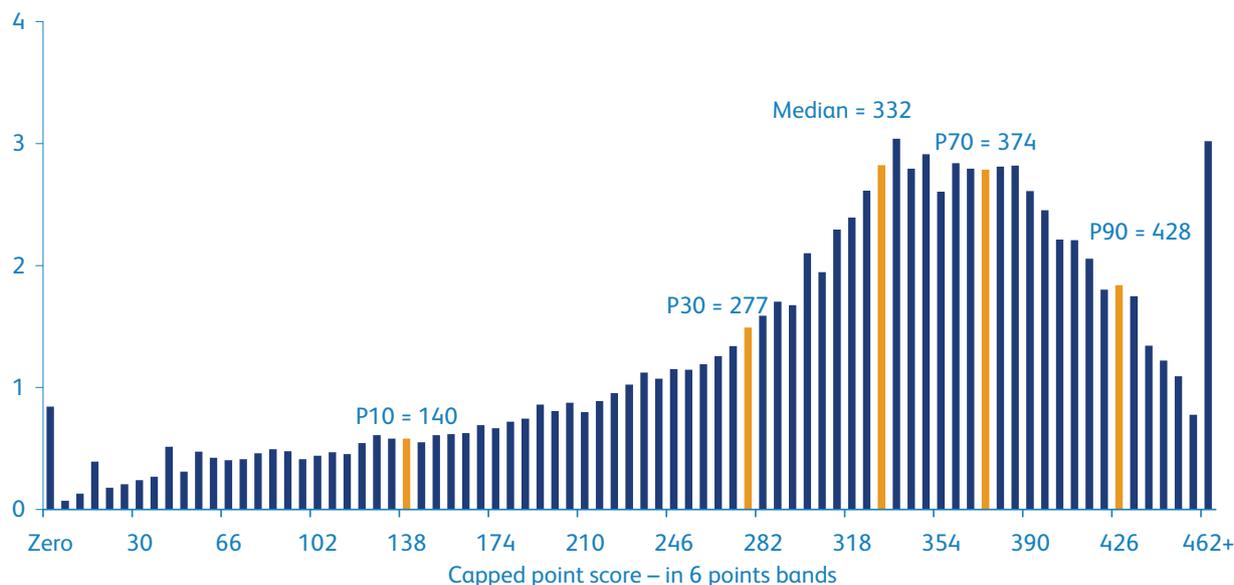
Figure 2.1(f): Key Stage 4 results, Wales, 2008:  
Percentage with results in each band



Source: Welsh Assembly Government.

Finally, Figure 2.1(g) shows achievement of pupils in state schools in Northern Ireland in 2008. In this case the system is directly comparable with that in England and achievement levels are very similar, with the exception that fewer Northern Irish pupils received no graded results, and twice as many (3 per cent) received the maximum shown of 462 or more points. It is this last statistic that represents the main difference from corresponding figures in 2005, when only half as many Northern Irish pupils had received the maximum score shown.

Figure 2.1(g): Key Stage 4 results, Northern Ireland, 2008:  
Percentage with results in each band



Source: Department of Education, Northern Ireland.

Given the differences in examination systems between countries, it is not possible to say directly whether these kinds of variations between high and low achievers in parts of the UK are similar or more marked than in those other countries. However, there are regularly undertaken international comparisons which involve standardised tests taken by samples of children in many countries. Appendix 9 summarises some of their recent findings for 13-16 year-olds in England and Scotland, showing both comparative levels of average achievement for reading, maths and science, and the spread around those averages. While the two studies quoted tell somewhat different stories about average performance in international terms (most flattering to England in the case of the Trends in International Mathematics and Science Study (TIMSS) of 15-16 year-olds in 2006), they both suggest that the *spread* of performance in Britain is not dramatically larger or smaller than other countries.<sup>22</sup> One of the studies suggests that the average level of achievement (in mathematics) is higher in England than Scotland, but with a narrower spread in Scotland.

### (b) *Highest qualifications of the adult population*

The discussion above is about the achievement levels at the minimum school leaving age of today's young people, who were 16 in 2008. But we are interested in the whole population, many of whom finished their formal education a long time ago. While we have less detailed information about precise grades, the Labour Force Survey (LFS) includes information on the highest level of qualification of the UK adult population, which we can compare with a wide range of individual characteristics. We divide qualifications into the eight categories shown in Figure 2.2. Within the working age population (16 to State Pension age),<sup>23</sup> by the three calendar years 2006-2008 half had at least A levels as their highest qualification, with 19 per cent having a first or higher degree. However, a quarter had either no qualifications or only those up to 'Level 1'.<sup>24</sup> As we shall see in Chapter 3, qualification levels vary substantially by age, ethnicity, religious affiliation, disability status and housing tenure.

As more highly qualified generations have entered the labour market, and older ones have retired, the distribution of qualifications among the working age population has changed. The figure shows that just eleven years earlier, only 12 per cent had a first or higher degree as their highest qualification, but 31 per cent had no qualifications above Level 1. Comparisons across countries in qualification levels are harder, but Appendix 9 suggests that the UK is similar to the OECD average in terms of tertiary education, but has lagged behind in terms of the numbers achieving at least upper secondary education (that is, from 5 GCSE grades A\*-C or equivalent to A levels), especially for those now aged 25-34.

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<sup>22</sup> Stewart (2009), looking at data from the international PIRLS 2006 study of literacy for a younger, 9-10 year-old age group, finds by contrast that England and Scotland had higher dispersion in results than almost all of the 13 participating OECD countries.

<sup>23</sup> In Chapter 3, we also show the qualifications for adults above State Pension age by age group.

<sup>24</sup> Level 1 corresponds to GCSEs grades D-G and corresponding vocational qualifications that give basic knowledge and skills and an ability to apply learning with guidance and supervision. Below Level 1 are entry level certificates, such as English for Speakers of Other Languages, Skills for Life, etc.

Figure 2.2: Highest qualification of working age population, UK, 1995-1997 and 2006-2008: Working age population (Men 16-64, Women 16-59), percentages



Source: National Equality Panel (NEP), based on LFS 1995-1997 and 2006-2008.

Note: (1) 5 GCSEs or more, (2) Non-degree higher educational qualifications.

## 2.2 Employment status

The LFS also allows us to look at the employment status of the working age population. Because employment patterns for men and women are so different, Figure 2.3(a) shows the pattern in 2006-2008 for all adults and for men and women of working age separately, while Figure 2.3(b) shows the same information for eleven years earlier. Overall, three-quarters of all working age adults were in paid work in 2006-2008, with nearly half employed full-time, a sixth part-time, and 9 per cent self-employed. A further 9 per cent were either unemployed looking for work or were students, and 17 per cent were economically inactive. But these patterns were highly gendered: 59 per cent of men, but only 39 per cent of women were employed full-time; 26 per cent of women but only 6 per cent of men were employed part-time; 14 per cent of men were self-employed, but only 5 per cent of women; and 12 per cent of women were 'inactive, looking after family or home', but only 1 per cent of men. Comparing this pattern with that eleven years earlier (1995-1997), the main changes over this period of continuous economic growth were an increase of 4 percentage points in the number of women employed full-time and a decrease in the number of men unemployed looking for work from nearly 8 to 5 per cent. The proportion of women not in paid work looking after home or family fell by 3 percentage points.

## An anatomy of economic inequality in the UK

Figure 2.3(a): Employment status, UK, 2006-2008:  
Working age population (Men 16-64, Women 16-59)

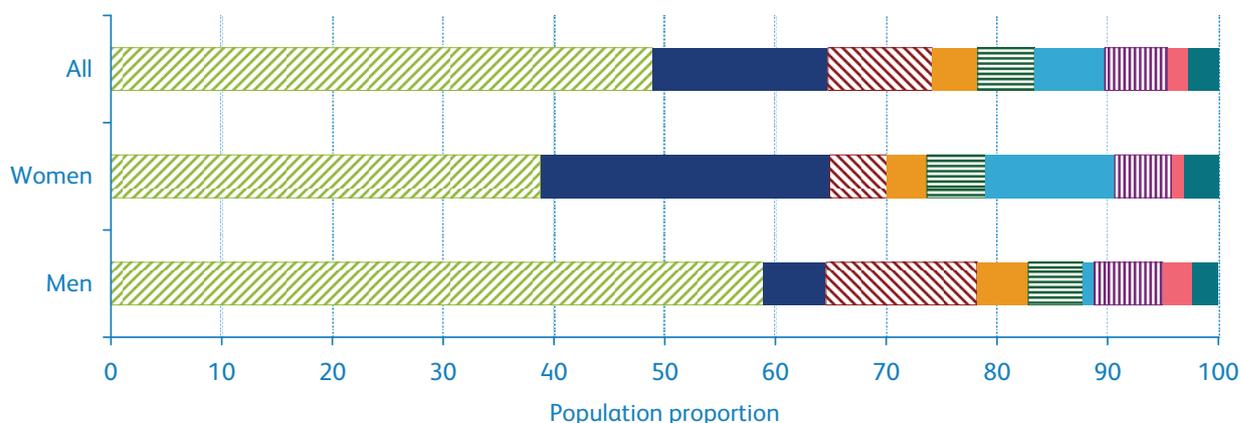
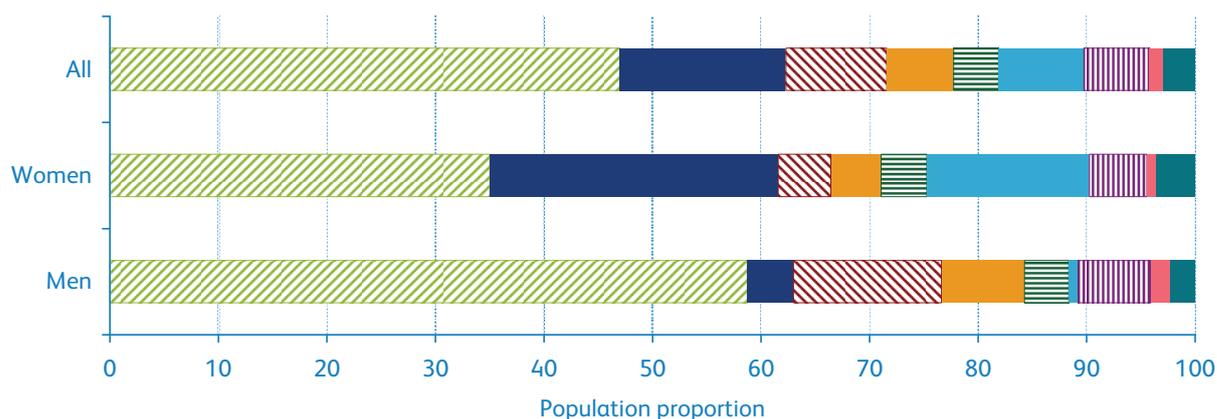


Figure 2.3(b): Employment status, UK, 1995-1997:  
Working age population (Men 16-64, Women 16-59)



Source: NEP, based on LFS 1995-1997 and 2006-2008.

Appendix 10 shows a breakdown by main category of employment status for other European Union countries. Compared to the other countries, the UK had (before the recession) relatively high employment rates, low formal unemployment, and particularly high rates of female part-time employment.

## 2.3 Wages and earnings

### (a) Hourly wages

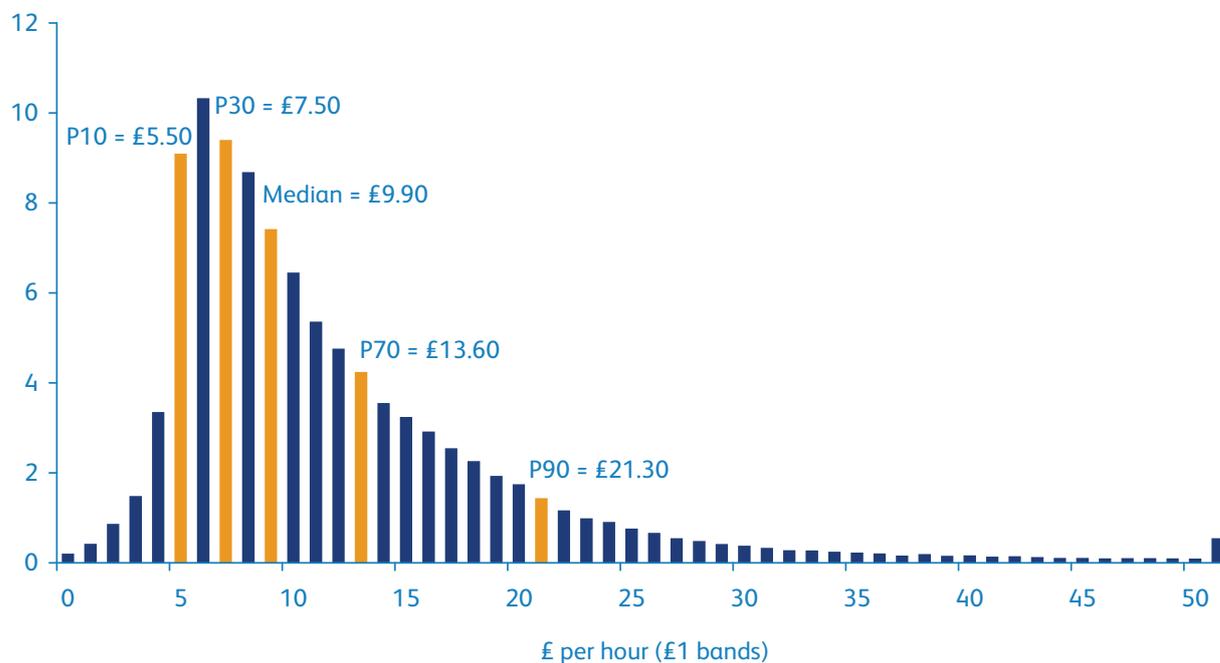
The LFS allows us to look at both the hourly wages and weekly earnings of the two-thirds of the working age population (both men and women) who are in paid employment but not those who are self-employed. We use data from the LFS in preference to the Annual Survey of Hours and Earnings (ASHE) because, although ASHE has more accurate data on those who earn more than the threshold for paying National Insurance contributions, unlike the LFS it contains very little information on the characteristics of employees beyond their gender and age. Appendix 12 compares the wage and earnings distributions revealed by the two surveys. The LFS tends to show somewhat lower wage and earnings levels at each part of the distribution than ASHE, but the inequality shown by the two series is very similar.

Figure 2.4(a) shows the distribution of gross (that is, before tax) hourly wages for all employees in 2006-2008, adjusted to 2008 levels by an index constructed from the pooled LFS dataset to account for variations in earnings. The greatest concentration of wages was in the range from £6-6.99, but median wages were £9.90 per hour, and the mean was £12.20. As before, we highlight the 10<sup>th</sup>, 30<sup>th</sup>, 50<sup>th</sup>, 70<sup>th</sup>, and 90<sup>th</sup> percentiles. The top tenth of wages were £21.30 or more, just under four times those at the cut-off for the poorest tenth (£5.50, very close to the adult National Minimum Wage at the time).<sup>25</sup> The 90:10 ratio was therefore 3.9. Figure 2.4(b) shows the wages for each percentile of the distribution up to the top 1 per cent, who had wages more than £43 per hour. Figure 2.4(c) shows the very different shapes of the distributions for those employed full-time and part-time, the latter being very tightly grouped at, and just above, the National Minimum Wage, and few with wages more than £10 per hour, while the distribution of full-time wages is more widely spread.

<sup>25</sup> The adult minimum wage up to September 2008 was £5.73 per hour. Younger workers (aged 16-17) had a lower minimum of £3.40. Some of the small number of results shown for wages below these levels will represent errors in reporting of hours to the survey, rather than evasion – those actually employed by evading employers are unlikely to respond to surveys of this kind.

## An anatomy of economic inequality in the UK

Figure 2.4(a): Hourly wages at 2008 prices, UK, 2006-2008:  
All employees, percentage with earnings in each range



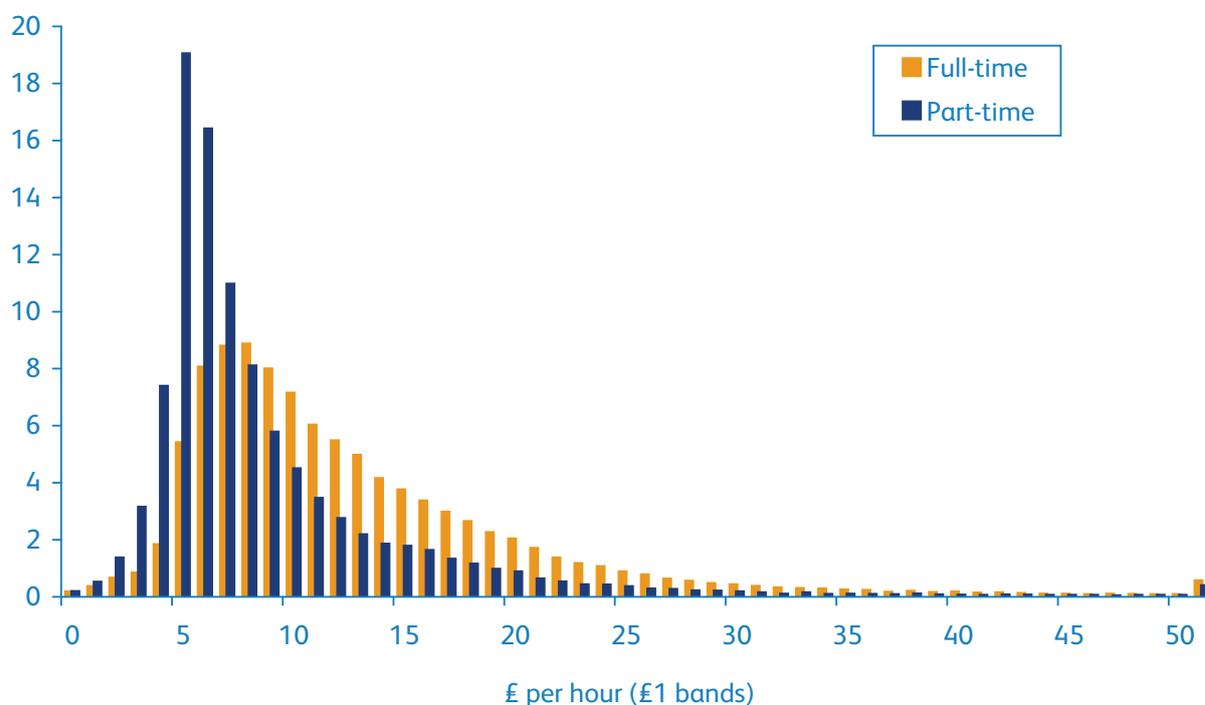
Source: NEP, based on LFS 2006-2008.

Figure 2.4(b): Hourly wages at 2008 prices, UK, 2006-2008:  
All employees, wage levels at each percentile of the distribution



Source: NEP, based on LFS 2006-2008.

Figure 2.4(c): Hourly wages at 2008 prices, UK, 2006-2008:  
Full-time/part-time employees, percentage with earnings in each range



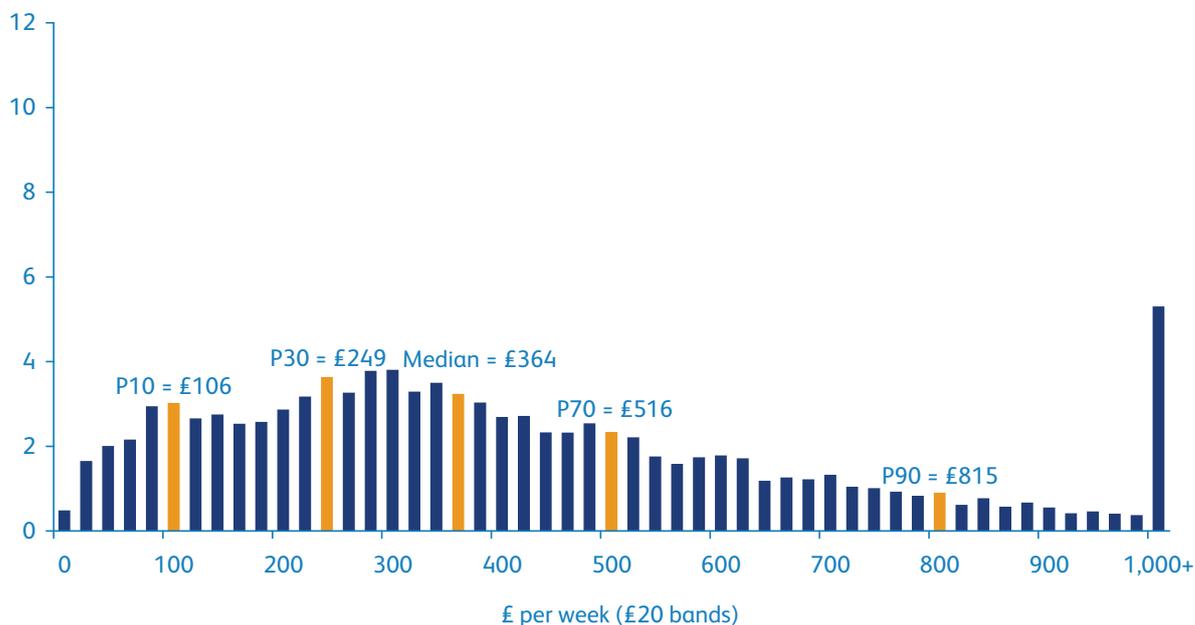
Source: NEP, based on LFS 2006-2008.

### (b) Weekly earnings

Given variations in hours, particularly between part-time and full-time earners, weekly earnings are even more dispersed than hourly wages. Figures 2.5(a)-(d) present information on weekly earnings similar to that given above for hourly wages, again based on LFS data. First, Figure 2.5(a) shows the distribution of weekly earnings across all employees in 2006-2008. Median earnings (including part-timers) were £364 per week, but with a tenth earning less than £106 and a tenth earning more than £815 (and therefore implying a 90:10 ratio of 7.7). As the spike on the right of the diagram shows, about one in twenty earned over £1,000 per week. The distribution for part-timers is shown separately in Figure 2.5(b) and for full-timers in Figure 2.5(c). The difference between the two series is of course even greater than that for hourly earnings. Median weekly earnings were only £141 for part-timers, compared to £448 for full-timers. The top tenth of part-timers earned at least £346, a figure exceeded by almost 70 per cent of full-timers. Meanwhile, a tenth of full-timers earned more than £893 per week. The 90:10 ratio for weekly earnings of full-timers, 3.7, was slightly less than that of wages for all employees. In Chapter 5, we look at the positions of different population groups in terms of hourly wages for all employees, and of weekly earnings for those working full-time. Figure 2.5(d) shows earnings at each percentile of full-time earnings, with the top 1 per cent earning £1,910 per week (£100,000 per year) or more.

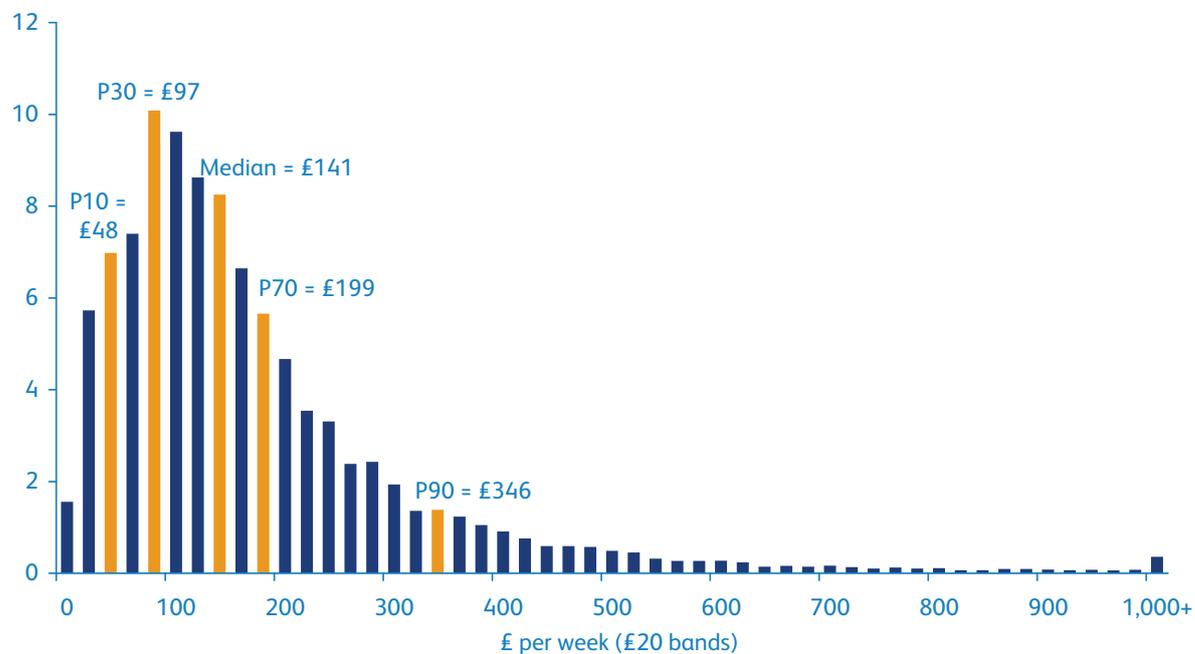
## An anatomy of economic inequality in the UK

Figure 2.5(a): Weekly earnings at 2008 prices, UK, 2006-2008:  
All employees, percentage with earnings in each range



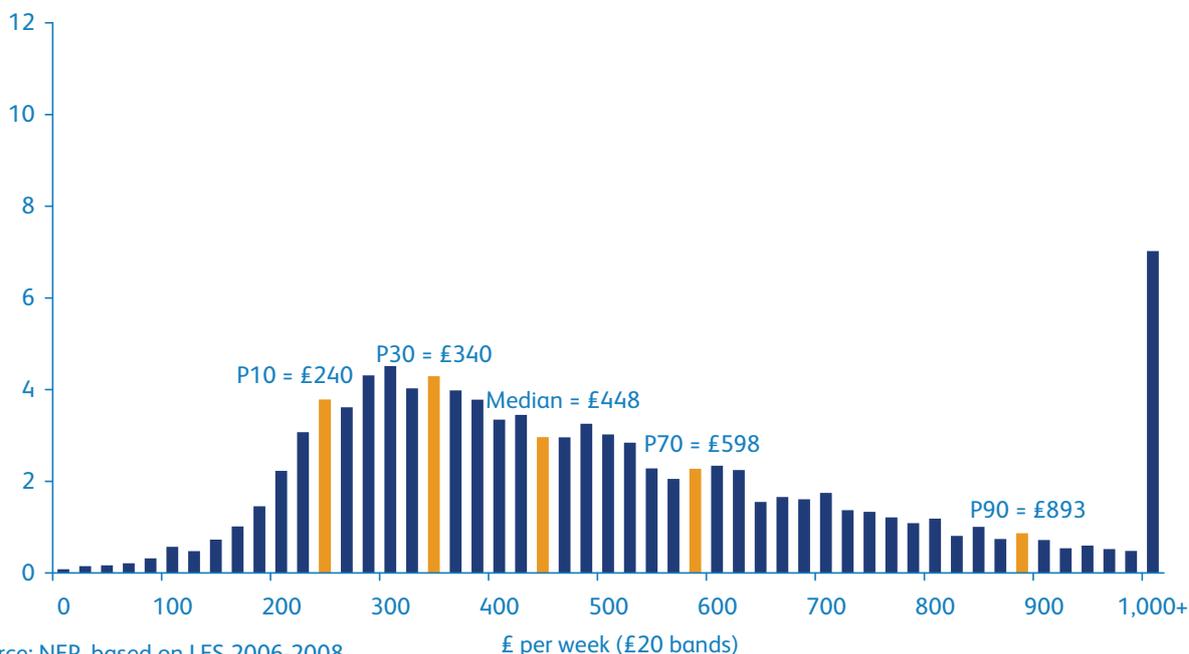
Source: NEP, based on LFS 2006-2008.

Figure 2.5(b): Weekly earnings at 2008 prices, UK, 2006-2008:  
Part-time employees, percentage with earnings in each range



Source: NEP, based on LFS 2006-2008.

Figure 2.5(c): Weekly earnings at 2008 prices, UK, 2006-2008:  
Full-time employees, percentage with earnings in each range



2

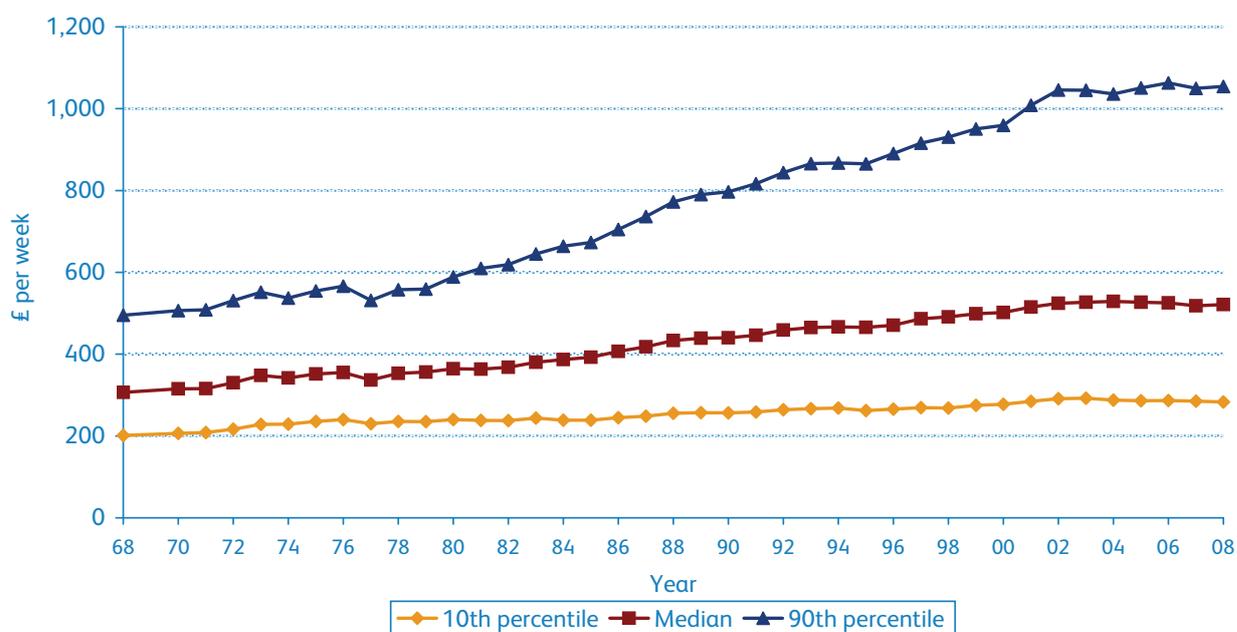
Figure 2.5(d): Weekly earnings at 2008 prices, UK, 2006-2008:  
Full-time employees, earning levels at each percentile of the distribution



## An anatomy of economic inequality in the UK

Over time, the distribution of earnings has changed, becoming much more dispersed between the mid-1970s and the late 1990s. Figure 2.6(a) and (b) use data from ASHE and its predecessors to show trends in the real value of weekly earnings for male and female full-time employees since 1968 at three points in the distribution: the 10<sup>th</sup> percentile, the median and the 90<sup>th</sup> percentile.<sup>26</sup> For men, earnings at the 90<sup>th</sup> percentile doubled from £531 per week in 1977 to £1,045 in 2002, while median earnings grew by 56 per cent, but earnings grew only by 27 per cent at the 10<sup>th</sup> percentile (a significant part of which occurred after 1997). As a result, the 90:10 ratio grew from 2.3 in 1977 to 3.6 in 2002. For women, the gap in wages between the best and worst paid also widened, but there was faster growth at all pay levels. Over the same 25 years from 1977, the 10<sup>th</sup> percentile for women rose by 56 per cent, the median by 84 per cent, and the 90<sup>th</sup> percentile by 114 per cent. As a result, the 90:10 ratio for women working full-time rose somewhat less rapidly, from 2.4 to 3.2. The figures also show how there was very little change at all in real earnings across the distribution for men or women between 2002 and 2008, even before the recession started.

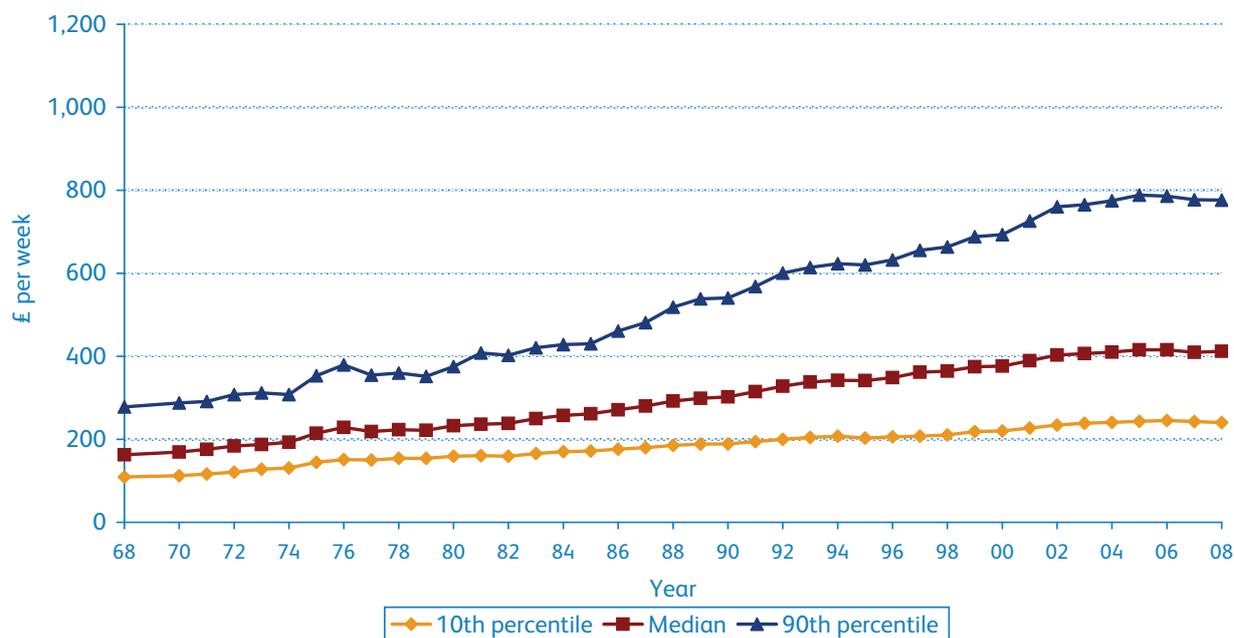
Figure 2.6(a): Full-time weekly earnings at 2008 prices, 1968 to 2008, men



Source: NEP, based on 1968-1996 New Earnings Survey (NES) (GB), 1997-2008 ASHE (UK).

<sup>26</sup> As explained in Appendix 12, these data show slightly higher levels of earnings across the distribution than those used in our main analysis, drawn from the LFS.

Figure 2.6(b): Full-time weekly earnings at 2008 prices, 1968 to 2008, women



Source: NEP, based on 1968-1996 NES (GB), 1997-2008 ASHE (UK).

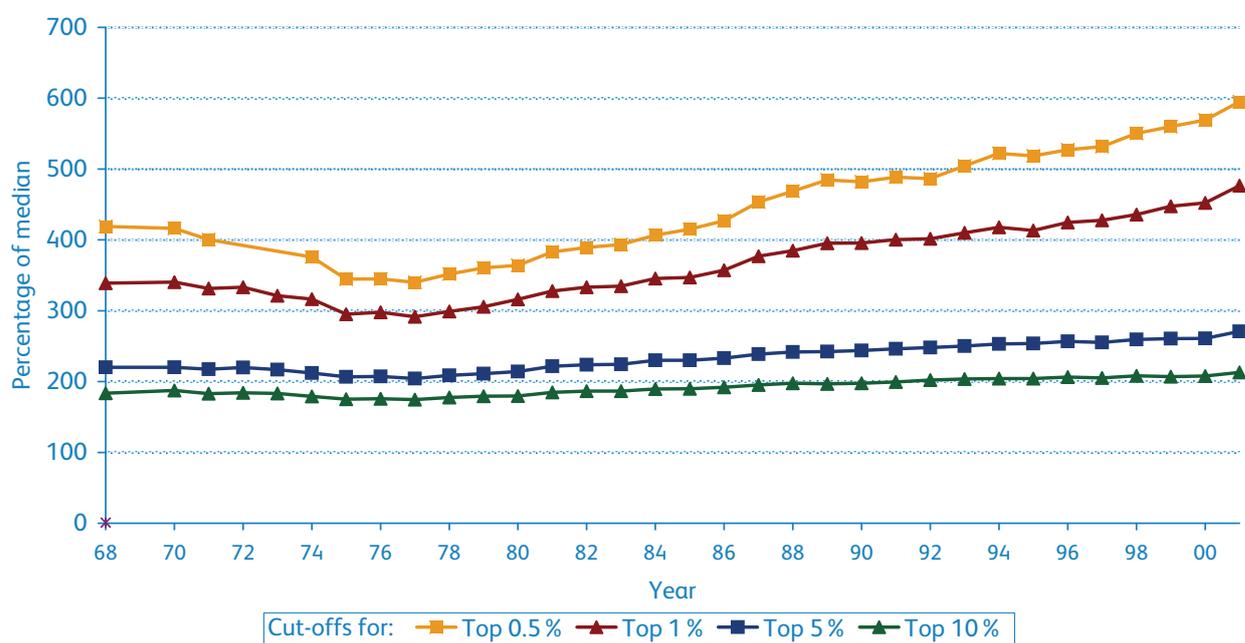
While our main concentration in this report is on the bulk of the distribution where the numbers in any population subgroup are large enough for us to make reliable comparisons, Figure 2.7 shows the extent to which weekly earnings vary *within* the top tenth of the distribution.<sup>27</sup> The top 5 per cent of full-timers earned more than £1,100 per week, and the top 1 per cent more than £1,900 per week. It is right at the top of the distribution that there have been the fastest increases in earnings in the last 30 years. The figure shows Atkinson and Voitchovsky's (2004) analysis of earnings at the top of the distribution expressed as a percentage of the median between 1968 (when the NES, now ASHE, series starts) and 2001. The 90<sup>th</sup> percentile for weekly earnings for men and women together grew from 1.7 times the median in 1977 to 2.2 times it in 2001. But the 99<sup>th</sup> percentile grew from 2.9 to 4.8 times the median, and the cut-off for the top 0.5 per cent from 3.4 to nearly 6 times the median.<sup>28</sup>

<sup>27</sup> This uses data from the NES, the predecessor to ASHE, rather than the LFS used in previous figures, such as Figure 2.5(d). For the highest earners, ASHE is likely to be more accurate.

<sup>28</sup> Figures of the kind quoted in this chapter generally represent the position at the time of a survey, with respondents generally asked about their 'usual' or 'normal' earnings or incomes at the time. Over a longer period, such as a year, these will vary, sometimes considerably (Hills *et al.*, 2005). One result of this is that the distribution of earnings across a whole year is less unequal than in a single week. McKnight (2009) discusses the trends in the distribution of annual earnings, showing that it became less unequal between 1997 and 2002, particularly when looked at across the whole working age population (including unemployed people).

## An anatomy of economic inequality in the UK

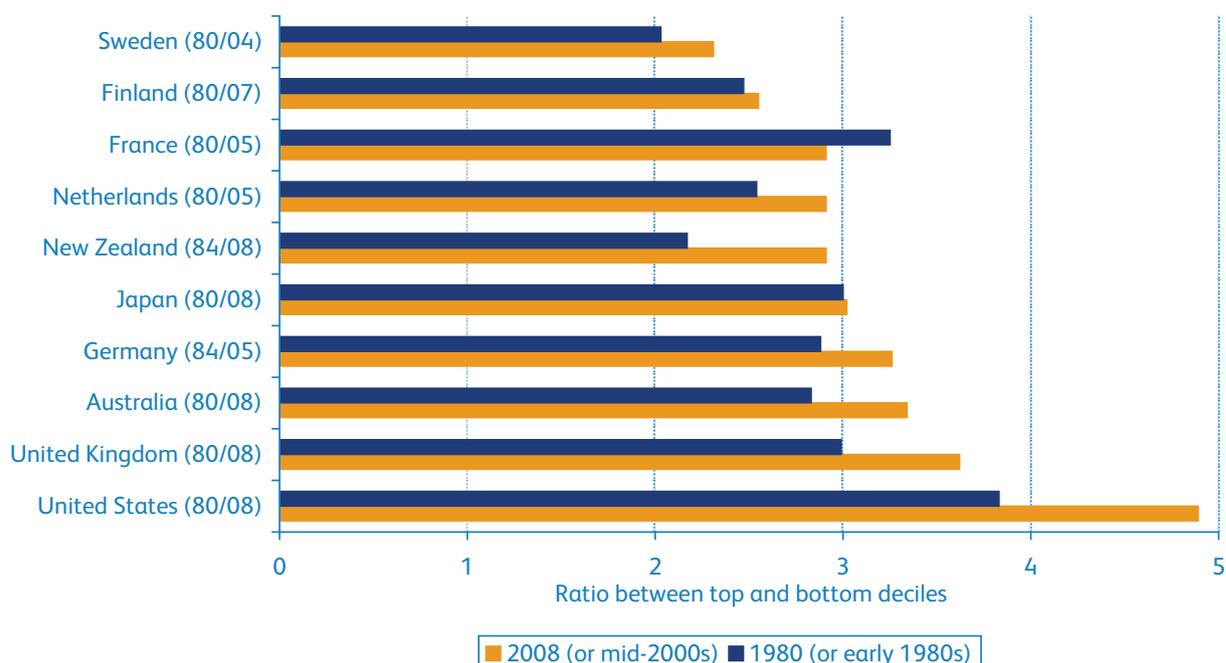
Figure 2.7: All employees weekly earnings at the top of the distribution as a percentage of the median, UK, 1968 to 2001



Source: Atkinson and Voitchovsky (2004), based on NES.

The UK is not the only country where wage differentials have increased over the last thirty years although, as Figure 2.8 shows, the increase was both faster here than in many comparable countries, and has taken the ratio between the 90<sup>th</sup> and 10<sup>th</sup> percentiles to a level only exceeded by the USA amongst the countries illustrated. The figures, for full-time workers, are calculated on a slightly different basis from the LFS figures shown in Figure 2.6(c), but the 90:10 ratio of 3.6 shown here for the UK in 2008 compares with lower ratios, of 3.0 in France and 3.3 in Germany, but a much higher one, 4.9, in the USA.

Figure 2.8: International trends in wage differentials, 1980 to 2008: Full-time employees



## 2.4 Individual incomes

For employees, the weekly earnings shown in Figure 2.5 generally represent the bulk of their incomes, but a third of those of working age are not employees, and most of those over State Pension Age are retired. Some of these may have no income in their own right (but live in a household where other members have income, as discussed in the next section), while others may have income from benefits, pensions, self-employment, or investments. Employees also have income from other sources as well as earnings. Figure 2.9(a) shows the distribution across all adults of the total income they receive directly.<sup>29</sup> Over the three financial years 2005-06 to 2007-08 (adjusted to 2007-08 prices), median total individual income was £251 per week, significantly less, as one would expect, than median earnings for all employees at around the same time (£364 in Figure 2.6(a)). The range was also even wider – with a tenth of adults having a weekly income on an individual basis of £57 or less, and a tenth having an individual income of £704 or more, generating a 90:10 ratio of 12.4. Four per cent of adults had total income exceeding £1,000 per week, but nearly 5 per cent had little or no income in their own right (less than £20). Figure 2.9(b) shows the corresponding distribution for the three years 1996-97 to 1998-99.<sup>30</sup> At that time there was a somewhat more pronounced peak corresponding to some of the main pension and benefit levels (£80-100 per week in 2007-08 prices). The fastest growth in individual incomes (28 per cent) was around the median, with both the 10<sup>th</sup> and 90<sup>th</sup> percentiles growing by rather less, around 20 per cent. Both the 10<sup>th</sup> and 90<sup>th</sup> percentiles therefore fell in relation to the median over the nine years, but the 90:10 ratio changed little.

In our breakdown of the position of members of different groups in Chapter 6, we concentrate on **net individual income**, after allowing for direct taxes. The overall shape of this distribution is shown for 2005-06 to 2007-08 in Figures 2.10(a) and (b). Figure 2.10(c) shows the shape of the net income distribution nine years earlier. As one might expect, comparing with Figure 2.9 direct taxes have little effect on those with the lowest individual incomes, and a larger effect on those with the highest incomes than on the median.<sup>31</sup> The 90:10 ratio is thus reduced compared to that of pre-tax incomes to 9.6 in 2005-06 to 2007-08 (and had been 9.8 nine years earlier). Just under 2 per cent of the adult population had net individual incomes of £1,000 per week or more (up from 1.2 per cent in the earlier period). The top 1 per cent had individual incomes above £1,300 in 2006-2008. Again, growth at the median (25 per cent) had been somewhat greater than at the 10<sup>th</sup> and 90<sup>th</sup> percentiles (18-19 per cent).

<sup>29</sup> This includes benefits such as Income Support or income-related Jobseeker's Allowance which are attributed here to the individual who receives them, even where they are paid in respect of a couple. Housing Benefit and Council Tax Benefit are excluded from these figures. The data cover only individuals living in private households. An adult is someone who is: a married or cohabiting person; or an individual aged 19 or over; or a 16 to 18 year-old not in full-time education; or a 16 to 18 year-old on a course above 'A' level standard (or above 'Highers' in Scotland).

<sup>30</sup> Data for 1996-97 to 1998-99 cover Great Britain, data for 2005-06 to 2007-08 cover the United Kingdom.

<sup>31</sup> See Box 2.4 below for discussion of the effect of the tax system as a whole.

## An anatomy of economic inequality in the UK

Figure 2.9(a): Total individual income at 2007-08 prices, UK, 2005-06 to 2007-08:  
Percentage with income in each range



Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

Figure 2.9(b): Total individual income at 2007-08 prices, Great Britain, 1996-97 to 1998-99:  
Percentage with income in each range



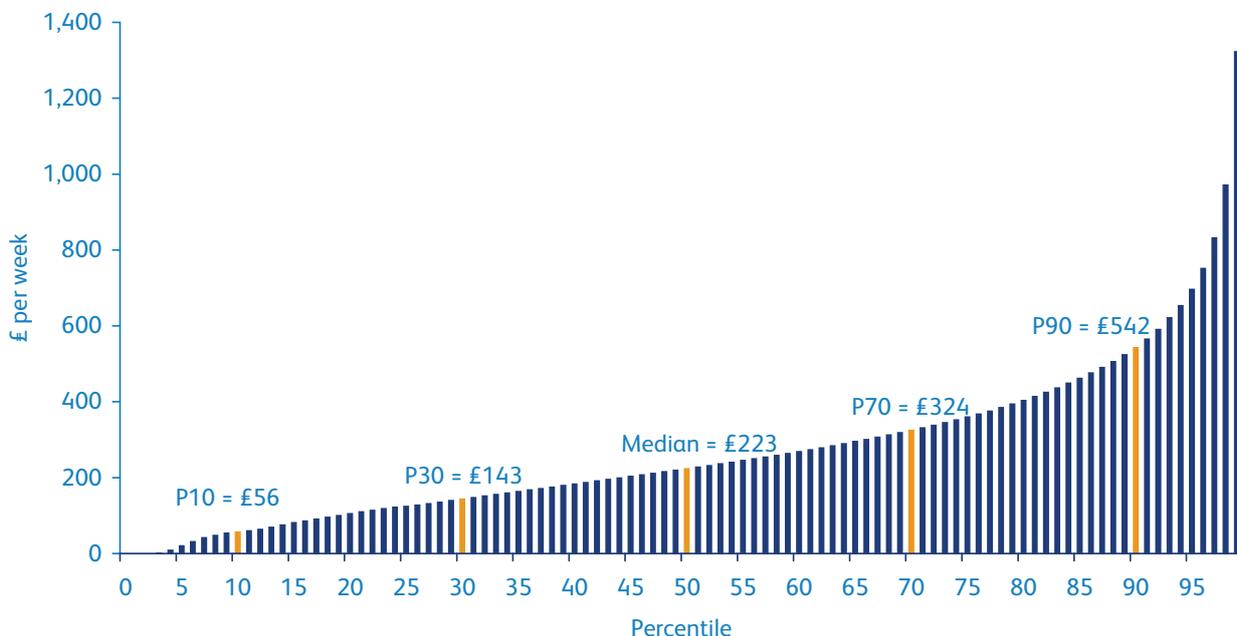
Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

Figure 2.10(a): Net individual income at 2007-08 prices, UK, 2005-06 to 2007-08: Percentage with income in each range



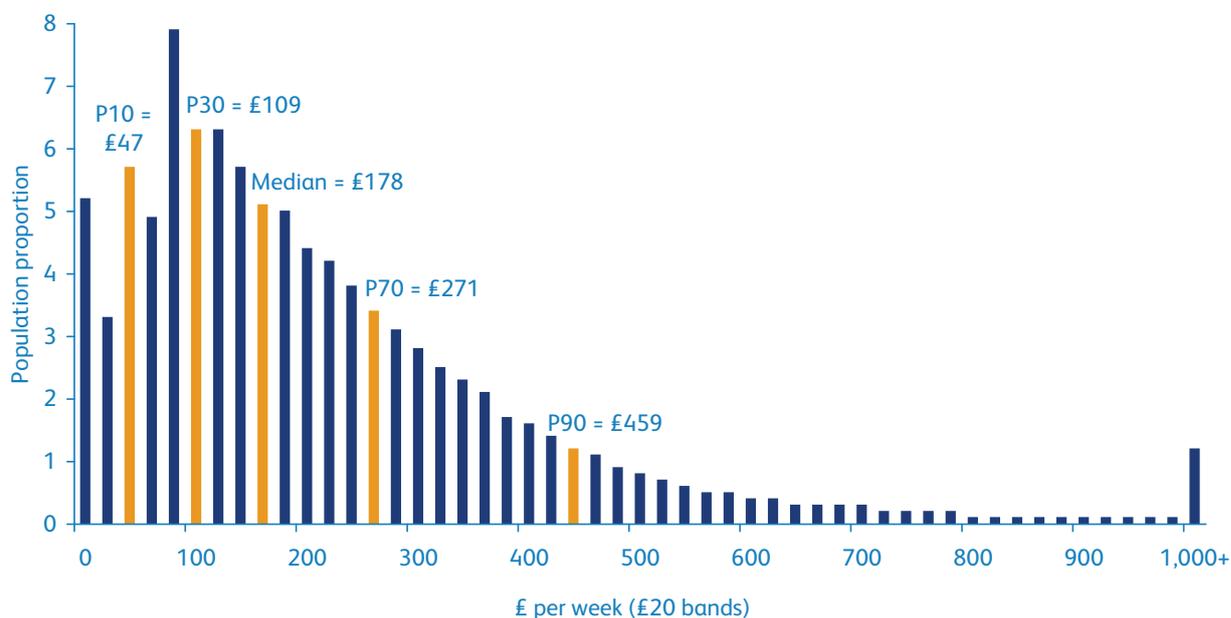
Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

Figure 2.10(b): Net individual income at 2007-08 prices, UK, 2005-06 to 2007-08: Income level at each percentile (£/week)



Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

Figure 2.10(c): Net individual income at 2007-08 prices, GB, 1996-97 to 1998-99:  
Percentage with income in each range



Source: NEP, based on Individual Income Series 1996-97 to 1998-99.

## 2.5 Incomes on a household basis

Looking at income on the basis of which individual receives it, as in the previous section, gives valuable insights into the positions of different groups and, as we shall see in Chapter 10, changes over time in the economic positions of men and women and of different age groups. However, most people do not live alone and, for many purposes, what will be most important for their standard of living is the total income of the family or household to which they belong. In this section, and in the breakdowns we examine in Chapter 7, we use a household-based definition. In this section, we look at ‘equivalent net income’ as defined for the main official income distribution statistics in the UK, published each year by the Department for Work and Pensions in its *Households Below Average Income* (HBAI) publication. A brief description of how those statistics are derived and the definitions used is given in Box 2.1, but key points to note are:

- The statistics allocate *all individuals* in the population (including children) a level of income based on the total income of the household in which they live. Each tenth of the distribution shown therefore contains the same number of people, even if they live in households of different sizes.
- Each individual in a household is allocated the same income, in effect assuming *equal sharing* of resources within a household. This may be a reasonable assumption in many cases, and assuming *no* sharing at all would clearly be wrong for those situations, but there is evidence that sharing is incomplete in other cases. There is no evidence that would allow robust estimates that allowed for variations in sharing within households. We discuss implications of this for measurement of gender inequality, in particular, in Box 7.1.

- The level of income is adjusted to allow for the fact that a smaller household needs fewer resources than a larger household to achieve the same standard of living. The result is a calculation of **equivalent net income**. This is the amount that would put a household consisting of a couple with no children in the same position.<sup>32</sup> The box explains how this adjustment is made. The factors used are, to some extent, arbitrary but are the ones used most commonly for international comparisons, for instance by the Organisation for Economic Cooperation and Development (OECD) or EU.
- Incomes include benefits and pensions, but income tax and National Insurance contributions are deducted. The official statistics present information on two bases – before and after deducting housing costs. For the main comparisons in this report we look at incomes on a before housing costs (BHC) basis, although we present some breakdowns on the after housing costs (AHC) basis where this gives a markedly different picture for the position of particular groups (notably those defined by region and housing tenure). Incomes are shown on a weekly basis (averaging out items that are received monthly or annually).

Although each of the many assumptions made in compiling these statistics could be challenged, the series gives, for many purposes, the most useful description of the differences in economic resources between people, including what has happened to inequality over time and how inequality in the UK compares with other countries. Figures 2.11(a) and (b) show the shape of the income distribution on this basis in the financial year 2007-08. Median equivalent net income was £393 per week. In other words, half the population lived in households where income adjusted for household size put them in a position that was less favourable than a childless couple with a net annual income of £20,500, and half were in a more favourable position. A tenth had weekly incomes below £191 and a tenth had incomes of more than £806 (including more than 5 per cent above £1,000 per week). The top 1 per cent had equivalent net incomes above £2,000 per week. Thus, the 10<sup>th</sup> percentile was just under half the median, and the 90<sup>th</sup> percentile was just over twice the median, and so the 90:10 ratio was more than four (4.2). As we shall see, this is a high level of income inequality in both historic and international terms. Sharing within the household (assuming that it occurs) means that it is, however, considerably less than the inequality described for individual income in the previous section. The shape of the distribution is one that is often observed: many people have incomes around and just below the median, but there is a long tail of a smaller number of people who had incomes well above the median. One result of this is that ‘average’ (mean) income (£487) in 2007-08 was well above the middle person’s income given by the median (£393). A small number of high incomes pull up the average.

<sup>32</sup> Note that this is simply the reference category used – all household types are included in the statistics, regardless of how many members they contain.

### Box 2.1: The Households Below Average Income (HBAI) income definition

The Department for Work and Pensions' HBAI series presents information on potential living standards in the UK. Despite the series' name, it provides information about the whole of the income distribution, not only on low incomes.

The measure of income used to produce the HBAI is 'weekly net disposable equivalent household income', which we refer to as 'equivalent net income'. This includes total income from all sources of all household members including dependants, net of direct taxes.

Income is measured on two bases, Before Housing Costs (BHC) and After Housing Costs (AHC) have been deducted. Housing costs include rent, water rates, mortgage interest payments, insurance premiums and ground rent and service charges.

An important assumption in the HBAI analysis is that all individuals in the household benefit equally from the total income of the household. However, a household of three persons needs a larger income than an individual living alone in order to enjoy the same living standard, but not three times as much because of economies of scale (e.g. sharing space, utilities, etc.). To reflect this, income is adjusted using an 'equivalence scale', to reflect the extent to which households of different size and composition require a different level of income to achieve the same living standard. Incomes are adjusted to be equivalent to those for a couple without children.

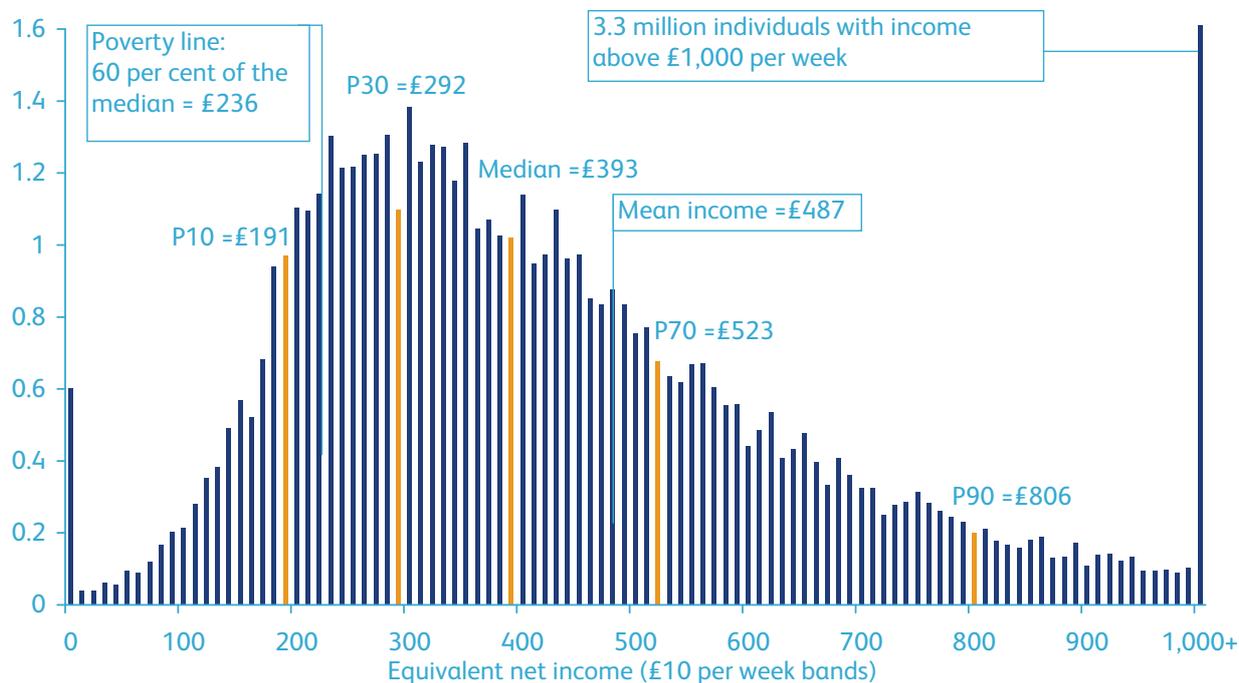
For example, suppose that three households – a single person, a couple with no children, and a couple with two children aged fourteen and ten – all have unadjusted weekly household incomes of £200 BHC.

The equivalent net income of the couple with no children would be £200, as that family type is the reference case. The equivalent income of the single person would be £299, in effect showing a potential living standard nearly 50 per cent higher than for the couple. For the couple with two children, equivalent income would be £131, reflecting a potential living standard only two-thirds of that of the childless couple.

The main data source used in the survey is the FRS, but results for around the top 1 per cent of the income distribution are adjusted to be consistent with HM Revenue & Customs (HMRC) data based on tax returns.

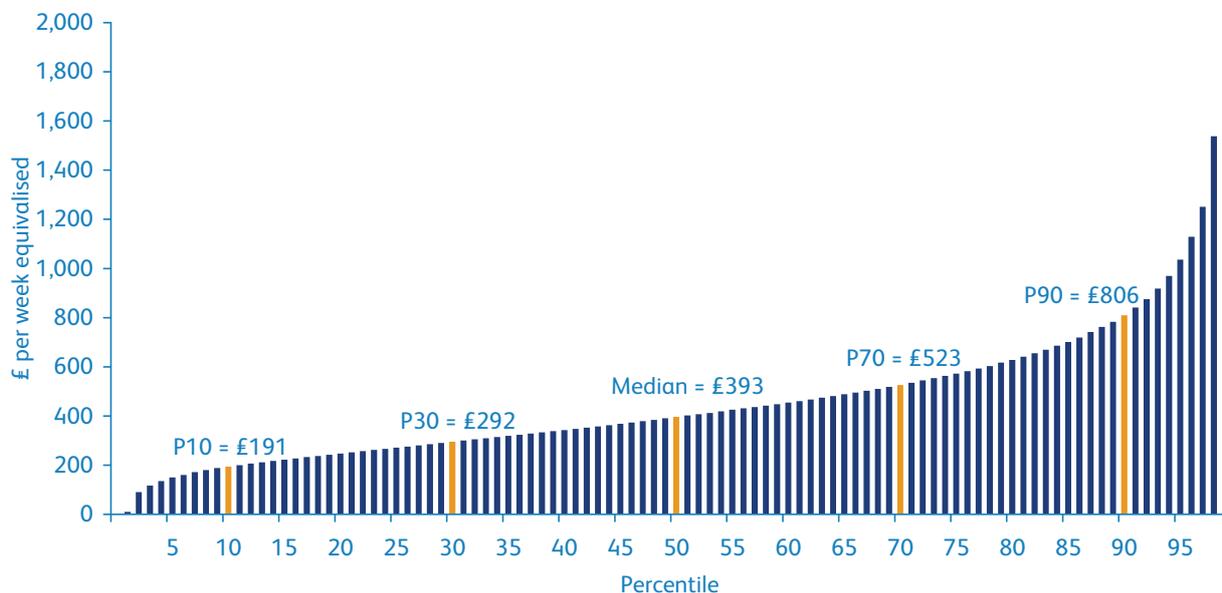
Fuller details can be found in Appendix 2 of DWP's annual HBAI publication.

Figure 2.11(a): Equivalent net income before housing costs, UK, 2007-08:  
Number of individuals (millions) with income in each range



2

Figure 2.11(b): Equivalent net income before housing costs, UK, 2007-08:  
Income level at each percentile (£/week)

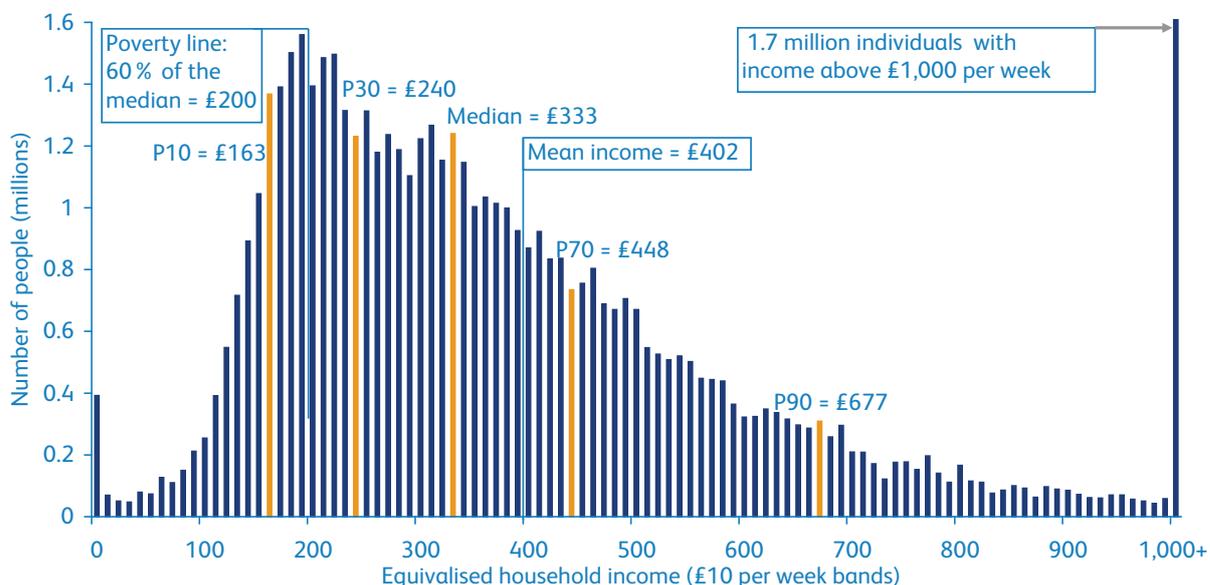


Source: DWP, based on HBAI dataset. Incomes are adjusted to be equivalent to those for a couple with no children. For a single person, divide actual net income by 0.67; for a couple with child under 14 by 1.2; for a couple with 2 children under 14 by 1.4, etc. (allowing 0.2 for each additional child under 14, and 0.33 for children aged 14 or over, or additional adults).

Figure 2.11(c) shows what the distribution looked like (at 2007-08 prices) ten years earlier, in 1997-98 (but for Great Britain). Comparing the two, incomes at all levels rose in real terms over the ten years by between 17 per cent (at the 10<sup>th</sup> and 70<sup>th</sup> percentile) and 21 per cent (at the 30<sup>th</sup> percentile). The median grew by 18 per cent. At the same time, there was a reduction in the numbers of individuals with incomes below the conventional poverty line marked on the diagrams (measured as 60 per cent of the median), but a faster increase in the incomes of those at the very top. Indeed, the number with incomes over £1,000 per week nearly doubled.

## An anatomy of economic inequality in the UK

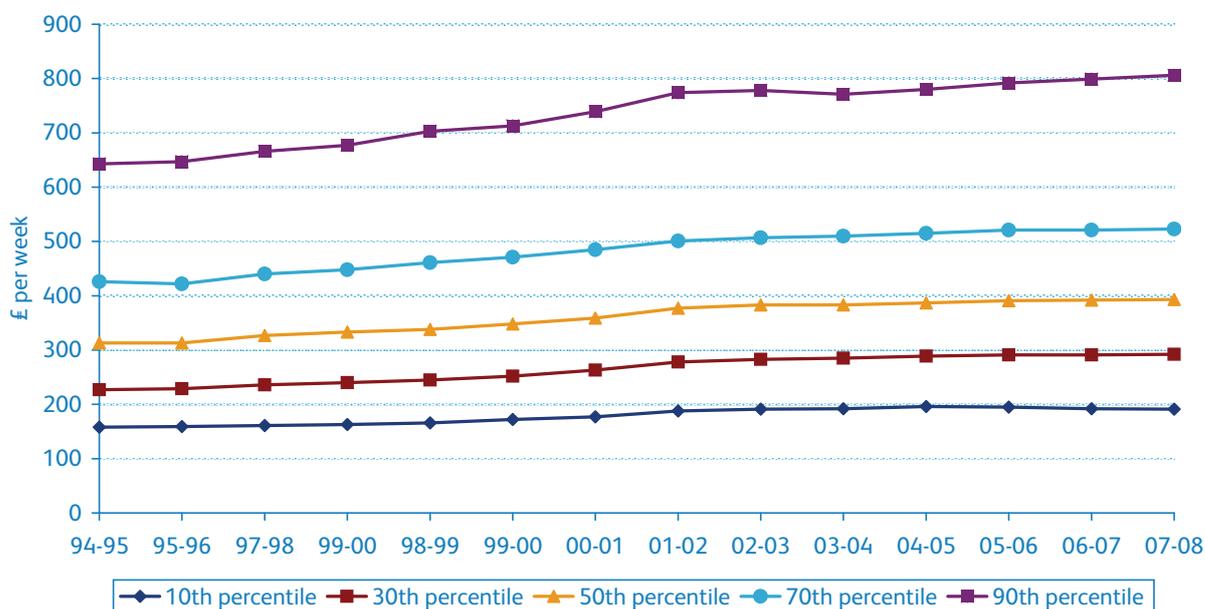
Figure 2.11(c): Equivalent net income before housing costs at 2007-08 prices, GB, 1997-98: Number of individuals (millions) with income in each range



Source: DWP, based on HBAI dataset.

Figure 2.12 shows in more detail the ways in which real incomes have grown at different points of the distribution since 1994-95 (when the survey used by DWP for this analysis started). Particularly rapid periods of growth include that for the 90<sup>th</sup> percentile between 1995-96 and 2001-02 and for the 10<sup>th</sup> percentile between 1997-98 and 2001-02. Growth for all groups slowed considerably after 2001-02. In the last two years for which figures are available, up to 2007-08, real incomes *fell* at the 10<sup>th</sup> percentile, but rose for those in the top half of the distribution.

Figure 2.12: Incomes over time at 10<sup>th</sup>, 30<sup>th</sup>, 50<sup>th</sup>, 70<sup>th</sup> and 90<sup>th</sup> percentiles, 1994-95 to 2007-08 at 2007-08 prices, GB/UK, £ per week



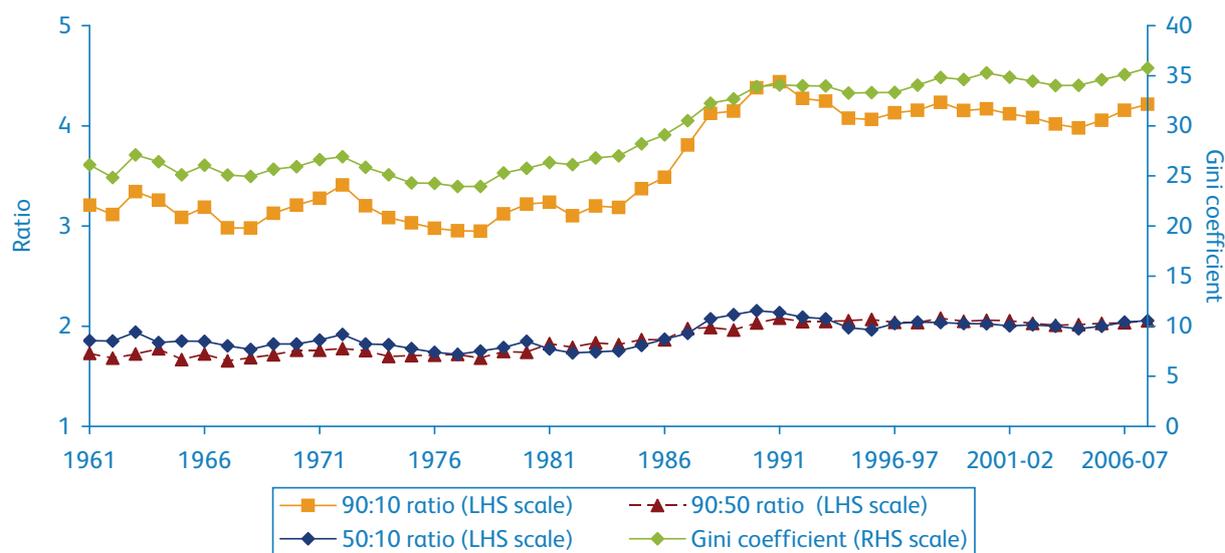
Source: DWP.

Note: figures are for the UK from 2002-03, earlier years are for GB only.

These kinds of differential income growth mean that different ways of summarising the overall inequality of the income distribution can show somewhat different pictures. Longer-term trends in income inequality since 1961 according to two kinds of summary measure are shown in Figure 2.13. The first measure is the 90:10 ratio which we have been using above, which is one way of summarising inequality across the bulk of the population. In the 1960s and 1970s, incomes at the 90<sup>th</sup> percentile were generally just over three times those at the 10<sup>th</sup> percentile. Ever since the very steep growth in inequality in the mid-1980s, the ratio has been somewhat above four. It declined in the mid-1990s and again at the start of the 2000s, but grew between 2004-05 and 2007-08, so that the latest figure available exceeds its value of ten years before. The figure also shows trends in the ratios for the parts of this relating to below-median incomes (the 50:10 ratio) and to above-median incomes (the 90:50 ratio). Since the mid-1990s these have had very similar values and have moved together, although back in the 1960s the 50:10 ratio was greater than the 90:50 ratio.

The second summary index for inequality is the Gini coefficient. This (expressed as a percentage) takes a value from zero, if everyone has the same income, to 100 if one person has all the income and everyone else none. It is affected by income differences at every point in the distribution, including at the very top and bottom as well as in the middle. Given the increasing incomes of those at the very top in particular, this index fell less rapidly than the 90:10 ratio in the mid-1990s and first part of this decade, and the increasing inequality after 2004-05 meant that by 2007-08 it had reached its highest level in the years covered. We do not have figures before 1961 on this basis, but comparison with measures based on tax records suggests that this is the highest level of income inequality since soon after the Second World War.<sup>33</sup>

Figure 2.13: Changes in overall income inequality measures (HBAI definition), 1961 to 2007-08



Source: IFS, <http://www.ifs.org.uk/bns/bn19figs.zip>

<sup>33</sup> See Hills (2004), figure 2.9, for a comparison with trends in the 'Blue Book' series back to 1949.

While our focus in this report is on the population as a whole rather than on the extremes, for many people it is the contrasts between those right at the top and those right at the bottom that are of most interest or concern. Box 2.2 summarises analysis of the increasing shares of those at the very top of the distribution in the last twenty years, comparing both with earlier periods and with other countries. Box 2.3 summarises recent changes in poverty rates using the main current official measures, and discusses evidence on the reliability or otherwise of the very lowest reported incomes (which implies that data for incomes in the bottom few percentiles – below the fifth percentile of the overall distribution – should be treated with caution).

### Box 2.2: Trends in the highest incomes

The main evidence we present in this report is concerned with inequalities across the bulk of the population. Because our focus is on differences between and within groups when the population is classified in various ways, and because of small sample numbers for many of those groups, we concentrate in the chapters that follow on inequality measures that exclude the very top and very bottom of the distributions in which we are interested. However, for many people the first thing that would come to mind when discussing ‘inequality’ would be differences between those right at the top and either the middle or those right at the bottom. This box presents evidence, mainly from different sources to those used in the rest of the report, on long-term and more recent trends in the highest incomes, with some evidence on what kinds of people have the highest incomes and earnings.

Table 2A and Figure 2A show results from analysis by Tony Atkinson and Thomas Piketty of the shares of total income which various groups right at the top of the income distribution received (after income tax) between 1937 and 2000. The results are drawn from tax records. They are somewhat different to other analysis of incomes in this section in that they relate to the shares of ‘tax units’ – essentially single people or couples up to 1989, but individual adults since then. There is, thus, a break in the series between 1989 and 1990. The figures are not adjusted for household size.

The table and figure show that between 1937 and 1949 the shares of each of the groups declined. The share of the top tenth of taxpayers fell from 36 per cent to 29 per cent. For the very highest group – the top 0.05 per cent (one in every two thousand) – the fall was from 2.4 per cent of total after tax income to 0.7 per cent. This tendency towards reduced inequality continued until 1969, but by the late 1970s it had reversed and then gathered pace. By 2000, the share of the top 0.05 per cent had risen to above 2.5 per cent of the total again – higher than it had been in 1937 (although a small part of the difference may reflect the definitional change in 1990). The share of the top 1 per cent had reached 10 per cent, again its highest since before the Second World War.

The table shows an important contrast, however, between the 1979 to 1989 and 1990 to 2000 periods. In the earlier period – essentially the 1980s – the top tenth of taxpayers increased their share of total income by 5 percentage points, with half of this accounted for by the top 1 per cent, and within this the top 0.1 per cent increasing their share by 1 percentage point. Inequality was growing *within* those with the highest incomes, but they were all increasing their shares. By contrast, in the 1990s, the increase in the share of the top tenth was *all* accounted for by the top 0.1 per cent. The ‘next 0.9 per cent’ gained too, so the top 1 per cent as a whole increased their

share from 8 to 10 per cent of the total. But the share of the ‘next 9 per cent’ actually fell. The increase in the shares of top incomes in the 1990s was about those right at the top, not those quite near to it.<sup>34</sup>

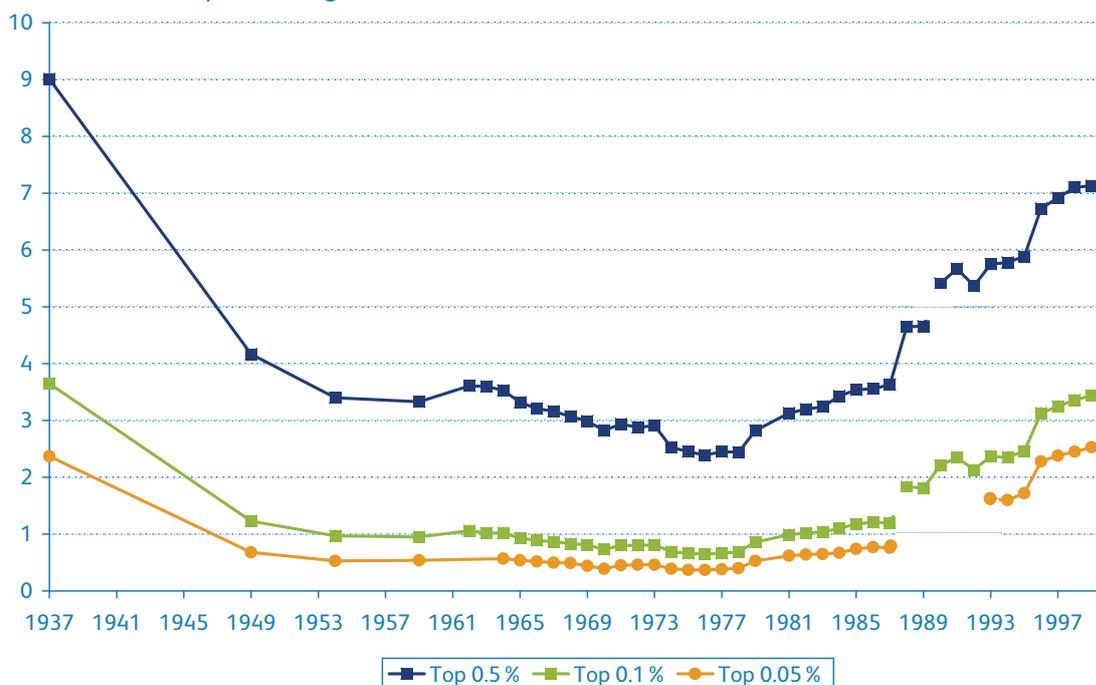
Table 2A: Income shares (percentages) of highest income taxpayers (after income tax), 1937-2000, UK

	Top 0.05%	Next 0.05%	Next 0.4%	Top 0.5%	Next 0.5%	Top 1%	Next 9%	Top 10%
1937	2.37	1.28	5.4	9.0	3.6	12.6	23.1	35.6
1949	0.68	0.55	1.2	4.2	2.6	6.8	22.0	28.8
1959	0.54	0.41	2.4	3.3	2.2	5.5	20.4	25.9
1969	0.44	0.37	2.2	3.0	2.0	5.0	20.0	25.1
1979	0.53	0.33	2.0	2.8	1.9	4.7	21.5	26.2
1989	1.81		2.9	4.7	2.5	7.1	24.2	31.3
1990	2.21		3.2	5.4	2.6	8.0	25.9	33.9
2000	2.53	0.97	3.7	7.2	2.8	10.0	24.3	34.3

Source: Atkinson and Piketty (2007), table 4.2.

Notes: Figures are based on the shares of different groups of ‘tax units’ (as proportion of total potential tax units). There are two discontinuities resulting in slight changes after 1974 and more significant ones after 1989, with the introduction of independent taxation, so husbands and wives are now separate units.

Figure 2A: Share of total personal after tax income of the top 0.05%, 0.1%, and 0.5%, UK, 1937-2000 (percentage of total after tax income)



Source: Atkinson and Piketty (2007), figure 4.6.

<sup>34</sup> In 2004-05, the highest tenth of adults had annual incomes before tax of above £35,000; the top 1 per cent had incomes above £100,000; and the top 0.1 per cent – about 47,000 people – had incomes above £350,000 (all at 2007-08 prices) (Brewer, Sibieta and Wren-Lewis, 2008, p. 10).

This kind of (favourable) reversal of (literal) fortunes for those at the very top of the income distribution since the late 1970s happened in certain other countries as well. As the first panel of Figure 2B shows, comparable data show similar trends for the shares of the top 1 per cent in other English-speaking countries (in this case for before tax incomes and going back over the whole of the twentieth century). Indeed, in the USA, the gain of the top 1 per cent was even greater than in the UK, to more than 15 per cent by 2000. However, as the lower panel shows, while the pattern of falling shares for the very top was similar in France, Germany, the Netherlands and Switzerland up to 1980, in these countries there has been little change since then. The rise in the incomes of the very top has not, therefore, been a global phenomenon.

Mike Brewer, Luke Sibieta and Liam Wren-Lewis look at recent tax-based data in more detail, contrasting the four-year periods from 1996-97 and from 2000-01. In the first period, real income growth (after income tax) within the top 10 per cent was faster, the nearer the top one looked: an annual rate of nearly 4 per cent at the 90<sup>th</sup> percentile, but more than 5 per cent at the 99<sup>th</sup> percentile, and 8 per cent at the cut-off for the top 0.1 per cent. However, between 2000-01 and 2004-05, annualised income growth fell to around 1 per cent at most points within the top tenth, and to zero at the cut-off for the top 0.1 per cent.<sup>35</sup>

Part of the reason for this is connected with fluctuations in the stock market, and in levels of dividend payments, which will have increased and then fallen again in the period since 2004. Part of it also relates to trends in pay for those with the highest incomes. One indication of what has been happening here is provided by the Income Data Services analysis of the earnings (and other remuneration) of the chief executive officers (CEOs) of Britain's largest companies shown in Figure 2C. This shows indices of real earnings since 1999 for all full-time employees, and for the CEOs of the top 100 and next 250 companies. For all employees, real earnings were roughly static between 2003 and 2008 (at about 106 per cent of 1999 levels). But between 1999 and 2007 the real earnings of the CEOs of the top 100 companies more than doubled (reaching £2.4 million per year), and those of the next 250 companies almost doubled (reaching £1.1 million). The CEOs did have a sharp fall in pay in 2008, as one might expect given the financial crash, but it remained higher than in 2004, and substantially higher than in 1999. It is striking that the rapid rise in CEO remuneration came after 2003, just as full-time earnings in general flattened out.

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<sup>35</sup> Brewer, Sibieta and Wren-Lewis (2008), figure 11. Atkinson and Piketty (forthcoming) suggest, however, that by 2005, shares at the very top of the UK distribution were higher again in 2005 than they had been in 2000.

Figure 2B(a): Share of top 1% in total income before tax in English-speaking countries (percentages)

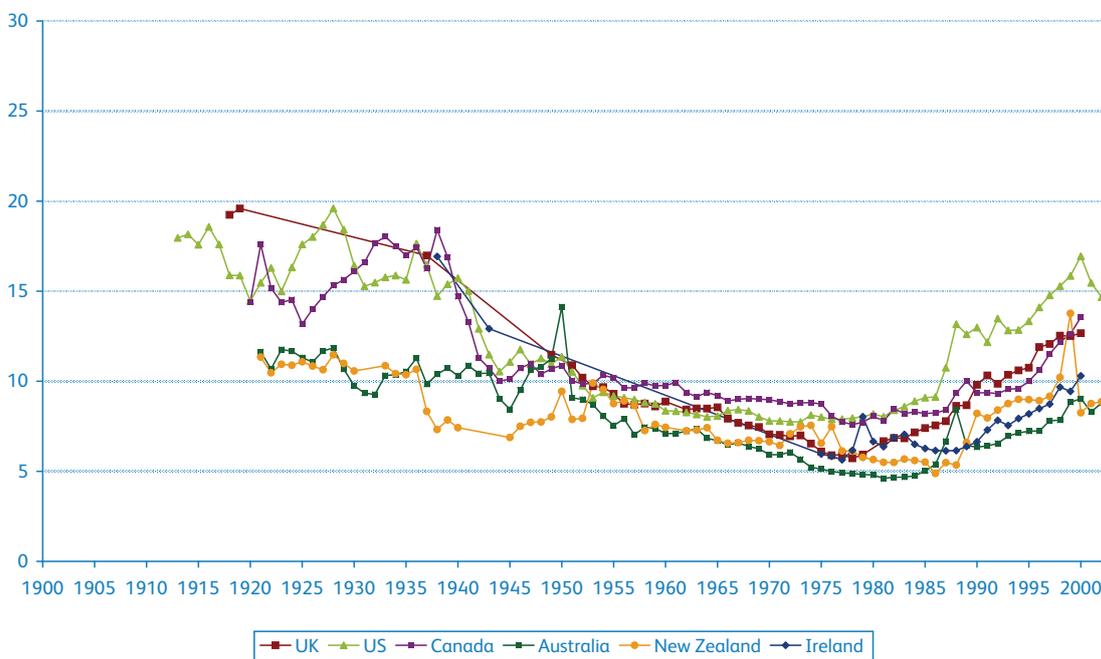
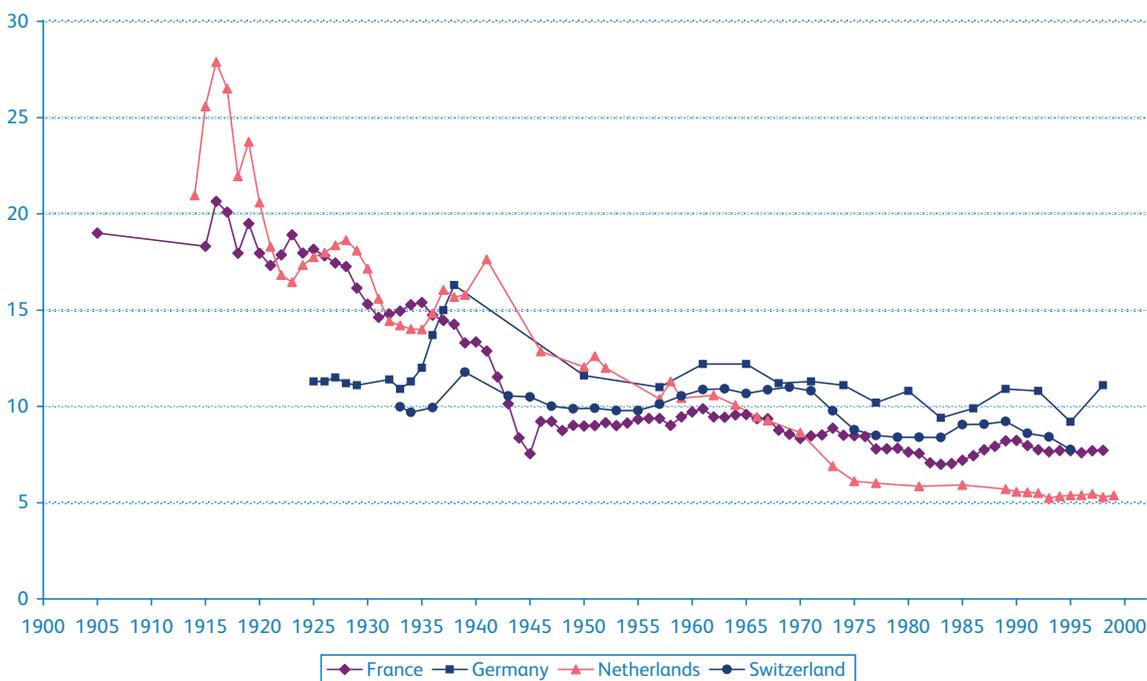
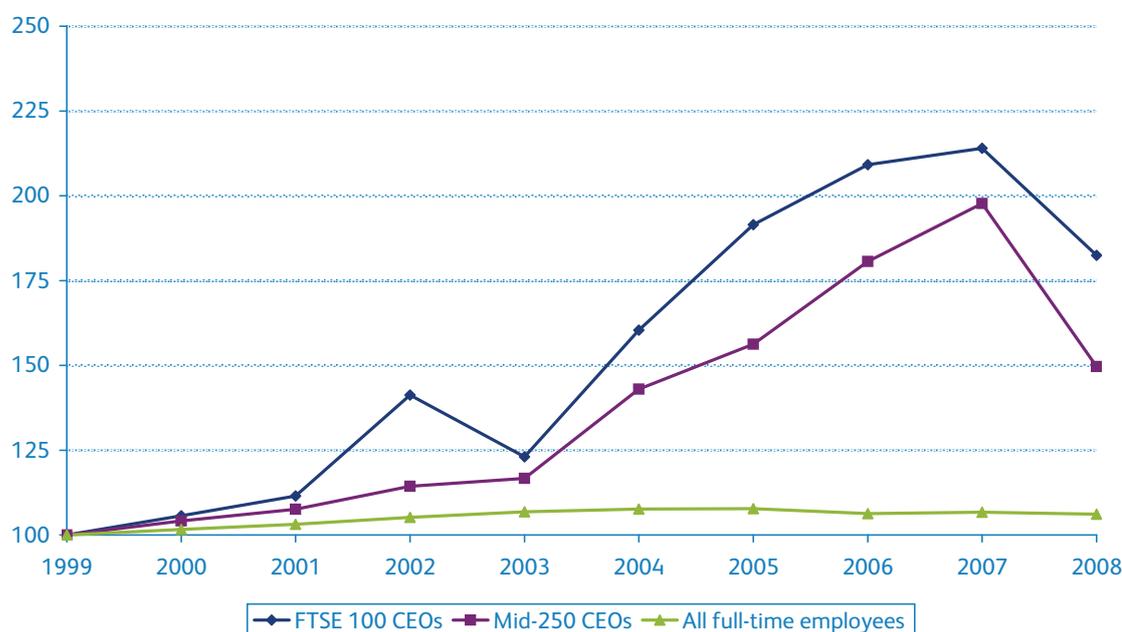


Figure 2B(b): Share of top 1% in total income before tax in continental Europe (percentages)



Source: Atkinson and Piketty (2007), figures 13.2A and 13.2B.

Figure 2C: Index of real median earnings of FTSE 350 CEOs, 1999-2008 (1999=100)



Source: Income Data Services (for CEO pay) and ASHE (for all full-time employees).

Note: CEO earnings include salary, benefits, annual bonus, share options and Long-Term Investment Plans. Adjusted by RPI.

### Who are those with the highest incomes?

We know much less about what kinds of people have the highest incomes and earnings than we do about larger groups of the population, where sample data give reliable information. As far as incomes for tax purposes are concerned, we have a little information about their gender, age and the region where they live:<sup>36</sup>

- Men were just over half of all taxpayers in 2004-05, but five-sixths of the top 1 per cent and more than nine-tenths of the top 0.1 per cent.
- Those aged 45-54 were just under a fifth of all taxpayers were, but they were a third of the top 1 per cent and half of the top 0.1 per cent.
- Those living in London were an eighth of all taxpayers, but a quarter of the top 1 per cent and more than a third of the top 0.1 per cent.

The tax data on which this is based do not indicate people's other characteristics. The LFS gives more information of the composition of those with the highest weekly earnings, some features of which are summarised in Table 2B, showing what proportions of earners of different kinds are found in various parts of the weekly earnings distribution. In Chapter 5, we investigate the earnings of different groups in more detail, but this summary shows that patterns applying when looking up to the top tenth of earners intensify within the top tenth. For instance:

<sup>36</sup> Brewer, Sibieta and Wren-Lewis (2008), figures 5 and 6. The data also contain information on the kinds of industry people work in.

- Men are more than three times as likely to be in the top tenth of earners as women, but six times as likely to be in the top 1 per cent.
- With the exception of Indian employees, non-white ethnic groups are less likely to be amongst the highest earners than White British employees.
- Nearly 40 per cent of higher managerial and professional employees are in the top tenth of earners, and 5 per cent of them in the top 1 per cent.
- 12 per cent of employees with mortgages are in the top tenth of earners, but less than 1 per cent of social tenant employees are in the top tenth.

Table 2B: Proportions of different groups within various parts of the weekly earnings distribution (all employees, 2006-2008)

	Bottom fifth	Second fifth	Third fifth	Fourth fifth	Top fifth	Top 10% of earners	Top 1% of earners
Men	9	15	21	25	29	15.9	1.8
Women	30	25	19	15	12	4.6	0.3
White British	20	20	20	20	20	10.0	1.0
Indian	16	21	21	20	23	13.3	1.3
Pakistani	29	27	18	14	13	7.0	na
Bangladeshi	40	24	15	13	na	na	na
Black Caribbean	17	18	24	25	16	6.1	na
Black African	18	22	21	25	15	5.7	na
Higher managerial/professional	2	4	9	24	62	39.4	5.2
Lower managerial/professional	6	13	22	30	29	12.4	0.8
Intermediate	22	33	27	14	5	1.3	na
Lower supervisory	13	23	27	26	11	2.6	na
Semi-routine	41	34	17	7	2	0.4	na
Routine	36	26	22	13	3	0.6	na
Outright owners	27	21	19	16	17	8.8	1.2
Mortgagors	16	17	19	23	25	12.4	1.1
Social tenants	34	31	21	11	3	0.7	na
Private tenants	18	26	23	19	13	7.0	0.8

Source: NEP, based on LFS (UK).

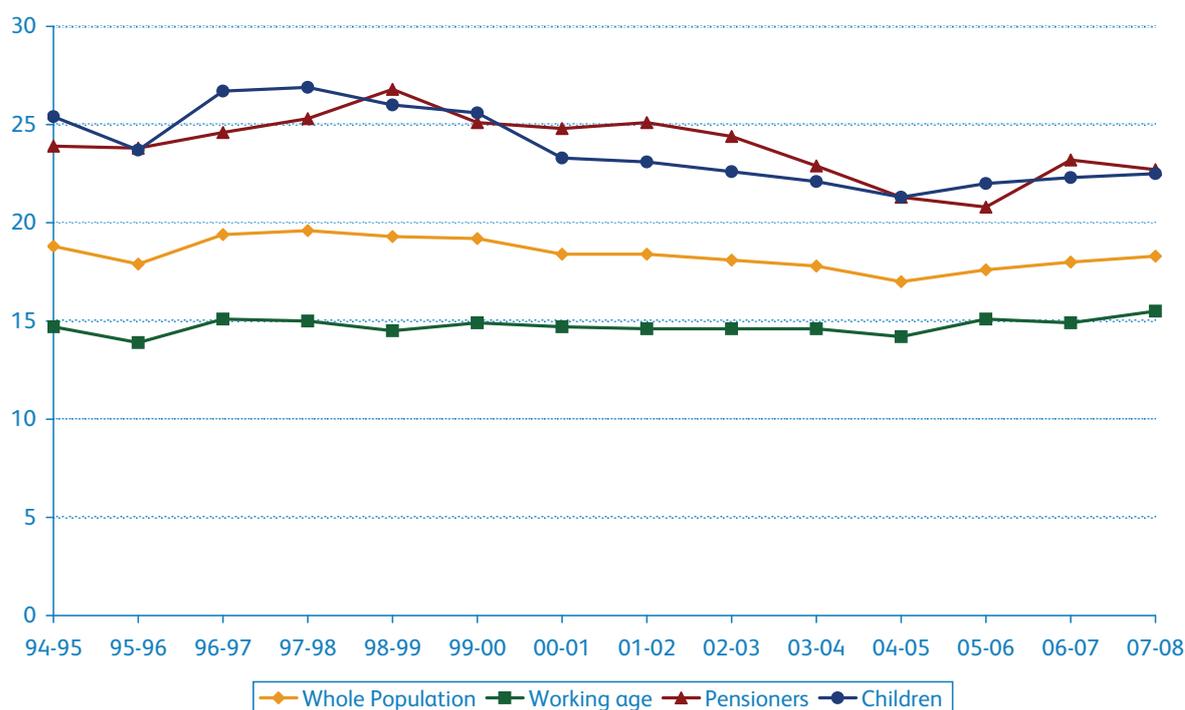
### Box 2.3: Trends in income at the bottom of the income distribution

In this box we present information on poverty rates for the whole population as well as for selected groups: working age adults, children and pensioners.<sup>37</sup> We then discuss two issues: that the extent of poverty depends on the measure adopted, and that reported income is not always the best measure of living standards.

We start with figures for relative poverty on official definitions, that is, the number of individuals whose equivalent net income<sup>38</sup> is below 60 per cent of the national median. In 2007-08 in the UK there were 11 million individuals in relative poverty using this definition. As a percentage of the population, poverty had fallen from 19.4 to 18.3 per cent since 1994-95. The reduction in the poverty rate was most pronounced between 1997-98 and 2004-05, falling from 19.4 to 17 per cent.

As Figure 2D shows, the reduction in the rate of child poverty was particularly pronounced over the same period from 1997-98 to 2004-05, falling from 26.7 to 21.3 per cent. However, it had risen again to 22.5 per cent in 2007-08. Similarly, the pensioner poverty rate fell from 24.6 to 21.3 per cent between 1997-98 and 2004-05, but had risen to 22.7 by 2007-08.

Figure 2D: Relative poverty rates, 1994-95 to 2007-08, UK



Source: HBAI (2007-08), DWP.

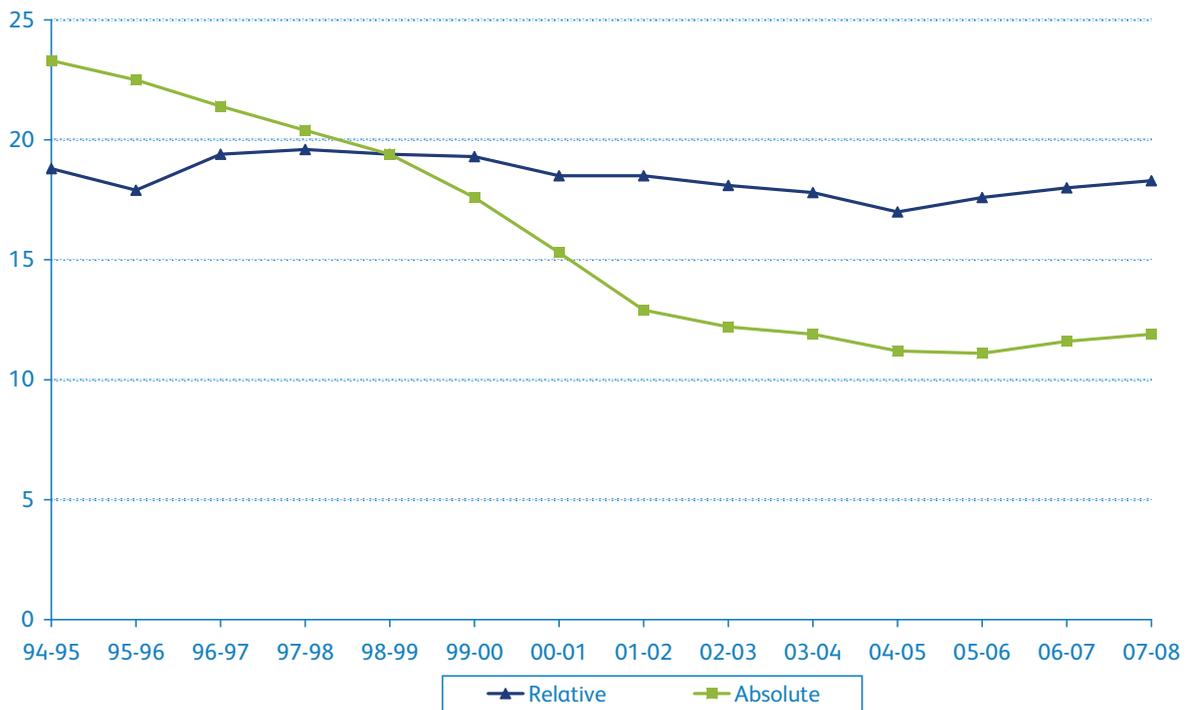
The numbers presented above are based on a relative measure of poverty, that is, relative to the median income of the whole population. The threshold therefore changes over time as general living standards rise.

<sup>37</sup> We draw heavily from the DWP Households Below Average Income and the IFS Poverty and Inequality annual publications. We report figures on a Before Housing Cost basis.

<sup>38</sup> See Box 2.1 for a description of how equivalent net income is calculated.

Alternatively, a line can be fixed at 60 per cent of the median income in a particular year, for instance, 1998-99 in Figure 2E. This gives us a measure of numbers below a fixed real (absolute) line. Against an absolute line, 12 per cent of individuals were classified as poor, compared to this, by 2007-08. By contrast, this figure was 23 per cent in 1994-95.

Figure 2E: Poverty in relative terms and against an absolute line



Source: HBAI (2007-08), DWP.

Income is the basis for the measures of poverty presented above and in the official statistics. However, the Government announced in 2003 that it would also adopt an additional third indicator of poverty to monitor progress towards its target to halve child poverty by 2010 compared to the 1998 level. This is a combined indicator of low income (below 70 per cent of the median) and material deprivation, according to which children are classified as living in material deprivation if their parents say they cannot afford certain items, such as a family holiday for at least a week a year, having friends or family around for a drink or meal at least once a month, two pairs of all-weather shoes for each adult.<sup>39</sup> According to this measure, there were 2.2 million children living in households with low income and high material deprivation in the UK in 2004-05, or 17 per cent of all children. The figures were the same in 2007-08, (up from a low point in 2006-07).<sup>40</sup>

<sup>39</sup> Rates of material deprivation are only collected for families with children.

<sup>40</sup> DWP (2009a).

Research for DWP by Brewer, O’Dea *et al.* (2009), using data for 2004-05 to 2006-07, suggested that children from households with the very lowest reported incomes did not appear to have the lowest average living standards measured in other ways. Children living in households with reported incomes below £50 a week had average living standards comparable to those with incomes of £250 to £500 a week. Living standards were also higher for children living in self-employed families compared to those living in employed families and workless families with similar reported incomes.

The lowest apparent living standards were for children living in households with incomes in the range of £100 to £200 a week. From Figure 2.11(b) this corresponds to the 4<sup>th</sup> to the 11<sup>th</sup> percentile of the overall income distribution. By implication, care should therefore be taken when using statistics relating to incomes in the bottom 4-5 per cent of the distribution, as they may be affected by reporting errors.

It should be noted that the figures for income that we analyse here and in later chapters are usually taken from surveys that cover a ‘snap shot’ of a sample of the population at any one time. First, this means that when we make comparisons over time, as in Figures 2.12 or 2.13 or in Chapter 10, they are a comparison between the populations at each date, not the result of following the same people over time (although Chapter 11 contains some analysis that does this). Second, people’s circumstances vary over time – those who are, for instance, poor in one year are not necessarily poor the next year. While the prevalence of income change between one year and the next is relatively high, the growing literature on ‘income mobility’ shows that most income changes are short-distance rather than long-distance moves – few people move from the top to the bottom or vice versa over a period of several years.<sup>41</sup>

### *The relationship between different kinds of income*

In Sections 2.3 and 2.4, we looked at the distributions of gross earnings (for employees) and of total individual incomes (across all adults, and including other kinds of income). The shapes of these are major factors in creating the overall distribution of income on the net household income basis described in this section, but there are three intervening mechanisms that mean that household income inequality may not be the same as – or even change in the same direction as – inequality in earnings or individual incomes. First, the *social security system* means that the gross incomes of pensioners and others with no earnings are substantially higher than their incomes from the market (even including private pensions). Second, the *direct tax* system tends to narrow income inequalities, as we saw in Section 2.4. Third, *household composition* can either narrow or widen income inequality. If those without income in their own right are in the same households as those with high individual income, inequalities will be narrowed, but if those with high individual incomes are in the same households as others with high incomes, inequalities may be widened. In Box 2.4, we look at

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<sup>41</sup> See Hills (2004), chapter 5, for a summary of the evidence. See Jarvis and Jenkins (1998) and Jenkins and Rigg (2001) for a more detailed discussion of the position in the UK in the 1990s. International comparisons can be found in Goodin, Heady, Muffels and Dirven (1999) and Bradbury, Jenkins and Micklewright (2001).

the impact of the tax and benefit system on overall income inequality, while in Box 2.5 (at the end of the chapter) we look at the relationship between household composition and income levels. One reason for the differences between groups in incomes on a household basis that we show in Chapter 7 is that household composition varies between them.

### Box 2.4: The effects of taxes and benefits on household income

Taxes and benefits change the income of households and therefore affect the level of income inequality, usually reducing it. The Office for National Statistics' (ONS) annual Redistribution of Income (ROI) analysis assesses the impact of the tax and benefit system on the distribution of household income and therefore on income inequality. In the first part of this Box we report findings from their 2009 analysis and from a review they published in 2008 looking back over the last 30 years.

The ROI analysis starts from the 'original income' received by households from employment, occupational and private pensions, and investments, before government intervention (effectively, market income). It then looks at how taxes and benefits at different stages affect households' final disposable income. The unit is the household, unlike DWP's HBAI analysis, where the unit of analysis is the individual. However, in presenting results, households are ranked by their net equivalent disposable income, adjusted in a similar measure to HBAI, taking account of their size and composition. Income levels are shown without adjustment.

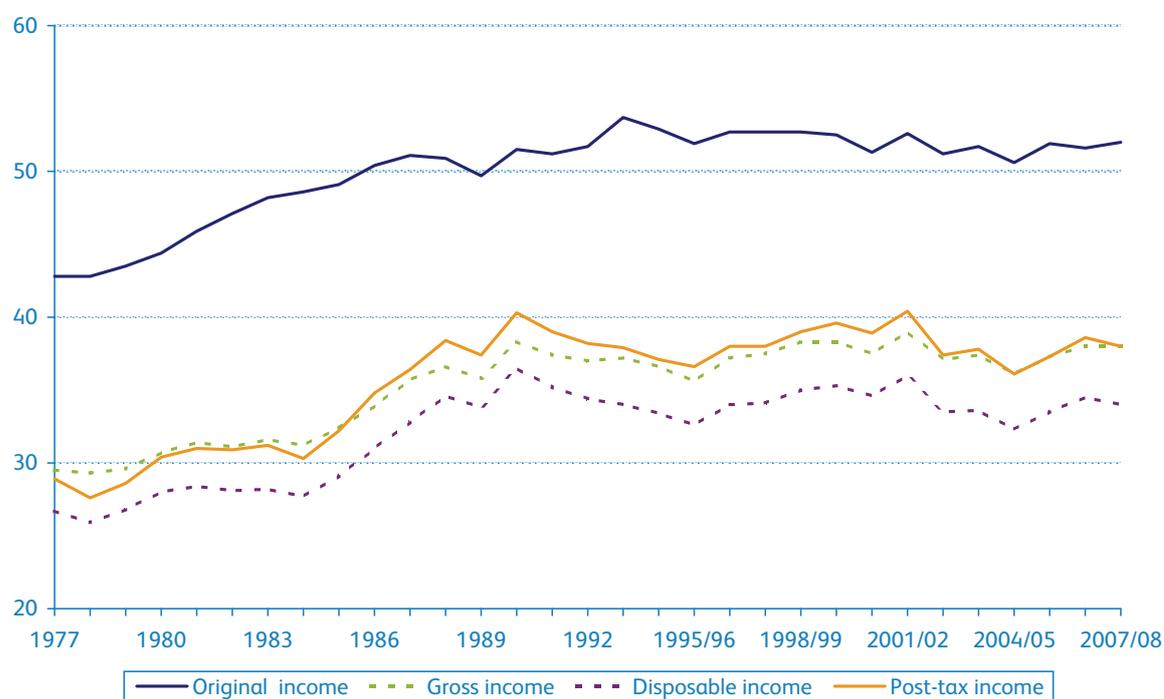
The latest available analysis is based on the Expenditure and Food Survey (EFS) for 2007-08. It shows that, before tax and benefits, the top fifth of households had an average original income of £72,600 per year. This was sixteen times the average for the bottom fifth of households, £4,700 per year. After taking account of all taxes (including indirect taxes) and benefits, the 'post tax' incomes of the top fifth became £52,400, whilst that of the bottom fifth increased to £14,300. Households with the highest income pay more in taxes than they receive in benefits, while the opposite occurs for those with the lowest incomes. Taxes and benefits therefore reduce the extent of income inequality.

Figure 2F shows the Gini coefficients for inequality in the different types of household income considered in the analysis:

- The top line shows the Gini coefficient for **original** income. This was 52 per cent in 2007-08, up from 43 per cent in 1977.
- The Gini coefficient for **gross** income (original income plus cash benefits such as state pensions) was much lower: 38 per cent in 2007-08, up from 30 per cent in 1977.
- The Gini coefficient for **disposable** income (gross income less direct taxes and local taxes, and so similar to the HBAI equivalent net income measure) was even lower: 34 per cent in 2007-08, compared to 27 per cent in 1977.
- However, once indirect taxes were taken into account, the Gini coefficient for **post-tax** income (disposable income less indirect taxes) was 38 per cent in 2007-08, the same level as the index for gross income. In 1977 the coefficient for post-tax income had been 29 per cent.

Thus, while cash benefits reduce inequality in the distribution of household income, the overall effect of the tax system as a whole – the difference between gross incomes and ‘post-tax’ incomes – is small (apart, of course, from financing the benefits). In the ONS analysis, the equalising redistributive effect of direct taxes was offset by the effect of indirect taxes.<sup>42</sup> Figure 2F shows that this has been the case for the last 30 years. Figure 2G shows that this has also been true when one looks at the different parts of the income distribution. In some ways this is a quite startling diagram. It shows that across the entire period, the tax system as a whole (including indirect taxes) has had virtually no effect on the shares of each fifth of the income distribution – direct and indirect taxes (as measured by ONS) have taken the same proportion of income from each fifth of households throughout the period. The effect of the tax system has remained resolutely proportional, with very little variation over time despite the policy shifts over the period. This is especially striking over the 1980s. Given that the share of original (market) income of the top fifth grew over this period, one might have expected, other things being equal, the progressivity of the income tax system to have restrained the growth of post-tax inequality. That it did not do so was a result of other changes over the same period that changed the structure of the tax system, acting in the opposite direction.<sup>43</sup>

Figure 2F: Inequality for the distribution of income at each stage of the tax and benefit system, Gini coefficients (percentages)

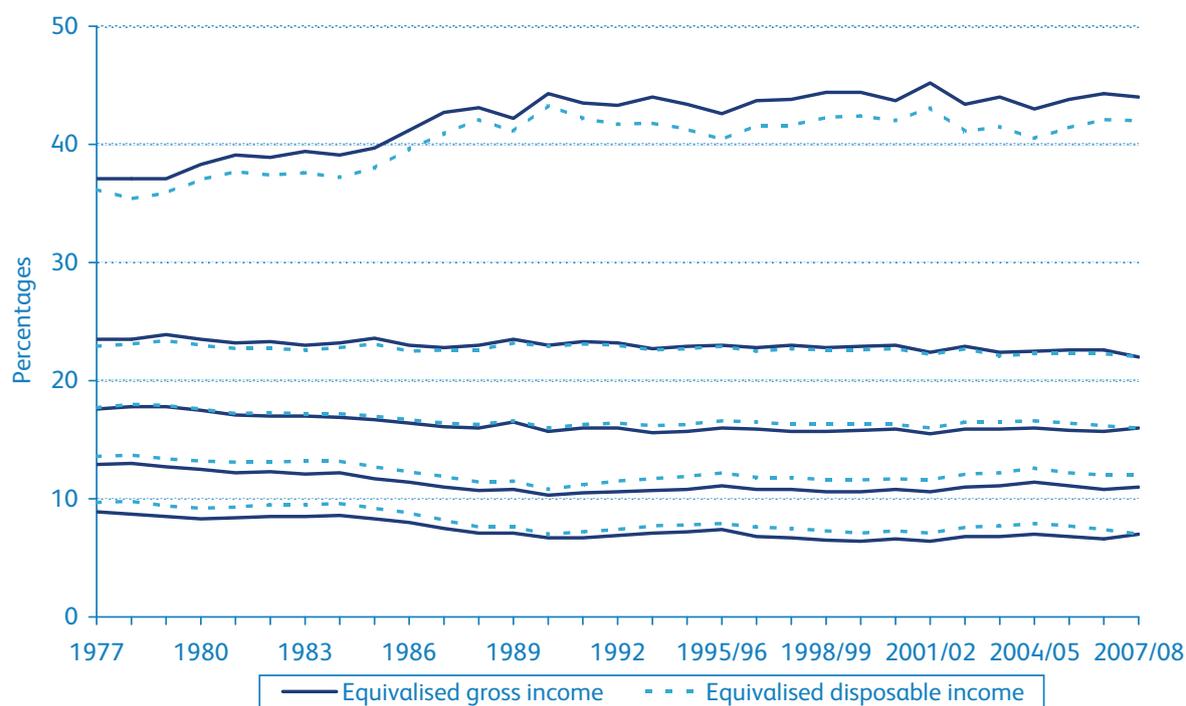


Source: Jones, Annan and Shah (2009), figure 12.

<sup>42</sup> Measuring the distributional effects of indirect taxes can be done in different ways. Where households smooth their consumption while income fluctuates, analysis of the kind used by ONS can exaggerate the regressivity of indirect taxes. If their impact is measured in relation to spending, rather than income (of which higher income households tend to save more), they also emerge as less regressive, or even progressive, in the case of VAT (Crossley, Phillips and Wakefield, 2009).

<sup>43</sup> See Clark and Leicester (2004).

Figure 2G: Share of total gross and post-tax income by quintile group



Source: Jones, Annan and Shah (2009), figure 12.

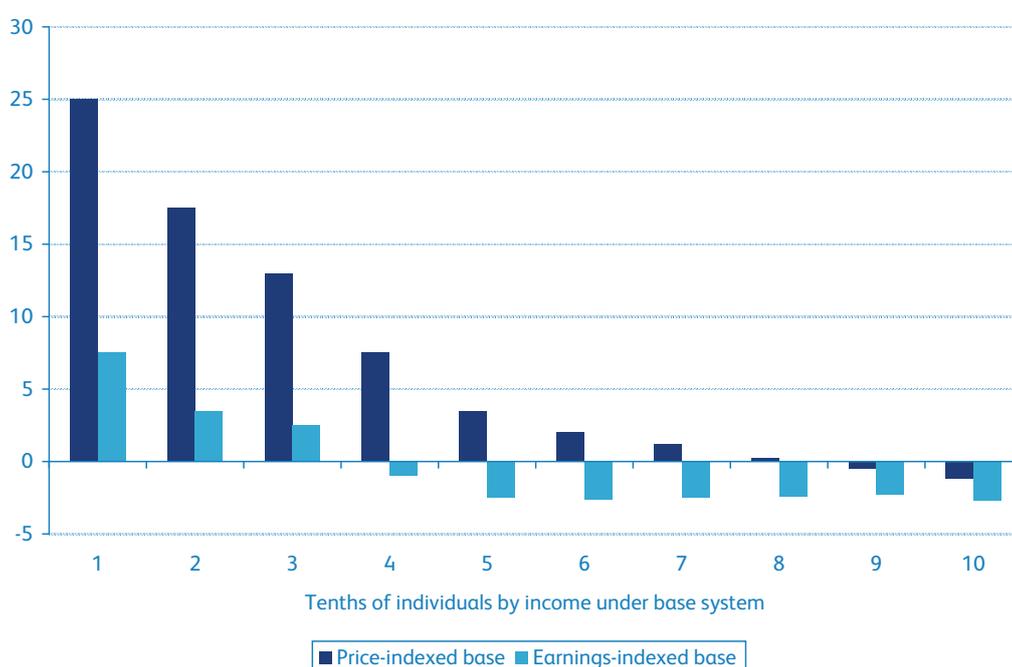
Figure 2F highlights that it is the combination of taxes and benefits that has a redistributive effect. Taxes in the UK may be largely proportional overall, but they finance, amongst other things, cash benefits and state pensions that are more important to the incomes of those with low incomes, so the combined effect is to reduce inequality. In understanding trends over time, it is important to look at the combination of the two together – as can be done by comparing the lines for original and disposable or post-tax incomes in Figure 2F.

The discussion of the effects of the tax system also reminds us that there are two things that can affect the distribution of income after taxes and benefits: changes in the distribution of market income and policy changes. To isolate the impact of the latter, one has to model what would have happened in the absence of policy change – technically, comparing the results of actual policies with a ‘counterfactual’. Figure 2H shows analysis of the impact of changes to the direct tax and benefit systems over the twelve years from 1996-97 to 2008-09, modelled on a population with fixed market incomes and other characteristics. The impact is shown against two comparisons: with what the system would have become if all aspects of the tax and benefit system had been adjusted in line with price inflation over the period; and against what it would have become if they had been adjusted in line with earnings growth. The first of these gives a broad measure of the distributional impact of policy change against policies if there had been no reforms such as the introduction of tax credits and if price indexation of benefits and tax thresholds had continued. However, at a time of real income growth, one would expect price indexation to lead to a less redistributive impact of taxes and benefits (as, for instance, benefits and pensions fall behind the incomes of those in paid work).<sup>44</sup> The second comparison is therefore against an earnings-linked base that would be expected to be more neutral in distributional terms.

<sup>44</sup> See Sutherland *et al.* (2008) for detailed discussion.

The first set of bars suggests that compared to unchanged policies that involved price indexation, those who would have been in the poorest half of the income distribution were better off under the actual structures of 2008-09 – by up to 25 per cent for those who would have been in the poorest tenth.<sup>45</sup> The second set of bars suggests that against an earnings-linked base, those who would have been in the poorest three tenths were still better off on average, but to a smaller extent – by up to 8 per cent for the bottom tenth. Those in the top half of the income distribution were slightly worse off than they would have been under the 1996-97 adjusted for earnings indexation.

Figure 2H: Overall distributional effect of tax-benefit policies, 1996-97 to 2007-08, compared to price and earnings indexation (percentage change in disposable income)



Source: Sefton, Hills and Sutherland (2009), figure 2.5.

A recent analysis carried out by Stuart Adam and James Browne came to a very similar conclusion about the changes to taxes and benefits affecting households since 1996-97.<sup>46</sup> It also carried out the same analysis on reforms under the previous government, concluding that, “*Labour’s reforms since 1997 have had a similar effect on overall inequality as increasing benefit rates in line with GDP, while the Conservatives’ reforms (between 1979 and 1997) were roughly equivalent to increasing them in line with inflation*”. The effect of this was that, “*Labour’s tax and benefit reforms since 1997 have tended to reduce inequality, while those of the previous Conservative government tended to increase it*”.

However, the reforms to personal taxes and benefits since 1996-97 have involved selective redistribution. The family types which have benefited the most from these changes on average have been pensioners, and workless families with children, even when one looks within each income group.<sup>47</sup>

<sup>45</sup> Unlike the ONS analysis, which looks at households, this analysis is for the position of individuals, in terms of equivalent net income.

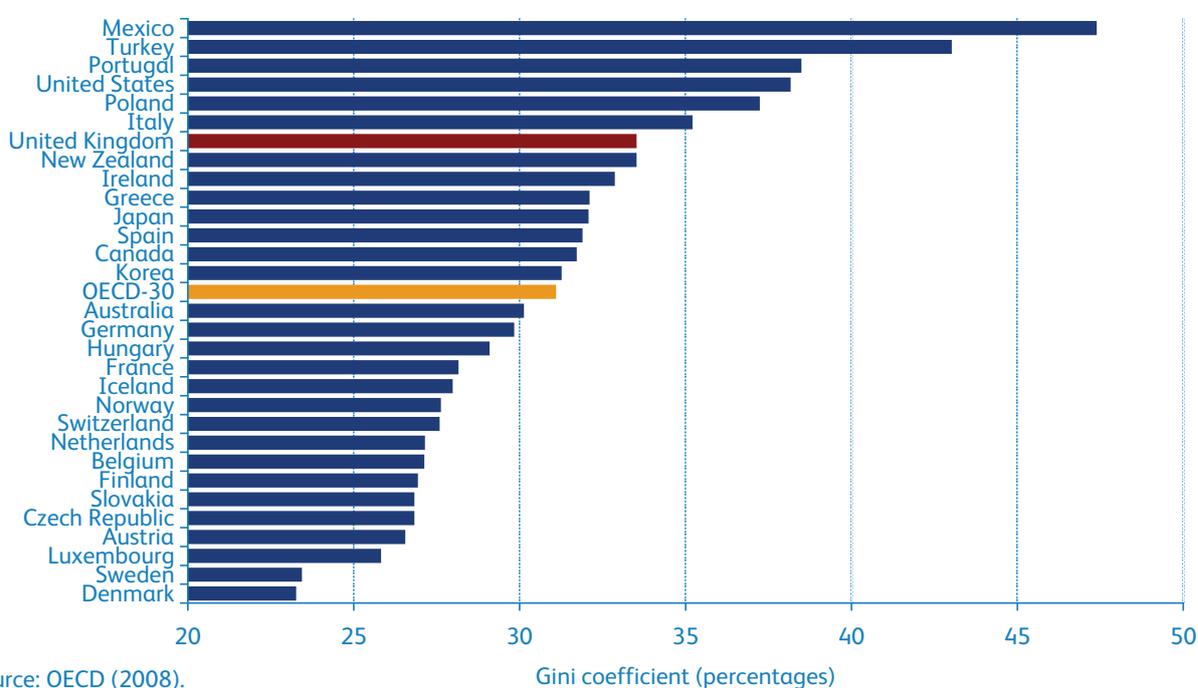
<sup>46</sup> Adam and Browne (2009). See also Jenkins and Van Kerm (2009).

<sup>47</sup> Adam and Browne (2009), figure 4.9; Sefton, Hills and Sutherland (2009), figure 2.6; Phillips (2008), figure 14.7.

## International comparisons

The OECD recently published a major comparison of income inequality across its member countries. Figure 2.14(a) compares the Gini coefficients measured in much the same way as described above (and using the same data source for the UK) in 30 industrialised countries in the mid-2000s. At this point the UK had income inequality that was above the OECD average and which put it in the top quarter of all the countries shown, although significantly below the USA, Turkey and Mexico. Italy had higher inequality than the UK,<sup>48</sup> but other large European countries such as Germany and France had inequality that was below the OECD average, while Scandinavian countries, particularly Denmark and Sweden, had the least inequality.

Figure 2.14(a): Gini coefficients of income inequality in OECD countries, mid-2000s



Source: OECD (2008).

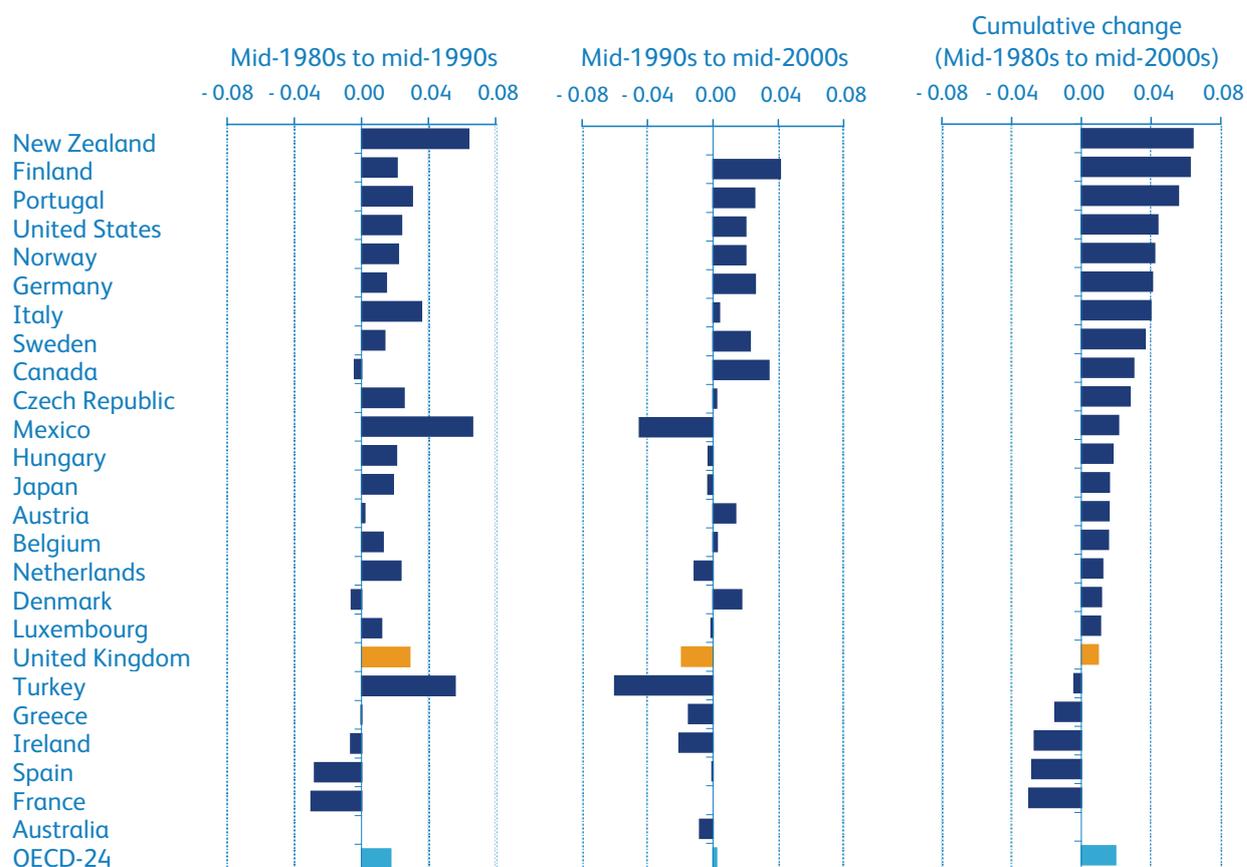
Note: UK figures based on FRS.

The growth in income inequality in the UK in the 1980s was unusually rapid from a cross-national perspective. Part of this can be seen from Figure 2.14(b), showing *changes* in the Gini coefficient for 24 countries where data are available over two periods, from the mid-1980s to the mid-1990s and from then until the mid-2000s. In the first period, the UK was one of the six countries with the most rapid *growth* in inequality; in the second, it was one of the four countries with the largest *fall*. Taking the two decades as a whole, UK inequality grew, but by less than the average for these countries. The years chosen to mark off the most recent period are, however, rather favourable for the UK, 2004-05 preceding the most recent period of inequality growth.<sup>49</sup>

<sup>48</sup> The UK figure used by OECD was for 2004-05; the growth in inequality in the UK by 2007-08 would put the UK above the level that Italy had been at in the mid-2000s.

<sup>49</sup> Brewer, Muriel, Phillips and Sibieta (2009, p.24). The OECD comparisons over time also use a different data source, the EFS, which gives a somewhat more favourable picture of income inequality trends than the larger FRS used for the comparison shown in Figure 2.14(a) and for the main DWP analysis.

Figure 2.14(b): Percentage point changes in the Gini coefficient over different time periods



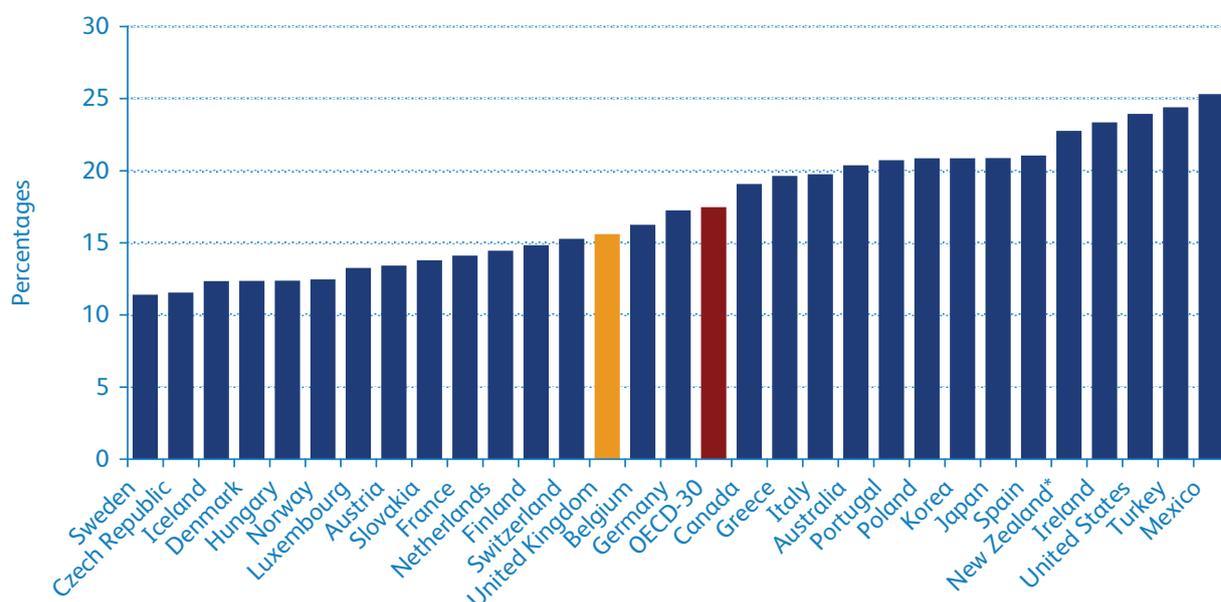
Source: OECD (2008). Note: UK figures based on Expenditure and Food Survey.

The UK's high level of income inequality in international terms is partly a product of its very high inequality at the top of the income range,<sup>50</sup> while it is less unusual at the bottom. In terms of relative poverty, its performance is bad compared to other EU member states, particularly for children and pensioners, according to Eurostat's main data source.<sup>51</sup> This suggests that in 2006 the UK had an overall poverty rate (against a line of 60 per cent of each country's median income) of 19 per cent, compared to an average for the fifteen longer-standing EU members of 16 per cent. Only Italy, Spain and Greece had higher overall poverty rates. This is, however, a slightly gloomier assessment of the UK's poverty rate than the DWP's HBAI data show (a poverty rate of 18 per cent in 2006-07) and a less favourable picture than the OECD's comparison across 30 countries illustrated in Figure 2.15, which suggests a rate of 16 per cent in the UK a couple of years earlier, putting it below the average for the larger group of countries shown at the time.

<sup>50</sup> OECD (2008), p.32.

<sup>51</sup> Stewart (2009), table 13.1.

Figure 2.15: Relative poverty rates (percentages) at 60% of median income thresholds, mid-2000s

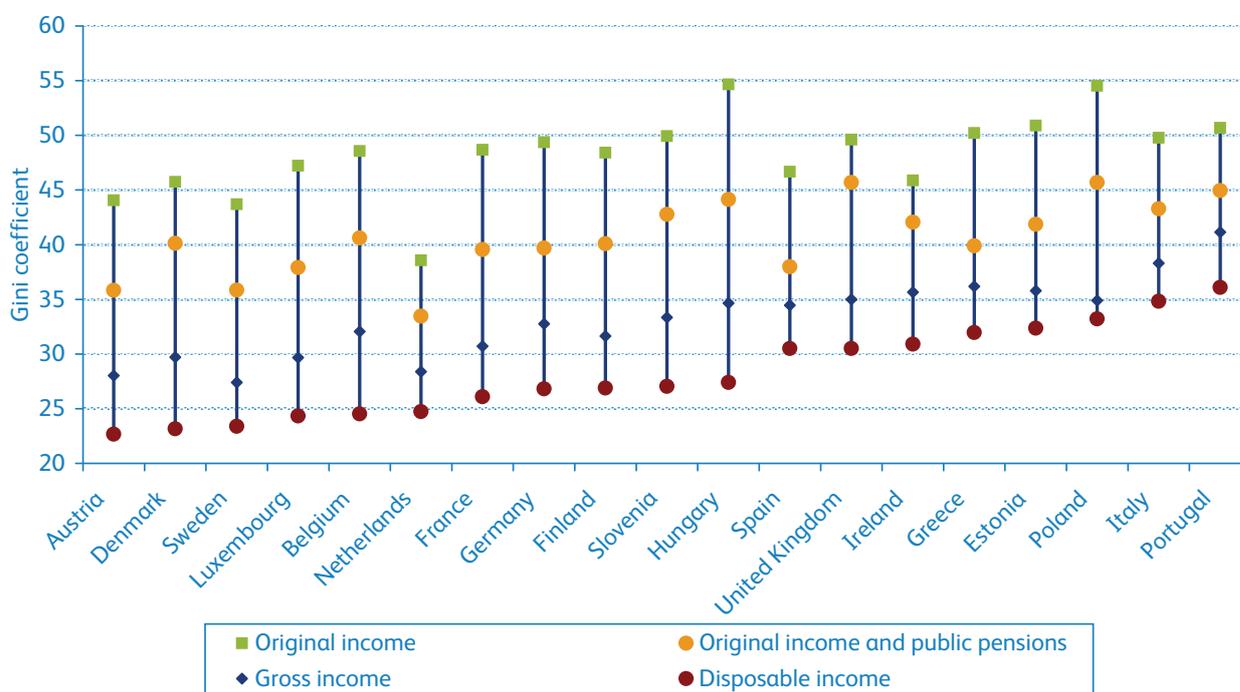


Source: OECD (2008).

One of the reasons for the UK's comparatively high levels of inequality in disposable incomes within Europe is that the combined impact of benefits and taxes in some other countries does more to reduce inequality compared with that in incomes from the market than the UK system does (see Box 2.8). Figure 2.16 is based on analysis by Alari Paulus, Francesco Figari and Holly Sutherland of income inequality in the early 2000s, both before and after allowing for the impact of state pensions and other benefits and direct taxation. Looking across the countries there is less variation in inequalities in 'original' (market) income than there is in gross income (after public pensions and other benefits) or disposable income (after taxes). Inequality in original income is not very much higher in the UK than in France and Germany, for instance, but benefits and taxes result in inequality in disposable income that is four percentage points lower in Germany and five points lower in France. Scandinavian countries, such as Denmark start with market income inequality that is not much lower than that in the UK, but achieve much greater reductions.<sup>52</sup>

<sup>52</sup> Calculations of the redistributive effect of taxes and transfers can be done in different ways. The recent OECD report, *Growing Unequal?*, presents a number of comparisons across industrialised countries (OECD, 2008, figure 4.4). These confirm the picture that the UK achieves less reduction in inequality than countries such as Denmark, Sweden and Germany, but more than others outside Europe, such as Japan or the USA. The comparison with countries such as France depends on the precise measure used.

Figure 2.16: Income inequality (Gini coefficient) before and after taxes and benefits, 2001-2005



Source: Paulas, Figari and Sutherland (2009).

## 2.6 Household wealth

The final kind of comparison that we make is between the wealth levels of different kinds of household (that is, their stock of assets, as opposed to their flows of income). This has not previously been possible, but can now be done thanks to the new ONS Wealth and Assets Survey (WAS), based on a sample survey carried out in the two years from July 2006 to June 2008. As with the other data we present, this relates to the period immediately before the financial crisis and associated falls in both house prices and share values, and hence, relates to the point when wealth values were at their, arguably artificial, peaks. As explained above, it is very difficult to attribute wealth on an individual basis, so we look here at wealth distribution between households.

Measures of wealth can be constructed in different ways, depending on what kinds of assets or liabilities are included. We show the distributions of wealth below on three bases, concentrating in Chapter 8 on the third:

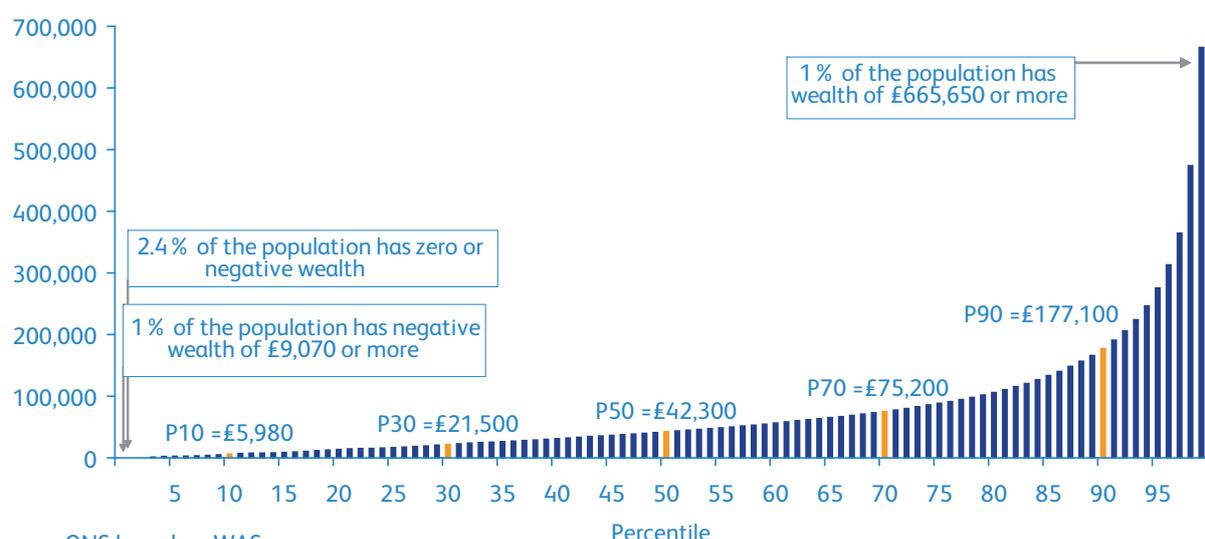
- Figure 2.17 shows the distribution of **net financial and physical wealth**, giving the values at each percentile of the distribution. This includes household goods and possessions such as cars, but excludes owner-occupied houses. It also excludes mortgages, but allows for other financial liabilities.
- The distribution of **net non-pension wealth**, including houses and deducting mortgages, is shown in Figure 2.18.

- Figure 2.19(a) shows the proportion of households with **total net wealth**, including private pension rights, in each range, while Figure 2.19(b) shows the values at each percentile of the distribution.<sup>53</sup>

Some households had little or no wealth or even negative wealth (that is, those whose liabilities exceed their assets, even when household goods and property such as cars are included).<sup>54</sup> For instance, on the narrowest wealth definition shown in Figure 2.17, the bottom 2.4 per cent of households had no or negative wealth in 2006-2008. Wealth at the 90<sup>th</sup> percentile, £177,000, was over four times the median, £42,000. One per cent of households had net financial and physical wealth of more than £666,000.

2

Figure 2.17: Net financial and physical wealth, 2006-08, GB (£)



Source: ONS based on WAS.

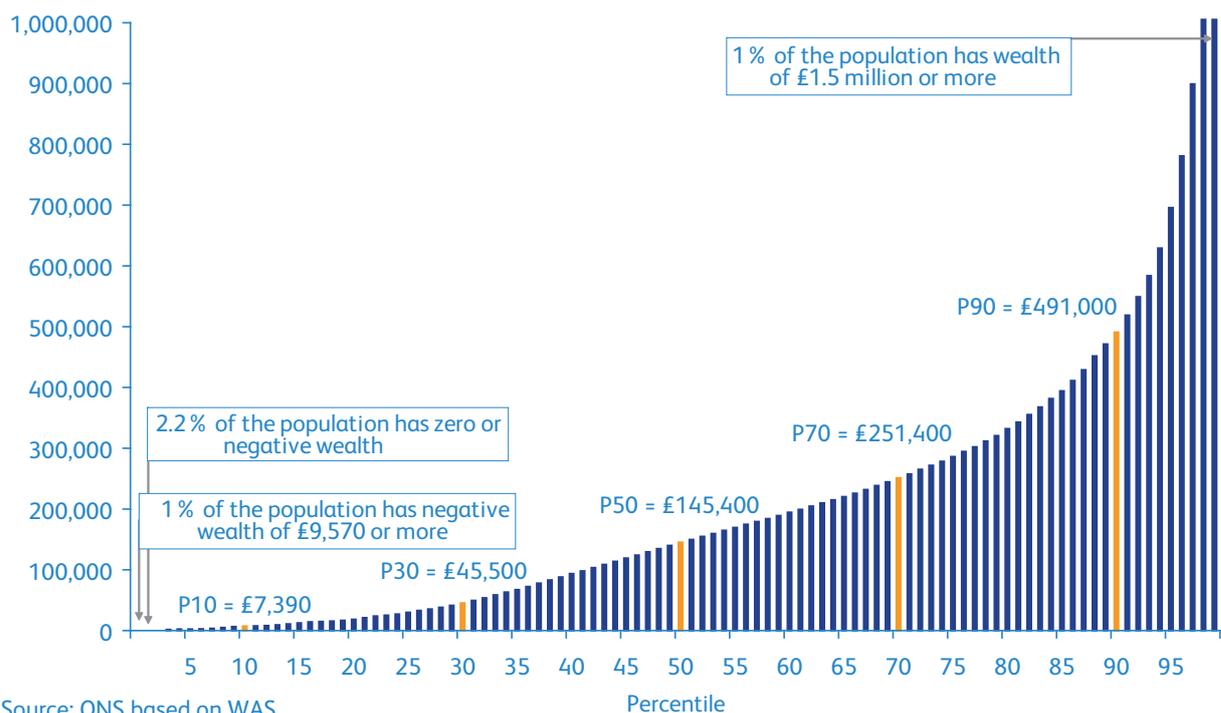
<sup>53</sup> In analysis of the English Longitudinal Survey of Ageing carried out for us by James Banks and Gemma Tetlow (2009) looking at the wealth of people aged over 50, they also show the distribution of wealth including estimated State Pension rights.

<sup>54</sup> The data we are using relate to the period before house prices fell, so 'negative equity' (which could create negative non-pension wealth) was less common than it may have become since then.

## An anatomy of economic inequality in the UK

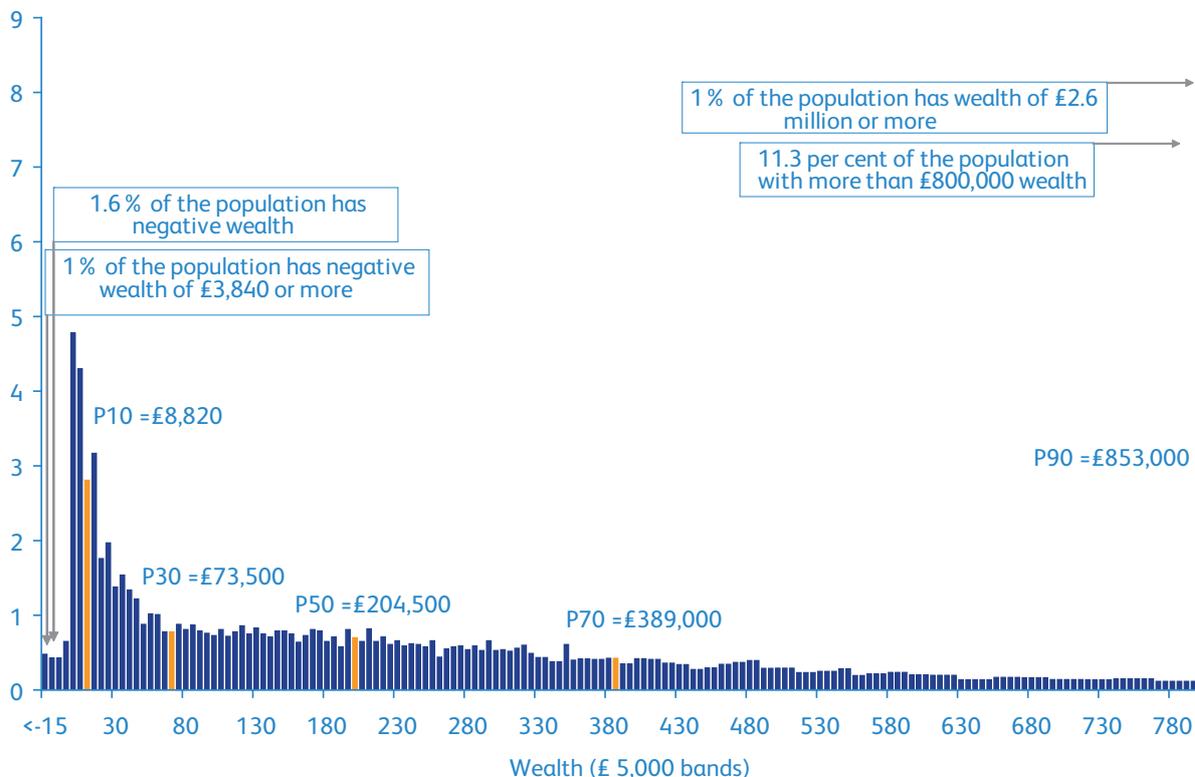
Allowing for houses and mortgages, to show net non-pension wealth as in Figure 2.18, 2.2 per cent still had zero or negative wealth, but the median rose to £145,000, and the 90<sup>th</sup> percentile to £491,000. More than 2 per cent of households had net non-pension wealth exceeding £1 million; for the top 1 per cent it exceeded £1.5 million (off the scale of the figure).

Figure 2.18: Net non-pension wealth, 2006-08, GB (£)



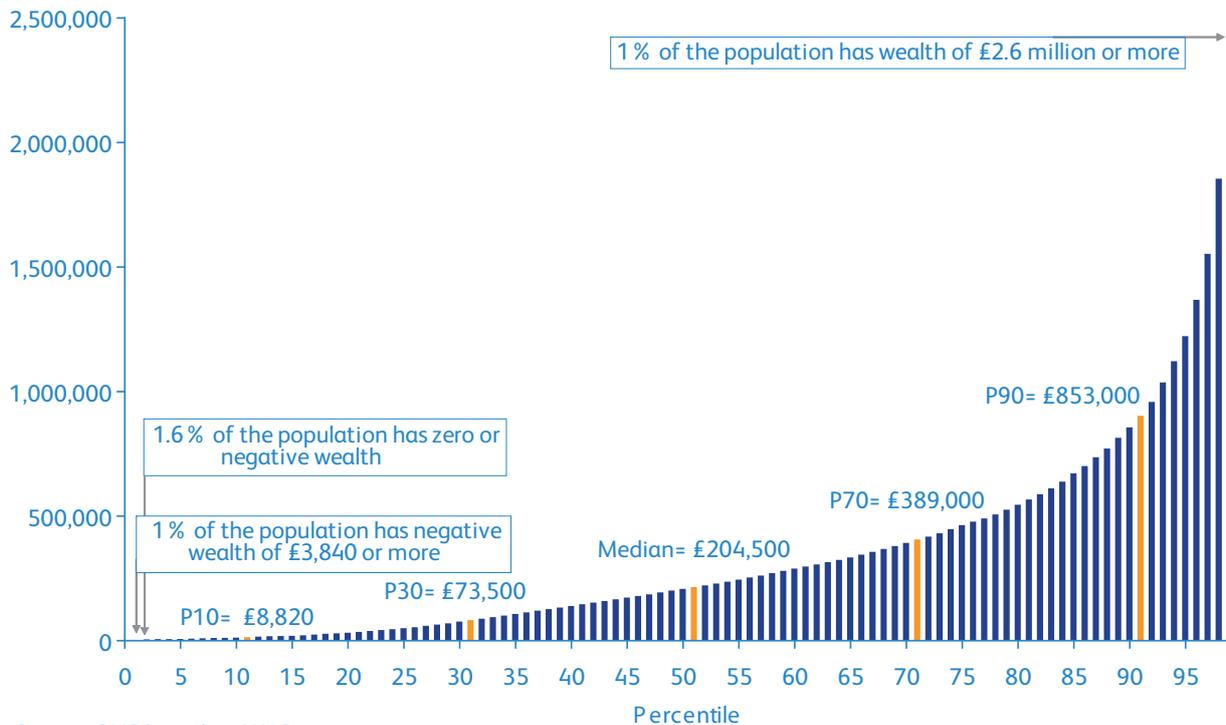
Allowing for private pension rights widens the gaps again, particularly at the top. Figure 2.19(a) shows what proportion of households had wealth in various ranges (up to £800,000), already showing how wide the spread is compared with the other outcomes we have looked at. Figure 2.19(b) shows the levels of total wealth at each percentile. 1.6 per cent of households had zero or negative total net wealth, and the 10<sup>th</sup> percentile for total net wealth only rose to £8,800 and the median to £205,000. However, a tenth of households had total net wealth exceeding £853,000, 7 per cent more than £1 million, and the top 1 per cent more than £2.6 million.

Figure 2.19(a): Total net wealth, 2006-08, GB, (£)  
Percentage with wealth in each range



Source: ONS based on WAS.

Figure 2.19(b): Total net wealth, 2006-08, GB, (£)



Source: ONS based on WAS.

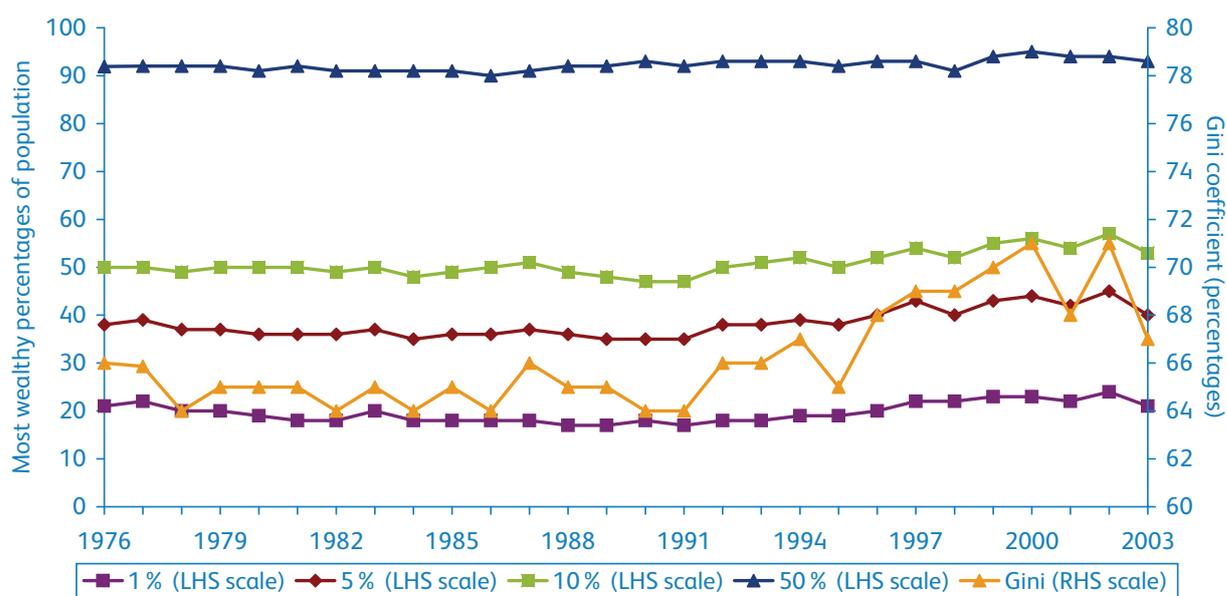
2

## An anatomy of economic inequality in the UK

These distributions are far more unequal than any of those we have discussed so far, and the wealth of the richest households is far greater in relation to median household wealth than are high earnings or incomes relative to typical earnings or incomes.<sup>55</sup> Measures such as the 90:10 ratio – almost 100 for total net wealth – have limited meaning when the poorest tenth have little or no wealth. Within the top half of the distribution, the 90:50 ratio (comparing the 90<sup>th</sup> percentile and the median) for total net wealth was 4.2, twice the equivalent ratio for equivalised net income or full-time weekly earnings (see Table 2.2 below). While the top 1 per cent by equivalent net income had 5 times the median (Figure 2.11(b)), the wealthiest 1 per cent of households had almost 13 times median total net wealth. Measures such as the Gini coefficient also have much higher values than they do for income distribution – for instance, 61 per cent for total net wealth as measured in this survey, compared with 36 per cent for equivalent net income.

As the Wealth and Assets Survey (WAS) has just been carried out for the first time, it is not possible to look at trends in wealth distribution on a comparable basis.<sup>56</sup> Figure 2.20 gives some indication of recent trends in wealth distribution from a different kind of source, HMRC analysis of data on the estates of those dying each year. The series is available on this basis since 1976. Until the mid-1980s, there was an uneven trend towards less inequality of wealth measured on this basis, but after the early 1990s it tended to become more unequal again, although fluctuating with stock market cycles. By 2003, after a fall in the stock market, the shares of the wealthiest groups and the overall level of the Gini coefficient had fallen back in that year, but were still as high, or higher, than they had been in 1976. This series does not extend beyond 2003.

Figure 2.20: Distribution of personal marketable wealth, 1976 to 2003, UK:  
Share of most wealthy percentages of population and Gini coefficient, (percentages)



Source: HMRC, based on Distribution of Personal Wealth series.

<sup>55</sup> In Chapters 8 and 11, we look at the extent to which this inequality is explained by life-cycle factors.

<sup>56</sup> Comparison of changes in wealth distribution calculated in a similar way to that shown here for the period 1995 to 2000 based on data from the British Household Panel Survey (BHPS) by Banks, Smith and Wakefield (2002) can be found at <http://www.ifs.org.uk/wps/wp0221.pdf>

## International comparisons

Making comparisons of wealth inequality between countries is more difficult than comparing earnings or income distributions. However, an exercise known as the Luxembourg Wealth Study (LWS) has begun to do this. Table 2.1, drawn from OECD's review of LWS data, suggests that levels of household wealth inequality in the UK<sup>57</sup> are not exceptional in international terms, and indeed much less not only than in the USA (for which two alternative series are shown), but also than in Germany and Sweden. The latter may come as a surprise, but it should be remembered that the meaning and importance of wealth differs between countries. In nations where the state is responsible for the bulk of pension provision funded from taxation, individuals have less need to save for retirement, which affects some of the numbers.

Table 2.1: Distribution of household net worth

	Canada SFS 1999	Finland HWS 1998	Germany <sup>1</sup> SOEP 2002	Italy SHIW 2002	Sweden HINK 2002	United Kingdom BHPS 2000	United States PSID 2001	United States SCF 2001
<b>Shares of individuals (%)</b>								
Positive net worth	77	83	63	89	68	82	77	77
Nil net worth	3	2	29	7	5	6	8	4
Negative net worth	20	15	9	3	27	11	16	19
<b>Shares of total wealth (%)</b>								
Top 10%	53	45	55	42	58	45	64	71
Top 5%	37	31	38	29	41	30	49	58
Top 1%	15	13	16	11	18	10	25	33
<b>Wealth inequality</b>								
Gini index (%)	75	68	80	61	89	66	81	84

Source: OECD (2008), table 10.3, based on the LWS database. Tabulations based on a definition of household wealth that excludes business equity. Data based on household weights. Pension assets excluded for UK, Italy and Sweden.

Notes: 1. Most financial assets and non-housing debt are recorded only for values exceeding €2,500.

<sup>57</sup> The UK figures are drawn from the BHPS. They show more inequality in 2000 than the comparable HAS figures for 2006-2008 shown in Figure 2.18 which also omit private pension rights. The HAS figures for non-pension wealth have a Gini coefficient of 59 per cent, for instance, compared to the 66 per cent for the BHPS series used by OECD in Table 2.1.

### Summary

For those familiar with the kinds of information we are using in this report, none of what we have presented above (apart from the only recently released data on wealth distribution) may be a surprise but, for others, the sheer scale of inequalities in most of the areas that we cover may be striking. Table 2.2 summarises some of the information we have shown. For the five distributions of wages, earnings, incomes and wealth we look at in detail, generally using data for the three years 2006-2008:

- The median **hourly wage** was £9.90. The 90:10 ratio was **3.9**, with 10 per cent having wages below £5.50 and 10 per cent above £21.30 per hour. The top 1 per cent had wages above £43 per hour.
- The median for **weekly earnings** for those employed full-time was £448. The 90:10 ratio was **3.7**, with 10 per cent having earnings below £240 and 10 per cent above £893 per week (equivalent to annual earnings of £46,600). The top 1 per cent had earnings above £1,910 per week.
- Median **net individual income** received by adults in their own right, including those not employed, was £223 per week. The 90:10 ratio was **9.6**, with 10 per cent of adults having individual incomes below £56 and 10 per cent above £542 per week. 1 per cent had individual incomes about £1,300 per week.
- For the whole population, median **equivalent net income** on a household basis was £393 per week. The 90:10 ratio was **4.2**, with 10 per cent of people having equivalent net incomes below £190 and 10 per cent above £805 per week. 1 per cent had equivalent net incomes above £2,000.
- Median **total wealth** (including personal possessions, net financial assets, housing and private pension rights) was £205,000. The 90:10 ratio was just less than **100**, with the top tenth of households having wealth above £853,000, and the bottom tenth having less than £8,800. Even looking more narrowly at the top half of the wealth distribution, those in the top tenth had more than 4.2 times as much wealth as those in the middle, around twice the equivalent ratios for weekly earnings or equivalent net income. 1 per cent of households had total net wealth above £2.6 million.

For earnings and equivalent net income, all of these ratios represent high levels of inequality by comparison with those in the UK a generation ago, and by comparison with other industrialised countries. Over the last decade, trends have been complex. On some measures, including the 90:10 ratio described above, earnings inequality has narrowed, and income inequality flattened out. On other measures, particularly those for income inequality which look across the whole distribution, inequality has widened.

A recent assessment of the overall impact of tax and benefit reforms since 1979 finds that policy over the 1979 to 1997 period was equivalent to increasing benefits in line with price inflation, while policy since then has been equivalent to increasing benefits in line with the growth of national income. Reforms since 1997 have tended to reduce income inequality, while those in the earlier period tended to increase it.

Table 2.2: Comparison of inequality in wages, earnings, incomes and wealth

	£			Ratios		
	10 <sup>th</sup> percentile	Median	90 <sup>th</sup> Percentile	90:10 ratio	90:50 ratio	50:10 ratio
Hourly earnings all employees	5.50	9.90	21.30	3.9	2.2	1.8
Weekly earnings full-time employees	240	448	893	3.7	2.0	1.9
Net individual incomes/per week	56	223	542	9.6	2.4	4.0
Equivalent net incomes before housing costs/per week	191	393	806	4.2	2.1	2.1
Total wealth	8,820	204,500	853,100	97	4.2	23.2

Note: All figures are given in 2008 prices, except the figures for net individual incomes (which are at 2007-08 prices). Figures for net individual incomes taken from data for 2005-06 to 2007-08 (at 2007-08 prices), those for equivalent net income are from 2007-08 data, and for wealth from data for July 2006 to June 2008 in cash terms.

At the very top of the income distribution, using data from tax records, the share of the top 1 per cent in after tax income fell from 12.6 per cent of the total in 1937 to 4.7 per cent by 1979, but rose again to 8 per cent in 1990 and 10 per cent in 2000. The share of the top 0.05 per cent (one in two thousand) fell from 2.4 per cent of the total in 1937 to under 0.5 per cent in 1969. By 2000, their share had risen back to 2.5 per cent. A similar gain in the shares of those with the highest incomes occurred in other English-speaking countries in the 1980s and 1990s, but this did not occur in continental Europe.

Although household wealth inequality is far more unequally distributed than household income, recent trends have been for only a small increase in inequality in the UK, and its level does not appear to be unusual by comparison with other countries.

It is harder to compare the spread of educational outcomes over time or internationally, particularly using the measure we favour for looking at the spread of overall achievement at age 16, rather than the numbers reaching a particular standard. However, recent international surveys suggest that school pupils in the UK have relatively good levels of literacy and mathematics achievement on average, and that the spread of attainment in comparable tests at age 14-16 is not exceptional. Looking at the qualifications of the working age population, while these have improved over time, what stands out is the relatively slow improvement in the proportion of the population with low (or no) qualifications, particularly for those in their twenties and thirties by comparison with other countries.

In the next part of the report, we examine the most recent data available to us to look at where members of particular population groups are to be found within these distributions, and how the spread of outcomes within each group compares with those in the population as a whole.

### Box 2.5: Household composition and income levels

There is a strong relationship between the type of family that individuals belong to and their likelihood of being located in a specific part of the equivalent net income distribution.

Table 2C below shows that individuals in lone parent families are disproportionately represented at the bottom of the income distribution: almost 40 per cent of them are in the bottom fifth of the distribution, which corresponds to an equivalent net income below £244 per week, and 31 per cent into the second fifth. Only 3 per cent of individuals in lone parent families are in the top fifth of the income distribution.

Single pensioners are also mostly represented at the bottom of the income distribution: 29 per cent of them fall into the bottom fifth, and only 6 per cent of them fall into the top fifth.

On the other hand, couples with no dependent children are to be found mostly at the top of the distribution: 38 per cent are in the top fifth and 27 per cent in the next highest fifth.

Non-pensioner couples with children and single people without dependent children are more evenly distributed across the distribution. There are few differences in the distribution between single men and women without children.

Table 2C: Distribution of equivalent net income for individuals, by family type, UK (% of individuals in each fifth of the distribution), 2007-08

	Equivalent net income					All individuals (millions)
	Bottom fifth	Second fifth	Third fifth	Fourth fifth	Top fifth	
<b>Family type</b>						
Pensioner couple	22	23	22	18	15	7.7
Single pensioner	29	31	21	12	6	4.6
Male	22	33	23	13	8	1.2
Female	32	31	21	11	6	3.4
Couple with children	18	21	22	20	19	20.7
Couple without dependent children	10	9	15	27	38	11.4
Single with children	39	31	18	9	3	4.9
Single without dependent children	20	18	21	21	21	10.6
Male	19	17	21	22	21	6.4
Female	20	19	20	21	20	4.1

Source: DWP (2009a). Figures are Before Housing Costs

## Part 2

# What is the position of different groups in the distributions of economic outcomes?

In this part of the report, we present our core findings on where members of different groups are to be found within the overall distributions of economic outcomes shown in the previous chapter, using the most recent data<sup>58</sup> (Chapter 10 looks at changes in some of these over time). Chapters 3 to 8 present a very detailed view of differences across a range of educational and economic outcomes both between groups and within groups. Rather than summarising these at the end of each chapter, the most striking features of these are summarised in Chapter 9 under each way of dividing the population between social groups. At times, the results may seem repetitive: there are pervasive inequalities between social groups that manifest themselves again and again across different outcomes. That is important in itself. At the same time, there are some variations not just in the scale of the differences between groups, but also in their direction, depending on which outcome we have examined, which we draw out further in that chapter and its summary tables. However, what the statistics in these chapters also make clear is that inequality in economic outcomes is not only, or even predominantly, about differences between groups, but manifests itself within each social group, however we classify the population.

We show results in Chapter 3 to 8 for eight main distributions (two for each of education and earnings). We start by showing results broken down by gender (except for wealth). As the circumstances of men and women usually differ so much, we look at the positions within the overall distributions of men and women separately, where possible, when examining the other nine dimensions in which we are interested.<sup>59</sup>

The dimensions we examine are:

- age;
- ethnicity;
- religious affiliation or ethno-religious group;
- disability status;
- sexual orientation;
- occupational social class;
- housing tenure;
- nation or region within England;
- area deprivation.

<sup>58</sup> We use the present tense to describe these results as they are as contemporary as currently available data allow. As we explained in Chapter 2, the data mostly relate to periods ending in 2008.

<sup>59</sup> The Statistical Appendix available online contains breakdowns for the whole population by each dimension as well as detailed results for men and women separately. For incomes on a household basis in Section 3.5, we present only limited information by gender, with most breakdowns shown for the population as a whole. For wealth in Chapter 8, breakdowns are on a household basis only.

In Chapters 3 to 8, we present detailed results from this exercise – in many ways the core of what we were asked to do – taking each outcome one at a time. In Chapter 9, we summarise these findings, taking a cross-cutting approach, looking across each dimension in turn. That chapter also contains evidence from studies which have examined the extent to which variations in some of the outcomes – such as pay differentials between groups can be explained by differences between them in other factors, such as qualifications.

The Statistical Appendix contains full tables giving the values of each outcome for each subgroup of the population in two ways. First, it shows outcomes for the 10<sup>th</sup>, 30<sup>th</sup>, 50<sup>th</sup> (median), 70<sup>th</sup> and 90<sup>th</sup> percentiles *within that group*, for instance in pounds per hour or pounds per week where we are discussing earnings, as well as the mean outcome for the group. This shows both what outcomes are for those in the middle of that group, and the scale of differences between members of the group. A second table then shows what these amounts correspond to in terms of the *ranking within the overall distribution for the whole population*. Thus, to take the first set of results we look at in Chapter 3, the median GCSE point score for girls in England 2008 in state schools is 338. This result is at the 56<sup>th</sup> percentile of the distribution of point scores for all students in state schools – half of girls are in the top 44 per cent of achievement overall. When we look later at attainment by whether a pupil is receiving Free School Meals or not (as an indicator of low income or disadvantage), the median (middle) result for those receiving Free School Meals is 275 points, corresponding to the 27<sup>th</sup> percentile of the overall distribution – half of children receiving Free School Meals have results putting them in the bottom 27 per cent of achievement overall.

In Chapters 5 to 8, we summarise this information for earnings and income outcomes in two ways. First, we show the outcomes for each group diagrammatically, showing the range from the 10<sup>th</sup> to the 90<sup>th</sup> percentiles within each group, also indicating the median and the central range between 30<sup>th</sup> and 70<sup>th</sup> percentiles. Second, at the end of each chapter, we give a summary table containing the median outcome for the group, the 90:10 ratio for the group (as an indicator of inequality within it),<sup>60</sup> and the rank in the overall distribution reached by the 10<sup>th</sup> percentile, median, and 90<sup>th</sup> percentile of the group. The diagrams and tables also indicate what proportion of the total population falls within each category. The rows of the tables are ordered by the median outcome for each group. Box 3.1 gives an annotated example of this kind of presentation to help readers follow the diagrams that follow. In the case of Key Stage 4 outcomes we use diagrams to show the *ranking* within each nation's state school results rather than the raw results to allow some comparison across the nations, and do not present summary tables. As highest educational qualifications and employment are categorical outcomes we simply present these diagrammatically rather than as a ranking. The Statistical Appendix contains the detailed statistics underlying each of these. Most of the information we present is drawn from sample surveys (apart from that for children's attainment at 16, which is from records for all children). It is therefore subject to sampling error, particularly where small population groups are concerned. To avoid this distorting the

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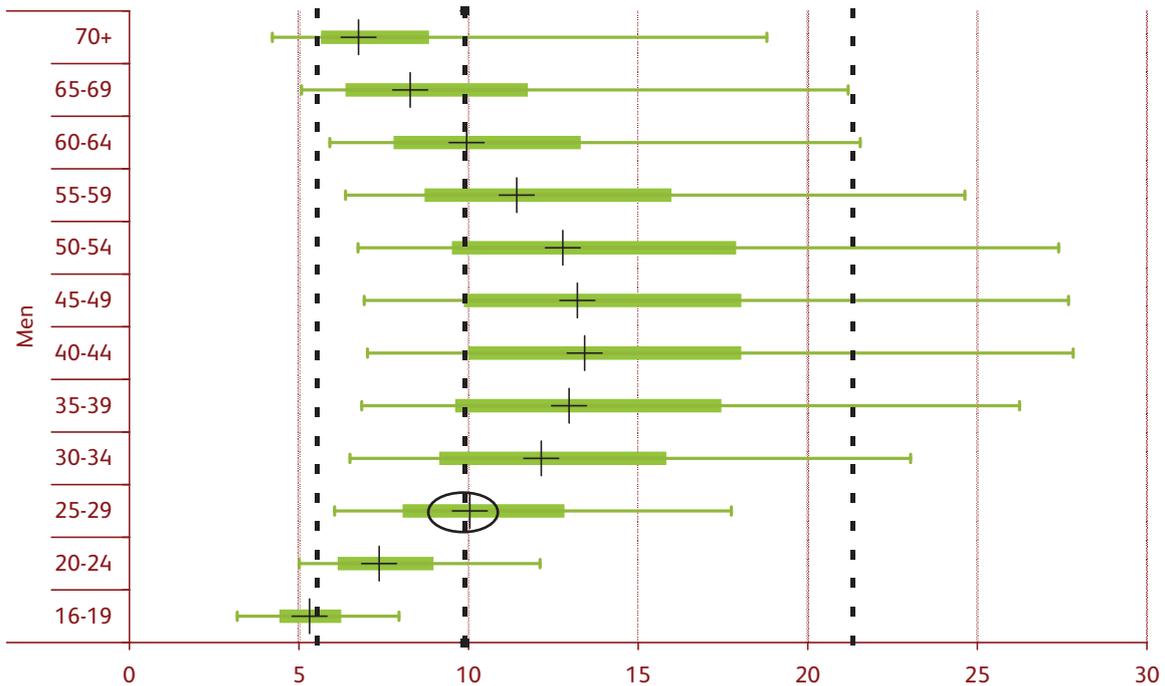
<sup>60</sup> This is not always possible or meaningful as far as household wealth is concerned, because of the prevalence of very low or negative wealth holdings within some groups.

results, we use large surveys, pool data from several years of the surveys, and avoid presenting results based on small sample numbers.<sup>61</sup>

### Box 3.1: Reading and interpreting the report’s diagrams and tables

In this part of the report, we present results of the descriptive analysis in two ways: ‘box and whisker’ figures and summary tables. In this box, we explain how to interpret them.

#### Example 1: Figures



To show the extent of inequality both between groups and within each group, we use diagrams of the kind shown above, in this case for men’s hourly wages by age band.

For each age group, the black short vertical line represents median earnings for men of that age. For instance, the median is £10 per hour for men aged 25-29 (circled). Half of men of this age earn more than this, and half earn less. For each group, the thin line

<sup>61</sup> The estimates that we present of percentiles, proportions and other statistics derived from sample survey data are subject to sampling error. The uncertainty associated with estimates, and with calculations based on them (e.g. differences across groups, or changes over time), can be assessed using summaries of statistical significance such as standard errors and confidence intervals. The uncertainty associated with estimates decreases in magnitude, the larger the sample size. We present information about sampling variability in this report only rarely. Instead, to reduce potential problems, in the statistics derived from our own research, we try to ensure that the samples used are sufficiently large to minimise sampling error, typically by pooling data from different years of the survey. To address the separate issues of bias and possible unrepresentativeness, we have used the relevant survey weights where possible. For discussions of issues of statistical significance and bias associated with the estimates derived by others, please see the original source. It should be noted that estimates of differences based on comparisons between surveys, for instance over time as in Chapter 10, are likely to have greater standard errors than estimates for a single point of time.

extends as far to the right as the 90<sup>th</sup> percentile of earnings for this age group – a tenth of men aged 25-29 earned more than £18 per hour. At the other end, the 10<sup>th</sup> percentile is shown – a tenth of men aged 25-29 earned less than £6 per hour. The thicker parts of each bar show the central range of earnings for each group, from the 30<sup>th</sup> to the 70<sup>th</sup> percentiles.<sup>62</sup>

The greater the distance between the 10<sup>th</sup> and 90<sup>th</sup> percentiles, the larger is the ratio of the 90<sup>th</sup> percentile to the 10<sup>th</sup> percentile, and the greater the 90:10 ratio, the greater the inequality in hourly earnings.

The three broken black vertical lines running from the top of the chart to the bottom show the 10<sup>th</sup> percentile, median (50<sup>th</sup> percentile) and 90<sup>th</sup> percentile for the whole population. With these reference points, we are able to compare the distribution within each age group with the distribution for the population as a whole.

### Example 2: Summary tables

We also use tables such as the example below to summarise key statistics at the end of Chapters 5-8. The example is again for hourly earnings, by gender as well as age band.

There are four types of information in the table. The first is the outcome for the person in the middle of each group, in this case the value in £ of median earnings: such as £10 per hour for a man aged 25-29.<sup>63</sup> This information is in the first column of the table.

The second type of information, shown in the second column, is the 90:10 ratio, which is a summary measure of inequality. For instance, inequality in hourly earnings for men aged 65-69, 4.2 according to the 90:10 ratio, was greater than the inequality among both men aged 30-34 (a 90:10 ratio of 3.5), and among women aged between 65 and 69 (3.3). A ratio of 4.2 means that the best paid tenth of men aged 65-69 earned more than four times as much as the worst paid tenth of men of the same age.

The table also shows where members of each group come within the ranking (from zero to 100) of outcomes for the whole population. It shows where people in a group with outcomes corresponding to the 10<sup>th</sup> percentile, median and 90<sup>th</sup> percentile of that group are to be found within the population as a whole. For instance, among women aged 20–24, a woman with the middle value of hourly earnings (median) for that age group had hourly earnings that put her only 26 places up from the bottom of the distribution or, put another way, 24 places below the middle of the overall distribution. The worst paid tenth of women aged 20-24 came below the 5<sup>th</sup> percentile of the whole distribution. By contrast, among men aged 40-44, the middle value (median) corresponds to the 69<sup>th</sup> percentile of the overall distribution, that is, within the top third.

Finally, the fourth column of the table, shows the proportion of the population within each group – the ‘population share’ of that group.

In summary tables, as here, we order groups by the median outcome for each group.

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<sup>62</sup> Sometimes we do not have enough data to give reliable information on the full spread within a group. In some cases we are not able to show the levels of P10 and P90, and so the group only has the thicker central box, without the thinner lines extending to its right and left sides. In other cases, we are able to show only the median, so the group just has a cross showing the position of its median.

<sup>63</sup> The outcome would be £ per week in the case of weekly earnings, or points score in the case of educational achievement at 16, or £ per week in the case of individual or household income.

	Median gross hourly wages (£)	90:10 ratio	Rank in the overall distribution			Population proportion (%)
			10th	Median	90th	
<b>Men</b>						
40-44	13.42	4.0	25	69	95	6.6
45-49	13.21	4.0	24	68	95	5.9
35-39	12.96	3.8	24	67	94	6.3
50-54	12.78	4.1	22	66	95	4.9
30-34	12.14	3.5	20	63	92	5.4
55-59	11.42	3.9	19	59	93	4.5
25-29	10.04	2.9	15	51	83	4.7
60-64	9.94	3.6	14	50	90	3.0
65-69	8.28	4.2	6	37	89	0.7
20-24	7.36	2.4	6	28	63	3.4
70+	6.76	4.5	3	23	85	0.3
16-19	5.31	2.5	1	8	34	2.0
<b>Women</b>						
30-34	10.37	3.5	11	53	87	5.6
35-39	10.01	3.7	10	50	88	6.8
40-44	9.56	3.6	10	47	88	7.6
25-29	9.53	3.0	11	47	80	5.2
50-54	9.31	3.6	11	45	87	6.0
45-49	9.24	3.5	11	45	86	6.9
55-59	8.61	3.4	9	40	85	5.0
60-64	7.96	3.3	7	34	82	2.3
20-24	7.08	2.4	5	26	60	3.8
65-69	6.83	3.3	5	23	77	0.6
70+	6.17	3.3	3	17	69	0.2
16-19	5.31	2.5	1	8	34	2.3



# Chapter 3 Education

In this chapter, we look at two measures of educational outcomes: attainment by children at the age of 16; and the highest qualifications of adults. For the first of these, as examination systems differ between them, we show results separately for England, Scotland, Wales and Northern Ireland. We look at the range of achievement by gender for all four nations. We also examine outcomes in England, Scotland and Wales by ethnicity, Special Educational Needs (Additional Support Needs in Scotland), Free School Meals receipt as an indicator of low income (in England and Wales), region (in England), and area deprivation. We show highest qualifications of adults in the UK across all ten of the dimensions in which we are interested.

3

## 3.1 Results at Key Stage 4

Information from the National Pupil Database (from the Pupil Level Annual School Census) on Key Stage 4 results in England (the GCSE examinations taken at 16 in England and equivalents in the other nations) allows us to examine how the distribution of points scores that children obtain at age 16 relates to some of the characteristics that we are interested in. These include gender, ethnicity, and the deprivation level of the neighbourhood where they live. Box 3.3 reports analysis of the relationship between GCSE performance in England and religious affiliation. Information on whether children are assessed as having Special Educational Needs (Additional Support Needs in Scotland) gives indirect information on the relationship with disability status (considered in more detail in Box 11.2 in Chapter 11).<sup>64</sup> Whether children are receiving Free School Meals gives some indirect information on relationships with parental income or social class. In Chapter 11, we consider analysis of evidence from a variety of sources on the relationship between test assessments through childhood and other indicators of background, including ethnicity, parental income and social class.

### *Gender*

Figure 3.1<sup>65</sup> shows the results of boys and girls in each of the four nations of the UK in terms of their ranking within the overall results in 2008 at age 16 (Key Stage 4) for state schools in each nation. Girls do better than boys throughout the distribution in each nation.<sup>66</sup> Median results for girls correspond to the 54<sup>th</sup> percentile of all results in Scotland, and the 56<sup>th</sup> in Wales and Northern Ireland and England. The gender gap in terms of typical ranking ranges from 8 places (out of 100) in Scotland to 12 places in Northern Ireland and Wales. There are similar gender differences in ranking at the 30<sup>th</sup> and 70<sup>th</sup> percentiles, but the differences at the extremes are rather smaller<sup>67</sup> – the top 10 per cent performing girls in England are in the top 8 per cent of the overall distribution, just 5 points ahead of the best performing boys while the bottom 10 per cent of boys in England are in the bottom 8 per cent of the overall distribution, for instance, 5 places behind the worst performing girls.

<sup>64</sup> Children who would be considered disabled under the Disability Discrimination Act (DDA) (around 4 per cent of the child population) make up a sub-set of all children with Special Educational Needs/Additional Support Needs (Scottish Government, 2009).

<sup>65</sup> The numbers in brackets after the description of each group in the figures in Chapters 3 and 4 show the proportion of the total population in that group.

<sup>66</sup> These are the only breakdowns we are able to present for Northern Ireland.

<sup>67</sup> There is a limit on how big the differences can be at these points in the distribution, given the sizes of the groups.

Figure 3.1: Key Stage 4 (Secondary 4) results, by gender, 2008

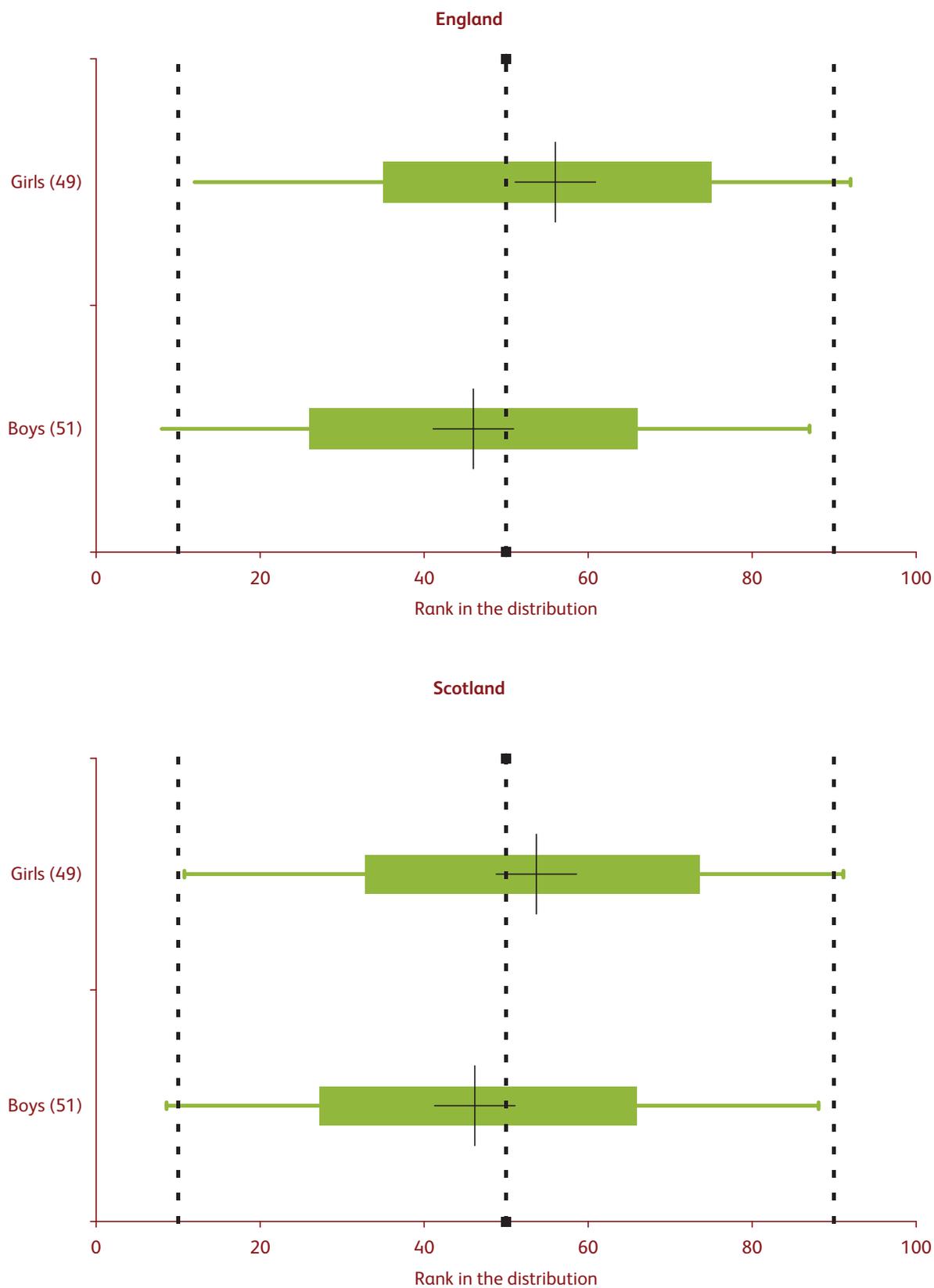
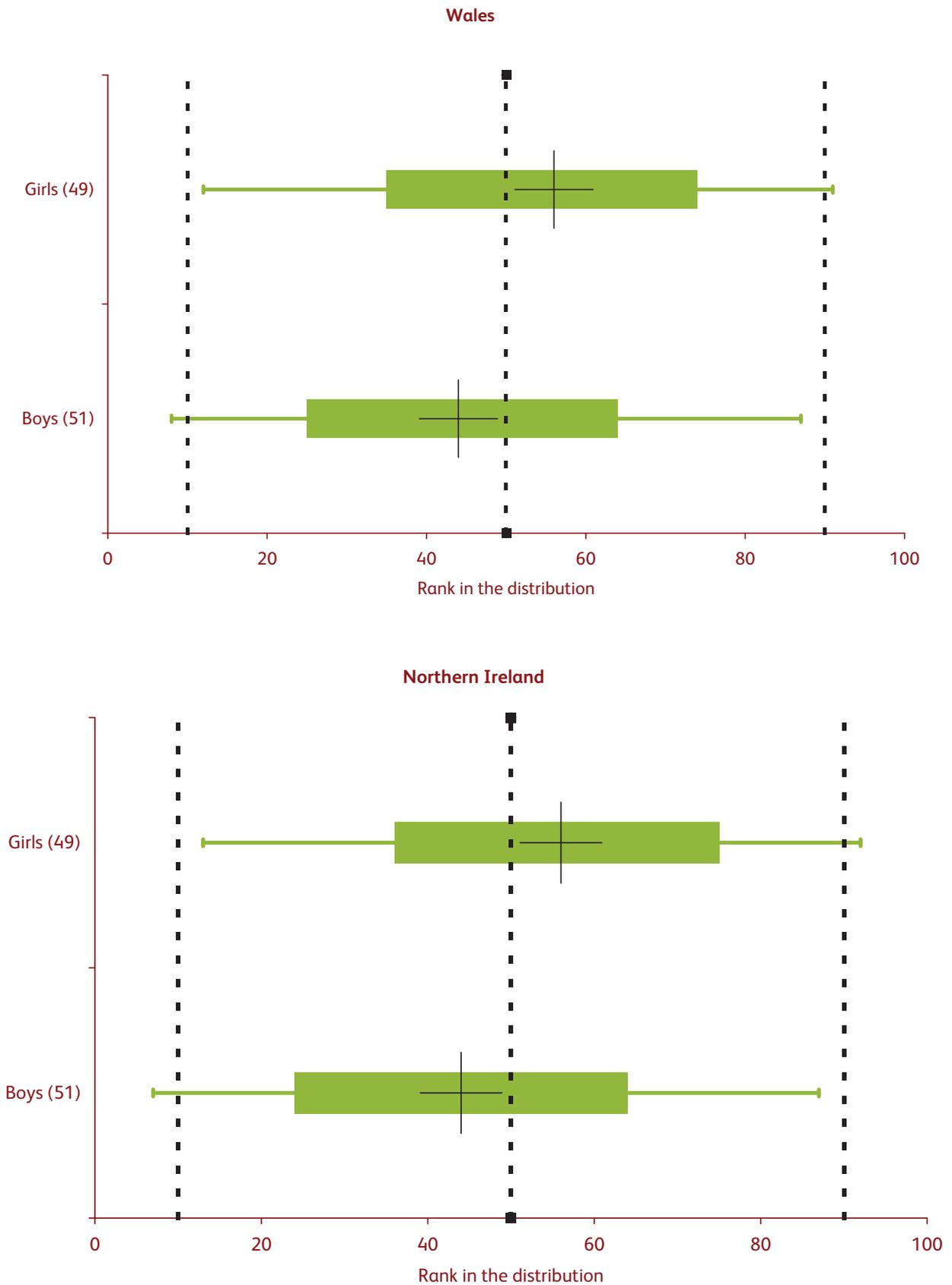


Figure 3.1: (Continued)



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Source: DCSF; Scottish Government; Welsh Assembly Government; Department of Education, Northern Ireland, based on NPD.

### *Ethnicity*

Figure 3.2(a) shows results at Key Stage 4 in England in 2008 by gender and ethnicity in terms of ranking within overall state school results in England. Figures 3.2(b) and (c) show equivalent breakdowns for Scotland and Wales (but with a less detailed breakdown, and with population numbers too small to give meaningful presentation on the spread of results for some ethnic groups). In England, the median White British boy ranks at the 46<sup>th</sup> percentile, with median results for several other ethnic groups near to or just below the overall median. However, the median Indian boy is ranked at the 64<sup>th</sup> percentile overall, and the median Chinese boy at the 75<sup>th</sup> percentile. Median results for Pakistani, Black African, Black Caribbean, and boys with other Black backgrounds are ranked at the 40<sup>th</sup> percentile or below. More than half of boys of Irish Traveller or Gypsy/Romany heritage have results placing them in the lowest 10 per cent overall. Box 3.2 looks at other evidence on the exceptionally high levels of educational and other forms of disadvantage of the Gypsy and Traveller communities.

For girls, there are some similar differences in terms of high performing ethnic groups, but with a higher overall level of achievement, and with few groups with a very low overall ranking. Thus half of Chinese girls are ranked above the 83<sup>rd</sup> percentile, and half of Indian girls above the 73<sup>rd</sup> percentile. But half of Pakistani girls perform above the overall median (above the 53<sup>rd</sup> percentile) and the medians for girls from the three Black categories recorded are around the overall median. Thus gaps between ethnic groups are smaller on the whole for girls than for boys. Again, however, the median for girls of Gypsy/Romany and Irish Traveller heritage is in the bottom 11-12 per cent overall.

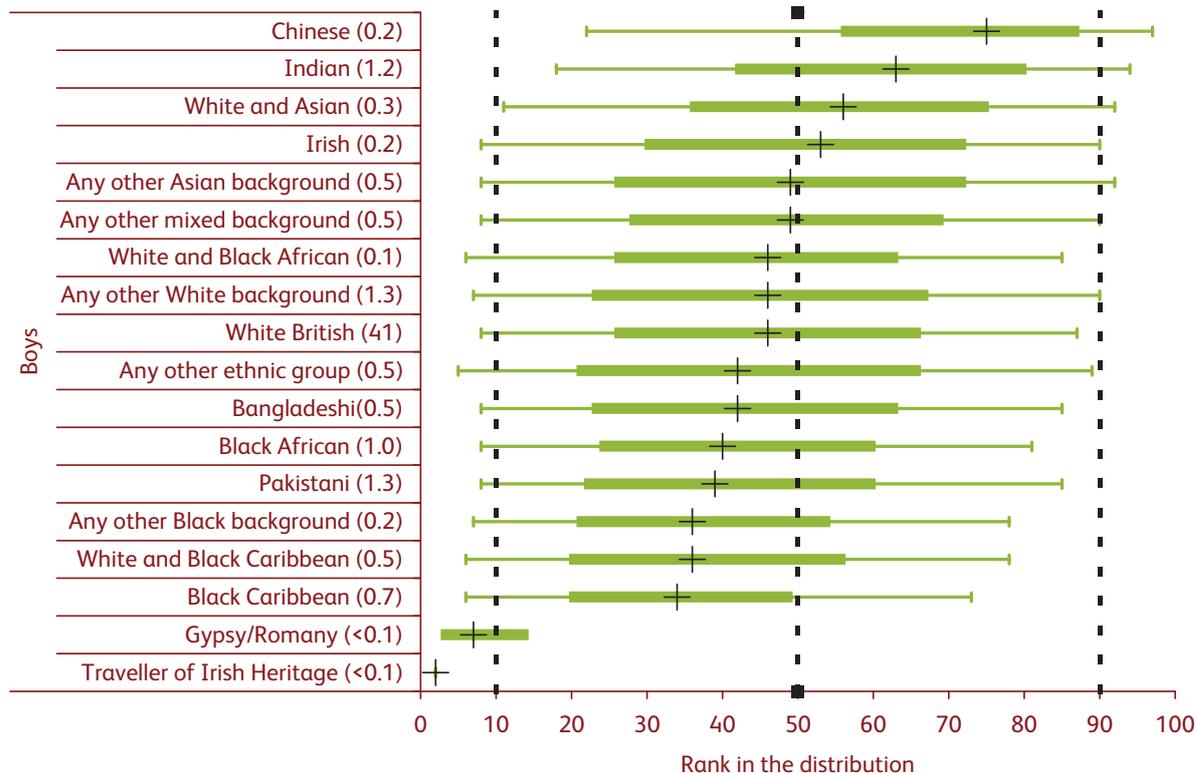
Results vary considerably *within* each ethnic group, indeed, much more so than between most groups. As the figure shows, the differences between ethnic groups are similar across most of the performance range within them (looking at the thicker bars showing the 30<sup>th</sup> to 70<sup>th</sup> percentiles of each group). At the extremes – the ends of the thinner lines – there is less variation (partly because there is less scope for it). Nonetheless there are some features that stand out. For instance, a tenth of Chinese boys are ranked in the top 3 per cent overall, and a tenth of Chinese girls are ranked in the top 1 per cent.

These differences in ranking appear to be greater in England than in Scotland and Wales. Figure 3.2(b) shows, for instance, that the median for Black boys (from different backgrounds taken together) is at the 48<sup>th</sup> percentile overall in Scotland, and the median for Asian-Pakistani boys is at the 43<sup>rd</sup> percentile. Asian-Indian girls have median results ranked at the 73<sup>rd</sup> percentile and Asian-Chinese girls at the 76<sup>th</sup> percentile. In Wales, Figure 3.2(c) shows only median rankings for most groups, as the numbers of non-white pupils are rather small. Chinese boys and Indian girls achieve high rankings, but the median rankings for small number of Black African boys and girls (only 127 in total in the dataset covering the whole of Wales) are at the 29<sup>th</sup> and 34<sup>th</sup> percentiles respectively.

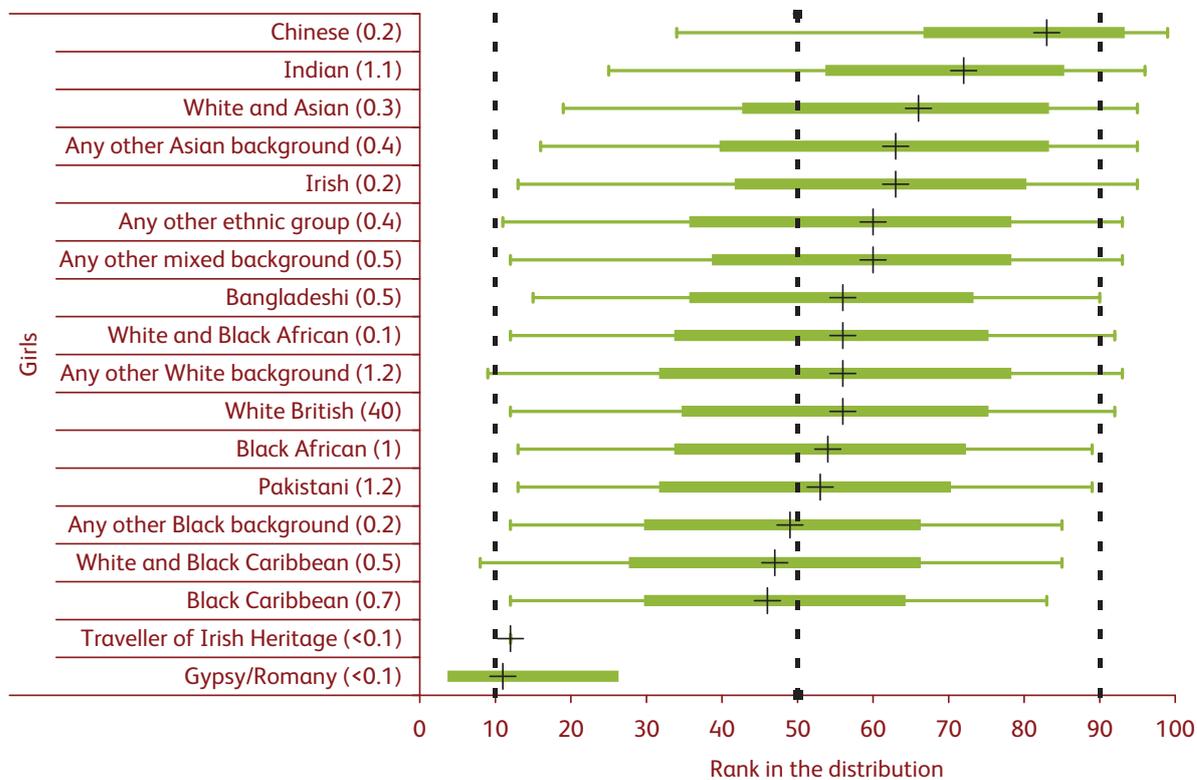
Comparing the figures, what is most striking is the way in which particularly large proportions of low achievers are found for boys from certain ethnic groups. In Chapter 11, we look at how differences in performance in school tests between ethnic groups develop over the school years, drawing on analysis of English test results. The administrative data from schools do not include religious affiliation, but the Longitudinal Survey of Young People in England (LSYPE) sheds some light on this, and on the interaction between religious affiliation and other characteristics. This is discussed in Box 3.3. It suggests that there are some differences within ethnic groups when also classified by religious affiliation. For instance, White Christian children achieve more GCSE passes at A\*-C than White children who have no religious affiliation, and Indian Hindu and Sikh children achieve more good GCSEs than Indian Muslim children.

# An anatomy of economic inequality in the UK

Figure 3.2(a): Key Stage 4 results, by ethnicity, England, 2008



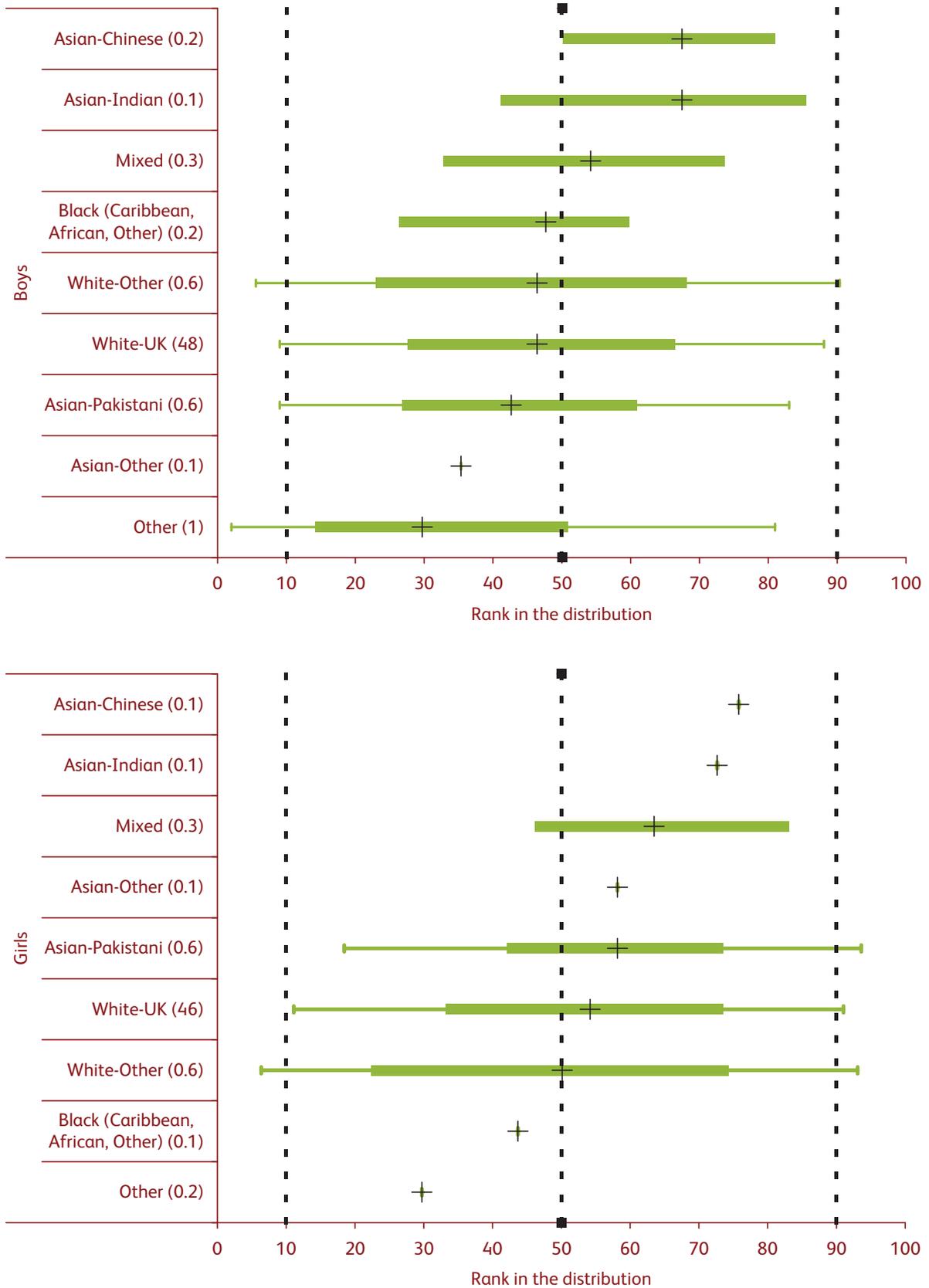
Ethnicity unknown for 2% of boys/girls.



Ethnicity unknown for 2% of boys/girls.

Source: DCSF, based on NPD-PLASC.

Figure 3.2(b): Secondary 4 results, by ethnicity, Scotland, 2008

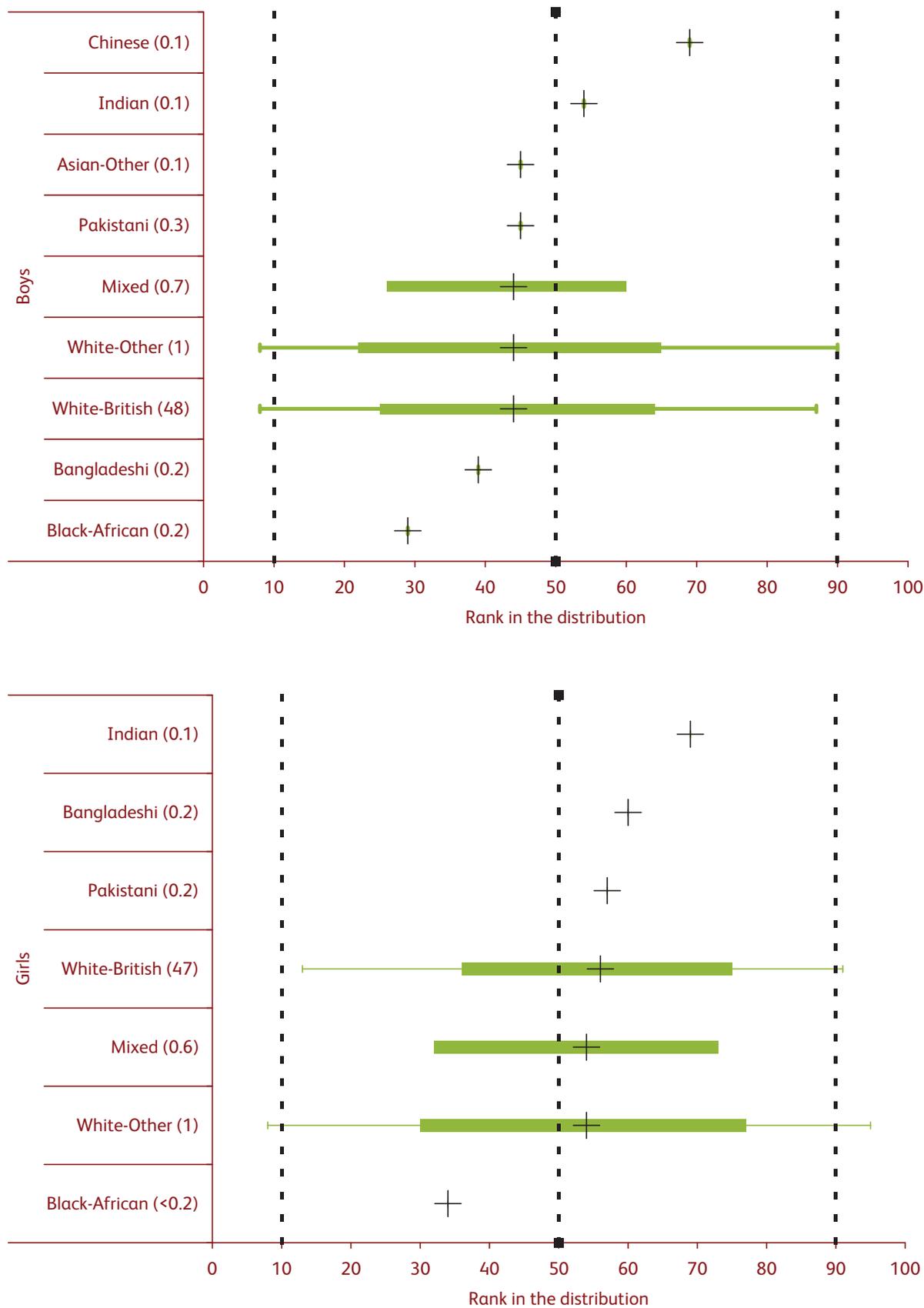


Source: Scottish Government, based on Pupil Census.

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# An anatomy of economic inequality in the UK

Figure 3.2(c): Key Stage 4 results, by ethnicity, Wales, 2008



Source: Welsh Assembly Government, based on NPD-PLASC.

### Box 3.2: The Gypsy and Traveller population

There is no official count of the Gypsy and Traveller population, as the relevant question will be introduced for the first time only in the 2011 Census. The exact figure is hard to estimate, but the Council of Europe has suggested there were around 300,000 Gypsies and Travellers in the UK in 2002 (200,000 housed, and 100,000 in caravans).<sup>68</sup> According to Communities and Local Government, in 2009, there were around 18,000 caravans.<sup>69</sup>

In Scotland in 2008, the Gypsy and Traveller population was estimated at 2,455 people or 744 households. This represents 0.05 per cent of the overall Scottish population.<sup>70</sup>

Although we are able to report on the educational achievement of Irish Travellers and Gypsies/Romany children, the other surveys we use to assess economic inequality do not allow us to identify Irish Travellers and Gypsies/Romany groups in general. Because of this, we need to rely on other evidence from other sources. This is very little limited, but a recent report by Sarah Cemlyn and colleagues (2009) for the Equality and Human Rights Commission (EHRC) presents evidence of high levels of disadvantage, including:

- very low rates of participation in secondary education and reported discrimination and abusive behaviour by school staff and other students;
- lack of access to pre-school, out-of-school and leisure services for children and young people;
- low employment rates and high poverty rates;
- reported repeated brutal evictions and extreme hostility from the wider population; and
- worse health and higher mortality rates than the rest of the population.

#### Education

Gypsy and Traveller children remain highly disadvantaged in terms of access, inclusion and achievement in schools. Since 2003, Department for Children, Schools and Families DCSF has been able to obtain and publish figures about the participation and achievement of Gypsy and Traveller children.<sup>71</sup>

Gypsy/Roma and Irish Traveller pupils, who make up a significant proportion of children in primary schools (2.5 per cent in 2007)<sup>72</sup>, experience high levels of inequality in relation to attainment. In 2008, Gypsy/Roma and Irish Traveller children had the lowest educational performances with only 17 per cent of Traveller of Irish Heritage and 16 per cent of Roma Gypsy pupils obtaining five or more GCSE A\*-C passes, compared to 55-65

<sup>68</sup> The Council of Europe [http://www.coe.int/t/dg3/romatravellers/documentation/strategies/statistiques\\_en.asp](http://www.coe.int/t/dg3/romatravellers/documentation/strategies/statistiques_en.asp)

<sup>69</sup> Communities and Local Government (2009).

<sup>70</sup> Scottish Government (2008).

<sup>71</sup> It should be noted that these national figures apply to two groups, Travellers of Irish Heritage and Gypsy/Roma pupils.

<sup>72</sup> DCSF (2008a).

per cent for the rest of children.<sup>73</sup> We will see in Chapter 6 that, unlike that for any other ethnic group, educational attainment among Gypsy/Romany and Irish Travellers pupils has fallen over time. Irish Traveller pupils are 2.7 times more likely than White British pupils to be categorised as having Special Educational Needs, even once socio-economic disadvantage is controlled for.<sup>74</sup>

Data from 2005-06 show that Irish Traveller, Gypsy/Roma along with Black Caribbean and Mixed White/Black Caribbean pupils are more than three times as likely to be permanently excluded from school as White pupils.<sup>75</sup> This has been explained by accommodation difficulties leading to interrupted attendance and learning, experiences of racist harassment and bullying, from both other pupils and the school staff, lack of validation of their culture, limited relevance of the curriculum for some children, difficulties in negotiating home and school, and teachers' low expectations.<sup>76</sup>

The disadvantage in education is also reflected in the considerable barriers to training and economic inclusion that the Gypsy and Traveller population experience. The employment statistics do not differentiate Travellers and Gypsies from other minority ethnic groups. In the absence of systematic data, the review carried out for the EHRC by Sarah Cemlyn and colleagues draws on small-scale studies and anecdotal evidence. The picture reported in that review, which we summarise below, is one of high levels of unemployment and economic inactivity (often the result of employment-related injuries).

### Employment and financial exclusion

- Employment patterns are highly gendered. Self-employment among men is common and a small number of waged Gypsies and Travellers are employed in low or semi-skilled jobs. A high percentage of women do not work outside the home, or work only until they are married and children are born. There is some evidence that a small, but growing, number of mothers are entering (usually low or unskilled) employment when their children reach school age. In some areas, it is not seen as the cultural norm for women to have paid work.
- There is evidence from across the UK that those who are known to be Gypsies or Travellers encounter discrimination when applying for paid work. Although the review found hard evidence (unsurprisingly) hard to come by, examples abound of people not being called for interviews or of jobs being 'mysteriously filled'.<sup>77</sup> Other barriers faced by unemployed Gypsies and Travellers include literacy and numeracy problems, lack of qualifications or references and the inability to provide evidence of former addresses.
- Discrimination can also affect the work opportunities of those who are self-employed. Their opportunities are also frequently restricted by regulations, which limit economic activities on official sites. The authors conclude, "*the discussion of access to employment and economic inclusion for Gypsies and Travellers demonstrates inequalities resulting from racism and discrimination*" (p.45).

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<sup>73</sup> DCSF (2008b).

<sup>74</sup> Cemlyn *et al.* (2009).

<sup>75</sup> DCSF (2007).

<sup>76</sup> Cemlyn *et al.* (2009).

<sup>77</sup> Cemlyn *et al.* (2009), p. 41.

- Gypsies and Travellers are often excluded from accessing bank accounts and reasonably priced credit, frequently leading people in poverty to incur debt to unregulated loan companies. This makes it harder to secure receipt of benefits.

### Accommodation

- The lack of suitable and secure accommodation underpins many of the inequalities that Gypsy and Traveller communities experience. Currently around one in four Gypsies and Travellers living in caravans do not have a legal place on which to park their home. Being on unauthorised sites presents a situation of constant threat of eviction. Eviction itself causes further stress and threat of violence.
- An additional issue is the relatively higher costs that Travellers and Gypsy/Roma people have to incur for accommodation. This is due to the high levels of rent for residents on sites, and the resale of electricity or other utilities, which is determined by the fact that site residents have to pay an additional premium for the use of electricity.

### Health

- Mortality rates and life expectancy are worse for the Gypsy and Traveller population than for the rest of the population. It is reported that Gypsy and Traveller women live 12 years less than women in the general population and Gypsy and Traveller men 10 years less than men in the general population.
- Gypsies and Travellers have been found to be nearly three times more likely to be anxious than others, and just over twice as likely to be depressed. Gypsies and Travellers in housing experience hostility from neighbours, and it is likely that the constant exposure to racism and discrimination has a negative impact on mental health.

### Box 3.3: Religious affiliation and educational attainment

To better understand the way in which religious affiliation is associated with educational outcomes, the Panel commissioned the Centre for Market and Public Organisation (CMPO) at the University of Bristol to analyse the relationship between pupils' religion, ethnicity and attainment at school in England, using the Longitudinal Survey of Young People (LSYPE) (who were in Year 9 in 2003-04).<sup>78</sup> In this box, we summarise some of the results of this research.

In explaining economic and educational inequalities, it is often difficult to disentangle religion from ethnicity. This is even more so when gender is added as an additional characteristic and sample sizes become small. For instance, in the LSYPE, there are only 51 cases who report themselves to be Jewish, 44 of these being White and 2 Indian, which is too few to ensure robust results. Moreover, some ethnic groups are concentrated in just one religious group, which makes impossible to compare the attainment of religious groups within them. More than 99 per cent of Pakistani female students and 97 per cent of Bangladeshi female students report themselves to be Muslim.<sup>79</sup>

The research shows that, in all measures of GCSE attainment, Hindu boys and girls perform most highly on average: Hindu girls achieve almost 2 GCSE grades A\*-C more than Christian girls, and over 2 GCSE grades A\*-C more than Muslim girls. For all religious groups, girls tend to do better than boys, and the gender gap is similar across religious groups.

Looking at one measure of ethno-religious differences, Table 3A shows that Indian Hindu and Indian Sikh girls have one more GCSE pass at A-C\* than Indian Muslim girls, and two more than Pakistani and Bangladeshi Muslim girls. This difference is slightly more pronounced in the case of boys. Within Christians, it is Black African girls that have the highest numbers of GCSE passes at A-C\* while, for boys, it is White Christians who outperform others.

The researchers also look at the (capped) points scores of the kind used elsewhere in this chapter attained by children from different ethno-religious groups.<sup>80</sup> These show a similar pattern to the number of passes shown in Figure 3A. For instance, White Christian girls and boys obtain more GCSE points than those without religion, and Indian Hindu girls and boys more points than Muslim or Sikh girls and boys.

They also investigate whether these differences between groups are statistically significant, using multiple regression analysis. They find that for White students, there is a positive association between being Christian – as opposed to not religious – and the number of Key Stage 4 passes (as in Table 3A). This association does not necessarily imply, however, that religious observance, per se, has an effect on educational attainment: other factors, such as the quality of schools attended, or family resources, may be the factors that make a difference. For Black African and Indian students, however, the difference between religious groups in number of passes is not statistically significant.

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<sup>78</sup> Burgess, Greaves and Wilson (2009).

<sup>79</sup> 'Religion' is self-reported. The relevant LSYPE question is 'What, if any, is your religion?'

<sup>80</sup> Burgess, Greaves and Wilson (2009), tables 9a and 9b. They also look at outcomes at Key Stages 2 and 3 (age 11 and 14) and at changes ('value added progress') between Key Stages 2 and 4.

Table 3A: GCSE outcomes – number of GCSE/GNVQ at grades A\*-C by ethnicity, religious affiliation and gender (England, 2003-04)

	Religion					
	None	Christian	Hindu	Muslim	Sikh	Other
<b>Girls</b>						
<b>Ethnicity</b>						
White	<b>5.97</b>	<b>6.88</b>	13	7.19	0	<b>6.01</b>
Black Caribbean	3.12	<b>5.81</b>	4	--	0	8.93
Black African	9.77	<b>7.12</b>	--	4.39	9	7
Indian	10.51	7.18	<b>8.63</b>	<b>7.2</b>	<b>8.02</b>	10.67
Pakistani	6.65	--	2	<b>6.14</b>	--	--
Bangladeshi	2	--	--	<b>6.93</b>	6.5	1.92
Mixed: White and Black Caribbean	<b>5.64</b>	<b>5.78</b>	9	3.52	6	5.07
<b>Boys</b>						
<b>Ethnicity</b>						
White	<b>5.13</b>	<b>6.17</b>	5.5	6.68	6.69	<b>5.19</b>
Black Caribbean	3.49	<b>4.06</b>	--	7.5	--	5.61
Black African	6.57	<b>5.68</b>	0	4.83	--	--
Indian	5.93	8.11	<b>7.66</b>	<b>6.05</b>	<b>6.44</b>	8.21
Pakistani	0	8.74	--	<b>4.51</b>	2.07	6.5
Bangladeshi	--	0	--	<b>5.21</b>	--	--
Mixed: White and Black Caribbean	<b>5.86</b>	3.99	0	6.13	--	2.01

Source: Burgess, Greaves and Wilson (2009), Tables 9C and 9D.

Note: Cells with numbers in bold font contain at least 50 observations, the others less than 50 observations.

### *Special Educational Needs*

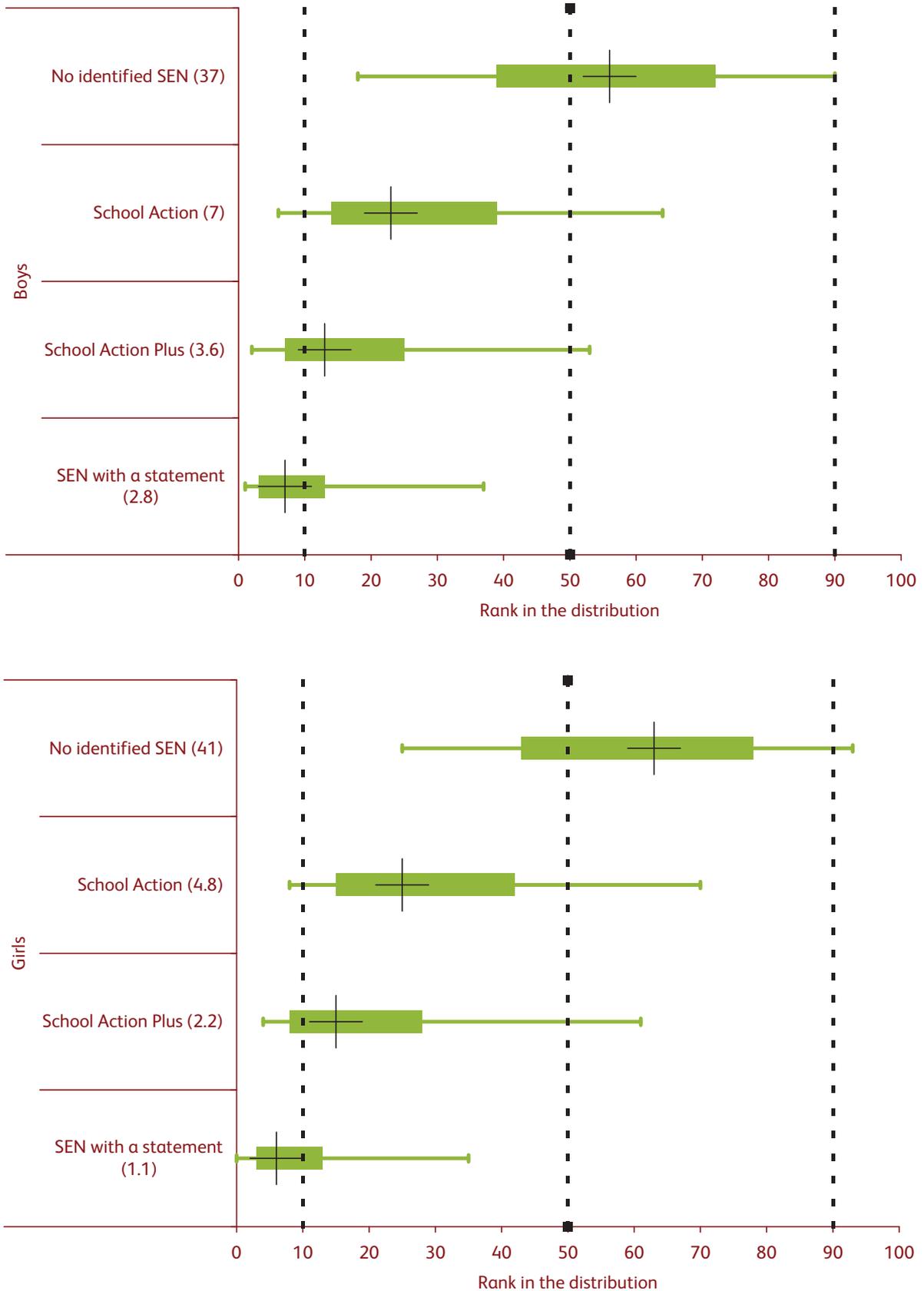
The data from English schools can be broken down by the level of Special Educational Needs assessed for each child. The categories that can lead to this are described in Box 11.2 in Chapter 11. There are three levels of Special Educational Needs that can be assessed – ‘school action’, ‘school action plus’, or Special Educational Needs with a ‘statement’ – the third implying the greatest level of special needs. The results in England in 2008 are shown in Figure 3.3(a). Just over a fifth, 22 per cent, of the 16 year-olds covered here had some form of Special Educational Needs assessment. Most of these are on some form of school action; only a small proportion have statements of Special Educational Needs. Any of the levels of Special Educational Needs was associated with a much lower range of performance at GCSE than by those without Special Educational Needs, but particularly when there was a formal statement. For those with some form of Special Educational Needs there is less of a gender difference than for others. In Wales, a smaller proportion (17 per cent) is assessed as having Special Educational Needs, but the pattern of differences shown in Figure 3.3(c) is almost identical.<sup>81</sup> The Scottish system is different, with only 5 per cent of pupils assessed as having Additional Support Needs. As Figure 3.3(b) shows, the performance of this group at Standard Grade is comparable to that of the similarly sized group of statemented children at GCSE in England and Wales.

Whilst it might be expected that children with certain types of cognitive difficulty would achieve less well, there is no necessary reason why children who have, say, visual or hearing impairments should not perform as well as their peers, unless they have additional difficulties. It should be noted that in England and Scotland there is a strong association between living in a deprived area and having particular types of Special Educational Needs/Additional Support Needs identified. The association between living in a deprived area and being identified as having social, emotional and behavioural difficulties or a learning disability is particularly strong. By way of contrast, the association between the identification of sensory impairments or specific learning difficulties (dyslexia) with area deprivation is less strong. Box 11.2 in Chapter 11 presents evidence from a study carried out for us that looked at performance through the school years of children with different kinds of special needs.

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<sup>81</sup> The figure omits the small additional category in Wales of ‘statutory assessment’.

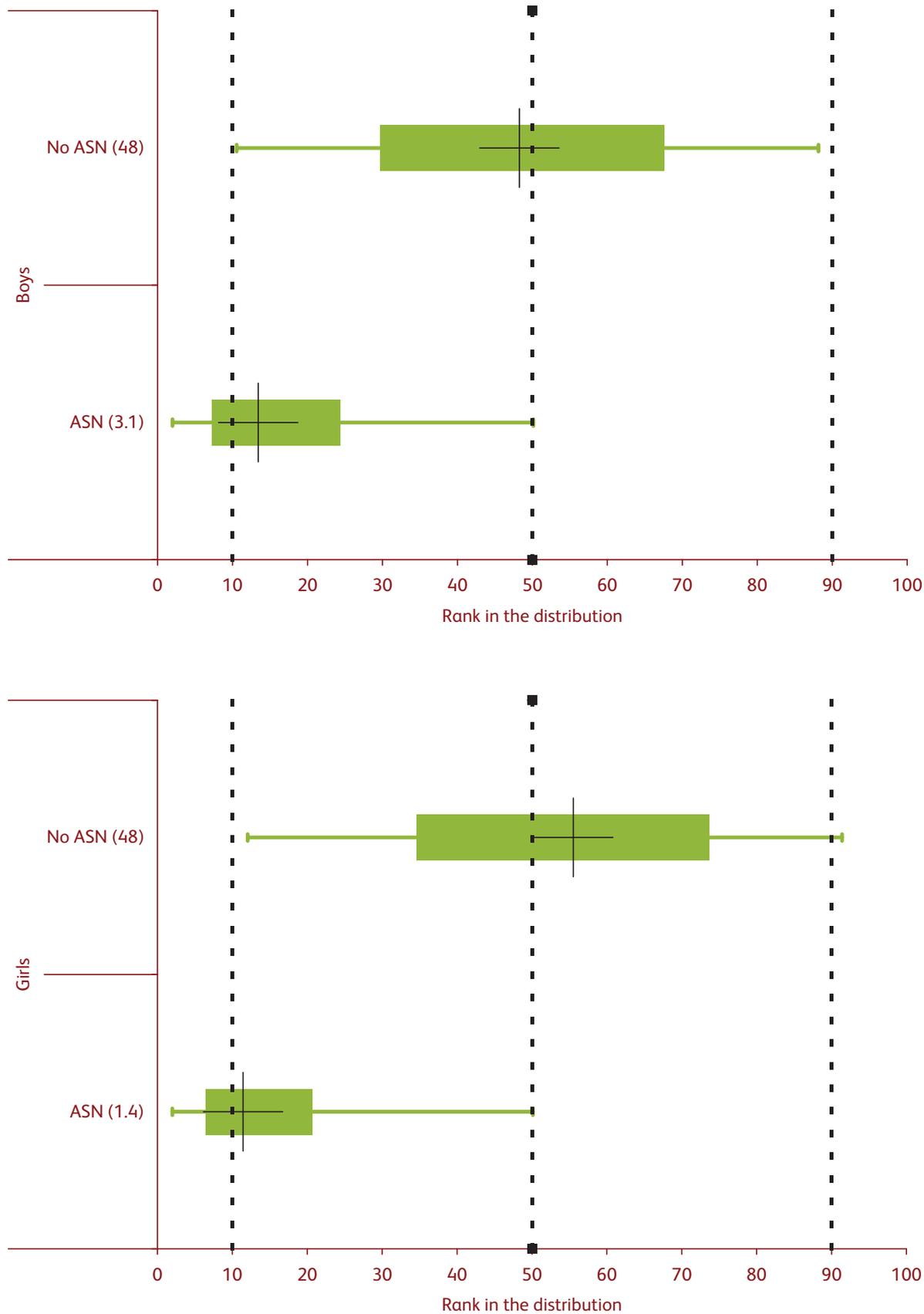
Figure 3.3(a): Key Stage 4 results, by Special Educational Needs, England, 2008



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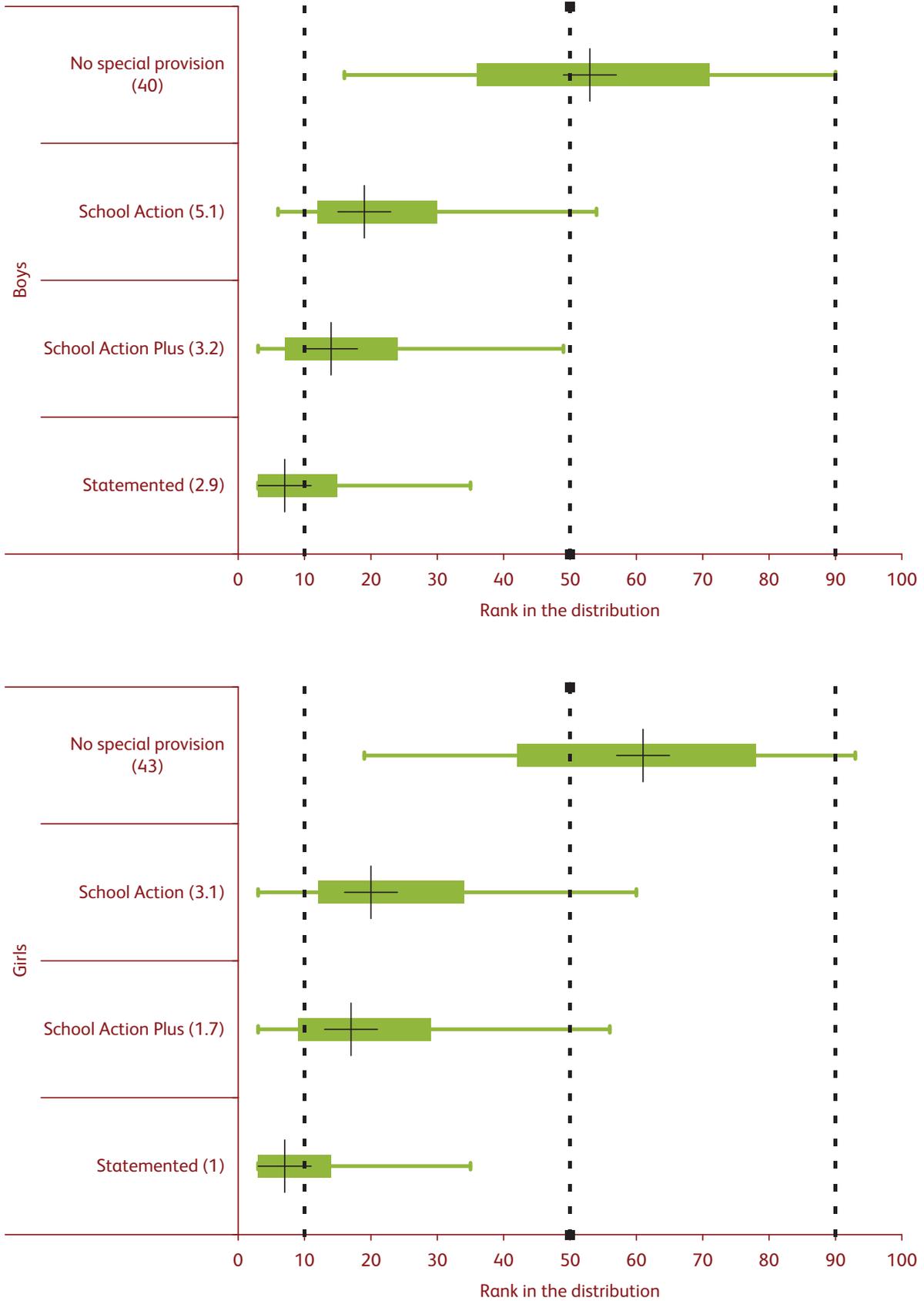
Source: DCSF, based on NPD-PLASC.

Figure 3.3(b): Secondary 4 results, by Additional Support Needs, Scotland, 2008



Source: Scottish Government, based on Pupil Census.

Figure 3.3(c): Key Stage 4 results, by Special Educational Needs, Wales, 2008



3

Source: Welsh Assembly Government, based on NPD-PLASC.

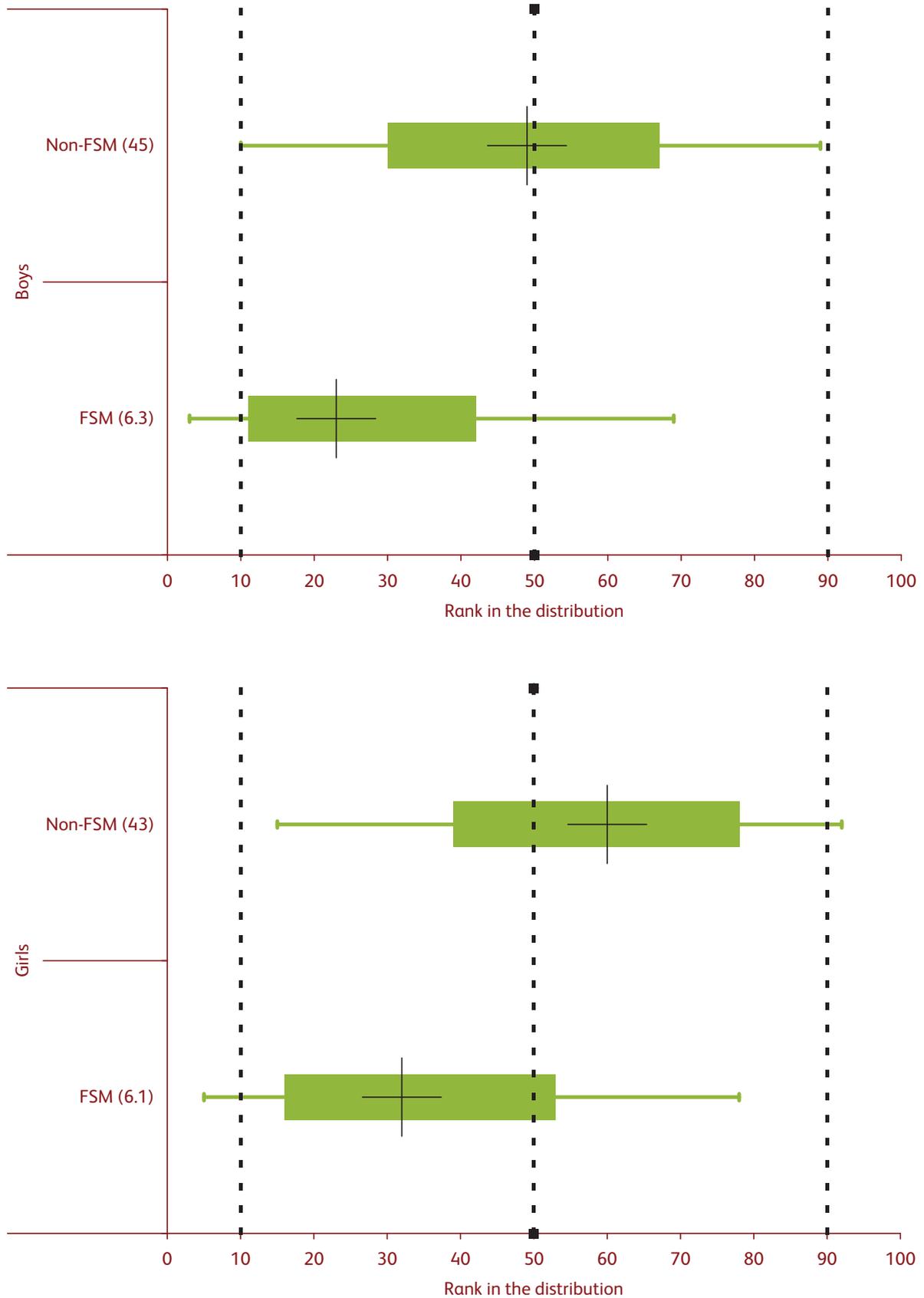
### *Free School Meals status*

Figure 3.4 shows the difference in the range of rankings between those receiving Free School Meals and those not receiving them. This is an imperfect measure of parental income or social class. Entitlement to Free School Meals depends on parental receipt of out-of-work benefits or the maximum rate of Child Tax Credit, but those in work receiving other benefits or tax credits are not currently entitled, even if they also have low income. About one in eight of those covered by the English statistics receive Free School Meals. Detailed comparison of family income levels suggests that while those children receiving free meals generally come from low-income families, other children from low-income families do not receive them for one reason or another.<sup>82</sup> Nonetheless, it reveals one of the starkest differences in any of the results at age 16. In the English results in Figure 3.4(a), it can be seen that the spread of results for boys *not* receiving Free School Meals is almost identical to that for all children. But half of boys receiving free meals come in the bottom quarter of the overall distribution; two-thirds of them in the bottom two-fifths. A tenth of boys receiving Free School Meals have no more than 44 tariff points, corresponding to nothing more than two passes at grade F. Overall, there is a gap of 26 places (out of 100) in the typical ranking of boys receiving or not receiving free meals, and 28 places for girls. The Welsh results show a virtually identical pattern. Results on this basis are not available for Scotland. Chapter 11 looks in more detail at differences in assessments between ages 7 and 16 by gender, ethnicity and Free School Meals status.

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<sup>82</sup> Hobbs and Vignoles (2009), figure 1. Some children eligible for Free School Meals do not take them up; others are from low-income families, but are ineligible because a parent is in low-paid work, receiving tax credits, rather than Income Support. Technically, the measure refers to children 'known to be eligible' for Free School Meals; for simplicity, we refer to those receiving or not receiving them.

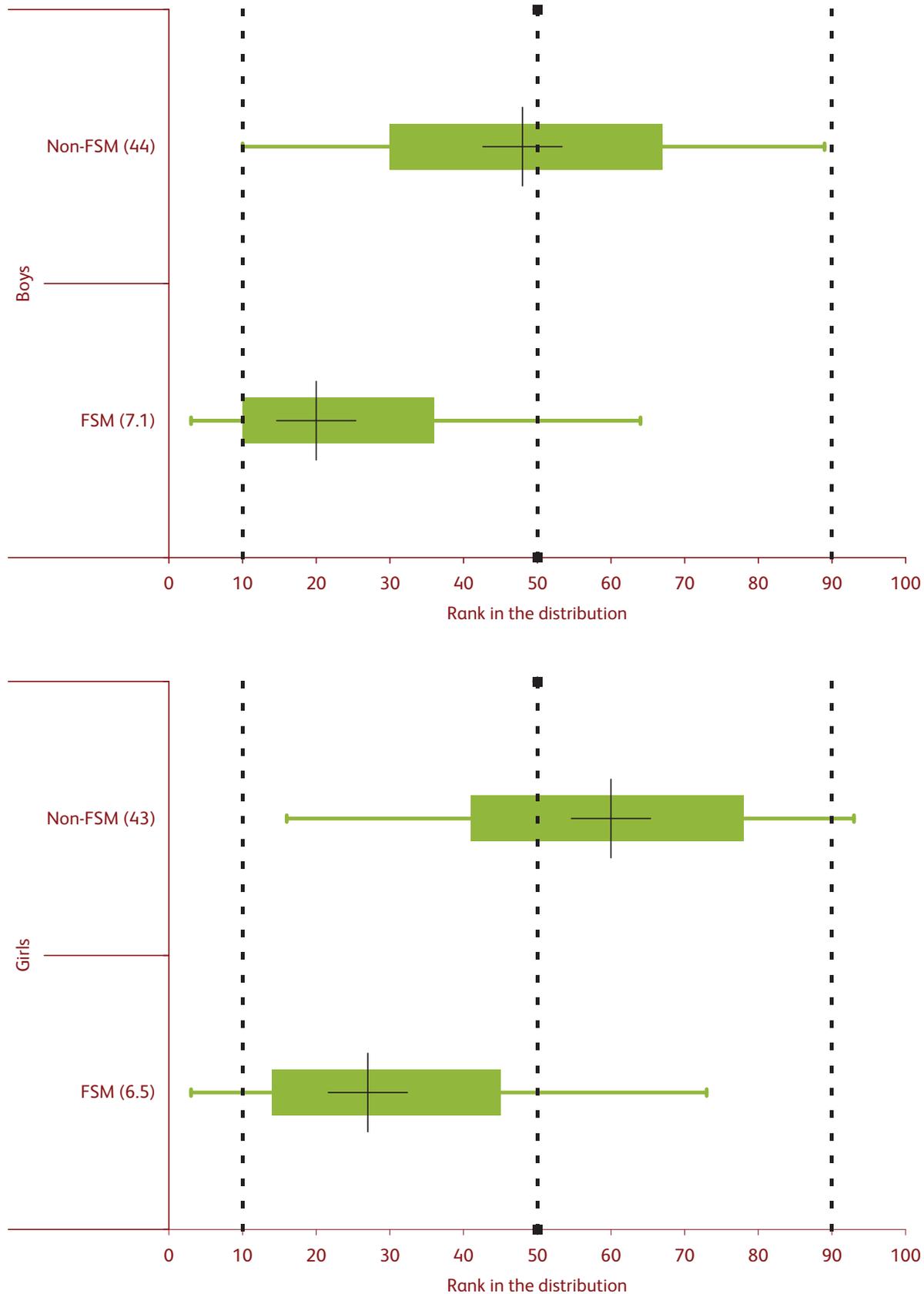
Figure 3.4(a): Key Stage 4 results, by Free School Meals status, England, 2008



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Source: DCSF, based on NPD-PLASC.

Figure 3.4(b): Key Stage 4 results, by Free School Meals status, Wales, 2008



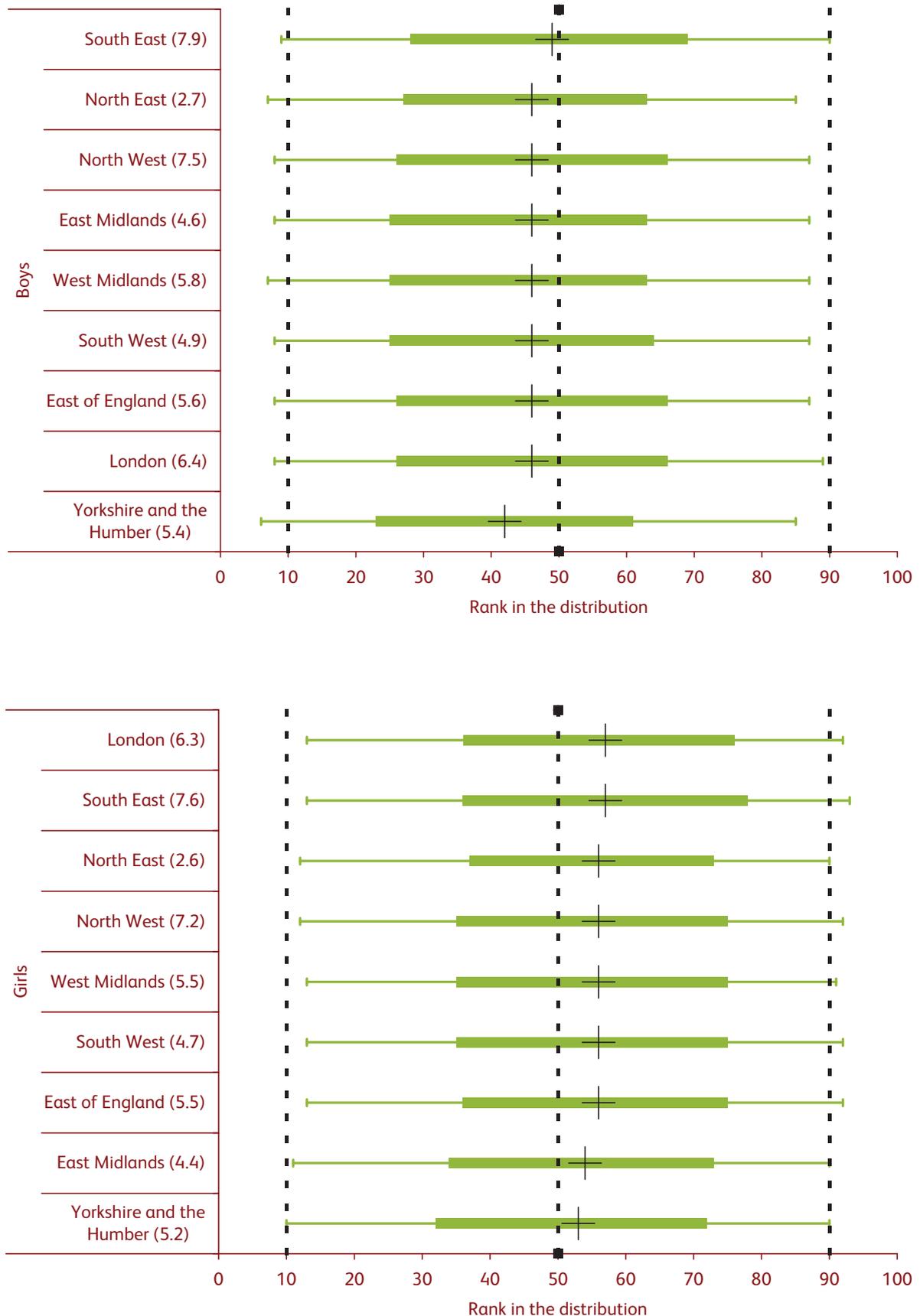
Source: Welsh Assembly Government, based on NPD-PLASC.

### *Region*

For the reasons given in Chapter 2, we cannot compare Key Stage 4 results between the constituent nations of the UK. However, Figure 3.5 shows the differences in spread of results across the English regions. The main conclusion from this is that there is little difference between regions. The biggest difference in median rankings is only 7 places for boys and 5 places for girls, between Yorkshire and the Humber and the South East.

# An anatomy of economic inequality in the UK

Figure 3.5: Key Stage 4 results, by region, England, 2008



Source: DCSF, based on NPD-PLASC.

## Area deprivation

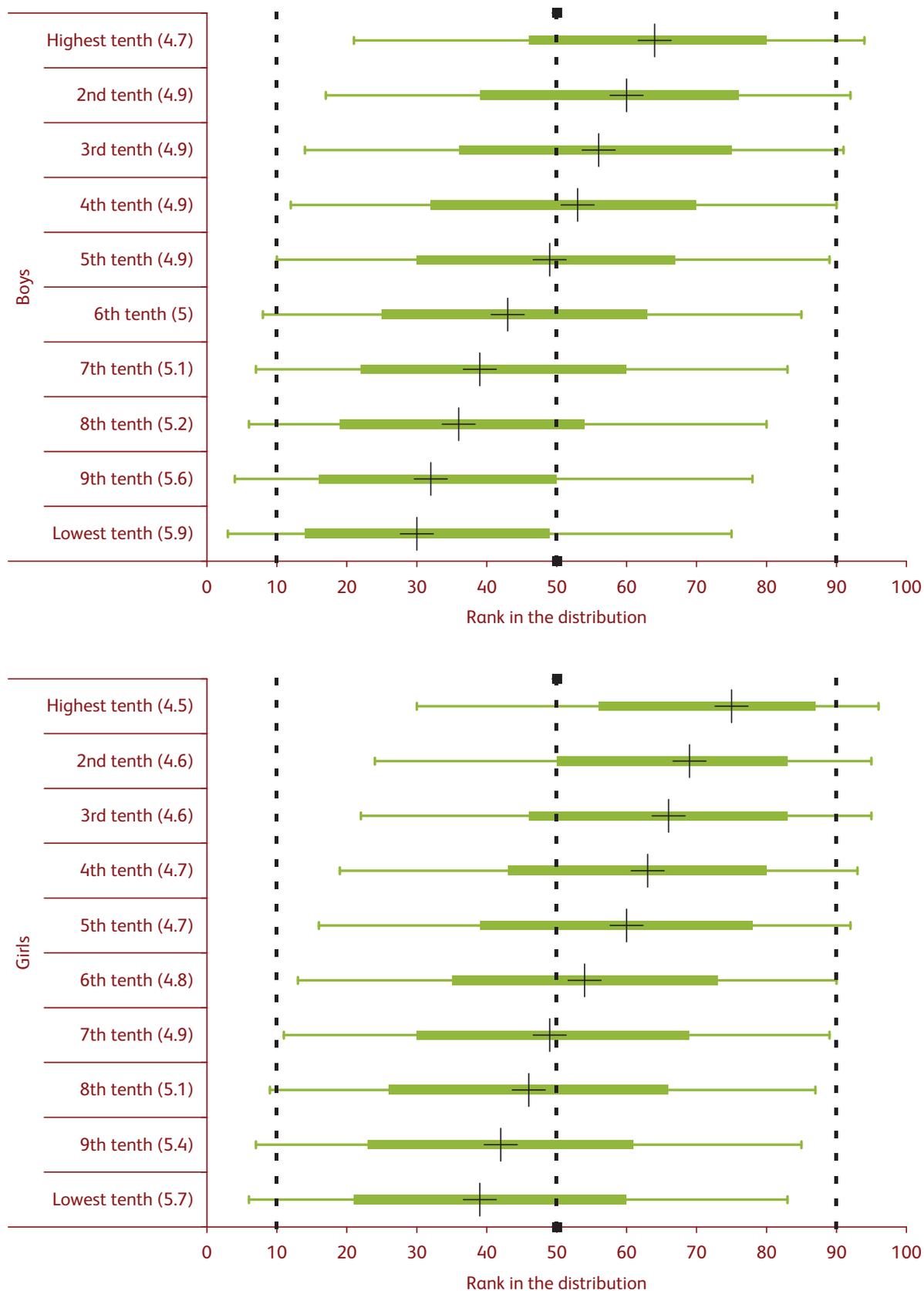
By contrast with regional differences, there is a considerable gradient between the children living in different kinds of neighbourhood. The English results in Figure 3.6(a) are based on an index of area deprivation linked to the circumstances of children in particular.<sup>83</sup> The differences between areas are similar for boys and girls and at all points within the spread of results. Within the least deprived areas, nearly 70 per cent of boys achieve results in the top half of the overall range. In the most deprived areas, only 30 per cent of boys achieve results in the top half. Half of girls in the least deprived areas achieve results in the top quarter overall, but only about a fifth of those in the most deprived areas. The difference in typical ranking between most and least deprived areas is 35 places (out of 100). Very few of the highest achievers come from the most deprived areas, and very few of the lowest achievers come from the least deprived areas.

Scotland and Wales have different indices of area deprivation.<sup>84</sup> Using these also shows very pronounced differences in results between areas. Indeed, in Scotland, the pattern in Figure 3.6(b) shows an even more dramatic gradient between areas than in England: *median* results for boys in the least deprived Scottish areas are at the 73<sup>rd</sup> percentile and for girls at the 76<sup>th</sup> percentile; those in the most deprived areas are at the 23<sup>rd</sup> and 29<sup>th</sup> percentiles respectively. In other words, simply knowing what kind of neighbourhood a child comes from makes a difference equivalent to traversing *half* of the overall range of performance at 16. The Welsh results in Figure 3.6(c) show results in the most deprived areas between the English and Scottish results.

<sup>83</sup> This is the Income Deprivation Affecting Children Index (IDACI): it shows the percentage of children in a defined geographical area (Super Output Area) that live in families that are income deprived (as measured by numbers receiving Income Support, income-based Jobseeker's Allowance or Pension Credit, plus those receiving Working Tax Credit or Child Tax Credit who also have an equivalent net income below 60 per cent of the national median before housing costs).

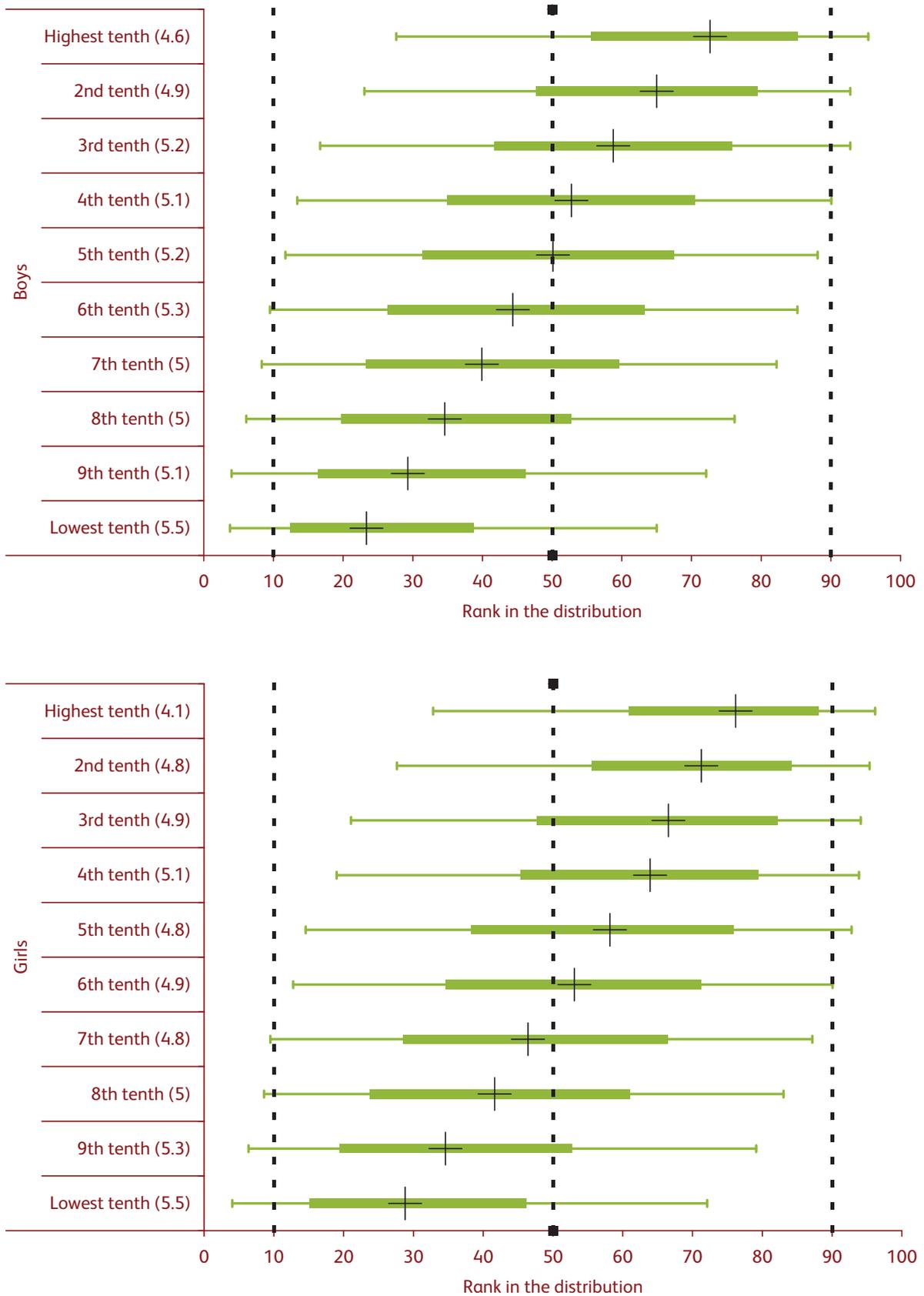
<sup>84</sup> The Scottish Index of Multiple Deprivation 2006 (SIMD) combines 37 indicators across seven domains (current income, employment, health, education, skills and training, housing, geographic access and crime). The overall index is a weighted sum of the seven domains. It is used to rank areas from most deprived (rank 1) to least deprived (rank 6,505). The Welsh Index of Multiple Deprivation (WIMD) 2008 provides a rank for the 1,896 Lower Super Output Area (LSOAs) in Wales. The deprivation domains are: income, employment, health, education, skills and training, geographical access to services, housing, physical environment and community safety.

Figure 3.6(a): Key Stage 4 results, by Income Deprivation Affecting Children Index, England, 2008



Source: DCSF, based on NPD-PLASC.

Figure 3.6(b): Secondary 4 results, by Scottish Index of Multiple Deprivation, Scotland, 2008

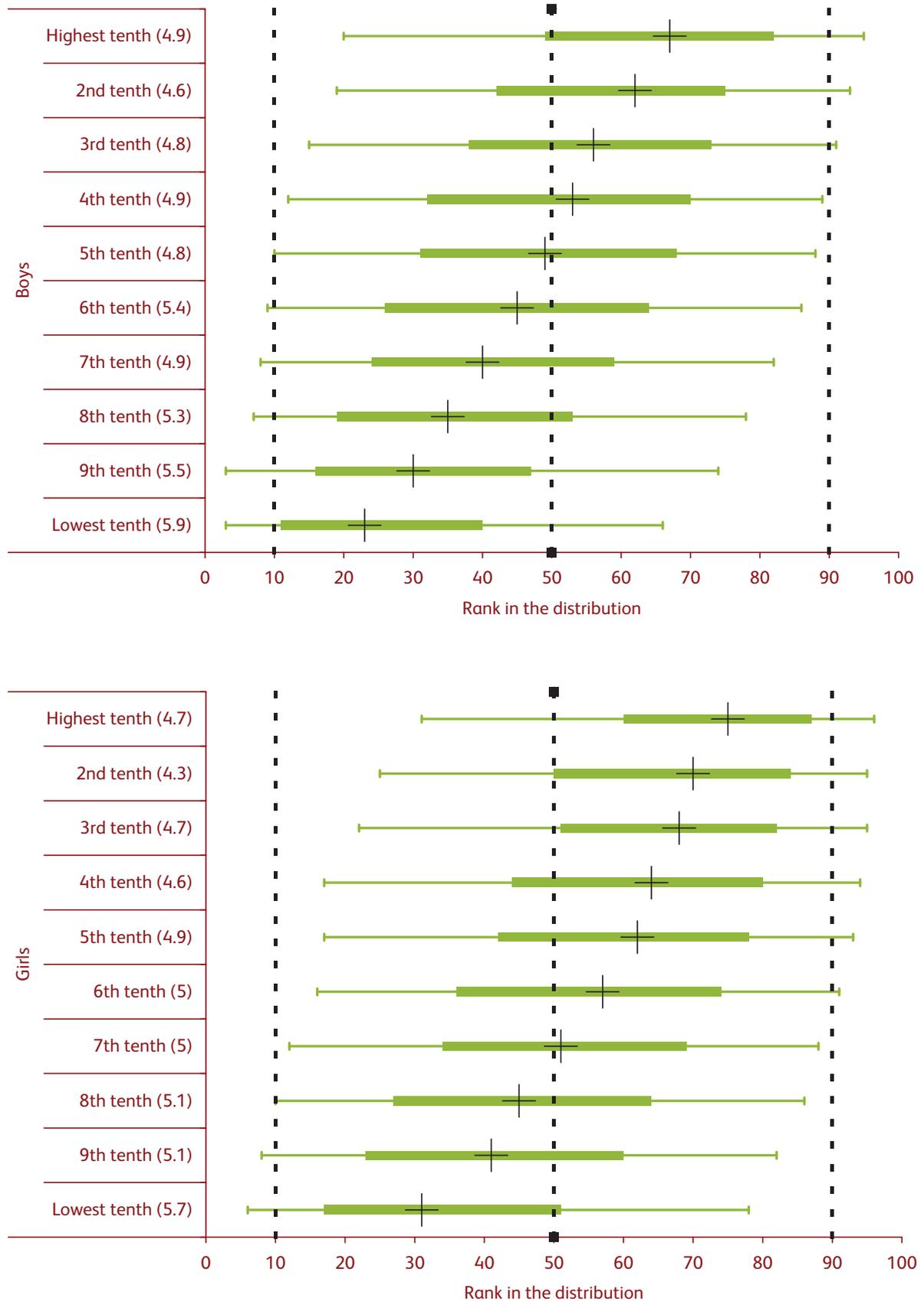


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Source: Scottish Government, based on Pupil Census.

# An anatomy of economic inequality in the UK

Figure 3.6(c): Key Stage 4 results, by Welsh Index of Multiple Deprivation, Wales, 2008



Source: Welsh Assembly Government, based on NPD-PLASC.

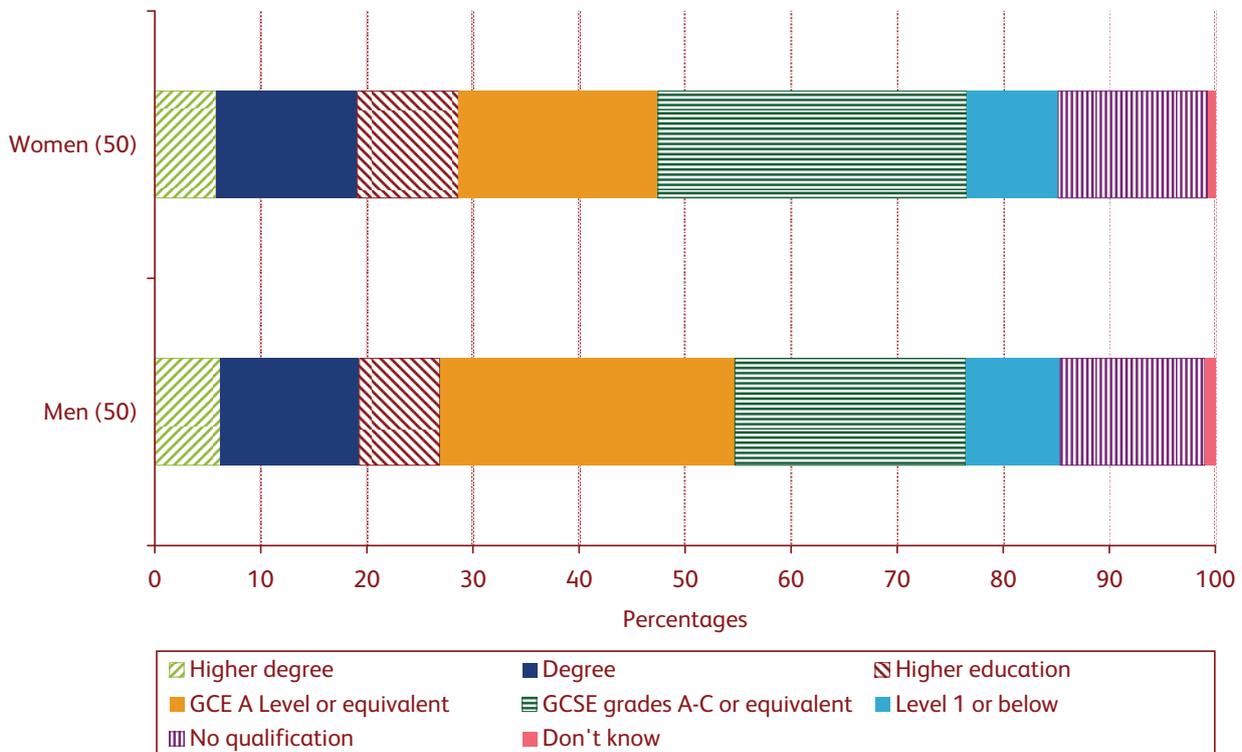
### 3.2 Highest qualifications of the adult population

For some individuals, of course, educational achievement at age 16 determines the qualifications with which they enter the labour market. For others, it is a prelude to staying on at school or college and further qualifications. Box 11.3 in Chapter 11 looks at the relationship between recent results at age 16 in England and whether young people enter higher education, depending on gender, ethnicity and Free School Meals status (with significant differences by ethnicity in particular). Other research discussed in Chapter 11 also examines the relationships between young people’s social background, the kind of university they go to, their eventual degree result, and what happens to them when they then enter the labour market. The qualifications of today’s adult population reflect the accumulation of past relationships of that kind. This section presents breakdowns of the highest qualification levels of the adult population in the UK, as shown in Figure 2.2 in the last chapter.

#### Gender

Figure 3.7 shows that across the adult working age population more than a quarter of both men and women have degrees or other qualifications from higher education, but fewer women (19 per cent) than men (28 per cent) have A levels or their equivalent as their highest qualification. A quarter of each has no more than a Level 1 qualification.<sup>85</sup>

Figure 3.7: Highest qualification, by gender, UK, 2006-2008, (percentages): Working age population



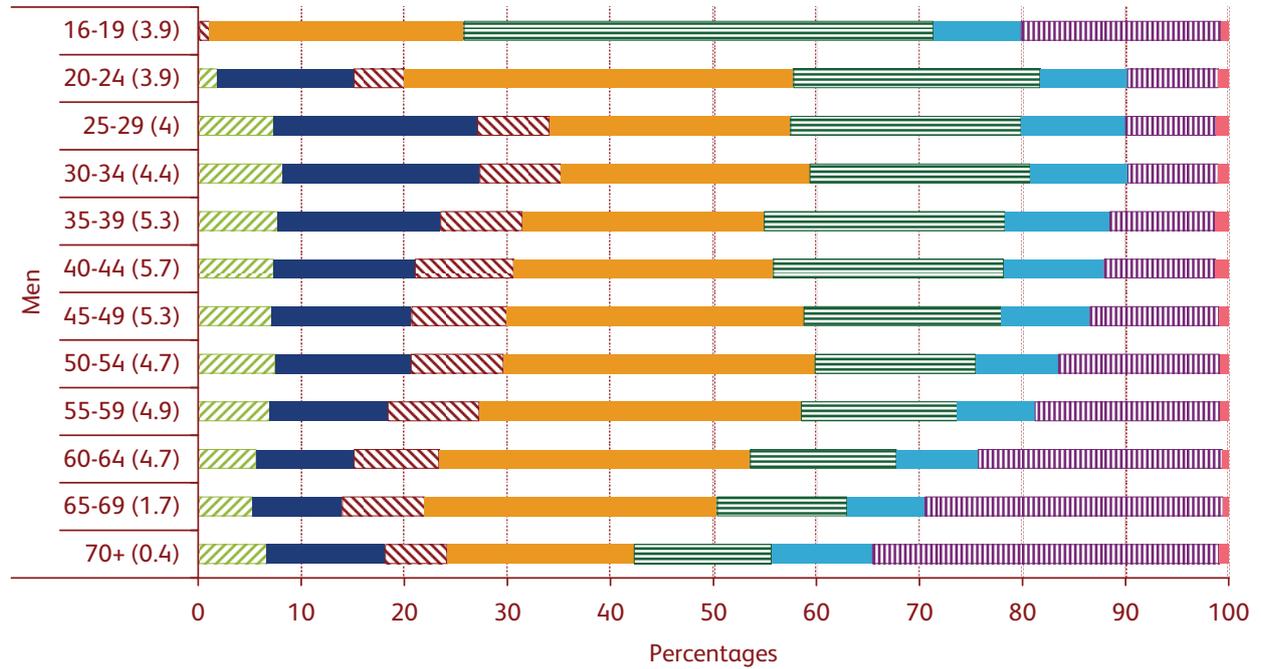
Source: NEP, based on LFS 2006-2008.

<sup>85</sup> Level 1 corresponds to GCSEs grades D-G and corresponding vocational qualifications that give basic knowledge and skills and an ability to apply learning with guidance and supervision. Below Level 1 are entry level certificates, such as English for Speakers of Other Languages, Skills for Life, etc.

### Age

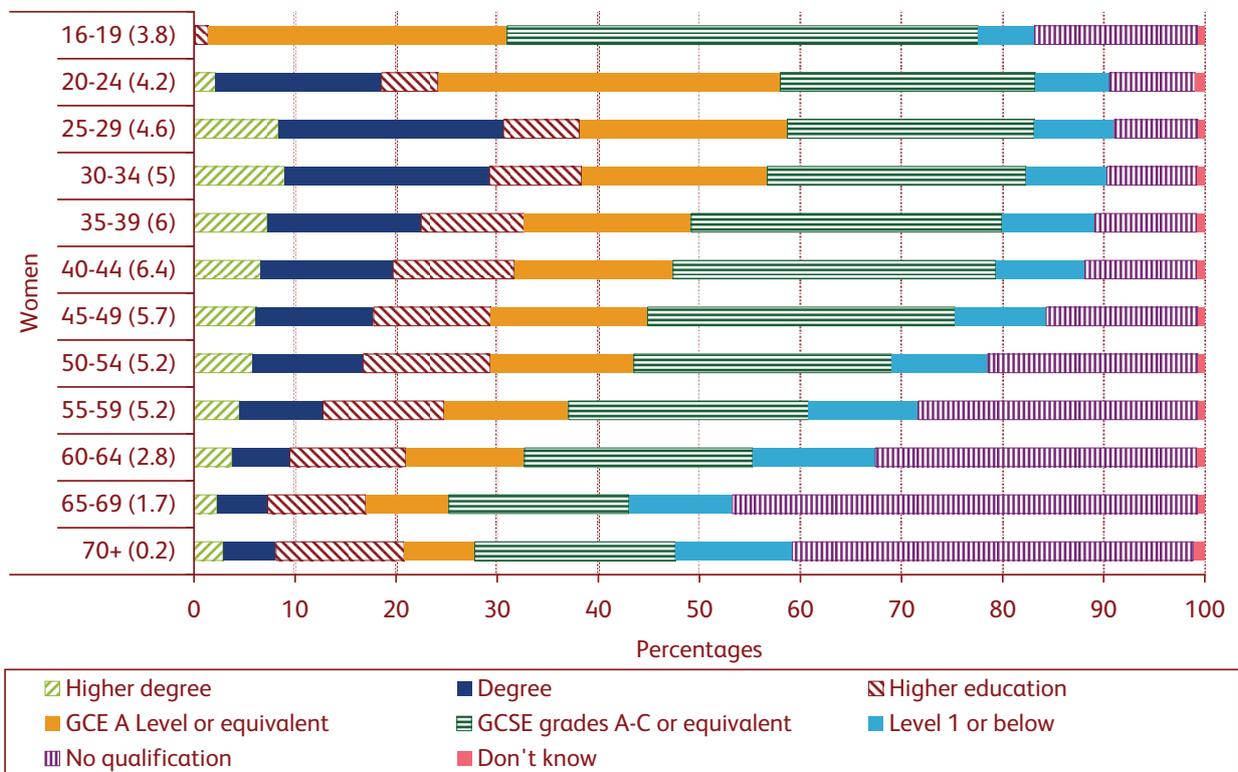
These gender differences are mainly the result of differences for older cohorts, as can be seen from Figure 3.8. For the youngest cohorts gender differences are very small, with for instance, the main difference for those aged 25-29 between 2006-2008 being that 30 per cent of women, but only 27 per cent of men, have a degree or higher degree, while only 17 per cent of women, but 20 per cent of men have no qualifications above Level 1. However, for each age group over 30, not only does the overall level of qualifications tend to reduce, but so the gap between men and women increases in size for older age groups. 59 per cent of men, but only 36 per cent of women in their late fifties have A level qualifications or higher. 26 per cent of men in their later fifties have no qualifications above Level 1, but 39 per cent of women. The way in which this gender gap in qualifications has closed – even reversed – is very important in understanding trends in the gender wage gap (see Box 10.1 in Chapter 10 below).

Figure 3.8(a): Highest qualification, by age, men, UK, 2006-2008 (percentages)



3

Figure 3.8(b): Highest qualification, by age, women, UK, 2006-2008 (percentages)

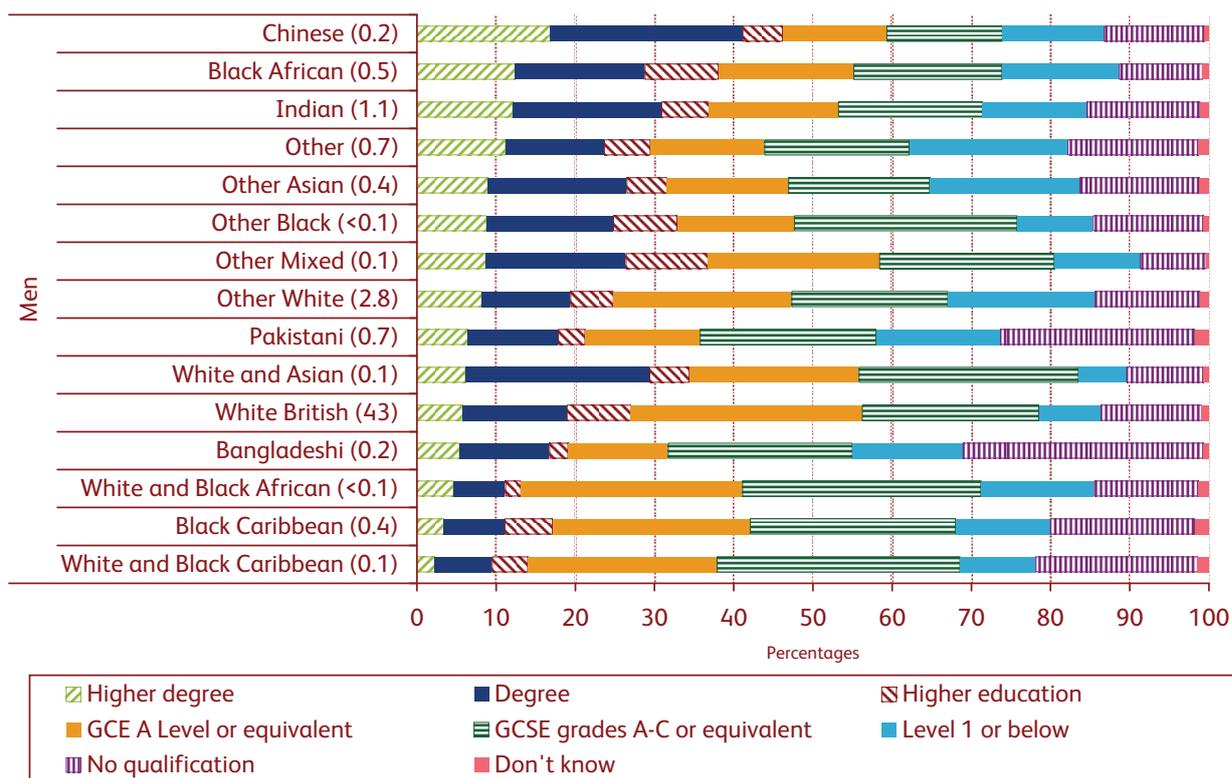


Source: NEP, based on LFS 2006-2008.

## Ethnicity

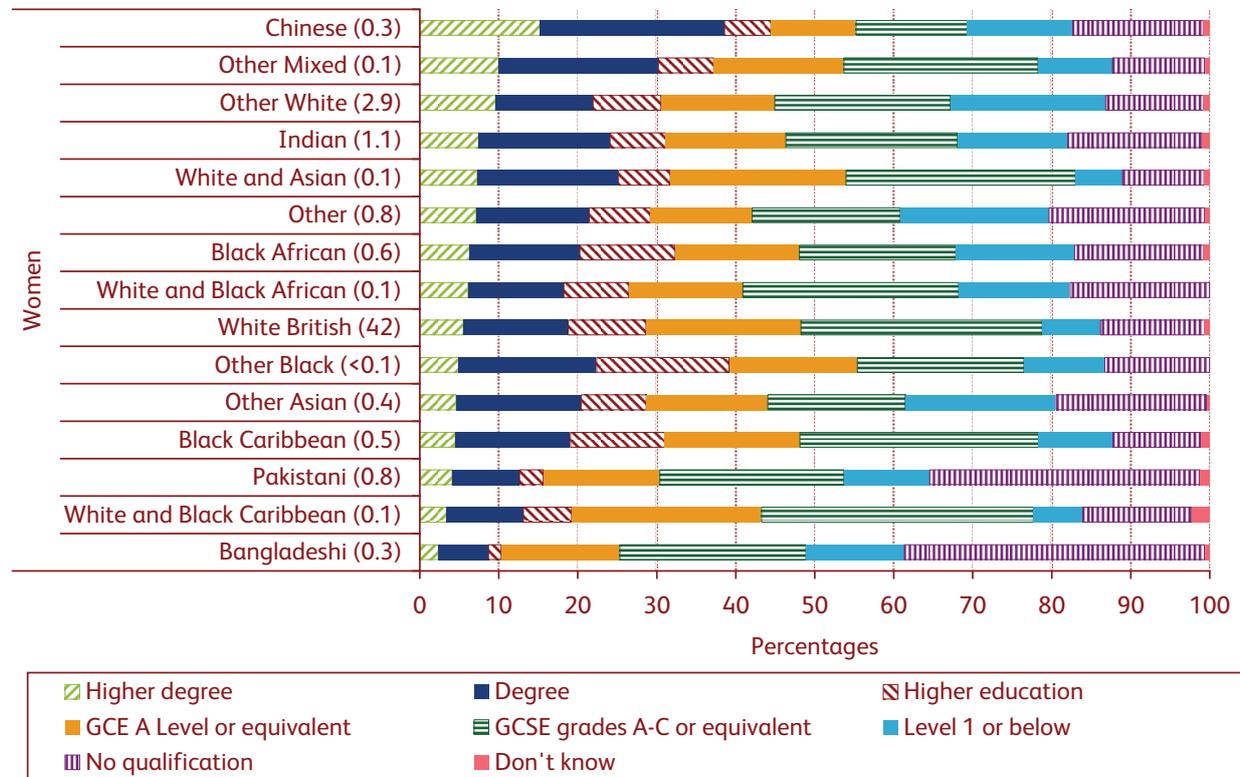
Bearing in mind that a part of the difference may be due to age structure differences between ethnic groups and to younger cohorts being better qualified,<sup>86</sup> Figure 3.9 shows considerable ethnic differences in qualification levels for both men and women in the working age population. More than 40 per cent of Bangladeshi and Pakistani men and of Pakistani women, and more than half of Bangladeshi women have no qualifications above Level 1, although nearly as many Bangladeshi and Pakistani men have a degree or higher degree as the population as a whole. 19 per cent of White British men and 18 per cent of White British women have first or higher degrees, but around 30 per cent of Indian and Black African men, and around 40 per cent of Chinese women and men. The White British population thus has smaller proportions than most other ethnic groups of both those with degrees and of those with low or no qualifications. These very large differences in qualification levels should be borne in mind when looking at the pattern of wage differentials in Chapter 5 below.

Figure 3.9(a): Highest qualification, by ethnicity, men, UK, 2006-2008 (percentages)  
Working age population



<sup>86</sup> See Boxes 9.2 and 9.3 in Chapter 9 for discussion of differences between first generation migrants and those in the 'second generation'.

Figure 3.9(b): Highest qualification, by ethnicity, women, UK, 2006-2008 (percentages)  
Working age population



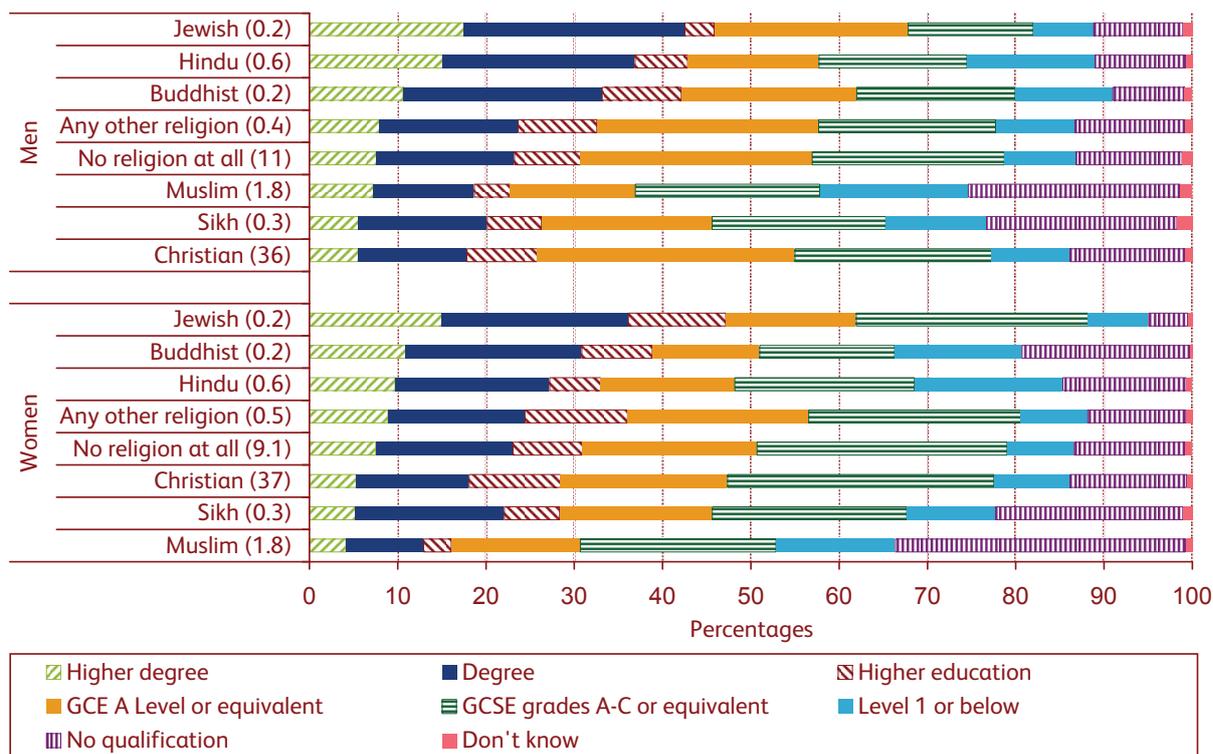
Source: NEP, based on LFS 2006-2008.

3

## Religious affiliation

The Labour Force Survey (LFS) also allows us to break the results down by the religious affiliation that people express,<sup>87</sup> as in Figure 3.10. This shows major differences between groups, some of course closely linked to the ethnic differences described above. More than a third of Buddhist and Hindu men and of Jewish women have first or higher degrees, and 43 per cent of Jewish men. Christian and Muslim men have the smallest proportion with degrees, at 18 per cent. At the same time, more than 40 per cent of Muslim men and women have no qualification above Level 1. In contrast to the somewhat poorer performance at GCSE in England of those with no religious affiliation shown in Box 3.3, the fifth of working age adults telling the LFS that they have no religious affiliation are slightly better qualified than the population as a whole.

Figure 3.10: Highest qualification, by religious affiliation, UK, 2006-2008 (percentages)  
Working age population



Source: NEP, based on LFS 2006-2008.

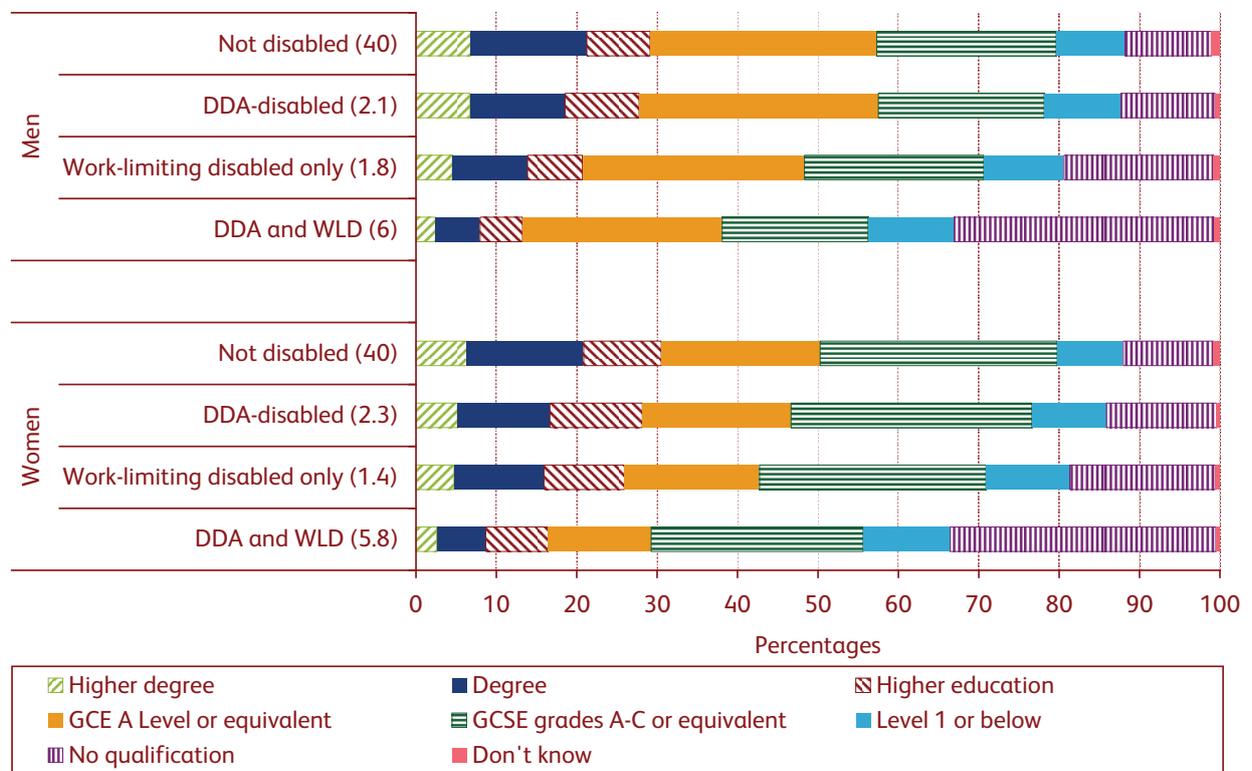
<sup>87</sup> The analysis is based on the response to the LFS question, 'What is your religion even if you are not currently practising?' The ONS' advice is to classify this as 'religious affiliation' (see <http://www.ons.gov.uk/about-statistics/measuring-equality/ethnic-group-statistics/addendum--guidance-on-presenting-and-discussing-religion-data.pdf>).

### Disability status

We are able to look at disability status in two different ways – whether people are disabled in terms of the Disability Discrimination Act ('DDA-disabled'), and whether they say that they have a long-term problem which affects the kind or amount of work which they might do ('work-limiting disabled'). As Figure 3.11 shows, the better qualified groups are those classed as not disabled, or as DDA-disabled only. Nearly a third of both men and women who are both work-limiting and DDA-disabled have no qualifications (although note that this will be, in part, an age effect, as older people are both more likely to be disabled, and to have no qualifications).

3

Figure 3.11: Highest qualification, by disability status, UK, 2006-2008, (percentages)  
Working age population



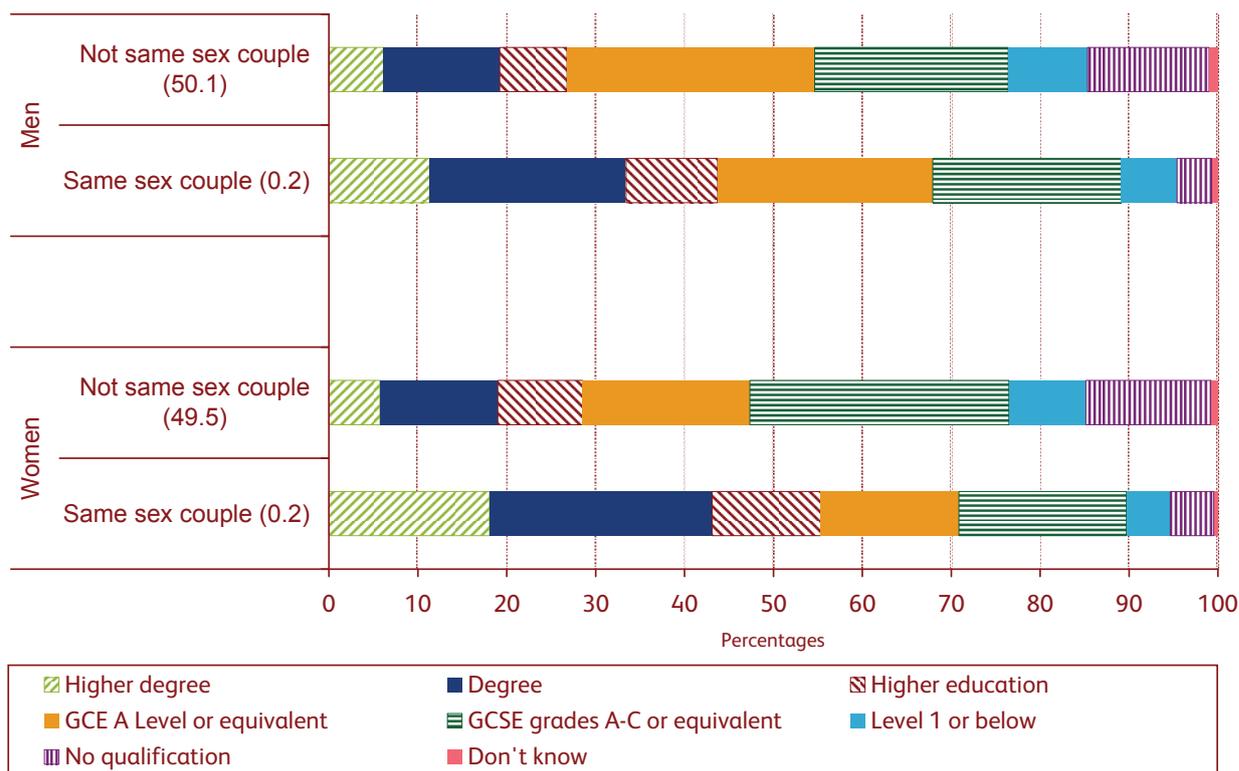
Source: NEP, based on LFS 2006-2008.

## Living in a same sex couple

The LFS does not ask respondents directly about their sexuality. However, for a number of years it has asked respondents whether they live as part of a same sex couple. The responses shown in Figure 3.12 show substantial differences between the qualification levels of the 0.5 per cent or so of both male and female respondents who say they do and others who do not do so. For instance, a third of men and 43 per cent of women who report they are living in a same sex couple have a first or higher degree, compared to 19 per cent of others. We suggest that these data are unlikely to reflect differences in sexual orientation by educational level and are more likely to reflect differences in people’s propensity to report their status to a survey of this kind, or indeed their confidence to live openly in same sex couples. These differences are, however, very important for the interpretation of differences in wages between those who report they are in same sex couples and others (see Box 9.8 in Chapter 9).

Figure 3.12: Highest qualification, by whether living in a same sex couple, UK, 2006-2008 (percentages)

Working age population



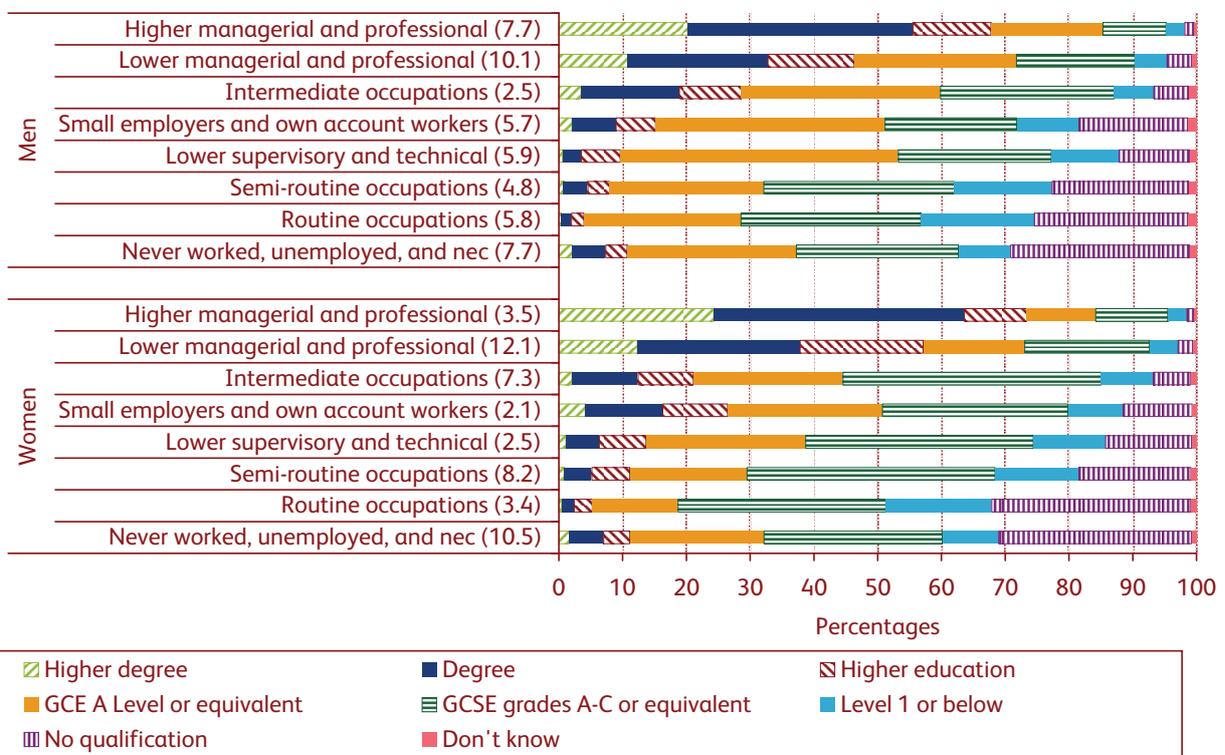
Source: NEP, based on LFS 2006-2008.

### Occupational social class

Figure 3.13 reports the differences one would expect by household occupational social class,<sup>88</sup> although the scale of differences is very striking. More than half of men and women in higher managerial and professional households have degrees, and more than a third of those in lower managerial and professional households. Few in these groups have qualifications below 5 or more GCSE grades A-C or equivalent. By contrast, fewer than 10 per cent of men or women in the bottom three categories have degrees, and a third or more have qualifications no more than Level 1, including nearly half of women in households with routine occupations.

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Figure 3.13: Highest qualification, by occupational social class, UK, 2006-2008 (percentages) Working age population



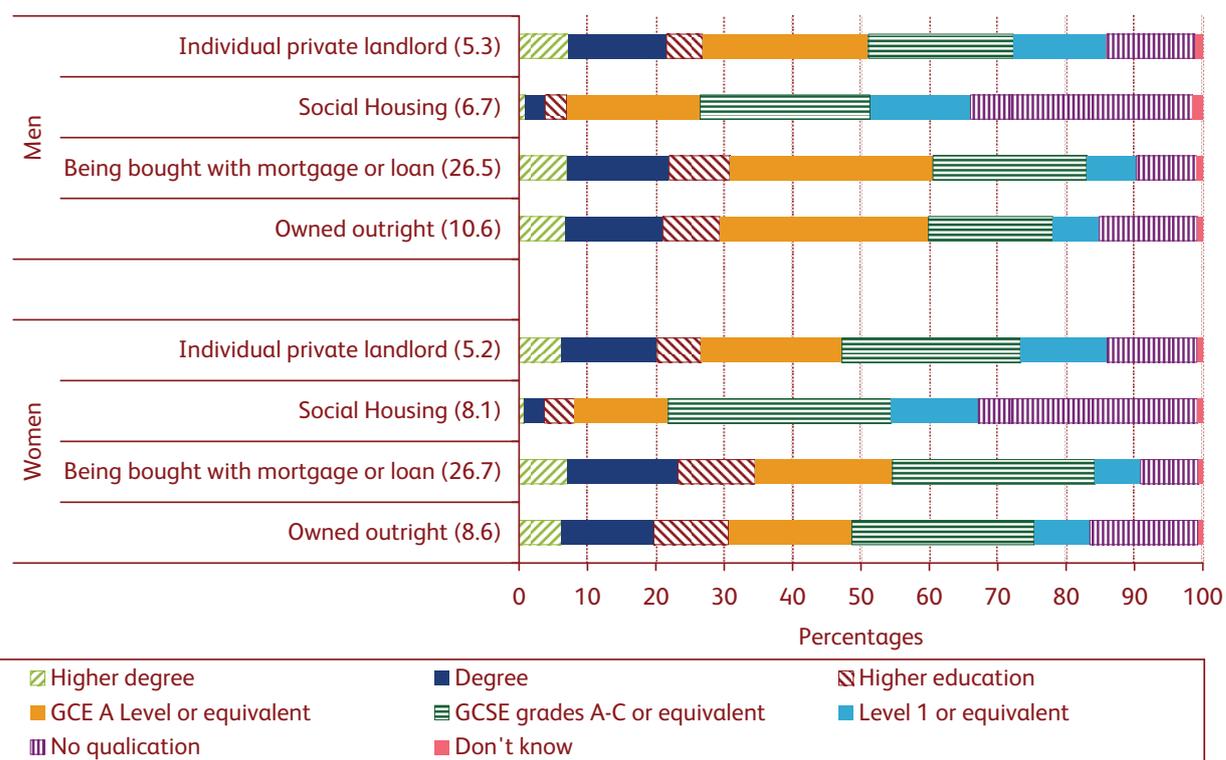
Source: NEP, based on LFS 2006-2008.

<sup>88</sup> The measure we use in Chapters 3-6 is the ONS NS-SEC, which is an occupational based classification that can cover the whole adult population. It replaced Social Class based on occupation (SC) and Socio-Economic Group (SEG) classifications. NS-SEC is defined at a *household* level by the position of the Household Reference Person (HRP). The HRP is the person responsible for the accommodation; in the case of joint householders, the person with the highest income; and where incomes are equal, the oldest person. More information can be found at [http://www.statistics.gov.uk/methods\\_quality/ns\\_sec/downloads/NS-SEC\\_User\\_2005.pdf](http://www.statistics.gov.uk/methods_quality/ns_sec/downloads/NS-SEC_User_2005.pdf)

## Housing tenure

Figure 3.14 shows that only 4 per cent of social tenants have degrees, compared to 20 per cent or more for the other groups, and that 45 per cent of women and 47 per cent of men living in social housing do not have qualifications above Level 1, compared to less than a quarter for owner-occupiers. These differences are again closely linked to the employment and wage differentials we examine in Chapters 4 and 5.

Figure 3.14: Highest qualification, by housing tenure, UK, 2006-2008 (percentages)  
Working age population

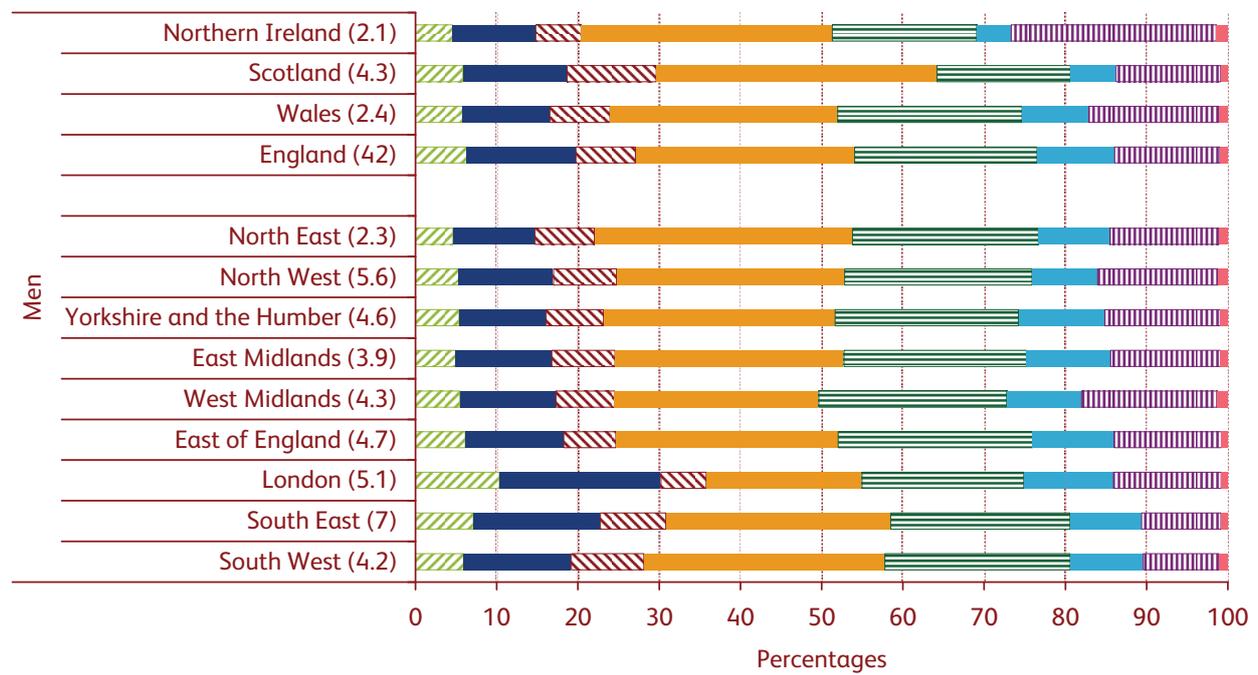


Source: NEP, based on LFS 2006-2008.

## Nation or region

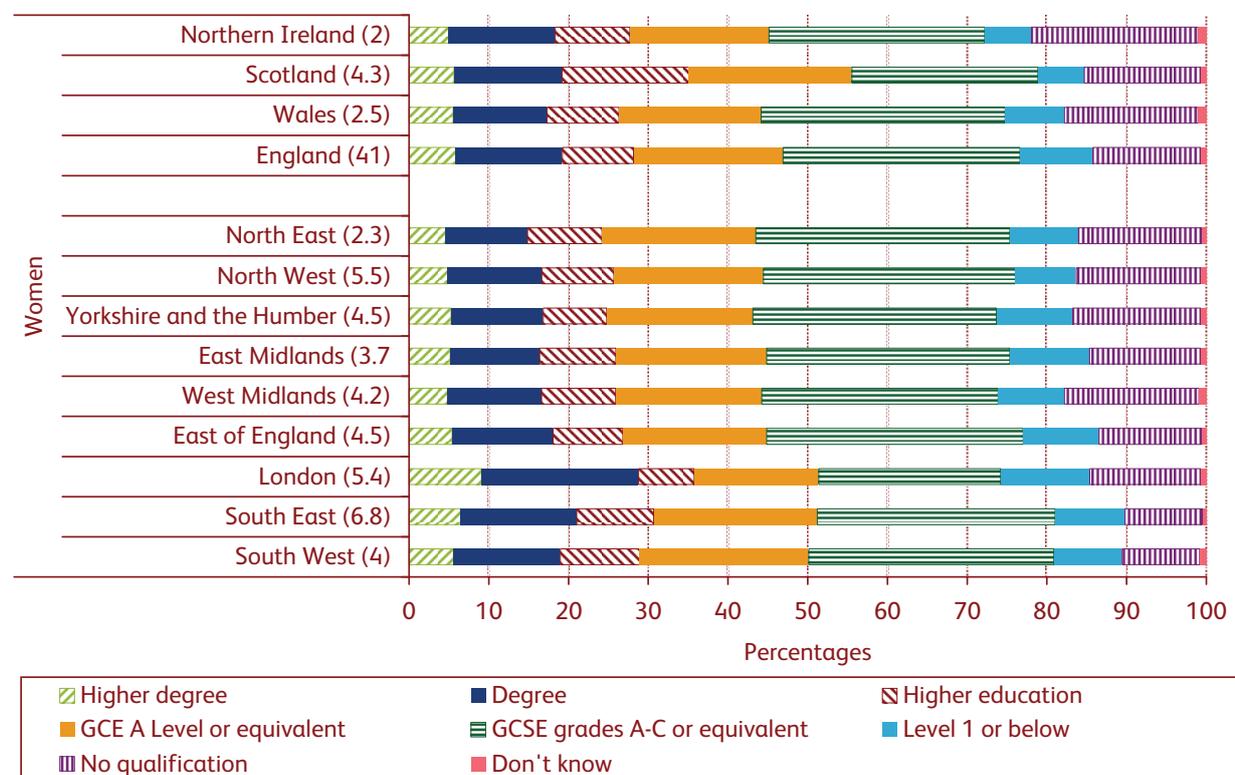
Figure 3.15 shows rather small differences in qualification levels between England and the devolved nations, the largest being that 25 per cent of men and 21 per cent of women in Northern Ireland have no qualifications at all. In Scotland, 11 per cent of men and 16 per cent of women have non-degree higher education qualifications (vocational qualifications, such as in nursing or teaching), more than in the other countries. At regional level within England, the most striking feature is the high proportion of those in London with degrees (30 per cent of men and 29 per cent of women), although the proportion in London with low qualifications is similar to the English average.

Figure 3.15(a): Highest qualification, by nation and region, men, UK, 2006-2008 (percentages)  
Working age population



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Figure 3.15(b): Highest qualification, by nation and region, women, UK, 2006-2008 (percentages)  
Working age population



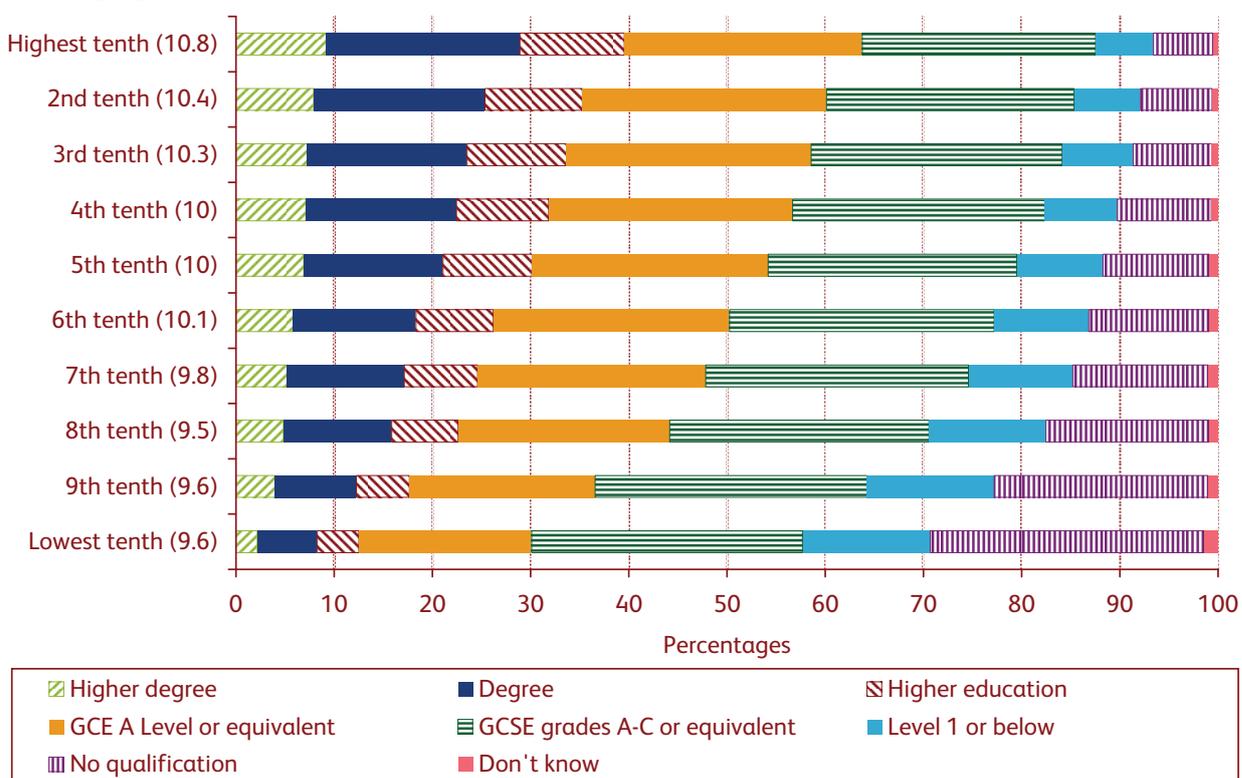
Source: NEP, based on LFS 2006-2008.

## Area deprivation

Figures 3.16(a)-(c) show for England, Scotland and Wales qualification levels for all adults of working age<sup>89</sup> by area deprivation level within each nation.<sup>90</sup> As with results at age 16, there is a strong gradient between areas with low and high levels of deprivation, and the gradients are very similar in each of them (although this partly reflects the way in which qualifications are one of seven factors used to construct the deprivation index).<sup>91</sup> In all three nations nearly 30 per cent of those living in the most deprived areas have no qualifications at all, and 8 per cent or fewer have degrees. Conversely, 29 per cent of those in the least deprived English areas, and 38 and 32 per cent of their equivalents in Scotland and Wales, respectively, have degrees, and 7 per cent or fewer have no qualifications at all.

Figure 3.16(a): Highest qualification, by Index of Multiple Deprivation, England, 2006-2008 (percentages)

Working age population



Source: NEP, based on LFS 2006-2008.

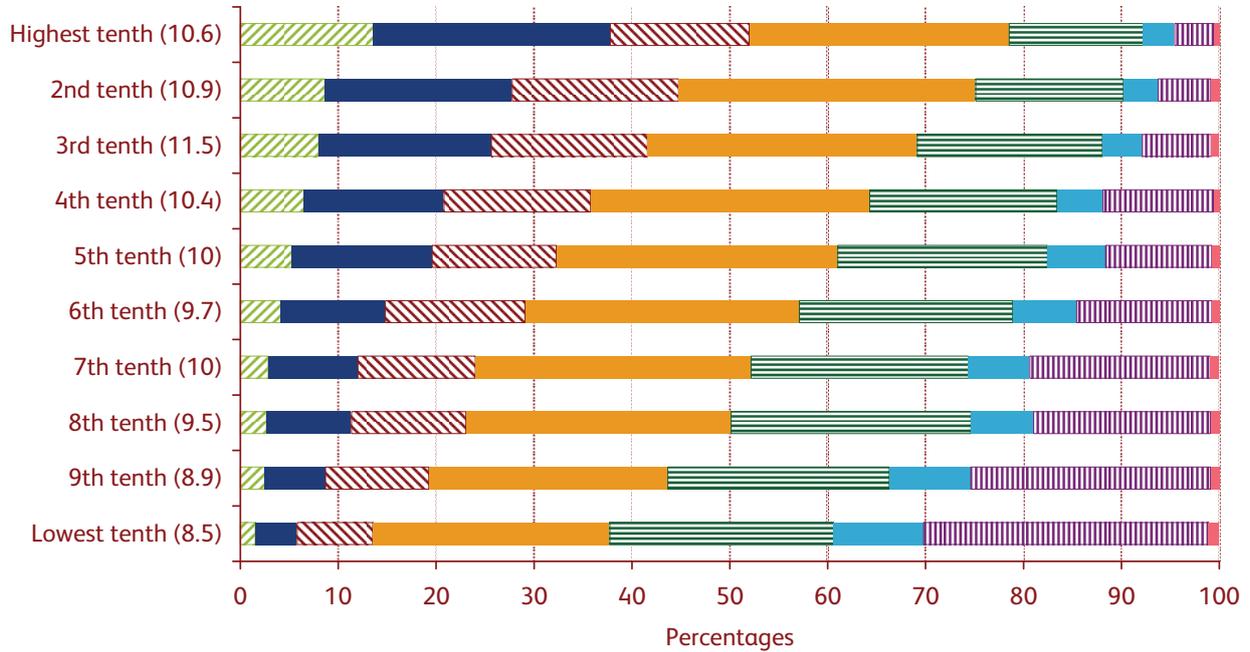
<sup>89</sup> The Statistical Appendix contains separate tables for men and women.

<sup>90</sup> In this case, and in Chapters 4 to 8, the index used for England is the Index of Multiple Deprivation (IMD). The IMD 2007 combines a number of indicators, chosen to cover a range of economic, social and housing issues, into a single deprivation score for each small area in England. This allows each area to be ranked relative to one another according to their level of deprivation. The seven domains are: income, employment, health deprivation and disability, education skills and training, barriers to housing and services, crime, living environment. IMD is similar to the WIMD and the SIMD, although based on a slightly different methodology.

<sup>91</sup> The IMD includes one indicator on adults aged between 25 and 54 with no or low qualifications and another on the percentage of people not entering higher education.

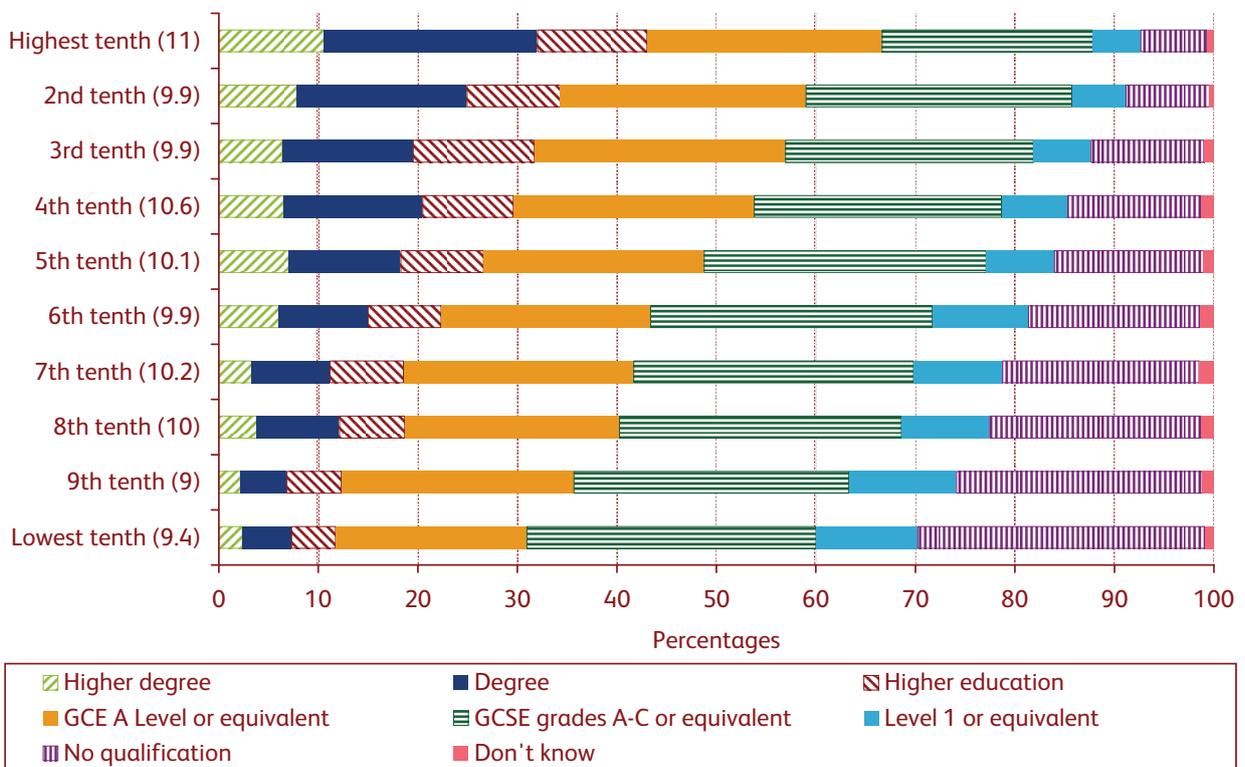
Figure 3.16(b): Highest qualification, by Scottish Index of Multiple Deprivation, Scotland, 2006-2008 (percentages)

Working age population



3

Figure 3.16(c): Highest qualification, by Welsh Index of Multiple Deprivation, Wales, 2006-2008 (percentages)



Source: NEP, based on LFS 2006-2008.



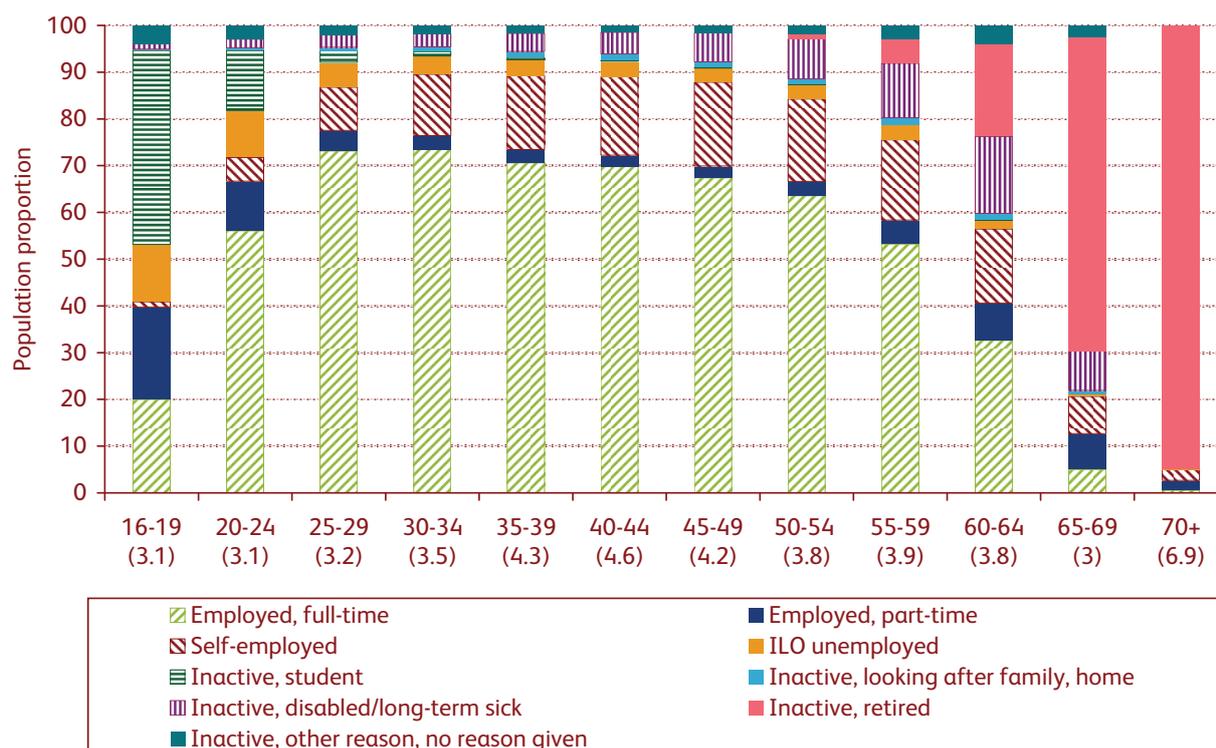
## Chapter 4 Employment

We showed overall gender differences in employment status in Chapter 2 (Figure 2.3). In this chapter, we examine how these differences are related to other characteristics that are available from the Labour Force Survey (LFS). We look separately at the positions of men and women by age, ethnicity, religious affiliation, disability status, whether they report living in a same sex couple, occupational social class, housing tenure, the nation or region (for England) in which they live, and area deprivation.

### Age

Figures 4.1 (a) and (b) show employment patterns for men and women by age (including those over State Pension Age). Among men, full-time employment is over 70 per cent for those in their late twenties. Including significant amounts of self-employment, and rather less part-time employment, more than 85 per cent of men are in paid work for ages up to their early fifties. For older groups, the fraction is smaller: under 60 per cent for those in their early sixties, and 21 per cent for those in their late sixties. For women, the pattern is very different: 73 per cent of women in their late twenties are in paid work, including 17 per cent employed part-time. While the proportion of women in paid work is around 70 per cent at all ages up to the early fifties, more than 25 per cent are in part-time employment. For women in their early thirties, nearly 20 per cent are counted as being ‘economically inactive, looking after family, home’. Half of women in their early sixties are classed as inactive due to retirement and a further 9 per cent as inactive due to disability or long-term sickness.

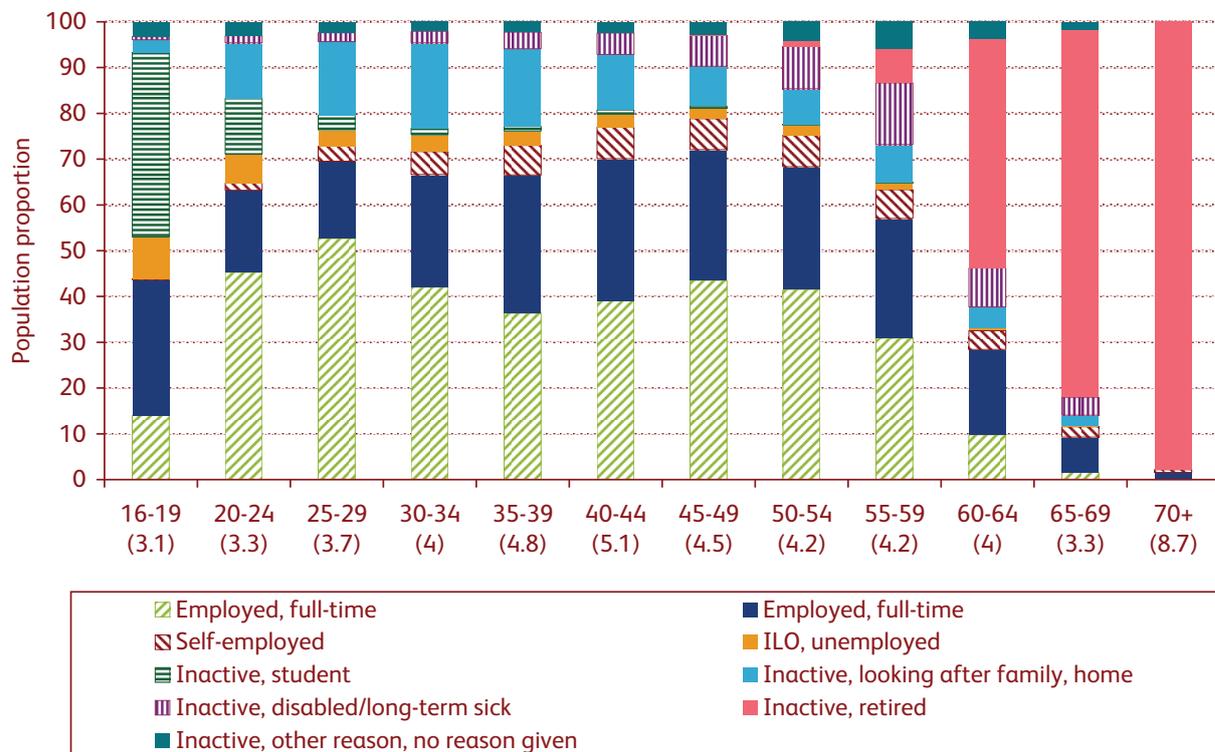
Figure 4.1(a): Employment status, by age, men, UK, 2006-2008 (percentages)



Source: NEP, based on LFS 2006-2008.

## An anatomy of economic inequality in the UK

Figure 4.1(b): Employment status, by age, women, UK, 2006-2008 (percentages)

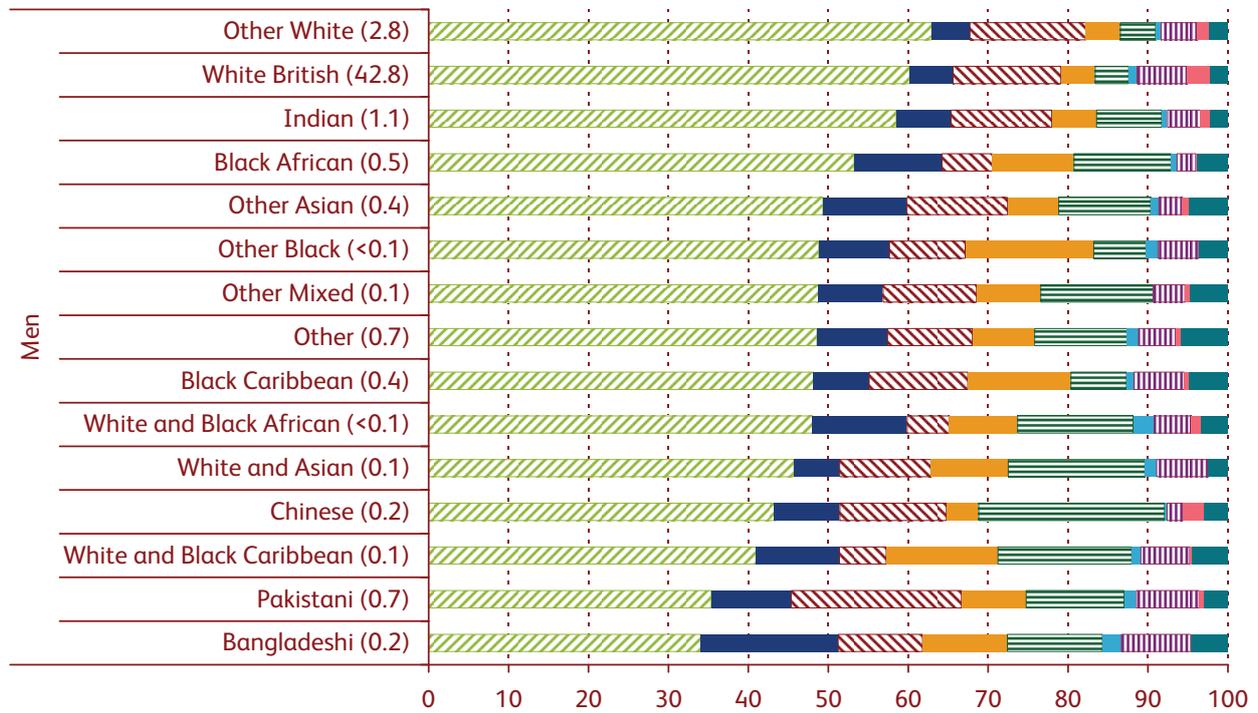


Source: NEP, based on LFS 2006-2008.

## Ethnicity

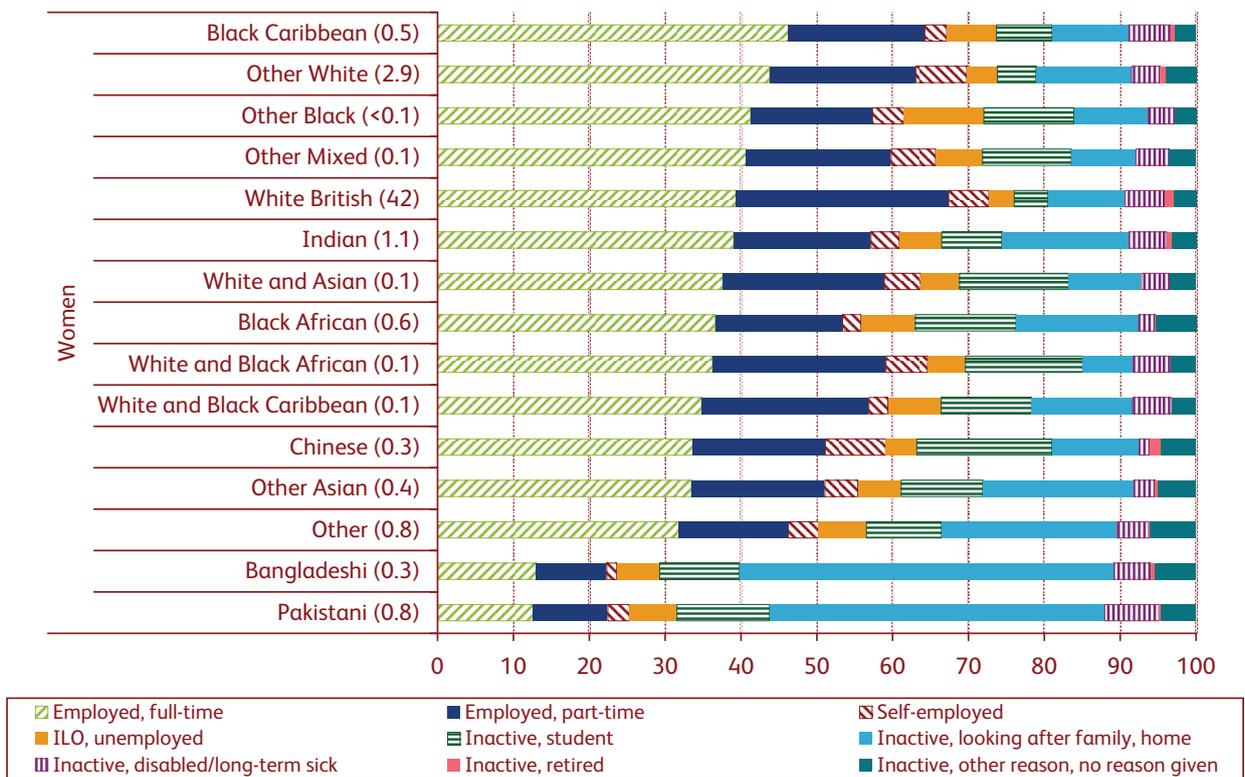
Differences between ethnic groups in employment patterns (Figure 4.2) are larger for women than for men of working age. Around 80 per cent of White and Indian men are in paid work in total; for the other groups, the fraction is between 60 and 70 per cent (59 per cent for those with mixed White and Black Caribbean background). Notably, 17 per cent of Bangladeshi men are employed part-time and 21 per cent of Pakistani men are self-employed. 23 per cent of Chinese men are students, but only 4 per cent of White British men. Unemployment is particularly high for Black African, Black Caribbean and Other Black men (between 10 and 16 per cent). For women, there are even more striking differences. In particular, 44 per cent of Pakistani and 49 per cent of Bangladeshi women are economically inactive, looking after family or home, compared to 20 per cent or fewer for most of the other groups. Only around a quarter of Pakistani and Bangladeshi women are in paid work, but more than half of the other groups. Part-time employment is most common for White British women (28 per cent). Economic inactivity as result of being a student is greatest for Chinese women (18 per cent), and smallest for White British women (4 per cent).

Figure 4.2(a): Employment status, by ethnicity, men, UK, 2006-2008 (percentages)  
Working age population



4

Figure 4.2(b): Employment status, by ethnicity, women, UK, 2006-2008 (percentages)  
Working age population



Source: NEP, based on LFS 2006-2008.

## Religious affiliation

Figure 4.3 shows that the highest full-time employment rates for both men and women are for Christians, Hindus, and those saying they had no religious affiliation. A quarter of Jewish men are self-employed. The lowest employment rates are for Muslim men (47 per cent) and women (24 per cent), with 42 per cent of Muslim women classed as inactive looking after family or home. Formal unemployment, 5 per cent for all men (in 2006-2008), is 9 per cent for Muslim men, while 13 per cent of both Muslim men and women are counted as economically inactive because they are students (compared to 5 per cent of all those of working age).

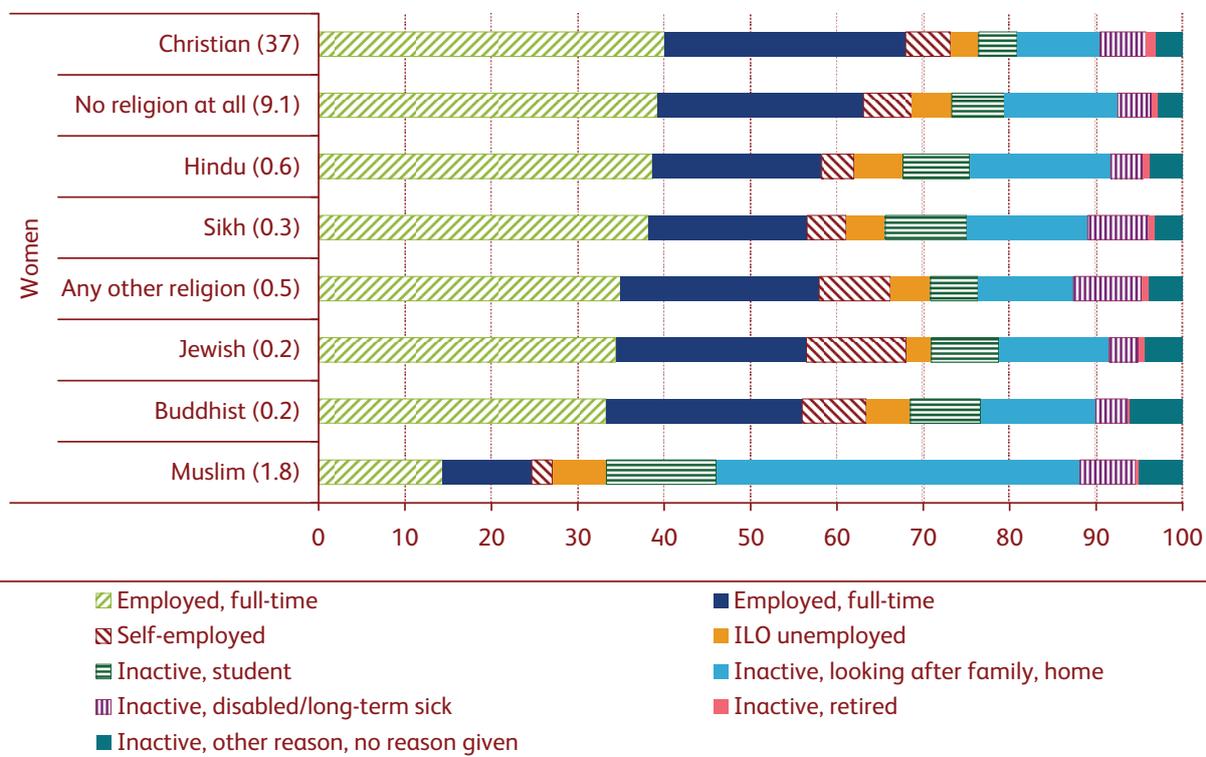
Figure 4.3(a): Employment status, by religious affiliation, men, UK, 2006-2008 (percentages)  
Working age population



Source: NEP, based on LFS 2006-2008.

Figure 4.3(b): Employment status, by religious affiliation, women, UK, 2006-2008  
(percentages)

Working age population



Source: NEP, based on LFS 2006-2008.

### Disability status

Disability status, particularly for those reporting a work-limiting disability, makes a very large difference to employment status. There is little difference between those reporting no disability, and those who are classed as 'Disability Discrimination Act (DDA) disabled' but did not report a work-limiting disability. There is some potential circularity here, as employment status may affect whether people describe themselves as having a 'work-limiting condition'. It is those who report work-limiting disability as well as disability in DDA terms who are most affected, with nearly half of such men (49 per cent) and 42 per cent of women being economically inactive because of disability or long-term sickness. Only 21 per cent of men with DDA and work-limiting disability are employed full-time, contrasting with two-thirds of men who were not disabled. For women, the corresponding figures are 14 per cent and 42 per cent. These broad categories disguise, however, considerable variation within the population of disabled people depending on severity and type of impairment. This is discussed further in Box 4.1.

## An anatomy of economic inequality in the UK

Figure 4.4(a): Employment status, by disability status, men, UK, 2006-2008 (percentages)  
Working age population

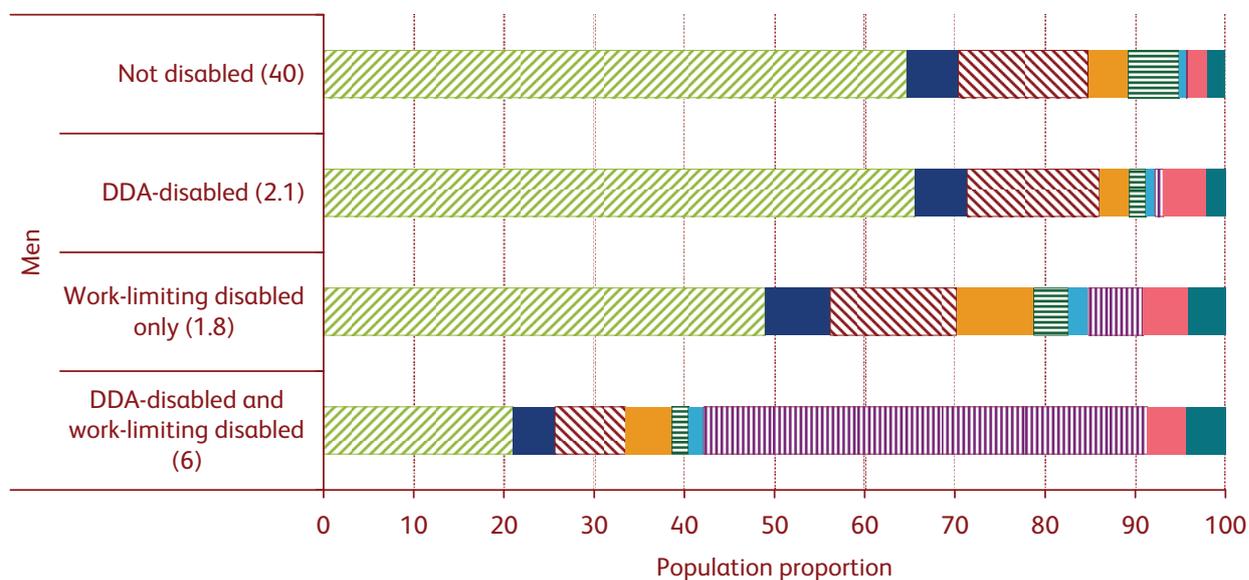
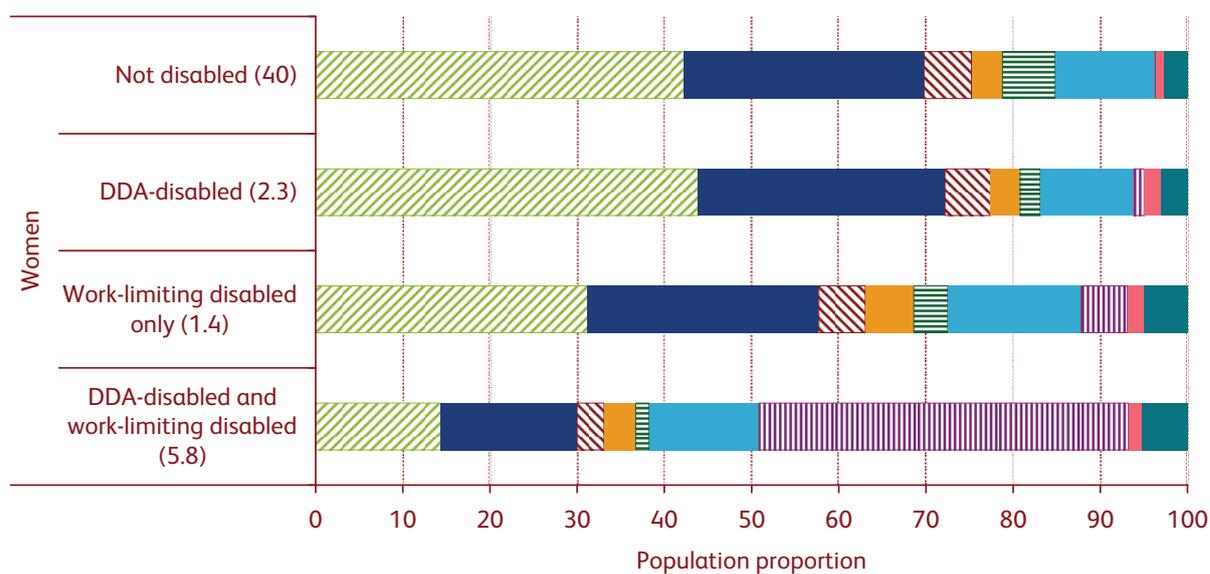


Figure 4.4(b): Employment status, by disability status, women, UK, 2006-2008 (percentages)  
Working age population



Source: NEP, based on LFS 2006-2008.

### Box 4.1: Employment and disability

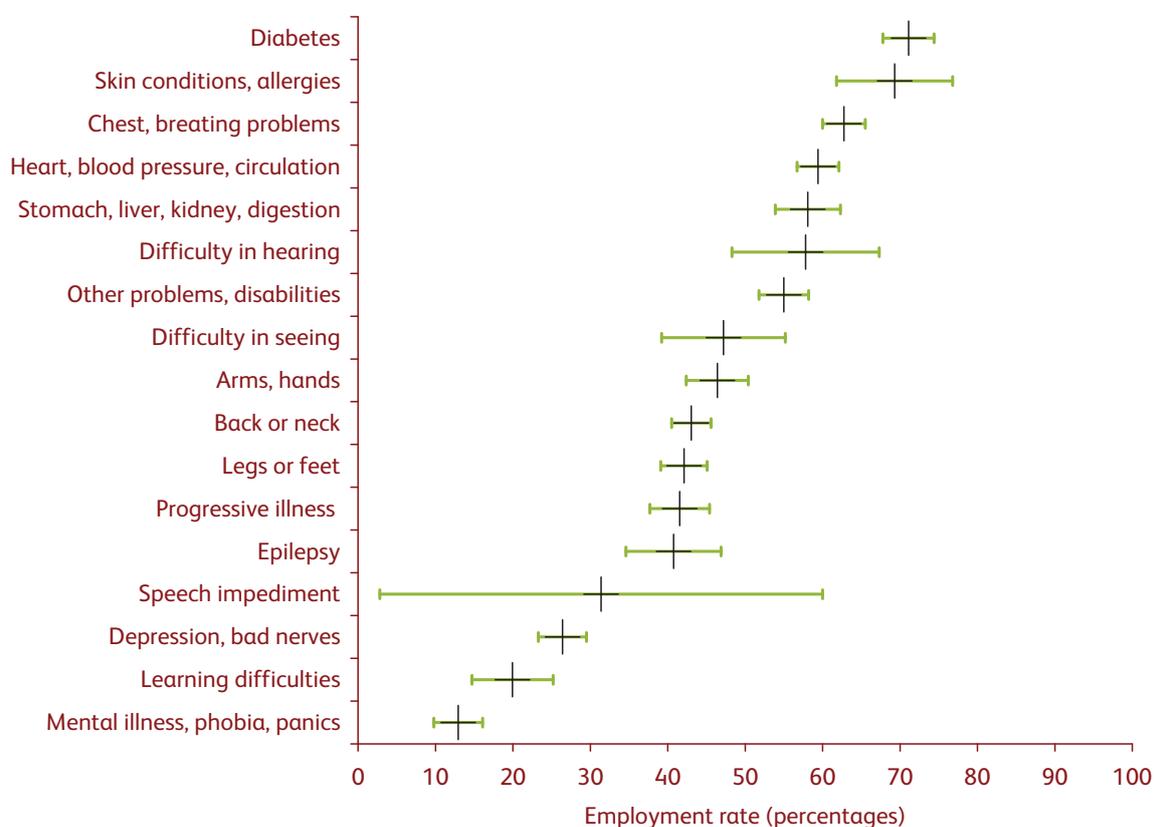
Disabled people face some of the greatest employment disadvantages of any group we examine. However, the extent of this disadvantage depends on the type of impairment, and on its severity and duration.

Analysis of the labour market prospects of disabled people, and the differences by type and severity of impairment, shows that:

- certain conditions (especially mental health problems) are more associated with poor employment prospects than others (such as skin conditions);
- certain types of impairment (such as locomotor or intellectual impairments) are more disadvantaging than others (such as hearing problems);
- more severe overall impairments are associated with poorer job prospects.<sup>92</sup>

Figure 4A shows Office for Disability Issues estimates of employment rates by type of impairment drawn from the Labour Force Survey. Some of these estimates have wide confidence intervals (shown by the bars around the central estimate) due to small sample sizes. There is a considerable range, from under 20 per cent for people with mental illness, phobia or panic, or people with learning difficulties, to over 60 per cent for people with skin conditions and allergies, diabetes, or chest or breathing problems.

Figure 4A: Employment rates (percentages) with 95% confidence intervals, by type of impairment, 2008, working age adults



Source: Office for Disability Issues (2009), based on Quarter 2 of the LFS. For each type of impairment, the short vertical line shows the estimate of the group's employment rate. The length of the horizontal line shows the 95% confidence interval for the estimated employment rate.

<sup>92</sup> Berthoud (2006).

## Living in a same sex couple

Figure 4.5 shows that men who reported themselves as living in a same sex couple have full-time employment rates 10 percentage points higher than other men of working age. The difference for women is even larger, with 67 per cent of those reporting themselves as in a same sex couple working full-time, compared to 39 per cent of other women, and with considerably fewer (2 per cent compared to 12 per cent) economically inactive because they are looking after family or home. Box 9.8 in Chapter 9 looks at the extent to which these differences are explained by characteristics such as the variations in qualifications described in the previous section. It shows, for instance, that men reporting themselves to be members of a same sex couple are a little *less* likely to be in employment than other men in couples, after controlling for demographic and other characteristics, such as age, education and region (but, by 2006-2008, the difference is not statistically significant).

Figure 4.5: Employment status, by whether living in a same sex couple, UK, 2006-2008 (percentages) Working age population



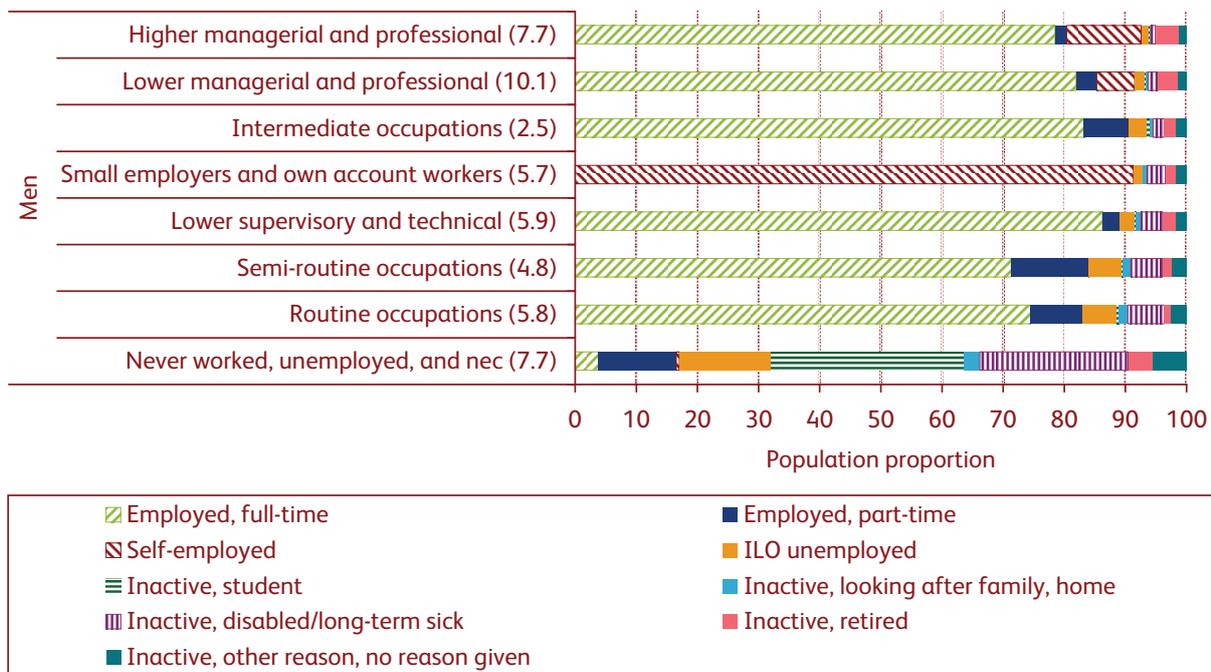
Source: NEP, based on LFS 2006-2008.

### Occupational social class

The most striking difference in employment status by household occupational social class shown in Figure 4.6 is in whether women are employed full- or part-time. Around two-thirds of women in higher or lower managerial or professional households are employed full-time, and only about a fifth part-time. However, more women from routine or semi-routine households are employed part-time than full-time. Women from households in routine employment are much more likely than those in higher occupational classes to be economically inactive as a result of looking after family or home. Unsurprisingly, men and women in households classed as small employers and own account workers are also overwhelmingly classified as self-employed. Equally, few of those classed as never having worked or who are not otherwise classified are in paid work.

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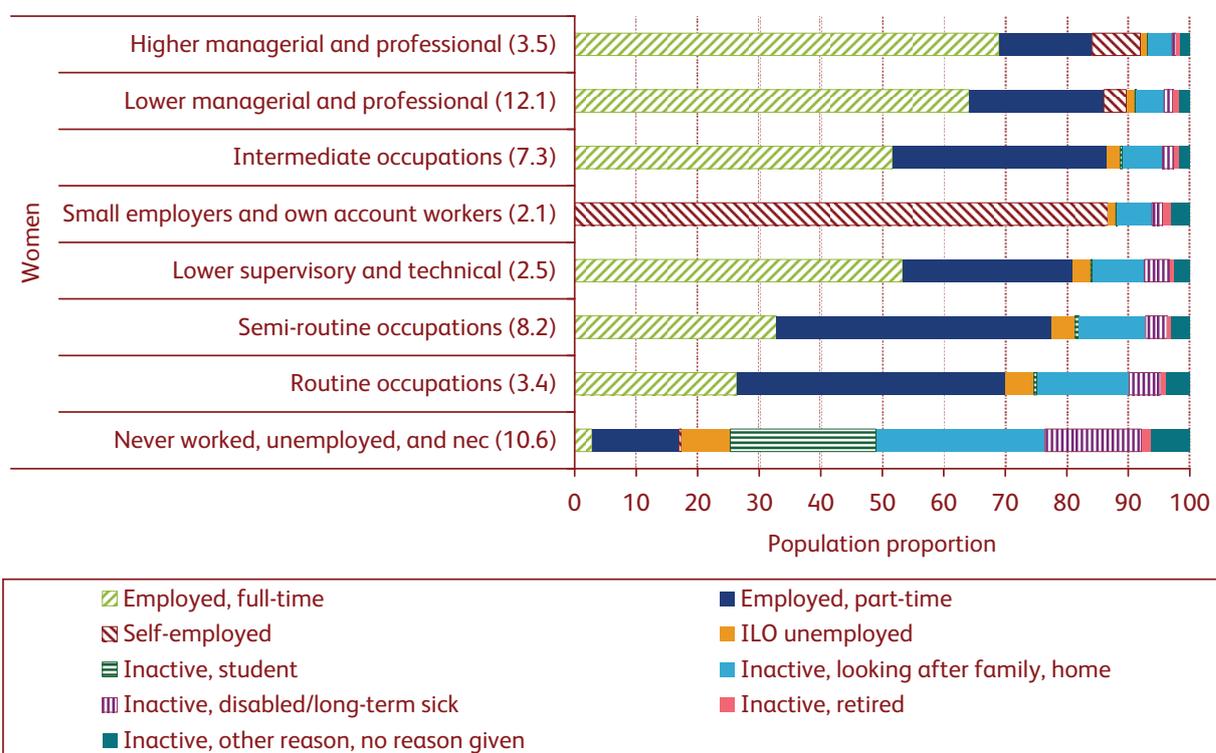
Figure 4.6(a): Employment status, by occupational social class, men, UK, 2006-2008 (percentages) Working age population



Source: NEP, based on LFS 2006-2008.

## An anatomy of economic inequality in the UK

Figure 4.6(b): Employment status, by occupational social class, women, UK, 2006-2008 (percentages) Working age population

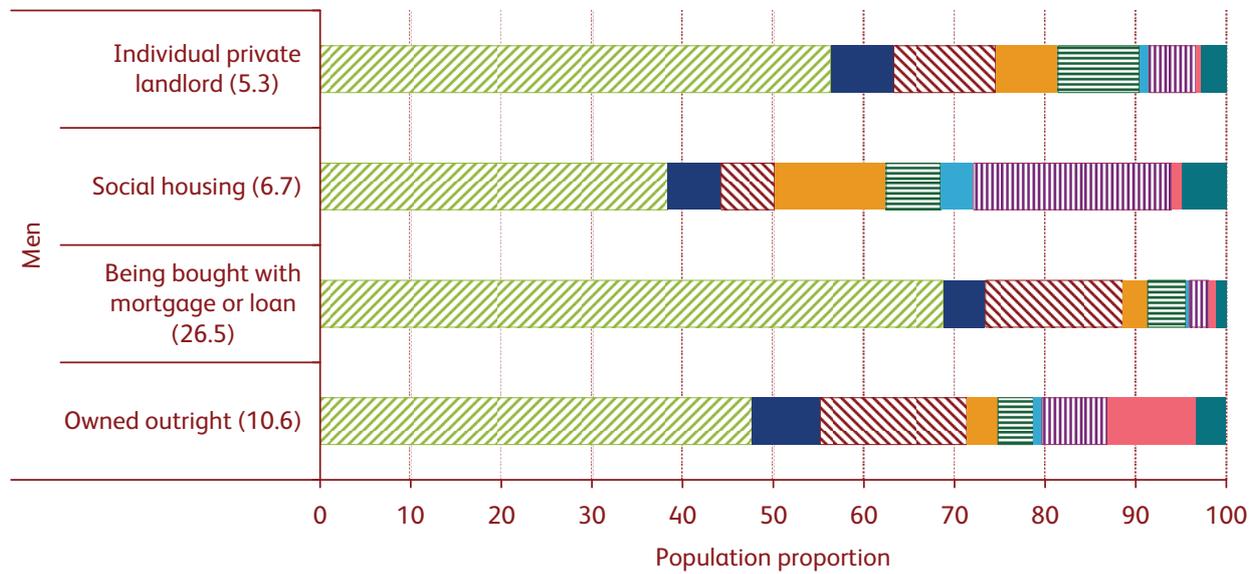


Source: NEP, based on LFS 2006-2008.

## Housing tenure

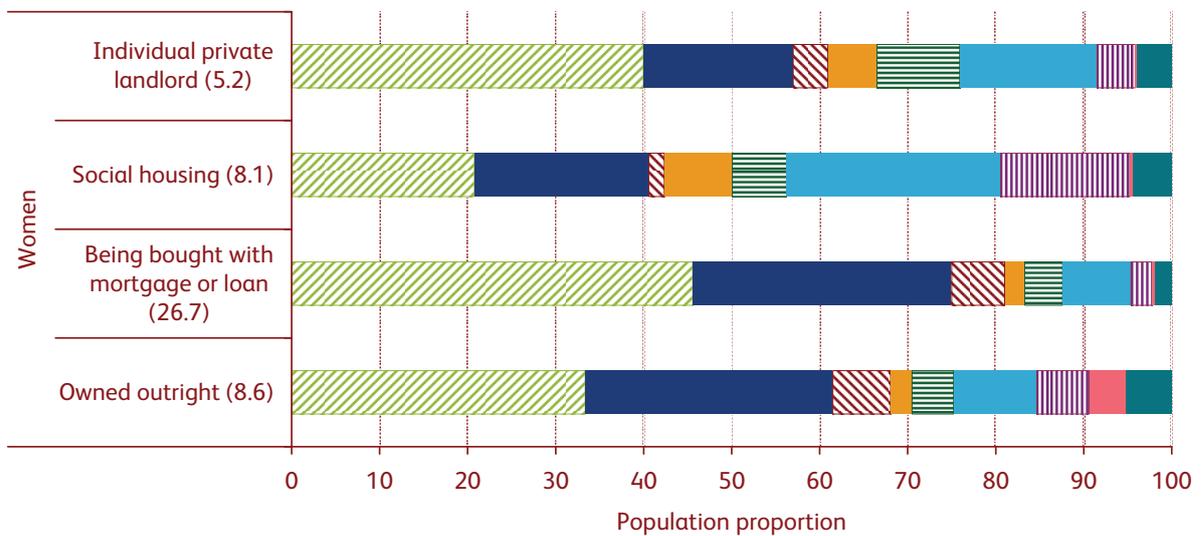
Figure 4.7 shows substantial differences in employment patterns by housing tenure, particularly for social tenants. Only half of men and 42 per cent of women of working age living in social housing are in paid work, compared to 89 per cent of men and 81 per cent of women in an owner-occupied household with a mortgage. More than a fifth of male social tenants are inactive due to disability or long-term sickness and two-fifths of women in social housing are inactive either due to disability or sickness or looking after family or home.

Figure 4.7(a): Employment status, by housing tenure, men, UK, 2006-2008 (percentages)  
Working age population



4

Figure 4.7(b): Employment status, by housing tenure, women, UK, 2006-2008 (percentages)  
Working age population

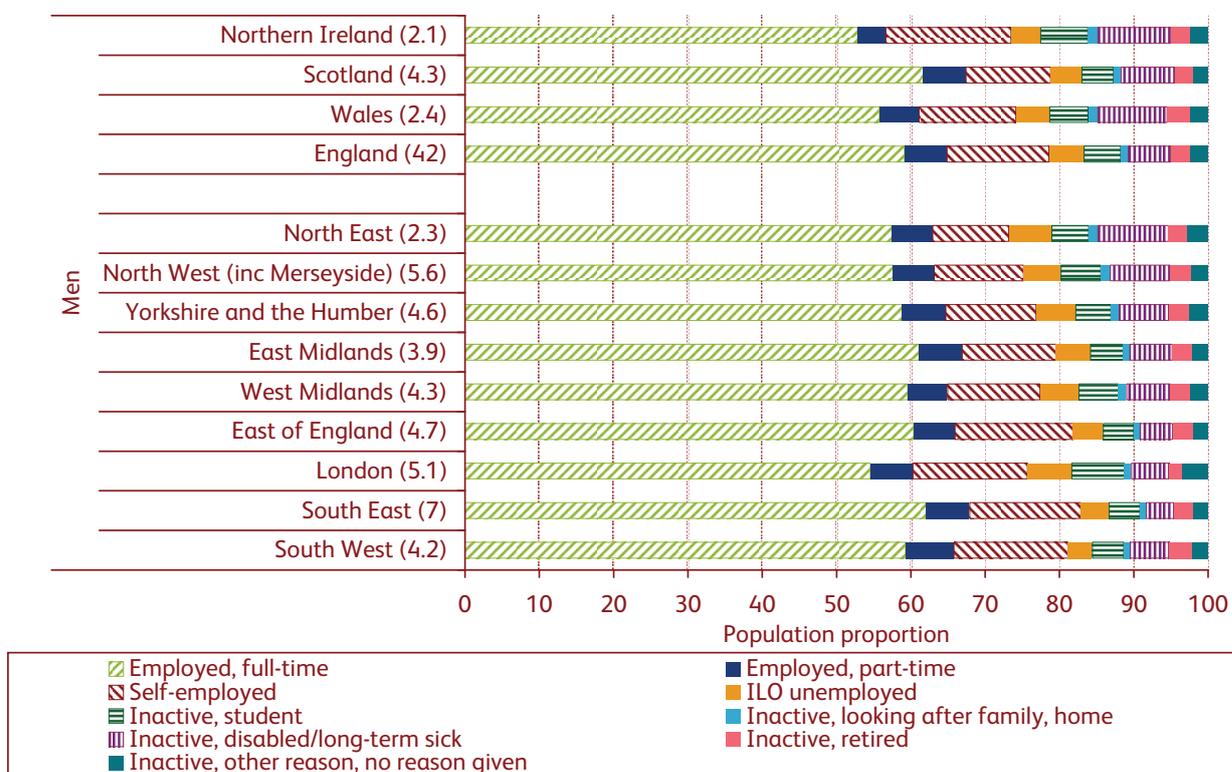


Source: NEP, based on LFS 2006-2008.

## Nation or region

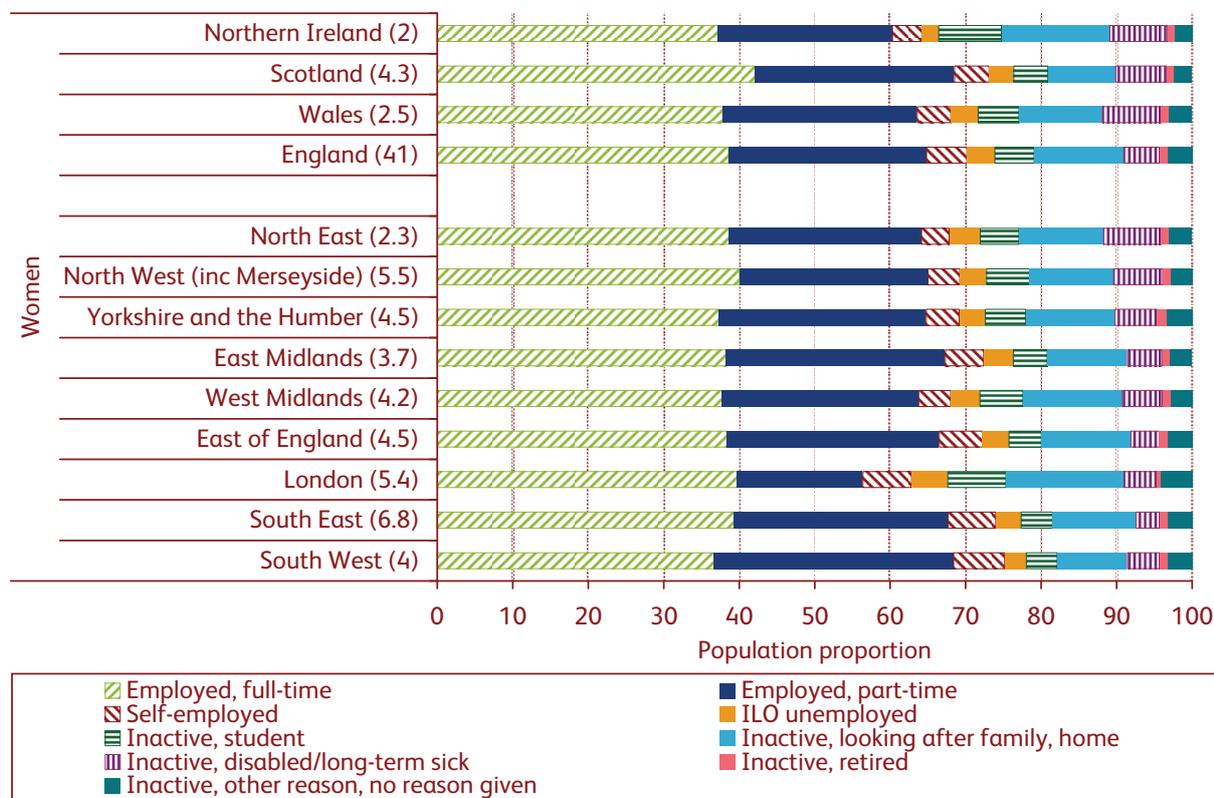
In contrast to the lack of substantial regional differences in educational results described in the last section, there are differences in employment patterns between the nations and between English regions. Figures 4.8(a) and (b) show higher employment in Scotland than for the other nations, and higher levels of inactivity in Northern Ireland due to disability or sickness (for men) or looking after family or home (for women). Within the English regions, London has the lowest full-time employment and highest unemployment rates for men. For women, London has a somewhat *higher* full-time employment rate than other regions, but a much lower rate of part-time employment. The North East has the highest rate of inactivity for men due to disability or sickness.

Figure 4.8(a): Employment status, by nation or region, men, UK, 2006-2008 (percentages)  
Working age population



Source: NEP, based on LFS 2006-2008.

Figure 4.8(b): Employment status, by nation or region, women, UK, 2006-2008 (percentages)  
Working age population



Source: NEP, based on LFS 2006-2008.

### Area deprivation

Finally, Figures 4.9 (a)-(c) show the links between employment rates and area deprivation across England, Scotland and Wales (again for all adults, rather than separately for men and women). One has to be careful again with circularity in these classifications, as employment is one factor (amongst seven) in determining the area deprivation measures. In England, the major difference is between the most deprived fifth of areas and others. In the most deprived tenth of areas, only 55 per cent of adults are employed and a quarter economically inactive because of disability, sickness or caring for family or home. This contrasts with more than 80 per cent and less than 10 per cent in these categories, respectively, in the least deprived half of areas. The patterns in Scotland and in Wales are similar, with the partial exception that levels of economic inactivity due to disability or sickness are at 10 per cent or above in the most deprived four-tenths of areas in Scotland and Wales.

## An anatomy of economic inequality in the UK

Figure 4.9(a): Employment status, by Index of Multiple Deprivation, England, 2006-2008 (percentages)

Working age population

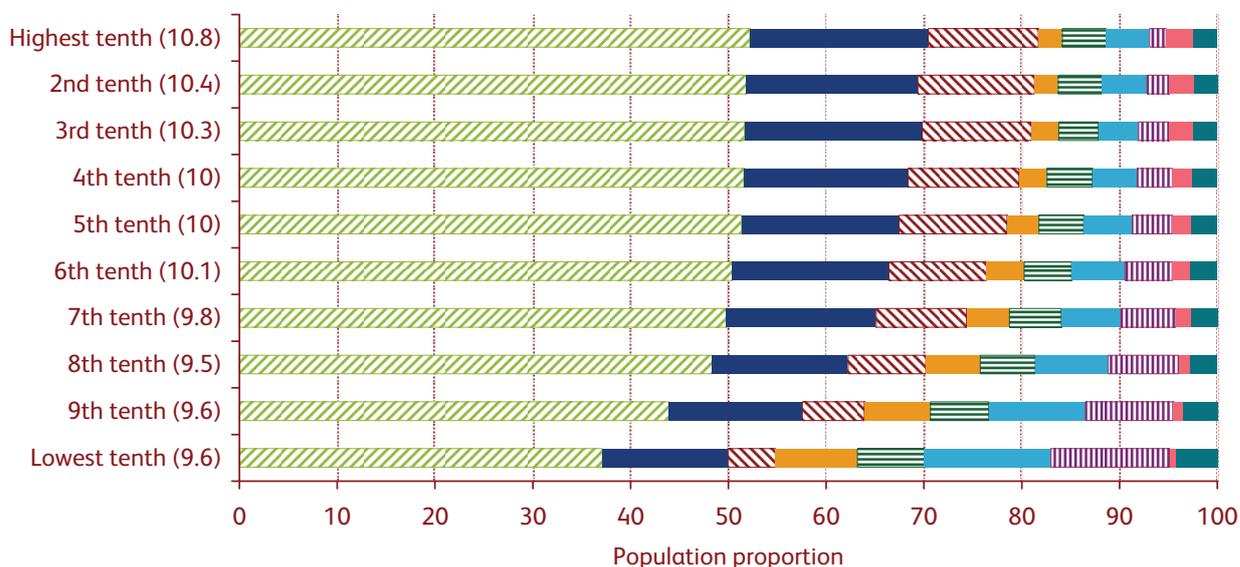
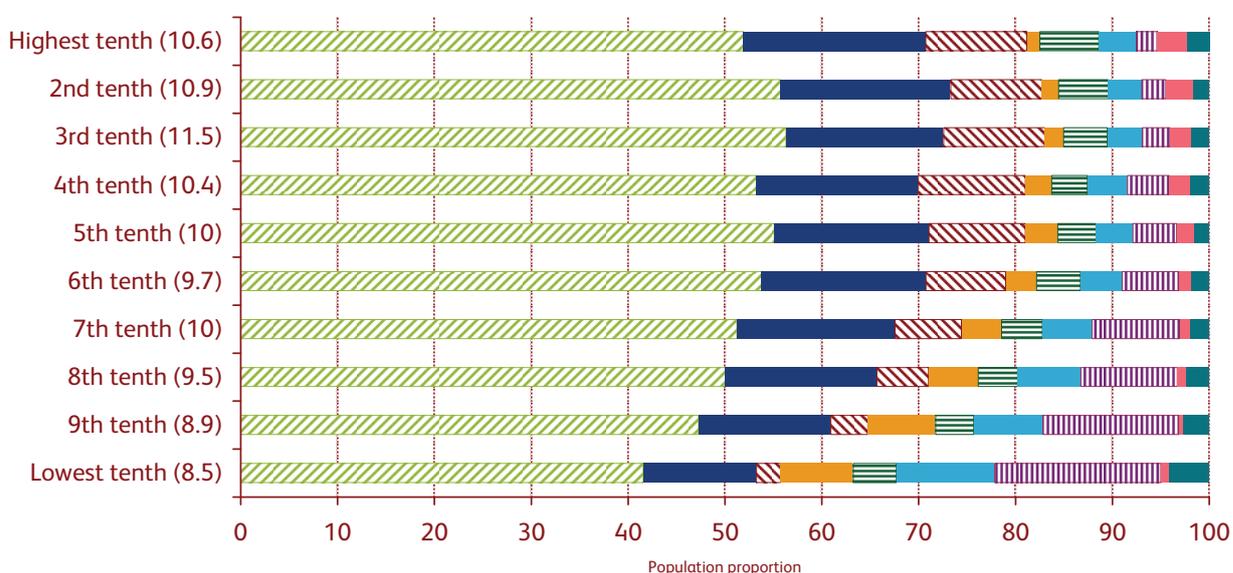


Figure 4.9(b): Employment status, by Scottish Index of Multiple Deprivation, Scotland, 2006-2008 (percentages)

Working age population



Source: NEP, based on LFS 2006-2008.

Figure 4.9(c): Employment status, by Welsh Index of Multiple Deprivation, Wales, 2006-2008 (percentages)

Working age population



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Source: NEP, based on LFS 2006-2008.



## Chapter 5 Wages and earnings

The first section of this chapter uses data from the Labour Force Survey (LFS) to explore the position of different groups within the distribution of hourly wages, including both full-time and part-time employees. We look first at the position of all men and all women, and then at men and women separately within each of the other dimensions we can examine. The second section looks at the weekly earnings of those employed full-time. Rather than repeat all of the breakdowns given for hourly wages,<sup>93</sup> this section highlights some of the main features of the distribution of full-time weekly earnings, paying particular attention to gender, as it is here that the largest differences can arise by comparison with the picture already given for hourly wages.

### 5.1 Hourly wages

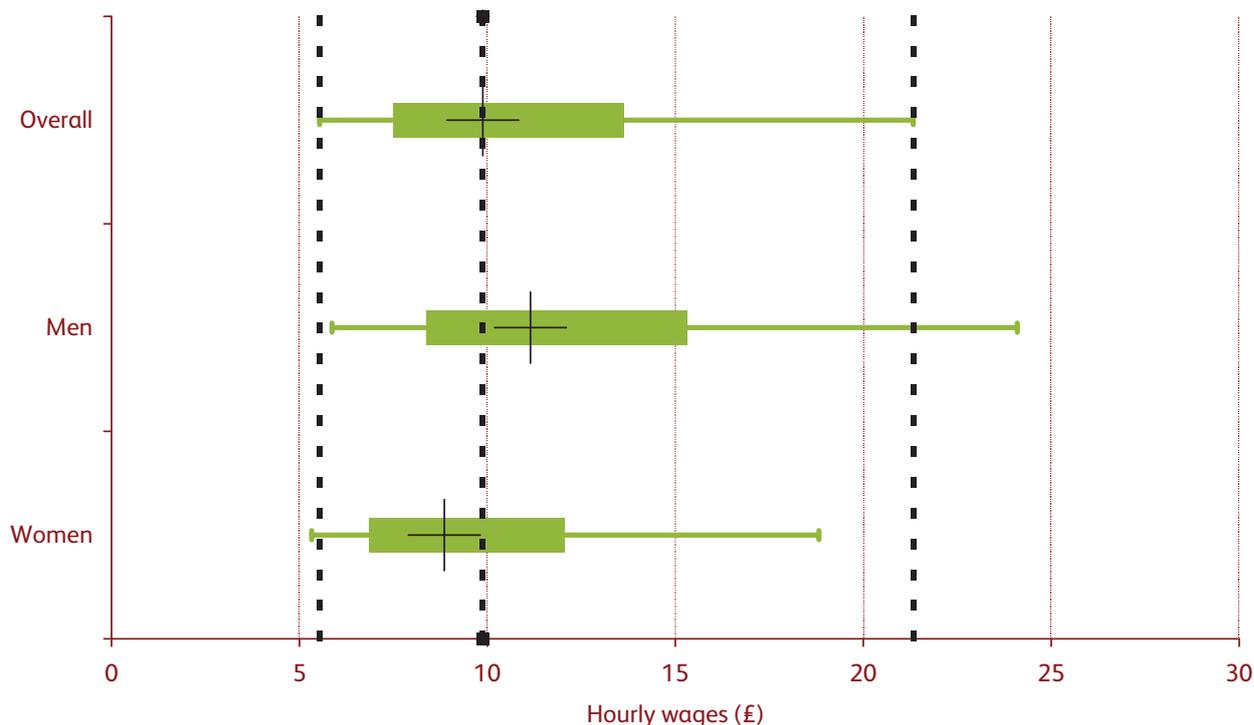
#### *Gender*

In Chapter 2, we showed the overall distribution of hourly wages for all employees.<sup>94</sup> Figure 5.1 and Table 5.1 summarise for 2006-2008 the differences both between men and women and within each gender in wage levels and in the corresponding rankings within the overall distribution (combining both full- and part-time employment) that these imply. The tables in this section show the proportions of the population in each group. Looking at Figure 5.1, the median female hourly wage, at £8.90, is 21 per cent below those of men (at £11.15). However, there is a very large spread within each gender, and hence, a considerable overlap between them. The best paid 10 per cent of men are paid more than £24 per hour, 4.1 times the cut-off for the worst paid 10 per cent of men. The best paid tenth of women are paid more than £18.80 per hour, 3.5 times the cut-off for the worst paid women. From Table 5.1, it can be seen that the median male employee is at the 58<sup>th</sup> percentile of the overall ranking, 16 places higher than the median female employee. To put it another way, nearly three-fifths of men are in the top half of the hourly wage distribution, while nearly three-fifths of women are in the bottom half. The best paid tenth of women are within the top 15 per cent of the overall distribution, but the best paid tenth of men within the top 7 per cent overall. Box 10.1 in Chapter 10 discusses trends in the gender wage gap measured in different ways.

<sup>93</sup> Corresponding information for the level and spread of weekly earnings for those working full-time can be found in the Statistical Appendix.

<sup>94</sup> Self-employed workers are not covered in this section, but their incomes are taken into account in looking at the distribution of individual incomes in Chapter 6. Note that the calculation of hourly wages will, for some survey respondents, depend on dividing weekly or monthly earnings by reported hours of work, which may be approximate.

Figure 5.1: Hourly wages, by gender, UK, 2006-2008 (£)

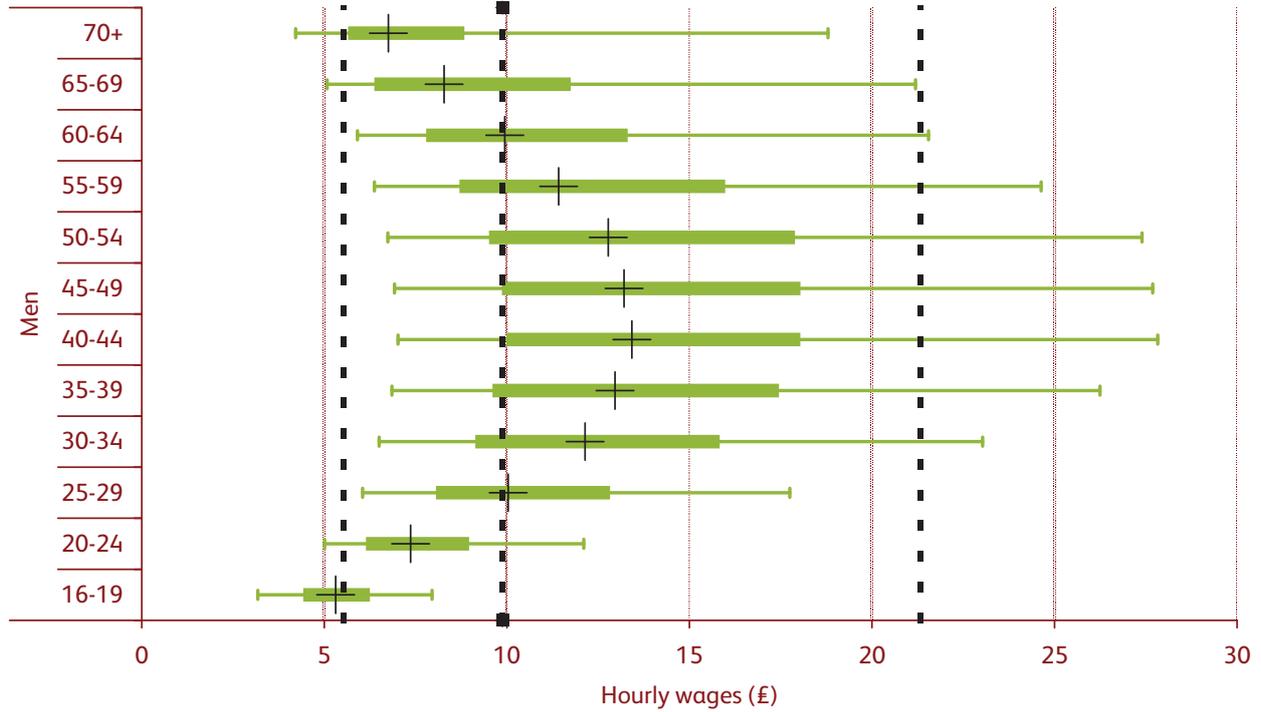


Source: NEP, based on LFS 2006-2008 at 2008 prices.

## Age

A more detailed view of the gender wage gap can be seen by comparing the panels in Figure 5.2. Among those in their twenties, the difference in the median wage between women and men is smaller than for all ages, at 5 per cent, but still in favour of men. This is even though we have seen that women in this cohort have slightly higher levels of qualification than men. The best paid tenth of women in their late twenties are paid more than £16.70, 6 per cent less than the cut-off for the best paid men. While the median wage is highest for men in their early forties (at £13.40 per hour), the median is highest for women in their early thirties (£10.40). The best paid tenth of men in each age group from their late thirties to their early fifties are paid more than £26 per hour, while the cut-off for the best paid tenth of women is around £20 per hour. For most age groups, the worst paid tenth of women are paid no more than £5.60 per hour (showing the effect of the National Minimum Wage in setting a floor to earnings), but the worst paid tenth of men are paid up to between £6 and £7 per hour. For both men and women in age groups well before the State Pension Age hourly wages are lower than those for younger ones at all levels within the distributions. Both panels of the figure show the way in which wages at all corresponding ranks in each group distribution are much lower for younger and older workers than for those in their thirties, forties and fifties.

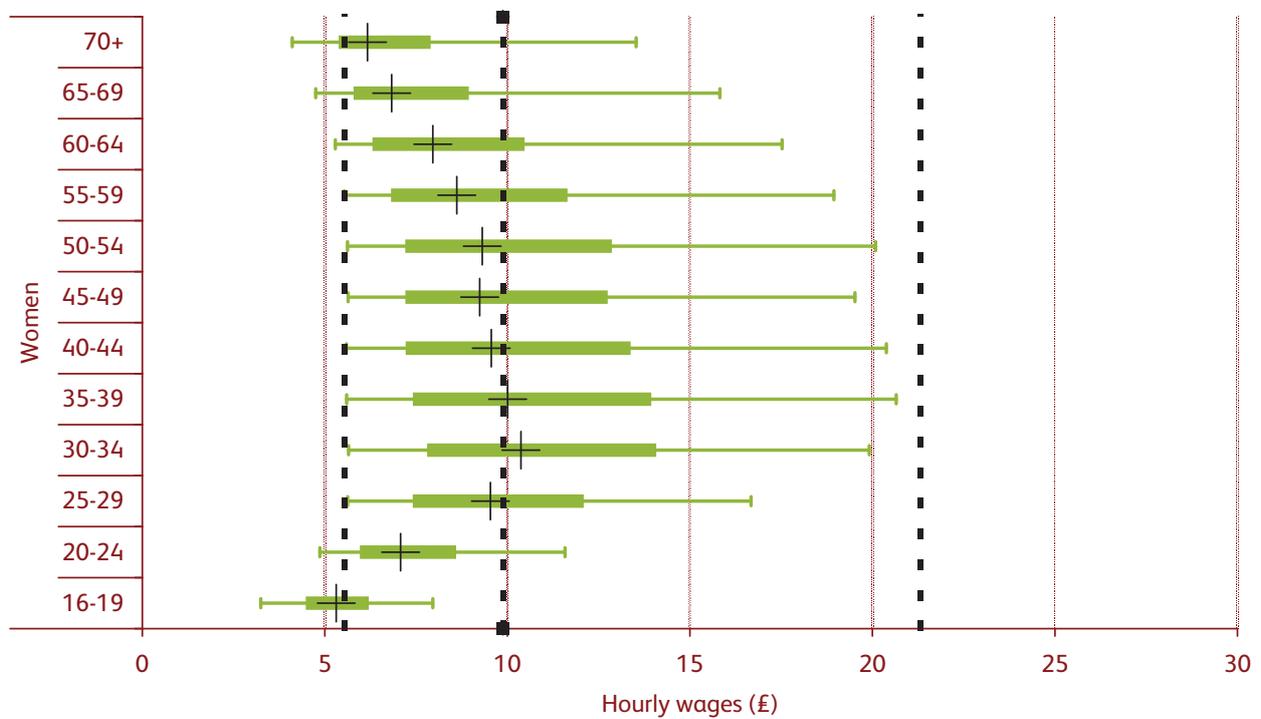
Figure 5.2(a): Hourly wages, by gender and age, men, UK, 2006-2008 (£)



Source: NEP, based on LFS 2006-2008 at 2008 prices.

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Figure 5.2(b): Hourly wages, by gender and age, women, UK, 2006-2008 (£)



Source: NEP, based on LFS 2006-2008 at 2008 prices.

Table 5.2 shows what this implies for rankings within the overall distribution. The median wage of the youngest, teenage, employees, is in the bottom 8 per cent of the overall distribution and the median wage for those in their early twenties, is still in the bottom 26-28 per cent. The medians for men in their thirties, forties and early fifties are high enough to put them in the top third of the overall distribution, but only for women in their thirties is the median wage high enough to put them half way up the distribution. For employees in their early fifties, the median wage for women is 19 places lower down the distribution than the median for men. The best paid tenth of middle-aged men are ranked at the 94<sup>th</sup> percentile or above, but the cut-off for the best paid tenth of women is below the 90<sup>th</sup> percentile for all age groups. For both men and women over working age median hourly wages are well down the distribution.

### *Ethnicity*

Figure 5.3 shows the range of hourly wages for men and women from different ethnic groups.<sup>95</sup> Apart from the small mixed White and Asian group, the median wage is highest for Chinese men, at £12.70, followed by the medians for White British men at £11.40, the Other Mixed group at £11.30 and Indian men at £11.20. The median hourly wage is only £6.90 for Bangladeshi men, and only £7.70 for Pakistani men. Looking at the highest paid in each group, the best paid Indian men have wages greater than £26.30, the best paid White British men greater than £24.20, and the best paid Other White men greater than £25.70. At the bottom, however, there is less difference, with the cut off for the worst paid 10 per cent in each group (where available) being between £5 and £6 per hour, again suggesting that the National Minimum Wage provides a floor. The 90:10 ratio is 4.1 for men taken as a whole (Table 5.1). What is very striking in Table 5.3 is that the ratio is around the same or even higher for nearly all of the ethnic groups where we can compute it (apart from Black Caribbean and Black African men, where it is slightly lower). That is, wage inequality *within* most ethnic groups is as much as, or greater than, overall wage inequality. The table shows that members of most groups are spread through the overall distribution of hourly wages. However, the median-waged Pakistani man is only a third of the way up the overall distribution. The median wage for Bangladeshi men is only at the 24<sup>th</sup> percentile, and so half of this group is in the bottom quarter of the overall distribution.

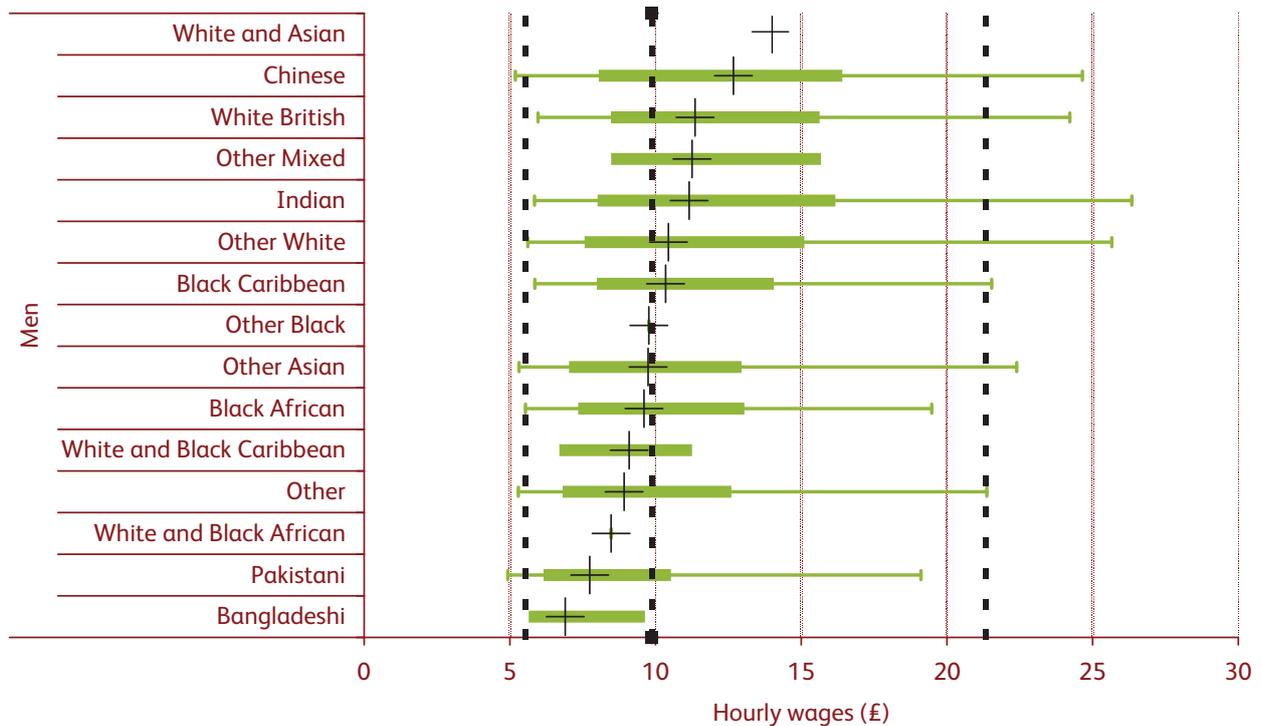
For women, Figure 5.3 shows some similar patterns of difference both between and within groups, but usually at lower levels than for men. For only a few ethnic groups (Black Caribbean, Chinese and Other Mixed) does the median female wage reach the overall median. For several groups, including the largest group, White British women, the median wage is below £9 per hour. For Pakistani and Bangladeshi women the median wage is only £8.30 and £7.80, respectively. However, this implies that if women from these groups are employed, they are paid *more* than the median-waged man from the same groups. The gender wage gap is also reversed for Black Caribbean and Black African women. Overall wage

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<sup>95</sup> For some groups, sample numbers are too small to show reliable information on the spread of wages within the group.

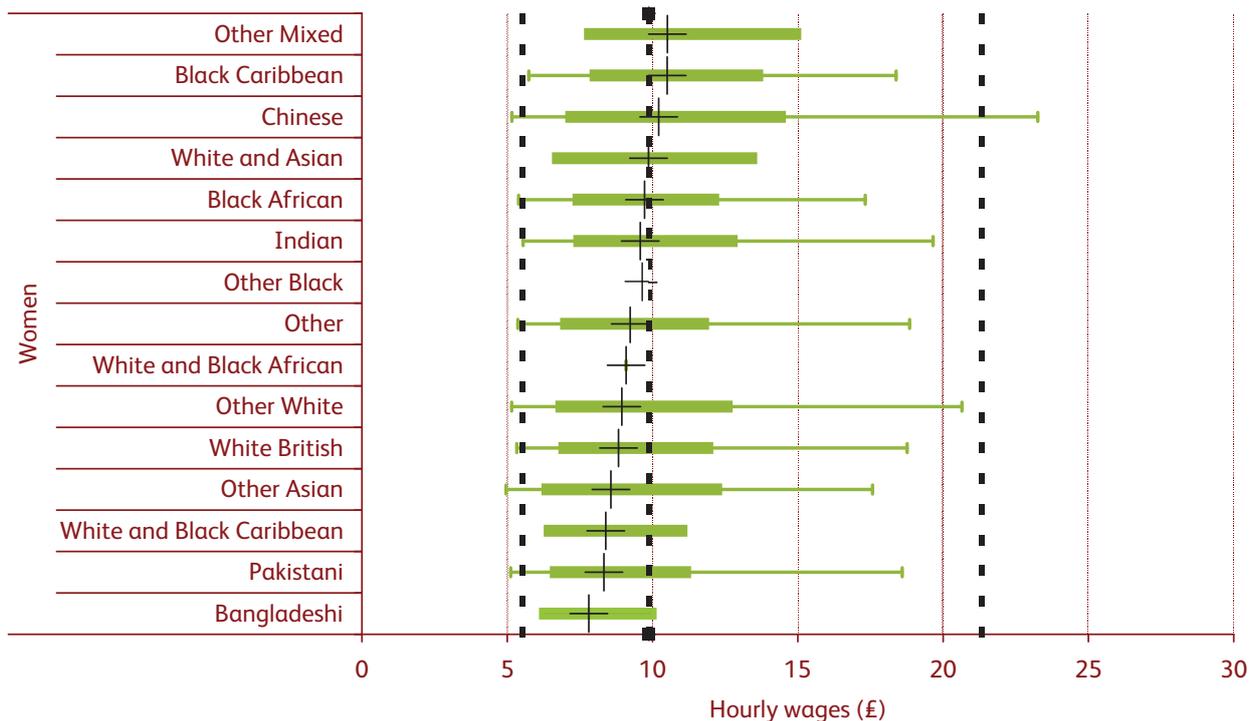
inequality within ethnic groups is somewhat lower for women than for men – reflecting, in particular, lower wages for the best paid women than the best paid men – but again is as great *within* each group as between women as a whole (a 90:10 ratio of 3.5), apart from Black Caribbean and Black African women.

Figure 5.3(a): Hourly wages, by gender and ethnicity, men, UK, 2006-2008 (£)



Source: NEP, based on LFS 2006-2008 at 2008 prices.

Figure 5.3(b): Hourly wages, by gender and ethnicity, women, UK, 2006-2008 (£)



Source: NEP, based on LFS 2006-2008 at 2008 prices.

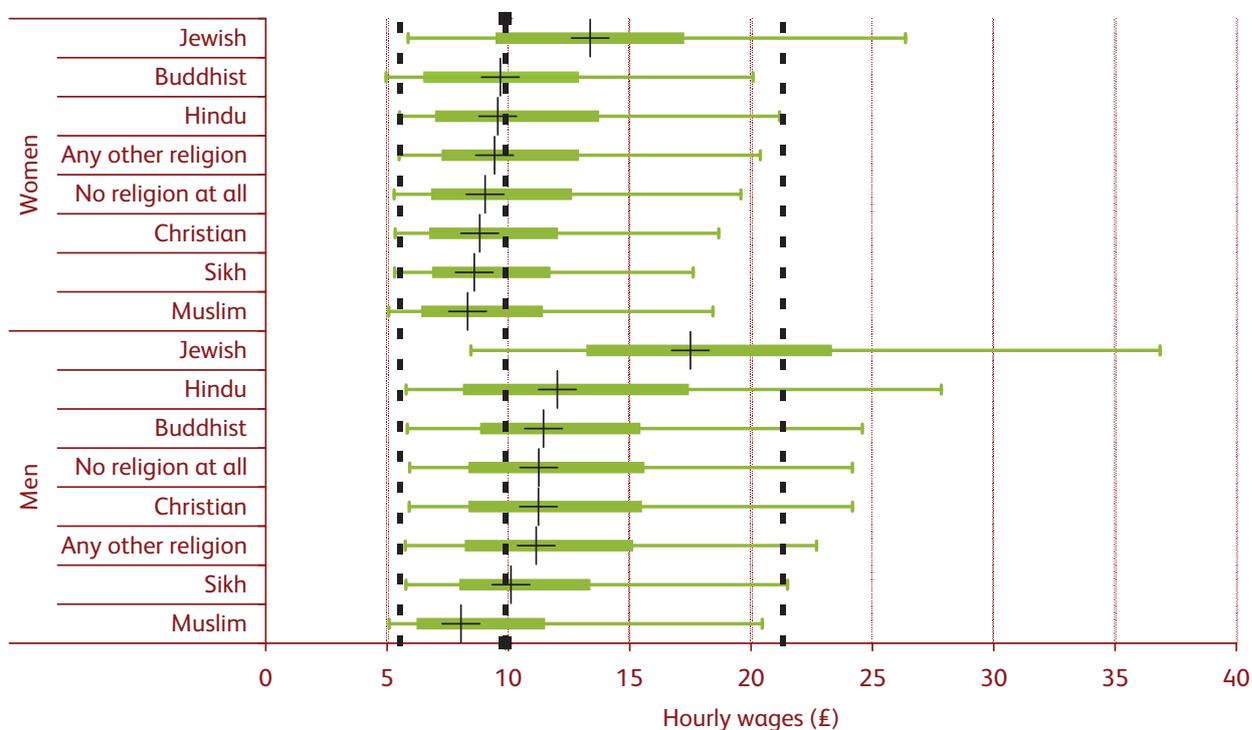
## An anatomy of economic inequality in the UK

One of the factors affecting pay differentials is people's migration status, and for how long they have been resident in the country. Box 5.2 in the next section looks at some recent evidence on the way in which the relative weekly earnings of recent migrants rise as they stay longer in the country.

### Religious affiliation

Differences between groups based on their expressed religious affiliation are greatest between Muslim men (median earnings of £8 per hour) and Jewish men, whose *median* wages of £17.50 are within the top fifth of all hourly wages. The best paid tenth of Jewish men have wages over £36.90, putting them in the top 2 per cent of the overall distribution. The best paid tenth of Hindu men have wages above £27.80, within the top 5 per cent of the overall distribution. It is also worth noting that the 10<sup>th</sup> percentile for Jewish men, at £8.50, is substantially above the minimum wage. The median wage for Jewish women is also well above the female median, putting them in the top third overall. There is much less difference between the other groups of men and women by religious affiliation. In Chapter 9 (Box 9.3), we look at evidence on differences in wages between ethno-religious groups, controlling for other factors such as differences in qualifications.

Figure 5.4: Hourly wages, by gender and religious affiliation, UK, 2006-2008 (£)

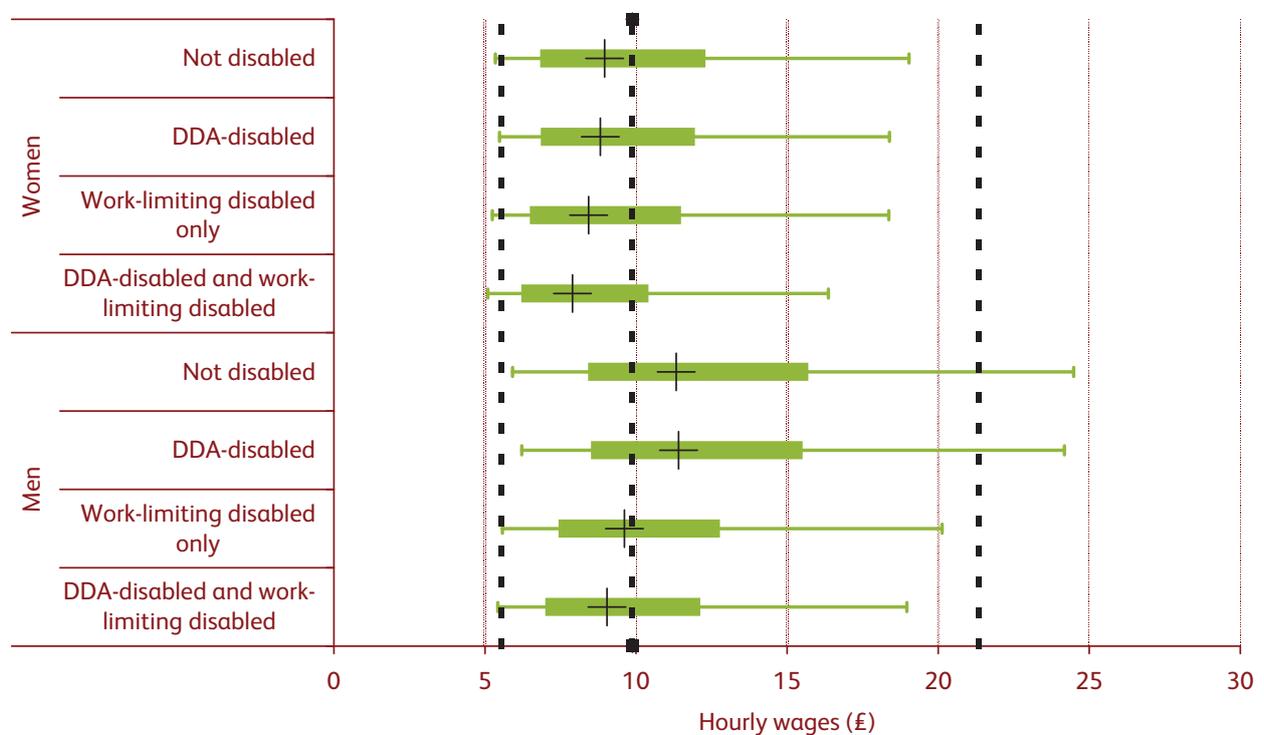


Source: NEP, based on LFS 2006-2008 at 2008 prices.

## Disability status

Figure 5.5 and Table 5.5 show that disabled people have lower wages than others, in addition to the much lower employment rates described in the last section. Again, for both men and women it is those who report a work-limiting disability as well as being Disability Discrimination Act (DDA) disabled who are most affected, with the median for men 20 per cent lower than the median for non-disabled men, and 12 per cent lower for women. There is very little difference between the level and spread of wages of those who report conditions that class them as DDA-disabled, but not a work-limiting condition, and those who are not disabled.

Figure 5.5: Hourly wages, by gender and disability status, UK, 2006-2008 (£)

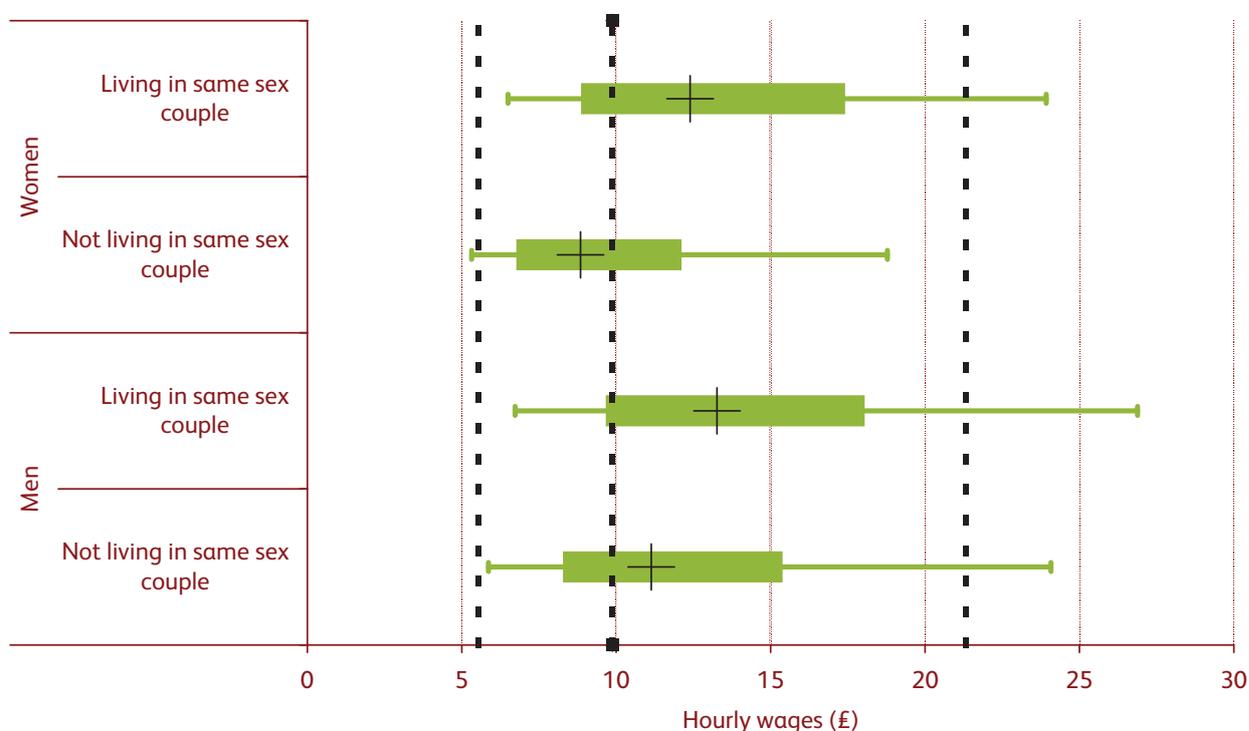


Source: NEP, based on LFS 2006-2008 at 2008 prices.

### Living in a same sex couple

Hourly wages for both men and women who report that they live in a same sex couple are higher at all points in the distributions for both men and women. Figure 5.6 shows that the median wage for men is 19 per cent and for women 40 per cent higher if they report living in a same sex couple. Indeed, the median wage for women reporting that they are in a same sex couple is higher than the median wage for men. The best paid tenth of men who report living in same sex couples are paid more than £27 per hour, putting them in the top 5 per cent overall; the best paid tenth of women in same sex couples are in the top 8 per cent overall.

Figure 5.6: Hourly wages, by gender and whether living in a same sex couple, UK, 2006-2008 (£)



Source: NEP, based on LFS 2006-2008 at 2008 prices.

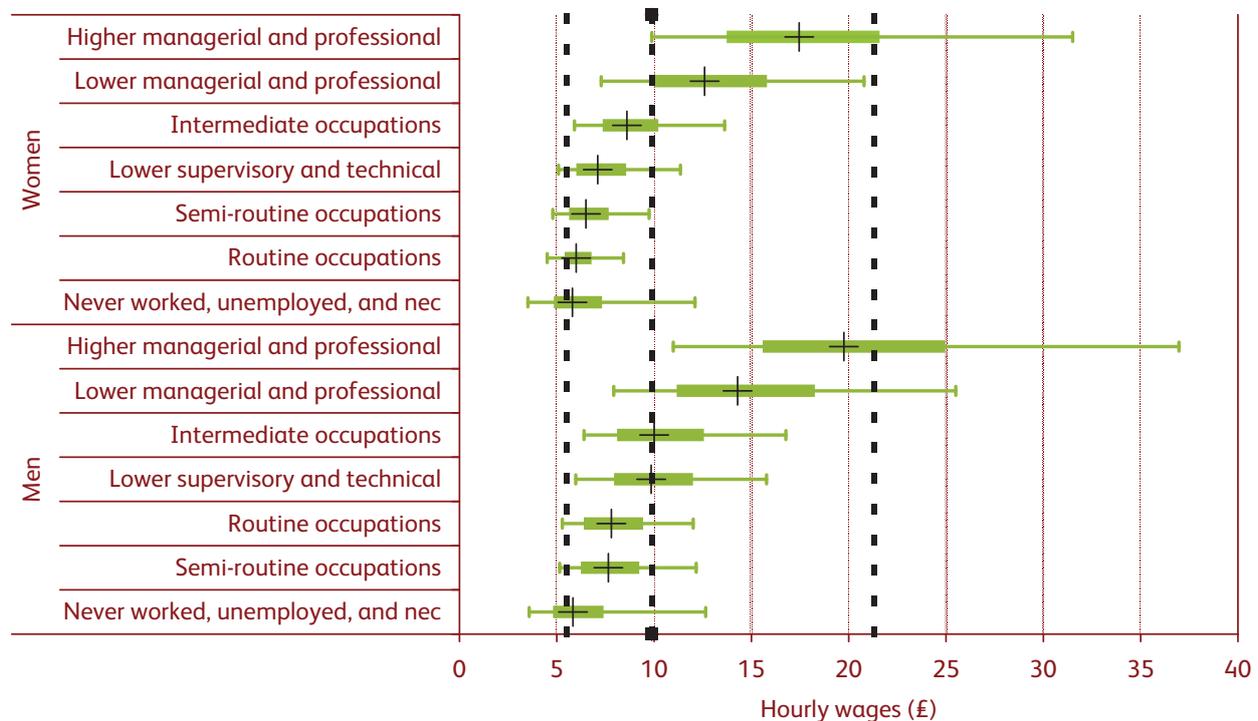
However, this kind of difference is not entirely surprising, given the higher level of qualifications for people who report they live in same sex couples (see Chapter 3). Box 9.8 in Chapter 9 summarises the results of a study carried out for us which concludes that by 2006-2008, wages are not significantly different for men who report living in same sex couples from those that would be expected on the basis of other characteristics. There is evidence that there was a *penalty* in the wages of men in same sex couples after allowing for qualifications in earlier periods, but this is no longer statistically significant. Women in same sex couples continue to have higher wages than other women with similar characteristics, although the difference is smaller than it previously was. In other words, the pay gap in favour of those in same sex couples is wholly explained, for men, and mostly explained, for women, by factors such as the qualification levels of those reporting this status.

## Occupational social class

Figure 5.7 and Table 5.7 show the largest spreads in wage levels between any of the breakdowns in this chapter, those by household occupational social class. There is a very clear hierarchy, not just according to the median wage in each group, but also for the other points in the ranges for each group. The median hourly wage for men in the higher professional and managerial category, at £19.80, is 78 per cent higher than the median for all men. For women in this group the median is 153 per cent higher than the median for all women. The highest paid tenth of men in the higher professional and managerial group are paid £37 per hour or more, 3.7 times the overall median wage, and putting them in the top 2 per cent overall. Indeed, the cut-off for the *lowest* paid tenth of this group of men, £11 per hour, is equal to the overall median for men. By contrast, among men in routine or semi-routine occupation households the median wage is £7.60-7.80 per hour, and for women it is £6-6.60, placing them in the bottom third of the overall distribution for men and in the bottom fifth for women. These differences between occupational groups are an important part of the explanation of overall earnings inequality: the 90:10 ratios within each group are in the range 2.3-3.5 for men and 1.9-3.4 for women, in each case well below this inequality measure for men and women as a whole (4.1 and 3.5, respectively).

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Figure 5.7: Hourly wages, by gender and occupational social class, UK, 2006-2008 (£)

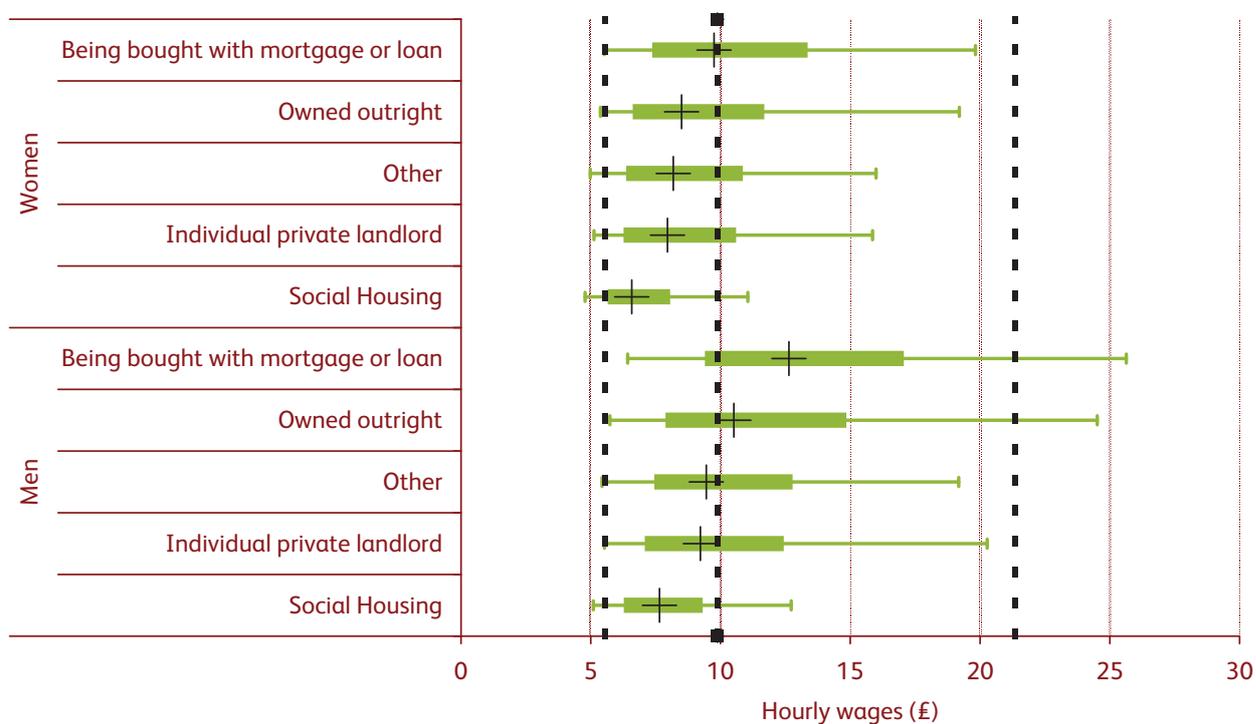


Source: NEP, based on LFS 2006-2008 at 2008 prices.

### Housing tenure

Figure 5.8 and Table 5.8 show the differences in hourly wages by housing tenure. Not surprisingly, the median wages of those who own their property (whether bought outright or with a loan or mortgage) are higher than the earnings of people who rent. This is the case for both men and women. The median wage for women living in social housing, £6.58, corresponds to the 21<sup>st</sup> percentile of the overall distribution. At the other end, the median hourly wage for men with a mortgage (£12.64) cuts the overall distribution at the 65<sup>th</sup> percentile, 34 places (out of 100) higher up the distribution than the median for men in social housing.

Figure 5.8: Hourly wages, by gender and housing tenure, UK, 2006-2008 (£)

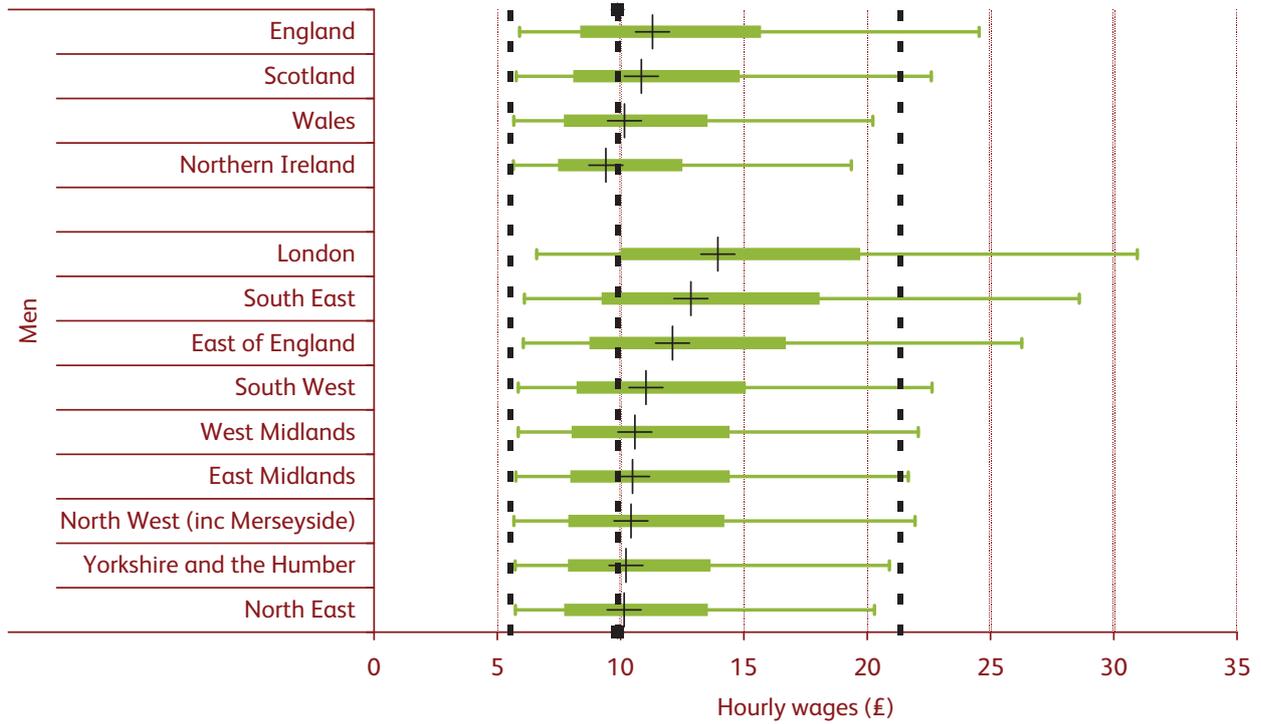


Source: NEP, based on LFS 2006-2008 at 2008 prices.

### Nation or region

The median wage for both men and women in each of the three devolved nations is below that for the UK as a whole. Among men, the median is lowest in Northern Ireland but, among women, it is lowest in Wales. Within the English regions, the median wage for both men and women is lowest in the North East (also in Yorkshire and the Humber for women) and highest in London. For men, the gap between the median wage in Northern Ireland and in London is equivalent to 25 places (out of 100) in the overall distribution; for women, the median wage in London is 27 places above the median in Wales. As Table 5.8 shows, the spread of wages is also widest in London, with 90:10 ratios for men of 4.7 and for women of 4.3, much higher than the national ratio in each case. Wages are also more widely spread in the South East than in other region, for both men and women.

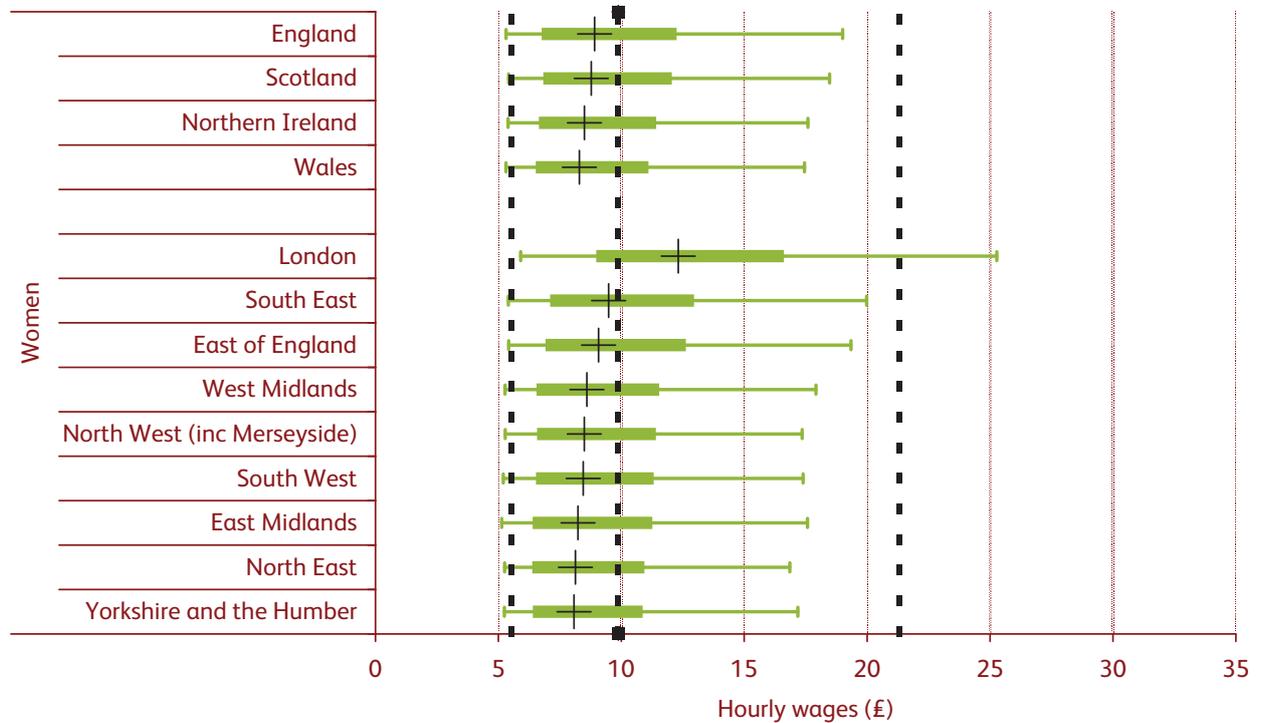
Figure 5.9(a): Hourly wages, by gender and nation or region, men, UK, 2006-2008 (£)



Source: NEP, based on LFS 2006-2008 at 2008 prices.

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Figure 5.9(b): Hourly wages, by gender and nation or region, women, UK, 2006-2008 (£)



Source: NEP, based on LFS 2006-2008 at 2008 prices.

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These differences should be seen within the context of cost of living differences across the country. Box 5.1 contains some evidence on these and on their scale. Allowing for cost of living differences would reduce, but not eliminate, the differences between regions. For instance, the median hourly wage is 48 per cent higher in London than in Northern Ireland, but the cost of living only 15 per cent higher.

### Box 5.1: Cost of living differences between regions

In February 2005, the Office for National Statistics (ONS) published estimates of the relative regional consumer price levels in 2004. This gives an indication of the differing cost of living in each region. The analysis has not been updated since 2005.

Table 5A shows the average price level in each region, relative to the national average. The analysis is based on data collected for the compilation of the Retail Prices Index supplemented by a purpose-designed survey of regional prices.

Table 5A: Average price index for each region, relative to national average, 2004 (UK= 100)

North East	94.2
North West	96.9
Yorkshire and the Humber	94.2
East Midlands	97.4
West Midlands	97.8
Eastern	101.1
London	109.7
South East	105.3
South West	101.3
Wales	93.1
Scotland	94.5
Northern Ireland	95.8

These figures show that the price of a fixed basket of goods and services, based on national consumption patterns, is highest in London, followed by the South East. Average prices in London are 9.7 per cent higher than the UK average. In the South East, they are 5.3 per cent higher than the national average. Prices are lowest in Wales, the North East and Yorkshire and the Humber.

Using this fixed national basket of goods and services means that variations in the purchasing patterns between regions are not allowed for. However, the index allows comparisons to be made between the relative purchasing power of incomes between one region and another. Housing costs, which are included in the calculation, show the greatest variation between regions, with London being nearly twice as expensive as Northern Ireland. By contrast, food and tobacco prices vary little across regions.

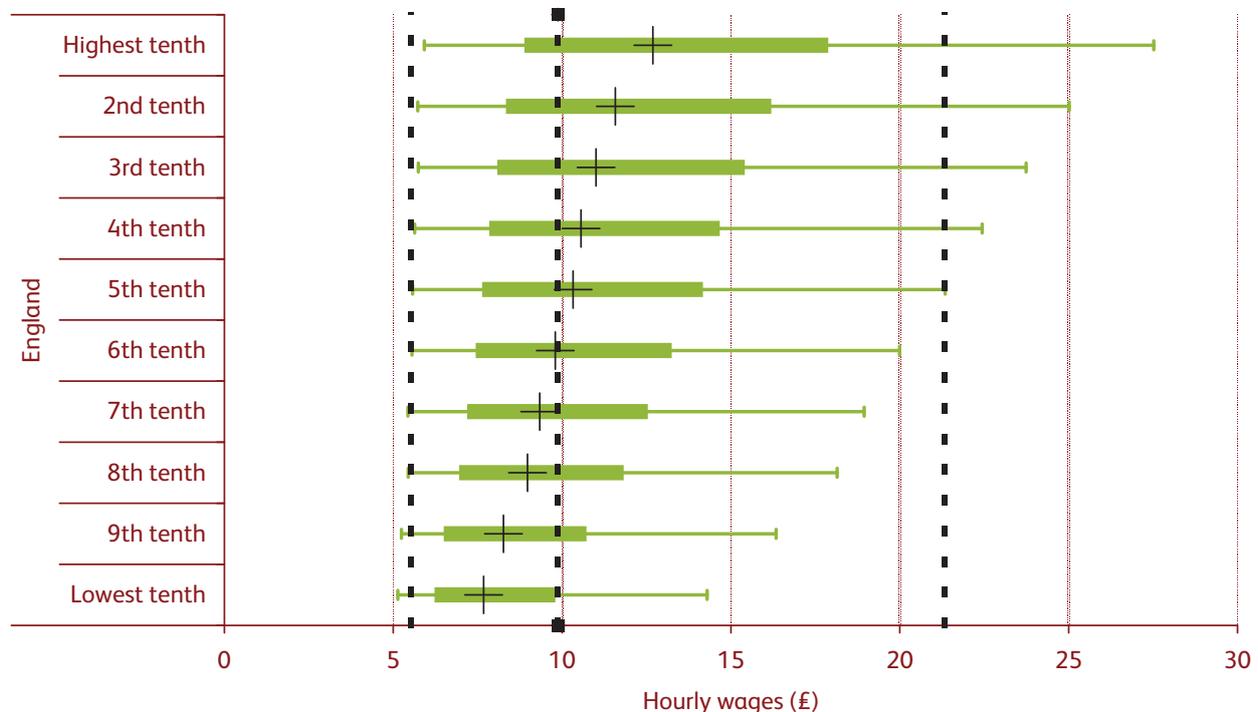
### Area deprivation

The relationship between hourly wages and area deprivation is shown in Figure 5.10 and Table 5.10, for England, Scotland and Wales. As with the employment analyses presented earlier, income (of which earnings are an important component) is part of the deprivation indices, and therefore the classifications have some degree of circularity that needs to be remembered when interpreting the results. The median hourly wage in the most deprived tenth of areas is much lower than the median in the least deprived tenth of areas – by nearly 40 per cent in England and Wales, and by 45 per cent in Scotland. The gap in median wages between most and least deprived areas is equivalent to 34 places out of 100 in the distribution in England and 35 places in Wales. In Scotland, the difference is even larger – 39 places.

There is relatively little difference across kinds of area in wages at the bottom end (again reflecting the floor provided by the National Minimum Wage), but larger differences between them for the best paid. As a result there is much more inequality within the least deprived areas than within most deprived ones. The 90:10 ratio is 4.6 compared to 2.8 for least and most deprived areas in England, and 4.7 compared to 2.6 in Scotland.

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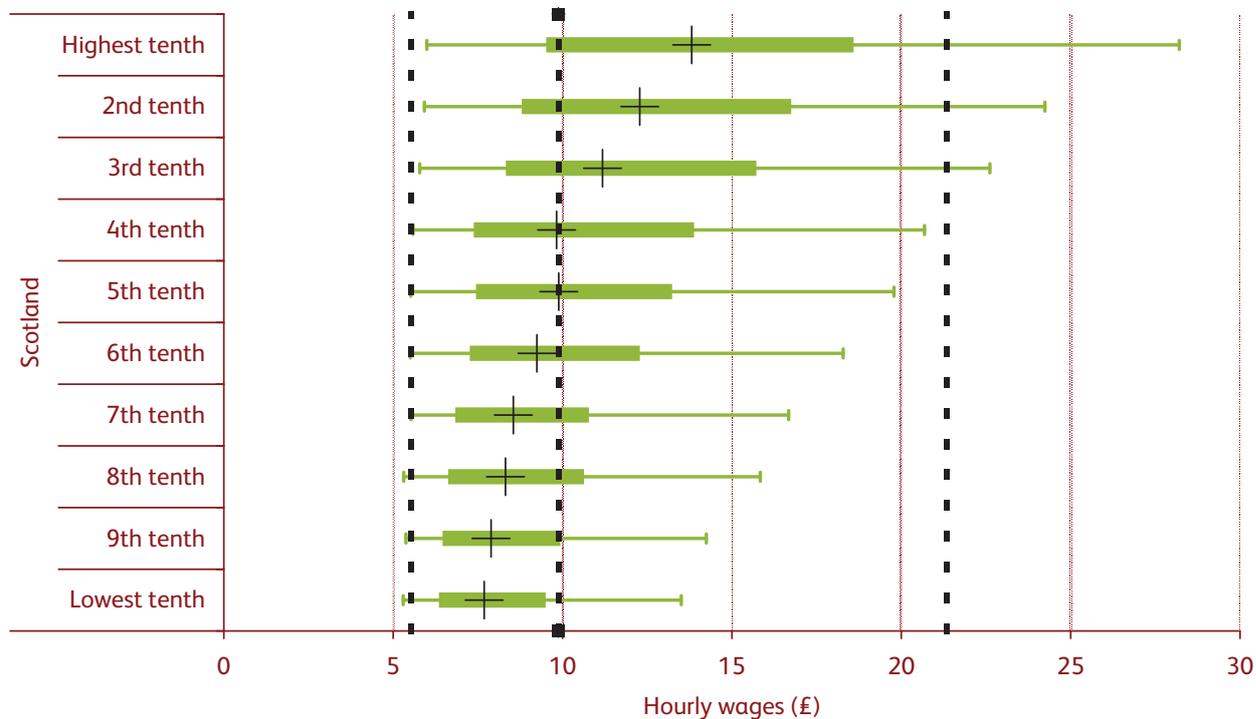
Figure 5.10(a): Hourly wages, by Index of Multiple Deprivation, England, 2006-2008, all employees (£)



Source: NEP, based on LFS 2006-2008 at 2008 prices.

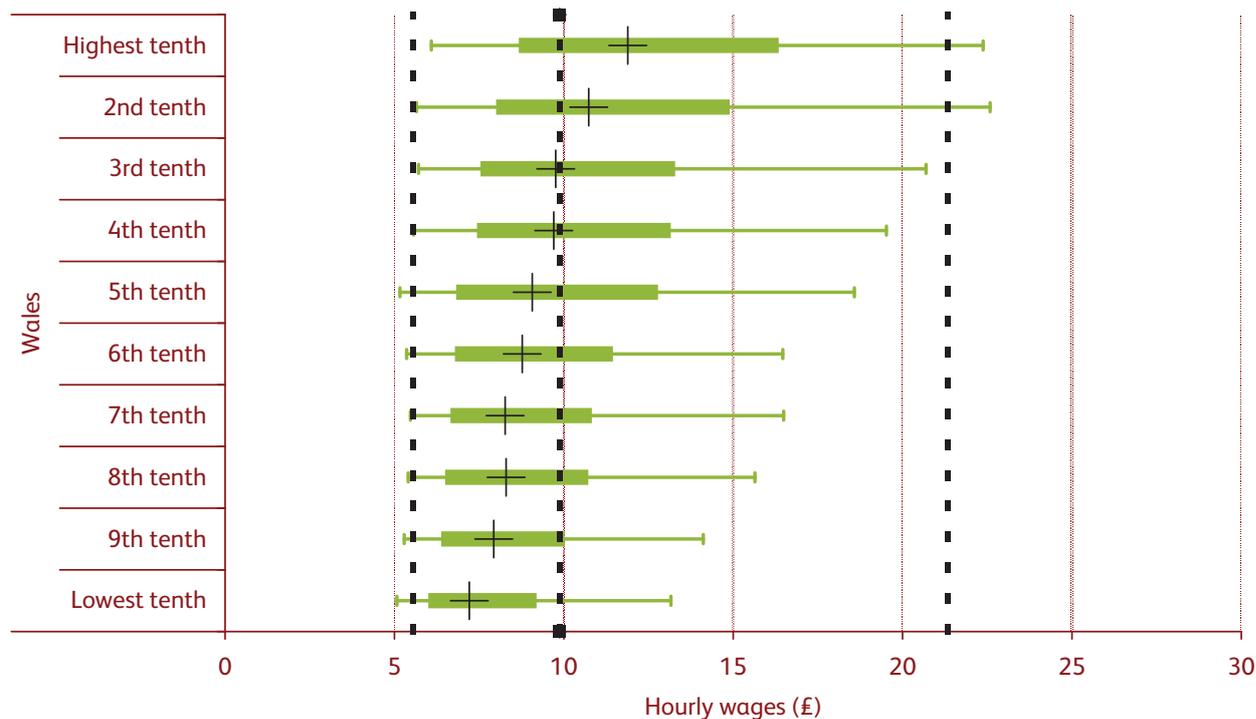
## An anatomy of economic inequality in the UK

Figure 5.10(b): Hourly wages, by Scottish Index of Multiple Deprivation, Scotland, 2006-2008, all employees (£)



Source: NEP, based on LFS 2006-2008 at 2008 prices.

Figure 5.10(c): Hourly wages, by Welsh Index of Multiple Deprivation, Wales, 2006-2008, all employees (£)



Source: NEP, based on LFS 2006-2008 at 2008 prices.

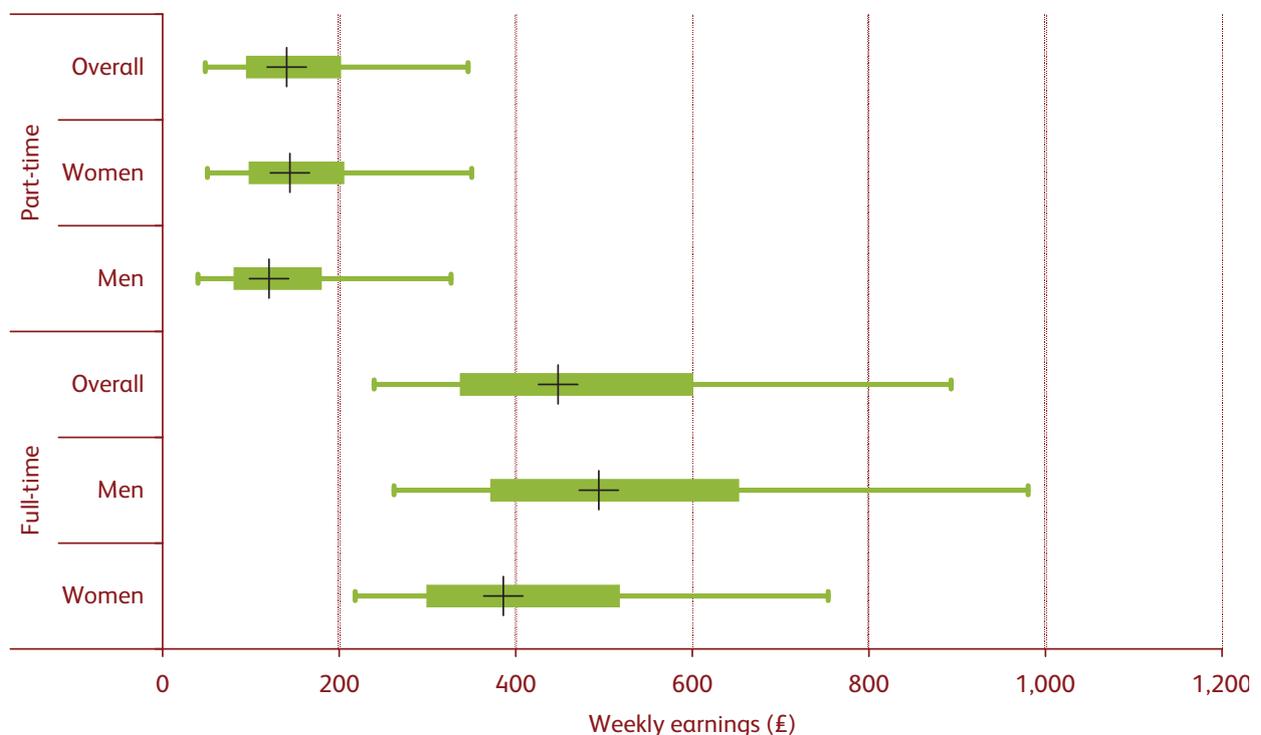
## 5.2 Weekly full-time earnings

### Gender and age

Figure 5.11 shows the spread of weekly earnings for all full-time employees and for men and women employed full-time in 2006-2008 (at 2008 prices), with, for comparison, the spread of weekly earnings for those working part-time. Among men working full-time, the median is £494 per week (equivalent to £25,800 per year). The median for women working full-time is £386 (equivalent to £20,100 per year). Table 5.11 (which includes information for all those of working age as well as the age breakdown) shows that this means that median earnings for women working full-time are at the 39<sup>th</sup> percentile of the overall distribution of full-time earnings, somewhat further down, even, than women's hourly wages discussed in the previous section. Again, the gender gap in pay (22 per cent at the median) is alongside inequality **within** the distributions (as measured by the 90:10 ratio) that is just as great for men, and nearly as great for women looked at separately, as it is for all full-time workers together.<sup>96</sup> For those working part-time there is much less difference between men and women – indeed women earn slightly more than men but, for both men and women, median part-time earnings are less than a third of median full-time earnings.

5

Figure 5.11: All employees weekly earnings, by gender, UK, 2006-2008 (£)



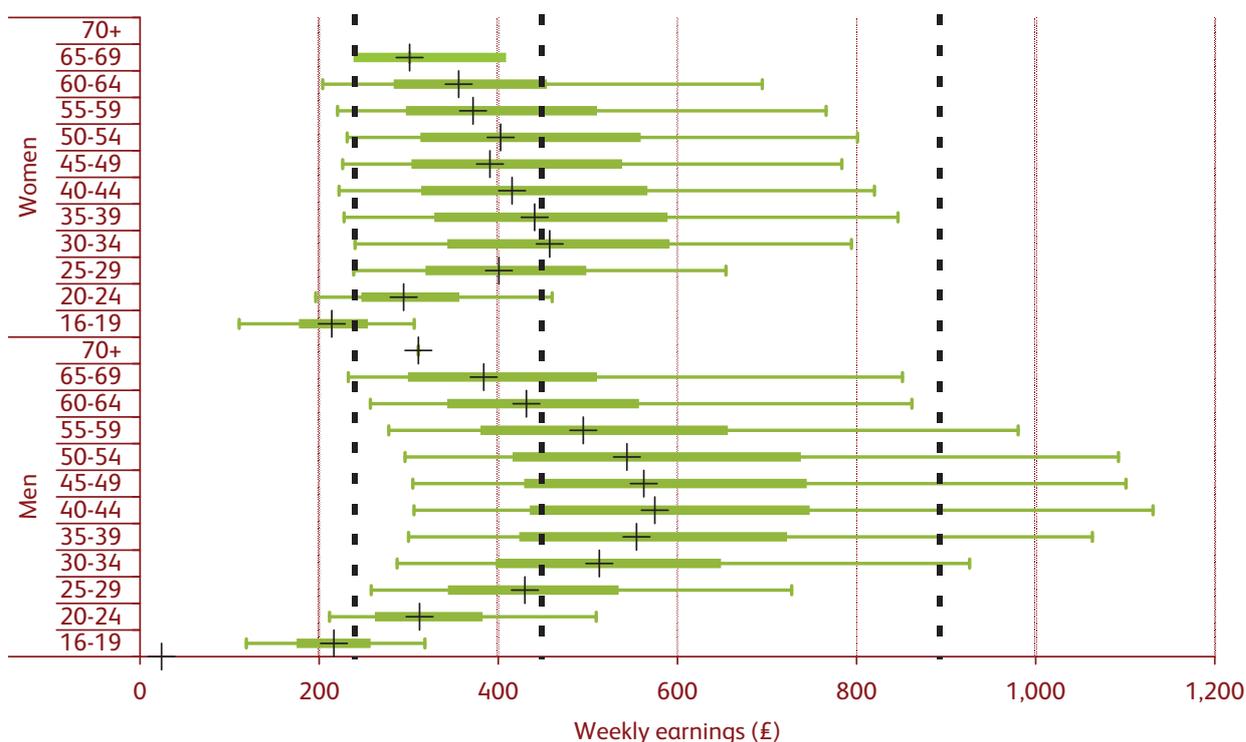
Source: NEP, based on LFS 2006-2008 at 2008 prices.

<sup>96</sup> See Box 10.1 in Chapter 10 for discussion of trends in the gender pay gap.

## An anatomy of economic inequality in the UK

Figure 5.12 shows how the spread of full-time earnings varies between men and women in different age groups. Median earnings are highest for men in their early forties, £575 per week, while those for women are highest in their early thirties, £457 per week. The full-time gender pay gap in median earnings is 6-7 per cent for women in their twenties, but much greater for the older groups – 28 per cent for those in their early forties, for instance. The gender gap for the highest earners is similar: the highest paid tenth of men have weekly earnings in their forties of over £1,100, while the cut-off for the best paid tenth of women of the same age is around £800.

Figure 5.12: Full-time employees weekly earnings, by gender and age, UK, 2006-2008 (£)



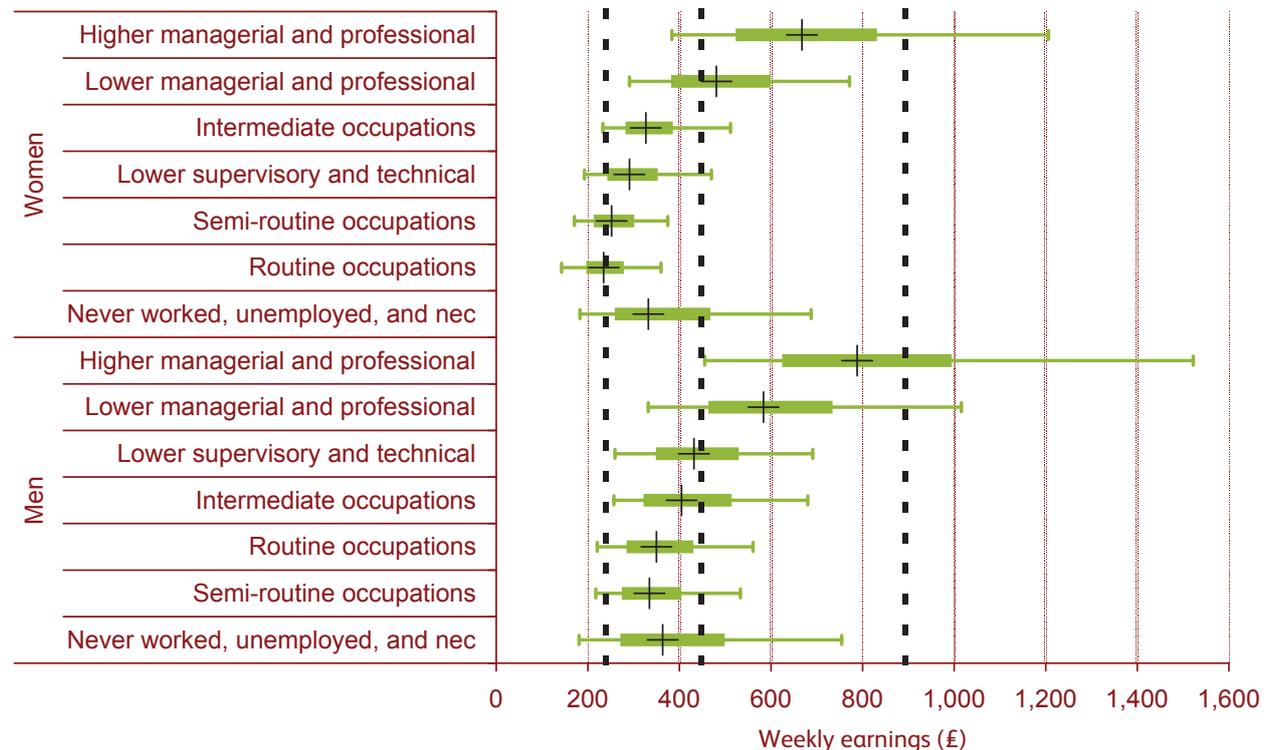
Source: NEP, based on LFS 2006-2008 at 2008 prices.

Looking at the positions within the overall distribution of full-time weekly earnings shown in Table 5.11 that these levels imply, at any given age and point in the distribution, women are slightly further down this distribution than they were in that of hourly wages (shown in Table 5.2). For those in their late forties, for instance, the median full-time earnings for women is 26 places (out of 100) lower down the overall earnings distribution than the median for men (compared to a gap of 23 places in hourly wages).

## Occupational social class

Figure 5.13 shows the spread of earnings for men and women within each household occupational social class grouping. As with hourly wages broken down this way, there are large differences between groups, as well as within them. For men, the gradient between the groups is slightly less than that in hourly wages, however. For instance, men in higher professional or managerial households have median earnings 2.3 times as much per week as men in routine jobs, but the hourly wage difference was 2.5 times (Figure 5.7). However, the median earnings for women working full-time from higher professional or managerial households is 2.8 times greater than the median for women in routine occupation households, which is a greater difference than between the same groups in hourly wages (2.5 times). The highest paid tenth of men in the higher managerial and professional occupational group earn more than £1,500 per week (equivalent to just under £80,000 per year), 3.4 times the overall median for men. Again, this is a slightly smaller margin than the corresponding ratio for hourly wages (3.7), implying that men in this occupation report shorter working hours than do men in other occupations.

Figure 5.13: Full-time employees weekly earnings, by gender and occupational social class, UK, 2006-2008 (£)



Source: NEP, based on LFS 2006-2008 at 2008 prices.

### *Other characteristics*

For completeness, Table 5.12 summarises features of breakdowns of the distribution of full-time weekly earnings by other characteristics (full details are in the Statistical Appendix). It shows where median earnings for men and women in each category come within the overall ranking of full-time earnings, looking in turn at selected aspects of disability status, nation and region, whether people report living in a same sex couple, ethnicity and religion. By comparison with the corresponding tables (shown separately for each characteristic) in Section 5.1, the main difference is that women are generally several places further down this distribution than that of hourly wages. For some groups the difference is larger. As a result, it is only for three groups (Pakistani, Bangladeshi and mixed White-Black Caribbean women) that median full-time weekly earnings for women are greater than for men. For instance, among Black Caribbean women, the median hourly wage is at the 54<sup>th</sup> percentile of the overall distribution, but those working full-time have median weekly earnings only at the 46<sup>th</sup> percentile.

Some groups of men are higher up the full-time distribution than they are in the distribution of hourly wages. Median full-time earnings for Bangladeshi men correspond to the 29<sup>th</sup> percentile of the overall distribution, which is very low, but slightly better than the position suggested by the median of their hourly wages which is at the 24<sup>th</sup> percentile. Box 5.2 discusses the way in which the weekly earnings of recent migrants rise relative to UK-born workers in the years after arrival in the UK, and how this varies depending on continent of origin.

While the median among men reporting themselves as living in a same-sex couple lies at the 68<sup>th</sup> percentile of the hourly wage distribution, it is only at the 60<sup>th</sup> percentile of the weekly full-time earnings distribution. Similarly, the median-waged woman in same-sex couples is at the 64<sup>th</sup> percentile of the hourly wage distribution, but only the 56<sup>th</sup> percentile of full-time weekly earnings.

#### **Box 5.2: Earnings, migration and assimilation**

One factor associated with differences between some ethnic groups in labour market outcomes is the disadvantage recent migrants experience in the labour market, both in terms of finding work and wages. However, over time, the pay gap closes (and even reverses as experience is gained). Recent research by Abigail McKnight and Richard Dickens,<sup>97</sup> using longitudinal data from the Lifetime Labour Market Database, explores how earnings of migrants have changed in the last thirty years.

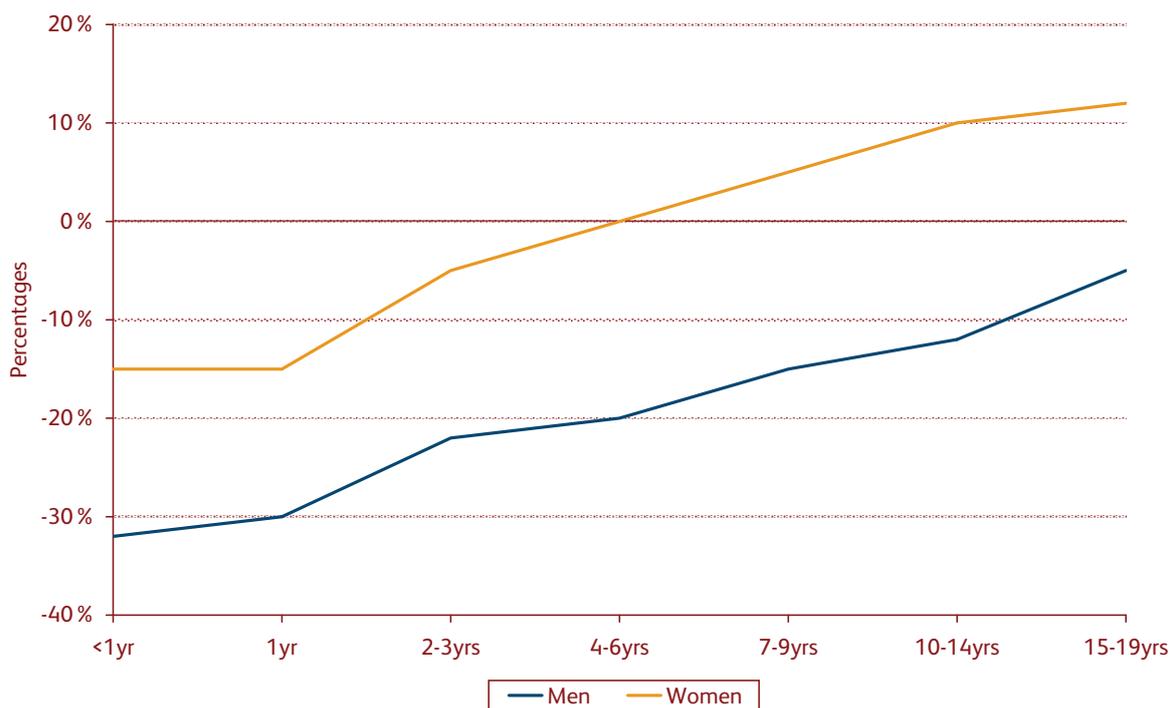
Looking at groups as a whole, real weekly earnings of migrants (arriving in Britain since 1975) lagged behind those of native workers in the 1980s and early 1990s. They are typically lower than those of native workers, but these wage differences narrow as length of residence in Great Britain increases. Since the early 1980s, migrant wages have risen in relation to those born in the UK.

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<sup>97</sup> McKnight and Dickens (2008). The model used by the researchers controls for a number of factors, including age, so the differences shown, relative to native-born employees, do not result from migrants' wages rising with age and experience once they have arrived.

This ratio has tended to increase over time as migrant wages have caught up with those of non-migrants, partly reflecting differences in the balance of qualifications and experience between the groups. By the early 2000s, migrant men had similar pay to men born in the UK, but migrant women had pay more than 15 per cent higher than women born in the UK.

Figure 5A: Gap between earnings of migrants and UK-born workers by years since arrival



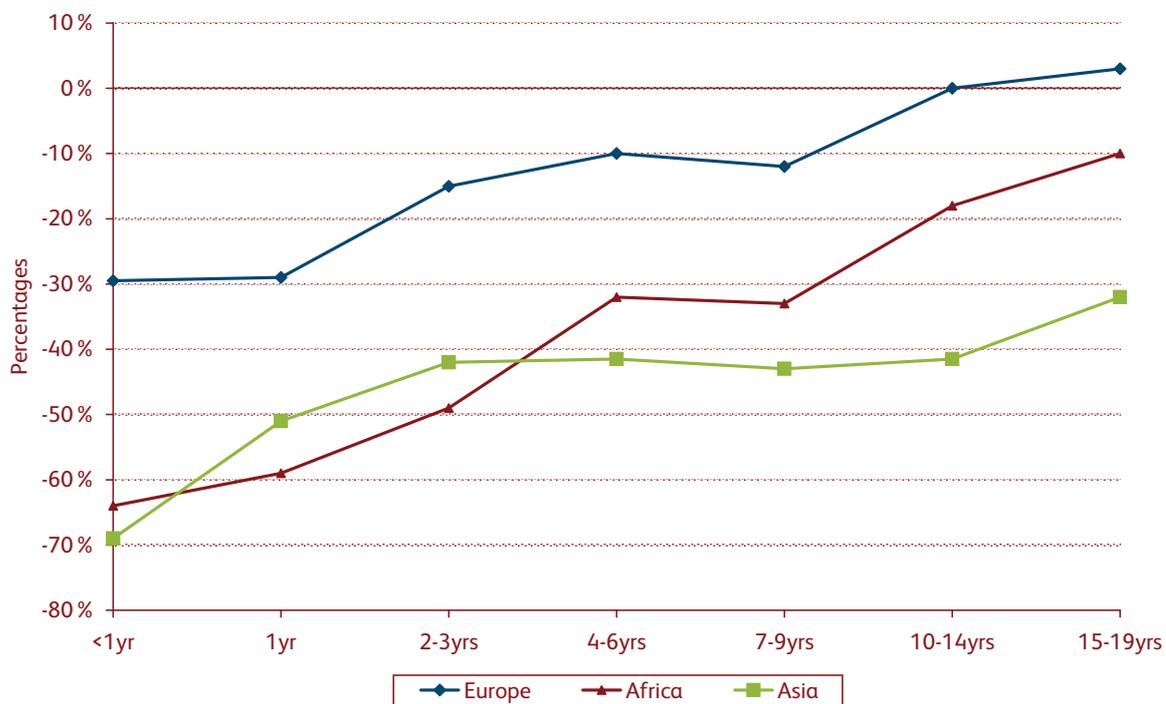
Source: McKnight and Dickens (2008), figure 9.

Figure 5A shows for men and women separately, how long it takes, since arrival in the country, for their wages to catch up with those of native workers of the same age. On arrival, both male and female migrants are paid less than a native worker of the same age. This gap is larger for men at more than 30 per cent, while for women the gap is around 15 per cent. This wage gap closes as migrants build up increasing years of experience in the British labour market. After two to three years, the penalty falls to 20 per cent for men and about 5 per cent for women. For migrant women, the wage gap has disappeared after four to six years, whereas for men it takes up to twenty years to completely eradicate the wage difference.

As can be seen from Figures 5B and 5C, there is a considerable variation in the time it takes to 'catch up' depending on migrants' countries of origin. For example, assimilation rates are fastest for those coming from European countries, while Asian men have slow rates of assimilation and have the largest initial gap, at 70 per cent.

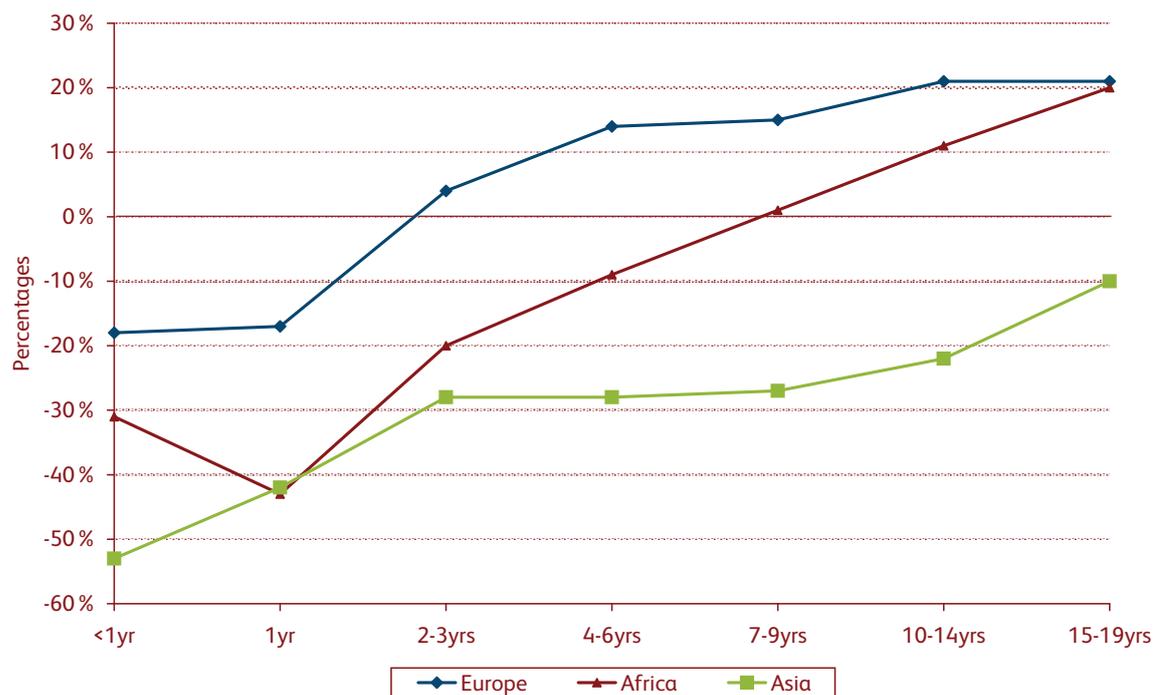
The research also shows that migrants who have arrived since 1985 have fared better than those who arrived between 1975 and 1980. This is because they have a higher relative pay on arrival than twenty years ago, rather than because they then experience faster wage growth.

Figure 5B: Gap between earnings of migrants and UK-born workers by continent of origin: Men arriving between 1985 and 1990



Source: McKnight and Dickens (2008), figures 14, 15 and 16.

Figure 5C: Gap between earnings of migrants and UK-born workers by continent of origin: Women arriving between 1985 and 1990



Source: McKnight and Dickens (2008), figures 17, 18 and 19.

Table 5.1: Hourly wages, by gender, UK, 2006-2008 (£)

	Median gross hourly wages (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
Overall	9.88	3.9	10	50	90	100
Men	11.15	4.1	13	58	93	48
Women	8.86	3.5	8	42	85	52

Source: NEP, based on LFS 2006-2008 at 2008 prices.

Table 5.2: Hourly wages, by gender and age, UK, 2006-2008 (£)

	Median gross hourly wages (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Men</b>						
40-44	13.42	4.0	25	69	95	6.6
45-49	13.21	4.0	24	68	95	5.9
35-39	12.96	3.8	24	67	94	6.3
50-54	12.78	4.1	22	66	95	4.9
30-34	12.14	3.5	20	63	92	5.4
55-59	11.42	3.9	19	59	93	4.5
25-29	10.04	2.9	15	51	83	4.7
60-64	9.94	3.6	14	50	90	3.0
65-69	8.28	4.2	6	37	89	0.7
20-24	7.36	2.4	6	28	63	3.4
70+	6.76	4.5	3	23	85	0.3
16-19	5.31	2.5	1	8	34	2.0
<b>Women</b>						
30-34	10.37	3.5	11	53	87	5.6
35-39	10.01	3.7	10	50	88	6.8
40-44	9.56	3.6	10	47	88	7.6
25-29	9.53	3.0	11	47	80	5.2
50-54	9.31	3.6	11	45	87	6.0
45-49	9.24	3.5	11	45	86	6.9
55-59	8.61	3.4	9	40	85	5.0
60-64	7.96	3.3	7	34	82	2.3
20-24	7.08	2.4	5	26	60	3.8
65-69	6.83	3.3	5	23	77	0.6
70+	6.17	3.3	3	17	69	0.2
16-19	5.31	2.5	1	8	34	2.3

Source: NEP, based on LFS 2006-2008 at 2008 prices.

Table 5.3: Hourly wages, by gender and ethnicity, UK, 2006-2008 (£)

	Median gross hourly wages (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Men</b>						
White and Asian	13.90	*	*	71	*	0.1
Chinese	12.67	4.8	7	65	93	0.1
White British	11.35	4.1	14	59	93	41
Other Mixed	11.25	*	*	58	*	0.1
Indian	11.15	4.5	13	58	94	0.9
Other White	10.44	4.6	10	53	94	2.8
Black Caribbean	10.34	3.7	13	53	90	0.3
Other Black	9.77	*	*	49	*	0.0
Other Asian	9.75	4.2	8	49	91	0.3
Black African	9.60	3.5	10	48	86	0.5
White and Black Caribbean	9.10	*	*	44	*	0.1
Other	8.92	4.0	7	42	90	0.6
White and Black African	8.48	*	*	39	*	0.0
Pakistani	7.74	3.9	5	32	86	0.4
Bangladeshi	6.90	*	*	24	*	0.1
<b>Women</b>						
Other Mixed	10.51	*	*	54	*	0.1
Black Caribbean	10.51	3.2	12	54	84	0.0
Chinese	10.21	4.5	7	52	92	0.0
White and Asian	9.86	*	*	49	*	0.1
Black African	9.73	3.2	8	48	81	0.0
Indian	9.58	3.5	10	47	87	0.8
Other Black	9.50	*	*	47	*	0.0
Other	9.23	3.5	8	45	85	0.0
White and Black African	9.09	*	*	44	*	0.1
Other White	8.94	4.0	7	43	88	2.8
White British	8.83	3.5	8	42	85	46
Other Asian	8.57	3.5	5	39	82	0.0
White and Black Caribbean	8.39	*	*	38	*	0.1
Pakistani	8.33	3.6	6	37	85	0.2
Bangladeshi	7.81	*	*	33	*	0.1

Source: NEP, based on LFS 2006-2008 at 2008 prices.

Table 5.4: Hourly wages, by gender and religious affiliation, UK, 2006-2008 (£)

	Median gross hourly wages (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Men</b>						
Jewish	17.50	4.4	38	82	98	0.1
Hindu	12.02	4.8	12	62	95	0.6
Buddhist	11.44	4.2	13	59	93	0.2
No religion at all	11.25	4.1	14	58	93	10
Christian	11.24	4.1	14	58	93	35
Any other religion	11.14	3.9	12	58	91	0.4
Sikh	10.11	3.7	12	51	90	0.2
Muslim	8.05	4.0	6	35	88	1.0
<b>Women</b>						
Jewish	13.37	4.5	13	68	94	0.2
Buddhist	9.67	4.0	5	48	87	0.2
Hindu	9.56	3.8	9	47	89	0.5
Any other religion	9.43	3.7	9	46	88	0.4
No religion at all	9.04	3.7	7	43	86	9.0
Christian	8.82	3.5	8	42	85	41
Sikh	8.59	3.3	8	40	82	0.2
Muslim	8.32	3.6	6	37	84	0.6

Source: NEP, based on LFS 2006-2008 at 2008 prices.

Table 5.5: Hourly wages, by gender and disability status, UK, 2006-2008 (£)

	Median gross hourly wages (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Men</b>						
DDA-disabled	11.41	3.9	17	59	93	2.4
Not disabled	11.33	4.1	14	59	93	41
Work-limiting disabled only	9.61	3.6	10	48	88	1.5
DDA-disabled and work-limiting disabled	9.04	3.5	9	43	85	2.4
<b>Women</b>						
Not disabled	8.96	3.6	8	43	85	45
DDA-disabled	8.82	3.4	9	42	84	3.0
Work-limiting disabled only	8.43	3.5	7	38	84	1.5
DDA-disabled and work-limiting disabled	7.90	3.2	6	33	79	3.0

Source: NEP, based on LFS 2006-2008 at 2008 prices.

Table 5.6: Hourly wages, by gender and whether living in a same sex couple, UK, 2006-2008 (£)

	Median gross hourly wages (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Men</b>						
Living as a same sex couple	13.26	4.0	22	68	95	0.3
Not living as a same sex couple	11.14	4.1	13	58	93	47
<b>Women</b>						
Living as a same sex couple	12.39	3.7	20	64	92	0.3
Not living as a same sex couple	8.84	3.5	8	42	85	52

Source: NEP, based on LFS 2006-2008 at 2008 prices.

Table 5.7: Hourly wages, by gender and occupational social class, UK, 2006-2008 (£)

	Median gross hourly wages (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Men</b>						
Higher managerial and professional	19.75	3.4	57	87	98	9.4
Lower managerial and professional	14.29	3.2	34	72	94	13
Intermediate occupations	10.00	2.6	19	50	80	3.4
Lower supervisory and technical	9.85	2.6	14	49	77	7.6
Semi-routine occupations	7.65	2.4	7	31	63	5.8
Routine occupations	7.80	2.3	7	33	62	6.8
Never worked, unemployed, and not classified	5.83	3.5	2	13	65	1.5
<b>Women</b>						
Higher managerial and professional	17.46	3.2	50	82	97	4.9
Lower managerial and professional	12.59	2.9	28	65	89	17
Intermediate occupations	8.60	2.3	14	40	70	10
Lower supervisory and technical	7.11	2.2	6	26	59	3.4
Semi-routine occupations	6.50	2.0	5	20	49	10
Routine occupations	6.00	1.9	4	15	38	4.1
Never worked, unemployed, and not classified	5.80	3.4	2	13	63	2.3

Source: NEP, based on LFS 2006-2008 at 2008 prices.

Table 5.8: Hourly wages, by gender and housing tenure, UK, 2006-2008 (£)

	Median gross hourly wages (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Men</b>						
Being bought with mortgage or loan	12.64	4.0	19	65	94	29
Owned outright	10.51	4.3	12	54	93	5.0
Other	9.45	3.5	9	46	86	1.3
Individual private landlord	9.22	3.7	9	45	88	8.3
Social Housing	7.65	2.5	6	31	66	4.1
<b>Women</b>						
Being bought with mortgage or loan	9.75	3.6	9	49	87	32
Owned outright	8.50	3.6	8	39	86	4.6
Other	8.18	3.2	6	36	78	1.2
Individual private landlord	7.96	3.1	6	34	77	9.5
Social Housing	6.58	2.3	5	21	57	5.2

Source: NEP, based on LFS 2006-2008 at 2008 prices.

Table 5.9: Hourly wages, by gender and nation or region, UK, 2006-2008 (£)

	Median gross hourly wages (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Men</b>						
England	11.29	4.2	14	58	93	40
London	13.94	4.7	21	71	96	4.9
South East	12.85	4.7	16	66	95	9.1
Eastern	12.10	4.3	15	63	94	5.1
South West	11.03	3.9	13	57	91	4.9
West Midlands	10.58	3.8	13	54	90	4.7
East Midlands	10.48	3.8	12	54	90	4.8
North West (inc. Merseyside)	10.42	3.9	11	53	90	6.0
Yorkshire and the Humber	10.22	3.7	12	52	89	5.6
North East	10.14	3.5	12	51	88	2.7
Scotland	10.84	3.9	12	56	91	4.4
Wales	10.15	3.6	11	51	88	2.2
Northern Ireland	9.40	3.4	11	46	86	1.1
<b>Women</b>						
England	8.91	3.6	8	42	85	44
London	12.32	4.3	14	64	94	5.1
South East	9.49	3.7	8	47	87	5.6
Eastern	9.07	3.6	8	44	86	5.4
West Midlands	8.60	3.4	7	40	83	3.0
North West (inc. Merseyside)	8.50	3.3	7	39	82	6.8
South West	8.45	3.3	7	38	82	9.6
East Midlands	8.24	3.4	6	37	82	5.5
North East	8.13	3.2	7	36	80	5.1
Yorkshire and the Humber	8.08	3.3	7	35	81	6.0
Scotland	8.78	3.4	8	41	84	4.9
Northern Ireland	8.50	3.3	8	39	82	1.3
Wales	8.30	3.3	8	37	82	2.5

Source: NEP, based on LFS 2006-2008 at 2008 prices.

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Table 5.10: Hourly wages, by Index of Multiple Deprivation, England, Scotland and Wales, 2006-2008 (£)

	Median gross hourly wages (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>England</b>						
Highest tenth	12.69	4.6	14	65	95	12
2nd tenth	11.58	4.4	12	60	93	11
3rd tenth	11.01	4.1	12	57	92	11
4th tenth	10.56	4.0	11	54	91	11
5th tenth	10.32	3.8	10	53	90	10
6th tenth	9.80	3.6	10	49	87	10
7th tenth	9.34	3.5	9	46	85	10
8th tenth	8.98	3.3	9	43	83	9.0
9th tenth	8.26	3.1	7	37	79	8.1
Lowest tenth	7.68	2.8	6	31	72	6.8
<b>Wales</b>						
Highest tenth	11.89	3.7	16	62	91	12
2nd tenth	10.74	4.0	11	55	91	11
3rd tenth	9.76	3.6	11	49	88	10
4th tenth	9.70	3.5	10	48	86	11
5th tenth	9.07	3.6	7	43	84	10
6th tenth	8.77	3.1	8	41	79	9.5
8th tenth	8.30	2.9	8	37	77	11
7th tenth	8.27	3.0	9	37	79	10
9th tenth	7.93	2.7	7	34	72	8.4
Lowest tenth	7.21	2.6	6	27	68	7.6
<b>Scotland</b>						
Highest tenth	13.81	4.7	15	70	95	11
2nd tenth	12.28	4.1	14	63	93	12
3rd tenth	11.18	3.9	12	58	91	13
5th tenth	9.89	3.6	9	50	87	10
4th tenth	9.82	3.7	10	49	88	11
6th tenth	9.24	3.3	9	45	84	10
7th tenth	8.55	3.0	9	39	80	10
8th tenth	8.31	3.0	8	37	77	8.9
9th tenth	7.89	2.6	8	33	72	7.8
Lowest tenth	7.69	2.6	7	31	69	6.4

Source: NEP, based on LFS 2006-2008 at 2008 prices.

Table 5.11: Full-time employees weekly earnings, by gender, UK, 2006-2008 (£)

	Median gross weekly earnings (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>All</b>	447.9	3.7	10	50	90	100
<b>All men</b>	494.0	3.7	14	56	92	59
<b>All women</b>	386.0	3.5	6	39	83	41
<b>Men</b>						
40-44	574.7	3.7	22	67	95	8.7
45-49	562.4	3.6	22	66	94	7.8
35-39	554.4	3.5	21	65	94	8.3
50-54	543.6	3.7	20	63	94	6.4
30-34	512.8	3.2	18	59	91	7.1
55-59	494.9	3.5	16	57	92	5.6
60-64	431.4	3.4	13	47	88	3.3
25-29	429.7	2.8	13	47	81	6.1
65-69	383.8	3.7	8	39	88	0.3
20-24	312.1	2.4	6	24	59	3.9
70+	310.8	*	*	24	*	0.1
16-19	216.5	2.7	1	6	25	1.3
<b>Women</b>						
30-34	457.3	3.3	10	51	85	4.8
35-39	440.6	3.7	8	48	88	5.0
40-44	415.4	3.7	7	44	87	5.7
50-54	402.5	3.5	8	42	86	5.0
25-29	400.7	2.7	9	42	75	5.3
45-49	390.7	3.5	7	40	85	5.7
55-59	371.7	3.5	7	36	84	3.8
60-64	355.8	3.4	5	33	79	1.1
65-69	300.9	*	*	21	*	0.1
20-24	294.2	2.3	4	20	51	3.7
16-19	214.1	2.8	1	6	22	0.9
70+	*	*	*	*	*	0.0

Source: NEP, based on LFS 2006-2008 at 2008 prices.

Table 5.12: Full-time employees weekly earnings, by gender and other characteristics, UK, 2006-2008 (£)

	Median rank in the distribution	
	Men	Women
<b>a) Disability Status</b>		
DDA-disabled	58	39
Not disabled	58	40
Work-limiting disabled only	47	36
DDA-disabled and work-limiting disabled	43	30
<b>b) Nation and Region</b>		
England	58	40
London	70	61
South East	67	44
Eastern	62	42
South West	56	37
East Midlands	54	33
West Midlands	52	36
North West (inc. Merseyside)	50	34
Yorkshire and the Humber	50	32
North East	47	33
Scotland	54	36
Wales	50	32
Northern Ireland	43	33
<b>c) Whether living in same sex couple</b>		
Living in a same sex couple	60	56
Not living in a same sex couple	56	39

Table 5.12: (Continued)

	Median rank in the distribution	
	Men	Women
<b>d) Ethnicity</b>		
White and Asian	70	44
Chinese	65	51
White British	58	39
Other Mixed	57	52
Indian	56	43
Other White	53	39
Other Asian	50	42
Black Caribbean	50	46
Black African	50	45
Other Black	50	47
White and Black Caribbean	43	37
Other	43	40
White and Black African	41	47
Pakistani	31	34
Bangladeshi	29	30
<b>e) Religious Affiliation</b>		
Jewish	82	62
Hindu	62	49
Christian	57	39
No religion at all	57	41
Buddhist	56	43
Any other religion	56	43
Sikh	50	35
Muslim	36	35

Source: NEP, based on LFS 2006-2008 at 2008 prices.



## Chapter 6 Net individual incomes

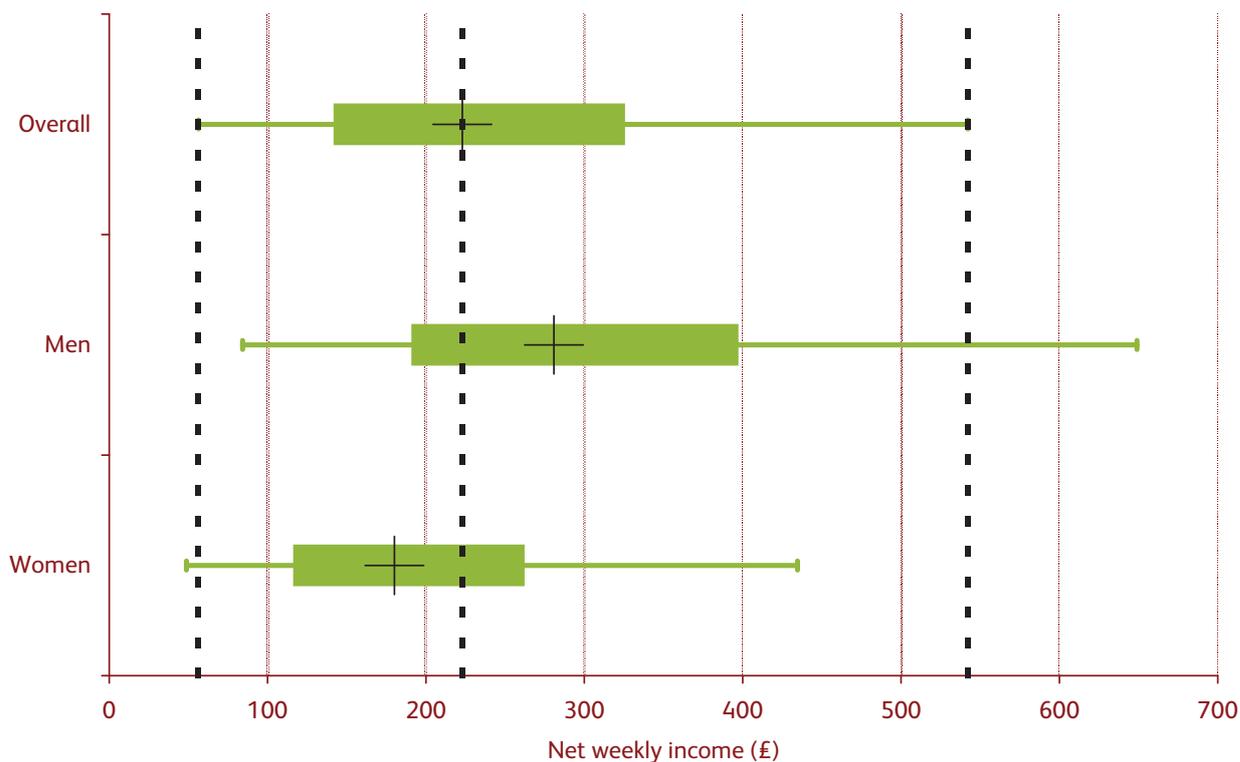
In the next chapter we look at people's incomes based on the total received by the household in which they live, on the assumption that all members share an equal standard of living. But for some purposes, we are also interested in the incomes which people receive in their own right, something which gains importance when resources are not equally shared within a couple, for instance. We looked at the distribution of weekly incomes directly received by each individual adult in Chapter 2 (Section 2.4), first in terms of the gross total incomes, then at net individual incomes, after deduction of direct taxes. In this chapter we look at the position of all adults from different population groups within the distribution of weekly net individual incomes pooled across the three financial years 2005-06 to 2007-08 (at 2007-08 prices). We can do this for eight of the dimensions in which we are interested, again starting with differences between men and women, and then looking at other groups for men and women separately. The data source (the Family Resources Survey (FRS)) does not ask questions linked to religious affiliation or sexual orientation.

### *Gender*

As we noted in Chapter 2, individual incomes are distributed across all adults much more unequally than earnings are across those in employment. Figure 6.1 and Table 6.1 show considerable differences both between men and women and within the distribution for each gender. The median female individual income, £180 per week, is less than two-thirds of the median for men, £281 per week.<sup>98</sup> A tenth of women have individual incomes above £435, in the top fifth of the overall distribution, but a tenth have incomes below £49 per week. A tenth of men receive more than £649 per week, but a tenth less than £84 per week. The spread measured by the 90:10 ratio is therefore nearly 8 for men and nearly 9 for women, which is not much lower than the ratio of 9.6 for the overall distribution. More than half of women are in the bottom 40 per cent of the distribution and more than half of men are in the top 40 per cent.

<sup>98</sup> As shown in Chapter 10, however, this is a substantial increase on the position eleven years earlier.

Figure 6.1: Net individual incomes, by gender, UK, 2005-06 to 2007-08 (£)



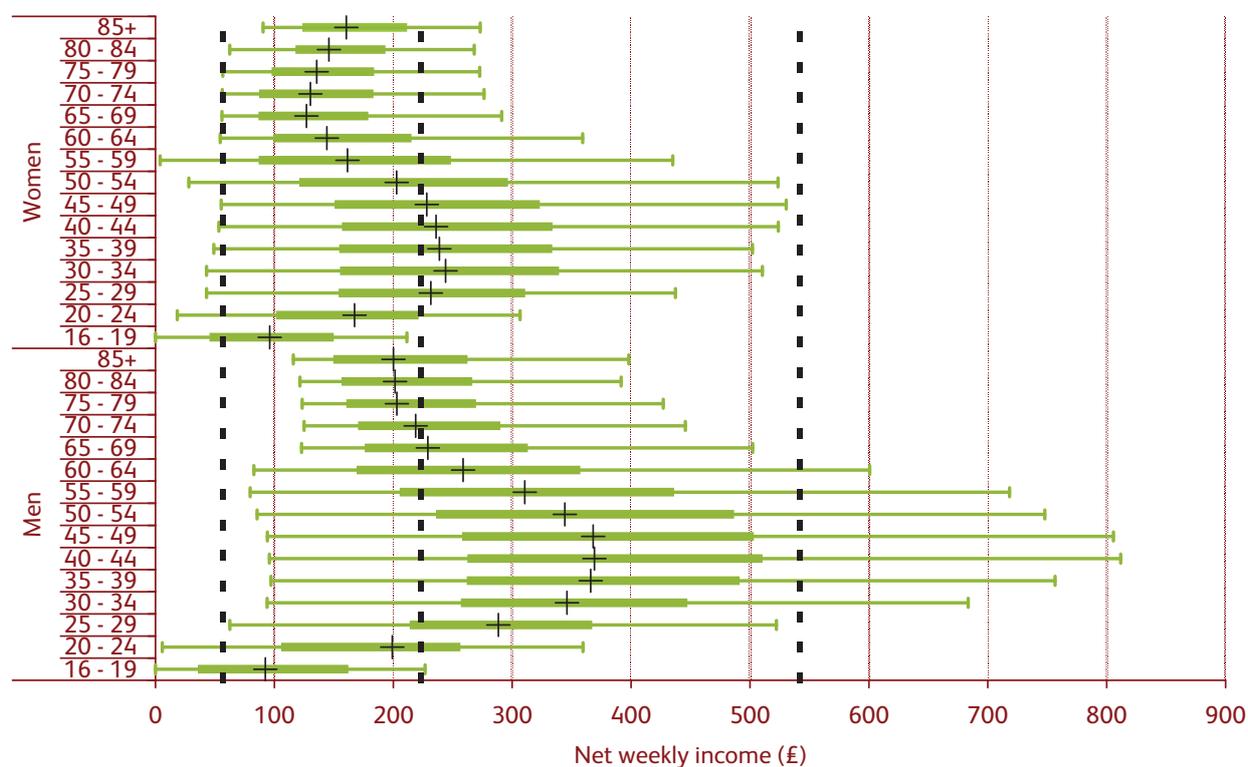
Source: National Equality Panel (NEP), based on Individual Income Series 2005-06 to 2007-08.

## Age

Figure 6.2 and Table 6.2 break these differences down by age. For both genders there is a pronounced age pattern but, at all ages, women have much lower individual incomes than men. At all ages before State Pension Age there are very wide spreads in income, particularly for women.<sup>99</sup> A tenth of men in their forties have net incomes above £812, and half above £369. Incomes for women in their thirties and forties are also higher than at other ages, but with a less pronounced peak. The cut-off for the highest tenth of women's incomes in each age group never reaches the cut-off for the top tenth of incomes overall (£542 per week). Apart from the very youngest, few men have individual incomes below £90 per week and, after State Pension Age, the cut-off for the poorest tenth rises to over £120. The pattern for women is different, with the cut-off for the poorest tenth coming between £40 and £60 in most age groups. For the oldest women, this cut-off rises, however, to £90 per week (as a larger proportion of older widows receive pensions directly, rather than their husbands receiving a married pension). One consequence of this strongly age-related pattern is that 70 per cent of all those aged 65 or over have incomes in the bottom half of the overall distribution, and so too do nearly two-thirds of those in their early twenties.

<sup>99</sup> At the youngest ages, where more than a tenth have little or no individual income, the 90:10 ratio ceases to be a useful measure.

Figure 6.2: Net individual incomes, by gender and age, UK, 2005-06 to 2007-08 (£)



Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

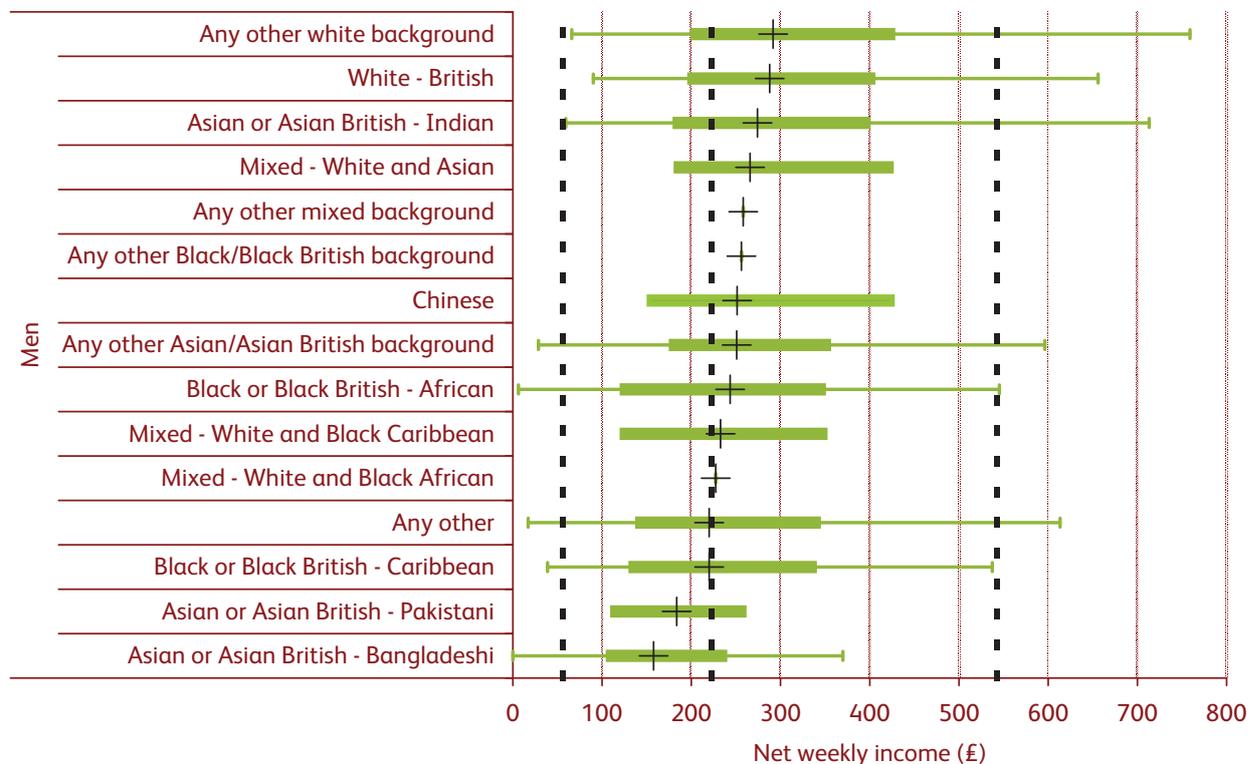
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## Ethnicity

Sample numbers, even pooling three years of data in the way we do here, are not large enough to show the full spread of individual incomes for all the groups in which we are interested, but Figure 6.3 and Table 6.3 show different patterns between the groups where full information is available. There are significant differences both in median incomes and those at the top. For White British men, the median income is £288, 30 per cent greater than those at the top. For Black or Black British Caribbean men, for instance, while the 90<sup>th</sup> percentile for White British men is 22 per cent higher than the 90<sup>th</sup> percentiles for Black or Black British Caribbean men. Strikingly, more than half of Asian or Asian British Pakistani women have individual incomes below £100 per week (and nearly half of Asian or Asian British Bangladeshi women), and so are in the bottom fifth overall. More than a tenth of Pakistani women and of Bangladeshi men have no reported income in their own right at all. Looking across ethnic groups, White men (British and other) are typically 30 places (out of 100) higher up the overall distribution than Asian or Asian British Bangladeshi men. Comparing men and women, only for Black or Black British Caribbean men and women are individual incomes at similar levels across the range. For other groups, women are typically 10-20 places (out of 100) below men of the same ethnicity. The median income for White British women is 24 places below the median for White British men in the overall distribution; for Asian or Asian British Indian women, the gap is 27 places.

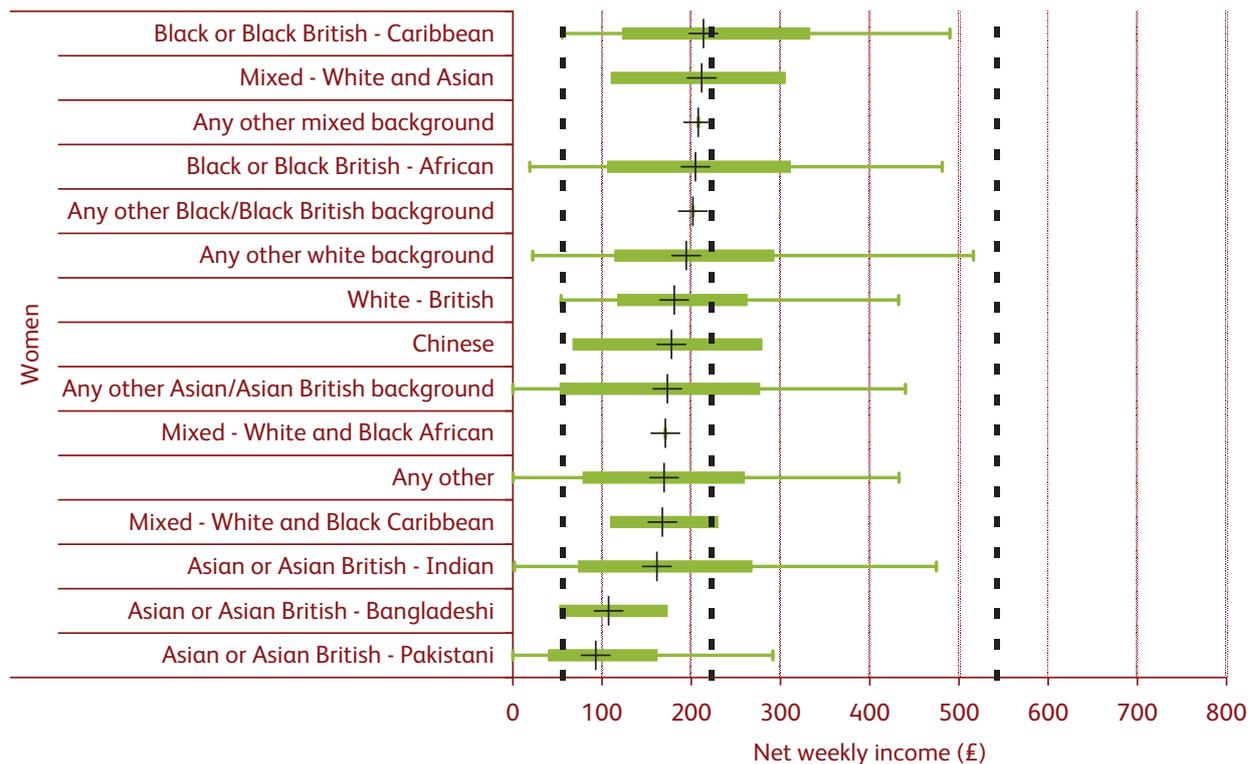
## An anatomy of economic inequality in the UK

Figure 6.3(a): Net individual incomes, by gender and ethnicity, men, UK, 2005-06 to 2007-08 (£)



Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

Figure 6.3(b): Net individual incomes, by gender and ethnicity, women, UK, 2005-06 to 2007-08 (£)



Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

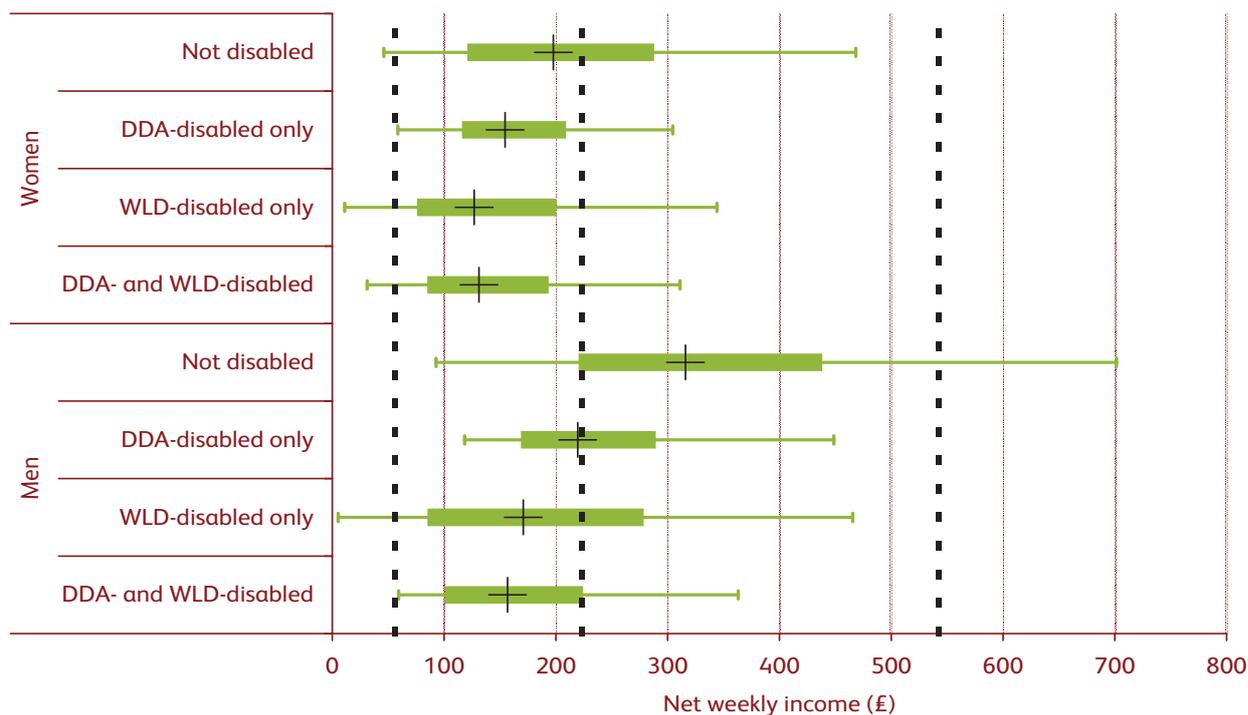
## Disability status

Figure 6.4 and Table 6.4 show the spread of individual incomes for men and women by disability status. As with the earlier analysis of earnings, the available data allow us to distinguish those who are disabled on the two definitions, one linked to the Disability Discrimination Act (DDA), the other to whether they report a condition that limits the work they can do.<sup>100</sup> As with the findings for earnings of employees, it is those who are disabled on both definitions who are most disadvantaged. The median individual income for men who are disabled on both definitions is £157, half the £316 for non-disabled men. For women the corresponding estimates are £131 and £198. A tenth of men disabled on both definitions have individual incomes below £59 per week, and a tenth of women in this situation have incomes below £31 per week. Unlike the position for earnings, however, those who are disabled according to the DDA definition, but do not report a work-limiting condition, also have much lower incomes than non-disabled people: the median income is £220 for men and £155 for women. A reason for the difference is that the population covered here includes not just employees, but others who are of working age, but not in paid work, and those over State Pension Age.<sup>101</sup> The effect of this is that 70 per cent of men and about 75 per cent of women disabled on both definitions are in the bottom half of this income distribution. The much lower levels of income for disabled people shown here are despite the inclusion within their incomes of ‘extra costs benefits’, which are intended to compensate for some of the additional costs disabled people face. In Box 7.1 in Chapter 7, we argue that a fairer comparison between the incomes of disabled and non-disabled people would exclude such benefits, and we show the effects of doing so.

<sup>100</sup> The individual income data are derived from the FRS, which contains two disability-related questions. The first asks whether the respondent thinks he/she experiences life problems due to illness, injury or disability. The second asks whether, again in the opinion of the respondent, injury, illness or disability affect their ability to work. We have used a combination of these two answers to derive a disability variable for individual income analysis. We constructed this measure specifically for this exercise; it is not a standard FRS output.

<sup>101</sup> The difference between incomes of women over 60 and men over 70 between those who are not disabled and those who are DDA-disabled only is much smaller than the overall difference, suggesting that this is a composition effect.

Figure 6.4: Net individual incomes, by gender and disability status, UK, 2005-06 to 2007-08 (£)



Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

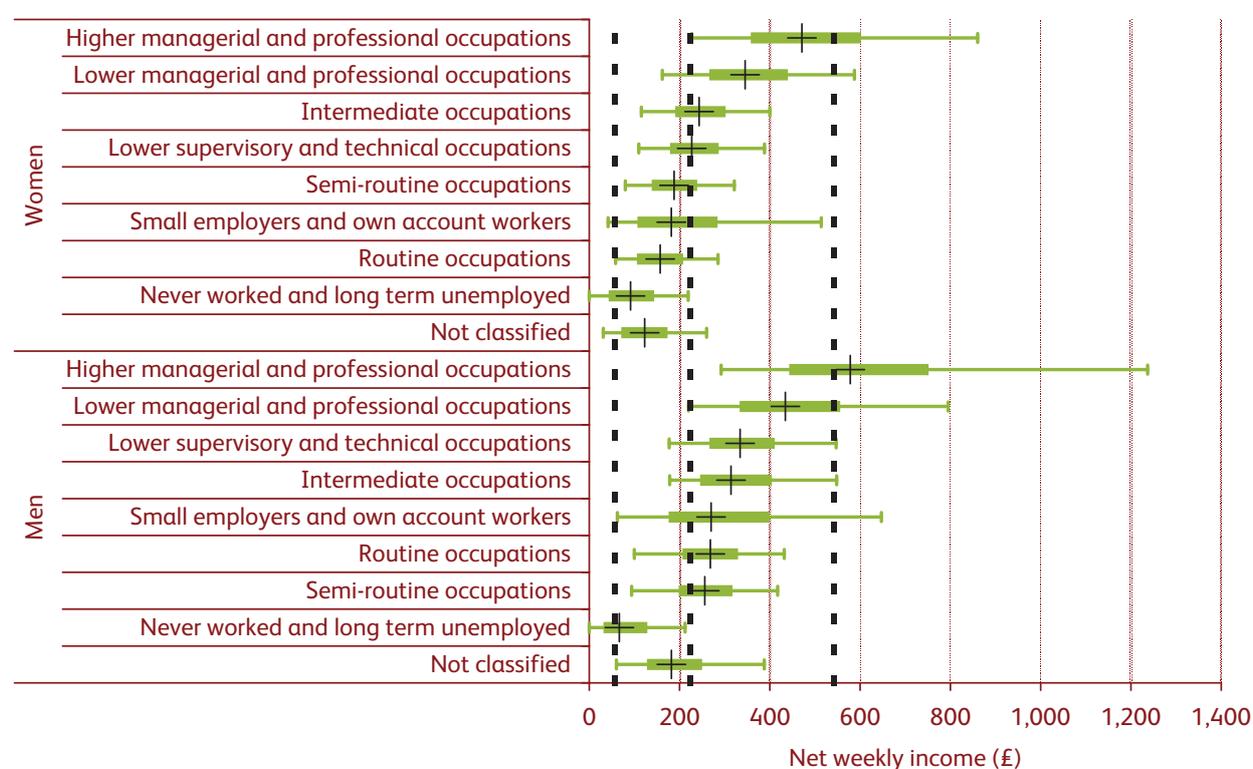
### Occupational social class

Given what we saw of weekly earnings variations for those in paid employment in Chapter 5, the degree of difference *between* different household occupational social class groups shown in Figure 6.5 may not come as a surprise.<sup>102</sup> It is also the case that income inequality *within* most of these groups is less than that for the population as a whole, unlike the other breakdowns we have examined so far in this section, although it is still substantial. The median individual income for men from higher managerial or professional households is £578 per week, more than twice the median for men from routine occupation households, £268 per week. For women, the corresponding differential is even larger: £471 compared with £157. The median individual income is below £100 per week for both men and women from households who have never worked or are long-term unemployed. A tenth of men in higher professional or managerial households have net incomes above £1,200 per week (compared to a corresponding figure of £1,500 for the gross earnings for full-time employees). The greatest within-group inequality is for small employers and 'own account' worker households, where for both men and women, incomes for those in the top tenth are more than ten times those for the poorest tenth. This illustrates the extent to which significant numbers of self-employed workers have very low incomes (affecting some ethnic groups more than others, with, for instance, 21 per cent of Pakistani men self-employed).

<sup>102</sup> Non-employed people (retired; looking after a home; on government employment or training schemes; and sick or disabled) are classified according to their last main job. Full-time students, the long-term unemployed and people who have never worked are assigned to a residual category: 'never worked, unemployed, not elsewhere classified'.

In terms of the positions these imply within the overall distribution of individual incomes, Table 6.5 shows the considerable differences between groups. 90 per cent of men and about 75 per cent of women in the top occupational group have individual incomes in the top third of the overall distribution. Half of men and nearly half of women from this group are in the top tenth of the overall distribution. Conversely, two-thirds of women from routine and semi-routine occupations have incomes in the bottom half overall. However, more than half of men even in these occupations still have individual incomes in the top half overall. Nearly all of both men and women classed as ‘never worked or long-term unemployed’ have incomes in the bottom half of the overall distribution, most of them in the bottom fifth or lower.

Figure 6.5: Net individual incomes, by gender and occupational social class, UK, 2005-06 to 2007-08 (£)

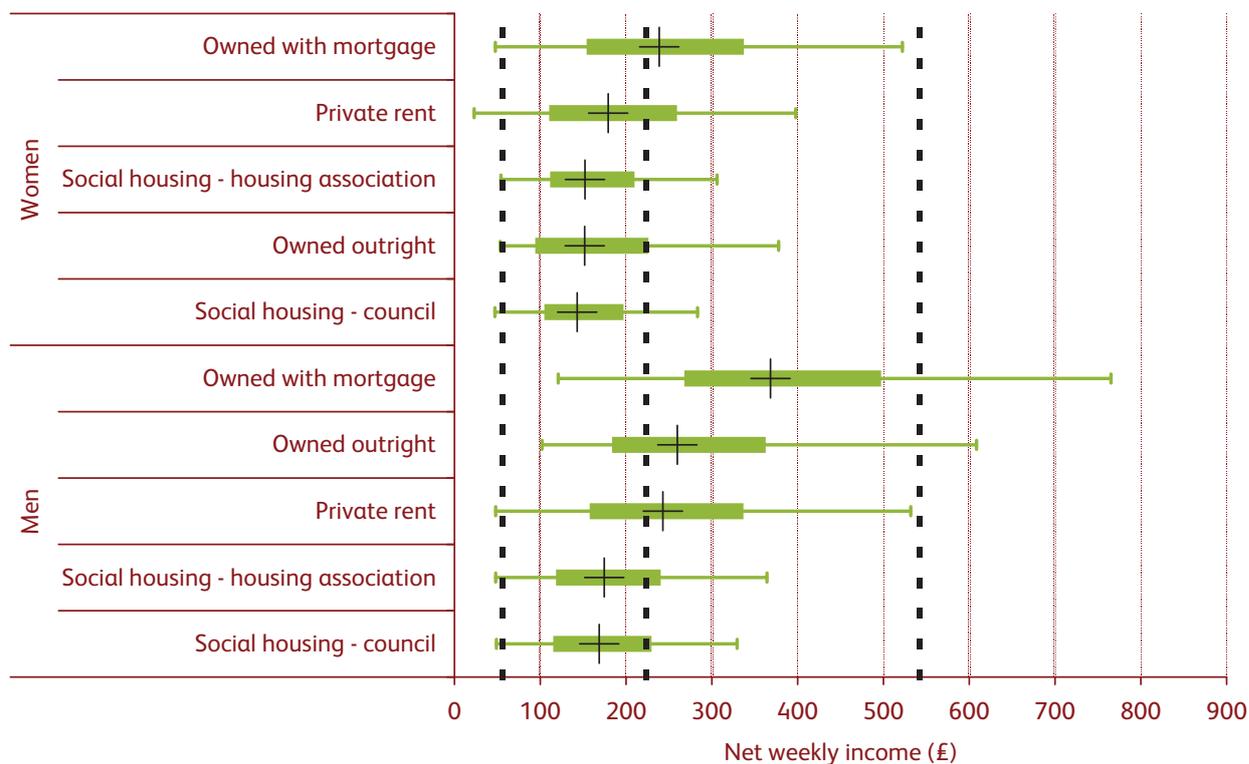


Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

### Housing tenure

Differences by housing tenure are linked to those by occupational class. Among owners buying with a mortgage, the median income is £368 per week for men, and £239 per week for women (Figure 6.6). These medians are greater than even the 90<sup>th</sup> percentile for male social tenants or the 75<sup>th</sup> percentile for female social tenants. The median income for social tenants is less than half the median for mortgagors for men and 60 per cent of the median for women. The greatest spread of incomes comes within the private rented sector, reflecting its role as a tenure of transition for some on the way to owner-occupation, but often as the only option for others with low incomes. As a result of these differences, half of male mortgagors are in the top quarter of the overall distribution, but half of all social tenants are in the bottom third (Table 6.6).

Figure 6.6: Net individual incomes, by gender and housing tenure, UK, 2005-06 to 2007-08 (£)

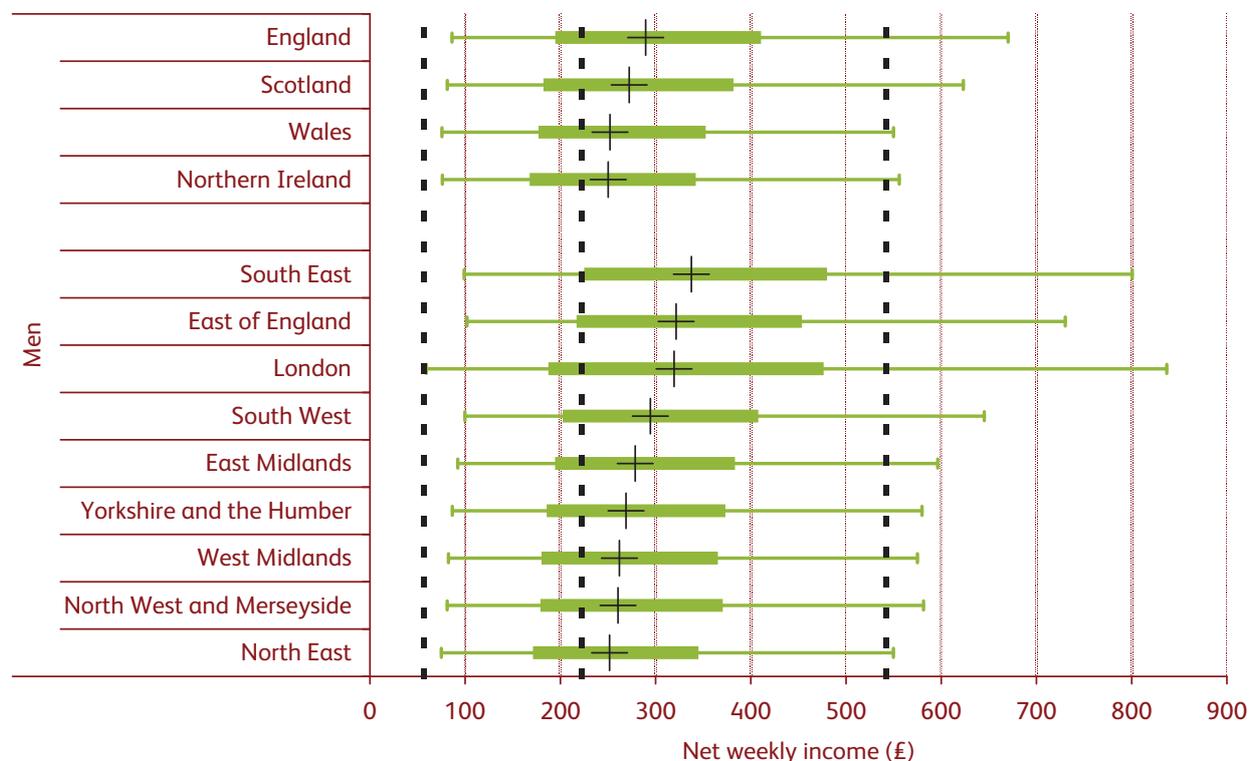


Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

### *Nation and region*

Individual incomes do not vary so greatly between the four nations, although they are typically somewhat higher in England for men. The highest incomes for men are also somewhat higher than those for their equivalents in the other nations, but otherwise the ranges shown in Figure 6.7 are fairly similar. Similarly, at regional level, the ranges for each region are fairly similar, with the exception of London and the South East. In London, the incomes of the richest are the highest of any region, but those of the poorest are the lowest, for both men and women. Confirming the capital's popular reputation for extremes, the 90:10 ratios are 14 for men and 18 for women, showing twice the inequality of the other English regions.

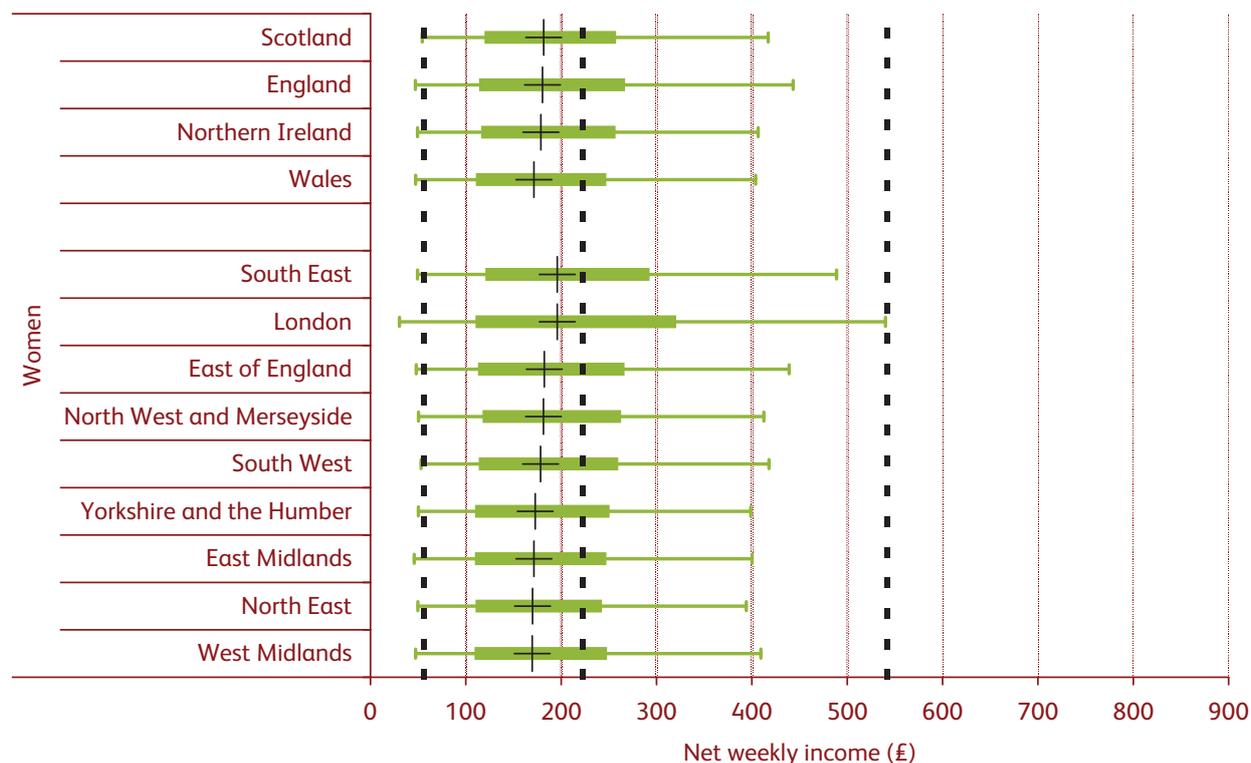
Figure 6.7(a): Net individual incomes, by gender and nation or region, men, UK, 2005-06 to 2007-08 (£)



Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

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Figure 6.7(b): Net individual incomes, by gender and nation or region, women, UK, 2005-06 to 2007-08 (£)

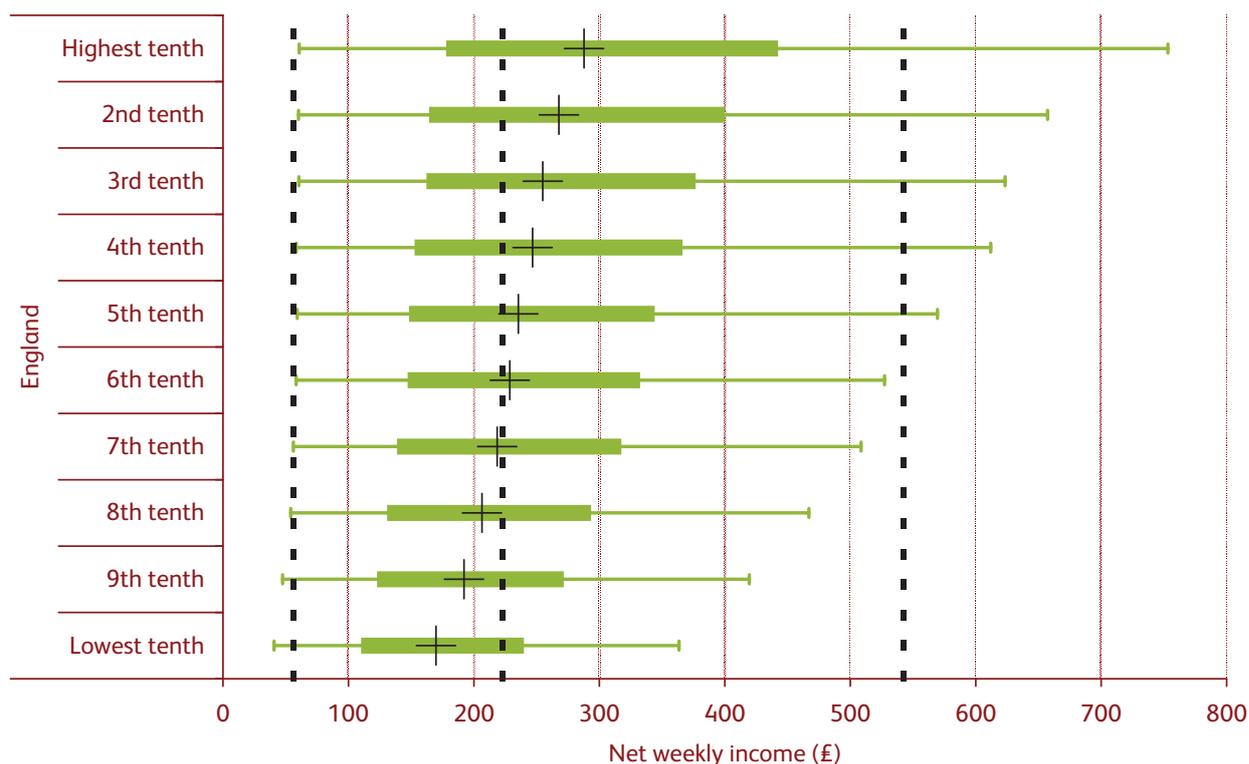


Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

## Area deprivation

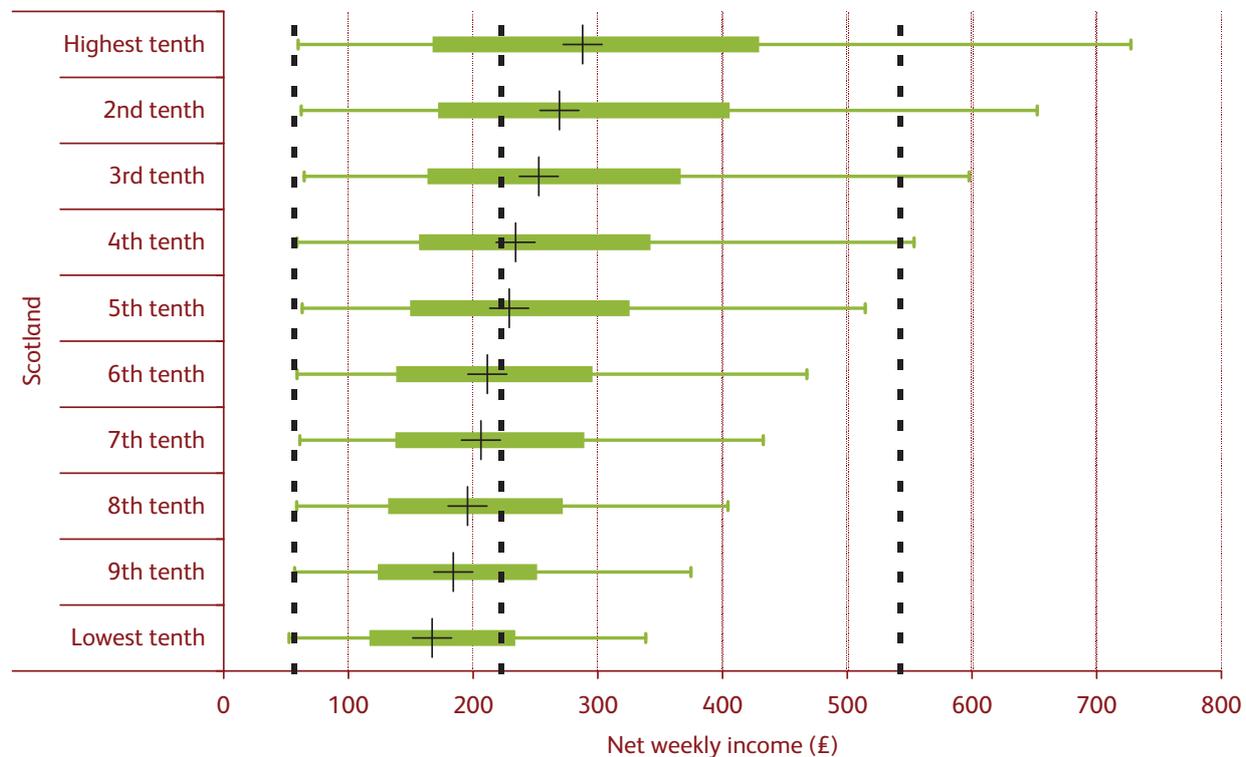
Bearing in mind that income levels are, indirectly, a factor in assessing the deprivation of areas, there are considerable differences in individual incomes between areas by level of deprivation. Median income for the least deprived area is 70 per cent higher than the median income for the most deprived area in both England and Scotland (Figure 6.8) and 56 per cent higher in Wales. There are even larger differences between those with the highest incomes in each kind of area – with 10 per cent having incomes above £700 in the least deprived English and Scottish areas, more than twice the highest incomes in the most deprived areas. As would be expected from the pattern of earnings described in Chapter 5, there is much less variation in the lowest individual incomes between areas, so the level of inequality ranges from 90:10 ratios of 6-9 in the most deprived areas to 11-12 in the least deprived areas. Median incomes for the least deprived areas are 23-28 places higher in the overall distribution than the medians for the most deprived ones.

Figure 6.8(a): Net individual incomes, by Index of Multiple Deprivation, England, 2005-06 to 2007-08, all adults (£)



Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

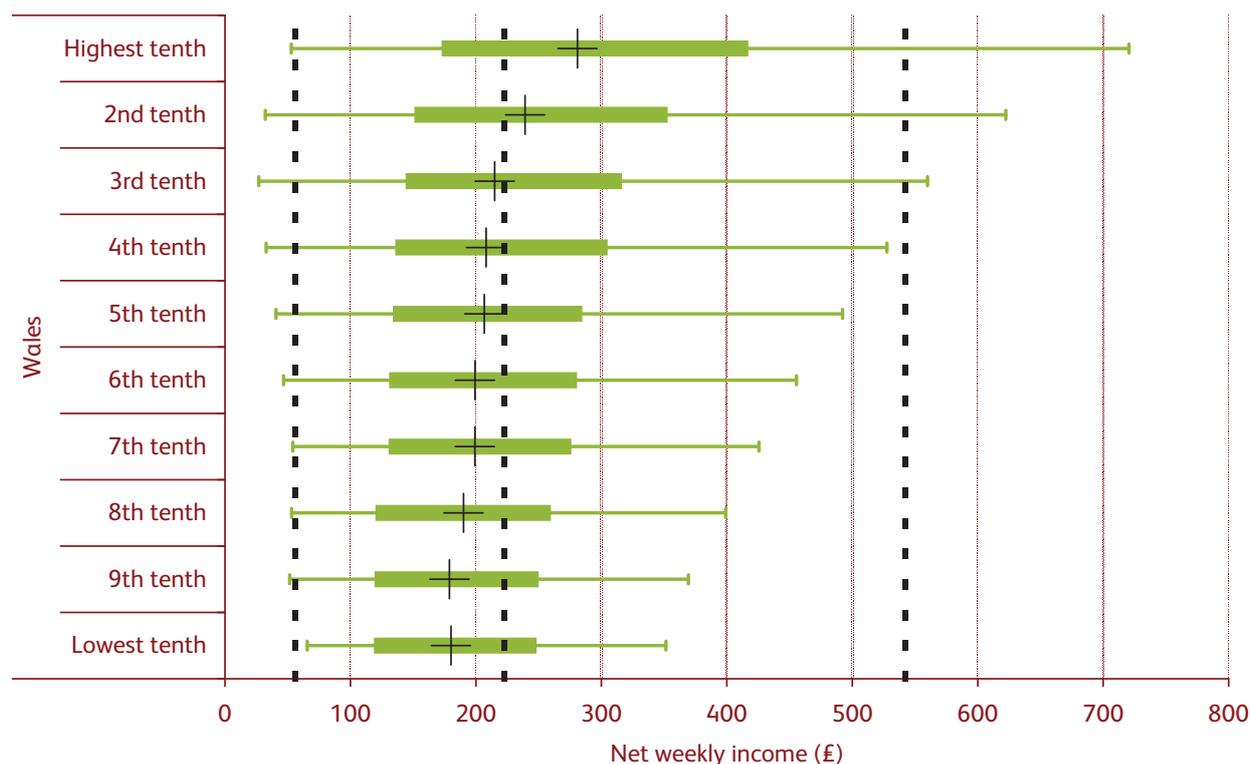
Figure 6.8(b): Net individual incomes, by Scottish Index of Multiple Deprivation, Scotland, 2005-06 to 2007-08, all adults (£)



Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

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Figure 6.8(c): Net individual incomes, by Welsh Index of Multiple Deprivation, Wales, 2005-06 to 2007-08, all adults (£)



Source: NEP, based on Individual Income Series 2005-06 to 2007-08.

## An anatomy of economic inequality in the UK

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Table 6.1: Net individual incomes, by gender, UK, 2005-06 to 2007-08 (£), all adults

	Median net individual incomes (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
Overall	223	9.6	10	50	90	100
Men	281	7.7	15	62	93	47
Women	180	8.9	8	39	82	53

Source: NEP, based on Individual Income Series, 2005-06 to 2007-08.

Table 6.2: Net individual incomes, by gender and age, UK, 2005-06 to 2007-08 (£), all adults

	Median net individual incomes (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Men</b>						
40-44	369	8.5	18	76	96	4.7
45-49	368	8.6	17	76	96	4.3
35-39	366	7.8	18	75	96	4.6
30-34	346	7.3	17	73	94	3.8
50-54	344	8.7	15	72	95	4.0
55-59	311	9.0	14	67	95	4.1
25-29	288	8.4	11	63	88	3.2
60-64	259	7.3	15	58	92	3.8
65-69	229	4.1	24	51	87	3.3
70-74	219	3.6	25	48	83	2.7
75-79	203	3.5	24	44	82	2.1
80-84	201	3.2	23	44	78	1.4
85+	200	3.4	22	44	79	0.7
20-24	199	>30	3	44	75	2.9
16-19	92	*	1	17	50	1.4
<b>Women</b>						
30 - 34	244	12	7	54	88	4.5
35 - 39	239	10	8	53	87	5.2
40 - 44	236	9.8	8	53	90	5.3
25 - 29	232	10	7	52	83	3.9
45 - 49	228	9.6	9	51	90	4.6
50 - 54	203	19	5	44	88	4.2
20 - 24	167	17	4	36	67	3.3
55 - 59	161	>30	3	34	82	4.4
85+	161	3.0	17	34	61	1.3
80 - 84	146	4.3	11	30	59	1.8
60 - 64	144	6.6	9	30	74	4.1
75 - 79	136	4.8	10	28	60	2.6
70 - 74	130	4.9	9	26	61	3.0
65 - 69	127	5.2	9	25	64	3.5
16 - 19	96	*	1	18	47	1.3

Source: NEP, based on Individual Income Series, 2005-06 to 2007-08.

## An anatomy of economic inequality in the UK

Table 6.3: Net individual incomes, by gender and ethnicity, UK, 2005-06 to 2007-08 (£), all adults

	Median net individual incomes (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Men</b>						
Any other white background	292	11	12	64	96	1.7
White – British	288	7.3	16	63	94	42
Asian or Asian British – Indian	274	12	10	61	95	0.9
Mixed – White and Asian	266	*	*	59	*	0.1
Any other mixed background	258	*	*	57	*	0.1
Any other Black/Black British background	256	*	*	57	*	0.0
Chinese	251	*	*	56	*	0.2
Any other Asian/Asian British background	251	>30	5	56	92	0.3
Black or Black British – African	244	>30	3	54	90	0.4
Mixed – White and Black Caribbean	233	*	*	52	*	0.1
Mixed – White and Black African	227	*	*	51	*	0.0
Any other	220	>30	4	49	92	0.5
Black or Black British – Caribbean	220	14	6	49	90	0.4
Asian or Asian British – Pakistani	184	*	*	40	*	0.6
Asian or Asian British – Bangladeshi	158	*	1	33	76	0.1

Table 6.3: (Continued)

	Median net individual incomes (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Women</b>						
Black or Black British – Caribbean	214	8.9	9	47	86	0.5
Mixed – White and Asian	212	*	*	47	*	0.1
Any other mixed background	208	*	*	46	*	0.1
Black or Black British – African	205	25	4	45	86	0.5
Any other Black/Black British background	202	*	*	44	*	0.0
Any other white background	194	23	5	42	88	2.0
White – British	181	8.0	9	39	82	47
Chinese	178	*	*	38	*	0.2
Any other Asian/Asian British background	173	*	1	37	83	0.3
Mixed – White and Black African	171	*	*	37	*	0.1
Any other	169	>30	1	36	82	0.6
Mixed – White and Black Caribbean	168	*	*	36	*	0.1
Asian or Asian British – Indian	161	>30	3	34	85	0.9
Asian or Asian British – Bangladeshi	107	*	*	20	*	0.2
Asian or Asian British – Pakistani	93	*	1	17	64	0.6

Source: NEP, based on Individual Income Series, 2005-06 to 2007-08.

Table 6.4: Net individual incomes, by gender and disability status, UK, 2005-06 to 2007-08 (£), all adults

	Median net individual incomes (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Men</b>						
Not disabled	316	7.6	17	68	95	36
DDA-disabled	220	3.8	23	49	84	5.8
Work-limiting disabled only	171	>30	3	36	85	1.3
DDA-disabled and work-limiting disabled	157	6.1	10	33	75	4.1
<b>Women</b>						
Not disabled	198	10	7	43	85	40
DDA-disabled	155	5.2	10	32	66	8.2
Work-limiting disabled only	127	>30	4	25	72	1.7
DDA-disabled and work-limiting disabled	131	10	6	27	67	3.6

Source: NEP, based on Individual Income Series, 2005-06 to 2007-08.

Table 6.5: Net individual incomes, by gender and occupational social class, UK, 2005-06 to 2007-08 (£), all adults

	Median net individual incomes (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Men</b>						
Higher managerial and professional occupations	578	64	91	98	5.4	9.4
Lower managerial and professional occupations	434	49	82	96	7.3	13
Intermediate occupations	314	38	68	90	2.0	3.4
Small employers and own account workers	270	11	60	93	3.9	7.6
Lower supervisory and technical occupations	334	38	71	90	4.1	5.8
Semi-routine occupations	256	17	57	81	3.6	6.8
Routine occupations	268	19	60	82	4.5	
Never worked and long term unemployed	67	1	12	47	1.4	
Not classified	182	11	39	78	15	1.5
<b>Women</b>						
Higher managerial and professional occupations	471	50	85	97	2.5	4.9
Lower managerial and professional occupations	345	34	73	91	8.8	17
Intermediate occupations	243	22	54	79	5.7	10
Small employers and own account size workers	182	7	39	88	1.4	3.4
Lower supervisory and technical occupations	227	21	50	78	1.5	
Semi-routine occupations	188	14	41	69	5.9	
Routine occupations	157	10	33	63	2.5	10
Never worked and long term unemployed	91	1	17	49	3.2	4.1
Not classified	123	6	24	58	21	2.3

Source: NEP, based on Individual Income Series, 2005-06 to 2007-08.

Table 6.6: Net individual incomes, by gender and housing tenure, UK, 2005-06 to 2007-08 (£), all adults

	Median net individual incomes (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Men</b>						
Owned with mortgage	368	6.3	23	76	96	20
Owned outright	260	6.0	19	58	92	15
Private rent	243	11.1	8	54	90	4.9
Social housing – housing association	175	7.6	8	37	75	2.8
Social housing – council	169	6.7	8	36	70	4.4
<b>Women</b>						
Owned with mortgage	239	11.0	8	53	88	20
Private rent	179	17.3	5	39	79	5.4
Social housing – housing association	152	5.7	9	32	67	4.0
Owned outright	152	7.1	8	32	77	18
Social housing – council	143	6.0	7	30	62	5.9

Source: NEP, based on Individual Income Series, 2005-06 to 2007-08.

Table 6.7: Net individual incomes, by gender and nation or region, UK, 2005-06 to 2007-08 (£), all adults

	Median net individual incomes (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>Men</b>						
England	290	7.8	16	64	94	34
South East	338	8.1	18	71	96	7.8
Eastern	322	7.2	19	69	95	5.4
London	319	14.1	10	69	97	5.6
South West	295	6.5	18	64	93	4.7
East Midlands	279	6.5	17	62	92	4.4
Yorkshire and the Humber	269	6.7	16	60	91	5.1
West Midlands	262	7.0	15	58	91	5.1
North West and Merseyside	260	7.2	15	58	91	6.6
North East	252	7.3	13	56	90	2.5
Scotland	272	7.7	15	60	93	7.4
Wales	252	7.3	14	56	90	2.1
Northern Ireland	250	7.3	14	56	90	3.3
<b>Women</b>						
England	180	9.4	7	39	83	38
South East	196	9.9	8	43	86	8.7
London	196	17.8	5	43	90	6.5
Eastern	182	9.1	8	39	83	5.9
North West and Merseyside	181	8.2	8	39	80	7.4
South West	178	7.9	8	38	81	5.1
Yorkshire and the Humber	173	7.9	8	37	79	5.7
East Midlands	171	8.7	7	37	79	4.9
North East	170	7.9	8	36	79	2.9
West Midlands	170	8.6	7	36	80	5.7
Scotland	182	7.7	9	39	81	8.6
Northern Ireland	179	8.2	8	38	80	3.8
Wales	171	8.5	7	37	80	2.4

Source: NEP, based on Individual Income Series, 2005-06 to 2007-08.

## An anatomy of economic inequality in the UK

Table 6.8: Net individual incomes, by Index of Multiple Deprivation, England, Scotland and Wales, 2005-06 to 2007-08 (£), all adults

	Median net individual incomes (£)	90:10 ratio	Rank in the distribution			Population proportion (%)
			10 <sup>th</sup>	Median	90 <sup>th</sup>	
<b>England</b>						
Highest tenth	288	12.4	11	63	96	11
2nd tenth	268	10.9	11	59	94	10
3rd tenth	255	10.3	11	57	93	10
4th tenth	247	10.5	10	55	92	10
5th tenth	235	9.6	10	52	91	10
6th tenth	229	9.0	10	51	89	10
7th tenth	219	9.1	9	48	88	9.2
8th tenth	206	8.7	9	45	85	10
9th tenth	192	8.8	7	42	81	10
Lowest tenth	170	8.9	6	36	75	10
<b>Wales</b>						
Highest tenth	281	11.1	10	62	94	11
2nd tenth	239	10.1	9	53	90	10
3rd tenth	215	7.9	11	47	87	10
4th tenth	208	9.2	9	46	87	11
5th tenth	207	10.0	8	45	87	8.7
6th tenth	199	8.5	8	44	82	9.4
8th tenth	199	7.9	10	44	84	10
7th tenth	190	7.6	8	41	76	8.3
9th tenth	179	7.8	8	38	78	10
Lowest tenth	180	7.3	8	39	73	10
<b>Scotland</b>						
Highest tenth	288	12.2	10	63	95	10
2nd tenth	269	10.5	11	60	93	10
3rd tenth	253	9.3	12	56	92	11
5th tenth	234	9.4	10	52	90	10
4th tenth	229	8.2	11	51	88	11
6th tenth	211	7.9	10	47	85	10
7th tenth	206	7.1	11	45	82	10
8th tenth	196	6.9	10	43	80	9.3
9th tenth	184	6.6	10	40	76	10
Lowest tenth	167	6.4	8	35	72	8.9

Source: NEP, based on Individual Income Series, 2005-06 to 2007-08.

## Chapter 7 Equivalent net income – incomes on a household basis

The main official income distribution statistics in the UK are based on the income of the household in which an individual lives, adjusted for household size (see Box 2.5 in Chapter 2 for more details of how this ‘equivalent net income’ is calculated). While the net individual income described in the last chapter measures the resources available to individuals in their own right, and over which they will have strongest control, equivalent net income measures the resources available to people on the assumption that they are shared equally within the household. In this chapter we examine the equivalent net incomes of groups by gender, age, ethnicity, disability status, occupational social class, housing tenure, nation and region, and area deprivation. The source is again the Family Resources Survey (FRS), so we cannot present breakdowns by religious affiliation or sexual orientation. As the equal sharing assumption means that men and women within couples are allocated the same income level, we do not present the other breakdowns on a gender basis.

This ‘equal sharing’ assumption is clearly unrealistic in some cases, although a ‘no sharing’ assumption would be even less realistic in many others. Box 7.1 discusses some of the issues related to this. We present the analysis on the basis of incomes before deducting housing costs (but show the effects of doing so where most relevant). For most of the analysis in contrast to the last section, children are included as individuals (with income depending on that of the household in which they live). As in the previous chapter, because this information was not collected by the survey, we cannot present breakdowns related to religious affiliation or sexual orientation. The breakdowns we present by gender, age, and disability relate to the position of the individual concerned. For ethnicity, the analysis is by that of individual adults (but is not available for children). Social class is that allocated to the household as a whole, while tenure, nation and region, and area deprivation are the same for each household member.

### Box 7.1: Income measurement and assumptions about sharing within the household

In this chapter we present information on the ‘equivalent net incomes’ of people calculated on the same basis as the main official income distribution statistics, produced by the Department for Work and Pensions (DWP) for its annual *Households Below Average Income* (HBAI) analysis. This measure assumes that resources are pooled and equally shared within households. Making an assumption about what happens within the household is not needed when analysing wages or earnings (as in Chapters 5 and 6) because there is a one-to-one relationship between the income earner and income recipient. However, this is no longer true when one moves to the household level. Some individuals may not receive any income at all in their own name, such as partners who are not in paid employment or dependent children, and yet the income of the household as a whole ensures some level of consumption or access to resources, through sharing within the household. The problem for analysing income distribution is that we do not observe what actually happens within the household, and what happens is likely to vary between households.

This chapter follows the practice almost universally employed in current analysis of income distribution, assuming that, within each household, incomes are pooled and the total is equally shared with each household member. Thus, each individual within the same household, whether adult or child, is assumed to receive the same income. This allocation rule is likely to be wrong when considering multi-person households. Qualitative research on financial management by couples has drawn attention to the different allocation systems that couples use and, although not specifically about sharing rules, the results suggest there is variation in such arrangements, including unequal sharing.<sup>103</sup> Other research, based on interviews with poor families, reveals how parents, especially mothers, may go without items or activities in order to provide for their children.<sup>104</sup> Differences in how income is used between parents and children are also revealed by analysis of US spending data.<sup>105</sup> Subsequent research on economic models of family decision-making has continued this tradition of deriving sharing rules, developing theoretical models that are fitted to survey data, though focusing on allocations between partners to a couple rather than parents and children.<sup>106</sup> Although progress has been made in this area, it has not yielded recommendations for income distribution analysis to employ alongside or instead of the ubiquitous equal-sharing rule.

There are two relatively ad hoc approaches to examining the sensitivity of conclusions to this assumption.<sup>107</sup> The first is to look, as we do in Chapter 6, at distributions of ‘individual income’ rather than household income. This shows the income which each individual reports receiving from all sources, and hence is in many ways the polar opposite case to the equal-sharing one. It will be important, for instance, to the extent that actual receipt of an income source indicates control over its allocation. As can be

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<sup>103</sup> Pahl (1983). See also the survey-based research of Vogler (1989).

<sup>104</sup> Middleton *et al.* (1997).

<sup>105</sup> Lazear and Michael (1986, 1988).

<sup>106</sup> See, for instance, the overview by Bourguignon and Chiappori (1992).

<sup>107</sup> Jenkins (1991).

seen by comparing the results in this chapter with those in Chapter 6, this approach suggests much larger differences in incomes between men and women than seen in equivalent net income.

The issues are not only about sharing within couples and between parents and children. A second type of sensitivity analysis allows for unequal sharing within *households*, by instead assuming equal sharing within *families*. The distinction between families and households is that a household also includes individuals at the same address who are not part of the nuclear family, such as grandparents, adult children, or unrelated lodgers. These are individuals who are likely to have relatively low incomes, and so this alternative approach tends to raise the proportion of individuals who are poor and increase inequality.<sup>108</sup>

If everyone lived alone, rather than in households, the discussion in the last chapter shows that there would be huge inequalities. But households come in different shapes and sizes, bringing both the ability to share where individuals have little income in their own right, but also greater responsibilities and needs where they are larger, for instance where there are children. The kind of household people live in has important effects on their potential standard of living, as measured by equivalent net income. This in turn affects the relative positions of groups with different characteristics – older people are more likely to live alone, for instance, and women are more likely than men to be lone parents. To provide part of the context for the findings in this section, Box 7.2 shows the proportions of kinds of individual living in different household types (which can be compared with the information on incomes of different types of household shown in Box 2.5 in Chapter 2).

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<sup>108</sup> See, for instance, Johnson and Webb (1989) who show that the proportion of the population with income below half mean income at the time was 11.1 per cent, when sharing within families was assumed, but 8.1 per cent when equal sharing between households was assumed, even when they contained more than one family.

### Box 7.2: Household type and other characteristics

Some of the differences in incomes shown in this chapter between people with different characteristics are associated with the way in which they are more likely to live in particular kinds of household. As we showed in Box 2.5 in Chapter 2, there are substantial differences between the incomes of different household types.

Table 7A shows the proportion of each group who were living in different kinds of households in 2007-08.

Women are more likely to be in lone parent families than men (7 per cent compared to 1 per cent) and more likely to be single pensioners (14 per cent compared with 5 per cent).

By ethnicity, Asian or Asian British adults are much more likely than others to live in a couple, with or without children, and relatively unlikely to be in a lone parent family, as are those from the 'Chinese or other' group (only 3 per cent).

Differences by socio-economic classification are generally small. However, those who have never worked or are not classified are much more likely to be in pensioner households.

By tenure, those in social housing are more likely to be in lone parent families and less likely to be in a childless couple. Unsurprisingly, outright owners are more likely than others to be pensioners.

Table 7A: Individuals within different groups by household type, UK:  
Percentage of individuals (including children)

	Pensioner couple	Single pensioner	Couple with children	Couple without children	Single with children	Single without children
Children	*	*	76	*	24	*
Men	17	5	24	25	1	28
Women	16	14	23	23	7	17
<b>Age group (17+)</b>						
17-25	*	*	15	17	7	60
26-45	*	*	47	25	7	20
46-65	*	*	16	41	7	20
Over 66	55	45	*	*	*	*
<b>Ethnicity (adults)</b>						
White British	17	10	22	25	4	22
Mixed	6	3	24	17	11	38
Asian or Asian British	6	4	41	23	3	23
Black or Black British	7	6	26	14	13	34
Chinese or other	8	5	27	28	3	30

Table 7A: (Continued)

	Pensioner couple	Single pensioner	Couple with children	Couple without children	Single with children	Single without children
<b>DDA-disability</b>						
Not DDA-disabled	10	4	39	20	9	18
DDA-disabled	27	23	14	14	6	17
<b>Socio-economic class (adults)</b>						
Higher managerial and professional	5	1	37	35	2	20
Lower managerial and professional	5	1	32	37	4	21
Intermediate	5	2	27	34	5	27
Small employers and own account workers	10	2	35	33	3	18
Lower supervisory and technical	5	1	30	35	3	27
Semi-routine	7	2	27	28	7	29
Routine	9	2	26	28	5	32
Never worked and long term unemployed	13	12	21	10	9	34
Not classified	36	25	10	10	4	17
<b>Housing tenure</b>						
Social rented	8	13	26	9	23	21
Private rented	3	4	28	21	12	31
Owned outright	35	17	14	18	2	15
Owned with mortgage	3	1	53	23	6	15

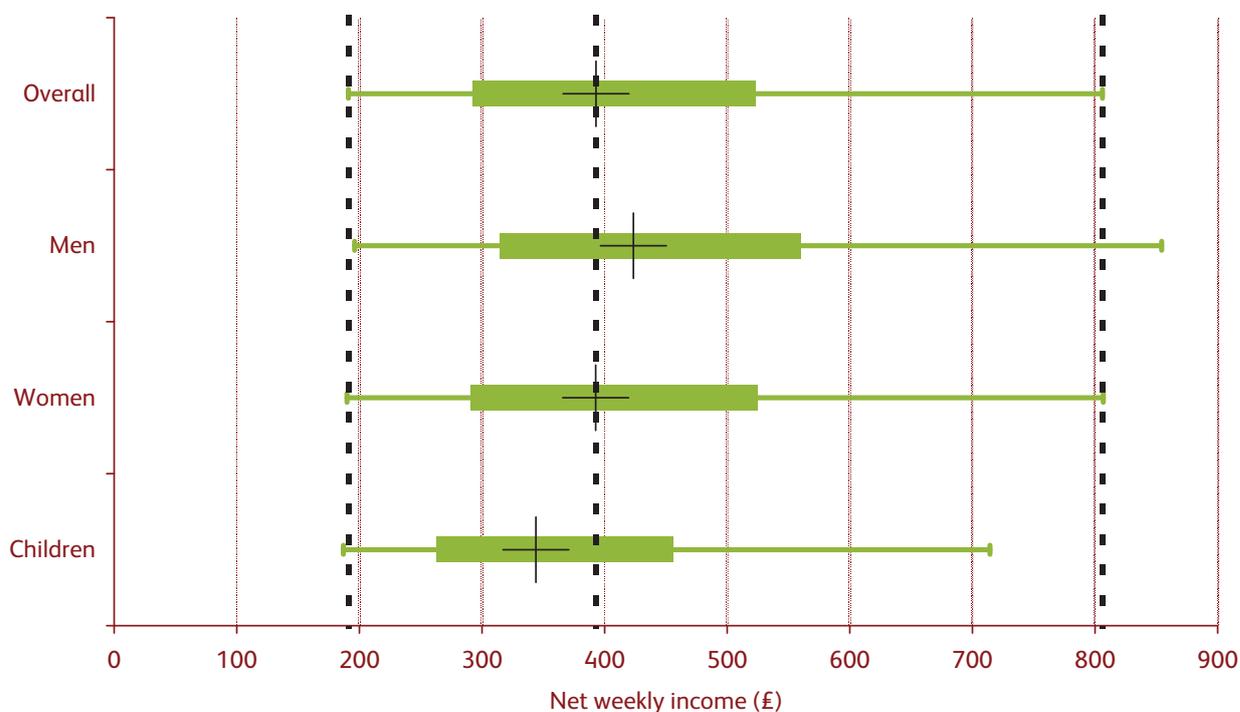
Source: FRS 2007-08.

Note: \* Less than 0.5 percent. Percentages may not sum to 100 per cent due to rounding.

### Gender

Figure 7.1 and Table 7.1 show, in the same format as before, the spread of incomes on this basis in the single year 2007-08 of all individuals in the population, adults by gender, and for children.<sup>109</sup> Median equivalent net income was £393 overall (in terms of the amount of weekly income that would give a couple with no children the same standard of living), with the ratio of 4.2 between the cut-offs for the top and bottom tenths already presented in Chapter 2. Given the household basis and the equal sharing assumption, gender differences only arise from differences between the incomes of single men and women and from the proportions of each that are single. They are, therefore, very much smaller than those in earnings or in individual incomes. Nonetheless, the median income for women is 7 per cent lower than the median for men, corresponding to being 6 places (out of 100) lower in the overall distribution than men. The difference arises from the lower incomes of women who live alone than of men and the greater likelihood of women to be single parents and older single pensioners. Given the comparatively small differences between men and women on this income definition, the remaining breakdowns described below are presented for all individuals, rather than split by gender as in the previous sections of this chapter.<sup>110</sup> As we explore below, median income for children – that is, the households in which they live – is lower than for adults as a whole (some of whom live in households without children). The second panels of the figure and table show the corresponding number for income after housing costs, which are both lower and more unequal.

Figure 7.1(a): Equivalent net income (BHC), for men, women and children, UK, 2007-08 (£)

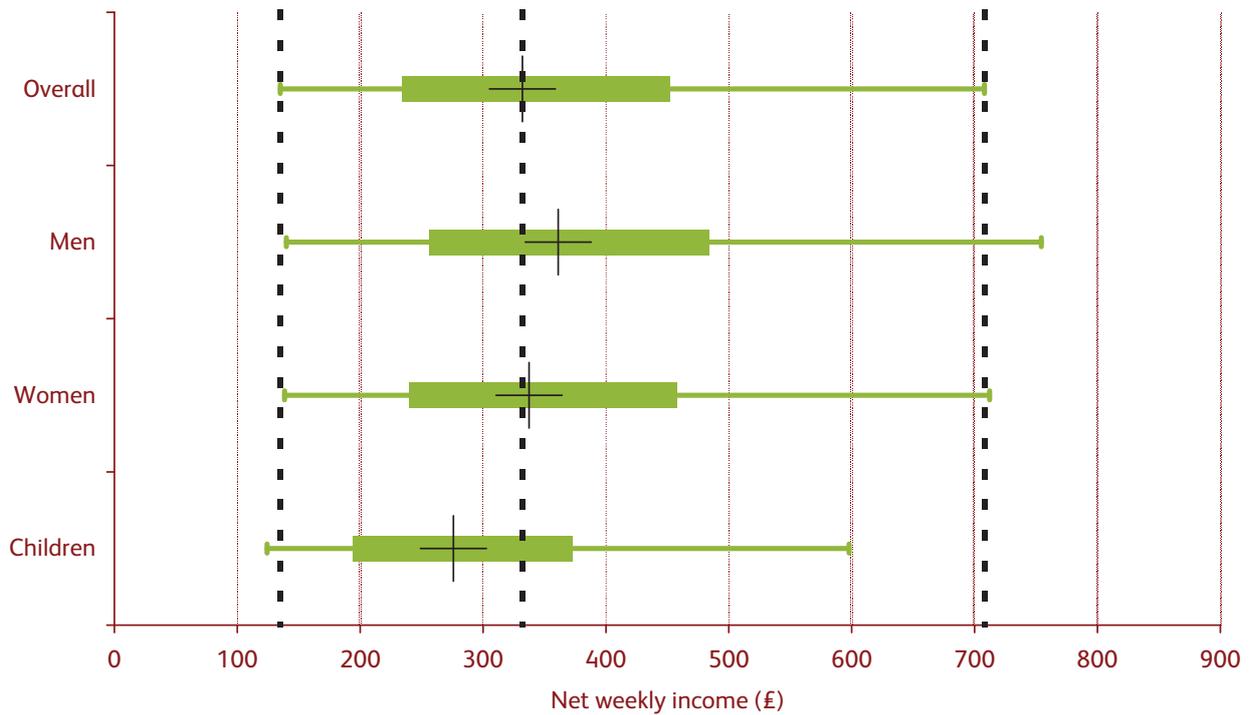


Source: DWP, based on HBAI dataset.

<sup>109</sup> For some more detailed breakdowns below, the results are drawn from data averaged over three years. Note: while we pool data over three years for other analyses in Chapters 3 to 6, these DWP results are averaged over three years.

<sup>110</sup> Breakdowns by gender are shown in the Statistical Appendix.

Figure 7.1(b): Equivalent net income (AHC), for men, women and children, UK, 2007-08 (£)



Source: DWP, based on HBAI dataset.

## Age

Figure 7.2 shows, for all individuals, the range of equivalent net incomes (before housing costs) by each individual's age group.<sup>111</sup> Two things are apparent. There is, as with individual incomes, a clear age pattern. Looking at median incomes for each age group, the lowest – under £350 – are clearly the medians for the under-16s (in other words, families with children are poorer than others) and for people aged over 65. Among those of working age, there are two peaks in median income – £477 for those aged 26-30, before family size reaches its maximum, and £474 for those in their early fifties, when many children have left home but the main decline in earnings with age we showed in Chapter 5 has not started. For those in their thirties and forties, equivalent net incomes are lower, reflecting family size, employment patterns and low part-time earnings for many mothers.

Second, there is a very large spread in the incomes of each group. However, only 10 per cent or fewer in any age group have equivalent net incomes below £200. The combination of the social security system and household sharing put an apparent floor to available resources, but one that is below the poverty line of 60 per cent of median income that is used in government statistics and targets (£236). It is further up the income ranges that the age-related gaps appear, with the incomes for those in the top tenth of the age group reaching more than £950 per week for those in their early thirties and early fifties. As a result, it can be seen in

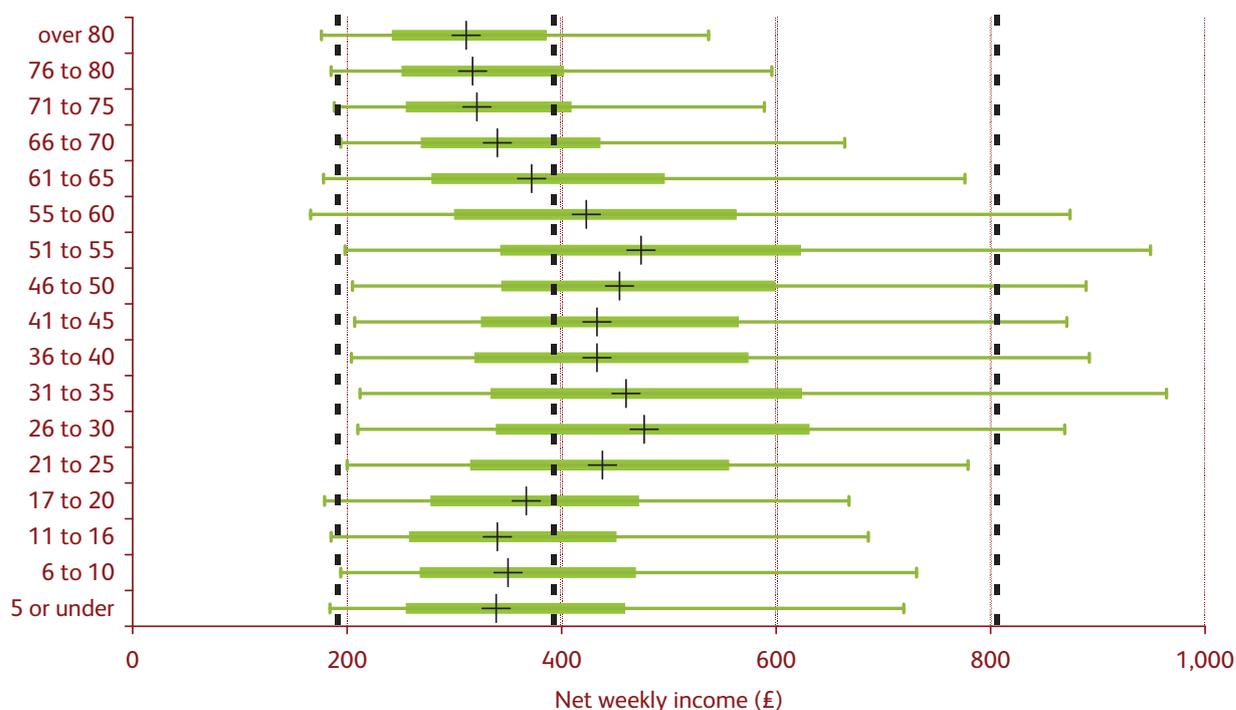
<sup>111</sup> Note that the age categories in the available analysis are slightly different from those used in earlier chapters.

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Table 7.2 that inequality within age groups, as measured by the 90:10 ratio is only around 3 for those over 70, but over 4 for those of working age, reaching its greatest extent, a ratio of 5.3, for those in their late fifties.

The result of this pattern can be seen in Table 7.2. Half of children are in households with equivalent net incomes in the bottom 40 per cent of the distribution. Half of those over 70 are in the bottom third of the distribution. To put it another way, those in their late twenties to early fifties are typically 25 places higher up the income distribution (before housing costs) than those over 70. This difference is, however, smaller for those aged over 60 when the comparison is made on the basis of income *after* housing costs, where the difference is reduced to around 15 places.<sup>112</sup> Note again, however, that here we are comparing people of different ages at the same date; in Chapter 11 we present some analysis relating to the incomes of the same individuals as they age.

Figure 7.2: Equivalent net income (BHC), by age, UK, 2007-08 (£)



Source: DWP, based on HBAI dataset.

## Ethnicity

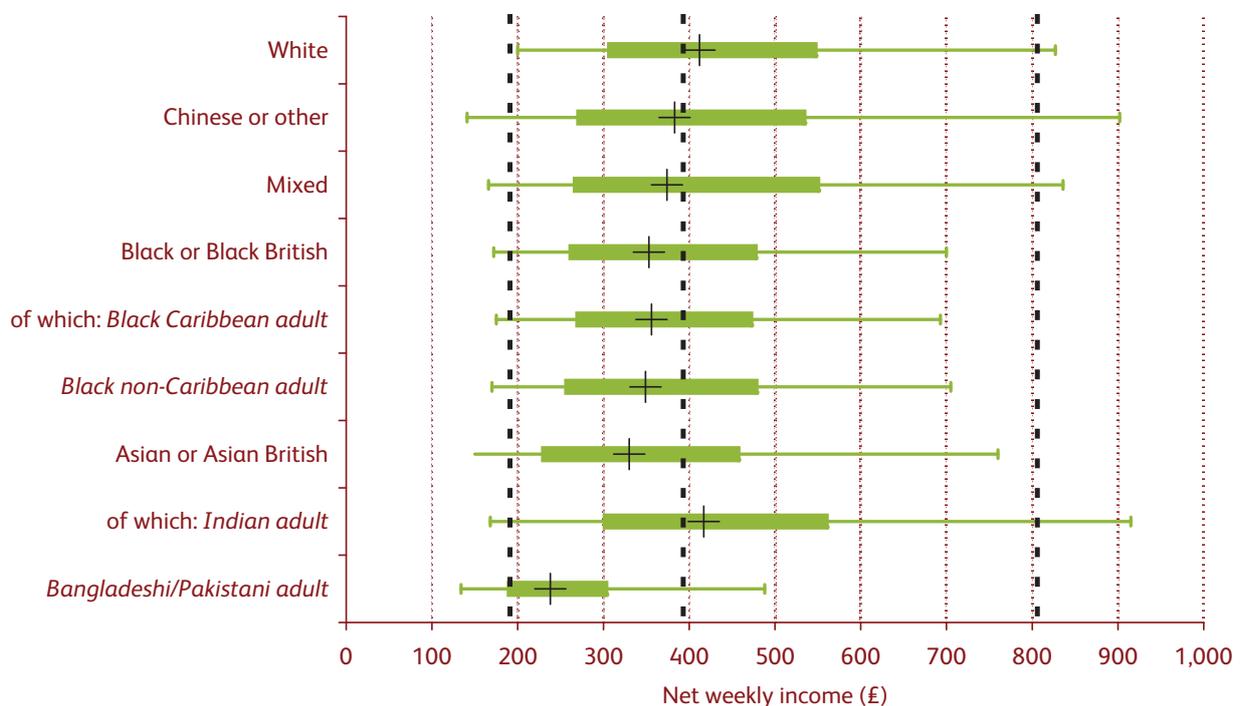
The source for these statistics, the FRS, does not have a large enough sample size, even using data from the three years up to 2007-08, to make the detailed ethnic breakdowns that were possible using data from three years of the Labour Force Survey (LFS) when analysing wages and earnings, in Chapter 5 above. Nor does the FRS allocate an ethnicity to children. Figure 7.3 and Table 7.3 therefore present the positions for *adults* in seven ethnic categories,

<sup>112</sup> Detailed figures on an After Housing Costs (AHC) basis are in the Statistical Appendix. The difference in the position of older people on an AHC basis results from the higher relative position of owner-occupiers who own outright. See section on housing tenure and Table 7.6 below.

although we have seen earlier in this chapter that there will be important differences within these categories. All the groups have wide ranges of incomes within them, but Indian and White adults have the highest median incomes, £417 and £412, respectively. For Black Caribbean and Black non-Caribbean adults, the median is around £350, but for Pakistani and Bangladeshi adults (taken together), the median is only £238, 60 per cent of the median for White adults. 30 per cent of Pakistani and Bangladeshi adults have incomes below £190, and half have incomes below £238, very close to the official poverty line. Low equivalent net incomes reflect both the low employment rates and earnings we have shown, and for some groups, larger household sizes. At the other end of the scale, a tenth of Indian adults and of the very varied ‘Chinese and other’ group, have equivalent net incomes above £900 per week.

Income inequality *within* these ethnic groups is generally similar to, or greater than that across the population as a whole, with a 90:10 ratio of 5.4 between Indian adults and 6.4 for the varied ‘Chinese and mixed’ group, but slightly less than others, 3.6, for Pakistani and Bangladeshi adults. The really striking statistic in Table 7.3 is, however, that the *median* income of Pakistani and Bangladeshi adults places them at only the 18<sup>th</sup> percentile of the overall distribution – 35 places (out of 100) behind median White adults.

Figure 7.3: Equivalent net income (BHC), adults by ethnicity, UK, 2005-06 to 2007-08 (£)



Source: DWP, based on HBAI dataset.

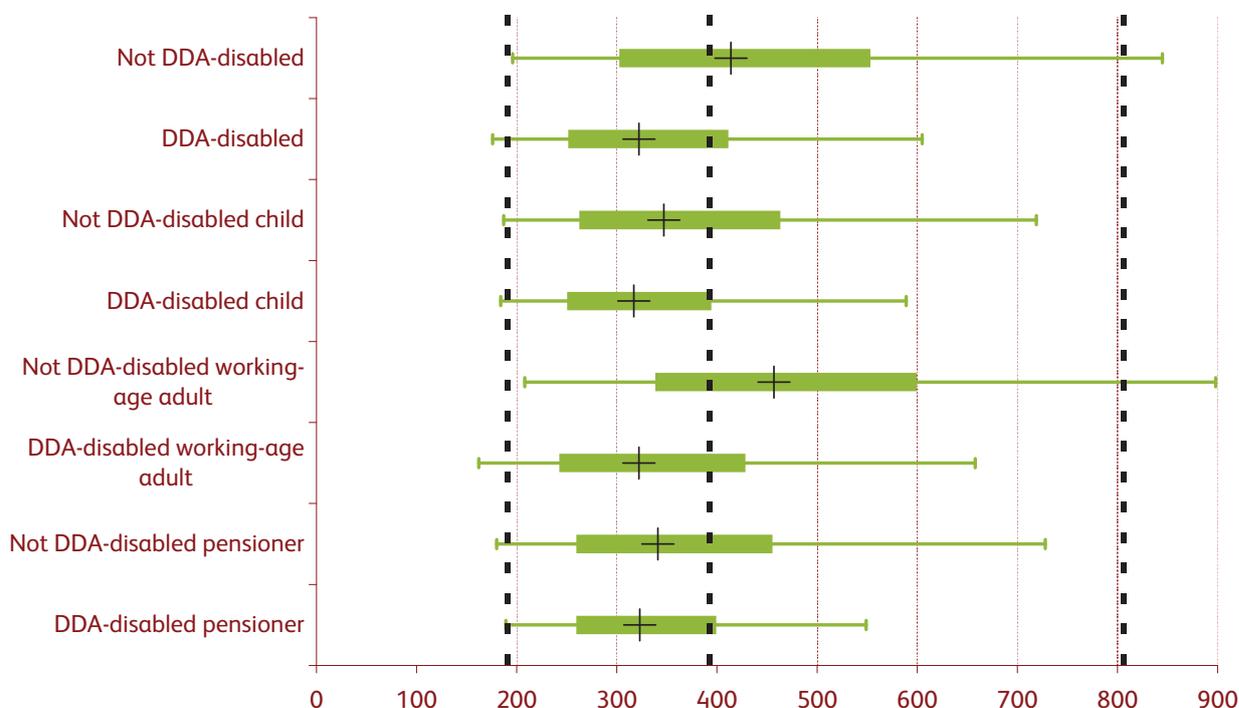
Note: Three year average, 2005-06 to 2007-08 (at 2007-08 prices).

### Disability

The analysis available to us identifies disability status according to two definitions, disability in the terms of the Disability Discrimination Act (DDA) and whether people have a limiting long-standing illness (but not whether the condition was work-limiting, which we saw in earlier sections gives the clearest distinction between groups). The pictures shown by these are very similar, so Figure 7.4 shows the spread of incomes between those who are and are not DDA-disabled, distinguishing between children, those of working age, and pensioners. Within the non-disabled population, the spread is as would be expected from the breakdown by age in Figure 7.2. All the disabled groups have a median income less than their non-disabled equivalents, and much lower when looking at the most affluent tenth of each group. The really striking difference is for those of working age: non-disabled people have a median equivalent net income of £457 per week, whereas the median for disabled people is £322, 30 per cent lower. While a tenth of non-disabled working age adults have equivalent net incomes of £898 or more, for those who were disabled, the cut-off for the top tenth is £658.

The consequence is that children who are classed as DDA-disabled are typically four places, and pensioners who are DDA-disabled, typically six places further down the overall distribution than their non-disabled equivalents (Table 7.4).<sup>113</sup> For people of working age, the difference is 25 places in the overall ranking: while non-disabled adults of working age typically have incomes at the 61<sup>st</sup> percentile, disabled working-age adults are typically at the 36<sup>th</sup> percentile.

Figure 7.4: Equivalent net income (BHC), by disability status, UK, 2007-08 (£)



<sup>113</sup> A pensioner is defined here as a person above State Pension Age, which is currently 65 for men and 60 for women.

All of this is, however, looking at incomes which include ‘extra costs’ disability benefits as part of income. Box 7.3 presents what happens both to this breakdown and to the breakdown by age, if extra costs benefits are excluded from the income measure. As can be seen, disabled people emerge as being much further down the distribution than under the official definition – typically by around 5 places in the income distribution, and by 10 places for DDA-disabled pensioners. Excluding extra costs benefits reduces the equivalent net incomes of disabled people by an average of 10 per cent. Doing this implies a poverty rate for disabled people of more than 30 per cent, compared to the 25 per cent shown by the official statistics.

### Box 7.3: Household income and disability benefits

We describe the way in which the measure of household income used in this section and in the official *Households Below Average Income* analysis adjusts for household size and composition in Box 2.1.

However, there are reasons other than differences in household size and composition why the same amount of income may not provide the same standard of living for different kinds of household. Differences in disability status are one of the most important of these reasons. The income of a household which includes a disabled person has to stretch further than the income of a comparable household without a disabled member to meet particular needs. As a result, higher income is needed to reach the same standard of living in other respects.<sup>114</sup>

The social security system recognises this through the payment of ‘extra costs’ benefits to disabled people. However, when it comes to analysing the position of disabled people within the income distribution, these benefits are included within their measured income. This is arguably perverse: the benefits are intended to help disabled people deal with extra costs, but the income assessment effectively then says that they are better off than other people as a result.

There are different ways of dealing with this problem, but in this Box, we show the result of the simplest approach, which is to exclude such extra costs benefits from the measured incomes of those who receive them.

Figure 7A and Table 7B show what the equivalent net income distributions of various groups classified according to disability status look like on this basis. They can be compared with Figure 7.4 and Table 7.4 to gauge the scale of the change. The figures in brackets in the table repeat the median income and the position of the median within the overall distribution for each group before this adjustment was made.

Looking first at the comparison between the equivalent net income of people who are or are not DDA-disabled, the main effect is to reduce the median equivalent net income for the first group by £34 (or more than 10 per cent), but by only £3 for the second group. Looking at particular age groups, the decrease in household income for a DDA-disabled working age person is from a median equivalent income of £322 (including extra costs benefits) to £287 per week (excluding them). Similarly, for a DDA-disabled pensioner, median equivalent net income is reduced from £323 to £288.

<sup>114</sup> Burchardt and Zaidi (2003).

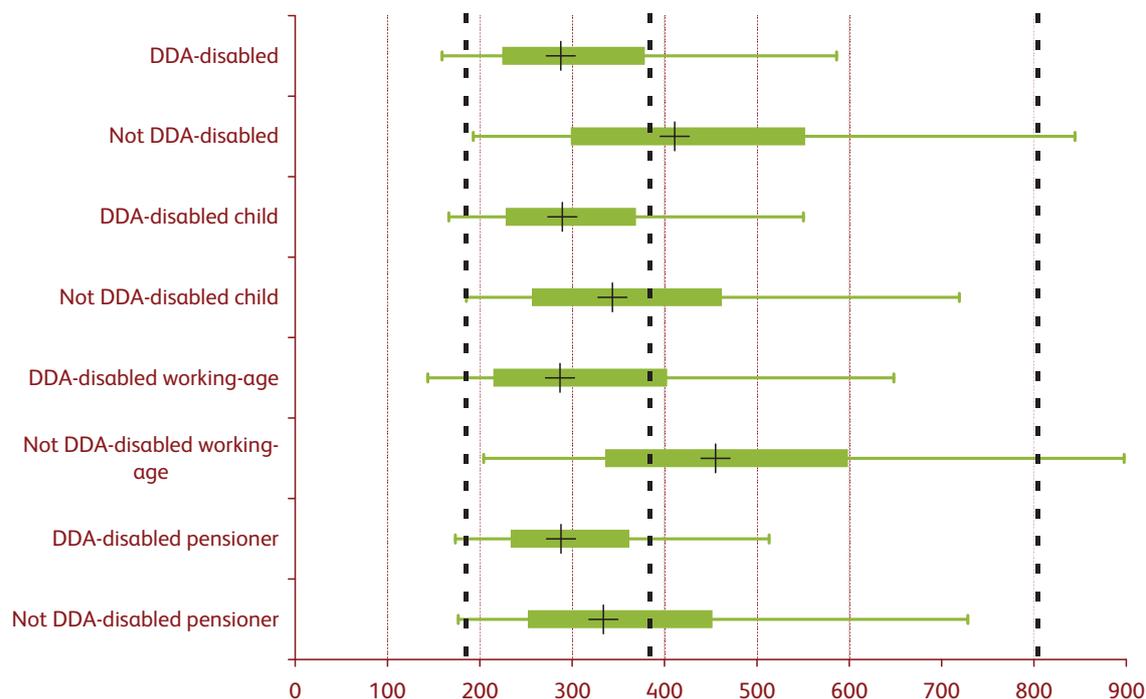
## An anatomy of economic inequality in the UK

The table shows that the overall effect is that people in households containing a disabled member are typically placed significantly further down the income distribution – at only the 31<sup>st</sup> percentile, compared to the 36<sup>th</sup> percentile in the conventional analysis. For households containing a DDA-disabled pensioner, the typical ranking is reduced from the 41<sup>st</sup> to the 31<sup>st</sup> percentile.

Exclusion of the extra costs benefits also slightly increases the degree of inequality within each of the groups considered (as shown by the 90:10 ratios by comparison with those shown in Table 7.4), particularly for working age disabled people.

One result of this is that relative poverty would be measured at a higher level for disabled people than in the standard statistics. In Figure 7A, it can be seen that for all of the groups containing disabled members, the 30<sup>th</sup> percentile (the end of the thicker bar) comes at or below £231 per week, which is what the poverty line would be (based on 60 per cent of overall median income excluding extra costs benefits). In other words, for all of the groups containing disabled people, the poverty rate would become over 30 per cent, compared with 25 per cent in the official analysis.

Figure 7A: Equivalent net incomes (BHC) excluding extra costs disability benefits, by disability status and age group, 2007-08



Source: DWP. Estimates are for the UK.

Table 7B: Equivalent net income (BHC) excluding extra costs disability benefits, by disability and work status, 2007-08

	Median equivalent net incomes* (£ per week)	90:10 ratio	Rank in the overall distribution		
			10 <sup>th</sup>	Median*	90 <sup>th</sup>
DDA-disabled	288 (322)	3.7	6	31 (36)	76
not DDA-disabled	411 (414)	4.4	11	54 (53)	91
DDA-disabled child	289 (317)	3.3	7	31 (35)	73
not DDA-disabled child	344 (347)	3.9	10	42 (41)	86
DDA-disabled working-age	287 (322)	4.5	5	31 (36)	81
not DDA-disabled working-age	455 (457)	4.4	13	61 (61)	92
DDA-disabled pensioner	288 (323)	3.0	8	31 (36)	69
not DDA-disabled pensioner	334 (341)	4.1	8	40 (40)	86

Source: DWP, based on HBAI dataset. Estimates refer to the UK.

Note: \* Numbers in parentheses show estimates including extra costs benefits.

Because older people are more likely to receive disability benefits than others, this adjustment also affects the measured position of older people. Comparing Table 7C with Table 7.2 at the end of the chapter, it can be seen that the largest effects are for people aged over 80 – a reduction of £28, or nearly 10 per cent, in their equivalent incomes. For all the groups aged over 65, the ranking of typical incomes for the age group is reduced by around 3 places (out of 100).

Table 7C: Equivalent net incomes (BHC) excluding extra costs disability benefits, by age

	Median equivalent net incomes* (£ per week)	90:10 ratio	Rank in the overall distribution		
			10 <sup>th</sup>	Median*	90 <sup>th</sup>
5 or under	336 (339)	4.0	9	41 (40)	86
6 to 10	344 (350)	3.8	11	43 (42)	86
11 to 16	336 (340)	3.8	9	41 (40)	84
17 to 20	363 (367)	3.8	8	46 (45)	83
21 to 25	435 (438)	4.0	12	58 (57)	89
26 to 30	474 (477)	4.2	14	64 (63)	91
31 to 35	458 (460)	4.7	13	61 (61)	94
36 to 40	427 (433)	4.4	12	57 (57)	92
41 to 45	430 (433)	4.3	12	57 (57)	92
46 to 50	451 (454)	4.6	11	60 (60)	92
51 to 55	467 (474)	5.1	10	63 (63)	93
55 to 60	412 (423)	5.7	6	54 (55)	92
61 to 65	358 (372)	4.6	7	45 (46)	88
66 to 70	317 (340)	3.5	10	37 (40)	82
71 to 75	301 (321)	3.2	9	34 (36)	76
76 to 80	293 (317)	3.3	8	32 (35)	75
over 80	283 (311)	3.1	7	30 (34)	68

Source: DWP calculations for National Equality Panel (NEP). Estimates refer to the UK.

Note: \* Numbers in parentheses show estimates including extra costs benefits.

### Occupational social class

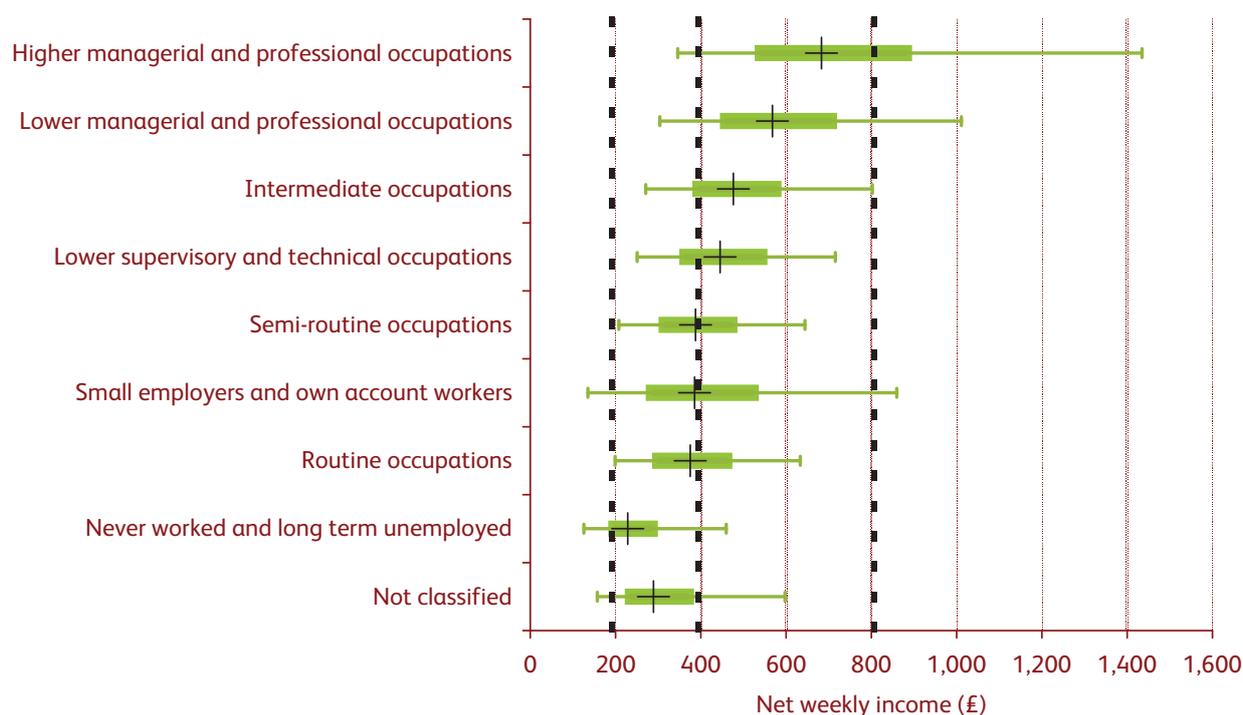
In the previous two chapters, we showed very substantial differences in earnings and individual incomes by household occupational social class. These can be both reinforced and moderated by household circumstances as well as by the tax system. Looking at all employees for earnings and all adults for net individual income,<sup>115</sup> the median hourly wage of those in higher managerial and professional households is 2.7 times the median for those in routine occupation households. For weekly full-time earnings, the corresponding ratio is 2.3, and for individual income, 2.4. As Figure 7.5 shows, for the distribution of equivalent net income, the ratio is somewhat smaller, but still 1.8 times – a median of £685 per week compared to £378 per week. The spread within each occupational social class group is substantial – more so, in fact, than for gross weekly earnings (partly because the population covered here includes those who have retired or are not currently working). The 90:10 ratio within the top group is 4.1, for instance, compared to 3.4 in weekly earnings for employees. The equivalent net

<sup>115</sup> Using the source data (shown in the Statistical Appendix) for the most recent three year periods in each case.

income of the best-off tenth within the top group exceeds £1,400 per week. Again, the widest spread, at 6.2, is for the group including self-employed households, with a tenth of them having an equivalent net income less than £138, but a tenth having above £862.

However, it is those in households who are classed as never having worked/long-term unemployed who are the poorest group, with half of them in the bottom fifth of the overall income distribution (Table 7.5). By contrast, 70 per cent of adults in the top occupational group are in the top 30 per cent overall; 30 per cent of them in the top 8 per cent overall.

Figure 7.5: Equivalent net income (BHC), by occupational social class, UK, 2007-08 (£)



Source: DWP, based on HBAI.

### Housing tenure

When comparing equivalent net income by housing tenure, the patterns shown for incomes before and after deducting housing costs (BHC and AHC) differ. For some purposes, it is the former which matters, as deducting one of the major elements of people's chosen consumption can give a false impression of relative resources. However, looking at incomes before housing costs can give a misleading impression of the position of owner-occupiers who own their property outright, in particular – most of their housing consumption comes as a return 'in kind' from being able to live in the property which they own rent-free, but this 'imputed rent' is not included in their income as measured here.<sup>116</sup> After housing costs income may be a better guide to the relative position of this group. Figures 7.6 (a) and (b) show the effect of this difference in definitions. Overall, income measured on an after housing costs basis is more unequal than that before housing costs, reflecting the way in which

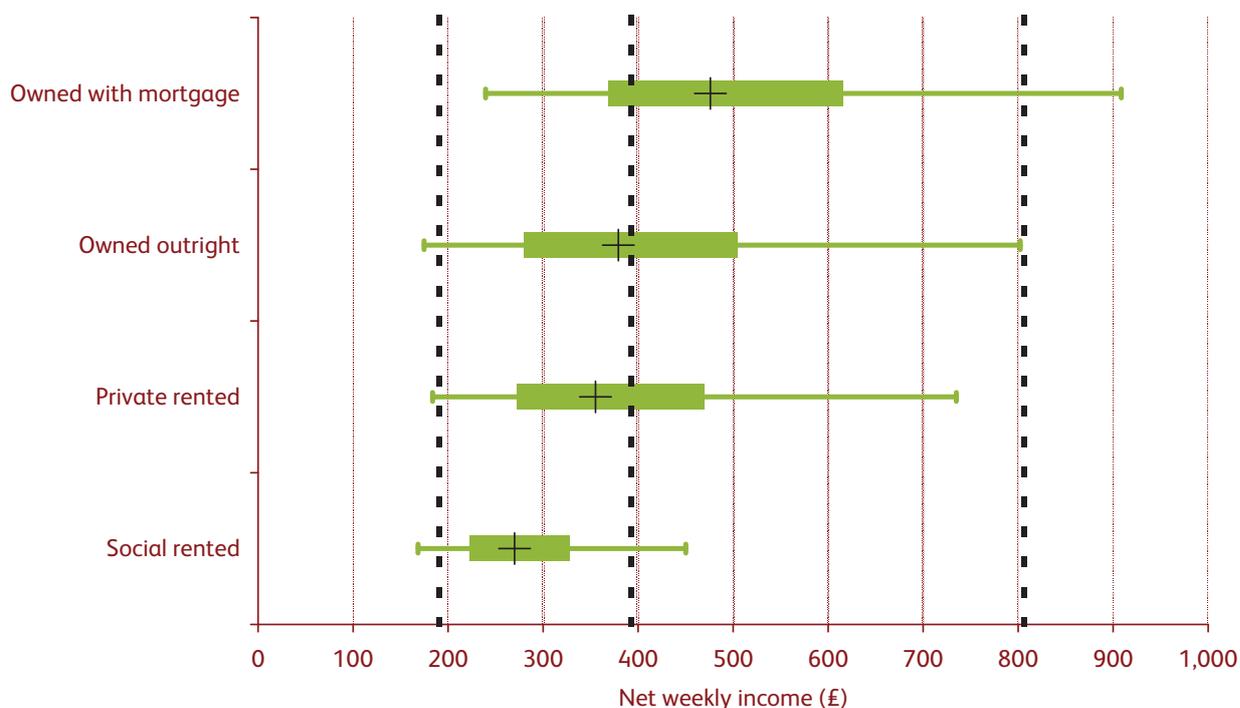
<sup>116</sup> For discussion of the issues involved in principle, see Hills (1991). For recent calculations of this kind, see Mullan, Sutherland and Zantomio (2007).

## An anatomy of economic inequality in the UK

housing costs tend to vary less than people's incomes (Table 7.1). However the comparison is made, social tenants have by far the lowest incomes. On a before housing costs basis, median equivalent income for social tenants is around £270, and for outright owners £379, and for mortgagors £476. On an after housing costs basis, the figures are £204, £369 and £388 respectively. A third of social tenants have equivalent net incomes of £230 or less before housing costs, that is, below the official poverty line. As with other income measures, the spread is widest within the private rented sector – a tenth of those living in it having equivalent net incomes (AHC) below around £80, but a tenth above £582.

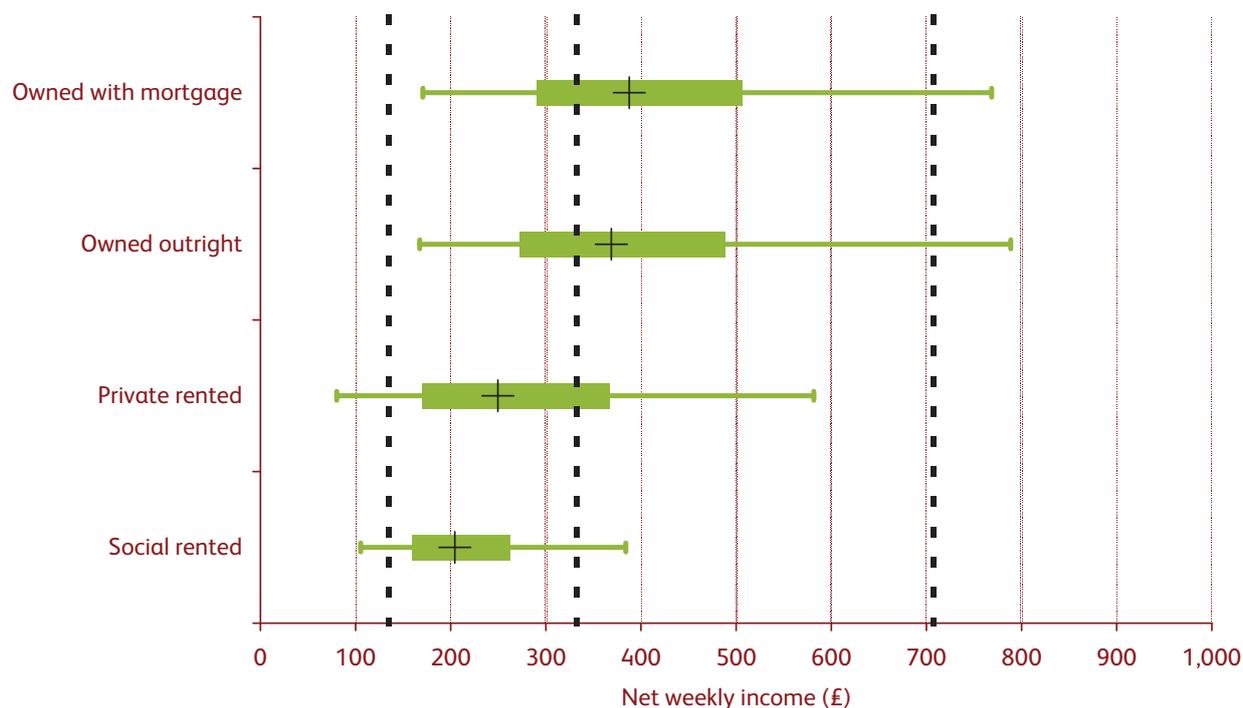
Table 7.6 shows that, in the overall distribution, the median income for social tenants is 22-33 places below the median for outright owners and 37-38 places below the median mortgagors, depending on whether before or after housing costs. Only about a fifth of social tenants are in top half of the overall income distribution on either definition.

Figure 7.6(a): Equivalent net income (BHC), by housing tenure, UK, 2007-08 (£)



Source: DWP, based on HBAI dataset.

Figure 7.6(b): Equivalent net income (AHC), by housing tenure, UK, 2007-08 (£)



Source: DWP, based on HBAI dataset.

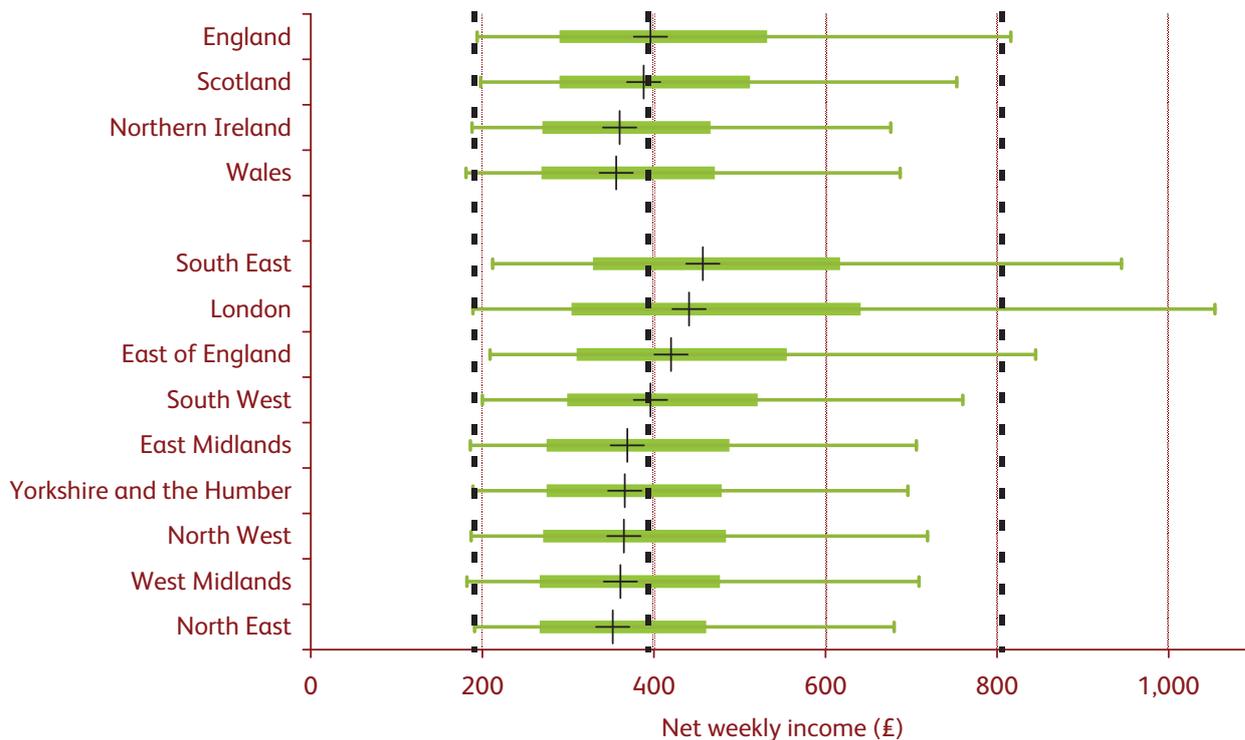
### Nation and region

Figure 7.7 and Table 7.7 show that of the four nations, England has the highest median income before housing costs, ten per cent higher than the medians for Wales and Northern Ireland. Note, however, that allowing for cost of living differences (of the kind shown in Box 5.1) would remove most of those differences. Income inequality, as measured by the 90:10 ratio, is also significantly greater in England than in the other nations. Within England, London is by far the most unequal region, with a 90:10 ratio of 5.6 on a before housing costs basis, compared to the UK ratio of 4.2. This reflects the way in which the highest incomes in London are much higher than in all the other regions apart from the South East, but the lowest incomes in London are little different from elsewhere. As a corollary, this implies that allowing for cost of living differences would narrow, but not eliminate, differences between those with the highest incomes in each region. However, those with the lowest incomes in London would be shown as poorer than those with low incomes in other regions.

Incomes measured after housing costs are *more* unequal both overall and within nations and regions. However, the gaps in median incomes between the nations and regions are somewhat smaller on the after housing costs basis.

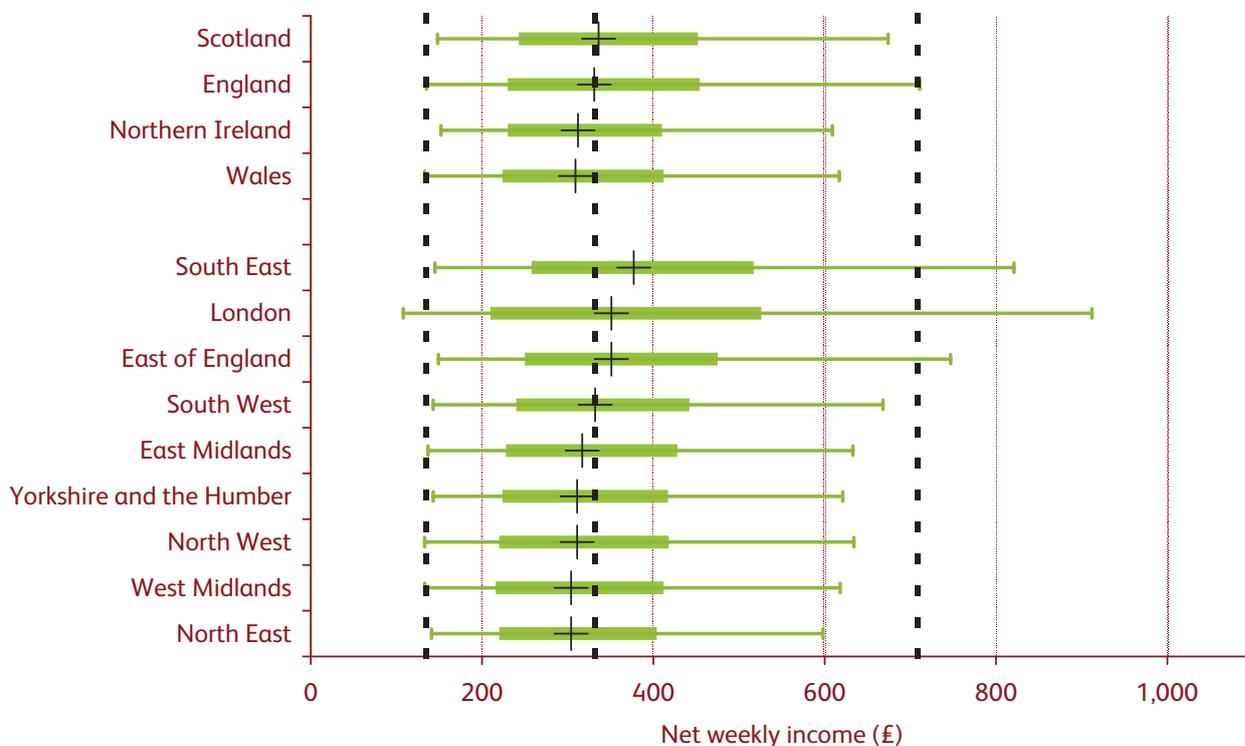
# An anatomy of economic inequality in the UK

Figure 7.7(a): Equivalent net income (BHC), by nation or region, UK, 2006-2008 (£)



Source: DWP, based on HBAI dataset.

Figure 7.7(b): Equivalent net income (AHC), by nation or region, UK, 2007-08 (£)



Source: DWP, based on HBAI dataset.

### *Area deprivation*

Finally, Figure 7.8 and Table 7.8 show (for England only) the differences in equivalent income levels (before and after housing costs) between people living in areas with different levels of Index of Multiple Deprivation (IMD) scores and the spread of incomes within such areas. As with educational results, employment, earnings and individual incomes, there is a very strong gradient by area deprivation.<sup>117</sup> Looking at the results before deducting housing costs, the median income for the most deprived tenth of areas is only £281, compared with £396 for England as a whole, and £533 in the least deprived tenth of areas. After allowing for housing costs, the gradient is, if anything, even steeper, with median incomes in the least deprived areas twice those in the most deprived ones.

While more than 70 per cent of those living in the least deprived areas are in the top half of the distribution overall, more than 70 per cent of those living in the most deprived areas are in the bottom half. The median income for people in the most deprived tenth of areas is 42-44 places out of 100 lower down the income distribution than the median income for the least deprived areas (depending on whether measured before or after housing costs).

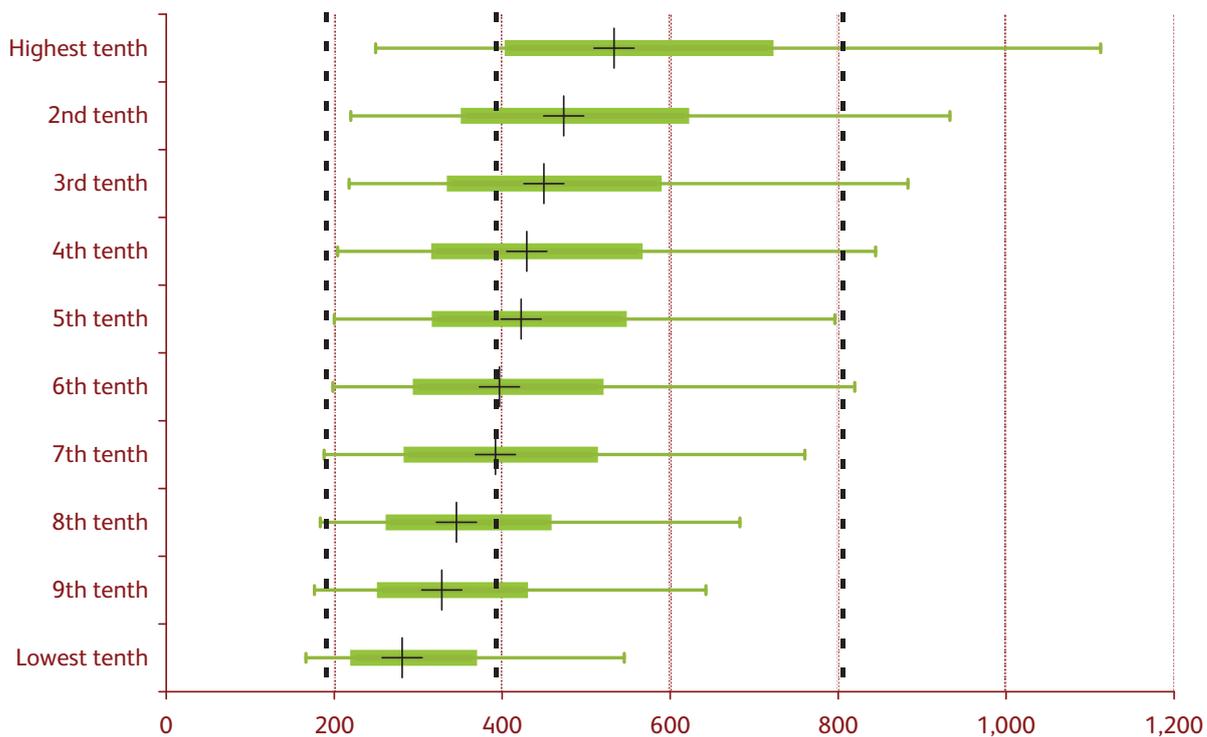
There are differences between areas of all kinds, not just between the most disadvantaged areas and others. However, there is also substantial inequality in incomes within each kind of area, as well as between them. In most cases, as measured by the 90:10 ratio, incomes are almost as unequally distributed within each kind of area as they are within England as a whole. In the most disadvantaged areas, there is somewhat less inequality, reflecting, in particular, the relatively low incomes for the best-off households within them.

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<sup>117</sup> While acknowledging the circularity from the fact that the proportion of the local population receiving benefits such as Income Support or tax credits are part of the income domain of the IMD, the gradient is still very strong.

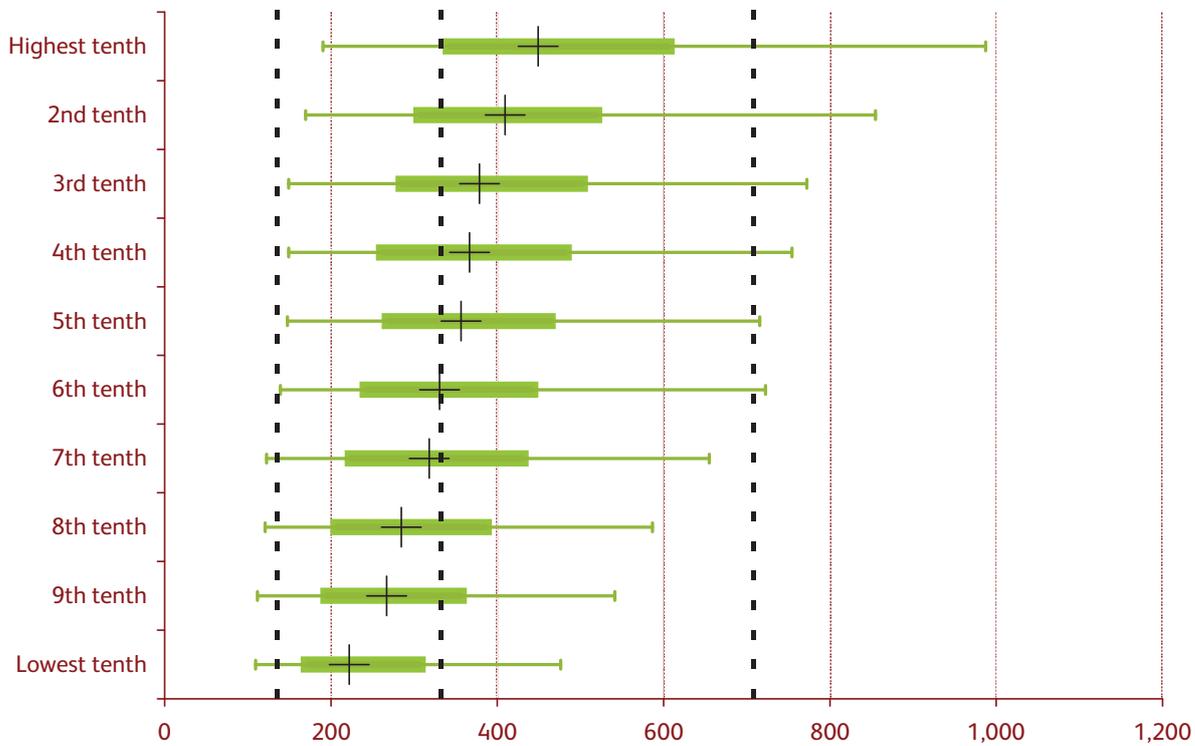
# An anatomy of economic inequality in the UK

Figure 7.8(a): Equivalent net income (BHC), by area deprivation, England, 2006-2008 (£)



Source: DWP, based on HBAI dataset.

Figure 7.8(b): Equivalent net income (AHC), by area deprivation, England, 2007-08 (£)



Source: DWP, based on HBAI dataset.

Table 7.1: Equivalent net income, for men, women and children, UK, 2007-08 (£)

	Median equivalent net income (£)	90:10 ratio	Rank in the distribution		
			10 <sup>th</sup>	Median	90 <sup>th</sup>
<b>Before Housing Costs (BHC)</b>					
Overall	393	4.2	10	50	90
Men	423	4.4	10	55	91
Women	393	4.2	9	49	90
Child	344	3.8	9	40	85
<b>After Housing Costs (AHC)</b>					
Overall	332	5.2	10	50	90
Men	361	5.4	10	55	91
Women	337	5.1	10	51	90
Child	276	4.8	8	38	84

Source: DWP, based on HBAI dataset.

Table 7.2: Equivalent net income (BHC), by age, UK, 2007-08 (£)

	Median equivalent net income (£)	90:10 ratio	Rank in the distribution		
			10 <sup>th</sup>	Median	90 <sup>th</sup>
26 to 30	477	4.1	13	63	91
51 to 55	474	4.8	11	63	93
31 to 35	460	4.5	13	61	93
46 to 50	454	4.3	12	60	92
21 to 25	438	3.9	11	57	88
36 to 40	433	4.4	12	57	92
41 to 45	433	4.2	12	57	91
55 to 60	423	5.3	6	55	92
61 to 65	372	4.4	8	46	88
17 to 20	367	3.7	8	45	83
6 to 10	350	3.8	10	42	86
11 to 16	340	3.7	9	40	84
66 to 70	340	3.4	10	40	82
5 or under	339	3.9	8	40	86
71 to 75	321	3.1	9	36	76
76 to 80	317	3.2	9	35	77
over 80	311	3.1	7	34	71

Source: DWP, based on HBAI dataset.

Table 7.3: Equivalent net income (BHC), adults by ethnicity, UK, 2007-08 (£)

	Median equivalent net income (£)	90:10 ratio	Rank in the distribution		
			10 <sup>th</sup>	Median	90 <sup>th</sup>
White	412	4.1	11	53	90
Chinese or other	383	6.4	4	48	92
Mixed	374	5.0	6	46	90
Black or Black British	353	4.1	7	42	85
of which: <i>Black Caribbean</i>	356	4.0	7	43	84
<i>Black non-Caribbean</i>	349	4.1	7	42	85
Asian or Asian British	330	5.1	5	38	88
of which: <i>Indian</i>	417	5.4	7	54	93
<i>Bangladeshi/Pakistani</i>	238	3.6	4	18	65

Source: DWP, based on HBAI dataset.

Note: Three year average, 2005-06 to 2007-08, at 2007-08 prices.

Table 7.4: Equivalent net income (BHC), by disability status, UK, 2007-08 (£)

	Median equivalent net income (£)	90:10 ratio	Rank in the distribution		
			10 <sup>th</sup>	Median	90 <sup>th</sup>
Not DDA-disabled	414	4.3	10	53	91
DDA-disabled	322	3.4	7	36	78
Not DDA-disabled child	347	3.8	9	41	86
DDA-disabled child	317	3.2	8	35	76
Not DDA-disabled working-age adult	457	4.3	13	61	92
DDA-disabled working-age adult	322	4.1	6	36	82
Not DDA-disabled pensioner	341	4.0	8	40	86
DDA-disabled pensioner	323	2.9	9	36	72

Source: DWP, based on HBAI dataset.

Table 7.5: Equivalent net income (BHC), by occupational social class, UK, 2007-08 (£)

	Median equivalent net income (£)	90:10 ratio	Rank in the distribution		
			10 <sup>th</sup>	Median	90 <sup>th</sup>
Higher managerial and professional occupations	685	4.1	42	84	97
Lower managerial and professional occupations	569	3.3	33	75	94
Intermediate occupations	477	2.9	26	63	89
Small employers and own account workers	387	6.2	4	49	91
Lower supervisory and technical occupations	447	2.8	23	59	86
Semi-routine occupations	391	3.1	13	49	81
Routine occupations	378	3.2	11	47	80
Never worked and long term unemployed	248	3.6	4	20	63
Not classified	311	3.6	7	34	78
Child	344	3.8	9	41	85

Source: DWP, based on HBAI dataset.

Table 7.6: Equivalent net income, by housing tenure, UK, 2007-08 (£)

	Median equivalent net income (£)	90:10 ratio	Rank in the distribution		
			10 <sup>th</sup>	Median	90 <sup>th</sup>
<b>BHC</b>					
Owned with mortgage	476	3.8	19	63	92
Owned outright	379	4.6	7	47	89
Private rented	355	4.0	8	43	86
Social rented	270	2.7	7	25	59
<b>AHC</b>					
Owned with mortgage	388	4.5	16	60	91
Owned outright	369	4.7	15	56	92
Private rented	250	7.3	4	33	83
Social rented	204	3.6	6	23	59

Source: DWP, based on HBAI dataset.

Table 7.7: Equivalent net income, by nation or region, UK, 2007-08 (£)

	Median equivalent net income (£)	90:10 ratio	Rank in the distribution		
			10 <sup>th</sup>	Median	90 <sup>th</sup>
<b>BHC</b>					
England	396	4.2	10	50	90
South East	457	4.5	13	61	91
London	441	5.6	9	58	84
Eastern	420	4.0	13	54	86
South West	396	3.8	11	50	95
East Midlands	369	3.8	9	45	83
Yorkshire and the Humber	366	3.7	9	45	88
North West and Merseyside	365	3.8	9	45	85
West Midlands	361	3.9	8	44	93
North East	352	3.6	10	42	85
Scotland	388	3.8	11	49	87
Wales	356	3.8	8	43	84
Northern Ireland	360	3.6	9	44	83
<b>AHC</b>					
England	331	5.3	10	49	90
South East	377	5.7	11	58	93
Eastern	351	5.0	12	53	91
London	351	8.4	6	53	94
South West	332	4.7	11	50	88
East Midlands	317	4.6	10	47	86
North West and Merseyside	311	4.8	9	46	86
Yorkshire and the Humber	311	4.3	11	46	85
North East	304	4.2	11	44	84
West Midlands	304	4.6	9	44	85
Scotland	336	4.6	12	50	88
Wales	309	4.6	9	45	85
Northern Ireland	312	4.0	13	46	85

Source: DWP, based on HBAI dataset.

Table 7.8: Equivalent net income, by area deprivation, England, 2007-08 (£)

	Median equivalent net income (£)	90:10 ratio	Rank in the distribution		
			10 <sup>th</sup>	Median	90 <sup>th</sup>
<b>BHC</b>					
Lowest tenth	281	3.3	6	27	72
9th tenth	328	3.6	7	37	81
8th tenth	346	3.7	8	41	84
7th tenth	392	4.0	9	49	88
6th tenth	397	4.1	11	50	90
5th tenth	422	4.0	11	55	89
4th tenth	429	4.1	12	56	91
3rd tenth	450	4.1	14	59	92
2nd tenth	473	4.2	15	63	93
Highest tenth	533	4.5	21	71	95
<b>AHC</b>					
Highest tenth	222	4.4	6	27	73
2nd tenth	267	4.8	7	36	80
3rd tenth	285	4.9	8	40	83
5th tenth	318	5.3	8	47	87
4th tenth	331	5.2	10	49	90
6th tenth	356	4.8	12	54	90
7th tenth	367	5.1	12	56	91
8th tenth	378	5.2	12	58	92
9th tenth	409	5.0	16	63	93
Lowest tenth	449	5.2	20	69	95

Source: DWP, based on HBAI dataset.

## Chapter 8 Wealth

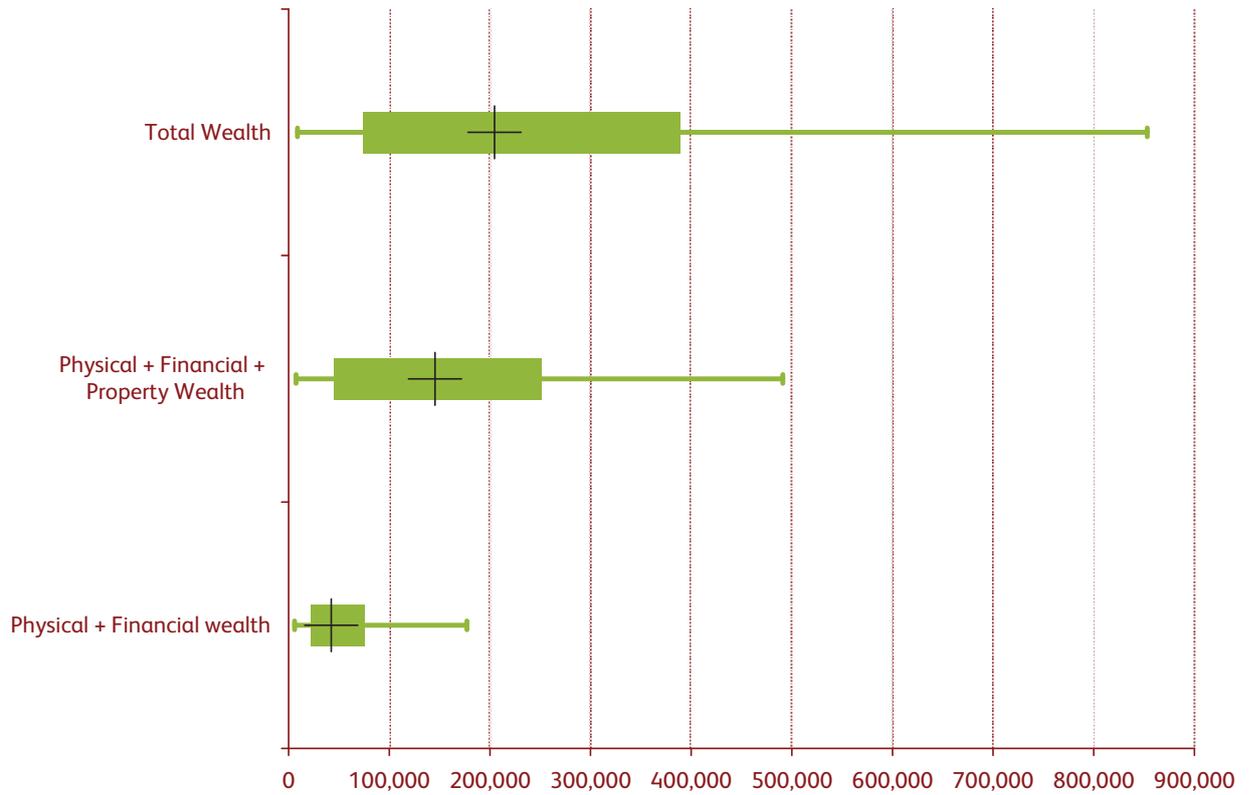
Wealth is, as we described in Chapter 2, distributed far more unequally than the other outcomes we have looked at. In this chapter, we look at the distribution of wealth in Great Britain using information from the new Office for National Statistics (ONS) Wealth and Assets Survey (WAS) (using data for June 2006 to June 2008). This survey allows us to look at the distribution of wealth between households by age, disability status, occupational social class, nation and region, and by area deprivation. We can also compare median wealth by ethnicity and religious affiliation, but not the distribution of wealth within those groups. As wealth is calculated here on a household basis and there is no obvious way of ascribing it between individuals, we do not include a breakdown by gender.<sup>118</sup>

Figure 8.1 summarises the range of household wealth on three definitions, including a progressively wider range of assets. Under all three definitions, the least wealthy tenth of households have less than £9,000. Median wealth rises from £42,000 when looking at net financial and property wealth, to £145,000 when houses (net of mortgages) are included, and £205,000 when private pension rights are included. The 90<sup>th</sup> percentile rises from £177,000 under the narrowest definition to £491,000 including houses, and £853,000 including private pension rights.

<sup>118</sup> Banks and Tetlow (2009) provide parallel analysis drawing on wealth estimates for the population aged 50 or more from the English Longitudinal Survey of Ageing for 2002. As well as the breakdowns analysed here for the whole population, they present figures by family type, date left education, equivalent income, self-reported health and type of area (urban or rural).

## An anatomy of economic inequality in the UK

Figure 8.1: Distribution of wealth between households by wealth definition, GB, 2006-08 (£)

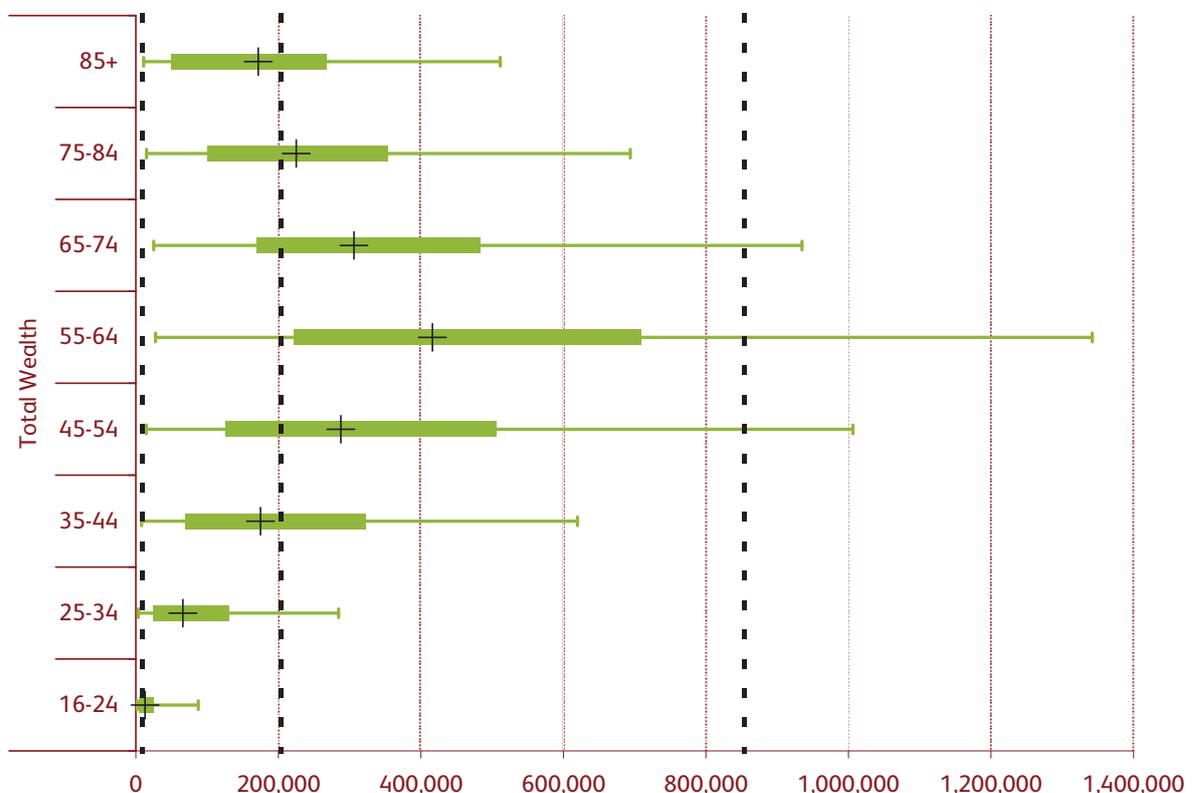


Source: ONS from WAS.

## Age

One of the reasons for wealth inequality when looked at in this way is that people save and accumulate assets across the life cycle. Pension rights, in particular, are built up through people's working lives, and then decline through retirement, as do some other forms of saving. However, even looking within particular age groups there are wide differences between households, shown for total wealth in Figure 8.2 (with detailed numbers for this and for the other two, narrower, definitions in Table 8.1). This confirms that there is indeed a strong pattern of life cycle wealth accumulation. Median total wealth for those with a 'household reference person' aged 25-34 is £66,000, rising to £416,000 for those aged 55-64, but falling to £172,000 for the oldest group (where pension rights, in particular, are for obvious reasons much smaller). We discuss in Chapter 11 the extent to which this difference of £350,000 over an age difference of just thirty years is likely to reflect just life-cycle saving, or other differences, including the timing of house price increases, between more and less fortunate cohorts. As can be seen from the table, only 10 per cent of households aged 25-34 are in the top half of the distribution overall, while just under 70 per cent of those aged 55-64 are in the top half. However, there remains considerable inequality at every age. Among people aged 55-64, that is, who are nearing or have reached retirement, a tenth of households still have wealth of less than £28,000, but a tenth have more than £1.3 million.

Figure 8.2: Total wealth, by age, GB, 2006-08 (£)



Source: ONS from WAS. Age is of 'household reference person'.

### *Ethnicity and religious affiliation*

The numbers in the sample are not large enough to give a very detailed breakdown of wealth by ethnicity (of the household reference person) or of the spread within each ethnic group. However, there are considerable differences in median total wealth between ethnic groups, part of which will reflect differences in age structure:

- For White British households, median total wealth is £221,000.
- For Indian households it is £204,000.
- For Pakistani households it is £97,000.
- For other Asian Households it is £50,000.
- For Black Caribbean households it is £76,000.
- For Black African households it is £21,000.
- For Bangladeshi households it is £15,000

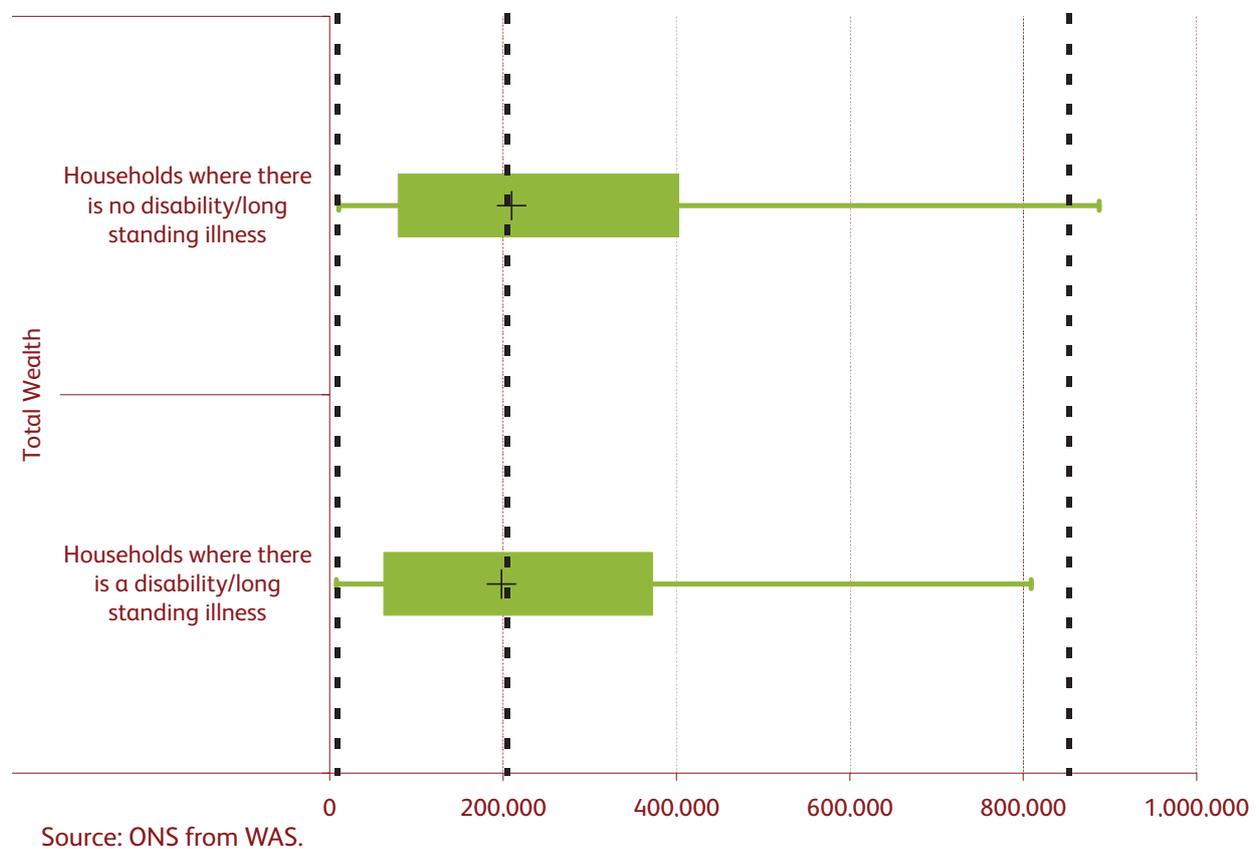
Sample numbers are also too small to give much detail of differences by religious affiliation of household reference person, but again there are considerable differences in median total wealth between groups:

- For households with a Jewish household reference person it is £422,000.
- For Sikh households it is £229,000.
- For Christian households it is £223,000.
- For Hindu households it is £206,000.
- For Muslim households it is £42,000.
- For those with any other religion it is £161,000.
- For those with no religious affiliation it is £138,000.

## Disability

While Figure 8.3 confirms that the 38 per cent of households with a member with a disability or long-standing illness have lower wealth than other households, the difference is not as large as some of those we have seen for other outcomes. This results from the way in which both prevalence of disability and wealth at a household level itself tend to rise with age. Median total wealth for households with a disabled member is £198,000, compared to £210,000 for others. For each group there is again a considerable range – indeed the 90:10 ratio for each remains close to the figure of 97 we saw for all households – and those with a disabled member are spread fairly evenly through the overall distribution (Table 8.2).

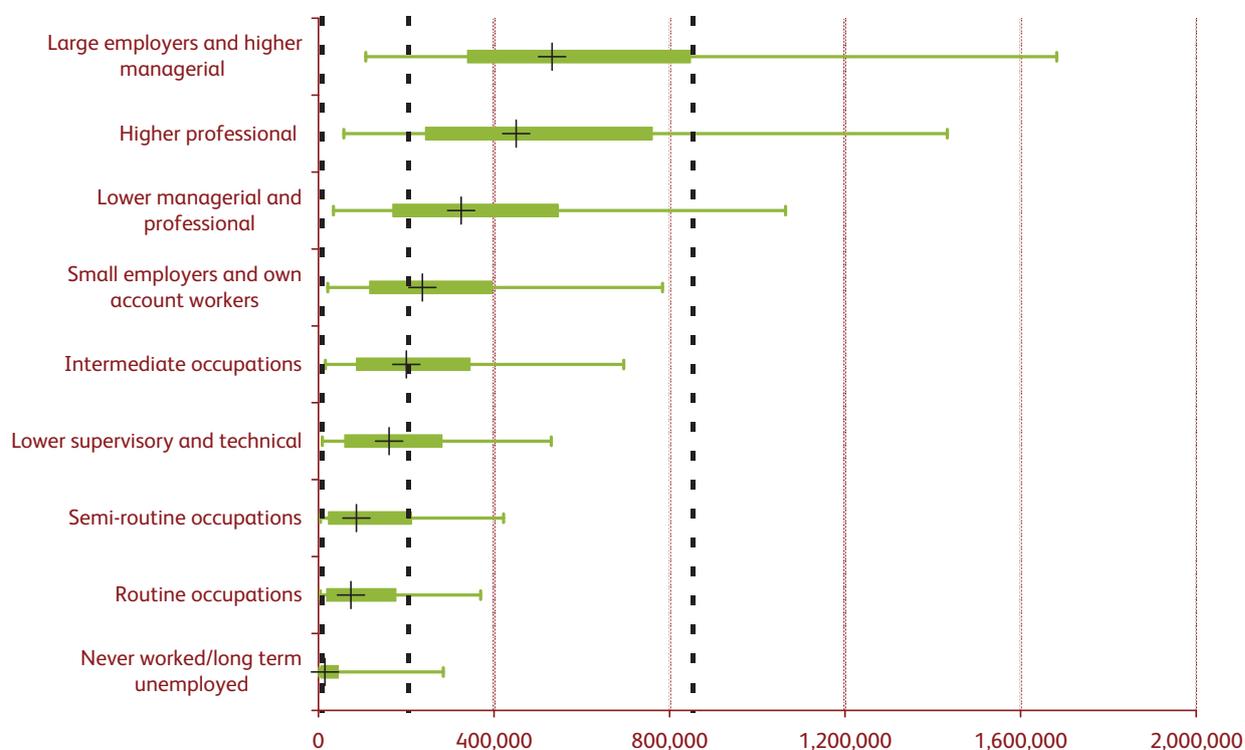
Figure 8.3: Total wealth, by disability status, GB, 2006-08 (£)



## Occupational social class

The differences in wealth between occupational social classes are, however, very large indeed. While median total wealth for households classed as in routine occupations is £74,000, for those in the top two categories, it is more than £450,000 (Figure 8.4 and Table 8.3). The wealthiest tenth of the top two groups have total household wealth of more than £1.4 million, although even these groups contain some households with wealth of under £100,000. Part of this variation reflects age differences and life-cycle saving. In Chapter 11, we look specifically at wealth for those aged 55-64 by social class to shed light on wealth accumulation by the end of people's working careers.

Figure 8.4: Total wealth, by occupational social class, GB, 2006-08 (£)

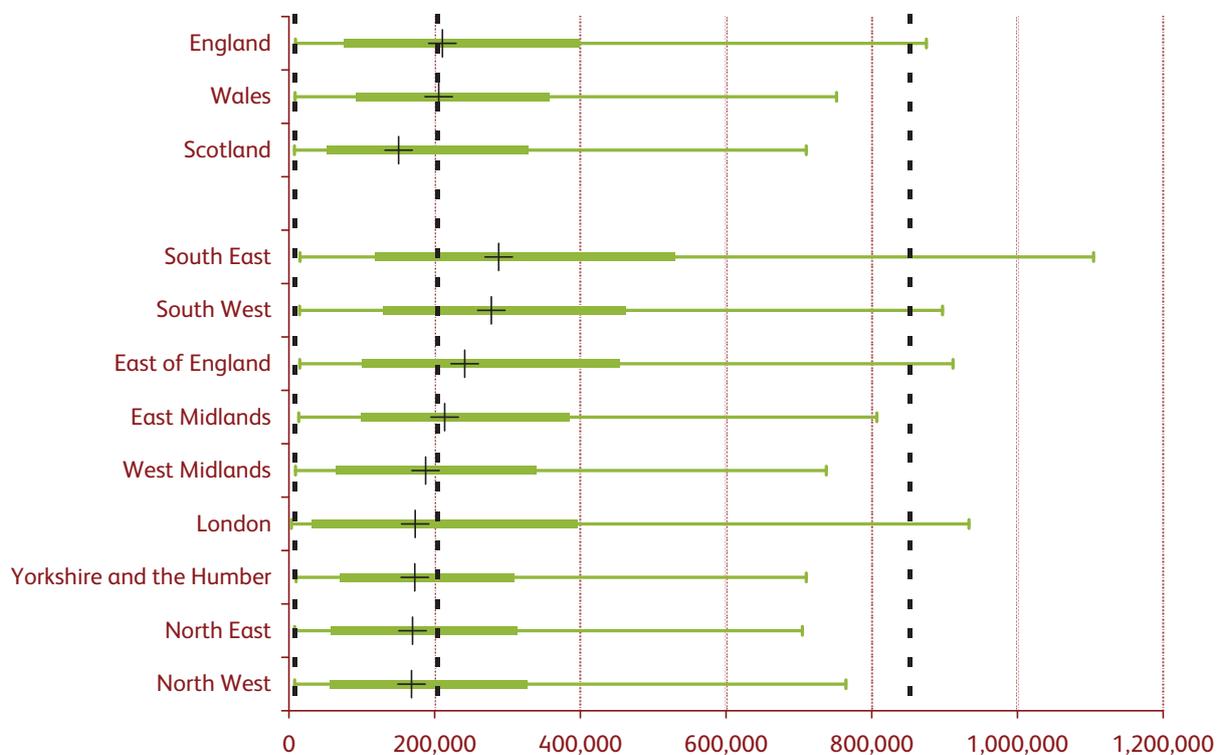


Source: ONS from WAS.

### Nation and region

Figure 8.5 shows that there are considerable wealth differences between nations and regions. Wealth both at the median and for the top tenth are considerably higher in England and Wales than in Scotland. Within England, the wealthiest region is the South East, with median total household wealth of £288,000, 1.7 times that in the North West. The variation between least and most wealthy in London is particularly striking. Much of this reflects house price variations, of course. Table 8.4 shows the breakdown for financial and (non-housing) physical wealth as well as that for total wealth. For the former, there is little difference in median wealth between England, Scotland and Wales, while median wealth is £36,000 in the North West compared with £54,000 in the South East of England.

Figure 8.5: Total wealth, by nation and region, GB, 2006-08 (£)

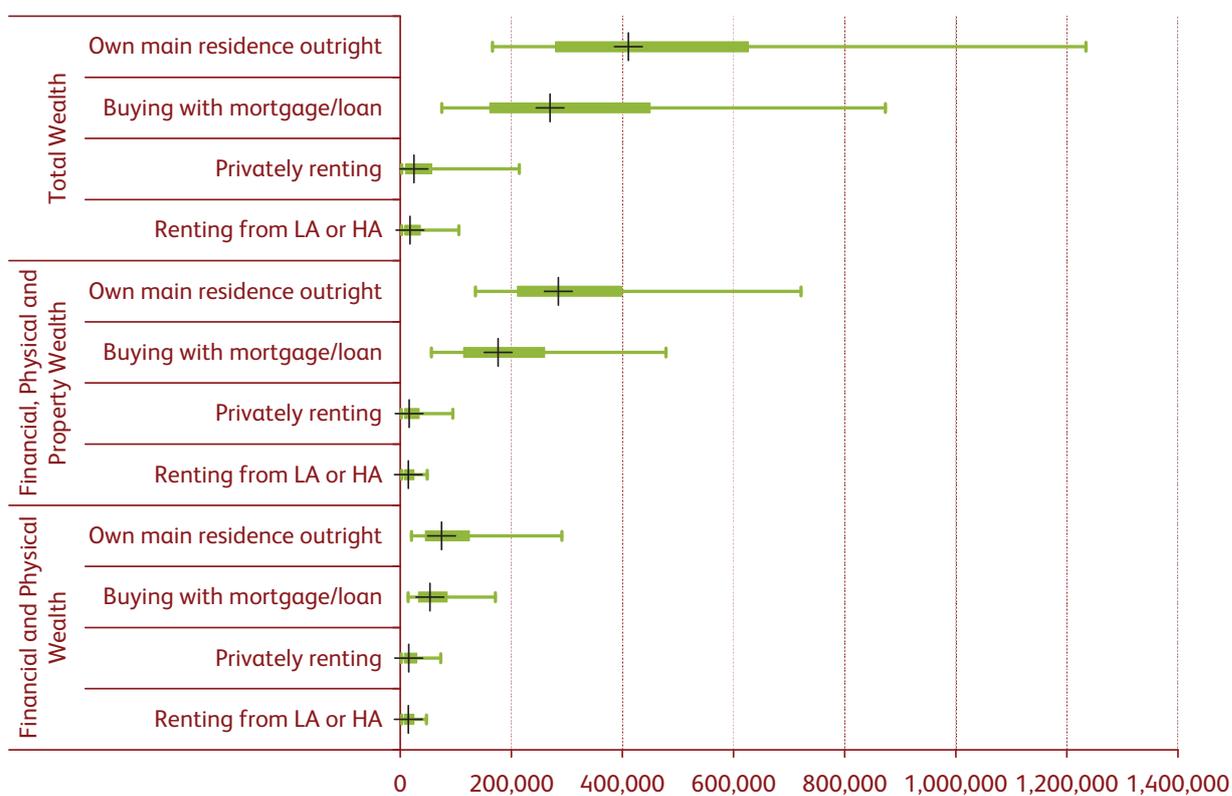


Source: ONS from WAS.

## Housing tenure

Given the importance of housing assets within total wealth, it is hardly surprising that there are large variations between tenures. But Figure 8.6 and Table 8.5 show that there are equally large variations in other forms of wealth which reinforce this. Social tenant households have median financial and non-property wealth of £15,000, which is unchanged allowing for housing, as one would expect, and rises only to £18,000 including non-state pension rights. By contrast, households owning their house outright have median financial and (non-housing) physical wealth of £75,000, rising to £285,000 including housing, and £411,000 including private pension rights. A tenth of outright owners have total wealth of more than £1.23 million, while the 90<sup>th</sup> percentile for social tenants is only £105,000 (including non-state pension rights).

Figure 8.6: Total wealth, by housing tenure, GB, 2006-08 (£)



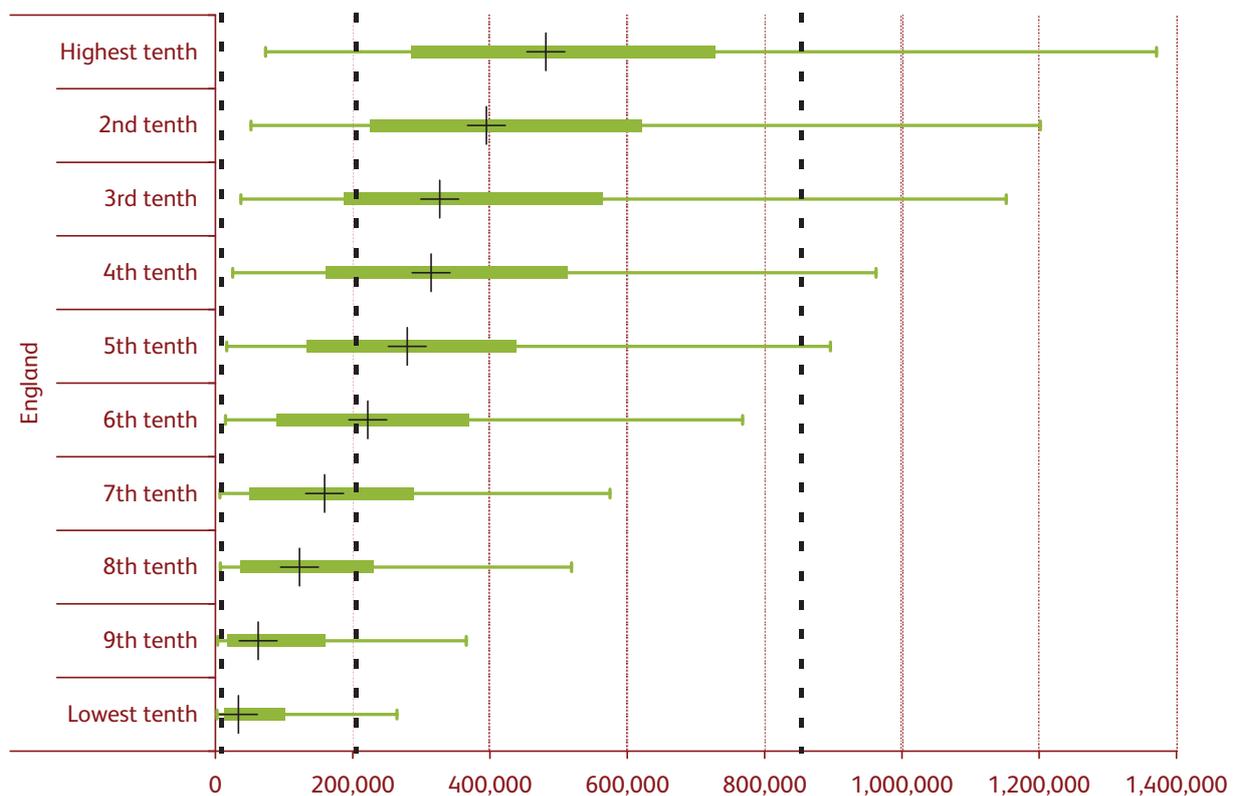
Source: ONS from WAS.

## Area deprivation

Figure 8.7 shows how total wealth varies between and within areas in England classified by area deprivation.<sup>119</sup> Even more starkly than for the other outcomes we have examined, there are very large differences between the different kinds of area. Median total wealth for households in the most deprived tenth of areas is £34,000; in the least deprived areas, it is £481,000, fourteen times as much. Half of households in the least deprived areas have total wealth in the top quarter overall, and a tenth of them have more than £1.4 million. In the most deprived tenth of areas, just under 90 per cent of households are in the bottom half within England (with less than £265,000). As Table 8.6 shows, this is not just because those living in the most deprived areas are tenants and so have no property wealth. Median financial and physical (non-housing) wealth for those in the most deprived areas is £15,000, compared with £84,000 in the least deprived ones. Private pension rights add only £10,000 to the median for those in the most deprived areas, but £173,000 for those in the least deprived areas.

The table shows that on all three wealth definitions, the median wealth in the least deprived tenth of areas is 50 or more places out of 100 higher in the overall distribution than in the most deprived areas. Comparing those at the 90<sup>th</sup> percentile in each kind of area, the differences in their places in the overall distribution is almost as large. Measured by the 90:10 ratio, there is less wealth inequality within the least deprived areas. This is because almost all households in the least deprived areas have assets of some kind, whereas in deprived areas, the least wealthy have virtually no wealth.

Figure 8.7: Total wealth, by area deprivation, GB, 2006-08 (£)



Source: ONS from WAS.

<sup>119</sup> Sample numbers are too small to give reliable results for this kind of breakdown in Scotland or Wales.

Table 8.1: All wealth, by age, GB, 2006-08 (£)

	Median wealth (£)	90:10 ratio	Rank in the distribution		
			10 <sup>th</sup>	Median	90 <sup>th</sup>
<b>Total wealth</b>					
55-64	416,100	48	19	72	95
65-74	306,000	37	18	62	91
45-54	287,800	68	13	60	92
75-84	225,200	46	13	52	85
35-44	174,900	77	9	45	83
85+	171,800	47	11	45	78
25-34	65,900	80	5	28	59
16-24	12,900	46	2	12	32
<b>Overall</b>	<b>204,500</b>	<b>97</b>	<b>10</b>	<b>50</b>	<b>90</b>
<b>Financial, physical and property wealth</b>					
55-64	243,300	43	17	68	94
65-74	213,200	39	17	63	93
45-54	184,200	59	12	58	92
75-84	182,700	49	13	57	90
85+	156,300	55	11	52	87
35-44	120,000	59	9	45	85
25-34	48,200	78	4	30	60
16-24	11,700	42	2	14	35
<b>Overall</b>	<b>145,400</b>	<b>66</b>	<b>10</b>	<b>50</b>	<b>90</b>
<b>Financial and physical wealth</b>					
55-64	66,400	25	16	65	94
65-74	55,100	22	16	59	92
45-54	52,000	28	11	57	91
75-84	43,000	24	13	50	91
35-44	40,200	29	9	48	86
85+	32,800	16	13	41	83
25-34	25,000	32	5	33	72
16-24	10,500	26	3	17	48
<b>Overall</b>	<b>42,300</b>	<b>30</b>	<b>10</b>	<b>50</b>	<b>90</b>

Source: ONS from Wealth and Assets Survey (WAS) 2006-2008. Age is that of 'household reference person'.

Table 8.2: Total wealth, by disability status, GB, 2006-08 (£)

	Median wealth (£)	90:10 ratio	Rank in the distribution		
			10 <sup>th</sup>	Median	90 <sup>th</sup>
Disability/long standing illness in household	198,200	104	9	49	88
No disability/long standing illness in household	209,900	84	10	50	90

Source: ONS from WAS 2006-2008.

Table 8.3: Total wealth, by occupational social class, GB, 2006-08 (£)

	Median wealth (£)	90:10 ratio	Rank in the distribution		
			10 <sup>th</sup>	Median	90 <sup>th</sup>
Large employers and higher managerial	532,500	16	35	79	97
Higher professional	450,500	25	27	74	96
Lower managerial and professional	325,000	31	21	64	93
Small employers and own account workers	236,600	37	17	54	88
Intermediate occupations	200,400	44	14	49	85
Lower supervisory and technical	161,100	60	10	43	79
Semi-routine occupations	86,700	88	6	32	72
Routine occupations	74,000	92	5	30	68
Never worked/long-term unemployed	15,000	117	3	13	59

Source: ONS from WAS 2006-2008.

Table 8.4: Total and financial and physical wealth, by nation and region, GB, 2006-08 (£)

	Median wealth (£)	90:10 ratio	Rank in the distribution		
			10 <sup>th</sup>	Median	90 <sup>th</sup>
<b>Total wealth</b>					
England	210,600	96	10	50	90
South East	287,900	73	14	60	93
South West	277,700	62	12	59	90
East of England	241,300	61	13	54	91
East Midlands	213,700	60	12	51	88
West Midlands	187,700	82	10	47	87
London	173,400	273	5	45	91
Yorkshire and the Humber	172,700	73	10	45	86
North East	169,500	89	9	44	86
North West	168,200	98	9	44	87
Wales	150,600	93	8	42	86
Scotland	205,500	89	9	50	87
<b>Financial and physical wealth</b>					
England	43,100	30	10	50	90
South East	53,600	31	13	58	93
South West	50,900	28	11	56	91
East of England	50,500	23	13	56	90
East Midlands	46,100	23	12	53	90
West Midlands	41,200	26	9	49	87
Yorkshire and the Humber	40,800	20	11	48	86
North East	37,600	29	9	46	86
North West	35,600	30	9	44	87
London	33,700	75	5	42	91
Scotland	39,100	29	9	47	87
Wales	35,900	23	9	44	85

Source: ONS from WAS 2006-2008.

Table 8.5: Wealth, by housing tenure, GB, 2006-08 (£)

	Median wealth (£)	90:10 ratio	Rank in the distribution		
			10 <sup>th</sup>	Median	90 <sup>th</sup>
<b>Total wealth</b>					
Own main residence outright	410,600	7	44	71	95
Buying with mortgage/loan	269,700	12	30	58	90
Privately renting	24,600	86	3	18	51
Social tenant	17,500	42	3	15	35
<b>Financial, physical and property wealth</b>					
Own main residence outright	284,700	5	48	74	95
Buying with mortgage/loan	176,000	9	32	56	89
Privately renting	16,200	52	3	18	40
Social tenant	14,700	19	4	16	30
<b>Financial and physical wealth</b>					
Own main residence outright	74,600	14	28	69	95
Buying with mortgage/loan	53,600	12	20	58	89
Privately renting	15,400	40	3	23	68
Social tenant	14,690	19	5	21	53

Source: ONS from WAS 2006-2008.

Table 8.6: All wealth by area deprivation, England, 2006-08 (£)

	Median wealth (£)	90:10 ratio	Rank in the distribution		
			10 <sup>th</sup>	Median	90 <sup>th</sup>
<b>Total wealth</b>					
Highest tenth	481,400	19	29	76	96
2nd tenth	394,800	23	26	70	94
3rd tenth	326,800	31	22	64	94
4th tenth	314,200	38	18	63	92
5th tenth	279,400	54	15	59	90
6th tenth	221,800	52	13	52	88
7th tenth	159,000	86	7	43	81
8th tenth	122,400	71	7	37	78
9th tenth	62,300	112	5	28	68
Lowest tenth	33,600	104	3	21	57
<b>Financial, physical and property wealth</b>					
Highest tenth	308,500	19	28	77	95
2nd tenth	259,800	20	26	71	95
3rd tenth	232,400	32	20	67	94
4th tenth	221,200	37	17	65	92
5th tenth	192,300	41	14	59	90
6th tenth	157,900	50	12	52	88
7th tenth	113,600	72	7	43	81
8th tenth	85,000	54	8	38	76
9th tenth	42,800	78	5	29	65
Lowest tenth	23,700	69	4	21	55
<b>Financial and physical wealth</b>					
Highest tenth	84,400	18	26	73	95
2nd tenth	71,600	17	25	68	95
3rd tenth	62,500	17	20	63	93
4th tenth	59,000	23	15	61	92
5th tenth	52,900	24	13	57	90
6th tenth	43,300	21	13	50	88
7th tenth	35,000	35	8	43	85
8th tenth	29,600	27	8	38	80
9th tenth	23,100	30	5	31	71
Lowest tenth	15,200	27	5	22	66

Source: ONS from WAS 2006-2008.

## Chapter 9 The position of different groups – a cross-cutting summary

The previous six chapters presented analyses of the position of different groups within the eight economic outcomes we have investigated in turn. This chapter summarises that information, taking a cross-cutting approach. We now focus, in turn, on each of the dimensions such as gender, age and so on (which were used to define the different groups), bringing together the findings about the various outcomes. We look at ethnicity and religious affiliation together, as their overlapping effect can be important in the labour market. The chapter also contains some more contextual information drawn from studies that have related the outcomes for particular groups to other characteristics and from other evidence submitted to us. Its final section provides a further level of summary, with tables bringing the findings together side-by-side.

### 9.1 Gender

Gender differences in outcomes run through the statistics we presented in the previous six chapters, and differences between other kinds of group are often distinct between men and women. As Katherine Rake, then from the Fawcett Society, put it to us, most inequalities need to be seen through a ‘gender lens’. Nor are men and women in monolithic groups. Given this, we highlight gender differences in each of the sections that follow rather than just in this section. We summarise immediately below some of these findings relating to differences by gender alone or by gender and age. The wealth data we are using are not broken down by gender.

- Girls outperform boys throughout the distribution of **educational achievement at age 16** (Key Stage 4) in each nation. Girls are typically ranked between 8 (in Scotland) and 12 (in the other nations) places higher up the ranking (out of 100) of results at age 16 than boys. The gender gaps are somewhat smaller between the highest and lowest achievers.
- Looking at the **highest qualifications** of the adult population as a whole, women are less likely than men to have A levels or higher qualifications. However, this is largely the result of lower levels of qualifications for older women, with little gender difference for those under 30. For those in their late fifties, 59 per cent of men, but only 36 per cent of women have A level qualifications or higher; 39 per cent of women, but only 26 per cent of men have no qualifications above Level 1. For those in their late twenties, 58 per cent of men and 59 per cent of women have A levels or higher, and fewer than 20 per cent of men or women have no qualifications above Level 1.
- **Employment** patterns differ considerably by gender. More than 85 per cent of men from their late twenties to early fifties are in paid work, mostly full-time. For women of the same ages, around 70 per cent are in paid work, but with more than 30 per cent in part-time employment in their late thirties. Overall, only 39 per cent of women compared with 59 per cent of men are employed full-time. 26 per cent of women but only 6 per cent of men are employed part-time.

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- The median **hourly wage** for women, £8.90, is 21 per cent less than the median for men. Nearly three-fifths of men are in the top half of the hourly wage distribution, while nearly three-fifths of women are in the bottom half. Looking at median wages by age group, men's wages are highest in their early forties (£13.40 per hour), but women's are highest in their early thirties (£10.40 per hour). For those in their early fifties, the median wage for women is 21 places lower down than the overall distribution than the median for men (at the 45<sup>th</sup> percentile of the overall distribution, compared to the 66<sup>th</sup> percentile for men). The minimum wage is a key determinant of the wages of the worst paid tenth of women in most age groups.
- Among men working full-time, median **weekly earnings** are £494 per week, compared to a median of £386 for women, 22 per cent less (with part of the difference reflecting women's shorter working hours, even if working full-time). The size of the pay gap between men and women varies considerably by age – 6-7 per cent in the twenties but as high as 28 per cent in their early forties. The gender gap in pay is accompanied by inequality *within* the distributions that is as great for men, and nearly as great for women, looked at separately, as it is for all full-time workers together.
- **Net individual incomes** are distributed across all adults much more unequally than earnings are across those in employment, with considerable differences both between men and women and within the distribution for each gender. The median female individual net income, £180 per week, is less than two-thirds of the median for men, £281 per week.
- Gender inequalities are largely masked when incomes are measured on a household basis. Given the household basis and the equal sharing assumption, gender differences in **equivalent net incomes** are very much smaller than those in earnings or in individual incomes. Nonetheless, the median equivalent net income for women is 7 per cent lower than the median for men, and the median for women is 6 places (out of 100) lower in the overall distribution than men.

What is striking from these summaries is the extent to which younger women now have qualifications equal to, or higher than, those of men, but continue to be disadvantaged in the labour market. Box 9.3 looks at analysis of differences in the pay of men and women from different ethno-religious groups – 'pay penalties' – that persist even after allowing for differences in qualifications and other characteristics. One notable conclusion from this work is that women from nearly all ethno-religious groups are paid less than the least well paid group of men, controlling for other factors.

As we explained in Chapter 1, the national surveys on which the analysis in Chapters 3 to 8 is based do not contain information on the position of the trans population. Box 9.1 gives a summary of some of the information available from other sources.

### Box 9.1: Evidence on the circumstances of the trans population

There are no official estimates of the size of the trans population, as none of the existing household surveys or main administrative sources asks about transgender status. The Office for National Statistics (ONS) has recently published a position paper on data relating to this group, in response to a recommendation from the 2007 Equalities Review.<sup>120</sup> The ONS paper summarises available population estimates, pointing to the inconsistencies in them. For instance, the Home Office, based on research from the Netherlands and Scotland, estimated in 2000 that there were between 1,300 and 2,000 male to female and between 200 and 450 female to male transsexual people in the UK.<sup>121</sup> More recently, Gender Identity Research and Education Society<sup>122</sup> suggests that there are 6,200 people who have transitioned to a new gender role via medical intervention and approximately 2,335 full Gender Recognition Certificates have been issued to February 2009. However, the group, Press for Change, estimates that there are around 5,000 post-operative transsexual people. The figures are more diverse when looking at the wider ‘trans community’ in the UK.<sup>123</sup>

There are several pieces of qualitative and quantitative evidence that give indications of the economic status of trans people. A survey by the Scottish Transgender Alliance survey found that 55 per cent of survey respondents had an HND/degree or postgraduate degree but only 30 per cent had a gross annual income of over £20,000, while 48 per cent had a gross annual income of under £10,000. 37 per cent of respondents stated that they were disabled. There was a high unemployment rate among the survey respondents, with 37 per cent receiving out of work benefits. There was also a high reported self-employment rate, at 20 per cent.<sup>124</sup> This may be because some members of the trans community avoid situations where they do not have control over their work environment and the people with whom they have day-to-day contact.<sup>125</sup>

An online survey found that the proportion of people from the trans community in higher occupational classes was above the UK national average. However, the workplace afforded a poor experience for many respondents. 42 per cent of those not living permanently in their preferred gender role were prevented from doing so because they feared it might threaten their employment status. As a consequence, one-quarter of trans people said they had felt obliged to change their jobs because of harassment and bullying. 38 per cent had experienced harassment at the time of gender transition and 25 per cent had experienced it at work for a period after transition. Some reported experiencing verbal abuse (23 per cent) and physical abuse (6 per cent).<sup>126</sup>

<sup>120</sup> ONS (2009b).

<sup>121</sup> Home Office (2000).

<sup>122</sup> GIRE (2008).

<sup>123</sup> According to ONS (2009), “the term trans is an umbrella term referring to individuals whose gender identity or gender expression falls outside of the stereotypical gender norms”. Estimates of its size range from 65,000 (Johnson, 2001, p.7) to 300,000 (GIRE, 2008).

<sup>124</sup> Morton (2008).

<sup>125</sup> Mitchell and Howarth (2009).

<sup>126</sup> Whittle, Turner and Al-Alami (2007).

The group A:gender argues that members of the trans community are consistently found working at levels well below their capability.<sup>127</sup> They suggest that this is unlikely to be explained by interruption to careers to undergo gender reassignment, as any consequent workplace absence is likely to have been short. Instead, they suggest that more plausible explanations might include changing job (voluntarily or forced), which may make it hard to obtaining a post at the same level, or indeed at all.

## 9.2 Age

Differences by age and gender in qualifications, wages, earnings and individual incomes are summarised above. We look at incomes and wealth on a household basis. Key findings include:

- Looking at the median **equivalent net income** for each age group, the lowest – under £350 – is for the under-16s (that is, households containing children), and those over 65. The median incomes for those of working age have two peaks – at £477 for those aged 26-30 and at £474 for those in their early fifties. There are very large spreads in the incomes of each age group. Inequality within age groups is highest for those in their late fifties.
- There is a strong life cycle pattern in **total household wealth**. Median total wealth is £66,000 for households with a ‘reference person’ aged 25-34, rising to £416,000 for those aged 55-64, falling to £172,000 for those over 85. However, there is considerable inequality at every age. By age 55-64, a tenth of households have total wealth of under £28,000, but a tenth have more than £1.3 million.

In Chapter 11, we look in detail at how educational outcomes develop across the life cycle, mostly using information from longitudinal surveys that have followed the same people as they become older.

## 9.3 Ethnicity and religion

- In terms of **educational achievement at 16** in England, Indian and Chinese boys and girls have median rankings well above the national median. A tenth of Chinese boys are ranked in the top 3 per cent overall, and a tenth of Chinese girls in the top 1 per cent. The median rankings for each of Pakistani, Black African and Black Caribbean boys are well below the national median. Rankings for results of boys and girls with Irish Traveller or Gypsy/Romany backgrounds are exceptionally low. In Chapter 11, we look at the way these differences develop over the school years. Ethnic differences in achievement at 16 appear to be smaller in Scotland and Wales than in England.

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<sup>127</sup> A:gender (2007).

- There are considerable ethnic differences in **highest qualification** for both men and women. More than 40 per cent of Bangladeshi and Pakistani men and women have no qualifications above Level 1. Just under a fifth of White British men and women have first or higher degrees, but around 30 per cent of Black African and Indian men, and around 40 per cent of Chinese men and women. The higher qualification levels of Black African adults contrast with the below-average attainment of Black African children. These differences are linked to substantial differences by religious affiliation: more than a third of Buddhist and Hindu men and of Jewish men and women have first or higher degrees; more than 40 per cent of Muslim men and women have no qualification above Level 1.
- The largest differences in **employment** patterns by ethnicity and gender are that 44 per cent of Pakistani and 49 per cent of Bangladeshi women are economically inactive, looking after family or home, compared to 20 per cent or fewer for most other groups. Only a quarter of Pakistani and Bangladeshi women are in paid work, but more than half of other ethnic groups. Around 80 per cent of White British, other White and Indian men are in paid work, but between 60 and 70 per cent of other groups. 17 per cent of Bangladeshi men are employed part-time and 21 per cent of Pakistani men are self-employed. By religious affiliation, only 47 per cent of Muslim men and 24 per cent of Muslim women are employed, and male Muslim unemployment is 9 per cent (compared with a national average of 5 per cent). A quarter of Jewish men and 16 per cent of Muslim men are self-employed. Box 9.2 explores these differences and reasons behind them in more detail, including the extent to which we are seeing differences between first and second generation migrants.
- Median **hourly wages** range from £6.90 for Bangladeshi men and £7.70 for Pakistani men to £12.70 for Chinese men. Alongside these considerable differences between groups, inequality for men **within** most ethnic groups is as much as, or greater than, it is for all men. A tenth of Indian men are paid more than £26.30, and a tenth of White British men more than £24.20, but a tenth of each group less than £6 per hour. The median wages for Bangladeshi and Pakistani women are only £7.80 and £8.30, respectively, but these are more than the median wages for men of the same groups. The gender wage gap is also reversed for Black Caribbean and Black African women. Wage inequality among women is, again, as great *within* most ethnic groups as it is among all women.
- By religious affiliation, Muslim men have a median wage of £8 per hour. The median for Jewish men is £17.50 (within the top fifth of all earners). There is much less difference between other groups of men and women by religious affiliation. Box 9.3 explores the extent to which hourly wage differentials between ethno-religious groups can be explained by differences in factors such as qualifications. Box 9.6 at the end of this section looks at the particular issue of religious affiliation and the labour market in Northern Ireland.

### Box 9.2: Employment, ethnicity and religion

In Chapter 9, we showed considerable differences in employment patterns for both men and women between both ethnic groups and between groups defined by religious affiliation. Two questions immediately arise from these findings. First, to what extent are these differences ‘explained’ by the qualifications that we reported in Chapter 3: are low employment rates for some groups attributable to lack of qualifications, or are there other factors at work? Second, are both ethnicity and religious affiliation each important in affecting employment status, or is the apparent effect of one mainly an effect of the way in which they overlap for particular groups? For instance, is the disadvantage of Muslims in the labour market primarily a reflection of the disadvantage of Pakistani and Bangladeshi people, or vice versa?

On the first of these questions, Stephen Machin, Richard Murphy and Zeenat Soobedar looked at the whole UK population of working age as a whole, at the extent to which employment is affected by qualification levels in the same ways. After allowing for differences related to age and gender, they found that:<sup>128</sup>

- for any given qualification level, White British men and women are more likely to be employed than those of any other ethnicity covered;<sup>129</sup>
- for those with no qualifications, Pakistani/Bangladeshi men have an employment rate 16 percentage points, Black men 7 percentage points, and Indian and other Asian men, 5 percentage points less than White British men. The differentials for those with higher qualification levels are smaller, but employment rates for Black and Pakistani/ Bangladeshi men with degrees are still 6 percentage points less than White British men with degrees;
- for women the employment gaps are larger. Even comparing those with degrees, Pakistani/Bangladeshi women are 11 percentage points, and other groups 4-7 percentage points less likely to be employed than White British women. For those with no qualifications, the gap is up to 44 percentage points.<sup>130</sup>

In this kind of analysis it is not possible to conclude that these kinds of difference are a straightforward effect of labour market discrimination – there may be other factors varying between the groups that have not been allowed for besides qualifications, age and occupation. In earlier work for the Department of Work and Pensions (DWP) using data from a range of surveys between 1973 and 2004, Anthony Heath and Sin Yi Cheung found significant ethnic employment penalties, unexplained by qualifications, of the same kind.<sup>131</sup> They found evidence that penalties were greater for the ‘first generation’, who were born abroad, than for those born and educated in Britain, however the penalties for the second generation were only a little smaller in magnitude. They reported that there was, “*considerable evidence from the Home Office Citizenship Survey...and from field experiments that unequal treatment on grounds of race or*

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<sup>128</sup> Machin, Murphy and Soobedar (2009b), Section 3.3.

<sup>129</sup> The analysis distinguished between eight broad ethnic classifications: White British, White Other, Black, Indian, Pakistani/Bangladeshi, Other Asian, Mixed, and Other groups.

<sup>130</sup> They also found that for both men and women, disabled people were 30 percentage points less likely to be employed than non-disabled people, with the differential falling to 5-6 percentage points for graduates.

<sup>131</sup> Heath and Cheung (2006).

*colour is likely to be a major factor underlying the pattern of ethnic penalties*".<sup>132</sup> Box 9.5 looks at more recent direct evidence that discrimination does indeed occur when people applying for jobs are called for interview, with only names (linked to gender and presumed ethnicity) or declared disability status varying, and with experience and qualifications the same.

In further work, Heath and Cheung looked in detail at unemployment differences between ethnic groups using Labour Force Survey (LFS) data for the period 1994 to 2000. Unemployment gives, in some ways, the clearest indication of difficulties in the labour market, given the variety of other reasons (such as participation in education) for non-employment. After adjusting for education and age they found:<sup>133</sup>

- significant increases in unemployment rates for Black African, Black Caribbean, Pakistani/Bangladeshi and (to a lesser extent) Indian men and women;
- these effects were as great for the 'second generation' as for the first;
- the differences tended to be 'hypercyclical', that is, worse in recessions;<sup>134</sup>
- the effects were similar for both men and women.

Figure 9A shows the scale of these effects for first and second generation men, using data from 1997-2005. In each case there is a clear distinction between the disadvantaged position of the first three groups – Black African, Black Caribbean and Pakistani/Bangladeshi men – and that of the others.

The same researchers also looked at what kind of occupation those who did get work were employed in, distinguishing between four broad occupational classifications.<sup>135</sup> In contrast to the results for unemployment, they found that the 'second generation' had made substantial progress compared with the first generation. In the second generation, minority men and women in employment had similar chances (after allowing for age and qualifications) of working in professional and managerial jobs to the White majority group. However, men from some minority groups – Black African, Black Caribbean, and Indian – had reduced chances of being in skilled manual jobs.<sup>136</sup>

We also saw in Chapter 9 that certain minority ethnic groups had high rates of self-employment. Investigating this, Ken Clark and Stephen Drinkwater also found differences between generations. First generation minorities from Pakistani, Bangladeshi and Chinese backgrounds were over-represented in self-employment, but those with Black Caribbean and Black African backgrounds under-represented. However, rates of self-employment fell between 1991 and 2001 for those from Chinese and Indian backgrounds. The authors argue that, "*this is consistent with second-generation Chinese and Indians choosing not to follow their parents into business and instead finding employment in the paid labour market. In contrast, Pakistanis and Bangladeshis experienced no such decline in self-employment rates despite having similar demographic characteristics*".<sup>137</sup>

<sup>132</sup> Heath and Cheung (2006), p.2.

<sup>133</sup> Cheung and Heath (2007), table 12.A2.

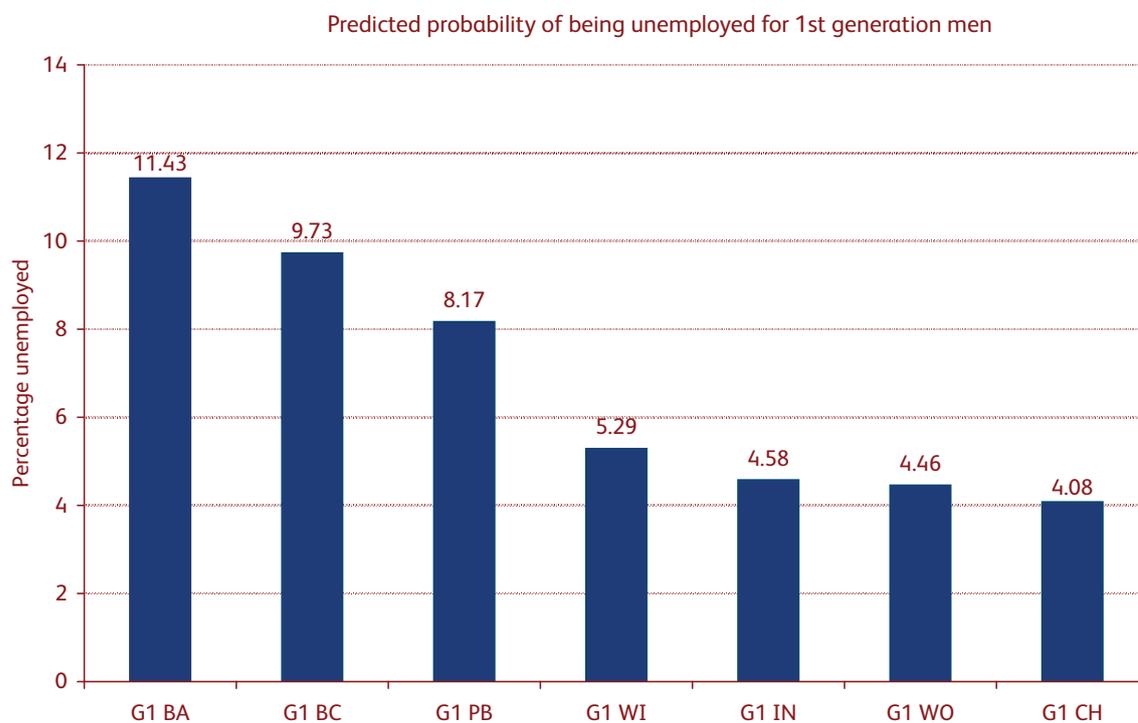
<sup>134</sup> See Section 10.5 for discussion of the early effects of the recession that started in 2008.

<sup>135</sup> These were: 'salaried' (white collar); 'petty bourgeoisie'; manual supervisor/skilled manual; and routine non-manual.

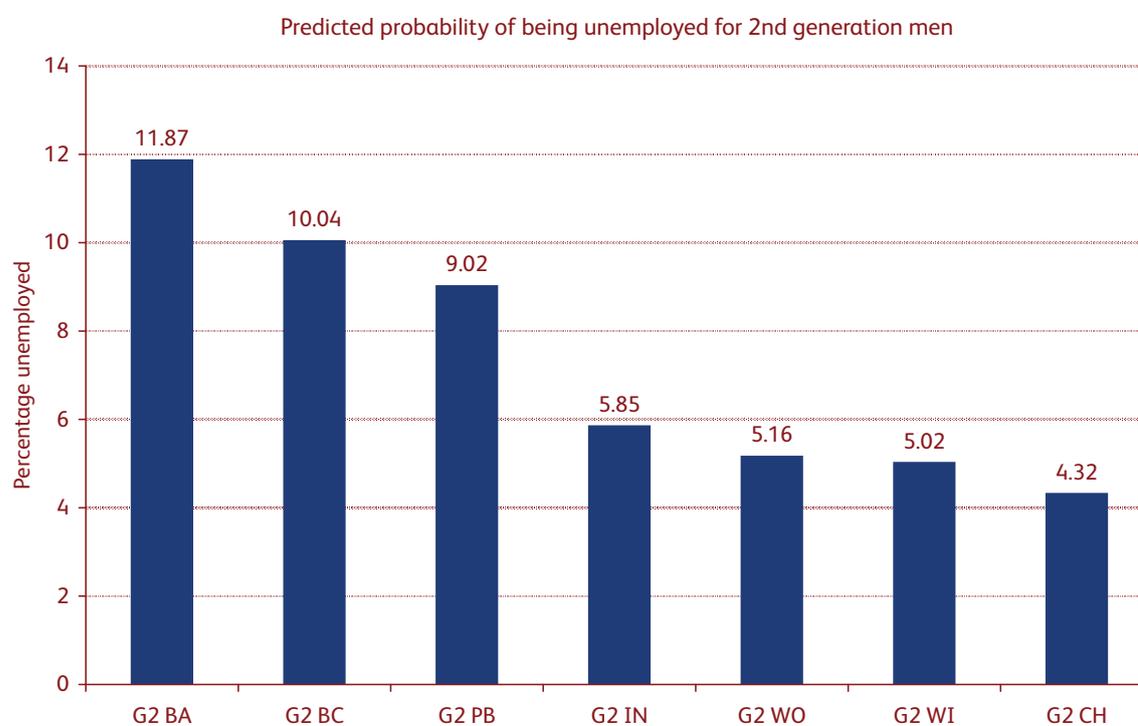
<sup>136</sup> Cheung and Heath (2007), tables 12.A3A and 12.A3B.

<sup>137</sup> Clark and Drinkwater (2007), p.ix.

Figure 9A: Predicted unemployment rates for men with similar characteristics by ethnic group



For married men with secondary education and 10-15 years' LM experience (1997-2005): WB=4.3 %.



For married men with secondary education and 10-15 years' LM experience (1997-2005): WB=4.3 %.

Source: Heath and Li (2008).

Note: BA: Black African; BC: Black Caribbean; PB: Pakistani/Bangladeshi; IN: Indian; WO: White Other (from Europe or Old Commonwealth); WI: White Irish; CH: Chinese; WB: White British; G1: first generation; G2: second generation.

On the second question, the relative importance and interaction of ethnicity and religious affiliation, Nabil Khattab looked at data from the 2001 Census to examine the position of particular ethno-religious groups in terms of both education and occupational attainment. He finds that by comparison with White British Christians:

- Jewish White British and no religion White British people, and Christian White Other men are advantaged in terms of both education and occupation;
- Christian Black African and Christian Black Caribbean people are advantaged in terms of education, but disadvantaged in occupation;
- Muslim Pakistanis, Muslim Bangladeshis, Muslim White people and Sikh Indians are disadvantaged in terms of both education and occupational attainment;
- Hindu Indians are advantaged in terms of education, but Muslim Indians disadvantaged, but neither group strongly advantaged or disadvantaged in occupational attainment.

On the basis of his analysis he argues that, “*ethnicity per se is not an important factor but operates as a proxy...skin colour and culture (religion) are to a greater extent probably the main mechanisms that operate to reinforce disadvantage among some groups or to facilitate social mobility amongst others*”.<sup>138</sup>

In recent work, Anthony Heath, Jean Martin and Karin Bosveld have also looked at employment outcomes, using LFS data for working age people in Great Britain for 2005 and 2006. They again looked at differences in employment status after allowing for factors such as age and highest qualification. They were able to distinguish 29 ethno-religious groups with large enough numbers in the survey for analysis. They found that there were many significant differences within ethnic groups:

*“In particular there is a strong ‘Muslim penalty’ for women from all ethnic groups: they were particularly likely to be economically inactive or, if active, to be unemployed. There were also ethnic penalties which persisted despite allowing for religion, in particular for Black Caribbean and Black African women. For men the results were broadly similar. Looking just at the second generation – those born in the UK or who arrive before the age of 5 – indicated that Muslim disadvantage had decreased compared with the immigrant generation but there was no decline in the Black disadvantage.”*<sup>139</sup>

In other words, religious affiliation and ethnicity have separate effects, and some of their interactions have changed between generations. This suggests that ethno-religious group can be a more revealing way of examining labour market position than looking at ethnicity and religion separately. In Box 9.3, we look at analysis of pay levels by ethno-religious group.

<sup>138</sup> Khattab (2009), p.319.

<sup>139</sup> Heath, Martin and Bosveld (2009).

### Box 9.3: Pay penalties, gender, ethnicity and disability

In Chapter 5, we mapped out the great differences in ranges of earnings for people from different backgrounds showing, amongst other things, the low levels of pay for women, for those from certain minority ethnic groups and for disabled people. These ‘pay gaps’ do not necessarily show that there is discrimination – they could, for instance, reflect differences in qualification levels or experience that would be expected to affect pay. However, it is also possible to look at pay levels for different kinds of people to see whether there are ‘pay penalties’ (or bonuses) for particular groups given what would be expected based on their qualifications, age and so on.

In recent work for the Equality and Human Rights Commission (EHRC), Simonetta Longhi and Lucinda Platt<sup>140</sup> used similar data from the LFS (over three years from October 2004) to that used here to look at hourly pay by a wide range of characteristics including age, occupational classification, family circumstances and qualifications. They then estimated what level of pay would be predicted for someone with any given combination of characteristics, given what was seen in the labour market. For the analysis by ethno-religious group, they used data for Great Britain; for analysis by disability, they were able to cover the whole of the UK. Using this they could then look at what level of pay would be predicted for someone with exactly the same characteristics *except* for the one they were investigating. The difference from someone with standard characteristics gives a measure of the ‘penalty’ associated with any given characteristic. The existence of a penalty of this kind does not in itself show that there is discrimination in pay determination, although that is one possible explanation. There may be other factors associated with pay variation that were not captured in the survey data used.

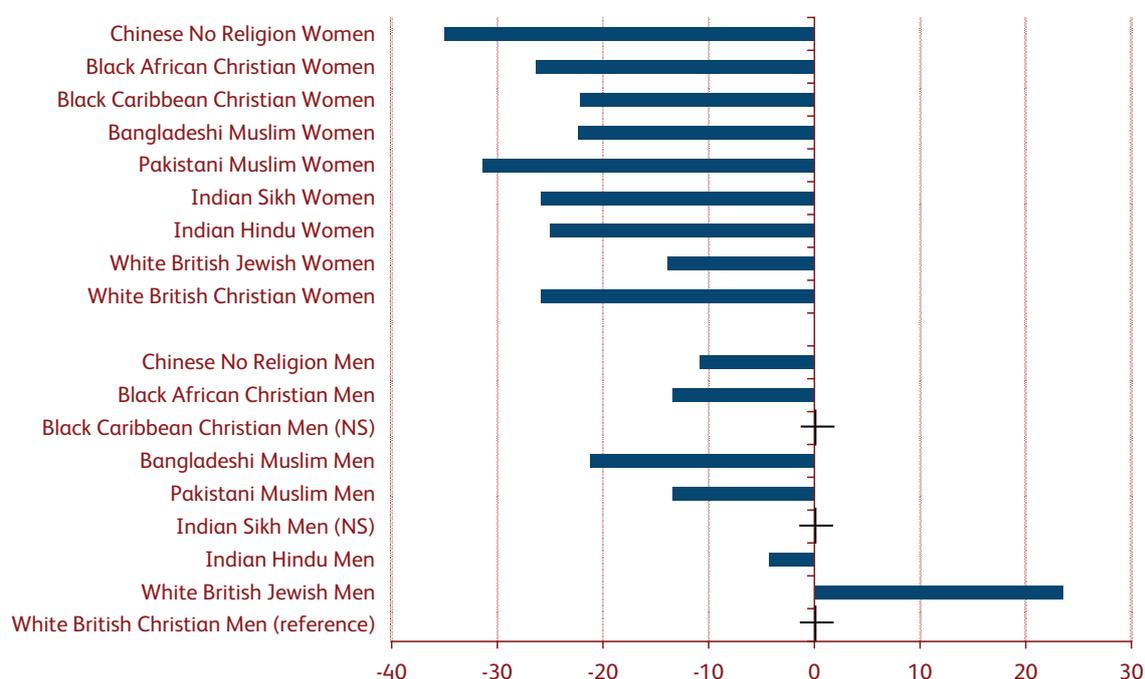
Figure 9B shows some of their results. The reference category was a White British Christian man, who was born in the UK, non-disabled, in a couple but without children, aged 40-44, with Level 2 qualifications,<sup>141</sup> and working in a skilled job. He was predicted to earn £10.13 per hour (at 2007 prices). The figure shows what percentage of higher or lower pay would be predicted for other people with exactly the same characteristics apart from their gender and ethno-religious group. As far as men are concerned, predicted pay for Indian Hindu and Sikh men and Black Caribbean Christian men was within the same range as the base case. White British Jewish men were predicted to earn 24 per cent more, even with the same other characteristics. However, Pakistani and Bangladeshi Muslim men and Black African Christian men were predicted to earn between 13 and 21 per cent less than White British Christian men with the same characteristics. In other words a substantial part of the pay gaps we showed for these groups in Figure 5.3 *cannot* be explained solely by factors such as qualifications and occupational class. *Actual* pay for Chinese men exceeded that of White British men by about 11 per cent in 2006-2008 (Table 5.3). However, once factors such as their higher qualification levels were taken into account, the figure shows that for Chinese men with no religion there was a pay *penalty* of 11 per cent.

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<sup>140</sup> Longhi and Platt (2008).

<sup>141</sup> For instance, 5 GCSE A\*-C or equivalent vocational qualifications.

Figure 9B: Pay penalty by gender and ethno-religious group – percentages



Source: Longhi and Platt (2008).

Note: The differences shown by the bars in the chart are all statistically significant. Pay penalties for Indian Sikh men and Black Caribbean Christian men compared to White British Christian men are not statistically significant. The figures show the difference in pay predicted for people from each ethno-religious group with the following shared characteristics: born in the UK; non-disabled; married or cohabiting; without dependent children; aged 40-44; level 2 qualifications; and in a skilled trade occupation.

Looking at the results for women, it is striking that none of these groups (with the exception of White British Jewish women) has predicted hourly pay above that of even the group of men (Bangladeshi) with the *lowest* predicted pay. The pay penalty for White British Christian women compared with their men with the same characteristics was 26 per cent, and for the other groups was in the range 22-35 per cent (14 per cent for White British Jewish women). To put it another way, little or none of the gender hourly pay gap (21 per cent for all employees) we described in Chapter 5 is explained by factors such as qualification levels. This should not be a surprise given what we also show about women’s educational performance and the qualifications of younger women.

Longhi and Platt carried out similar analysis for the effect on predicted pay of disability (based on whether people said they had a long-standing illness that limits their activities). Disabled men were predicted to be paid 8 per cent less than non-disabled men who otherwise were the same, non-disabled women 26 per cent less, and disabled women 31 per cent less.<sup>142</sup>

<sup>142</sup> Longhi and Platt (2008), table 4.2.

They also looked at whether the penalties they found applied to those with low and high qualifications, as well as for those with mid-level ones illustrated above. They found that pay penalties were greater for women with lower levels of qualification, but smaller for women with high qualifications. By contrast penalties were greater for disabled people with higher qualifications. Pakistani and Bangladeshi men with no qualifications experienced substantial pay penalties compared to White British Christian men with no qualifications (25 and 41 per cent respectively). Indian Hindu, Chinese and Black African men with higher qualifications also experienced some pay penalties (7-15 per cent).

The researchers extended their analysis for us to look at some of the factors associated with these pay penalties in more detail. This included looking at the impact of occupational sector in more detail (including whether full-time or part-time), at differences between those who were first or second generation immigrants, and at those with high and low pay. To do this they used LFS data pooled from Spring 2002 to the end of 2008. For sample size reasons their results are restricted to men.

Looking first at the larger ethno-religious groups by generation of immigration:<sup>143</sup>

- **First generation Hindu men** were paid slightly more (4 per cent) than White British Christian men. However, given their qualifications and (particularly) their occupations, they would have been expected to be paid 14 per cent more – there was an unexplained penalty of 10 per cent.
- **Second generation Hindu men** were paid 13 per cent more than White British Christian men, only slightly less than would be expected given their qualifications and occupation – an unexplained penalty of only 3 per cent.
- **First generation Pakistani Muslim men** were paid 46 per cent less than White British Christian men. They would be predicted to earn 30 per cent less on the basis of their qualifications and occupation, so there was an unexplained penalty of 15 per cent.
- **Second generation Pakistani Muslim men** were paid 12 per cent less than White British Christian men, about half of which was explained by qualifications and occupation, leaving an unexplained penalty of 8 per cent.
- Which occupation people were in was most important for first generation Muslim men. The prevalence of part-time work was important for both generations, particularly at the bottom of the distribution.
- Looking by level of pay, the researchers found that large proportions of the pay gap for the lowest paid were explained by education and occupation. However, the very highest paid (90<sup>th</sup> percentile) second generation Indian Hindu men were paid 17 per cent and first generation Pakistani Muslim men 30 per cent less than would be predicted.

Two points can be noted from this. First, the ‘unexplained penalty’ – which may represent discrimination in some form – was much less in the second generation than in the first (see Box 9.2 for parallel issues on employment). The penalties for the second generations, in particular, were a smaller than those shown in Figure 9B above.

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<sup>143</sup> Longhi, Nicoletti and Platt (2009), table 10.

Second, the analysis – using more detailed information on occupation – shows that an important part of the pay gap is to do with exactly which occupations particular groups end up in. Given, for instance, that a quarter of second generation Pakistani Muslim men work as drivers or as shop assistants, lower pay would be expected than for those with similar qualifications in other occupations. The issue is then why there is this concentration – which is where the kind of discrimination in (private sector) recruitment shown in Box 9.5 becomes such an important mechanism.

Looking at the pay gap for disabled people, the researchers found that an important factor in their pay disadvantage was concentration in part-time work and in less well-paid occupations. For pay differences by both ethnicity and disability status, they concluded that, “*labour market discrimination is potentially more relevant to limiting access to employment and to particular types of occupation than for pay within occupations*”. This kind of occupational segregation has been identified as being crucial in explaining the gender wage gap.<sup>144</sup>

- The main difference in patterns of **weekly earnings** from those of hourly wages is that women are generally several places further down the distribution of full-time earnings. The median hourly wage for Black Caribbean women places them at the 54<sup>th</sup> percentile of the overall distribution, but the median weekly earnings for those working full-time placed them only at the 46<sup>th</sup> percentile.
- More than half of Pakistani women and nearly half of Bangladeshi women have **individual net incomes** below £100 per week, and so are in the poorest fifth overall. More than a tenth of Pakistani women and of Bangladeshi men have no reported income in their own right at all. Comparing men and women, only for Black Caribbean men and women are individual incomes at similar levels across the range. For other ethnic groups, the median position of women is 10-20 places (out of 100) below men of the same ethnicity, but for White British and Indian women the difference is 24 and 27 places.
- Within seven broad ethnic categories, Indian and White adults have the highest median **equivalent net incomes**, £417 and £412, respectively, but the median for Pakistani and Bangladeshi adults (taken together) is only £238, 60 per cent of that of White adults. Half of Pakistani and Bangladeshi adults have incomes below £238, very close to the official poverty line. The median income for Pakistani and Bangladeshi adults places them only at the 18<sup>th</sup> percentile of the overall distribution – 35 places (out of 100) below the median for White adults. Income inequality **within** these ethnic categories is generally similar to, or greater than, that across the population as a whole. One contributor to low incomes for some ethnic groups is the position of asylum seekers and refugees. As Appendix 3 explains, while they may come within the household population for survey purposes, they are not separately identified. Box 9.4 reports some evidence from other sources on the existence of very low incomes for some asylum seekers and refugees.

<sup>144</sup> See, for instance: Olsen and Walby (2004); Mumford and Smith (2007).

### Box 9.4: Asylum seekers and refugees

Although asylum seekers and refugees are not identified in the surveys on which this report draws, there has been a number of recent studies of the economic circumstances of asylum seekers which identify significant levels of hardship and even destitution.

Two recent small-scale studies focused on the experience of destitution in two cities: Leeds and Leicester. The Leeds study was conducted on behalf of the Joseph Rowntree Charitable Trust Inquiry into Destitution among Refused Asylum Seekers.<sup>145</sup> It used a range of methods and spoke to both local agencies and asylum seekers themselves. Its main findings include:

- refused asylum seekers constituted the majority of those experiencing destitution;
- destitute asylum seekers rely upon friends and charity from voluntary organisations and churches to try to meet their basic needs of shelter, food, health, income and safety. Others are forced to find undocumented work to survive. All sources of support are highly precarious;
- people remain in this vulnerable position for protracted periods during which time they experience differing degrees of destitution that have an acute impact on their well-being, and can lead to self-harm and suicidal thoughts. Periods of rough sleeping are common for some.

Three of the asylum seekers interviewed, *“stated that they felt so ignored and insignificant to British society that they could die in the street and no-one would notice or care”*. One refused asylum seeker said, *“In my country they hate me, they killed my husband, they killed my family. If I went there they would kill me. Here they are killing me slowly.”*

The Leicester study was carried out through four voluntary organisations during one month in early 2008. It defined destitution as *“the lack of any available statutory support mechanisms resulting in the need of an individual approaching charities, faith groups, communities and voluntary groups to get help and assistance in accessing some form of daily support”*.<sup>146</sup> The study found:

- 135 asylum seekers who were destitute;
- of these, four reported sleeping rough the previous evening; 92 per cent that they had slept at a friend’s house; and 21 per cent were ‘sofa surfing’ between friends’ houses;
- 61 (45 per cent) had been destitute for more than a year and 16 (12 per cent) for five years or more.

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<sup>145</sup> Lewis (2007).

<sup>146</sup> Malfait (2008).

The author comments that, “a disturbing number of people have been trying to cope with destitution for considerable periods of time. In doing so there is undoubtedly a toll on their general health, their mental wellbeing and their feelings of inclusion in our society...An overwhelming feeling amongst destitute asylum seekers is that they are in a limbo where their lives have become meaningless and wasted”.

A third, national, study by the Refugee Council<sup>147</sup> focused on asylum seekers in receipt of ‘Section 4’ support in the form of vouchers (that is, refused asylum seekers who have exhausted their appeal rights and who do not have existing dependent children). The study surveyed organisations across England and interviewed a small number of asylum seekers. It concluded:

*“The research has shown that people are unable to shop around for cheaper and more appropriate food or other essential goods, are unable to buy sufficient food and toiletries to meet their needs, cannot keep in contact with friends, families and legal representatives, and are unable to pay for travel to essential appointments. It is clear that using vouchers as a means of support and subsistence is causing unnecessary hardship and having a detrimental effect on many asylum seekers’ physical and mental well-being...Some asylum seekers are being forced to survive on vouchers for many years.”*

As well as severe material hardship, the study revealed how the vouchers system impacts adversely on asylum seekers’ self-esteem. A fifth of organisations reported that clients felt embarrassed or humiliated using vouchers and over half reported poor treatment in shops. Comments included:

*“People describe it as the most degrading aspect of being an asylum seeker.”*

*“Repeated expression of feeling ‘less than human’.”*

In face of the removal of the right to work, the majority of respondents were aware of asylum seekers being forced in to the informal economy “in order to obtain cash to meet their basic needs, potentially exposing themselves to exploitation”.

- Median **total household wealth** varies considerably by ethnicity, from only £15,000 for Bangladeshi households to around £75,000 for Black Caribbean, £97,000 for Pakistani households and £200,000 or more for Indian and White British households. Differences by religious affiliation are as great, from £42,000 for Muslim households to £229,000 for Sikh and £422,000 for Jewish households.

It is clear that there is much diversity between minority ethnic groups: they are not all in the same socio-economic location. Moreover, each minority ethnic and religious group exhibits internal inequalities of a kind that reflect those of the country as a whole. However, socio-economic structures or ‘objective’ class factors do not fully explain the position of non-white minorities, either in terms of the distinctive disadvantages or of the advantages of specific minority groups.

<sup>147</sup> Doyle (2008).

As the studies reported in Boxes 9.2 and 9.3 show, educational achievement is not necessarily matched by labour market outcomes. The White population gets the best returns in terms of wages for a given level of qualifications – all minority ethnic groups suffer some form of ‘penalty’. Ethno-religious classification is an even better predictor of disadvantage in that Muslim ethnic groups suffer the largest ‘ethnic penalty’ (after controlling for the usual factors).

The studies also show that it is important to separate out ‘first’ and ‘second’ generations within minority groups. Doing so reveals, for example, that while both generations suffer similar degrees of ethnic penalty in relation to getting employment, the second generation has made considerable progress in relation to job levels and now has, if in work, similar chances of accessing professional and managerial jobs as the White British population. However, they appear to be relatively worse-placed within the broad occupational categories. The severity of labour market disadvantage for the Pakistani and Bangladeshi population, in particular, suggests that general policies aimed at reducing low incomes or unemployment will not, by themselves, close these gaps. An implication of all this is that the central problem in relation to racial equality and the labour market is now unequal levels of unemployment, and the employment sectors which some people are constrained to enter. In this context, the recent studies discussed in Box 9.5, which suggest clear evidence of discrimination in recruitment, are very disturbing.

### Box 9.5: Evidence of discrimination in recruitment and employment

We have seen large differences between the employment rates of particular social groups. Some of these raw differences can be explained by factors such as age, qualifications and local levels of unemployment. However, even after these factors and characteristics are taken into consideration, some gaps still remain unexplained, as discussed in Box 9.2. These ‘penalties’ are not necessarily, by themselves, evidence of the extent of discrimination. However, other kinds of research provide more direct evidence, including ‘CV testing’, and interview trials.

The National Centre for Social Research recently carried out research for the DWP to examine the extent to which discrimination may explain the ‘ethnic penalty’ in employment.<sup>148</sup> They sent out CVs in response to actual job advertisements. As part of the experiment they sent identical CVs to different employers, but randomly varied the names on them to give an apparent indication of ethnicity and gender.

The results show strong evidence of discrimination at the first stage of recruitment for formal vacancies, in terms of success rates in being called for interview. The levels of discrimination were similar across all the ethnic groups studied. There was much more evidence of discrimination in the private than in the public sector. Discrimination was much more likely to arise when CVs were submitted, than when employer forms were used (perhaps because personal details on these may be removed before selection staff looked at them). Findings included:

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<sup>148</sup> Wood *et al.* (2009).

- where more than one successful response came from an employer, 68 per cent of applications with an apparently White British name were successful, but only 39 per cent of those from apparently ethnic minority applicants, a difference of 29 per cent;
- overall, of 987 applications with an apparently White British name, 10.7 per cent received a positive response;
- of all the 1,974 applications with an apparently ethnic minority name, only 6.2 per cent received a positive response, a net difference of 4.6 percentage points;
- the adverse effect was larger for those with apparently Pakistani or Bangladeshi names than those with Indian, Chinese or Black Caribbean names, but the differences between these groups were not statistically significant;
- discrimination applied to both men and women; however
- the level of discrimination was considerably lower for public sector than private sector employers (4 per cent compared to 35 per cent).

Other evidence shows how interview processes can have discriminatory consequences. Research on job interviews, language and ethnicity, also for DWP, looked at the practices of interviewers and candidates to determine whether ethnic minority candidates were systematically disadvantaged in interviews because of culturally-specific practices.<sup>149</sup> The research showed that first generation ethnic minority candidates fared less well in the interviews. These interviews were marked by greater difficulties for candidates in presenting themselves in expected ways. Proportionately, fewer of these candidates were successful in being selected for employment, suggesting that job interviews created a ‘linguistic penalty’ for this group. The research suggested that this was not a result of a lack of fluency in English, but from the demands on candidates to communicate in particular ways and from a mismatch of implicit cultural expectations (mutual misunderstandings and negative judgements by interviewers). The complex communication demands of the job interview often exceeded the stated requirements of the job. This study focused on interviews for low-paid, mainly manual work. It found, however, that second generation ethnic minority candidates fared as well as White British candidates.

Another CV test experiment by the charity Leonard Cheshire assessed the extent of discrimination for disabled people in the private sector in Scotland.<sup>150</sup> The results showed that when identical CVs were sent in response to job advertisements differing only in that one disclosed a disability, non-disabled people were twice as likely to receive a positive response as a disabled applicant (69 per cent compared to 31 per cent). There was also a noticeable difference by type of impairment. The applicant with cerebral palsy received the majority of interviews (80 per cent) compared to the applicant registered blind (20 per cent). This apparent discrimination against disabled applicants existed from all types of organisation, irrespective of size.

<sup>149</sup> Roberts and Campbell (2006). The study is based on sixty-one real video recorded interviews.

<sup>150</sup> MacRae and Laverty (2006).

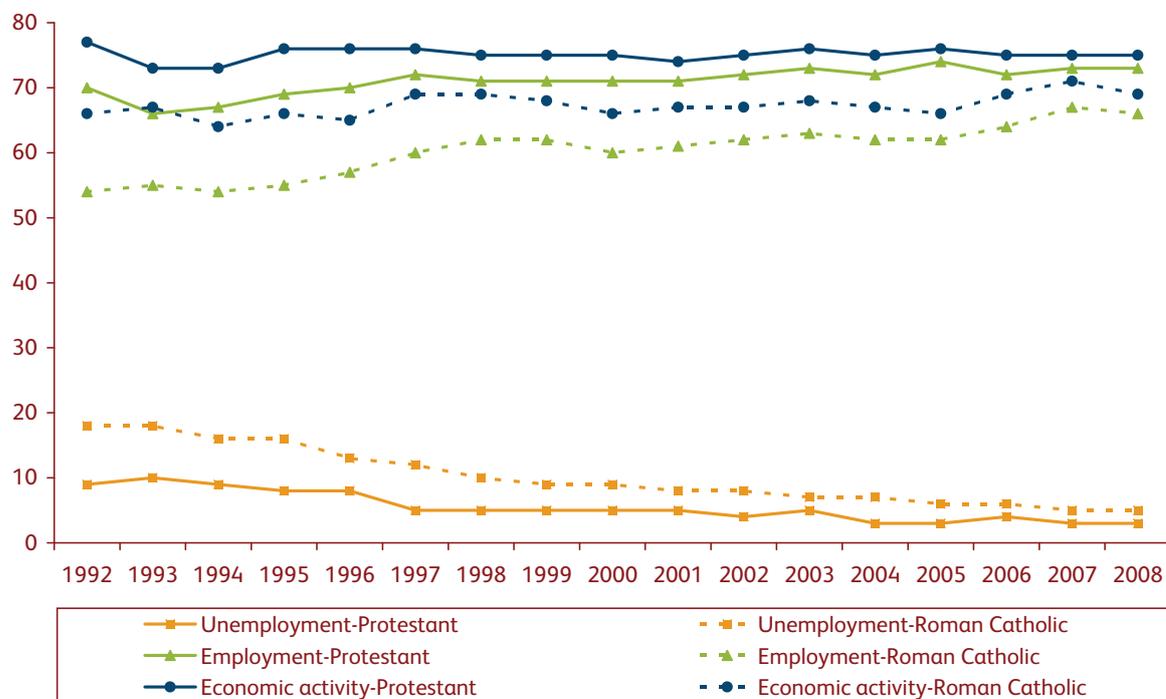
## Box 9.6: Religion and the labour market in Northern Ireland

Looking across the UK, the clearest issues related to religious affiliation concern differences between different religions. However, within Northern Ireland, the largest issues relate to differences between communities with traditions linked to different Christian denominations.<sup>151</sup> Such differences have been the subject of much political and academic debate. Recent analysis by the Office of the First Minister and Deputy First Minister (OFMDFM) in their *2008 Labour Force Survey Religion* report, shows that the labour market differences between Roman Catholics and Protestants have narrowed in the years since 1992.

Figure 9C suggests that in 2008:

- 69 per cent of Roman Catholics and 75 per cent of Protestants of working age were economically active. In 1992 the comparable figures were 66 per cent and 77 per cent, so the gap has declined from 11 to 6 percentage points;
- 66 per cent of Roman Catholics and 73 per cent of Protestants of working age were in employment, compared to figures of 54 per cent and 70 per cent respectively in 1992. The gap has therefore narrowed from 16 per cent to 7 per cent;
- unemployment rates were 5 per cent for Roman Catholics but 3 per cent for Protestants, compared to 18 per cent and 9 per cent in 1992. The unemployment gap has narrowed from 9 to one percentage point.<sup>152</sup>

Figure 9C: Economic activity, employment and unemployment in Northern Ireland by denomination, 1992 to 2007 (percentage of working age population)



Source: OFMDFM (2009).

Note: Unemployment rate (all economically active aged 16+); employment rate (economically active and inactive of working age); economic activity (working age).

<sup>151</sup> There are related issues in Scotland between Protestants and Roman Catholics. See Paterson and Iannelli (2006) and McAspurren (2005).

Where members of the two communities are employed, there are some differences in sector of employment: in 2008, 12 per cent of Roman Catholics, but 9 per cent of Protestants worked in construction; 15 per cent of Roman Catholics, but 13 per cent of Protestants worked in the 'health and social work' sector; 10 per cent of Roman Catholics but 13 per cent of Protestants worked in manufacturing. Such differences tended to be greater amongst men than amongst women.<sup>153</sup>

The same report suggests that 33 per cent of economically active Roman Catholics of working age had higher level qualifications in 2008, compared to 29 per cent of Protestants, while there was no difference in the proportions of Roman Catholics and Protestants who had no qualifications.<sup>154</sup>

### 9.4 Disability

- Chapter 3 presented some information on **educational attainment at 16** of children with Special Educational Needs (SEN) or Additional Support Needs (ASN) in Scotland. Taken as a whole, children with Special Educational Needs/Additional Support Needs status have much lower performance than others. However, this covers a wide variety of different kinds of needs. The attainment gap is particularly wide for those classified as having Severe Learning Difficulties or profound Multiple Learning Difficulty. Box 11.2 in Chapter 11 looks at how the positions of children with different kinds of support need develop through the school years. There is a strong association between living in a deprived area, having low levels of educational attainment and the identification of Special Educational Needs/Additional Support Needs, particularly with regard to behavioural, emotional, and social difficulties.
- For adults, nearly one-third of those of working age who are classified as disabled both in terms of the Disability Discrimination Act (DDA) and through reporting a work-limiting condition have no **qualifications** at all, compared to 12 per cent of those who are not disabled.
- By **employment status**, only 21 per cent of men reporting that they were DDA-disabled and have a work-limiting disability are employed full-time, compared to two-thirds of men not reporting a disability. In terms of particular kinds of impairment, mental illness, phobia or panic, and learning difficulties are the conditions associated with low employment. While gendered employment patterns among disabled people are similar to others, only 14 per cent of DDA-disabled and work-limiting disabled women are employed full-time, half the rate for men. However, taking full- and part-time employment together, disabled women are more likely to be employed than disabled men – 30 per cent compared with 25 per cent.

<sup>153</sup> OFMDFM (2009), pp.28-29.

<sup>154</sup> OFMDFM (2009), table A7.8, p62.

- Men who report a work-limiting disability and are DDA-disabled have a median hourly wage 20 per cent lower than the median for non-disabled men; for women, the median is 12 per cent lower. Box 9.3 summarised some evidence on the extent to which lower wages for disabled people are attributable to qualification levels and other characteristics, while Box 9.5 presented evidence of discrimination in recruitment.
- The median **net individual income** for men who are disabled according to both DDA and work-limiting definitions is £157, half the median for non-disabled men (£316). For women, the corresponding figures are £131 and £198. A tenth of men disabled on both definitions have individual incomes below £59 per week, and a tenth of women in this situation have incomes below £31 per week.
- Looking at differences in **equivalent net income** (including ‘extra costs’ disability benefits), working age DDA-disabled people have a median income of £322, 30 per cent lower than the median for non-disabled people of working age. Children who are reported as DDA-disabled are six places and pensioners four places further down the distribution at the median than their non-disabled equivalents; for those of working age the difference is 26 places in the overall ranking. However, excluding ‘extra costs’ benefits would reduce equivalent net incomes for disabled people by 10 per cent. The position of their median would then be 5 places further down the income distribution, and their poverty rate would rise to above 30 per cent.

While these kinds of findings relate to the position of disabled people, or sometimes to the households in which they live, they often also have implications for the position of carers. Box 9.7 reports some of the evidence put to us by Carers UK on the position of carers.

### Box 9.7: Evidence on the position of carers

The organisation, Carers UK, submitted a very helpful memorandum setting out the position of informal carers in relation to the issues raised by our terms of reference, making twelve key points from the evidence they had collected.<sup>155</sup>

- **Caring is relevant to all the equality ‘strands’:** Carers UK suggest that half of women are likely to provide care by the age of 59; Bangladeshi and Pakistani men and women are three times more likely to provide care than their White British counterparts; and carers themselves are two to three times more likely to have a long-standing limiting illness than non-carers.
- **Carers are less likely to be in paid work than the general population:** only 3 million of the 4.5 million carers of working age are in paid work, with one in five carers giving up work in order to care; many retire early in order to care.
- **Carers are more likely to be in low paid and low status professions:** almost 45 per cent of men and 55 per cent of women who are in paid work but caring for more than 20 hours per week are in routine occupations.

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<sup>155</sup> The memorandum can be found on our own website: (at <http://www.equalities.gov.uk/pdf/National%20Equality%20Panel%20evidence%20Carers%20.pdf>). Evidence which they refer to in that memorandum can be found at: <http://www.carersuk.org/Policyandpractice/Research>).

- **Carers are more likely to suffer from ill-health and long-term conditions, which further reduces their chances of returning to work:** Carers UK report that in the 2001 Census, carers providing high levels of care were twice as likely to be 'permanently sick or disabled' as those not caring.
- **Young adult carers are less likely to be in further or higher education:** among young adults aged 16-24, fewer than 16 per cent of women and fewer than 21 per cent of men who were caring for more than 20 hours per week were in education, compared to more than 25 per cent of non-carers.
- **Caring reinforces gender inequalities in the labour market and has different impacts on men and women:** women are more likely than men to be 'heavy end' carers, for more than 50 hours per week; male carers are more likely to be in paid work than female carers; one in five women aged 45-59 is a carer, at what, for some, of them could have been the peak of their career.
- **Many carers who are currently in work are at risk of falling out of work because of a lack of services and a lack of support at work:** only about a quarter of working carers report that they feel they receive adequate support to enable them to combine work and care.
- **Many carers who are not currently in work would like to work, but are not able to because of poor services, a lack of flexible working and the benefits trap:** Carers UK report that about a quarter of carers claiming Carer's Allowance would like to do more paid work, but do not want to lose their entitlement to the benefit.
- **Disability and caring are interlinked, and are a large contributor to the number of workless households:** caring is likely to be a contributor to reduced employment rates amongst groups such as women, those from minority ethnic groups, older people and disabled people.
- **Carers are more likely to be on low incomes:** carers who receive Carer's Allowance are less likely to be in poverty than the population as a whole, partly reflecting their age, but are clustered just above the poverty line, in the second fifth of the income distribution; those who care for more than 20 hours per week are more likely to be in poverty than others.
- **Carers' benefits do not support carers to lift themselves out of poverty or combine caring with paid work:** Carers UK argues that the structure of Carer's Allowance creates a 'cliff-edge', where carers receiving it cannot increase their hours or take a more senior position without losing the whole allowance.
- **The prevalence of caring responsibilities is likely to increase in the future:** demographic change is likely to increase the proportion of the population needing formal or informal care, but this will be coupled with the increased expectation that people will be in paid work until later ages, as longevity increases.

### 9.5 Sexual orientation

Statistics on educational attainment do not provide information on the sexual orientation of pupils. However, a survey of more than 1,000 lesbian, gay and bisexual secondary school pupils conducted for Stonewall by the School Health Education Unit in 2006 gives an indication of the difficulties young gay pupils face. It concludes that 'homophobic bullying is almost endemic in Britain's schools'.<sup>156</sup> According to the report:

- 65 per cent of young lesbian, gay and bisexual people experience homophobic bullying in Britain's schools;
- 97 per cent hear derogatory homophobic language in school;
- of those affected, 92 per cent have been subjected to verbal homophobic bullying, 41 per cent physical and 17 per cent have suffered death threats;
- teachers as well as pupils are responsible for homophobic bullying;
- seven out of ten of those affected believe that homophobic bullying affects their school work. Half say that they have skipped school because of it. Girls and black and minority ethnic pupils appear to be particularly adversely affected.

Most students either remain financially dependent on their parents, or receive financial assistance based on an assessment of their parents' income. However, 15 per cent of lesbian, gay or bisexual students and 35 per cent of transgender students say they fear losing financial support if they come out to their parents about their sexual orientation or gender identity. Five per cent of these students had already been refused support by their parents.<sup>157</sup>

For the adult population some information is available on the labour market position of those who report that they are living in a same sex couple (or have a civil partnership):

- people with higher levels of **qualification** are more likely than others to report that they are living in a same sex couple;
- the full-time **employment** rate for women reporting that they lived in a same sex couple is 67 per cent, compared to 39 per cent for other women;
- the median **hourly wage** for men who report that they live in a same sex couple is 19 per cent higher than the median for all men, and the corresponding figure for women is 40 per cent higher; however
- men and women reporting themselves as living in a same sex couple are somewhat lower down the distribution of **weekly earnings** than that of hourly wages.

Such statistics are, however, potentially misleading, as this response is a very limited measure of sexual orientation. Only 0.4 per cent of people of working age responding to the LFS say that they are living in a same sex couple or in a civil partnership, a fraction of

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<sup>156</sup> Hunt and Jensen (2007), p.2.

<sup>157</sup> Equality Challenge Unit (2009).

the likely proportion of the population who are lesbian, gay or bisexual.<sup>158</sup> Box 9.8 reports analysis of the LFS which examines the extent to which differences in employment, wages and earnings for those in same sex couples remain after controlling for qualifications and other characteristics. It finds that there are now no significant pay differences for men or for women in same sex couples compared to men or women in other couples without children. For men there is no significant difference in employment rates. Women in same sex couples are 8 per cent more likely to be in paid employment than women in heterosexual couples, and 13 per cent more likely than women in same sex couples without children, but these are much smaller differences than the raw differential quoted above.

Information on incomes by sexual orientation is not yet available, but we would agree with Stonewall that there is no reason, from this kind of evidence, to expect the spread of incomes for lesbian, gay and bisexual people to be much different from that of the population as a whole.

### Box 9.8: Relative pay of those reporting living in a same sex couple

As the main text shows, LFS data suggest that those who report they are living in a same sex couple have higher rates of pay and employment than others. However, previous research based on data from 1996 to 2002, found that the pay advantage of men who reported living in a same sex couple disappeared or was even reversed once characteristics such as qualifications were taken into account, and the apparent advantage of women who reported living in a same sex couple was reduced.<sup>159</sup>

The same authors updated the analysis for the Panel, to the most recent time period available, 2006-2008.<sup>160</sup>

The LFS asks people who are not married whether they are living in a couple, and if so whether they are living in a same sex couple. Those reporting this are just 0.4 per cent of the adult working age population. Since 2006, however, civil partnerships have also been reported, boosting the share to 0.6 per cent of the sample. The researchers compare those reporting as being in same sex couples in terms of their earnings and employment with those of the same gender in other couples, both married and cohabitants, with and without children. The authors consider that these are the relevant comparisons for considering potential earnings discrimination.

The research finds that the statistically significant pay penalty after allowing for age and qualifications for men living in same-sex couples, observed in earlier studies (1996-99), is not statistically significant in the most recent period.

<sup>158</sup> See Aspinall (2009) for discussion of the issues and uncertainties involved in estimating the size of the lesbian, gay and bisexual population. Stonewall, in evidence to the Panel, suggests that lesbian, gay and bisexual people make up 6 per cent or more of the UK population.

<sup>159</sup> Arabsheibani, Marin and Wadsworth (2005).

<sup>160</sup> Arabsheibani, Marin and Wadsworth (2009).

Table 9A shows the results for four time periods: 1996-99, 2000-02, 2003-05 and 2006-2008. We show pay differentials, adjusting for age, education, region and other factors. The numbers in the table approximate the percentage difference between wages of men or women who report living in a same sex couple and the other groups shown (all men, men in couples, etc). So, in the first column for 1996-99, the table shows that – in contrast to the apparent advantage in raw data – after controlling for demographic and other characteristics, the pay of men in same sex couples was 1.8 per cent less than that of all men. However, the lack of an asterisk indicates that the results are statistically insignificant. Compared to childless men in other couples, pay was significantly less than would be expected. By 2006-2008, all the differences were statistically insignificant.

For women in 1996-98, the pay of women who reported living in a same sex couple was significantly higher than other women (by 7.3 per cent). However, this was much smaller than the raw gap before adjusting for educational qualifications, age, and so on. Compared to childless women in couples, the advantage was smaller, and by 2006-2008, this comparative advantage was statistically insignificant.

**Table 9A: Estimates of pay differences (percentages) for people reporting living in same sex couples, allowing for qualifications and other characteristics**

Comparator	1996-99	2000-02	2003-05	2006-08
<b>Men</b>				
All men	-1.8	0.3	-5.4*	1.2
Men in couples	-5.4*	-3.0	-8.4*	-1.5
Childless men in couples	-7.8*	-5.1*	-11.5*	-4.4
<b>Women</b>				
All women	7.3*	10.1*	10.0*	5.0*
Women in couples	5.7*	9.2*	9.0*	3.7
Childless women in couples	4.4	8.3*	8.8*	3.1

Source: Arabsheibani *et al.* (2009).

Note: \* significant at 5%. Other controls include dummy variables for ethnicity, 1 digit industry, 1 digit occupation, job tenure, firm size, year of sampling, private sector, temporary job and part-time working.

Table 9B reports results of employment gaps and trends over time in a similar way. The numbers in the table are statistics on the differential probabilities of being in employment, also after taking account of demographic and other characteristics, such as age, education, and so on. Again, in contrast to the apparent advantage seen in the raw data, men who reported living in a same sex couple were less likely to be in employment than other men in couples with similar characteristics in 1996-99. However, by 2006-2008, the difference was statistically insignificant.

By contrast, even after controlling for other characteristics, women who report they are in same sex couples remain significantly more likely to be employed than the other groups of women, and this difference has not changed much over time. It is, however, much smaller than the raw differential shown in Figure 4.5.

Table 9B: Employment differences (percentages) for people reporting living in same sex couples, allowing for qualifications and other characteristics

Comparator	1996-99	2000-02	2003-05	2006-08
<b>Men</b>				
All men	0.6	2.6	0.4	5.2**
Men in couples	-5.4**	-3.2	-4.9**	-0.9
Childless men in couples	-4.4**	-2.8	-4.8**	-1.4
<b>Women</b>				
All women	9.5**	14.2**	9.8**	9.8**
Women in couples	7.3**	11.8**	7.7**	7.8**
Childless women in couples	13.1**	16.3**	12.7**	12.5**

Source: Arabsheibani, Marin and Wadsworth (2009).

Note: \*\* significant at 1 % level. Results control for age, education, religion and other factors, including ethnicity and year of sampling.

## 9.6 Social class

Social class differs from some of the other dimensions we examine because it is both an outcome of the labour market and part of the transmission mechanism that affects how people's lives develop. As one would expect, there are considerable differences in qualifications, employment rates, earnings and incomes between those from different occupational social classes.

- Information on the social class of children's parents is not available from the Annual School Census we have used to look at **educational attainment at 16**.<sup>161</sup> Whether children receive Free School Meals is one indicator of parental background. The median attainment of boys receiving Free School Meals is 26 places out of 100, and that of girls receiving Free School Meals 28 places below that of other pupils in England, and the gap is similar in Wales.
- More than half of those in higher managerial and professional households have degrees as their **highest qualification**, compared to less than 5 per cent of those in routine or semi-routine occupation households. More than a third of those in the latter groups have no qualifications above Level 1.
- The most striking difference in **employment status** is that around two-thirds of women in higher or lower managerial or professional households work full-time and only about a fifth part-time. By contrast, women in routine or semi-routine households are more likely to work part-time than full-time. Those in households classified as in routine employment are much more likely to be economically inactive looking after family or home than women in higher occupational classes.

<sup>161</sup> In Chapter 11 we look at evidence from longitudinal surveys which have followed children's performance over the school years that do include such information.

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- The median **hourly wage** for men in higher professional and managerial households is 78 per cent higher than the median for all men; the median for women in the same group is 153 per cent higher than the median for all women. The highest paid tenth of men in the top group are paid £37 per hour or more, 3.7 times overall median wages. Only a tenth of this group of men have wages below the overall male median. Men in routine or semi-routine occupation households have median wages of £7.60-7.80 per hour, and women £6-6.60, in the bottom third of the overall distribution for men and bottom fifth for women.
- For men, the gradient between household occupational groups in **full-time weekly earnings** is slightly less than that in hourly wages: median earnings for men in higher professional or managerial households is 2.3 times the median for men in routine occupation households, compared to the hourly wage differential of 2.5. However, median full-time earnings for women from higher professional or managerial households is 2.8 times as much as the median for women in routine occupation households, compared to a differential of 2.5 in hourly wages.
- The median **net individual income** for men from higher managerial or professional households is £578 per week, more than twice that of men from routine occupation households, £268 per week. For women, the differential is even larger: £471 compared to £157. Half of men and nearly half of women from higher professional/managerial households are in the top tenth of the overall distribution. Two-thirds of women from routine and semi-routine occupation households have individual incomes in the bottom half overall. Most men and women from households classed as 'never worked or long-term unemployed' have incomes in the bottom fifth of the overall distribution.
- The median **equivalent net income** for those in higher professional and managerial households is 1.8 times the median for those in routine occupation households. The spread within each occupational social class group is substantial (particularly for those who are self-employed). Income for the best-off tenth within the top group exceeds £1,400 per week. People in households classed as, never having worked/long-term unemployed, are the poorest group, with half in the bottom fifth of the overall income distribution.
- Differences between occupational social classes in **total household wealth** are very large indeed. Median total net wealth for households (of all ages) in routine occupations is £74,000, but for those in higher professional and managerial households, it is more than £450,000. The most wealthy tenth of the latter groups have net wealth of over £1.4 million.

In Chapter 11, we look, in particular, at how differences in outcomes between groups defined in terms of indicators of social advantage and disadvantage develop across the life cycle during childhood and adulthood, and at how the levels of wealth accumulated just before retirement vary by occupational social class.

## 9.7 Housing tenure

Housing tenure also has a dual role both as something that shapes people's lives and as an outcome of their levels of advantage and disadvantage in other respects. In particular, access to social housing has been heavily rationed towards those in the greatest need for the last quarter century, and access to owner-occupation depends on capacity to borrow a mortgage and sometimes on inheritance or help from families. As a result, there are now very substantial differences in economic outcomes between those living in different tenures, and these often reflect other characteristics.

- Only 4 per cent of those living in social housing have degrees, compared to more than 20 per cent of owner-occupiers. Nearly half of social tenants have no qualifications above Level 1, compared to fewer than 20 per cent of owners.
- Only half of men and 42 per cent of women living in social housing are in paid work, compared to 89 per cent of men and 81 per cent of women in households with a mortgage. Social tenants have strikingly higher rates of inactivity due to disability and long-term sickness than people in other tenures. Among women of working age, more than twice the proportion of social tenants compared to owner-occupiers are inactive because they are looking after family.
- Looking at **hourly wages**, the median for women living in social housing is in the bottom 20 per cent of the overall distribution. By contrast, the median for men who are owner-occupiers is within the top 35 per cent of the overall distribution.
- Looking at **net individual incomes**, the median for male social tenants is less than half the median of male mortgagors. For women, the corresponding proportion is 60 per cent.
- On a Before Housing Costs basis, social tenants have a median **equivalent net income** of £270, and mortgagors a median of £476. On an After Housing Costs basis, the figures are around £205 and £390, respectively. A third of social tenants have incomes below the official poverty line. According to their median incomes, social tenants are typically 22-33 places below outright owners and 36-38 places below mortgagors in the overall distribution, depending on whether a Before or an After Housing Costs basis is used. The spread of incomes is widest within the private rented sector.
- Social tenant households have a median **total household wealth** of £18,000, compared to £411,000 for outright owners. A tenth of outright owners have total wealth of more than £1.23 million, while 90 per cent of social tenants have wealth of less than £105,000 (including private pension rights).

These findings confirm high levels of disadvantage in the social housing sector. They reflect the role of the sector in providing decent homes and secure tenancies for people on low incomes. We would expect a higher proportion of people who are disabled or sick to be living in social housing, for instance. The statistics do not show us whether social housing in itself contributes to better lives for some people, or limits opportunities and outcomes for others. Are low qualifications the product of being in social housing, perhaps partly a function of school quality in some social housing areas, or simply a reflection of other disadvantage? Are

lower employment and higher caring rates among female tenants a reflection of their weaker labour market position and greater caring demands, or does subsidised housing enable caring roles that would not be possible with the pressures of paying a mortgage or private rents?

In Box 11.1 in Chapter 11, we report results from a recent study which looked at outcomes in adulthood for people who grew up in social housing.<sup>162</sup> This found that most of the differences from those growing up in other tenures could be explained by factors other than housing tenure, but some statistical associations (especially on economic outcomes) remained between childhood social housing tenure and later disadvantage even after taking these factors into account. However, what is behind these associations is unclear, which limits the conclusions that can be drawn for the development of policy. What the figures do suggest, however, is the high level of need in social housing, and thus the need and opportunity to support tenants' life chances. Addressing the disadvantage of social housing tenants is clearly an important component of addressing overall disadvantage, although, of course, not all disadvantaged individuals are in social housing.

Our findings also underline the enormous differences in wealth between those living in different tenure. In Chapter 11, we look in a little more detail at how these differences develop across the life cycle. Those who have not been able to buy their own home lag far in the wealth distribution. As the new figures for wealth distribution we present here show, inequality in housing wealth represent one of the starkest inequalities in Britain. However, social tenants do not only lack housing wealth – they have very low levels of other kinds of asset as well. 35 per cent of people in the Wealth and Asset Survey with zero or negative wealth live in social housing.

## 9.8 Nation and region

Commitments to social justice formed part of the basis of devolution. The Government of Wales Act 1998 has a principal equality clause, unique among devolution statutes, requiring government to take a proactive stance and promote equality for all persons and in respect of all Welsh Assembly Government functions. The Scotland Act 1998 empowers the Scottish Parliament to encourage equal opportunities and to impose duties on public authorities to ensure that functions are carried out with due regard to equal opportunity requirements. In Scotland equal opportunities are defined as, “*the prevention, elimination or regulation of discrimination between persons on grounds of sex or marital status, on racial grounds, on grounds of disability, sexual orientation, language or social origin, or of other personal attributes, including beliefs or opinions, such as religious beliefs or political opinions*”. In Chapter 10, we discuss whether trends in inequality have differed between the four nations of the UK over the period including devolution. In terms of several of the indicators we examine in this report, differences in the most recent position between them are generally smaller than between groups defined in other ways.

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<sup>162</sup> Lupton, Tunstall, et al. (2009).

- As the four nations have different examination and/or assessment systems, it is hard to compare **educational attainment at 16** between them. Gender gaps and ethnic differences in attainment appear to be smaller in Scotland than in England. Within Scotland, pupils attending schools located in larger urban areas typically do less well, and those attending schools located in remote rural areas better than the national average. Differences in the **highest qualifications** of the working age population are relatively small, although Scotland has the largest proportion (25 per cent) with some form of higher education qualification, compared to less than 20 per cent elsewhere.
- Scotland has the highest levels of **employment** between the nations, and Northern Ireland the highest levels of inactivity due to disability or sickness.
- Median **hourly wages** for men are lowest in Northern Ireland of the four nations, but lowest for women in Wales.
- The distribution of **net individual incomes** does not vary so greatly between the four nations, although the median is somewhat higher in England for men than elsewhere.
- England has a median **equivalent net income** (Before Housing Costs) that is 10 per cent higher than the medians for Wales and Northern Ireland, and 2 per cent higher than Scotland's median. However, the cost of living in 2004 was 4-7 per cent lower in Northern Ireland Scotland and Wales than in England, so that standard of living differences will be smaller. Income inequality is greater in England than in the other nations.
- Median **total household wealth** is £151,000 in Scotland, £206,000 in Wales and £211,000 in England.

Looking across the English regions does not suggest a simple 'North-South divide' in outcomes and their inequality, but there are often differences between London and the South East and other regions. Inequality in any dimension is wider in London than in any other region. Within England, regional differences in educational outcomes at 16 and in the highest qualifications of the adult population are relatively small. For other indicators there are larger variations, particularly between London and the South East and elsewhere:

- London has a much lower level of part-time **employment**, and the North East the highest level of inactivity due to disability or sickness.
- For men, the median male **hourly wage** in the North East is 73 per cent of the median for London; for women, the corresponding fraction is only 66 per cent.
- For men, the median **net individual income** in the North East is only 75 per cent of the median for the South East. Differentials for women are smaller: the median for the West Midlands is 86 per cent of the South East's median. Inequality in individual incomes is twice as large in London as in the other English regions.
- Median **equivalent net income** in the North East is only 77 per cent of the median for the South East. This is a much larger difference than in cost of living, which was only 12 per cent higher in the South East in 2004. London has by far the most unequal income distribution: the highest incomes in London are above those in all the other regions apart from the South East, but the lowest incomes in London are little different from elsewhere. Incomes measured After Housing Costs are more unequal than those Before Housing Costs overall and within nations and regions.

- Median **total household wealth** is £288,000 in the South East, 1.7 times that in the North West. Wealth inequality is very high in all regions, but especially in London, with a tenth of households with little or no wealth, and a tenth having more than £934,000.

### 9.9 Area deprivation

By contrast with relatively small regional differences, in all of the outcomes we examine, from education at 16 to equivalent net incomes, there are profound differences at neighbourhood level, between those with higher and lower levels of deprivation. Even allowing for the way in which average levels of qualifications, employment and incomes form part of the indices used to establish which are the most and least disadvantaged areas, the differences between them were some of the most striking that we showed in Chapters 3-8. The classifications of areas are different between England, Scotland and Wales, so we look at them separately. The figures for equivalent net income and wealth by area deprivation are only available for England.

- There are very large differences in **educational attainment at 16** for both boys and girls between results divided by deprivation level of the neighbourhood where children live – of 35 places (out of 100) in typical rankings between those from the least and most deprived areas in England, and even larger differences in Wales. In Scotland, the difference is equivalent to traversing half of the overall range in performance at 16.
- Differences in **highest qualifications** between areas ranked by level of deprivation are considerable. In each nation nearly 30 per cent of those living in the most deprived areas have no qualifications at all, but 7 per cent or fewer in the least deprived areas.
- In the most deprived tenth of areas in England, only 55 per of adults of working age are **employed** and a quarter are economically inactive because of disability, sickness, or looking after family or home.
- People living in the most deprived areas of England, Scotland and Wales, have a median **hourly wage** that is 40 per cent less than the median for those living in the least deprived areas. The gap in median earnings between most and least deprived areas is equivalent to around 34 places out of 100 in England but nearly 40 places in Scotland. There is relatively little difference between kinds of area in low wages, but large ones for the best paid. As a result there is much more inequality within the least than the most deprived areas.
- The median **net individual income** for the least deprived areas in England and Scotland is 70 per cent higher than the median for the most deprived areas, and 56 per cent higher in Wales. There are even larger differences between those with the highest incomes in each kind of area, but much less variation in the lowest incomes, so income inequality is much higher in the least deprived areas.
- There is a very strong gradient in **equivalent net income** by area deprivation within England. Median income in the most deprived tenth of areas is £281, compared with £396 for England as a whole, and £533 in the least deprived tenth of areas.

- There is an even stronger gradient in **total household wealth** by area deprivation within England. Median total household wealth in the most deprived tenth of areas is £34,000. In the least deprived tenth of areas, it is £481,000.

The differences between people living in the poorest and richest areas are some of the most dramatic that our work reveals. For all of the outcomes, there is a steady gradient by area deprivation, with the median for the least deprived tenth areas being higher than for the next least deprived tenth and so on (so it is not the case that it is only the most deprived tenth of areas that lag behind the others). The differences between top and bottom are very pronounced, ranging from the median for hourly wages in the least deprived tenth of areas being 64 per cent higher than the median in the most deprived areas, to a corresponding ratio of 14 to 1 for total net wealth. Of course, some gradient would be expected, since the measures which define whether areas are advantaged and disadvantaged include indicators related to some of our outcomes measures. Even so, some of the differences are startling.

From such evidence one cannot conclude that it is the characteristics of low-income areas which *cause* inequalities between people.<sup>163</sup> However, the main thing to draw from the findings is the very large disparity between the collective resources (both human and financial capital) of communities living in different kinds of area. These disparities manifest in lower private investment, for example, in shops and services, and less ability to support high value employment, as well as much greater needs for subsidised facilities and public services. A key policy implication is to examine whether disparities in public investment between areas parallel the inequalities in private resources. Schools and other education services seem a pressing priority, given very large gaps in the educational success rate between areas and the importance of education for future life chances.

### 9.10 Overview

Tables 9.1 to 9.3 bring together some of our findings for different outcomes in a comparable form across the various kinds of social group. They compare differences in median outcomes between groups, levels of inequality within groups, and the positions of median outcomes for each group within the distributions for the whole population. These allow us to see which patterns are common across all the outcomes, but also where they differ.

Table 9.1 brings together some of the findings for wages, earnings, incomes and wealth in a way that allows us to compare median outcomes between groups of the population split in different ways. It shows for each classification of the population, the median for each group as a percentage of the overall median outcome for the population as a whole. For example,

<sup>163</sup> There are numerous studies which have attempted to disentangle whether neighbourhood characteristics have any independent effect on people's outcomes, or whether worse aggregate outcomes in poorer areas simply arise because the people and households who live there are more disadvantaged to start off with. Examples include Buck (2001), McCulloch (2001) and Bolster *et al.* (2007). Reviews of the evidence (e.g. Galster, 2007) tend to suggest that it is inconsistent and that where neighbourhood effects are found, they are small relative to individual and household factors. There are, however, substantial methodological problems in measuring such effects (Dietz, 2002; Lupton, 2003).

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median men's hourly wages are 113 per cent of the median for all employees, while men's weekly full-time earnings are 110 per cent of median earnings for all full-time employees. We cannot compare educational and employment outcomes in this kind of way, so the table has five columns. For brevity, we omit some classifications, and show the breakdowns by area deprivation only for England. For the non-gender breakdowns, we present results for the whole population; information for men and women separately in each category can be found in the tables in Chapters 5 to 7.

Table 9.1: Median for each group as percentage of overall median by outcome

	Hourly wages <sup>1</sup>	Weekly earnings (FT) <sup>1</sup>	Weekly net individual income <sup>2</sup>	Weekly equivalent net income <sup>3</sup>	Total wealth <sup>4</sup>
<b>a) Overall median</b>	£9.88	£448	£223	£393	£204,500
<b>b) Gender</b>					
Male	113	110	126	103	n/a
Female	90	86	81	97	n/a
<b>c) Age (bottom of range)<sup>5</sup></b>					
16	54	48	43	93	} 6
20	73	68	81	111	
25	99	93	116	121	} 32
30	114	110	130	117	
35	115	114	131	110	} 86
40	114	114	131	110	
45	110	110	129	116	} 141
50	108	109	118	121	
55	100	99	100	108	} 203
60	92	92	85	95	
65	76	82	79	87	} 150
70	65	64	78	82	
<b>d) Disability</b>					
Not disabled	101	101	112	105 (107) <sup>6</sup>	103
DDA and WLD	85	85	65	82 (75) <sup>6</sup>	97
<b>e) Ethnicity (selected)<sup>7</sup></b>					
White British	101	101	101	105	108
Indian	103	101	97	106	99
Pakistani	80	78	59	} 61	} 47
Bangladeshi	74	75	56		
Black Caribbean	106	98	97	91	37
Black African	98	97	98	89	10
Chinese	111	113	92	97	32

Table 9.1: (Continued)

	Hourly wages <sup>1</sup>	Weekly earnings (FT) <sup>1</sup>	Weekly net individual income <sup>2</sup>	Weekly equivalent net income <sup>3</sup>	Total wealth <sup>4</sup>
<b>f) Occupational social class<sup>8</sup></b>					
Higher managerial and professional	191	167	242	174	220
Lower managerial and professional	135	118	171	145	159
Intermediate	90	77	115	121	98
Lower supervisory/technical	90	88	137	114	79
Semi-routine	69	65	95	99	42
Routine	70	73	101	96	36
Never worked, etc	59	79	38	63	7
<b>g) Housing tenure</b>					
Social housing	71	70	69	67	9
Private rented	87	85	93	87	12
Owned outright	95	95	90	96	201
Owned with mortgage	112	110	134	121	132
<b>h) Area deprivation (England)<sup>9</sup></b>					
Most deprived tenth	78	75	76	71	16
2nd	84	82	86	83	30
3rd	91	89	93	88	60
4th	95	95	98	100	78
5th	99	99	103	101	108
6th	105	105	106	108	137
7th	107	109	111	109	154
8th	111	114	114	114	160
9th	117	118	120	120	193
Least deprived tenth	128	132	129	136	235

## Notes:

1. Source: LFS 2006-2008 at 2008 prices.
2. Source: Individual Income series 2005-06/2007-08 at 2008 prices.
3. Source: DWP from HBAI dataset.
4. Source: ONS from Wealth and Assets Survey 2006-08.
5. Age ranges for equivalent net income are one year higher. Wealth gives the total wealth by age of the household reference person; this is only available in 10 year age bands.
6. Equivalent net income categories are by whether DDA-disabled or not DDA-disabled. Figures in brackets are for positions **excluding** extra costs benefits.
7. Definitions of categories vary between surveys. Net equivalent income figures are for adults within whole population distribution.
8. Net equivalent income figures are for adults within whole population distribution.
9. By IMD for all breakdowns.

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Looking at each panel in turn, some clear stories emerge:

- Women have a median hourly wage which is about 80 per cent of the median for men and a median net individual income which is only 64 per cent of men's. Even with the assumption of equal sharing within the household, women's median equivalent net income is 6 per cent less than that of men.
- For those in employment, median wages and earnings are highest between 35 and 44, and both young and older workers are typically a long way down the distributions of earnings and individual incomes. Allowing for household circumstances moderates this picture considerably for the youngest groups, and it is those in their late twenties and early fifties who emerge as the best off: there is a dip in equivalent incomes over the age range at which most families have children. Wealth shows a different pattern, with an even stronger age-related pattern and highest levels for those aged 55-64.
- Among those who are disabled (in terms of both the DDA definition and having a work-limiting condition), median wages and earnings are 16 per cent less than the medians for non-disabled people. For all disabled adults, median net individual incomes are even lower, only 58 per cent of that for non-disabled adults. If benefits paid to compensate for the costs of disability are excluded, disabled people (on the DDA definition) have a median equivalent net income that is 30 per cent below the median for non-disabled people. For household wealth, the corresponding differential is 6 per cent.
- Median wages, earnings and incomes of Bangladeshi and Pakistani adults are between 56 and 80 per cent of the national medians. Unlike some of the other comparisons, the differential for median equivalent net income remains nearly 40 per cent, taking the two groups together. Indian and Chinese employees have median wages and earnings above the national median. For Indian adults median individual income is also above the national median, but for Chinese adults it is below it. Although the median hourly wage for Black Caribbean and Black African employees is close to the national median, the medians for other groups fall below it. Ethnic differences in wealth levels are very large indeed.
- Differences by occupational social class are consistently the largest of any of the breakdowns we have looked at. People living in higher professional and managerial households have median wages, earnings and incomes at least two-thirds higher than the national medians, and a median wealth that is twice as high. Those from semi-routine and routine occupation households have much lower median wages and earnings relative to the national median than they do incomes, but even lower relative wealth levels. Those in the category of 'never worked' or 'not classified' have median wages, earnings, income and wealth that fall far below the national medians.
- Social tenants have median wages, earnings and incomes that are consistently around only 70 per cent of the national median, while the median for owners with a mortgage is 10-34 per cent above it. The wealth differences are again far larger, with social tenants having median wealth only 9 per cent of the national median, but the median for outright owners is twice the national figure.

- In all of the outcomes we have examined there are very large and consistent differences between areas by level of deprivation, with those in the most deprived tenth of areas having median wages, earnings and incomes around 25 per cent below the national medians, while the medians for those in the least deprived areas are more than 25 per cent above the national medians. Median total wealth in the most deprived areas in England is a sixth of the national median; in the least deprived areas, it is more than twice the national median.

For some groups then, the pattern of disadvantage is consistent across the outcomes – disabled people, Pakistani and Bangladeshi people, social tenants, and those living in the most deprived areas. For others – young people, women, and those in routine or semi-routine occupation households, disadvantage appears moderated when it comes to equivalent net income, based on household resources (and assuming that these are equally shared). In nearly all cases, the differences seen in earnings and incomes are greatly magnified when it comes to wealth.

Table 9.2 gives an alternative way of looking at these differences in outcomes, including some of those relating to education. It shows how many places out of 100 above or below (if the number is negative) the middle of the overall distribution the median member of each group would be found. Thus, in terms of hourly wages for all employees, in the third column of figures, the median wage for men is 8 places above the middle, but the median wage for women is 8 places below it. For highest qualification level, we show instead (in italics) the differences between the percentages of the group with higher educational qualifications and with no qualifications above Level 1 (28 per cent and 24 per cent of the working age population respectively). For reference, the top row of the table shows how much a movement of 10 places up or down around the median is ‘worth’ in terms of the percentage difference it would make to the last five outcomes. Thus, for those around the middle of the overall distribution, being 10 places higher up would mean wages or equivalent income would be 15 per cent more, but that wealth would be 33 per cent greater.

The patterns for wages, earnings and incomes are, of course, closely related to those shown in Table 9.2. But the table also shows that many of the differences in *positions* in the wealth distribution are much more comparable to those in the other outcomes: it is the scale of wealth inequality that magnifies the effect of differences in position to create the much larger differences in actual *levels* of wealth seen in the previous table. Thus, for instance, the median people from higher professional households are ranked at only 24 places above the middle of the overall wealth ranking, compared to 34 places above in the equivalent net income distribution, but this translates into their median wealth being more than twice the national median, because each place in the wealth ranking corresponds to such a large amount in absolute terms. When looked at by area deprivation, however, the gradients in positions in the wealth distribution are steeper than for the other outcomes.

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The other striking feature of the table is the way in which the ranking of different groups in terms of education and qualifications often does not translate into the differences one might expect in the labour market. Differences in qualifications by disability status, social class, housing tenure and area deprivation are in the same direction as those in wages and earnings. But women have better educational outcomes at 16, and qualifications that match those of men across the working age population, but worse outcomes in the labour market. The educational advantages of Indian and Chinese people are not so strongly reflected in the labour market. Some of this disjuncture between educational achievement and the labour market was discussed in Boxes 9.2 and 9.3; we explore other aspects of it in Chapter 11.

Table 9.2: Differences in median ranking for group from overall median (places out of 100 in ranking)

	Key Stage 4 <sup>1</sup>	Highest qualification <sup>2</sup>	Hourly wages <sup>3</sup>	Weekly earnings (FT) <sup>3</sup>	Weekly net individual income <sup>4</sup>	Weekly equivalent net income <sup>5</sup>	Total wealth <sup>6</sup>
<i>Value of 10 place change at the median (as % of median)</i>	<i>n/a</i>	<i>n/a</i>	14	15	19	15	36
<b>a) Gender</b>							
Male	-3	4	8	6	12	2	n/a
Female	3	6	-8	-11	-11	-2	n/a
<b>b) Age (bottom of range)<sup>7</sup></b>							
16	n/a	-24	-42	-44	-32	-5	} -38
20	n/a	6	-23	-28	-11	7	
25	n/a	19	-1	-6	7	13	} -22
30	n/a	19	8	6	14	11	
35	n/a	12	9	9	14	7	} -5
40	n/a	11	8	9	14	7	
45	n/a	7	6	6	13	10	} 10
50	n/a	2	5	5	9	13	
55	n/a	-6	-1	-1	-	5	} 22
60	n/a	-14	-6	-6	-9	-4	
65	n/a	-27	-20	-14	-12	-10	} 12
70	n/a	-23	-31	-31	-14	-15	
<b>c) Disability</b>							
Not disabled	n/a	10	1	-	6	+3(+4) <sup>8</sup>	0
DDA and WLD	n/a	-29	-12	-12	-20	-14(-19) <sup>8</sup>	-1

Table 9.2: (Continued)

	Key Stage 4 <sup>1</sup>	Highest qualification <sup>2</sup>	Hourly wages <sup>3</sup>	Weekly earnings (FT) <sup>3</sup>	Weekly net individual income <sup>4</sup>	Weekly equivalent net income <sup>5</sup>	Total wealth <sup>6</sup>
<b>d) Ethnicity (selected)<sup>9</sup></b>							
White British	-	7	-	-	-	3	2
Indian	18	5	2	-	-2	4	-1
Pakistani	-4	-24	-16	-18	-23	} -32	{ -17 -37
Bangladeshi	-	-33	-23	-21	-25		
Black Caribbean	-10	-	3	-2	-2	-7	-20
Black African	-3	6	-2	-3	-1	n/a	-34
Chinese	29	17	7	8	n/a	n/a	-22
<b>e) Occupational social class<sup>10</sup></b>							
Higher managerial and professional	n/a	65	35	32	40	34	24
Lower managerial and professional	n/a	44	18	11	27	25	14
Intermediate	n/a	10	-8	-19	7	13	-1
Lower supervisory/technical	n/a	-12	-8	-9	16	9	-7
Semi-routine	n/a	-23	-27	-30	-4	-1	-18
Routine	n/a	-40	-26	-23	-	-3	-20
Never worked, etc	n/a	-27	-37	-18	-35	-30	-37
<b>f) Housing tenure</b>							
Social housing	n/a	-38	-25	-26	-17	-25	-35
Private rented	n/a	1	-11	-12	-4	7	-32
Owned outright	n/a	8	-4	-4	-6	-3	21
Owned with mortgage	n/a	17	[+7]	6	15	13	8

Table 9.2: (Continued)

	Key Stage 4 <sup>1</sup>	Highest qualification <sup>2</sup>	Hourly wages <sup>3</sup>	Weekly earnings (FT) <sup>3</sup>	Weekly net individual income <sup>4</sup>	Weekly equivalent net income <sup>5</sup>	Total wealth <sup>6</sup>
<b>g) Area deprivation (England)<sup>11</sup></b>							
Most deprived tenth	-16	-30	-19	-14	-14	-23	-29
2nd	-13	-18	-13	-9	-8	-13	-22
3rd	-10	-7	-7	-5	-5	-9	-13
4th	-4	-1	-4	-2	-2	-1	-7
5th	-	3	-1	-1	1	0	2
6th	3	10	3	2	2	5	9
7th	7	4	4	4	5	6	13
8th	11	18	7	5	7	9	14
9th	14	21	10	8	9	13	20
Least deprived tenth	20	27	15	12	13	21	26

Notes:

1. Source: DCSF.
2. Source: LFS 2006-2008. Highest qualification numbers in italics are the difference between proportion of the working age population with at least higher education and proportion with no qualifications above Level 1.
3. Source: LFS 2006-2008 at 2008 prices.
4. Source: Individual Income series 2005-06/2007-08 at 2008 prices.
5. Source: DWP from HBAI dataset.
6. Source: ONS from Wealth and Assets Survey 2006-08.
7. Age ranges for net equivalent income are one year higher.
8. Net equivalent income categories are by whether DDA-disabled or not DDA-disabled. Figures in brackets are for positions excluding extra costs benefits.
9. Definitions of categories vary between surveys. Net equivalent income figures are for adults within whole population distribution.
10. Net equivalent income figures are for adults within whole population distribution.
11. By IDACI for Key Stage 4 results, but IMD for other breakdowns.

A second main theme that emerged in Chapters 3 to 8 was the scale of variation in outcomes *within* the different groups we have defined. Table 9.3 shows in a similar format to Table 9.1 the 90:10 ratios within each category for the five earnings, income and wealth outcomes we have concentrated on. In the first row of the table we show the 90:10 ratios for each outcome for the population as a whole. Comparing these with the numbers below shows whether inequality within each group is lower or higher than it is across the whole population. If differences between groups defined in some of these kinds of way were the main drivers of inequality in the population as a whole, we would expect to see lower ratios for inequality within each sub-group. However, this is rarely the case. As a generality, what the table brings out starkly is the extent to which inequality in the outcomes is usually much the same – sometimes even higher – within each sub-group as it is within the whole population.

There are exceptions to this, such as within the Bangladeshi and Pakistani populations,<sup>164</sup> but particularly when the groups in themselves are part of what delineates economic disadvantage: lower occupational social classes, social housing, and the most deprived areas have somewhat less inequality within them than the national figures.<sup>165</sup> But what the table makes clear is that while one aspect of inequality is the systematic differences in median outcomes we have shown in Table 9.1, another is that inequality within each group is usually a microcosm of economic inequality within the whole society.

**Table 9.3: Inequality within each group by outcome (90:10 ratios)**

	Hourly wages <sup>1</sup>	Weekly earnings (FT) <sup>1</sup>	Weekly net individual income <sup>2</sup>	Weekly equivalent net income <sup>3</sup>	Total wealth <sup>4</sup>
<b>a) All</b>	3.9	3.7	9.6	4.2	97
<b>b) Gender</b>					
Male	4.1	3.7	7.7	4.3	n/a
Female	3.5	3.5	8.9	4.2	n/a
<b>c) Age (bottom of range)<sup>5</sup></b>					
16	2.5	2.7	*	3.7	} 46
20	2.4	2.4	18.4	3.9	
25	3	2.8	8.3	4.1	} 80
30	3.6	3.3	9.9	4.5	
35	4	3.7	9.7	4.4	} 77
40	4.1	3.9	9.9	4.2	
45	4	3.8	9.4	4.3	} 68
50	4	3.8	12.2	4.8	
55	3.8	3.6	19.1	5.3	} 48
60	3.6	3.4	8.6	4.4	
65	3.9	3.7	6.4	3.4	} 37
70	4	N/A	5.9	3.1	
<b>d) Disability</b>					
Not disabled	3.9	3.7	10.6	4.3 (4.4) <sup>6</sup>	84
DDA and WLD	3.3	3.4	7.2	3.4 (3.7) <sup>6</sup>	104

<sup>164</sup> In terms of hourly wages and equivalent net incomes. Inequality in net individual income in terms of the 90:10 ratios shown in Table 9.3 is very high – or undefined – for these groups because significant numbers of adults within them have little or no income received in their own right.

<sup>165</sup> For total net wealth, inequality as measured by the 90:10 ratio is greatest in more deprived areas, as the least wealthy in these areas have virtually no wealth (Table 8.6).

Table 9.3: (Continued)

	Hourly wages <sup>1</sup>	Weekly earnings (FT) <sup>1</sup>	Weekly net individual income <sup>2</sup>	Weekly equivalent net income <sup>3</sup>	Total wealth <sup>4</sup>
<b>e) Ethnicity (selected)<sup>7</sup></b>					
White British	3.9	3.7	9.2	4.1	72
Indian	4.1	4.1	32	5.4	57
Pakistani	3.8	3.8	*	} 3.6	n/a
Bangladeshi	3.4	*	159		n/a
Black Caribbean	3.4	3	10.3	4	183
Black African	3.4	3.1	28	4.1	n/a
Chinese	4.7	4.3	320	6.4	n/a
<b>f) Occupational social class<sup>8</sup></b>					
Higher managerial and professional	3.3	3.4	4.3	4.1	25
Lower managerial and professional	3	2.9	3.7	3.3	31
Intermediate	2.4	2.4	3.6	2.9	44
Lower supervisory/ technical	2.7	2.8	3.5	2.8	60
Semi-routine	2.2	2.5	4.4	3.1	88
Routine	2.3	2.7	5.5	3.2	92
Never worked, etc	3.5	4	*	3.6	117
<b>g) Housing tenure</b>					
Social housing	2.4	2.4	2.7	2.6 - 2.7	42
Private rented	3.4	3.4	3.4	3.7 - 5.0	86
Owned outright	3.9	3.9	3.8	4.6	7
Owned with mortgage	3.9	3.9	3.7	3.8	12

Table 9.3: (Continued)

	Hourly wages <sup>1</sup>	Weekly earnings (FT) <sup>1</sup>	Weekly net individual income <sup>2</sup>	Weekly equivalent net income <sup>3</sup>	Total wealth <sup>4</sup>
<b>h) Area deprivation (England)<sup>9</sup></b>					
Most deprived tenth	2.8	2.9	8.9	3.3	104
2nd	3.1	3.2	8.8	3.6	112
3rd	3.3	3.2	8.7	3.7	71
4th	3.5	3.4	9.1	4.0	86
5th	3.6	3.5	9	4.1	52
6th	3.8	3.6	9.6	4.0	54
7th	4	3.7	10.5	4.1	38
8th	4.1	3.8	10.3	4.1	31
9th	4.4	4.1	10.9	4.2	23
Least deprived tenth	4.6	4.2	12.4	4.5	19

Notes:

\* Denotes ratios which cannot be computed because the 10<sup>th</sup> percentile is zero.

1. Source: LFS 2006-2008 at 2008 prices.
2. Source: Individual Income series 2005-06/2007-08 at 2008 prices.
3. Source: DWP from HBAI dataset.
4. Source: ONS from Wealth and Assets Survey 2006-08.
5. Age ranges for equivalent net income are one year higher. Wealth gives the total wealth by age of the household reference person; this is only available in 10 year age bands.
6. Equivalent net income categories are by whether DDA-disabled or not DDA-disabled. Figures in brackets are for positions **excluding** extra costs benefits.
7. Definitions of categories vary between surveys. Net equivalent income figures are for adults within whole population distribution. Wealth gives the total wealth by age of the household reference person; this is only available in 10 year age bands.
8. Net equivalent income figures are for adults within whole population distribution.
9. By IMD for all breakdowns.



## Part 3

# Changes over time and the life cycle

## Chapter 10 Changing patterns of inequalities

In the first part of this report we looked at how overall inequalities in the outcomes we are interested in have changed over time, particularly in recent years. In Part 2, we looked in detail at the most recent available information to present a picture of how outcomes vary both between social groups defined in different ways and within those groups. In Chapter 9, we presented a cross-cutting summary, comparing inequalities in each outcome across those social divides. In this chapter, we look at how that picture has changed over time, comparing where we can between the latest picture and that a decade ago. We also present analysis of which factors have been the most important contributors to the aggregate shifts in inequality in earnings and incomes over the last forty years.

One of the key factors driving up labour market inequality has been ‘skill-biased technological change’ (where increased demand for workers with the skills to utilise new technologies has come at the expense of a reduced demand for less skilled workers) in many countries. The UK is no exception to this. Rising wage and/or employment inequalities resulting from this have become a feature of contemporary labour markets which interact globally. Different groups of workers have faced changing patterns of demand and supply which have caused inequalities in their economic outcomes to change, and we focus upon the results of this in some detail in this chapter.<sup>166</sup>

The detail of the picture we painted in the last two chapters was only possible because of recent improvements in the data collected in the large-scale surveys we were able to use. In some cases, comparable data covering many years into the past are not available. In Section 10.1, we look at trends in relative GCSE outcomes, and changes in the highest qualification levels of different groups and in their employment patterns. For educational outcomes at 16, we can only show broad trends, but for the second and third of these, we can make a direct comparison using equivalent data for 1995-1997 to that used in earlier chapters for 2005-2008.<sup>167</sup> This covers a period of continuing economic growth and, of course, the period since change of government in 1997. The comparisons we can make are still somewhat limited, however, as older surveys either did not collect information on particular characteristics, or collected it in a form which cannot be compared with more recent data. The main comparisons we can make are by gender, age, ethnicity, and nation or region,

<sup>166</sup> Katz and Autor (1999) Machin and Van Reenen (2008).

<sup>167</sup> In making these comparisons, we are doing so between those with similar characteristics at the dates of each survey, not between the same people later in life. See Chapter 11 for evidence from surveys that have followed the lives of the same people over time.

although we include others where possible. Unfortunately, we cannot compare the striking differences between those living in more or less disadvantaged areas that we saw in Chapters 3 to 8 with the position in earlier years.<sup>168</sup>

In Section 10.2, we look at inequality patterns between and within groups across four further outcomes – hourly wages, weekly earnings, individual incomes and equivalent incomes – again looking back over the last eleven years using equivalent data, and taking a cross-cutting view as in the last chapter. (None of the sources of data has been running long enough to provide a comparison of wealth inequalities over time on a comparable basis.) In Section 10.3 we look in more detail at which groups have generally been ‘winners’ or ‘losers’ over the period and whether the pattern was the same for the better and worse off within each group. We do this by looking at how the positions of those who are better or worse off within each group have changed in terms of their rankings within the distribution for the population as a whole. Have, say, those near the bottom of the group moved up or down the overall distribution by as much as those in the middle of the group?

In Section 10.4, we take a longer perspective, looking specifically at earnings and income inequality since 1968. This section examines the extent to which the changes in overall inequality over this period can be attributed to changing differences *between* groups and to what extent they have been associated with changes in distribution *within* groups.

In examining these results, readers will have different views of whether they regard one kind of change as being more important than the other, or see both as equally important. For some, differences in the outcomes for groups that reflect what should be irrelevant factors – such as between ethnic groups – violate the most fundamental principles of social justice. The key issue is then whether gaps between groups have narrowed. For other readers, even if all gaps of this kind between groups were eliminated, if substantial inequalities remained within groups, the resulting distribution would still not be regarded as fair, as society as a whole would remain more unequal than they thought was just. Such differences in view can affect interpretation of trends in different kinds of inequality, when they move in opposite directions. For instance, we show in Section 10.4 (Table 10.17) that one factor which acted against growing earnings inequality in the last forty years was a reduction in the gap in average earnings between groups defined by gender and marital status. This is linked to the decline in the gender wage gap (see Box 10.1). But at the same time, there was a considerable increase in inequality within each of these groups by gender and marital status. For some readers, the main change would be that the gaps between groups, for instance women and men, had closed considerably over the last forty years but, for others, this would be tempered by the widening differences between, say, married women for much of the same period.

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<sup>168</sup> This is because the area markers in earlier versions of the surveys we use do not match the areas used in the deprivation indices on a consistent basis.

All of this analysis relates to the past – but so, of course, does the ‘current’ picture we presented in Chapters 3 to 9. In this kind of analysis we are always looking in a rear-view mirror, and the most recent information available to us generally relates to the three years ending in 2008 or the financial year 2007-08. This was, of course, immediately before the recession started. Since then many things have been in flux and it will be some time before it will be possible to see how the position reached at the end of the long period of growth has changed. There are, however, some indications from the experience of previous recessions and from early data on what has happened in the last year which suggest which groups could be worst affected by this one, together with some early data on its initial effects. We discuss these in Section 10.5.

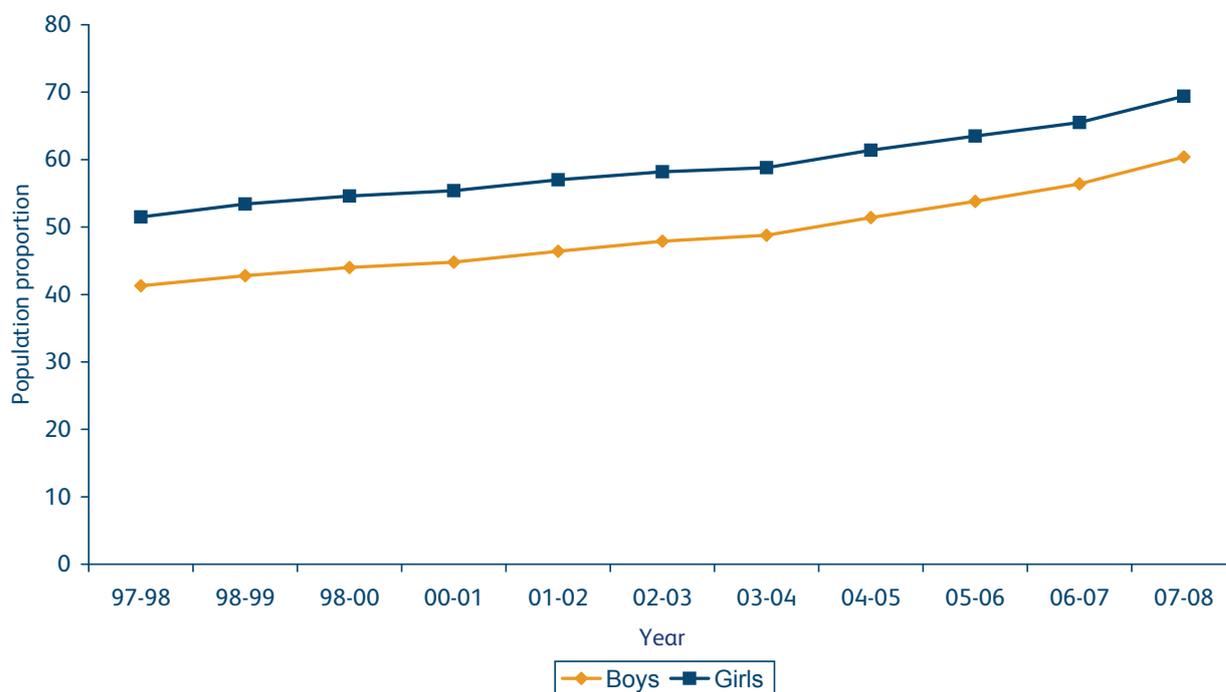
A summary of its key points is included at the end of each section.

### 10.1 Recent trends in education and employment outcomes

#### *(a) Educational outcomes at age 16*

Information on the spread of children’s exam results at 16 (GCSEs and their Scottish equivalents) is not available for earlier years in the form we presented in Chapter 3. However, there is some information of trends in a simpler indicator, the proportion of children (in England) achieving five or more GCSE passes at grades A\*-C. Figure 10.1 shows the proportion of boys and girls reaching this standard from 1998 to 2008, the year we presented information for in Chapter 3 above. For both boys and girls, the proportion increased, but slightly more rapidly for boys since 2003, so the gender gap in this measure narrowed a little from 10 to 9 percentage points over the period.

Figure 10.1: GCSE and equivalent attainment, by gender, England:  
Percentage achieving 5+ A\*-C grades



Source: DCSF from NPD.

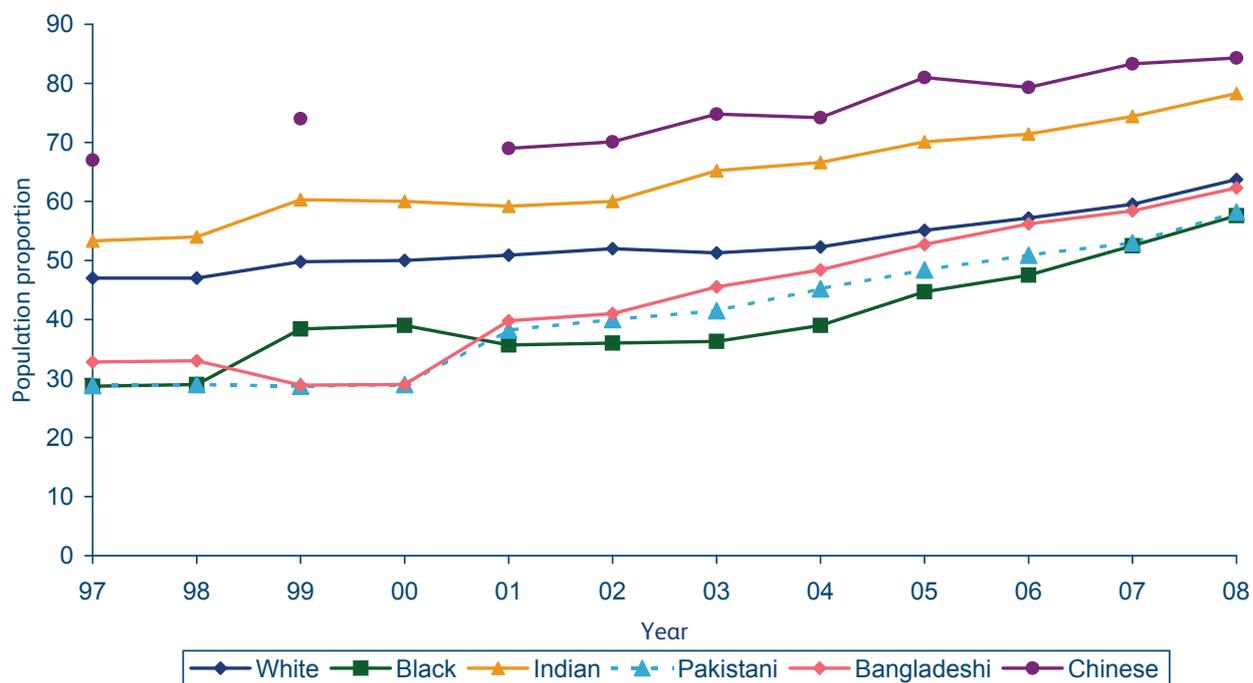
Trends in this indicator are also available by ethnicity – for broader ethnic groups since 1997, as shown in Figure 10.2(a) and since 2003 for a more detailed classification, as shown in Figure 10.2(b). From the first figure one striking feature is the extent to which the gap in this measure between White and Pakistani, Bangladeshi and Black<sup>169</sup> children narrowed over the period, eventually reaching the position that by 2008 the proportions reaching this threshold were very similar (as were their typical overall points scores shown in Figure 3.2(a)). By contrast, the gap in favour of Indian and Chinese children was maintained, if anything slightly widening. The gaps between most of the groups shown in the second panel and the more narrowly defined White British group narrowed over the period, including with Black Caribbean and Black African Children. However, the proportions of Irish Traveller and Gypsy/Roma children reaching the standard declined remarkably over this short period – from over 40 per cent to under 20 per cent for the former group. Whilst the numbers of children involved are relatively small<sup>170</sup>, it is impossible not to find this disturbing: not only are these groups of children reaching a level that is so far behind other groups, but this position appears to have worsened considerably in the recent past.<sup>171</sup>

<sup>169</sup> Data for the period up to 2002 come from the Youth Cohort Study, which uses these classifications, which are not broken down more finely.

<sup>170</sup> In 2008, there were 438 Gypsy/Romany and 109 Travellers of Irish heritage pupils at Key Stage 4 according to the Annual School Census.

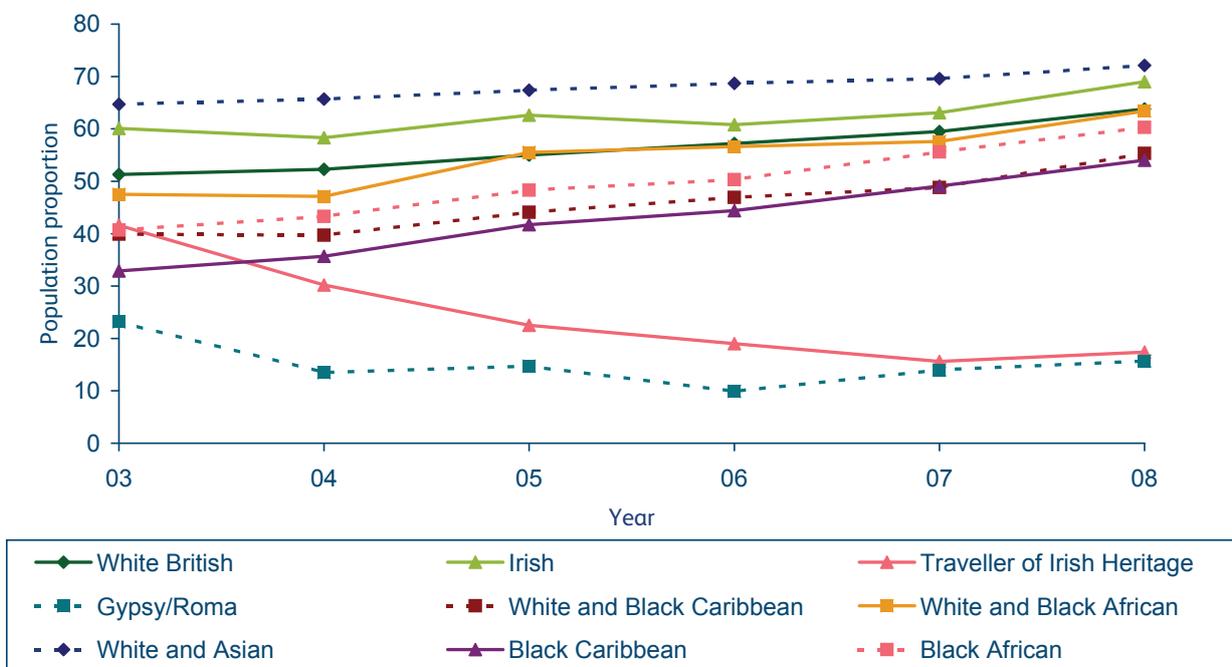
<sup>171</sup> As we discuss in Chapter 11, Burgess, Wilson and Worth (2009) also show the way in which the most recent cohort of Traveller and Gypsy children reaching 16 had average assessments that fell further behind the national average as they moved from Key Stage 1 to Key Stage 4 (7 to 16).

Figure 10.2(a): GCSE and equivalent attainment, by ethnic group, England, 1997 to 2008: Percentage achieving 5+ A\*-C grades



Source: Phillips (2009); DCSF.

Figure 10.2(b): GCSE and equivalent attainment, by ethnic group, England, 2003 to 2008: Percentage achieving 5+ A\*-C grades

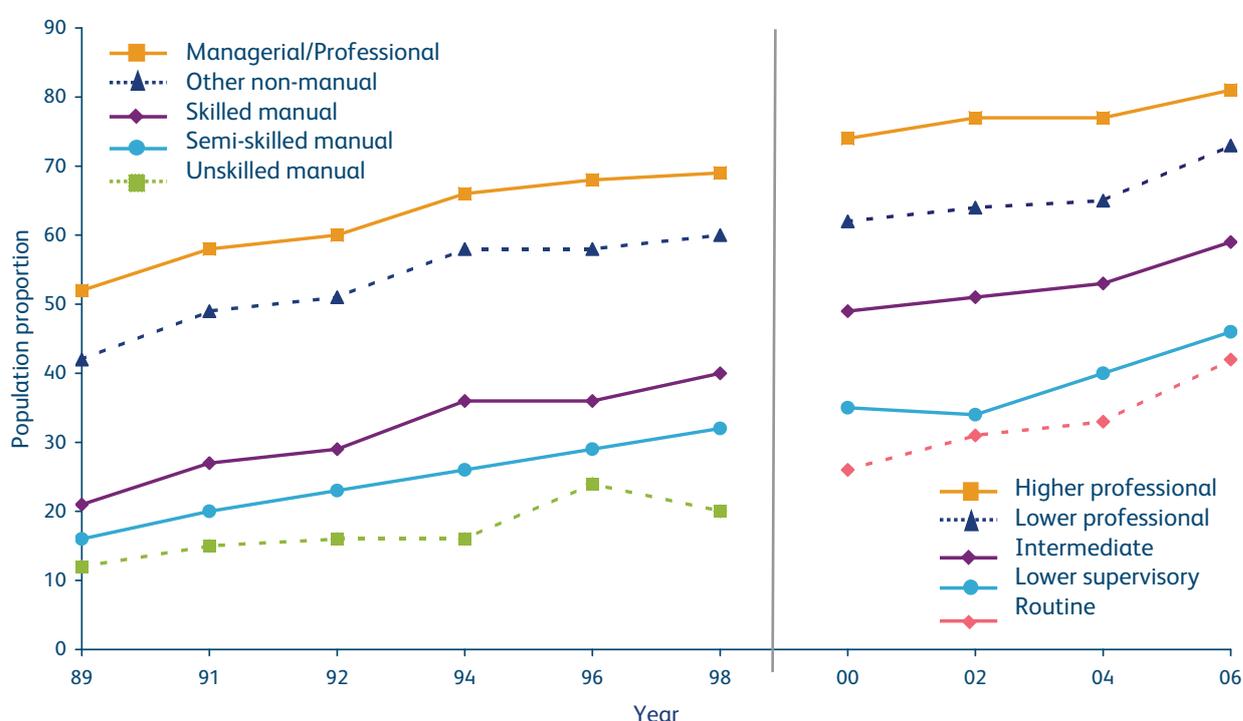


Source: Phillips (2009); DCSF.

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Using a different source, Figure 10.3 shows trends in this level of achievement by parental occupational social class for children in England and Wales, between 1989 and 1998 using one classification, and from 2000 to 2006 using the classification we used in the last six chapters (National Statistics Socio-Economic Classification (NS-SEC)). In the first period, the gap between children with unskilled manual and with managerial/professional parents widened from 40 to 49 percentage points, but in the second the gap between children with parents in routine and in higher professional occupations narrowed from 48 to 39 percentage points. So while this gap remains very wide (and we discuss in Chapter 6 how it develops over the school years), there are signs that it has narrowed a little in recent years.<sup>172</sup>

Figure 10.3: GCSE and equivalent attainment, by parental occupation, England, 1989 to 2006: Percentage achieving 5+ A\*-C grades



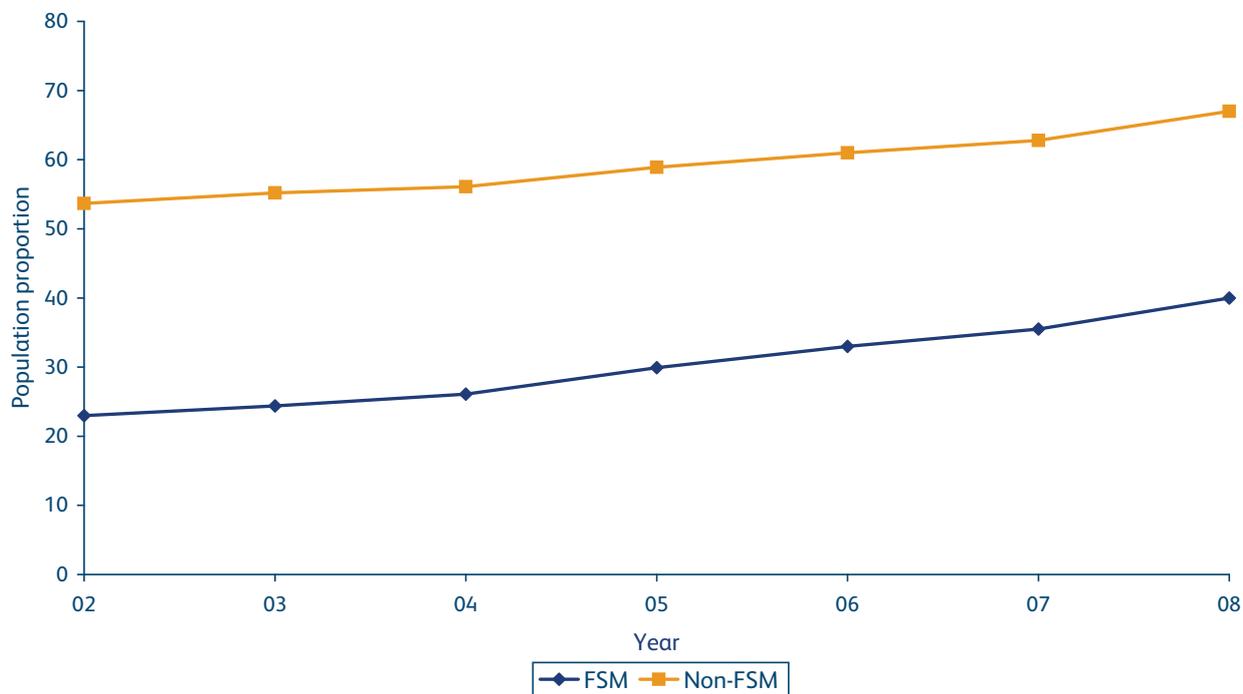
Source: Lupton, Heath and Salter (2009) and DCSF.

While large, the achievement gap between children receiving and not receiving Free School Meals has also narrowed a little in the last few years. Figure 10.4(a) shows that looking at individual children, the gap fell from 31 percentage points in 2002 to 27 percentage points in 2008. Figure 10.4(b) shows the proportion of children achieving five or more A\*-C grades by the proportion of children receiving free meals within the *school*. The most notable feature of this is that the gap between the groups of schools with the largest proportions of poor children – more than 20 per cent receiving free meals – and other schools narrowed substantially between 2002 and 2008.

<sup>172</sup> These data need to be treated with some caution because of the change in socio-economic classification and the fact that parental occupational data are reported by young people rather than parents. There is year-on-year fluctuation and it is impossible to know whether the narrowing of the gap in 2006 represents 'noise' in the data or a longer-term trend. Nevertheless, the data show a modest improvement over the period for those from routine/unskilled manual backgrounds that has had the effect of reducing inequality to some extent.

Figure 10.4(a): GCSE and equivalent attainment, by Free School Meals (FSM) receipt, England, 2002 to 2008:

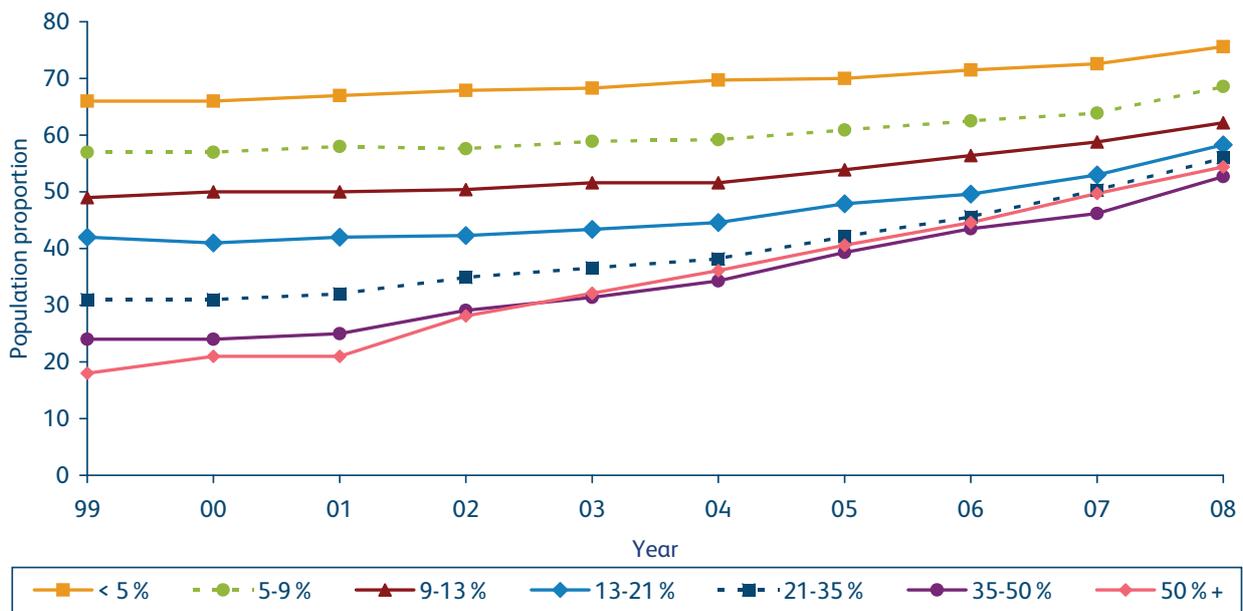
Percentage achieving 5+ A\*-C grades



Source: DCSF, Statistical First Release 32/2008.

Figure 10.4(b): GCSE and equivalent attainment by proportion of FSM pupils in the school, England, 1999 to 2008:

Percentage achieving 5+ A\*-C grades



Source: DCSF, Statistical First Release 32/2008.

Of course, there is considerable controversy about the extent to which the overall trends in this measure are the result of rising standards, ‘grade inflation’ or of more efficient ‘teaching to the test’. One factor which affects comparisons over time is the inclusion of a wider range of ‘GCSE-equivalent’ qualifications in recent years. However, so far as monitoring *differences* or gaps between groups, rather than levels, are concerned, these issues are generally less of a potential problem. Here there is some positive news: while we have already seen in Chapter 3 that gaps in children’s attainment remain wide in terms of social class or of receipt of Free School Meals, those gaps are a little narrower than they were a few years ago. At the same time, some of the main ethnic gaps in attainment have narrowed, although the very poor and apparently deteriorating position of Traveller and Gypsy children is very disturbing.

### (b) *Qualifications of the adult population*

Using data from the Labour Force Survey (LFS), we can look at how the proportions of the UK adult population with different levels of qualification changed between 1995-1997 and 2006-2008. Table 10.1 shows for all men and women of working age and then for men and women in different age bands, the proportions with degrees or other higher education qualifications, and with no qualifications higher than Level 1.<sup>173</sup> In general, what the table shows is a cohort effect – the higher qualification levels of those born more recently. There are some very large changes indeed, even over this comparatively short period, particularly for women. Women in their forties and fifties in 2006-2008 were up to 20 percentage points less likely to have only low or no qualifications than their predecessors just eleven years before. The proportion of women aged 25-34 with higher education qualifications was 15 percentage points higher. As a result, while in 1995-1997, more men than women had higher education qualifications in every age group above 25, by 2006-2008, more women than men had higher education qualifications in all the age groups up to age 44, and fewer had no or only low qualifications.

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<sup>173</sup> Figure 3.9 shows more detail for 2006-08.

Table 10.1: Highest qualifications, by gender and age, 1995-1997 and 2006-2008, percentage of the adult population

	1995-97		2006-08		Change over time	
	Higher education and above	Level 1 or below/no qualification	Higher education and above	Level 1 or below/no qualification	Higher education and above	Level 1 or below/no qualification
<b>Men</b>						
All working-age	21	28	27	24	6	-4
20-24	19	22	20	18	1	-3
25-29	25	24	34	20	9	-3
30-34	25	24	35	19	10	-5
35-39	24	23	31	22	7	-2
40-44	26	25	31	22	5	-3
45-49	25	27	30	22	5	-5
50-54	22	30	30	25	8	-6
55-59	17	35	27	26	10	-9
60-64	16	41	23	32	8	-9
65-69	25	34	22	37	-3	3
70+	20	48	24	44	4	-4
<b>Women</b>						
All working-age	19	35	29	23	10	-12
20-24	19	20	24	17	5	-3
25-29	22	25	38	17	16	-9
30-34	23	27	38	18	15	-10
35-39	22	31	33	20	10	-11
40-44	23	38	32	21	9	-17
45-49	21	43	29	25	8	-19
50-54	17	50	29	31	13	-19
55-59	15	59	25	39	10	-20
60-64	16	56	21	45	5	-11
65-69	20	57	17	57	-3	0
70+	19	60	21	52	2	-7

Source: LFS, UK. Reductions in proportions over time shown in bold.

Note: 1995-97: 12 quarters of LFS data, from beginning of 1995 to end of 1997.

2006-08: 12 quarters of LFS data, from beginning of 2006 to end of 2008.

Table 10.2 shows a similar breakdown by ethnicity. We show the results separately for each period, as there have been some changes in the categories available between them. Care also needs to be taken with comparisons between the periods due to small sample numbers for some groups, especially in 1995-1997. There appear to have been large reductions in the proportion of Bangladeshi and Pakistani adults with low or no qualifications, albeit to levels which are still twice as high as for the population as a whole. With the exception of the Black Caribbean population, all the other groups show faster increases in the proportion with higher education than the White British population. By 2006-2008, greater proportions of the Indian, Other Asian, Black African, and Other Black, and Chinese populations had higher education than the White British population. However, fewer of the White British population had no or only low qualifications than any of the other groups shown (see Figure 3.9 for more detail).

Corresponding comparisons between the four nations of the UK and the English regions show very similar changes to the overall national picture over this period. In terms of nations, the most notable feature is that Scotland, already with the highest proportion of the population with higher education qualifications in 1995-1997, had the largest increase, by 10 percentage points, to 32 per cent. Within the English regions the North East and West Midlands had the fastest, and London the slowest fall in the proportion without qualifications. However, London also had the fastest rise in the proportion with higher education qualifications, from 26 per cent to 36 per cent.

Table 10.2: Highest qualifications, by ethnicity, 1995-1997 and 2006-2008, percentage of the working age population

	Higher education and above	Level 1 or below/ no qualifications	Population proportion
<b>2006-08</b>			
White British	28	21	84.0
Other White	28	32	5.7
White and Black Caribbean	17	24	0.3
White and Black African	20	30	0.1
White and Asian	33	16	0.2
Other Mixed	37	20	0.2
Indian	34	29	2.2
Pakistani	18	43	1.5
Bangladeshi	14	48	0.5
Other Asian	30	36	0.8
Black Caribbean	25	25	1.0
Black African	35	29	1.2
Other Black	36	23	0.1
Chinese	45	28	0.5
Other	29	38	1.5
<b>1995-97</b>			
White	20	30	94.2
Black – Caribbean	19	33	0.9
Black – African	26	33	0.6
Black – Other (non-mixed)	17	24	0.2
Black – Mixed	13	30	0.2
Indian	20	38	1.6
Pakistani	10	54	1.0
Bangladeshi	3	64	0.3
Chinese	29	34	0.3
Other – Asian (non-mixed)	19	41	0.3
Other – Other (non-mixed)	26	35	0.2
Other – Mixed	23	27	0.2

Source: LFS, UK.

Note: 1995-97: 12 quarters of LFS data, from beginning of 1995 to end of 1997.

2006-08: 12 quarters of LFS data, from beginning of 2006 to end of 2008.

### (c) *Employment*

Table 10.3 compares the broad employment status of men and women in different age groups in 1995-1997 and 2006-2008. Over this period of more or less continuous economic growth, the main change was the rise of 2 percentage points in the proportion of the working age population employed or self-employed full-time, and a 2 percentage point decline in the proportion unemployed. The proportion inactive was unchanged. The rise in full-time paid work was greater for women, where it tended to replace inactivity, than it was for men, where it tended to replace unemployment (while men's inactivity actually rose). By age, economic inactivity grew for 16-19 year-old men and women. Most of this was accounted for by rising numbers in education (and so not implying a rise in the numbers not in unemployment, education or training). It fell most for men aged 55-69 and women aged 50-64. The fastest rise in full-time paid work was for women aged 45-59 and for men aged 55-64. Part-time work rose slightly for men of most ages, but fell slightly for women aged 25-54. However, this did little to change the overall gender difference in part-time work, as we saw in Figure 4.1.

Table 10.4 shows a similar comparison by ethnicity. Again, we cannot make a precise comparison between the two periods, as the definitions of the different groups changed, and sample sizes were small for some of them in the earlier period. However, it appears that nearly all the gaps compared to the White British population narrowed over the period, although differences remain considerable for the Pakistani and Bangladeshi populations.

At a national and regional level most changes followed the UK average. However, full-time employment or self-employment rose by 4 percentage points in Scotland and Northern Ireland (to overtake England in the former case) and by 5 percentage points in the North East (but leaving it still with the lowest rate of any English region).

Looking back over a longer period, Richard Berthoud analyses the employment rates of disabled and non-disabled people with different levels of qualifications between 1974-76 and 2001-03 (using limiting long-standing illness reported to the LFS as the measure of disability). The results of this are shown in Figure 10.5. The first panel shows that employment rates for non-disabled men fell between 1974-76 and 1988-90, particularly for those with low qualification levels. However, there was little further fall after 1988-90. For disabled men, the falls in employment rates were much larger, and continued after 1988-90. They were particularly marked for disabled men with no qualifications, whose employment rate halved between 1974-76 and 2001-03.

Table 10.3: Employment, by gender and age, 1995-1997 and 2006-2008, percentage of the adult population

	1995-97				2006-08			
	Full-time and self-employed	Part-time	Unemployed	Inactive	Full-time and self-employed	Part-time	Unemployed	Inactive
<b>All</b>	56	15	6	22	58	16	4	22
<b>Men</b>								
All working-age	72	4	8	16	73	6	5	17
16-19	29	22	13	36	21	20	12	47
20-24	65	7	13	15	61	11	10	18
25-29	82	2	9	7	82	4	5	8
30-34	85	2	7	6	87	3	4	7
35-39	85	2	7	6	86	3	3	7
40-44	84	2	6	8	87	2	3	8
45-49	84	2	5	9	85	3	3	9
50-54	78	2	6	14	81	3	3	13
55-59	64	4	7	26	70	5	3	21
60-64	41	5	4	50	48	8	2	42
65-69	8	5	1	86	13	8	1	79
70+	3	2	0	96	3	2	0	95
<b>Women</b>								
All working-age	40	27	5	29	44	26	4	26
16-19	20	30	10	39	14	30	9	47
20-24	50	14	7	29	47	18	6	29
25-29	50	18	5	27	56	17	4	24
30-34	39	27	5	29	47	25	4	25
35-39	38	32	4	26	43	30	3	24
40-44	43	31	4	22	46	31	3	20
45-49	45	30	3	22	50	29	2	19
50-54	38	30	3	29	48	27	2	23
55-59	26	26	2	46	37	26	2	35
60-64	9	15	0	75	14	19	1	67
65-69	2	5	0	93	4	8	0	88
70+	1	1	0	98	1	1	0	98

Source: LFS, UK.

Note: 1995-97: 12 quarters of LFS data, from beginning of 1995 to end of 1997. 2006-08: 12 quarters of LFS data, from beginning of 2006 to end of 2008.

Table 10.4: Employment, by ethnicity, 1995-1997 and 2006-2008, percentage of the working age population

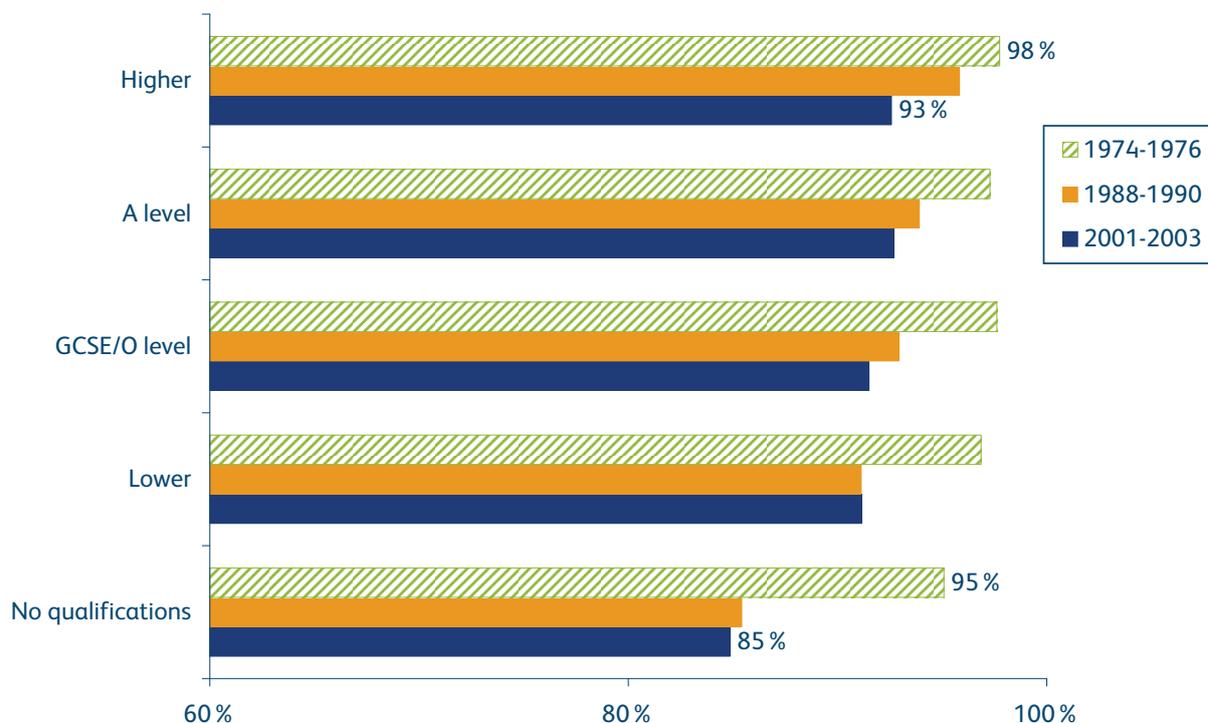
	Full-time and self-employed	Part-time	Unemployed	Inactive	Population proportion
<b>2006-08</b>					
Other White	64	12	4	20	5.7
White and Black Caribbean	42	17	10	31	0.3
White and Black African	47	18	7	29	0.1
White and Asian	50	14	7	29	0.2
Other Mixed	53	14	7	26	0.2
Indian	57	12	6	25	2.2
Pakistani	36	10	7	47	1.5
Bangladeshi	29	13	8	50	0.5
Other Asian	49	14	6	31	0.8
Black Caribbean	54	13	9	23	1.0
Black African	48	14	9	29	1.2
Other Black	52	13	13	23	0.1
Chinese	48	13	4	34	0.5
Other	47	12	7	34	1.5
<b>1995-97</b>					
White	57	16	6	21	94.0
Black – Caribbean	50	13	13	24	0.9
Black – African	37	12	18	33	0.5
Black – Other (non-mixed)	45	12	16	27	0.2
Black – Mixed	39	17	13	31	0.2
Indian	51	11	8	30	1.6
Pakistani	30	7	11	52	0.9
Bangladeshi	23	9	12	56	0.3
Chinese	48	10	6	36	0.3
Other – Asian (non-mixed)	44	11	7	39	0.3
Other – Other (non-mixed)	42	10	11	38	0.2
Other – Mixed	45	15	11	30	0.2

Source: LFS, UK.

Note: 1995-97: 12 quarters of LFS data, from beginning of 1995 to end of 1997.

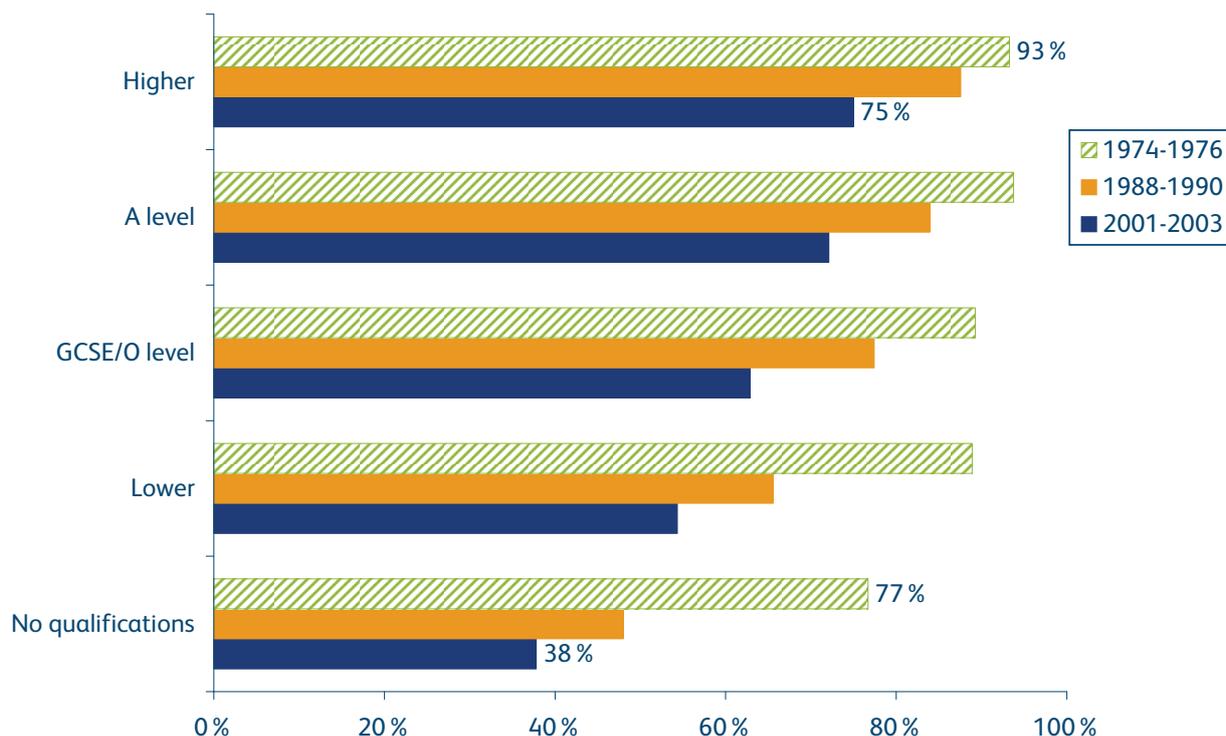
2006-08: 12 quarters of LFS data, from beginning of 2006 to end of 2008.

Figure 10.5(a): Proportion of men without limiting long standing illness who are in work, by highest educational qualifications (percentages)



Source: Berthoud (2007). Disability is based on reported limiting long-standing illness.

Figure 10.5(b): Proportion of men with limiting long standing illness who are in work, by highest educational qualifications (percentages)



Source: Berthoud (2007). Disability is based on reported limiting long-standing illness.

### Summary

- Gaps in children's attainment in terms of social class or of receipt of Free School Meals are narrower than they were at the start of the decade. Some of the main ethnic gaps in attainment also narrowed, but the poor and apparently deteriorating position of Traveller and Gypsy children since 2003 is disturbing.
- Women have made large gains in qualification levels, both absolutely and relative to men. Women in their forties and fifties in 2006-2008 were up to 20 percentage points *less* likely to have only low or no qualifications than their predecessors in 1995-1997. The proportion of women aged 25-34 with higher education qualifications was 15 percentage points higher.
- There appear to have been large reductions in the proportions of Bangladeshi and Pakistani adults with no qualifications over the eleven years, albeit to levels which are still twice as high as for the population as a whole, so that a considerable gap remains. Apart from the Black Caribbean population, all the ethnic groups analysed had faster increases in the proportion with higher education than the White British population.
- By age, economic inactivity grew for 16-19 year-old men and women (reflecting rising numbers in full-time education), while it fell most for men aged 55-69 and women aged 50-64. The fastest rise in full-time paid work was for women aged 45-59 and for men aged 55-64.
- Employment rates for disabled men with low or no qualifications have fallen considerably in the last 25 years.

## 10.2 Changing patterns of earnings and income inequalities in the last decade

It would not make sense simply to repeat here the analysis of the last two chapters for a previous year.<sup>174</sup> Instead, in this section we concentrate on what the data tell us about how things had *changed* to produce the most recent picture. We compare here outcomes between the three-year periods using pooled data for 1995-1997 and 2006-2008.<sup>175</sup> From Chapter 2, it will be recalled that this was a period – taking it as a whole – when there were much smaller changes in overall inequality in earnings or incomes than there had been in the 1980s and

<sup>174</sup> For enthusiasts, the Statistical Appendix to this report contains equivalent tables, where the data are available, for 1995-1997, which can be compared with those for 2006-2008.

<sup>175</sup> Figures for net individual incomes are for financial years covering similar periods. Equivalent net incomes are for 1997-98 and 2007-08 (apart from statistics for ethnicity which are a three year average at 2008 prices for the later period but not available for the earlier one). As the results shown here compare two sample surveys, the question of the statistical significance of any differences between them arises. Given the very large sample sizes (more than 70,000 in all) any differences of the kind shown in Table 10.5 in 90:10 ratios for large proportions of the population (such as all men and all women), for instance, are likely to be significant. However, when small population groups are involved, as, for instance with changes for many of the minority ethnic groups shown in Table 10.8, differences would have to be large to be statistically significant, so caution should be used in interpreting those figures.

early 1990s. So far as weekly earnings are concerned, the rapid growth in inequality according to the 90:10 ratio slowed after the early 1990s (Figure 2.6). Inequality in equivalent net income as measured using the Gini coefficient was slightly higher in 2007-08 than it had been in 1996-97, but was unchanged using the 90:10 ratio, which captures differences across the bulk of the population but not the very top or bottom (Figure 2.13).

According to the 90:10 ratio inequality measure, and for the four distributions we have focussed on, between 1995-1997 and 2006-2008:

- Inequality in *gross hourly wages* (across all employees) fell from 4.2 to 3.9.
- Inequality in *gross weekly earnings* (for full-time employees) fell slightly from 3.8 to 3.7.
- Inequality in *net individual incomes* (for all adults) fell slightly from 9.8 to 9.6.
- Inequality in *equivalent net incomes* (for all individuals, Before Housing Costs) was unchanged at 4.2.

In the sub-sections below, we examine the extent to which these overall changes were associated with changes in inequality between and within different groups when the population is classified in different ways.

### (a) Gender

The first two columns of Table 10.5 show median outcomes for men and women in each of these measures expressed as a percentage of the overall median in each three-year period. In each case the pattern is the same: women's earnings or incomes were below those of men at both dates, but the gap narrowed over the period: inequalities *between* men and women declined – most notably for net individual income, where women's median incomes rose from 74 to 81 per cent of the overall median, and from 53 to 64 per cent of that for men. For equivalent net income, the assumption of equal sharing within the household meant that the gender difference was relatively small to start with, and it narrowed only slightly.

The third and fourth columns show how inequality changed *within* the distributions for men and women.<sup>176</sup> To highlight the changes, in this table and the ones that follow, the higher of each pair of years is in bold.

- For hourly wages, inequality fell slightly looking *within* men and *within* women as groups: the overall reduction in inequality came from narrowing inequalities both between and within genders.
- For weekly earnings, inequality for each gender was unchanged. The slight overall fall in inequality reflected narrowing of the gender gap.

<sup>176</sup> We also looked at whether trends within the top and bottom halves of the distributions (as measured by the '90:50' and '50:10' ratios) were appreciably different from those in the 90:10 ratio, but they were not, so we do not report them here. The only substantial difference was that the 50:10 ratio for net individual income for women declined rather faster than the 90:50 ratio.

## An anatomy of economic inequality in the UK

- For individual incomes, the pattern was more complicated: there was a fall in inequality between women, as well as between men and women, but a rise in inequality between men, which meant that the overall fall in inequality was limited.
- For equivalent net incomes, inequality for each gender rose slightly, offsetting the slight narrowing in inequality between them, leaving overall inequality unchanged.

Box 10.1 below looks at other evidence on recent trends in the gender pay gap.

Table 10.5: Inequality in earnings and incomes by gender, 1995-1997 and 2006-2008

	Group median as percentage of overall median		Inequality within groups (90:10 ratio)	
	1995-97	2006-08	1995-97	2006-08
<b>(a) Hourly wages</b>				
Men	<b>118</b>	113	<b>4.2</b>	4.1
Women	86	<b>90</b>	<b>3.7</b>	3.5
<b>(b) Weekly earnings</b>				
Men	<b>112</b>	110	3.7	3.7
Women	82	<b>86</b>	3.5	3.5
<b>(c) Net individual incomes</b>				
Men	<b>139</b>	126	7.1	<b>7.7</b>
Women	74	<b>81</b>	<b>11.4</b>	8.9
<b>(d) Equivalent net income (BHC)</b>				
Men	<b>104</b>	103	4.2	<b>4.3</b>
Women	96	<b>97</b>	4.1	<b>4.2</b>

Source: LFS (UK 1995 to 1997; 2006 to 2008), National Equality Panel (NEP) from Individual Income Series (GB 1996-97 to 1998-99; UK 2005-06 to 2007-08), Department for Work and Pensions (DWP), based on Households Below Average Income (HBAI) (GB 1997-98; UK 2007-08).

Note: The time frame is 1996-97 to 1998-99 and 2005-06 to 2007-08 for net individual incomes; 1997-98 and 2007-08 for equivalent net income. Higher figures of each pair shown in bold.

### Box 10.1: Trends in the gender pay gap

The gender pay gap – the difference in pay between men and women – can be calculated in several different ways:

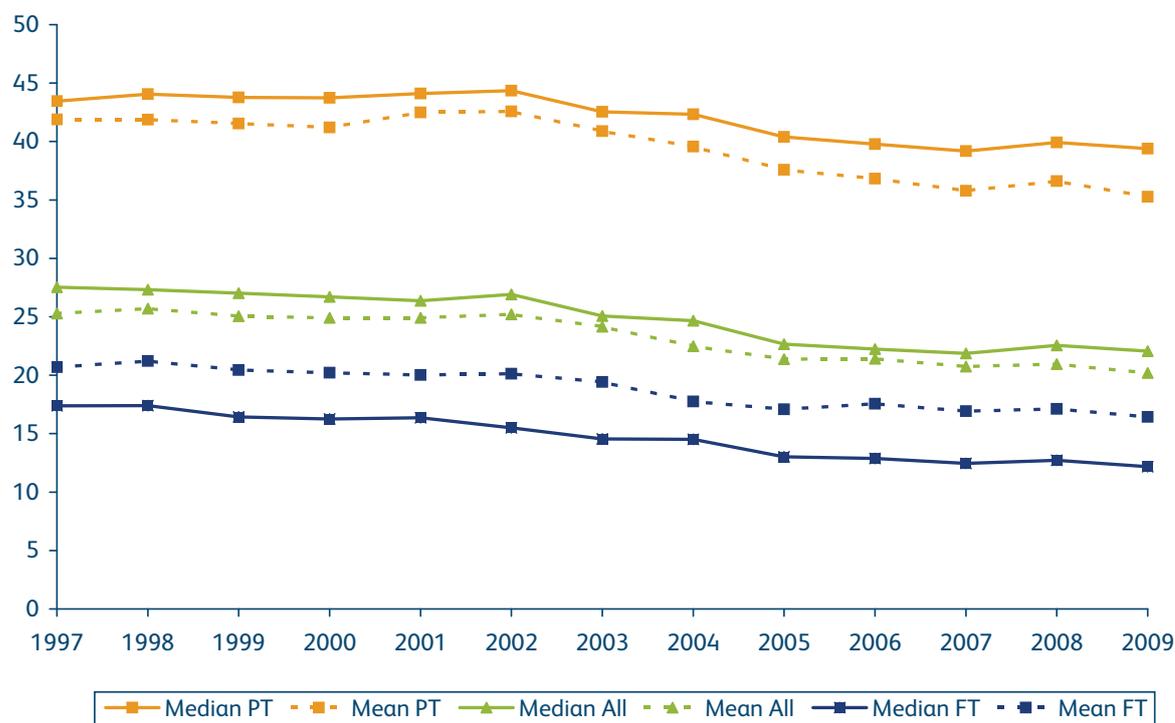
- By looking at hourly wages or weekly earnings. Looking at hourly wages gives the clearest comparison between the rates of pay that men and women receive for the same amount of work, but of course excludes the differences that arise from men and women working different hours.
- Looking at all employees, whether working full-time or part-time, or looking at full-time and part-time employees separately (but both by comparison with full-time workers). Looking at all employees together captures the effect on women as a whole of the way in which part-time pay is much lower than full-time. However, looking at full-time or part-time pay separately shows more clearly the impact of lower part-time pay for women.
- By looking at the gap between median pay of men and women or in mean (average) pay. The median is less affected by relatively small numbers of high earners than the mean and can give a better guide to the position of the population as a whole.

In earlier chapters we have shown these differences in a number of ways, but in Chapter 5, we concentrated on two – the median pay gap in hourly wages for all employees and the median pay gap in weekly earnings for full-time earners. We base our analysis on the LFS, showing for instance in 2006-2008 women employees had hourly wages 21 per cent below those of men, while weekly full-time earnings were 22 per cent lower. Eleven years before these gaps had both been 27 per cent (Table 10.5).

To set these results in the context of alternative measures, Figure 10A shows trends as measured by the Office for National Statistics (ONS) in six measures of the gender pay gap in hourly wages. Three of these show the median gap and three the mean gap. The three pairs of lines show the gaps for all employees and then for full-time and part-time employees only. The comparisons are all of women's pay compared with that of men working full-time (whereas our LFS comparisons are with all men). These are derived from the Annual Survey of Hours and Earnings (ASHE), which gives slightly different levels of pay from the LFS, but gives a similar picture of overall inequalities (see Appendix 12). The gender pay gap in hourly wages for all employees in this series between 2006 and 2008 is slightly higher (24 per cent) than the LFS-based results we have presented earlier in this report (as it is by comparison with men working full-time, rather than with all men as in our calculations). The trends in the two series are similar, however, with the ASHE based series falling by 4 percentage points over the slightly shorter period from 1997 to 2006-2008.

The pay gaps shown for all employees are greater than for full-time employees only, while the pay gap for part-timers is much larger – remaining at almost 40 per cent even at the end of the period. On all the measures, the gender pay gap decreased by between 4 and 6 percentage points over the period as a whole, but increased slightly between 2007 and 2008.

Figure 10A: Trends in alternative measures of the gender pay gap (hourly wages)



Source: ASHE 1997-2009. Note there were methodological changes in 2004 and 2007 causing breaks in the full-time series at those points. The gaps are measured against men working full-time in each case.

Using different measures and comparators produces different measures of the gender pay gap. Table 10A compares the gaps shown in the series based on ASHE for hourly pay in 2008 with those we derive from the LFS for 2006-08 for both hourly wages and weekly earnings. The two figures derived from our main comparisons are shown in bold: 21 per cent in hourly earnings for all employees, and 22 per cent in weekly earnings for those working full-time. The other figures show the consistency of other measures of the hourly pay gap between the two sources.

Table 10A: Alternative measures of gender pay gap (percentages)

	ASHE 2008	LFS 2006-2008	
	Hourly wages	Hourly wages	Weekly earnings
a) All women versus all men	22	<b>21</b>	39
(b) All women versus full-time men	26	24	43
(c) Part-time women versus full-time men	40	37	71
(d) Full-time women versus full-time men	13	13	<b>22</b>

### (b) Gender and age

These patterns are the product, however, of the rather more complex changes in the position of different groups defined by age as well as by sex shown in Table 10.6. Looking at the first two columns in each panel, there is a similar pattern for hourly and weekly earnings and for individual incomes:

- In most cases, there was a narrowing in inequality *between* age/gender groups – those that were below the overall median in 1995-1997 tended to make relative gains, and those that had been above it to fall back. This meant an improving position for nearly all age groups of women, but men aged 25-54 fell back. Older men also made relative gains.
- An exception to this overall pattern was that the position of younger men and women (aged 16-24), already below the overall median, fell back further or barely improved (part of which, with regard to incomes, at least, reflects the rising numbers in full-time education).
- Some age groups of women moved from having median earnings or incomes below the overall median to above it, which would not necessarily contribute to overall inequality reductions.

The general pattern is therefore that the relative position of all but the youngest groups of women improved, as did that of older men, and middle-aged men fell back in relative terms.

The third and fourth columns of each panel show the changes in inequality in the three outcomes within each age/gender group. Here the pattern for each gender is the opposite:

- For men aged up to 64, inequality within each age group generally *increased*, while it fell for men aged over 64.
- For women aged up to 64, inequality within each age group generally *decreased*, while it rose for women aged over 64.
- This division is clearest for individual incomes. For hourly and weekly earnings, inequality also decreased within age groups of men aged 16-29, as it did (slightly) for the weekly earnings of women aged 16-24 (and the individual incomes of women aged 20-24).

Table 10.6: Inequality in earnings and individual incomes by gender and age, 1995-1997 and 2006-2008

	Group median as a percentage of overall median		Inequality within groups (90:10 ratio)	
	1995-97	2006-08	1995-97	2006-08
<b>(a) Hourly wages</b>				
<b>Men</b>				
16-19	53	<b>54</b>	<b>2.9</b>	2.5
20-24	<b>79</b>	75	<b>2.8</b>	2.4
25-29	<b>109</b>	102	<b>3.1</b>	2.9
30-34	<b>130</b>	123	3.4	<b>3.5</b>
35-39	<b>140</b>	131	3.6	<b>3.8</b>
40-44	<b>145</b>	136	3.7	<b>4.0</b>
45-49	<b>147</b>	134	3.9	<b>4.0</b>
50-54	<b>131</b>	129	4.0	<b>4.1</b>
55-59	113	<b>116</b>	<b>4.0</b>	3.9
60-64	99	<b>101</b>	<b>3.7</b>	3.6
65-69	81	<b>84</b>	<b>6.3</b>	4.2
70+	65	<b>68</b>	<b>6.3</b>	4.5
<b>Women</b>				
16-19	53	<b>54</b>	<b>2.9</b>	2.5
20-24	<b>73</b>	72	<b>2.6</b>	2.4
25-29	96	<b>97</b>	<b>3.1</b>	3.0
30-34	101	<b>105</b>	<b>3.7</b>	3.5
35-39	93	<b>101</b>	<b>3.9</b>	3.7
40-44	92	<b>97</b>	<b>3.9</b>	3.6
45-49	90	<b>94</b>	<b>3.8</b>	3.5
50-54	86	<b>94</b>	3.6	3.6
55-59	79	<b>87</b>	3.4	3.4
60-64	75	<b>81</b>	<b>3.4</b>	3.3
65-69	65	<b>69</b>	<b>4.6</b>	3.3
70+	<b>64</b>	62	*	3.3

Table 10.6: (Continued)

	Group median as a percentage of overall median		Inequality within groups (90:10 ratio)	
	1995-97	2006-08	1995-97	2006-08
<b>(b) Weekly earnings</b>				
<b>Men</b>				
16-19	46	48	3.0	2.7
20-24	72	70	2.7	2.4
25-29	101	96	2.9	2.8
30-34	121	114	3.1	3.2
35-39	129	124	3.3	3.5
40-44	133	128	3.4	3.7
45-49	134	126	3.5	3.6
50-54	122	121	3.5	3.7
55-59	105	110	3.6	3.5
60-64	92	96	3.1	3.4
65-69	83	86	*	3.7
70+	84	69	*	*
<b>Women</b>				
16-19	45	48	3.0	2.8
20-24	64	66	2.4	2.3
25-29	86	89	2.7	2.7
30-34	99	102	3.2	3.3
35-39	92	98	3.6	3.7
40-44	88	93	3.5	3.7
45-49	85	87	3.4	3.5
50-54	82	90	3.4	3.5
55-59	77	83	3.4	3.5
60-64	71	79	3.3	3.4
65-69	59	67	*	*
70+	*	*	*	*

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Table 10.6: (Continued)

	Group median as a percentage of overall median		Inequality within groups (90:10 ratio)	
	1995-97	2006-08	1995-97	2006-08
<b>(c) Net individual incomes</b>				
<b>Men</b>				
16-19	<b>51</b>	41	*	*
20-24	<b>97</b>	89	7.4	<b>&gt;30</b>
25-29	<b>147</b>	129	7.3	<b>8.4</b>
30-34	<b>174</b>	155	6.7	<b>7.3</b>
35-39	<b>185</b>	164	7.4	<b>7.8</b>
40-44	<b>188</b>	166	7.2	<b>8.5</b>
45-49	<b>185</b>	165	8.0	<b>8.6</b>
50-54	<b>177</b>	154	7.6	<b>8.7</b>
55-59	<b>146</b>	139	7.4	<b>9.0</b>
60-64	<b>122</b>	116	6.0	<b>7.3</b>
65-69	<b>109</b>	103	<b>4.2</b>	4.1
70-74	94	<b>98</b>	<b>3.9</b>	3.6
75-79	84	<b>91</b>	3.5	3.5
80-84	80	<b>90</b>	<b>3.8</b>	3.2
85+	80	<b>90</b>	<b>3.5</b>	3.4
<b>Women</b>				
16-19	<b>46</b>	43	*	*
20-24	<b>76</b>	75	10.7	<b>16.7</b>
25-29	94	<b>104</b>	<b>13.5</b>	10.2
30-34	91	<b>109</b>	<b>15.7</b>	11.9
35-39	92	<b>107</b>	<b>11.7</b>	10.2
40-44	96	<b>106</b>	<b>11.8</b>	9.8
45-49	93	<b>102</b>	<b>16.8</b>	9.6
50-54	79	<b>91</b>	<b>89.5</b>	18.7
55-59	63	<b>72</b>	<b>&gt;30</b>	<b>&gt;30</b>
60-64	57	<b>65</b>	<b>10.8</b>	6.6
65-69	54	<b>57</b>	5.0	<b>5.2</b>
70-74	53	<b>58</b>	4.5	<b>4.9</b>
75-79	55	<b>61</b>	4.3	<b>4.8</b>
80-84	59	<b>65</b>	4.0	<b>4.3</b>
85+	66	<b>72</b>	2.6	<b>3.0</b>

Source: LFS (UK 1995 to 1997; 2006 to 2008), NEP from Individual Income Series (GB 1996-97 to 1998-99; UK 2005-06 to 2007-08).

Note: The time frame is 1996-97 to 1998-99 and 2005-06 to 2007-08 for net individual incomes; 1997-98 and 2007-08 for equivalent net income. Higher of each pair of figures shown in bold.

Given the equal sharing assumption, differences between groups defined by gender as well as age are less revealing, so Table 10.7 shows the changing inequality in equivalent net incomes between and within each age group. As far as inequality between age groups is concerned:

- the relative position of those with a ‘household reference person’ (see Glossary) aged over 55 improved. As most of these started behind the overall median, this tended to reduce inequality overall;
- the relative position of the originally best-off groups aged 41 to 55 fell back, also tending to reduce inequality, as did the improvement in the position of children aged up to 10; however
- the improvement of the already favourable position of those aged 26-40 and the further deterioration of the position of 17-20 year-olds both tended to increase inequality.

These diverse changes in inequality between age groups were combined with increases in inequality within most age groups, especially those aged 51-65. The result, as we have seen, is that overall inequality was unchanged.

Table 10.7: Inequality in equivalent net income by age, 1997-98 and 2007-08

	Group median as a percentage of overall median		Inequality within groups (90:10 ratio)	
	1995-97	2006-08	1995-97	2006-08
0-5	85	<b>86</b>	3.8	<b>3.9</b>
6-10	84	<b>89</b>	3.7	<b>3.8</b>
11-16	87	87	3.6	<b>3.7</b>
17-20	<b>101</b>	93	<b>3.9</b>	3.7
21-25	<b>117</b>	111	3.9	3.9
26-30	119	<b>121</b>	<b>4.2</b>	4.1
31-35	112	<b>117</b>	4.4	<b>4.5</b>
36-40	108	<b>110</b>	4.3	<b>4.4</b>
41-45	<b>116</b>	110	4.1	<b>4.2</b>
46-50	<b>128</b>	116	4.2	<b>4.3</b>
51-55	<b>124</b>	121	4.3	<b>4.8</b>
55-60	106	108	4.4	<b>5.3</b>
61-65	95	95	3.9	<b>4.4</b>
66-70	82	<b>87</b>	3.2	<b>3.4</b>
71-75	74	<b>82</b>	3.0	<b>3.1</b>
76-80	72	<b>81</b>	3.2	3.2
80+	73	<b>79</b>	3.2	3.1

Source: DWP, based on HBAI dataset (GB 1997-98; UK 2007-08).

Note: Higher of each pair of figures shown in bold.

### (c) Ethnicity

Table 10.8 shows a similar breakdown for hourly wages, weekly earnings and individual income by broad ethnic groups (sample sizes are too small to provide a clear picture by gender and ethnicity). As before the classifications within the surveys changed between the two periods and so are not directly comparable. The first panel shows the comparison for hourly wages and weekly full-time earnings. The second panel shows the comparison for net individual incomes. Comparisons are not available for equivalent net income. The picture for changes within and between ethnic groups differs from that for age:

- Inequality *within* each ethnic group appears to have narrowed for hourly wages and weekly earnings (apart from a slight increase for Black Caribbean employees). For individual income, there was also an increase for three of the groups shown, but a decline for the White British group, and a small decline for the Black or Black British African group.
- Looking *between* ethnic groups, the clearest equalising change appears to have been an improving relative position for Bangladeshi employees: from 50 to 73 per cent of the overall median for hourly wages; from 35 to 62 per cent for weekly full-time earnings. However, there was *no* apparent improvement in the median individual incomes of Bangladeshi adults, which remained at only 56 per cent of the overall median. The difference partly reflects the continuing very low employment rates of this group, so the median adult is not in employment (Table 10.4), but small sample sizes mean that we should take care with this comparison.
- The patterns of change differed across ethnic groups. The position of the Black African group improved towards the overall median in weekly earnings and individual incomes, but slipped back slightly for hourly wages.
- The improvement in weekly earnings and individual incomes for Indian adults also had an equalising effect, but the improvement in their median hourly wages took them further above the overall median, with the opposite effect. Similarly, the improved position of Chinese adults had an equalising effect for individual incomes, where they started below the overall median, but a disequalising effect for hourly and weekly earnings, where they started already above the median.
- Improving relative hourly wages for Black Caribbean workers took them further above the overall median, with a disequalising effect, but as they started with below-overall median individual incomes, in that case the improvement was equalising.

To summarise this complex picture, there appear to have been reductions in wage and earnings inequality *within* most ethnic groups, and some of the groups that were furthest below the overall median appear to have caught up to some extent. However, some groups that were already above the overall median improved their positions further, offsetting some of the other trends towards reduced inequality overall.

Table 10.8(a): Inequality in wages and earnings by ethnicity, 1995-1997 and 2006-2008

	Group median/overall		90:10 ratio		Population proportion
	Hourly wages	Weekly earnings	Hourly wages	Weekly earnings	
<b>2006-08</b>					
White British	100	100	3.9	7.8	88.0
Other White	97	101	4.3	6.9	5.6
White and Black Caribbean	87	84	3.2	8.6	0.2
White and Black African	89	88	*	*	0.1
White and Asian	114	104	4.7	10.6	0.1
Other Mixed	113	110	4.1	7.0	0.2
Indian	103	105	4.1	7.4	1.7
Pakistani	80	76	3.8	7.3	0.6
Bangladeshi	73	62	3.4	6.6	0.2
Other Asian	93	94	4.0	7.9	0.6
Black Caribbean	106	107	3.4	6.0	0.8
Black African	98	101	3.4	6.3	0.9
Other Black	97	93	*	*	0.1
Chinese	111	107	4.7	10.5	0.3
Other	92	92	3.8	7.3	1.0
<b>1995-97</b>					
White	101	100	4.2	9.5	96.0
Black – Caribbean	104	106	3.3	6.4	0.7
Black – African	100	96	3.6	6.7	0.3
Black – Other (non-mixed)	112	111	*	7.1	0.1
Black – Mixed	94	90	*	9.1	0.1
Indian	101	101	4.3	7.9	1.2
Pakistani	81	81	4.2	10.6	0.4
Bangladeshi	50	35	*	9.5	0.1
Chinese	106	106	5.2	10.0	0.2
Other – Asian (non-mixed)	107	108	4.9	9.5	0.2
Other – Other (non-mixed)	110	110	*	9.5	0.1
Other – Mixed	112	109	4.4	9.3	0.2

Source: LFS (UK 1995 to 1997; 2006 to 2008).

Table 10.8(b): Inequality in net individual incomes by ethnicity, 1996-97 to 1998-99 and 2005-06 to 2007-08

	<b>Group median/ overall</b>	<b>90:10 ratio</b>	<b>Population proportion</b>
<b>2005-06 to 2007-08</b>			
White – British	101	9.2	88.0
Any other white background	106	18.4	3.7
Mixed – White and Black Caribbean	82	*	0.2
Mixed – White and Black African	95	*	0.1
Mixed – White and Asian	111	>30	0.3
Any other mixed background	106	*	0.1
Asian or Asian British – Indian	97	>30	1.8
Asian or Asian British – Pakistani	59	*	1.2
Asian or Asian British – Bangladeshi	56	>30	0.3
Any other Asian/Asian British background	98	>30	0.6
Black or Black British – Caribbean	97	10.3	0.9
Black or Black British – African	98	27.8	0.9
Any other Black/Black British background	95	*	0.1
Chinese	92	>30	0.4
Any other	87	>30	1.1
<b>1996-97 to 1998-99</b>			
White	101	9.7	95.0
Black – Caribbean	87	7.1	0.9
Black – African	80	28.3	0.5
Black – neither Caribbean nor African	80	*	0.1
Indian	95	30.3	1.5
Pakistani	63	>30	0.8
Bangladeshi	56	18.3	0.3
Chinese	82	*	0.2
None of these	82	>30	1.0

Source: NEP from Individual Income Series (GB 1996-97 to 1998-99; UK 2005-06 to 2007-08).

### (d) Disability

We can examine trends broken down by disability status only for equivalent net incomes. Table 10.9 suggests that the biggest change over the period was the deteriorating relative position of working-age adults with long-standing limiting health conditions, whose median income fell from 90 per cent to 80 per cent of the overall median – even when extra costs disability benefits are included in their income.<sup>177</sup> On the other hand, the position of children and pensioners improved towards the overall median, whether or not they had long-standing limiting health conditions. Inequality increased within the groups of disabled people of working age and non-disabled pensioners. These factors acted in different directions, leaving overall inequality in equivalent income unchanged.

Table 10.9: Inequality in equivalent net income by long-standing limiting illness, 1997-98 and 2007-08

	Group median as % overall median		Inequality within groups (90:10 ratio)	
	1997-98	2007-08	1997-98	2007-08
<b>No long-standing limiting illness</b>				
All	104	<b>105</b>	4.2	<b>4.3</b>
Children	87	<b>88</b>	3.8	3.8
Working-age	<b>119</b>	116	4.3	4.3
Pensioners	80	<b>86</b>	3.7	<b>4.0</b>
<b>Long-standing limiting illness</b>				
All	82	82	3.4	3.4
Children	73	<b>81</b>	3.1	3.1
Working-age	<b>90</b>	80	3.7	<b>4.0</b>
Pensioners	77	<b>83</b>	<b>3.0</b>	2.9

Source: DWP, based on HBAI dataset (GB 1997-98; UK 2007-08).

Note: Higher of each pair of figures shown in bold.

### (e) Housing tenure

We can also compare the position of different housing tenure groups for individual incomes and for equivalent incomes. Table 10.10 shows that the inequalities between tenures which we discussed in Chapter 9 were actually slightly *smaller* in 2006-08 than they had been eleven years before. However, inequalities *within* tenure groups were wider (with the exception of declining individual income inequality among owners with mortgages).

<sup>177</sup> The employment changes illustrated in Figure 10.5 will have contributed to this decline. See Box 7.3 in Chapter 7 for discussion of the effects of excluding extra costs disability benefits from the measured incomes of disabled people.

Table 10.10: Inequality in individual and equivalent net income by housing tenure, 1995-1997 and 2006-2008

	Group median as a percentage of overall median		Inequality within groups (90:10 ratio)	
	1996-97 to 1998-99	2005-06 to 2007-08	1996-97 to 1998-99	2005-06 to 2007-08
<b>(a) Net individual incomes</b>				
Social housing – council	67	<b>68</b>	5.7	<b>6.3</b>
Social housing – housing association	69	<b>72</b>	5.7	<b>6.5</b>
Private rent	87	<b>93</b>	10.9	<b>15.0</b>
Owned outright	89	<b>90</b>	8.5	<b>8.7</b>
Owned with mortgage	<b>139</b>	134	<b>11.3</b>	9.6
	<b>1997-98</b>	<b>2007-08</b>	<b>1997-98</b>	<b>2007-08</b>
<b>(b) Equivalent net income (BHC)</b>				
Rented from council	65	<b>67</b>	2.5	<b>2.6</b>
Rented from housing association	68	<b>71</b>	2.5	<b>2.7</b>
Rented privately unfurnished	85	<b>87</b>	<b>3.8</b>	3.7
Rented privately furnished	93	<b>97</b>	4.7	<b>5.0</b>
Owned outright	96	96	4.6	4.6
Owned with mortgage	<b>123</b>	121	3.8	3.8

Source: NEP from Individual Income Series (GB 1996-97 to 1998-99; UK 2005-06 to 2007-08), DWP, based on HBAI dataset (GB 1997-98; UK 2007-08).

Note: Higher of each pair of figures shown in bold.

### (f) Nation and region

Table 10.11 shows that the differences between the four nations of the UK in earnings and between the three nations of Great Britain in incomes tended to narrow slightly over the period, particularly as relative earnings in Northern Ireland rose.<sup>178</sup> However, relative hourly and weekly earnings and equivalent incomes in Wales fell slightly further back compared to the overall median.

Given the differences between the countries in some of their policies and in particular, the strong constitutional commitments of the Scottish and Welsh devolved administrations towards equality (see Section 9.8), the third and fourth columns of the table are of great interest as they show whether inequality was declining any faster in those nations:

<sup>178</sup> As Northern Ireland is included in the 2006-08 income figures, the other three nations all rose in the UK rankings for net individual incomes. As discussed in Box 5.1 in Chapter 5, cost of living differences affect how one interprets these differences, but we do not have any measures of how differential changes in them affected each nation or region over the period.

- For hourly wages, inequality reduced at a similar rate in all four nations, but somewhat faster in Northern Ireland.
- Inequality in weekly earnings was unchanged in England, so the overall decline in the UK reflected reduced inequality in the other three, again with the largest reduction in Northern Ireland.
- Inequality in net individual incomes increased in Wales and very slightly in England, but fell in Scotland.
- Inequality in equivalent net incomes was unchanged in England, rose slightly in Wales, but fell in Scotland.
- In all cases, inequality in the three other nations started and ended a little below that in England (although not always below the levels in the English regions shown in Table 10.12).

The overall picture is one where the changes were broadly similar across the four nations, but it is notable that inequality declined slightly on all four measures only in Scotland, and inequality in earnings most rapidly in Northern Ireland. That there has been comparatively little difference between the devolved nations and England over the period may come as a disappointment to some, given the priority given to equality issues by the devolved governments in Scotland and Wales. Tania Burchardt and Holly Holder, in a more detailed study of comparative trends since 1997, also point to the small scale of differences, but point out that some of the major factors that affect inequalities in economic outcomes, such as the structure of the tax and benefit systems have been common across the UK.<sup>179</sup>

In the previous two chapters we noted the much higher level of inequality in London than elsewhere for most outcomes. This is confirmed in Table 10.12, which presents the picture across the English regions. The most consistent feature is that relative median incomes in London, already well above the English median, increased further for all four outcomes, although individual and equivalent incomes in the South East remain higher. London also started as the most unequal region and became even more unequal through the period in all four respects. The relative positions of the other regions were more mixed, with movements both towards and away from the overall median. In contrast to London, inequality within most regions generally declined slightly.

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<sup>179</sup> Burchardt and Holder (2009).

Table 10.11: Inequality in earnings and income by nation, 1995-1997 and 2006-2008

	Group median as a percentage of overall median		Inequality within groups (90:10 ratio)	
	1995-97	2006-08	1995-97	2006-08
<b>(a) Hourly wages</b>				
England	<b>102</b>	101	<b>4.2</b>	3.9
Northern Ireland	84	<b>90</b>	<b>3.9</b>	3.3
Scotland	96	<b>98</b>	<b>4.0</b>	3.7
Wales	<b>93</b>	92	<b>3.8</b>	3.4
<b>(b) Weekly earnings</b>				
England	102	102	3.8	3.8
Northern Ireland	81	<b>86</b>	<b>3.6</b>	3.3
Scotland	94	<b>96</b>	<b>3.6</b>	3.5
Wales	<b>92</b>	91	<b>3.5</b>	3.3
<b>(c) Net individual incomes</b>				
England	101	<b>102</b>	9.9	<b>10.0</b>
Scotland	96	<b>98</b>	<b>8.9</b>	8.6
Wales	89	<b>93</b>	8.6	<b>8.9</b>
<b>(d) Equivalent net income (BHC)</b>				
England	101	101	4.2	4.2
Scotland	98	<b>99</b>	<b>3.9</b>	3.8
Wales	<b>92</b>	91	3.7	<b>3.8</b>

Source: LFS (UK 1995 to 1997; 2006 to 2008), NEP from Individual Income Series (GB 1996-97 to 1998-99; UK 2005-06 to 2007-08), DWP based on HBAI dataset (GB 1997-98; UK 2007-08).

Note: The time frame is 1996-97 to 1998-99 and 2005-06 to 2007-08 for net individual incomes; 1997-98 and 2007-08 for equivalent net income. Higher of each pair of figures shown in bold.

Table 10.12: Inequality in earnings and income by region (England), 1995-1997 and 2006-2008

	Group median as a percentage of overall median		Inequality within groups (90:10 ratio)	
	1995-97	2006-08	1995-97	2006-08
<b>(a) Hourly wages</b>				
North East	93	91	3.9	3.4
Yorkshire and the Humber	93	92	3.9	3.5
South West	94	97	3.9	3.7
West Midlands	96	96	3.9	3.6
East Midlands	94	93	4.0	3.7
North West	97	94	3.9	3.6
East of England	104	105	4.3	4.1
South East	109	110	4.5	4.3
London	129	132	4.4	4.5
<b>(b) Weekly earnings</b>				
North East	93	88	3.6	3.4
Yorkshire and the Humber	93	91	3.6	3.5
West Midlands	95	95	3.6	3.5
East Midlands	95	95	3.6	3.5
North West	95	92	3.6	3.5
South West	96	99	3.7	3.6
East of England	107	108	3.8	3.8
South East	110	112	4.0	4.1
London	120	124	3.8	4.1
<b>(c) Net individual incomes</b>				
North East	89	92	9.2	8.4
Yorkshire and the Humber	91	96	8.8	8.7
East Midlands	96	98	9.1	9.1
North West	96	98	9.0	8.7
West Midlands	98	94	8.9	8.9
South West	99	102	9.1	8.9
East of England	108	108	10.9	10.5
London	110	111	14.2	16.6
South East	115	114	11.6	11.1

Table 10.12: (Continued)

	Group median as a percentage of overall median		Inequality within groups (90:10 ratio)	
	1995-97	2006-08	1995-97	2006-08
<b>(d) Equivalent net income (BHC)</b>				
North East	86	<b>90</b>	<b>3.7</b>	3.6
Yorkshire and the Humber	91	<b>93</b>	<b>3.9</b>	3.7
North West	93	93	<b>3.9</b>	3.8
East Midlands	<b>96</b>	94	3.8	3.8
West Midlands	<b>97</b>	92	3.8	<b>3.9</b>
South West	98	<b>101</b>	<b>3.9</b>	3.8
London	108	<b>112</b>	5.0	<b>5.6</b>
East of England	109	107	4.3	4.0
South East	<b>118</b>	116	4.5	4.5

Source: LFS (UK 1995 to 1997; 2006 to 2008), NEP from Individual Income Series (GB 1996-97 to 1998-99; UK 2005-06 to 2007-08), DWP based on HBAI dataset (GB 1997-98; UK 2007-08).

Note: The time frame is 1996-97 to 1998-99 and 2005-06 to 2007-08 for net individual incomes; 1997-98 and 2007-08 for equivalent net income. Higher of each pair of figures shown in bold.

## Summary

Taken as a whole, inequality (as measured by the 90:10 ratio) declined slightly between the two three year periods 1995-1997 and 2006-2008, so far as hourly and weekly earnings and individual incomes were concerned. However inequality in equivalent incomes was the same at the end of the period as at the start. These fairly small changes disguise much more complex (and often offsetting) underlying changes in inequality between and within different population groups.

- Inequalities between men and women reduced over the period, particularly for the individual incomes of adults, where those of women rose from 53 per cent to 64 per cent of those of men. For hourly wages, inequality for each gender narrowed, but for equivalent net incomes inequality increased for each gender.
- Looking between groups defined by age as well as gender, the relative positions of all but the youngest women improved in terms of earnings and individual incomes, while middle-aged men fell back. Within age groups, inequality fell for older men and women up to 64, but rose for working age men and older women.
- Considering adult men, women, and children, the improving position of younger children and older adults tended to reduce overall inequality in equivalent net incomes. However, inequalities increased *within* most age groups, offsetting this.

- There appear to have been reductions in wage and earnings inequalities *within* most ethnic groups over this period, and some of the groups that were furthest below the overall median appear to have caught up to some extent. However, some groups that were already above the overall median improved their positions further, offsetting some of the other trends towards reduced inequality.
- The equivalent net incomes of adults of working age with limiting long-standing conditions fell further below the overall median, tending to increase inequality, but the positions of children and pensioners improved towards the median whether or not they were disabled, with the opposite effect.
- Income inequalities between housing tenure groups reduced slightly over the period, but this was offset by widening inequalities within most tenures.
- Differences between the nations narrowed slightly over the period, although Wales tended to fall further behind. Changes in inequality *within* the nations were generally similar, although only in Scotland was there a (slight) narrowing in all four outcomes.
- Median earnings and incomes in London increased further in relative terms, although incomes remain higher in the South East. London started as the most unequal English region and became even more unequal over the period.

Section 10.4 looks at changes in within-group and between-group inequalities over a longer period in earnings and in equivalent net incomes.

### 10.3 The changing positions of different groups

The patterns shown in the previous section imply that the positions of particular groups, and within those groups those who are more or less advantaged, changed over the eleven years we can compare. This section looks at which kinds of people emerged as ‘gainers’ or ‘losers’ from the process. This section looks at earnings and incomes as in the last section, concentrating on differences by gender and age, but also looking at those who were better and worse off within each group. Changes in definitions between the surveys make it hard to do this on an accurate basis for ethnicity.

#### (a) Hourly wages

Table 10.13 adds to the information discussed in Section 10.2 by presenting changes in the position of the 10<sup>th</sup> through to 90<sup>th</sup> percentiles of each group in terms of the changes in their rank within the population as a whole. As before, rankings in the overall distribution range from zero (for the poorest) to 100 (for the richest). The table entries show where within each group’s distribution there are the ‘winners’ and ‘losers’. ‘Losers’ are percentiles with a fall in relative rank – shown as a negative number and in bold.

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Thus, for example, it can be seen from the first row of the table that median hourly wages for men fell by three places (out of 100) down the distribution for all employees, while the median for women rose by three places. However, for 30-34 year-old men with low wages (at the 10<sup>th</sup> percentile for that age group), the fall was much greater, 7 places.

The five columns of Table 10.13 make clear that the changes were not simply a matter of younger and middle-aged men losing, while middle-aged women gained. The biggest losers, in terms of their ranking in the wage distribution, were the bottom half of men in each age group from 25-49, and better-paid men and women aged under 25. The biggest gainers were women in their thirties and fifties with middle incomes for their group. The relative position of both the least and best-paid women in each age group changed much less. More simply, those moving down were young, or were less well-paid middle-aged men, while those moving up were more women in their thirties to fifties with middle wages.

Table 10.13: Change of rank in overall distribution of gross hourly wages (all employees) between 1995-1997 and 2006-2008, by gender and age

	Percentile of group				
	10	30	Median	70	90
<b>Men</b>					
All working age	-2	-3	-3	-1	0
16-19	-1	-1	-2	-3	-5
20-24	-2	-4	-5	-6	-6
25-29	-4	-5	-5	-4	-3
30-34	-7	-6	-4	-2	0
35-39	-5	-6	-4	-1	0
40-44	-6	-4	-3	-2	0
45-49	-6	-5	-5	-3	-1
50-54	-4	-2	-1	0	0
55-59	-2	0	1	2	0
60-64	0	-1	1	3	1
65-69	0	0	1	-2	-6
70+	1	3	2	-1	-3

Table 10.13: (Continued)

	Percentile of group				
	10	30	Median	70	90
<b>Women</b>					
All working age	0	2	3	3	2
16-19	<b>-1</b>	<b>-1</b>	<b>-2</b>	<b>-4</b>	<b>-7</b>
20-24	<b>-2</b>	<b>-2</b>	<b>-3</b>	<b>-3</b>	<b>-2</b>
25-29	0	-1	0	0	1
30-34	0	4	3	2	1
35-39	0	4	5	5	1
40-44	0	2	3	3	0
45-49	0	1	2	2	<b>-1</b>
50-54	2	5	6	9	3
55-59	0	3	6	7	4
60-64	0	2	4	6	5
65-69	1	1	2	0	<b>-5</b>
70+	*	<b>-1</b>	<b>-3</b>	<b>-4</b>	*

Source: LFS (UK).

Note: 1995-97: 12 quarters of LFS data, from beginning of 1995 to end of 1997, at 2008 prices. 2006-08: 12 quarters of LFS data, from beginning of 2006 to end of 2008, at 2008 prices. Falls in rank shown in bold.

Changes in the position of those within each nation or region were small, with the possible exception that typical workers in Northern Ireland moved 5 places (out of 100) up the overall ranking, although they remained well below the typical level of hourly wages in the UK as a whole.

### (b) *Weekly earnings*

Table 10.14 shows the same kind of information, but for the weekly earnings of full-time employees. In terms of rankings within the overall distribution, the picture is not so different from that for hourly wages. However, it is more clearly men that were moving down the distribution (apart from those in their late fifties and sixties), with those in their twenties and thirties most affected. Nearly all age groups of women improved their position, and across the distributions within each age, but particularly better-paid women in their fifties and sixties. So while the weekly pay of men aged 35-54 remains well ahead of any other group (Figure 5.12), older women have caught up to some extent, while younger men have fallen behind.

Table 10.14: Change of rank in overall distribution of gross weekly full-time earnings between 1995-1997 and 2006-2008, by gender and age

	Percentile of group				
	10	30	Median	70	90
<b>Men</b>					
All working age	-1	-2	-2	-1	0
16-19	0	-1	-1	-1	-1
20-24	-1	-2	-3	-4	-5
25-29	-4	-5	-4	-3	-4
30-34	-6	-6	-5	-3	-1
35-39	-5	-5	-3	-2	0
40-44	-5	-4	-3	-2	0
45-49	-5	-5	-4	-2	-1
50-54	-3	0	-1	1	0
55-59	-2	2	4	2	-1
60-64	0	3	3	5	3
65-69	*	3	2	0	*
70+	*	*	<b>-14</b>	*	*
<b>Women</b>					
All working-age	-1	1	4	5	3
16-19	0	0	0	1	2
20-24	-1	-1	0	1	2
25-29	-1	1	3	3	2
30-34	-1	0	2	2	1
35-39	0	2	4	3	3
40-44	-1	2	3	1	4
45-49	-1	-2	1	0	3
50-54	1	5	7	9	5
55-59	1	4	5	10	7
60-64	0	5	8	11	9
65-69	*	*	5	*	*
70+	*	*	*	*	*

Source: LFS (UK).

Note: 1995-97: 12 quarters of LFS data, from beginning of 1995 to end of 1997, at 2008 prices.

2006-08: 12 quarters of LFS data, from beginning of 2006 to end of 2008, at 2008 prices. Falls in rank shown in bold.

### (c) *Net individual income*

Given the importance of employment earnings within net individual income, it is not surprising that the pattern shown in Table 10.15 is similar to that for weekly earnings. However, the changes were even more pronounced by gender. While we saw in Table 10.5 that median women's individual incomes in 2006-2008 were only 64 per cent of those of men, this was considerably higher than eleven years before, when they were only 53 per cent of them. Not only had employment and the earnings of women in employment risen compared with men over the period, but so had other sources of individual income, including tax credits and pensions.

As the highlighting in Table 10.15 makes plain, there were very clear patterns by age, by gender and across different parts of the range within each group. Men and women – with rising numbers in full-time education – aged 16-24 slipped down the distribution of individual income, as did all but the highest income men aged 25-69. The position of poorer middle-aged men slipped fastest. By contrast, women aged 25-64 gained across the distribution, particularly those with middle and above-average incomes in their thirties. The relative position of the oldest men also improved. Again, we have already seen in Chapter 7 that there was a great disparity between the individual incomes of men and women in 2006-08, but this came after a decade in which all but the youngest women had generally improved their position from an even lower starting point.

Looking at other breakdowns where we can make this kind of comparison, there were few notable changes in terms of other characteristics. While it is not possible to compare the position of disabled people between the two dates using consistent definitions, it was notable that people with 'health problems' slipped two places further down the distribution over the period. In Chapter 11, we look at other evidence on the deteriorating labour market position of disabled people.

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Table 10.15: Change of rank in overall distribution of net individual incomes, between 1996-1998 (GB) to 2006-2008 (UK), by gender and age

	Percentile of group				
	10	30	Median	70	90
<b>Men</b>					
All working age	-4	-4	-3	-2	-1
16-19	-1	-5	-6	-5	-4
20-24	-5	-8	-4	-4	-1
25-29	-4	-7	-5	-4	-2
30-34	-5	-3	-2	-2	-1
35-39	-5	-5	-3	-2	0
40-44	-7	-4	-3	-1	0
45-49	-5	-5	-2	-2	0
50-54	-8	-7	-4	-2	-1
55-59	-5	-4	0	1	1
60-64	-5	-4	-1	-1	1
65-69	-4	-4	-3	-1	0
70-74	-1	0	1	2	0
75-79	1	2	2	3	4
80-84	0	4	4	6	-2
85+	0	5	4	6	4
<b>Women</b>					
All working-age	1	1	3	3	3
16-19	-1	-4	-1	-3	-2
20-24	-1	-3	-2	-3	-1
25-29	1	4	5	3	3
30-34	1	6	9	7	3
35-39	1	5	7	7	2
40-44	1	2	5	5	3
45-49	4	5	4	4	3
50-54	2	5	4	4	3
55-59	1	1	3	4	5
60-64	3	4	3	2	3
65-69	0	1	0	-1	2
70-74	-1	-1	1	2	3
75-79	-1	-1	2	2	3
80-84	-1	-1	2	3	3
85+	-1	1	2	3	4

Source: NEP, from Individual Income Series (GB 1996-97 to 1998-99; UK 2005-06 to 2007-08).

Note: Falls in rank shown in bold.

### (d) *Equivalent net income*

Finally in this section, we can look at changes in equivalent net incomes, based on those of the household in which people live, adjusted for household size.<sup>180</sup> Given the way in which the 'equal sharing' assumption made in calculating this measure works, gender differences – and changes in them – are much less pronounced than those in individual incomes or earnings. Table 10.16 shows that the most striking changes in ranking are by age (with relatively little variation within age groups by income level). First, the position of 6-10 year-olds (that is, of households containing them) improved notably, as did that of the over-70s – both trends associated with the falls in child and pensioner poverty over the period. By contrast, the position of young people aged 17-25 deteriorated (except for the poorest 17-20 year-olds) as did that of those aged 41-55. Within the oldest groups there was tendency for the greatest gains in position to be for those with the highest incomes. People in their early fifties used to be clearly the most affluent group – as we saw in Table 7.2, they generally remain higher up the distribution than those of other ages apart from those in their late twenties, but the margin over other age groups reduced over the period (as we saw in Table 10.7).

Second, we can compare people according to a narrow definition of disability in this series. Table 10.16 confirms that it was working age people with long-standing limiting illness who had the greatest decline in their position (especially those with middle incomes) – the kinds of difference we saw for 2006-08 in Table 7.4 between disabled and non-disabled people were much greater than they had been eleven years earlier. There were few changes in relative rankings by housing tenure, although the rather small group of private furnished tenants with middle incomes improved their ranking. Because of definitional differences and sample sizes, we cannot make this kind of comparison by ethnicity.

<sup>180</sup> For more detailed analysis of who has gained, and who has lost, from recent economic growth, see Jenkins and Van Kerm (2008).

Table 10.16: Change of rank in overall distribution of equivalent net income (BHC) between 1997-98 and 2007-08, by gender, age and limiting long-standing illness

	Percentile of group				
	10	30	Median	70	90
<b>(a) Gender</b>					
Male	0	<b>-1</b>	0	<b>-1</b>	0
Female	0	1	1	1	0
<b>(b) Age</b>					
5 or under	0	1	1	2	2
6 to 10	2	5	4	6	3
11 to 16	1	0	0	1	2
17 to 20	0	<b>-4</b>	<b>-5</b>	<b>-5</b>	<b>-3</b>
21 to 25	<b>-2</b>	<b>-3</b>	<b>-3</b>	<b>-2</b>	<b>-2</b>
26 to 30	0	0	1	1	<b>-1</b>
31 to 35	0	2	4	2	0
36 to 40	2	1	2	2	1
41 to 45	<b>-1</b>	<b>-4</b>	<b>-3</b>	<b>-3</b>	<b>-1</b>
46 to 50	<b>-3</b>	<b>-5</b>	<b>-6</b>	<b>-4</b>	<b>-1</b>
51 to 55	<b>-5</b>	<b>-4</b>	<b>-1</b>	<b>-1</b>	<b>-1</b>
55 to 60	<b>-3</b>	<b>-2</b>	1	2	1
61 to 65	<b>-2</b>	<b>-2</b>	0	1	0
66 to 70	<b>-2</b>	1	3	3	1
71 to 75	1	2	6	6	3
76 to 80	3	3	6	6	6
over 80	2	1	4	4	2
<b>(c) Limiting long-standing illness</b>					
<i>Not long-standing, limiting illness</i>					
All	0	0	0	0	0
Children	1	2	1	2	2
Working-age	0	<b>-1</b>	<b>-1</b>	<b>-1</b>	0
Pensioners	1	2	4	4	3
<i>Long-standing, limiting illness</i>					
All	<b>-1</b>	<b>-2</b>	<b>-1</b>	<b>-2</b>	<b>-3</b>
Children	2	5	5	3	1
Working-age	<b>-3</b>	<b>-7</b>	<b>-8</b>	<b>-7</b>	<b>-3</b>
Pensioners	3	2	4	3	1

Source: DWP, from HBAI (GB 1997-98; UK 2007-08).

Note: Falls in rank shown in bold.

### Summary

- Looking at the changing positions of the better and worse off within each age/ gender group by hourly wages, the biggest losers were the lowest paid half of men aged 25-49, and better-paid men and women aged under 25. The biggest gainers were women in their thirties and fifties with middle incomes.
- Men generally moved down the distribution of full-time weekly earnings (apart from those in their late fifties and sixties), with those in their twenties and thirties most affected. Nearly all age groups of women improved their position, and across the earnings distributions within each age, but better-paid women in their fifties and sixties had the largest gains.
- Men and women aged 16-24 slipped down the distribution of net individual income (for some because of longer periods in education), as did all but the highest income men aged 25-69. The position of poorer middle-aged men slipped the most. Women aged 25-64 gained across the distribution, particularly those with middle and higher incomes in their thirties. The relative position of the oldest men also improved.
- The most striking changes in ranking by equivalent net income were by age. The position of 6-10 year-olds improved notably, as did that of the over 70s. By contrast, the position of young people aged 17-25 deteriorated (except for the poorest 17-20 year-olds) as did that of those aged 41-55.

## 10.4 Which factors are most important in accounting for changing earnings and income inequality?

In Section 10.2, we looked back over the last eleven years to see how the relative positions of different groups had changed, indicating changes in *between*-group inequality, and at changes in inequality *within* each of these groups. While enlightening, this description did not show which of these was most important, or the relative importance of changes associated with one particular group classification rather than another. Can what has been happening be attributed to changes within age groups or to changes between age groups? And are breakdowns of changes in inequality based on groupings by nation or employment status (say) more informative than breakdowns by age? The period we looked at, over which we could use data broken down in the same way as in earlier chapters, was also a comparatively short one.

An approach which addresses the questions posed in the previous paragraph was used in work undertaken for us by Mike Brewer, Alastair Muriel and Liam Wren-Lewis.<sup>181</sup> They use a technique known as ‘decomposition analysis’, first to look at whether changes in within-group or between-group inequalities have had most impact on overall inequality, and then to look at

<sup>181</sup> Brewer, Muriel and Wren-Lewis (2009).

the relative importance of different factors when they are looked at together.<sup>182</sup> They look at changes in both weekly earnings inequality (across all employees) and equivalent net income inequality, using data for the last forty years, from 1968 to 2006-07.<sup>183</sup> For technical reasons this exercise can only be carried out using inequality measures that differ from those used in other parts of this report – indices known as the ‘Mean Logarithmic Deviation’ (MLD) for the first decomposition exercise and the ‘variance of logs’ for the second. These measures, like the Gini coefficient, but unlike the 90:10 ratio, have the advantage that they take account of earnings and income differences across the whole of the range, from the top through to the bottom. The two measures are more sensitive to income differences towards the bottom of the distribution rather than differences at the top; the Gini coefficient is most sensitive to income differences around the point at which incomes are most concentrated.

### (a) *Earnings inequality*

Table 10.17 summarises some of the decomposition results for earnings. It shows how much of the change in earnings inequality over the period as a whole – shown in the first column of figures – can be attributed to changes in inequality within groups (the second column of figures), how much to changes in the relative sizes of each group (the third column) and how much to changes in the mean earnings of each group (the fourth column).<sup>184</sup> Each row of the table shows the results obtained when the population is classified in different ways. Thus, the first row shows, for instance, that when the population is classified by age group, three-quarters of the overall increase (45) in the inequality index was accounted for by the increase in *within* group inequality (32), and less than a quarter by changes in the relative mean incomes of each age group (9). The fraction of the change attributable to changes in the relative sizes of the groups was much smaller (2). The other rows show what happens when the population is classified in other ways, such as by household type in the second row.

<sup>182</sup> In any year, and for a particular definition of groups (e.g. individuals classified by age), overall inequality can be expressed as the sum of inequality *within* groups and inequality *between* groups. Within-group inequality is the weighted sum of inequality within each of the groups. Between-group inequality is the inequality that would arise were each person to receive the mean income of the group to which they belong (in which case, within-group inequality would be zero). Overall inequality, therefore, depends on: inequality within each of the sub-groups; the average income of each group; and the relative size of each group. *Changes* over time in overall inequality can thus arise from three sources: (a) changes in within-group inequalities; (b) changes in the relative sizes of each group, and (c) changes in group mean incomes. In the tables that follow, we relate changes in overall inequality over the period to each of terms (a), (b) and (c), repeating the calculations for each of a variety of subgroup classifications. Later in subsection (c), instead of looking at factors such as age, gender, region, and so on, one at a time, we show a multivariate regression version of the earlier decomposition analysis in which the impact of a factor is assessed taking into account the impact of the other factors at the same time.

<sup>183</sup> These are both drawn from the same sources, the Family Expenditure Survey up to 1993, and the FRS since 1994-95. The income data are thus from the same source as we have used to measure income inequality in earlier parts of the report, but the earnings data sources differ, and so may show somewhat different levels and trends over time from those used in other parts of the report.

<sup>184</sup> The full report breaks these each down between seven sub-periods.

In nearly every case, the pattern is the same: however the population is classified, it is changes in inequality *within* groups that has been the dominant effect in explaining overall inequality changes. When people are grouped by gender and marital status, the increase in within-group inequality was more than enough to account for the overall change, with the narrowing of average earnings differences between the groups tending to reduce inequality considerably. This reflects a substantial improvement in the position of married/cohabiting women over the period. As a consistent occupational classification is not available over the whole period, the results by occupation are divided between three sub-periods, but within each of these it was still the within-group changes that dominated. It should be noted that the qualification variable available in the data is only a very crude one – the age at which the head of the household left full-time education.

Table 10.17: Decomposition of earnings inequality change, 1968 to 2006-07, by subgroup

	Change in overall inequality	Accounted for by changes in		
		Within-group inequalities (a)	Group population shares (b)	Group mean incomes (c)
Age group (table 5)	45	32	2	9
Household type (table 8)	45	49	-6	4
Gender and marital status (table 6)	45	79	21	-56
Region (table 13)	45	37	3	6
Age left education (table 15)	51	42	5	5
Occupation 1968–1986 (table 16)	34	30	-9	11
Occupation 1987–2001 (table 16)	3	2	3	-1
Occupation 2001–2007 (table 16)	-9	-9	2	-2

Source: Brewer, Muriel and Wren-Lewis (2009). Table number in brackets refers to the table in Brewer, Muriel and Wren-Lewis (2009) from which estimates are taken.

Notes: Gross weekly earnings for all employees at the individual level. Occupations A-C are between 8 and 12 categories of occupation, depending on the period (such as ‘professional and technical workers’, or ‘skilled manual workers’ in Occupation A).

‘Change in overall inequality’ refers to change in the MLD inequality index (see text).

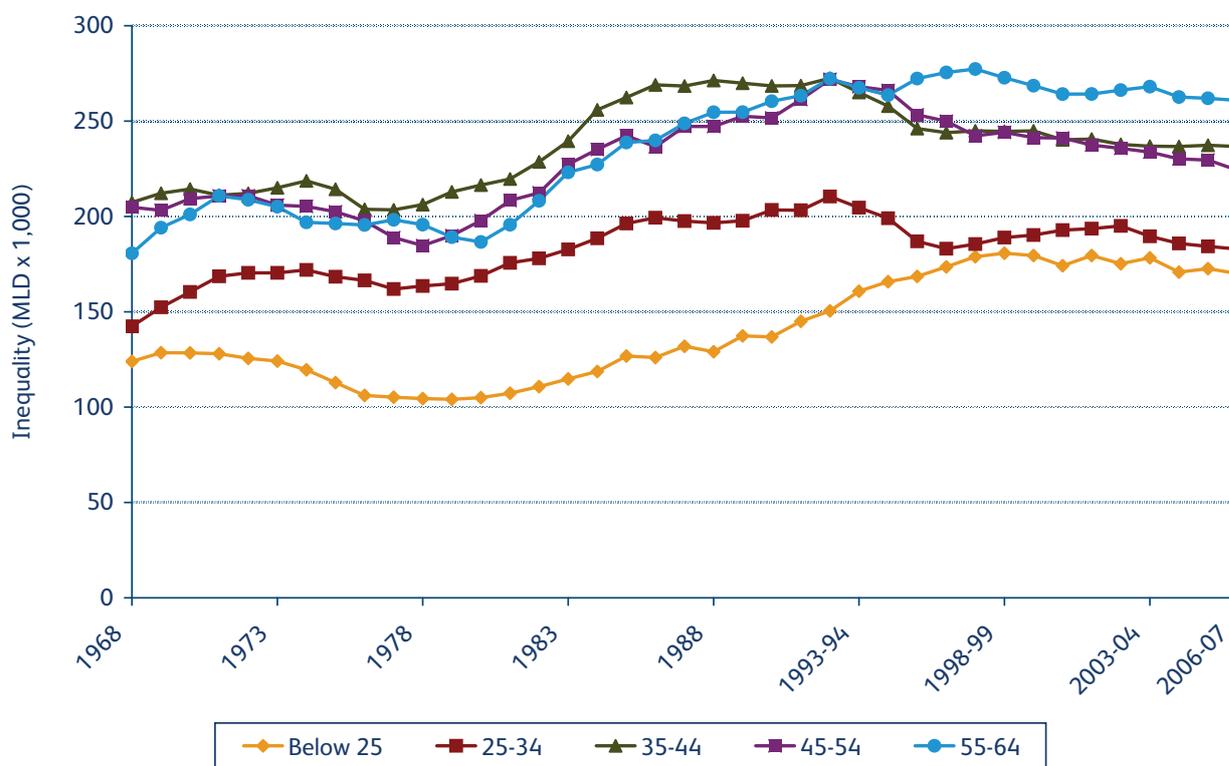
Given the dominance of changes in within-group inequalities, the panels of Figure 10.6 concentrate on illustrating which groups had the greatest inequality, and the greatest changes in it, when different breakdowns are used.

- Figure 10.6(a) shows that earnings inequality grew within each of the age groups during the 1980s, but continued to grow and did not fall back within the under-25 age group.

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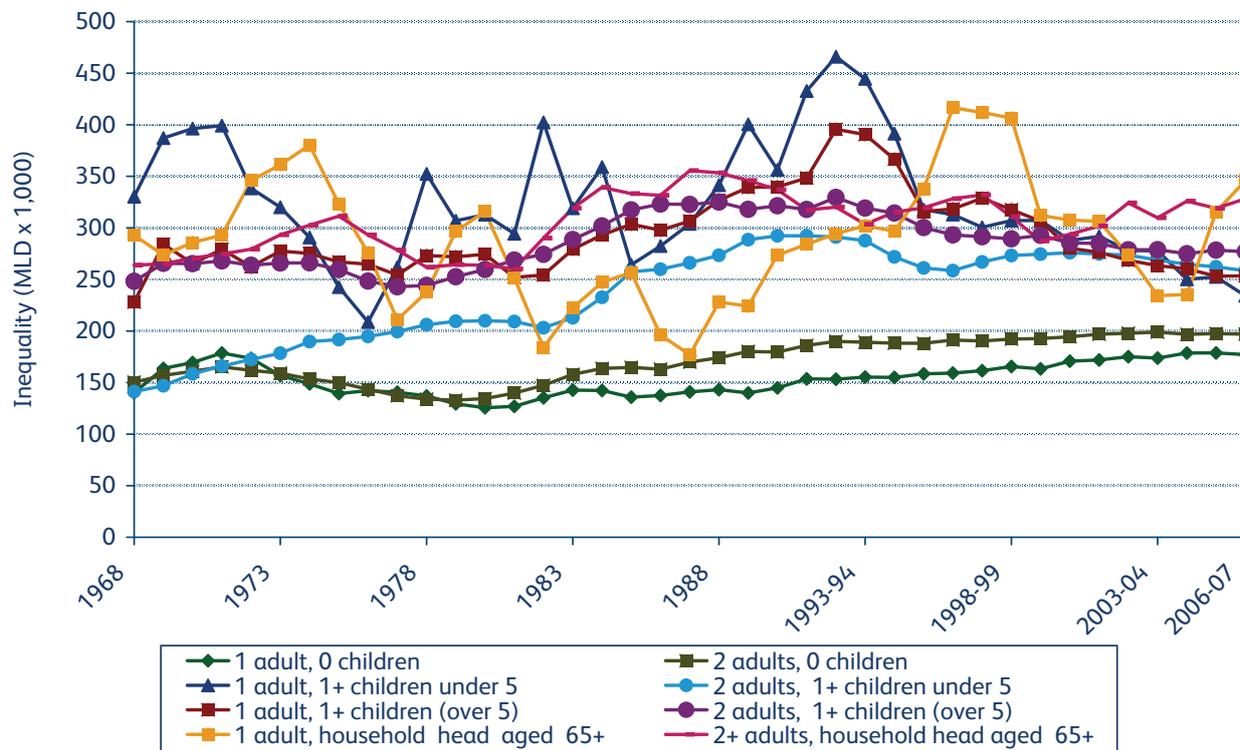
- Figure 10.6(b) shows more instability over time in inequality for particular household types (though this may simply represent the effects of sampling variability for relatively small groups). There were particularly large increases in inequality within the two lone parent groups in the late 1980s and among single pensioners in the early 1990s. Despite some falls in the last ten years, inequality in 2006-07 was greater within every household type group than in 1968, except among lone parent households with young children (possibly reflecting higher employment rates and more generous treatment by the tax and benefit system).
- Figure 10.6(c) shows the breakdown by gender and marital status. Inequality grew within both male groups from the early 1980s onwards until the start of this decade. For married/cohabiting women, earnings inequality started much higher than within other groups, but has been falling since the early 1990s. For single women, it started above both groups of males and below married/cohabiting women and rose until the mid-1990s. It has been steady since then.
- Figures 10.6(d) and (e) show the breakdown of inequality within each English region, Scotland and Wales. Overall, the patterns of growth and subsequent decline are very similar – with the exception that the growth in earnings inequality in London was fastest and continued longest (although starting from the lowest base).

Figure 10.6(a): Within-age group earnings inequality, 1968 to 2006-07



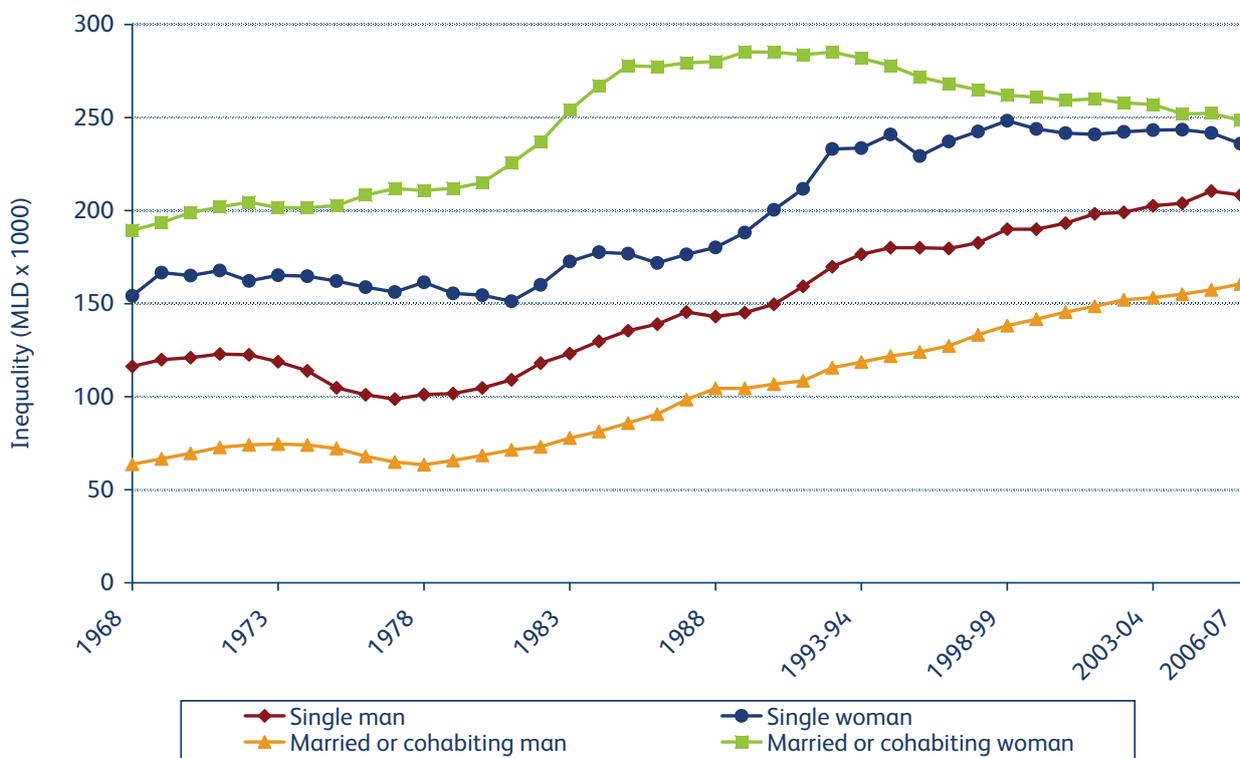
Source: Brewer, Muriel and Wren-Lewis (2009).

Figure 10.6(b): Within-household type earnings inequality, 1968 to 2006-07



Source: Brewer, Muriel and Wren-Lewis (2009).

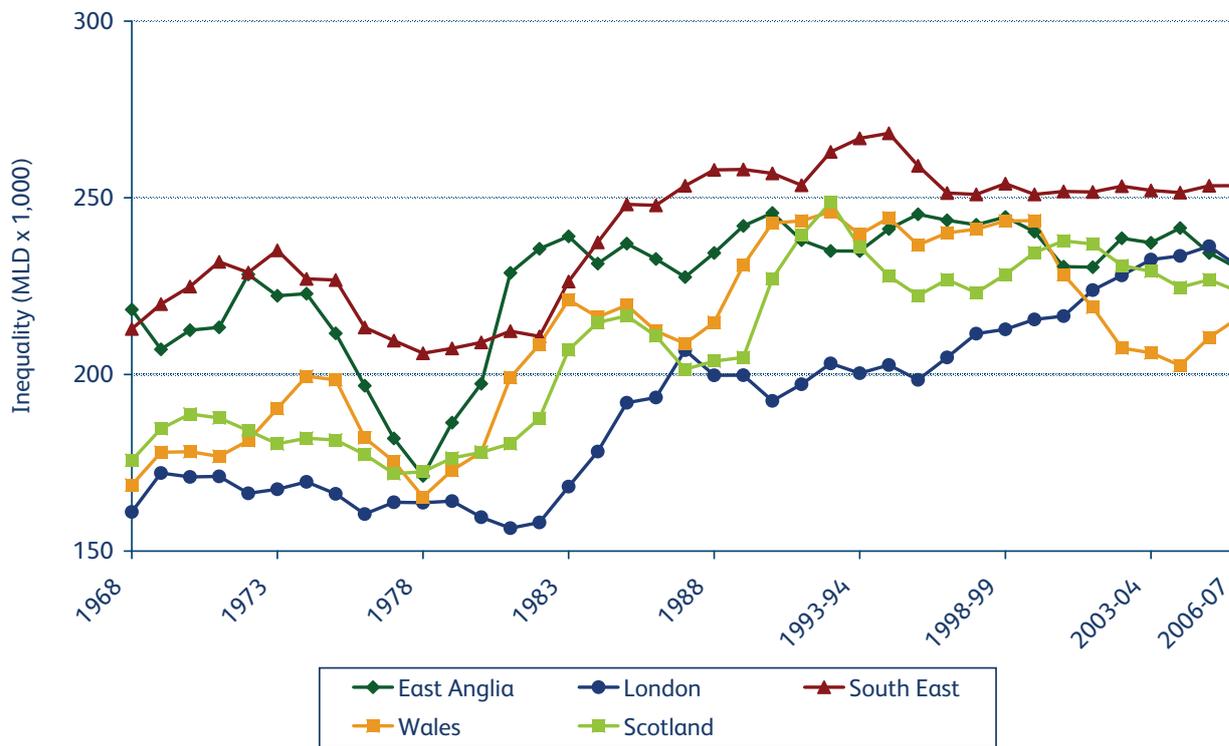
Figure 10.6(c): Within-gender/marital status group earnings inequality, 1968 to 2006-07



Source: Brewer, Muriel and Wren-Lewis (2009).

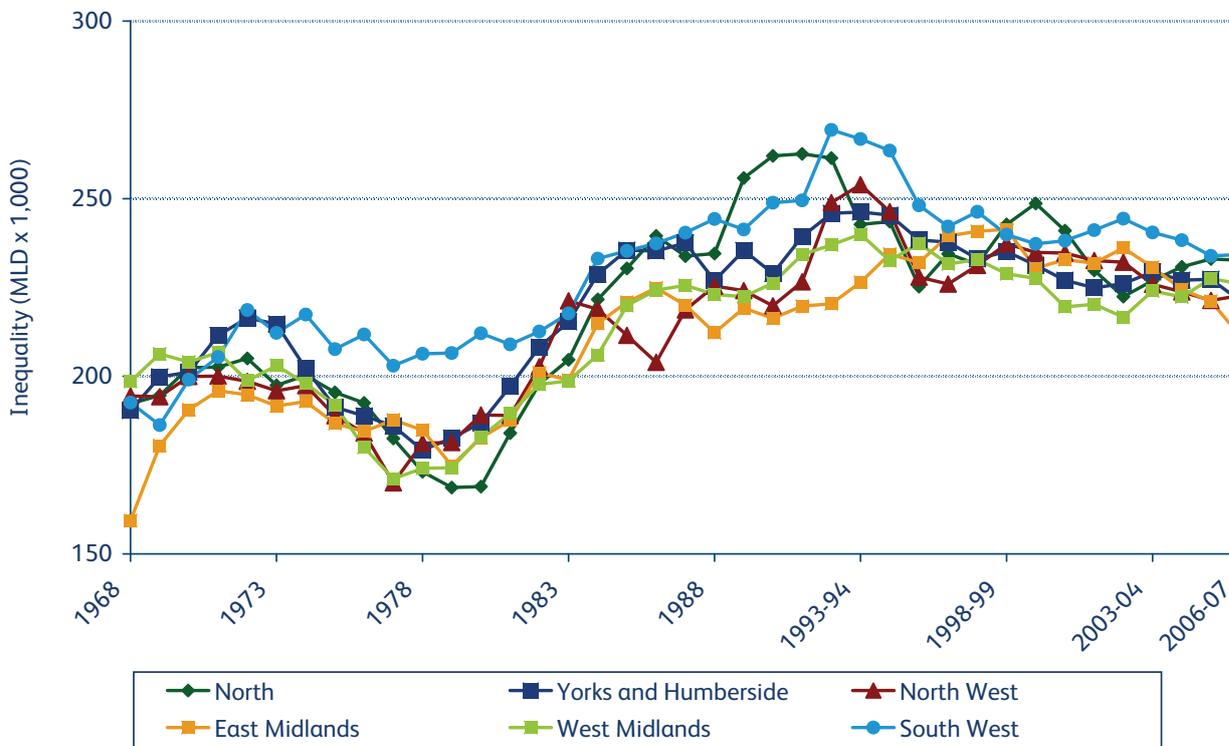
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Figure 10.6(d): Within-region earnings inequality, 1968 to 2006-07 (1)



Source: Brewer, Muriel and Wren-Lewis (2009).

Figure 10.6(e): Within-region earnings inequality, 1968 to 2006-07 (2)



Source: Brewer, Muriel and Wren-Lewis (2009).

*(b) Income inequality*

Table 10.18 gives a similar breakdown of the extent to which the growth of income inequality over the period can be ascribed to within-group inequality changes and to changes in the relative incomes between different groups, with the population again divided in different ways. Again, within-group inequality changes are dominant, accounting for all of the aggregate change in inequality or more in the age breakdowns, and nearly all of it in the others. A breakdown by ethnicity is only available for the period 1994 to 2006-07. For this period, in common with other breakdowns of the population, the overall inequality growth was mainly accounted for by growing inequality within ethnic groups. Only changes in relative incomes by employment status substantially added to rising inequality.

Table 10.18: Subgroup decomposition of income inequality changes, 1968 to 2006-07

	Change in overall inequality	Accounted for by changes in		
		Within- group inequalities (a)	Group population shares (b)	Group mean incomes (c)
Age group (table 4)	74	76	-1	-3
Household type (table 7)	74	70	11	-8
Employment status (table 9)	74	47	11	14
Household employment structure (table 10)	74	59	13	-1
Region (table 12)	73	69	1	3
Education (table 14)	78	60	13	2
Ethnicity (since 1994) (table 17)	12	10	2	-1

Source: Brewer, Muriel and Wren-Lewis (2009). Table number in brackets refers to the table in Brewer, Muriel and Wren-Lewis (2009) from which estimates are taken.

Notes: Equivalised net household incomes, all households. Occupations A-C are between 8 and 12 categories of occupation, depending on the period (such as 'professional and technical workers', or 'skilled manual workers' in Occupation A).

'Change in overall inequality' refers to change in the MLD inequality index (see text).

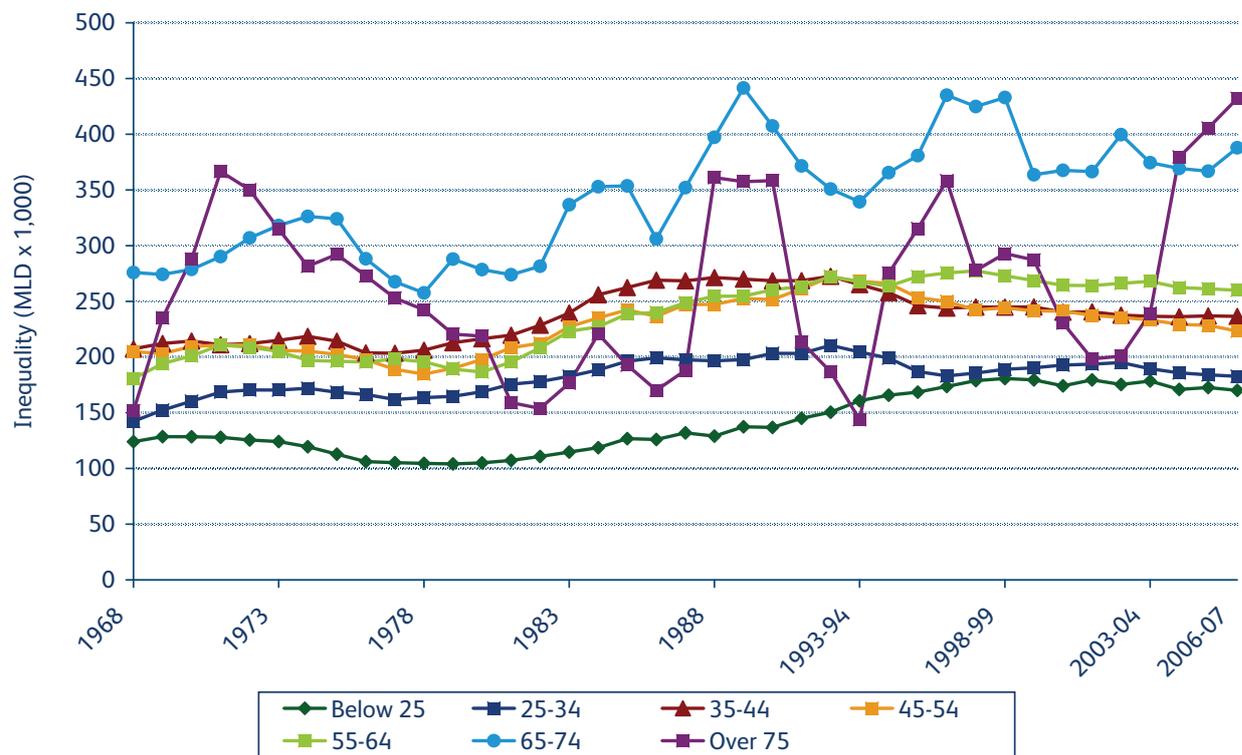
Given the overwhelming importance of changing inequality within groups, the panels of Figure 10.7 again illustrate the contributions coming from particular groups within each breakdown.

- Figure 10.7(a) shows both similar levels of income inequality within each age group, and fairly similar patterns of increase, although with more instability in inequality within the oldest group in particular.
- Figure 10.7(b) shows different levels of, but similar growth in income inequality within different groups by household types. Again, lone parents with young children were the only group to end up with lower within-group inequality than at the start.

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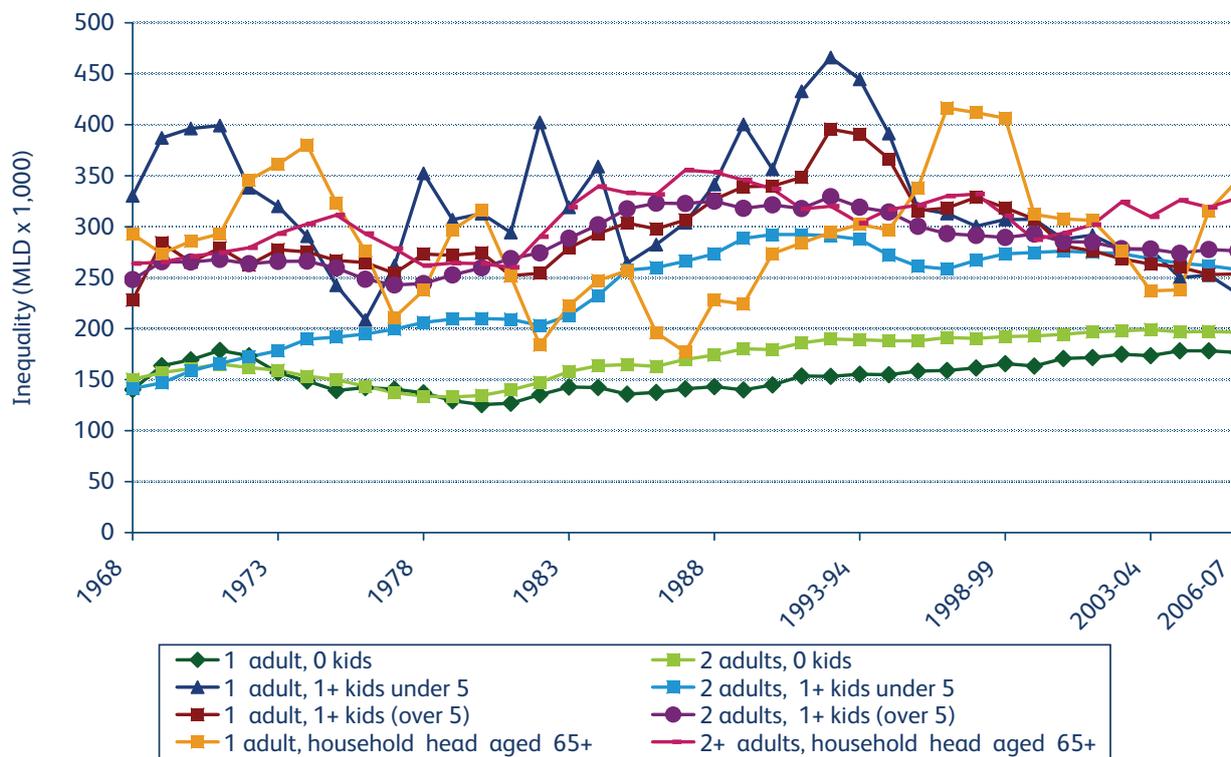
- By employment status (of 'household head'), Figure 10.7(c) shows that inequality within the self-employed remained highest, but that within households with unemployed heads grew most rapidly, particularly since 2000-01.
- As with earnings inequality broken down by nation or English region, Figure 10.7(d) shows that inequality started at similar levels in each of them and changed over time in the same way, with the exception that the growth in London was much more rapid, leaving incomes in London far more unequal than in the others by the end of the period.

Figure 10.7(a): Within-age group income inequality, 1968 to 2006-07



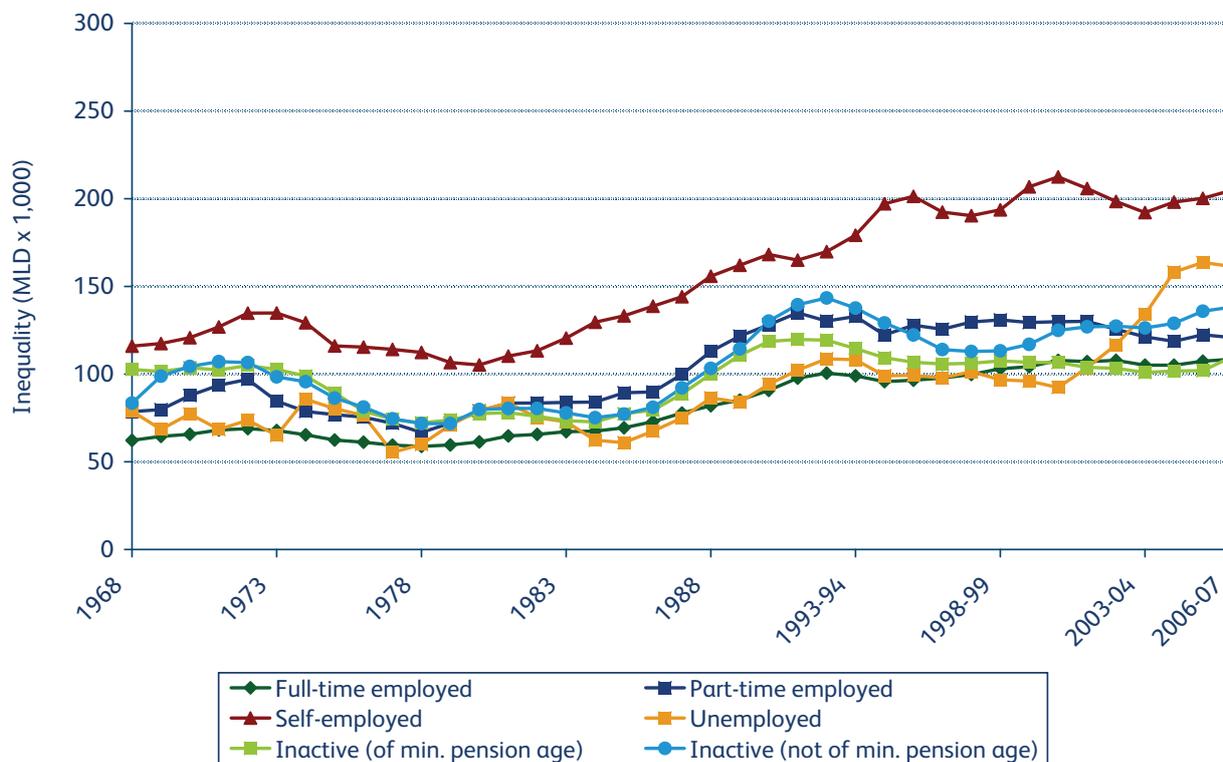
Source: Brewer, Muriel and Wren-Lewis (2009).

Figure 10.7(b): Within-household type income inequality, 1968 to 2006-07



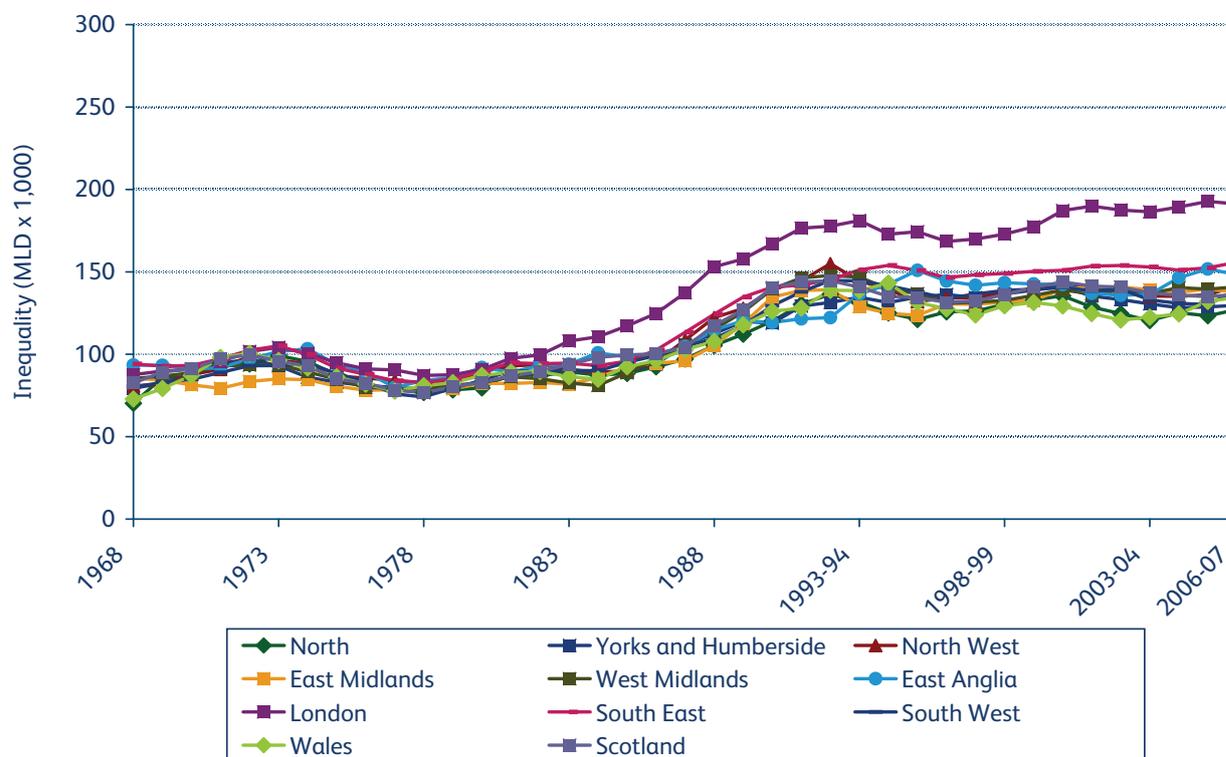
Source: Brewer, Muriel and Wren-Lewis (2009).

Figure 10.7(c): Within-employment status of head of household group income inequality, 1968 to 2006-07



Source: Brewer, Muriel and Wren-Lewis (2009).

Figure 10.7(d): Within-region income inequality, 1968 to 2006-07



Source: Brewer, Muriel and Wren-Lewis (2009).

### (c) *The importance of different factors*

A second kind of decomposition analysis investigates the relative contributions of each factor to overall inequality, and the extent to which there are other unexplained reasons for inequality growing, even after we have allowed for each of these factors. The unexplained fraction is the 'residual' in the figures. The results of doing this type of decomposition exercise are shown in Figure 10.8(a) for earnings inequality and Figure 10.8(b) for income inequality. In these figures, the more that a particular factor contributes to overall inequality (shown by the height of the chart as a whole), the wider is the band representing it. If the importance of a particular factor declines – for instance, because the gap in earnings between genders narrows – the band becomes narrower over time. Conversely, if a factor becomes more important, the band associated with it becomes wider.<sup>185</sup>

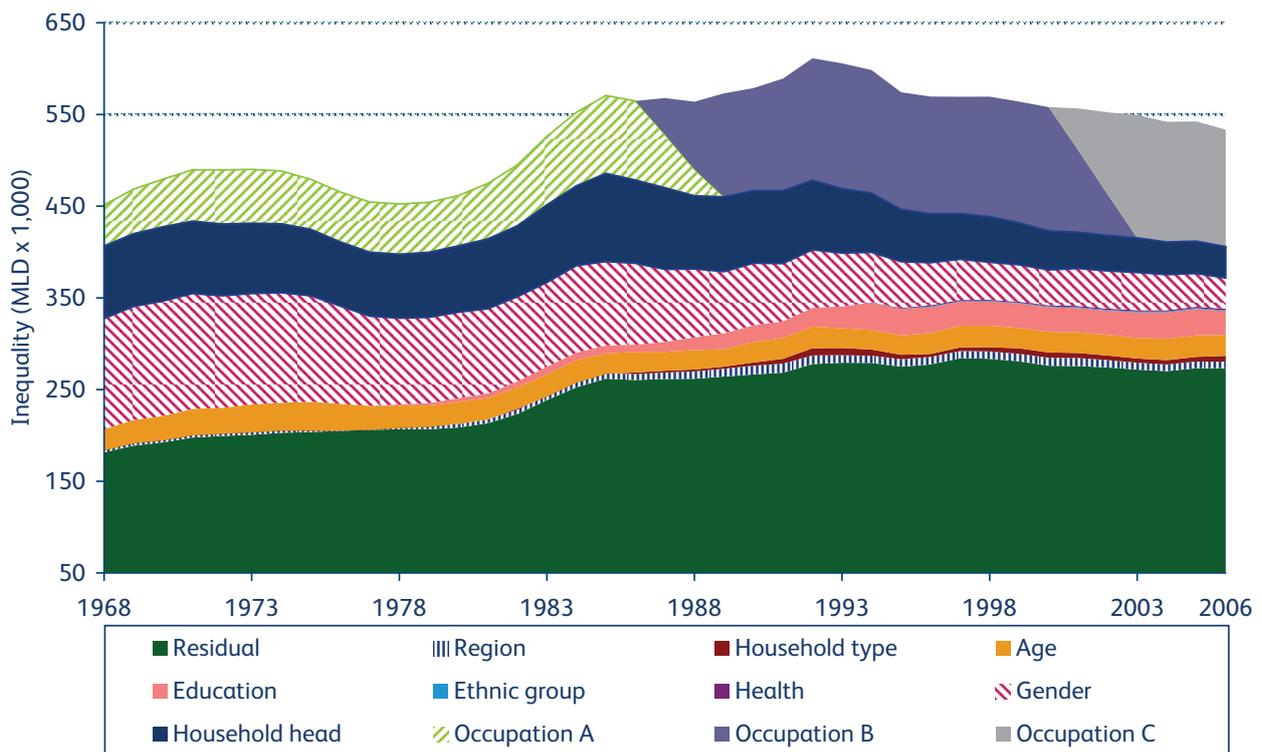
So far as earnings are concerned, Figure 10.8(a) shows that taken together, the factors included accounted for more than half of overall inequality at the start, but much less of it by then end. Even allowing for all these personal characteristics simultaneously, unexplained inequality grew – consistent with the patterns we have shown throughout this section of rising within-group inequality however the population is split. Two of the factors examined tended to reduce inequality over the period – falling gender earnings inequality and, also linked to gender, the declining importance of whether someone was a household head or a

<sup>185</sup> The band representing occupational category changes shading in the figures reflecting the changes in the categories available for analysis over the period.

second earner. On the other hand, earnings differences between occupational groups had an increasing effect over the period (although definitional changes make this element less precise). The contribution of earnings differences by education grew, but do not appear to be very large (partly because the measure is only the age someone left education).

If anything, Figure 10.8(b) shows even more strongly that in the case of income, the identified factors, and income differences between groups identified by them, were not the explanation of the rise in inequality over the period. Growing differences in income by employment status (especially between employed and non-employed people in the 1980s) and occupation did play a part in overall income inequality growth, as did differences by the age of leaving education. However, most of the growth in inequality is not related to the factors shown. Again, this is consistent with the patterns shown earlier in this chapter, that much of the story of changing income inequality is about changing income differences *within* groups, however they are defined.

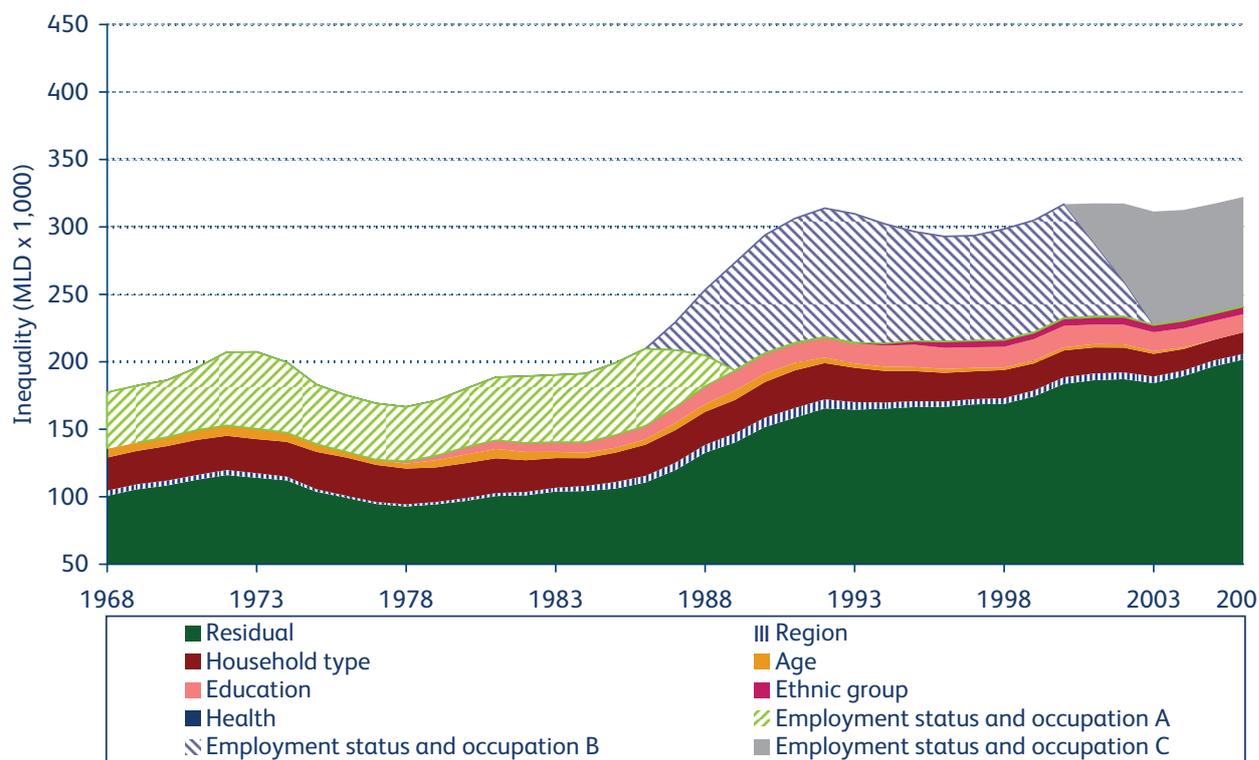
Figure 10.8(a): Earnings inequality decomposed by factor and year, 1968-2006



Source: Brewer, Muriel and Wren-Lewis (2009).

Notes: Gross weekly earnings for all employees at the individual level. Occupations A-C are between 8 and 12 categories of occupation, depending on the period (such as 'professional and technical workers', or 'skilled manual workers' in Occupation A).

Figure 10.8(b): Income inequality decomposed by factor and year, 1968-2006



Source: Brewer, Muriel and Wren-Lewis (2009).

Notes: Equivalised net household incomes, all households. Occupations A-C are between 8 and 12 categories of occupation, depending on the period (such as 'professional and technical workers', or 'skilled manual workers' in Occupation A).

### Summary

- Looking at the relationship between overall earnings inequality since 1968 for each of a number of different group definitions taken separately in turn, it is changes in inequality within groups that dominates in explaining overall changes, not changes in the relative earnings of different groups or the relative sizes of the groups.
- Changes in overall equivalent net income inequality are even more dominated by changing inequality within groups, rather than by changes in the mean incomes of each group. The exception to this is that differences in mean income when the population is classified by gender and marital status narrowed (but inequalities within these groups increased substantially).
- With only very few exceptions (such as lone parents with young children), both earnings and income inequality within *any* of the many sub-groups of the population we have looked at was greater in 2006-07 than it had been in 1968.
- While changes in the relationship between each personal characteristic and people's earnings or income might contribute only a little separately, when they are all looked at simultaneously, they might, together, explain a larger share of the overall inequality changes. However, even together they account for little of the change. This confirms that most of the increase in earnings and income inequality over the last forty years is about changing income differences *within* groups, however they are identified.

## 10.5 Inequalities and the recession

Inevitably, the data on which we have based this report relate to a period in the past, usually up to 2008 or the financial year 2007-08. In some ways, this is an advantage – it means that we are covering a period before the instability following the world financial crisis in the autumn of 2008 and before the economic recession had gathered pace. Whatever the path of recovery, it will be some time before the effects of the crisis on different groups will be clear. By the same token, some groups will have been more affected than others, and so the picture we have presented will already be, in some respects, out of date. Repeating the analysis we have carried out in a few years' time would reveal which respects these were. However, in the meantime, there is evidence that gives clues about what might be happening.

First, it is possible to look at other recessions to see if the patterns of change in inequality associated with them were consistent. Alastair Muriel and Luke Sibieta<sup>186</sup> conclude that, as far as overall income inequality was concerned, there was no consistent pattern. Income inequality fell slightly during the recession in the mid-1970s, rose during the early 1980s, but was flat in the early 1990s (see Figure 2.13). In each of these recessions, the real incomes of those in the middle of the income distribution (roughly speaking, the 30<sup>th</sup> to 70<sup>th</sup> percentiles) fell by the same proportion, but patterns at the top were more varied, sometimes related to income tax changes that happened at the same time as the recession. How different groups are affected depends, in part, on their relationship to the labour market – pensioners and groups such as lone parents whose incomes are more dependent on social security benefits may be less affected by changes in real wages and employment. The real living standards of those whose incomes have a large proportion of benefits within them will also be affected by fluctuations in inflation, particularly as they are adjusted with a lag, depending on past, rather than current, inflation rates.

Looking at employment, a study by Lynn Gambin and colleagues at Warwick University for the Equality and Human Rights Commission (EHRC)<sup>187</sup> suggests that in previous recessions:

- women were employed in less cyclically sensitive occupations, so men's unemployment rose faster; however
- where women were employed in traditionally male-dominated sectors, they were the first to lose their jobs. Lone mothers, older women, and those with lower skills were worst affected;
- in the most recent recessions there was some evidence of more lower-qualified women entering the labour market, possibly to fill the gap in falling family incomes;
- younger and older people had been more affected than middle-aged people, as labour market entry became difficult, and as older people were encouraged to take early retirement.

<sup>186</sup> Muriel and Sibieta (2009).

<sup>187</sup> Gambin, *et al.* (2009).

## An anatomy of economic inequality in the UK

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- recessions have coincided with higher levels of work-related disability, especially related to mental health problems;
- in the 1970s and 1980s, unemployment rates of minority ethnic groups – particularly Caribbean and African<sup>188</sup> men rose faster than the rest of the population during the recession, but then fell faster in the recovery. However, in the recovery of the 1990s they did not fall faster than others.

Using data from General Household Survey covering a thirty-year period and looking back at previous recessions, Richard Berthoud<sup>189</sup> identifies the characteristics of those most and least likely to be affected by a recession. He concludes that the groups most adversely affected in terms of employment are men, younger adults, *non*-disabled people,<sup>190</sup> those with poor educational records, members of ethnic minorities, and those living in the West Midlands. Those least adversely affected are women without children, in older age groups, disabled, with good qualifications, white people and those living in the North East of England. However, it is far from easy to generalise from these patterns.

Recent work by Rebecca Tunstall and Alex Fenton for the Joseph Rowntree Foundation (based on analysis of Jobseeker's Allowance claims at a neighbourhood level since 1983) shows that recessions tend, disproportionately, to affect neighbourhoods with high proportions employed in manufacturing and with high proportions of private and social renting. Areas with high public sector employment have been more resilient.<sup>191</sup>

The second kind of evidence is from early statistics on the initial impact of the current recession on the labour market.<sup>192</sup> Comparing data for the second quarter of 2009 with the position a year before, overall employment in the UK had fallen by 2.2 percentage points, unemployment had risen by 2.5 percentage points, but economic inactivity had increased by 0.2 percentage points. Within this:

- young people, aged 18-24, were worst hit, with an employment rate down 4.4 points, unemployment up 4.8 points, and inactivity up 1.1 points. By contrast, the employment rate for those aged 50-69 had barely fallen; their unemployment had risen by 1.6 percentage points, less than the national average;
- women had been less affected, with their employment rates down by 1.3 percentage points compared to 2.8 percentage points for men. The employment rate for lone parents with children *increased* by 0.6 percentage points, but their unemployment rate rose by 1.6 percentage points, although their inactivity fell by 1.8 points;

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<sup>188</sup> The study is based on the LFS categorisation at that time. These were African and West Indian or Guyanese. Berthoud (2009).

<sup>190</sup> The study found that if disabled people followed a similar trajectory in the current recession as they did in the 1983 and 1993 recessions, they would experience a 2.1 percentage point rise in their non-employment rate. This would be rather lower than that faced by non-disabled people and represent only a proportionate increase compared with the high rate of non-employment already faced by disabled people (Berthoud, 2009, p. 17).

<sup>191</sup> Tunstall (2009).

<sup>192</sup> Based on our analysis of the LFS Q2 2008 to Q2 2009, seasonally unadjusted, age 16 to 59-64, except for breakdown by age.

- for those from minority ethnic groups taken as a whole, employment rates had fallen (by 1.6 points), and inactivity had increased by just 0.3 points, with unemployment up 1.9 percentage points. Given the initial gaps (see Chapter 4), this still left minority employment rates much lower, and unemployment and inactivity much higher than the national average;
- disabled people also had smaller changes than the national average in all three respects;
- employment fell faster than the UK average in Northern Ireland and Wales, and the unemployment rate had risen at similar levels in the UK countries. Inactivity rates rose faster in Northern Ireland than in the UK average and the other countries.

### Summary

Past recessions have not affected all groups equally, but have varied in their effects on inequality. From recent recessions, one might expect those worst affected to be younger adults, men, those with low qualifications, members of minority ethnic groups, and non-disabled people. However, early evidence suggests that the current recession may have some different impacts from other recent recessions, particularly so far as older people are concerned. In certain respects, the patterns continue what we described in earlier sections of this chapter for the previous decade – young people in particular falling behind, but gaps compared with the national average narrowing somewhat for women and older people.



## Chapter 11 How do inequalities develop across the life cycle?

In Part 2, we showed the great extent to which economic outcomes vary not just between various social groups, but also within them. In Chapter 10, we looked at changes over time, and showed a complex picture over the last decade, with the differences between some groups narrowing a little, but that at the same time inequalities within some of them widening. We presented research showing that most of the overall growth in inequality in earnings and in incomes over the last forty years can be attributed to growing inequalities *within* groups defined in terms of characteristics, such as age, ethnicity, gender, region, and household type (although some growth in earnings inequality was also attributable to growing inequality between those in different occupational groupings).

In this chapter, we look at a different aspect of time: how do the differences we have charted develop as people age, from birth through to retirement and later life? In Chapters 5 to 8, we showed how incomes and other outcomes show an age-related pattern, comparing across a cross-section of people born in different years at a single date. In this chapter, where possible we use information on how the lives of people born in the same year (the same cohort) have developed as they have got older – longitudinal data. We also use information on the ways in which inequalities are affected by transitions between particular life stages.

In Section 11.1, we look at what, in some ways, is the start of this process, but in other ways the result of it – links between the economic circumstances of individuals and their parents. Unlike subsequent sections, it does not represent a single stage in the life cycle. Rather, it represents both the starting point for and the result of processes that occur at each life stage. In Section 11.2, we look at the pre-school years and assessments of children as they arrive in school. Section 11.3 looks at developments through the school years, particularly in terms of ethnicity and of indicators of the economic and social position of parents. Section 11.4 looks at higher education and entry into the labour market. Section 11.5 looks at particular issues connected with the way gender differences develop across people's working lives. In Section 11.6, we look at resources in retirement and their links with people's previous circumstances. A summary is given at the end of each section.

### 11.1 Overall intergenerational links

The circumstance over which people have least choice is that of who their parents are. How much the outcomes of children depend on the circumstances of their parents – whether there is high or low 'social mobility' – is controversial and difficult to measure. One reason for the difficulty is that we often lack detailed information on family and parental circumstances when individuals were growing up. A second is that these links refer to a long time – a whole generation. By the time we know, for instance, what the links look like between parental

income in childhood and how someone's earnings then evolve in early middle age, twenty or more years will have passed. For this reason, it is seldom possible to talk about what **is** happening to 'social mobility' in the present tense – we usually know what **has been** happening to social mobility as a result of processes in childhood or in school that may already have changed.

In principle, intergenerational links could be examined between any of the outcomes we looked at in Chapters 3 to 8 – educational qualifications, employment status, earnings, incomes or wealth. Confusion can arise when links in those different dimensions have varying strengths or change in different directions. The links can also be looked at in two different ways. On the one hand, we can examine the relationship between *absolute* outcomes for children and those of their parents: are the children better off in real terms than their parents, or do they have 'better jobs' or better qualifications than their parents according to a fixed standard? On the other, we can look at the relationship in *relative* terms: each generation may be improving their situation compared to the previous one, but are they all doing so at the same rate? To put it another way, how does the children's ranking in the income distribution compare with that of their families when they were growing up, or what is their ranking in an educational hierarchy by comparison with the ranking of their parents? With a measure of absolute mobility, everyone in the younger generation can do better than their parents. But with relative mobility, it is a zero-sum game: if someone is rising in the ranking, someone else must be falling.

In practice, the main evidence that is currently available for the UK about social mobility relates to only three of these possible measures: absolute and relative mobility in terms of occupational social class; and relative income mobility. This evidence rules out the extreme possibilities: outcomes for children are not random or independent of family background; but nor are we looking at a deterministic process, in which life chances are set in stone at birth. How we judge links whose strength is between these two extremes is difficult, and is sometimes a matter of choosing to describe whether a glass is half full or half empty. What we can sometimes say is whether links have been getting stronger over time, and whether they are stronger or weaker than in other countries. This is important because declining mobility, or mobility that is lower than in other countries, is seen as undesirable by people who have different political philosophies. For those who are concerned with inequality in outcomes in itself, strong intergenerational links would be seen as an exacerbating factor – not only are outcomes unfairly unequal, but they may have been reached through routes that appear less fair than in the past or than apply in other countries. But others who see 'equality of opportunity' as being the main yardstick for judging fairness, rather than inequality in outcomes per se, would also see intergenerational links that have strengthened over time or which are stronger than elsewhere as a problem, as they suggest less equal opportunities.

However, the evidence on intergenerational income and on occupational mobility tell different stories. This does not mean that they contradict one another. As we saw in Chapter 9, the relationship between occupational social class and income has changed over time, both in terms of income differences *between* classes and those *within* classes, so we would not

necessarily expect intergenerational links in one to move in the same direction as those in the other. We present some of the key pieces of recent evidence, some of it the result of research by members of the Panel and their colleagues. A more detailed review of some of the evidence can be found in a recent Cabinet Office discussion paper, which acted as background to the January 2009 White Paper, *New Opportunities: Fair Chances for the Future*.<sup>193</sup>

### (a) *Absolute mobility in occupational social class*

The first piece of evidence is associated with the work of John Goldthorpe and colleagues who have looked at the occupational social class of people of working age by comparison with what they report was that of their parents. The results presented in Figure 11.1(a) for men and 11.1(b) for women who were aged 25-59 at different dates between 1972 and 2005 show rates of upward and downward mobility between three levels of occupational status.<sup>194</sup> It is important to remember that over time the proportion of the workforce in the top category,<sup>195</sup> two-fifths in recent years for men, was only roughly a quarter in the early 1970s, and even less in earlier decades. There has, thus, been more ‘room at the top’ for people to have ‘better jobs’ in this absolute sense than their parents – for instance, white collar rather than manual jobs. The figures therefore show higher rates of *upward* absolute mobility (marked with green circles in the figures) than *downward* mobility (marked with orange squares) for men throughout the period and rates of upward mobility for women that have overtaken their rates of downward mobility. A complication in the figures comes from the definitional change, and hence non-comparability, between data from the General Household Survey (most observations) and two more recent surveys (the British Household Panel Study (BHPS) and the EU Survey of Income and Living Conditions). Allowing for this break in the series, the conclusion that the researchers reach is that there has been **no** change in absolute social class mobility for men over the thirty years shown while, for women, there is evidence that upward mobility grew between those working in the early 1970s and those working in the early 1990s, and appears to have grown again (to match that of men) by 2005.

Other countries have also experienced the ‘room at the top’ phenomenon and also have higher rates of upward than downward absolute occupational mobility. Figures 11.2(a) and (b) suggest that upward mobility rates in the UK have been steady, but somewhat below typical rates elsewhere in Europe for men, and although they have risen for women, they were still below all of the other countries shown in the 1990s.<sup>196</sup>

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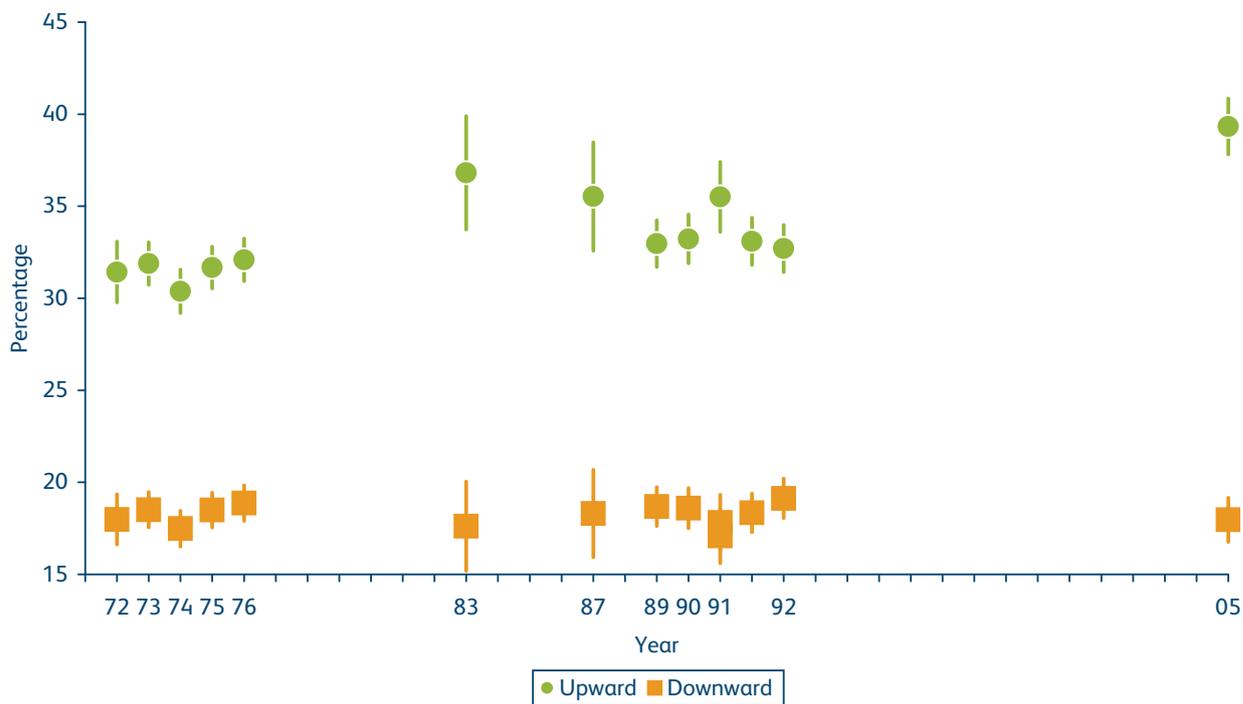
<sup>193</sup> Cabinet Office (2008, 2009a).

<sup>194</sup> See Goldthorpe and Mills (2008) for the way in which these are constructed from the occupational class measures available in different surveys.

<sup>195</sup> Corresponding to higher and lower managerial and professional posts, in terms of the National Statistics Socio-Economic Classification (NS-SEC) social class measure used in Chapters 3 to 8.

<sup>196</sup> See Iannelli and Paterson (2007) for more specific investigation of occupational social mobility in Scotland.

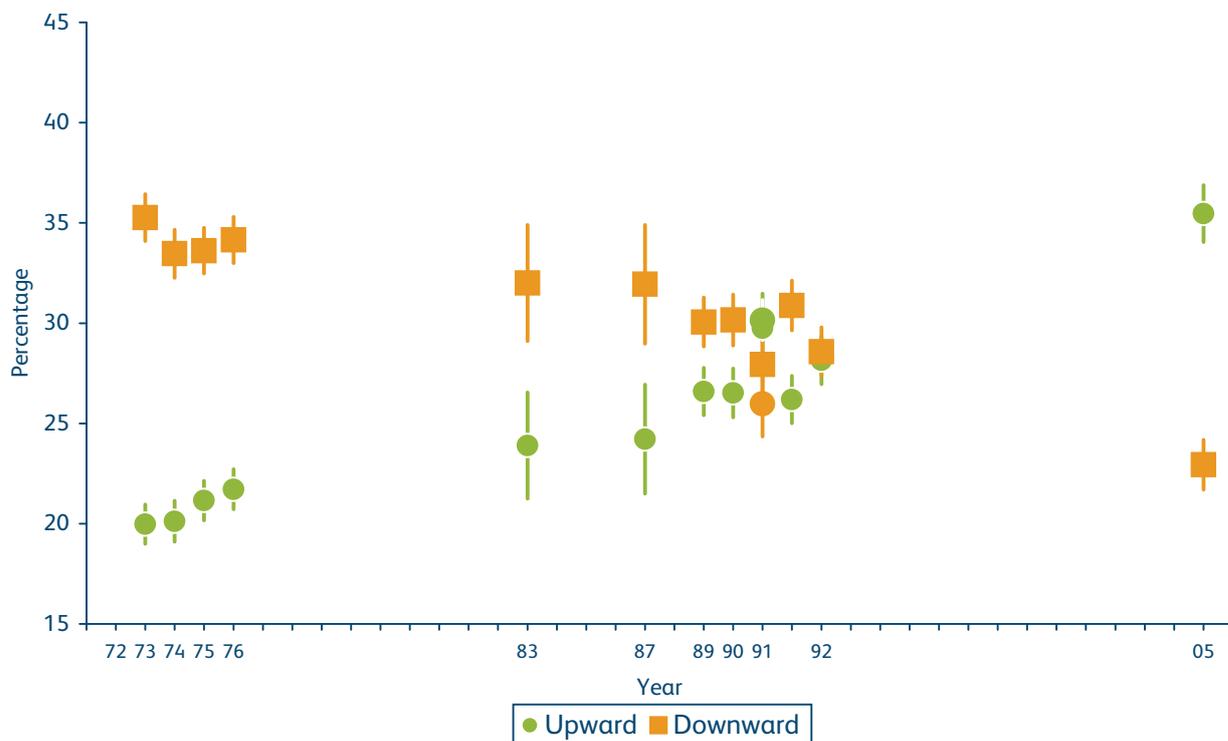
Figure 11.1(a): Absolute mobility in occupational social class, men 25-29



Source: Goldthorpe and Mills (2008).

Note: Circles and squares show estimates of mobility rates. Each vertical line shows the 95% confidence interval for the corresponding estimates.

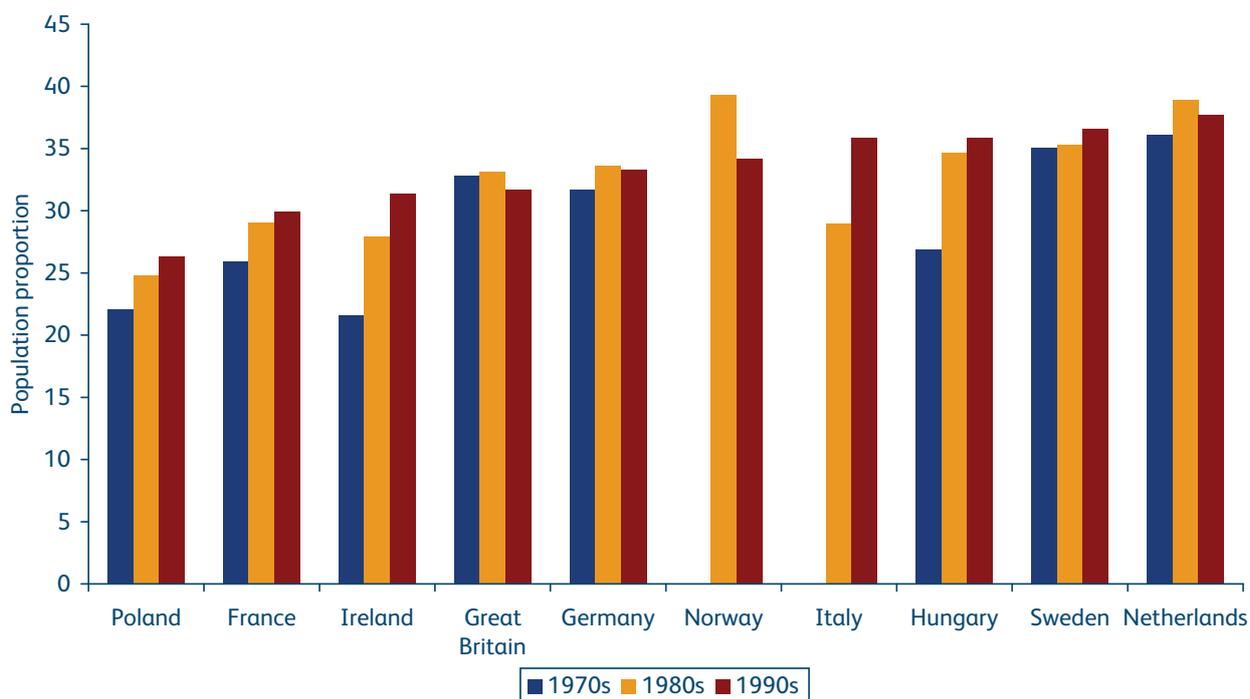
Figure 11.1(b): Absolute mobility in occupational social class, women 25-29



Source: Goldthorpe and Mills (2008).

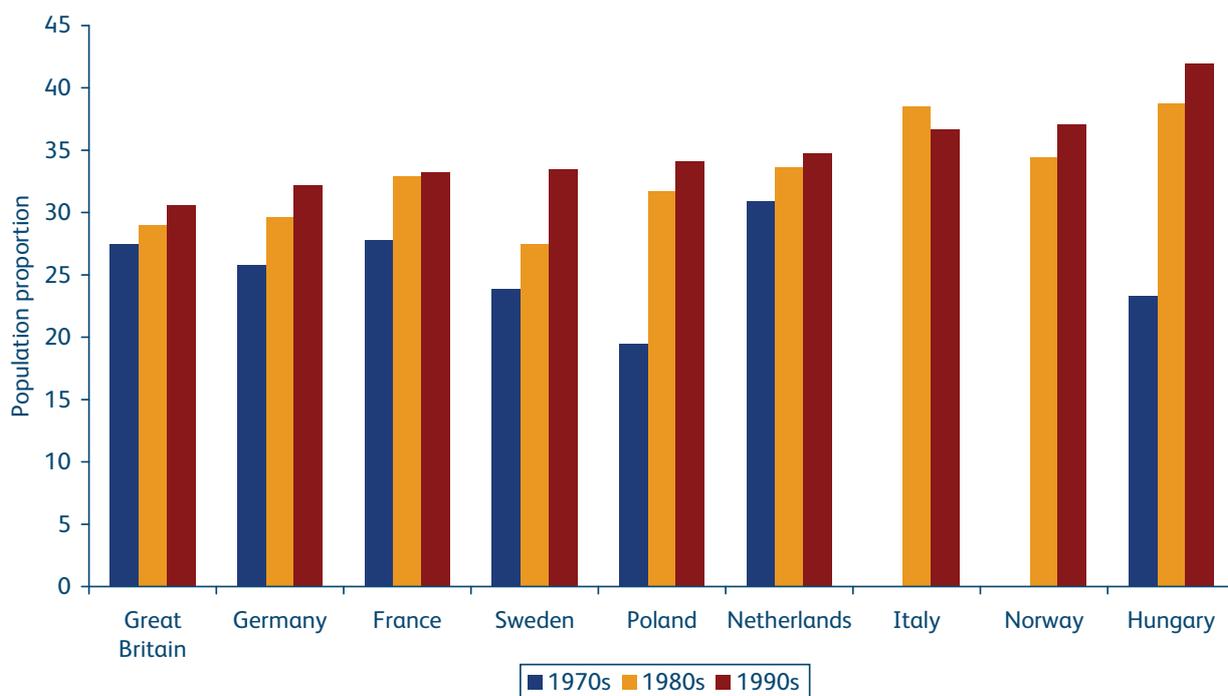
Note: Circles and squares show estimates of mobility rates. Each vertical line shows the 95% confidence interval for the corresponding estimates.

Figure 11.2(a): Absolute social mobility in different countries, men:  
Proportion of men getting better jobs than their parents (percentages)



Source: Cabinet Office (2008), based on Breen (2004).

Figure 11.2(b): Absolute social mobility in different countries, women:  
Proportion of women getting better jobs than their parents (percentages)



Source: Cabinet Office (2008), based on Breen (2004).

Apart from breakdown by gender of the kind shown, there is relatively little information on how social mobility varies between the kinds of population group we examine in this report. However, Lucinda Platt has used data from the Office for National Statistics (ONS) Longitudinal Study (based on linked Census records) to look at patterns in absolute occupational mobility by ethnicity, comparing class origins and destinations for White non-migrants, and those with Indian and Caribbean backgrounds. Examining the occupations in 1991 of those who had been children aged 8-15 in 1971, she found that patterns of mobility varied between the three groups. In particular, she found that Caribbean children had much lower chances of ending up in 1991 in the 'service class' (white collar) than White and Indian children. White children whose parents were in the service class had more than three times the chance of ending up in that class themselves than those whose parents were 'working class'. The relative chance for Indian children with service class parents was about twice that of those with working class parents. But for Caribbean children, having service class parents gave no statistically significant advantage.<sup>197</sup> By 2001, however, when the cohort was ten years older, Caribbean disadvantage in this respect had lessened, and indeed had become statistically insignificant once levels of educational achievement were allowed for. As she puts it, "*In so far as Caribbeans remain disadvantaged it is through area of residence, more limited access to parental resources, and an educational system in which they either do less well or achieve comparable levels of qualifications later*".<sup>198</sup> In other words, the different groups appear to be following trajectories with different timing in their careers. However, the Caribbean cohort still faced higher risks of unemployment regardless of class background.<sup>199</sup>

### (b) *Relative mobility in occupational social class*

As the discussion above indicates, some 'social mobility' in terms of the absolute occupational class of children compared with their parents is inevitable between generations, given the changing structure of jobs – the increasing proportion of white collar and decreasing proportion of manual jobs. The trends in occupational structure have varied over time, affecting the rate at which absolute mobility could occur. The index shown in Figures 11.3(a) (for men) and 11.3(b) (for women) adjusts for changes in occupational structure to compare **relative** social mobility over time – were people's chances of changing occupational level from those of their parents faster or slower than one would expect on the basis of the earliest comparison, after allowing for the changing labour market? The index is set at one for the earliest observation. The bars around later observations show the range consistent with there having been no statistically significant change. The conclusion reached by the authors is that there is no evidence that rates of relative occupational mobility have changed at all since the early 1970s (disregarding one apparent outlier in the index for women).

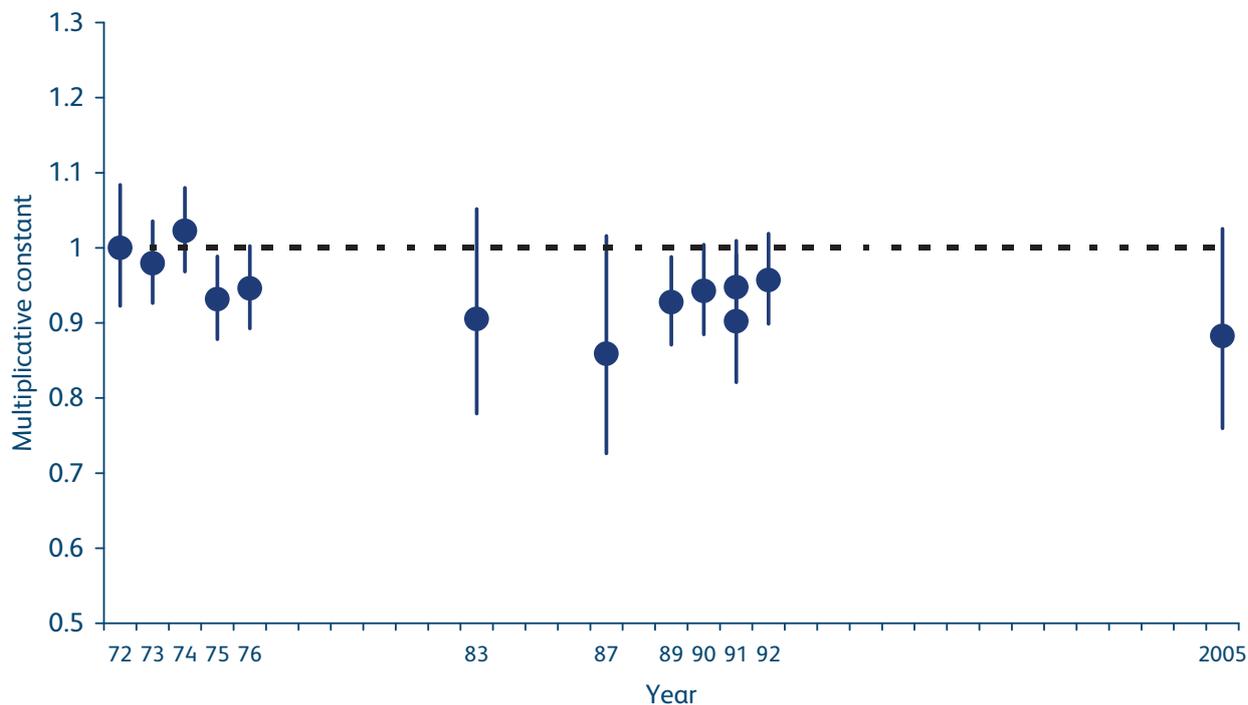
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<sup>197</sup> Platt (2005a), tables 4 and 5. In her research 'Caribbeans' are taken as those who defined themselves as 'Black Caribbean' or 'Black Other' in the 1991 Census, and had at least one parent born outside Britain. 'Indians' are those who defined themselves as 'Indian' and had at least one parent born outside Britain.

<sup>198</sup> Platt (2005b), p.715.

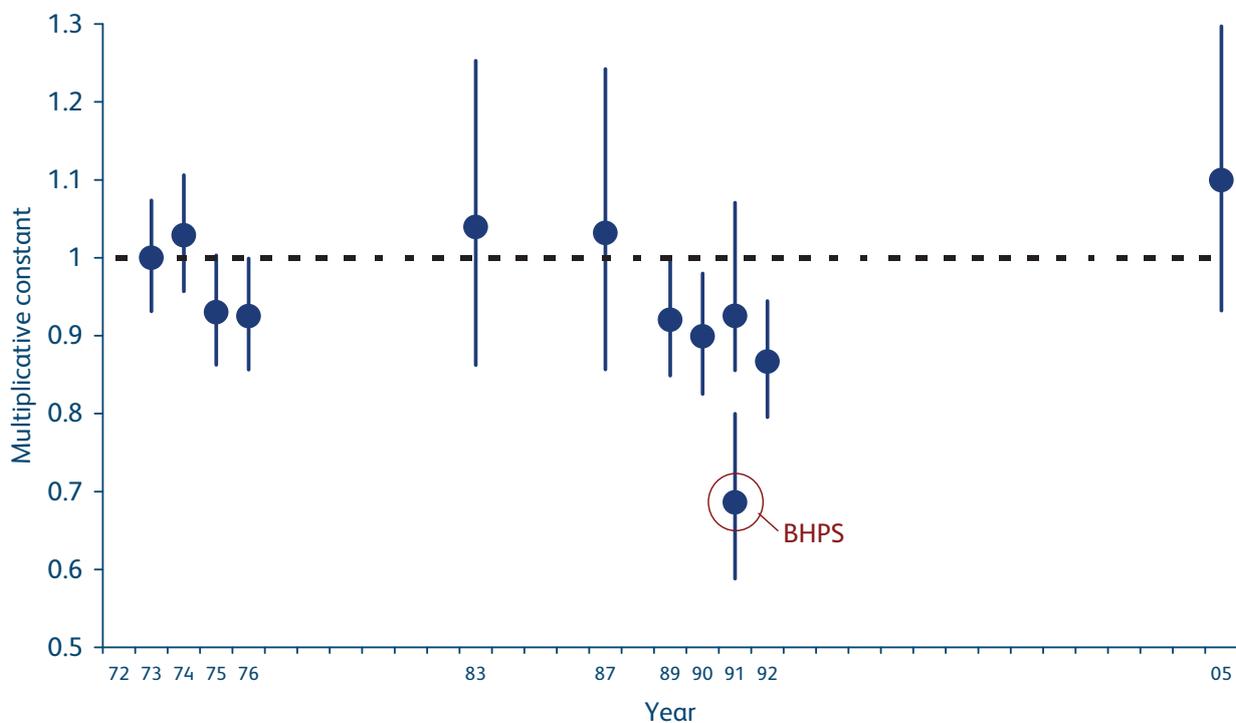
<sup>199</sup> See Box 9.2. See also Platt (2005c).

Figure 11.3(a): Index of relative occupational mobility, 1972-2005, men aged 25-29



Source: Goldthorpe and Mills (2008).

Figure 11.3(b): Index of relative occupational mobility, 1972-2005, women aged 25-29



Source: Goldthorpe and Mills (2008).

Note: Each vertical line shows the 95 % confidence interval for the corresponding estimate.

### (c) *Relative intergenerational income mobility*

The third kind of comparison we can make is between the earnings (or incomes) of adults and those of their families when they were growing up. Information of this kind is very limited, but Jo Blanden and Stephen Machin have used the results of the ‘birth cohort studies’ that have followed two groups of children born in 1958 and 1970, respectively, from birth into their thirties. Table 11.1 shows some of their findings. This compares where children came in the ranking of their earnings in their early thirties with their parents’ income group when they had been teenagers. So in the upper panel, it can be seen that 30 per cent of men born in 1958, whose parents were in the bottom quarter of incomes when they were teenagers, ended up in the bottom quarter of earnings themselves; only 18 per cent of them ended up in the top quarter of earnings. For their equivalents born twelve years later, more (37 per cent) ended up at the bottom, and fewer (13 per cent) at the top. The stickiness of high income strengthened even more – 45 per cent of those born in 1970 with the most affluent parents ended up high paid themselves, compared with 35 per cent for the earlier cohort. The lower panel shows a similar strengthening of the links between daughters’ earnings and parental income.

Table 11.1: Intergenerational income mobility, Great Britain

	Parents’ income group	
	Bottom 25%	Top 25%
<b>(a) Sons’ earnings at 33-34 (%)</b>		
In bottom 25%:		
Born 1958 (at 33)	30	18
Born 1970 (at 34)	37	13
In top 25%:		
Born 1958 (at 33)	18	35
Born 1970 (at 34)	13	45
<b>(b) Daughters’ earnings at 33-34 (%)</b>		
In bottom 25%:		
Born 1958 (at 33)	27	18
Born 1970 (at 34)	32	16
In top 25%:		
Born 1958 (at 33)	18	37
Born 1970 (at 34)	14	41

Source: Blanden and Machin (2007), tables 1a, 1b, 2a and 2b (and calculations by authors for National Equality Panel).

This comparison, suggesting – in contrast to the evidence on occupational class – that intergenerational income mobility *declined* significantly, relates to generations who are now in their late thirties and fifties.<sup>200</sup> The 1970 cohort completed the bulk of its education by the mid-1990s. We do not have corresponding evidence for those born more recently. However, looking at a variety of other sources, Blanden and Machin suggest that there is no evidence that there has been any reversal of that decline, although it may have flattened out for those born more recently. For instance, Table 11.2 shows the proportions of people born in different years who had achieved a first degree by the time they were 23, depending on the income group their parents had been in. There is a huge difference between those whose parents had high and low incomes, and this difference grew between the 1958 and 1970 cohorts – the expansion of higher education barely affecting those who had low income parents. For those born later in the 1970s, the absolute gap has widened again, but much less rapidly than over the previous period.

**Table 11.2: Proportion achieving a degree by age 23 by parental income group (percentages)**

Year of birth	Parents' income group	
	Bottom 25%	Top 25%
1958	5	20
1970	7	37
1975 (average)	11	40
1979 (average)	10	44

Source: Blanden and Machin (2007), tables 3 and 6.

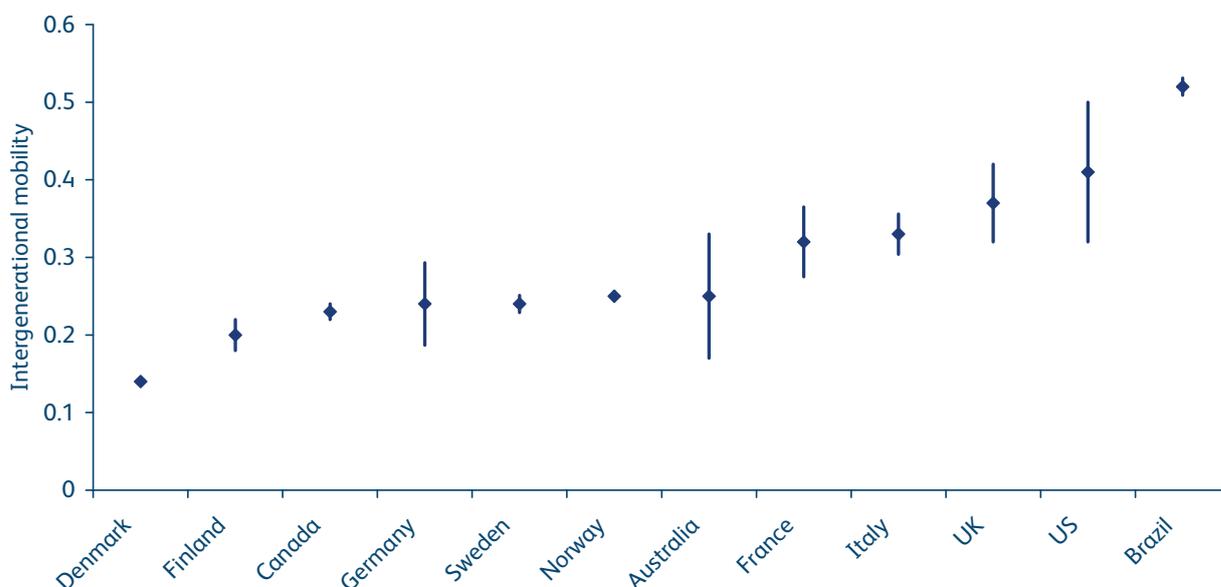
As before, it is helpful to compare the UK experience with that of other countries to judge whether the rates of income mobility in the UK are ‘high’ or ‘low’. Using data for those born in the late 1950s and early 1960s, Figure 11.4 shows how closely the earnings of sons are related to the earnings of their parents<sup>201</sup> – the higher the index, the more closely they are related and the lower intergenerational mobility. This suggests that Brazil, the USA, and Great Britain had the least mobility for this generation (since when the study quoted above suggests it has fallen further in Great Britain). It is notable that the highest rates of mobility appear to have been in the countries whose income distributions were more equal in the mid-1980s, when

<sup>200</sup> Ermisch and Nicoletti (2007) suggest that one cannot reach conclusions on trends in intergenerational mobility comparing only two points in time. Therefore, they compare intergenerational earnings mobility across successive cohorts for sons born between 1952 and 1972 in Britain, using the British Household Panel Survey (BHPS) (which contains information on people born at different times, but smaller sample numbers for those born at each time than are available from the birth cohort studies). By contrast with the birth cohort comparisons, their results suggest that intergenerational earnings mobility did not change much over that period. There is some indication of a stronger association between children’s and fathers’ average earnings for those born towards the end of the period, but the differences from earlier cohorts are not statistically significant.

<sup>201</sup> The UK data, as above, use the *income* of parents, rather than their earnings.

these generations reached the labour market (see Figures 2.8 and 2.14). Equally, the apparent fall in income mobility between the 1958 and 1970 cohorts in Britain coincides with the rise in income inequality between the periods when they each reached the labour market. This is suggestive evidence that intergenerational mobility is slower in societies which are more unequal – moving up a ladder is harder if its rungs are further apart.

Figure 11.4: International comparisons of income mobility



Source: Blanden (2009).

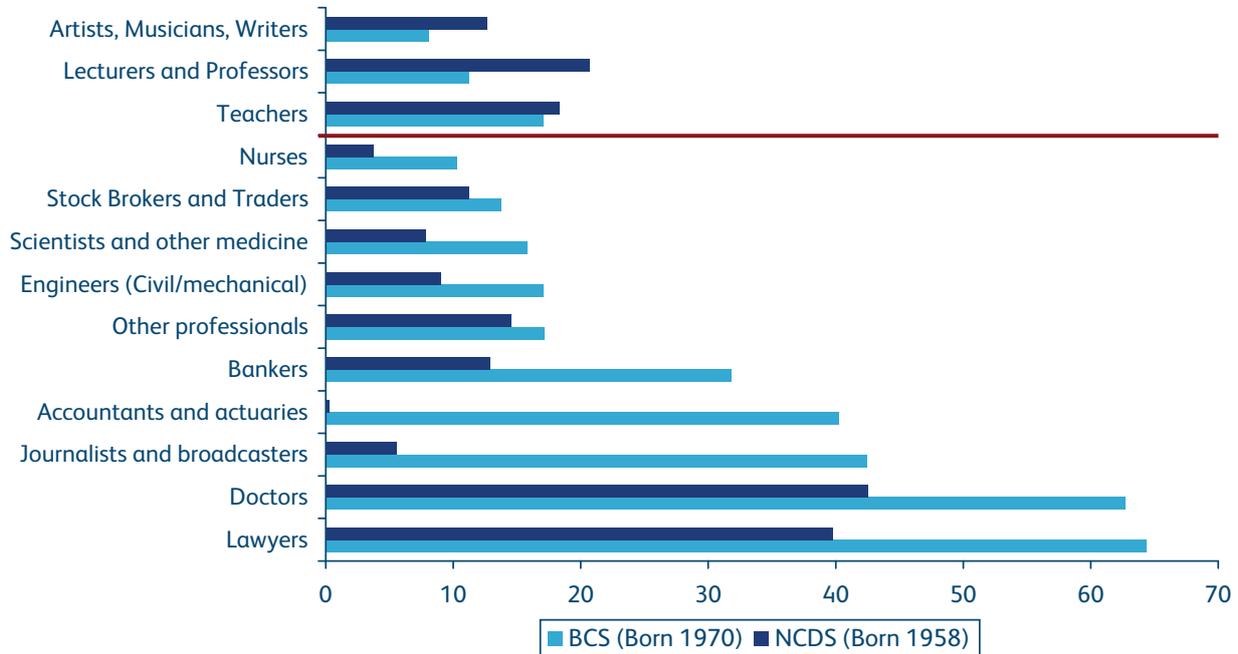
Note: Each vertical line shows the 95% confidence interval for the corresponding estimate.

The Panel on Fair Access to the Professions, chaired by the Rt. Hon. Alan Milburn looked in detail at some of the mechanisms by which social mobility has slowed down in terms of the backgrounds of those ending up in particular professions, at the very top of the occupational hierarchy. Figure 11.5 shows that members of the professions covered by that Panel typically had grown up in families with above average income. For most of the professions<sup>202</sup>, the difference between their families' income and the average grew substantially between those born in 1958 and those born in 1970. For instance, those born in 1958 who became journalists came from families with incomes 5 per cent above the average; those born in 1970 who became journalists came from families with incomes more than 40 per cent above average.

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<sup>202</sup> Lecturers and professors are an exception.

Figure 11.5: Family income background of professionals, born 1958 and 1970: Percentage difference between the average family’s income and that of the family that the typical professional grew up with



Source: Panel on Fair Access to the Professions (2009).

Note: The red line separates those professions where entry became less related to family income (above it) from those which have become more related to it (below).

### Summary

Whether intergenerational mobility is greater or smaller for today’s adults than it was in the past depends on which outcomes are examined. The level of job that people end up in appears to be no more or less dependent on that of their parents than it was thirty years ago, allowing for changing occupational structure. In this sense, ‘social mobility’ has not changed. On the other hand, the earnings in their early thirties of those born in 1970 are more closely associated with the income level of their parents when they were growing up than was the case for those born in the late 1950s. In this sense, ‘social mobility’ has declined.

However, whatever the differences between particular studies that are measuring different outcomes, two features of the evidence are clear. We do not live in a perfectly mobile society: people’s occupational and economic destinations depend to an important degree on their origins. Moreover, rates of intergenerational mobility in terms of incomes are low in international terms, and in terms of occupation are below the international average for men and at the bottom of the range for women. Intergenerational mobility is slower in societies which are more unequal – moving up a ladder is harder if its rungs are further apart. Equally, the apparent fall in intergenerational income mobility between those born in 1958 and in 1970 in Britain coincides with the rise in income inequality between the periods when they each reached the labour market. It matters more in Britain who your parents are

than in many other countries. When the stakes are so high given our historically and internationally high levels of inequality in economic outcomes, this observation is a cause for concern for those from a wide range of political philosophies.

In the following sections of this chapter we look at the ways in which some of these links between generations play out in the early stages in people's lives, and then how their later lives depend in turn on these. Given the links with parental background we show at each of those stages, it should be borne in mind that we may still not have seen the full effect of the increases in earnings and income inequality that took place across the 1980s: those who were the beneficiaries of this have had greater opportunities than others to support their children, but have still only had half their careers in this less equal environment.

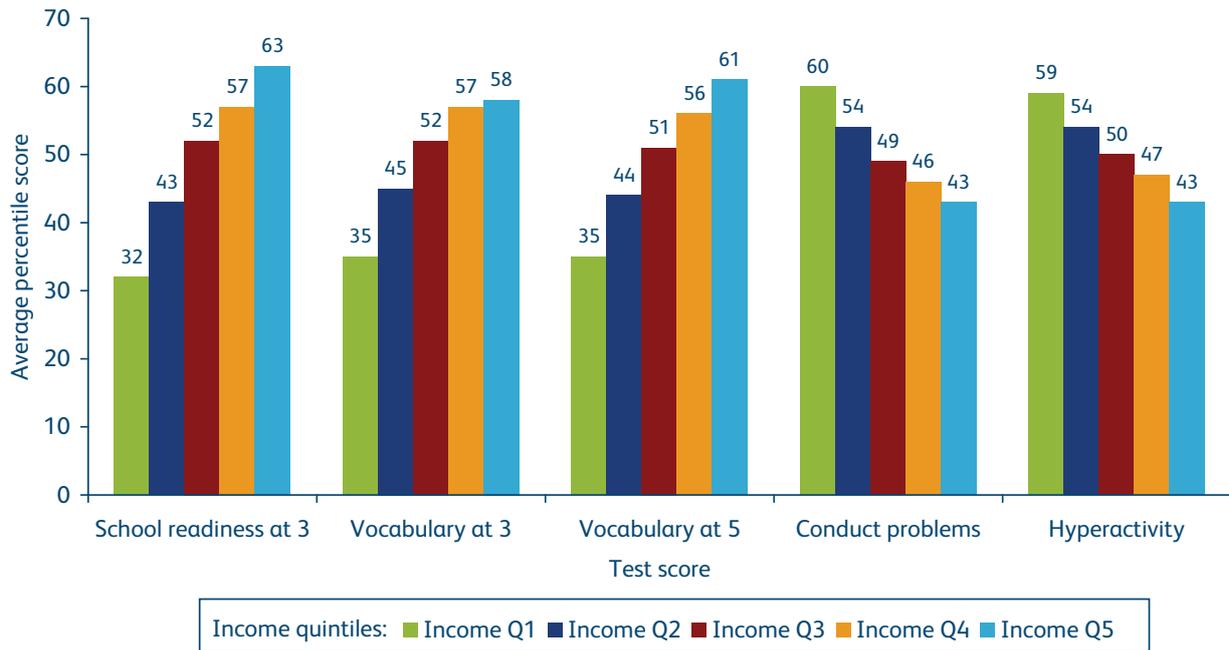
### 11.2 Inequalities in the early years

It is, of course, very hard to tell when children are young how they and their abilities may develop later on, and any attempt to measure different types of 'ability' (in terms of a score on some kind of assessment or test) will be subject to wide margins of error (particularly if there are language differences between the child and that of the assessment). Nonetheless, clear differences emerge and widen very early on between children with different backgrounds. Figure 11.6 gives some examples of data drawn from the Millennium Cohort Study (MCS), a cohort study that has been following a group of children born in 2000-01. In this case, assessments are shown for children aged 3 (the left two clusters) and at 5 (the other three clusters). In each case, the average results are shown for children whose families were in each of five income groups. The results are shown in terms of how high up the range, out of 100 children, the average ranking would come. If there were no differences between poorer and better off children, all the bars would have a height of 50 – the average ranking for each group would match the overall average. In fact, there were substantial differences. In terms of 'school readiness' at age 3,<sup>203</sup> there was a difference of 31 places between the children from the poorest group of families and those from the richest – a third of the measured ability range. The gradient in vocabulary ranking at age 3 with income is almost as great. By the age of 5, the difference in ranking of vocabulary scores is even greater. For assessments of conduct and hyperactivity at 5, the poorest fifth of children having an average ranking 26-27 places higher – that is, with *more* problems – than the richest fifth of children.

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<sup>203</sup> School readiness is measured in terms of the Bracken School Readiness Assessment, which is the sum of correct responses on six sub-scales: colours, letters, numbers/counting, sizes, comparisons and shapes.

Figure 11.6: Indicators of school readiness by parental income group, UK



Source: Waldfogel and Washbrook (2008).

There are, of course, many reasons why child development and the economic position of parents should be linked like this. As well as the resources available to them, parental behaviour and parenting style may differ both because of the different pressures on and opportunities open to parents with different incomes, or because more educated parents may both earn more and interact with their children in different ways. On the latter, the panels of Figure 11.7, also drawn from the MCS, show strong links between parental income and resources and factors known to affect child development. The children of poorer mothers had lower average birth weight, which affects later development, and their mothers were far more likely to suffer post-natal depression than the children of richer parents, both of which have direct links to relative resources. In terms of behaviour, there were strong gradients by income in whether three year-olds were read to every day and had regular bed times.

Figure 11.7: Links between socio-economic status (SES) and factors affecting child development

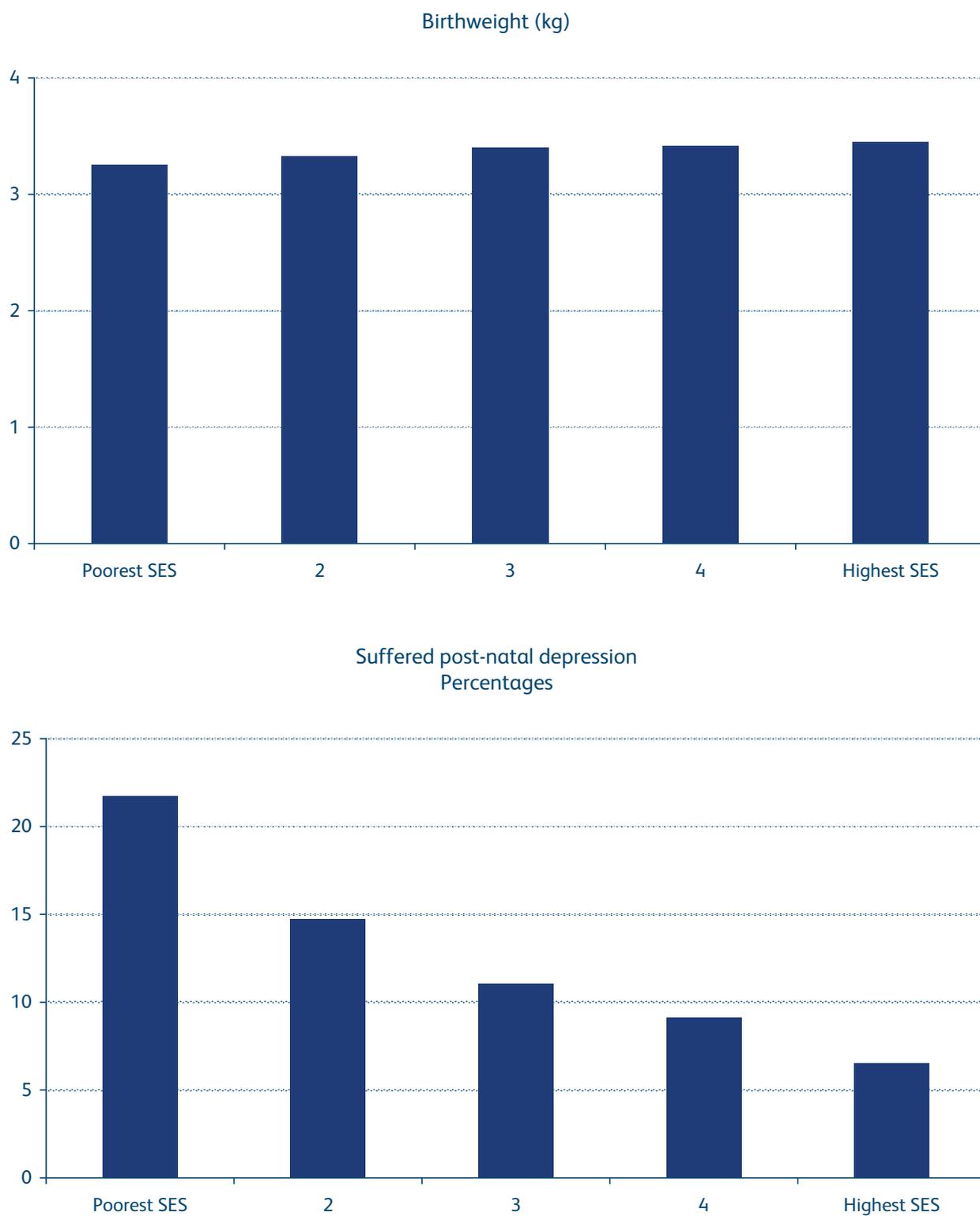
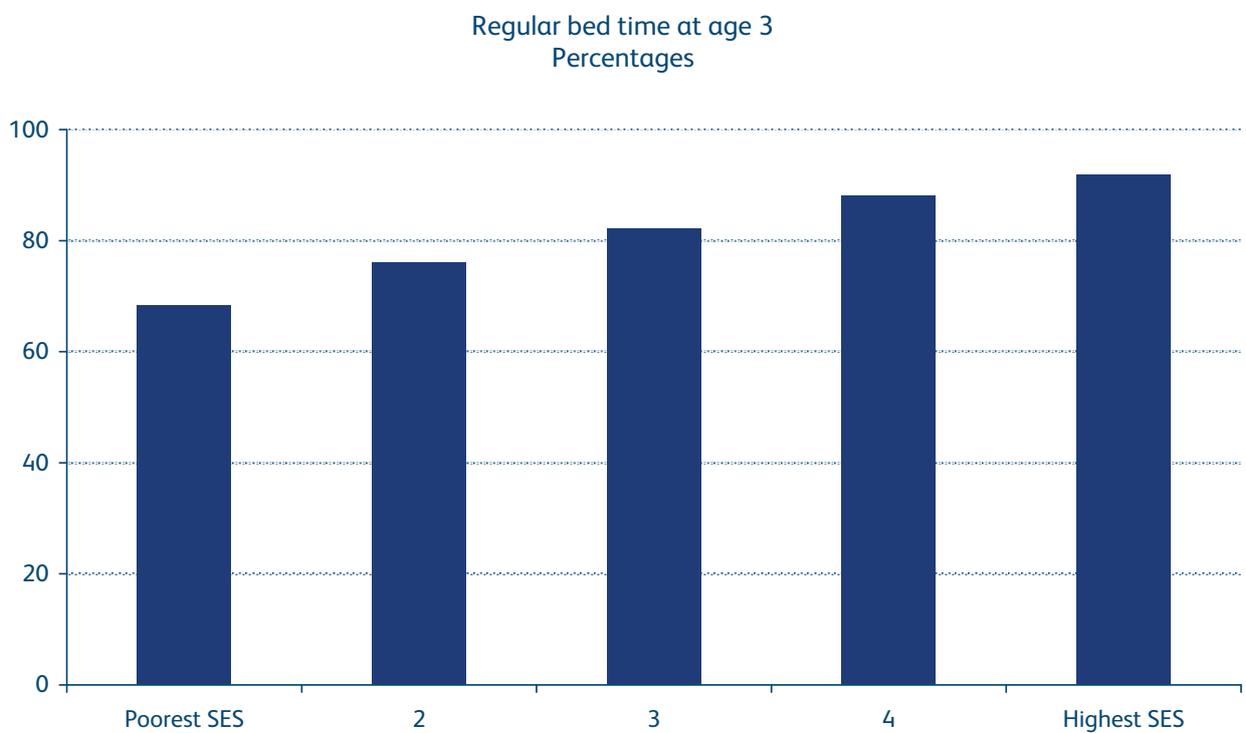
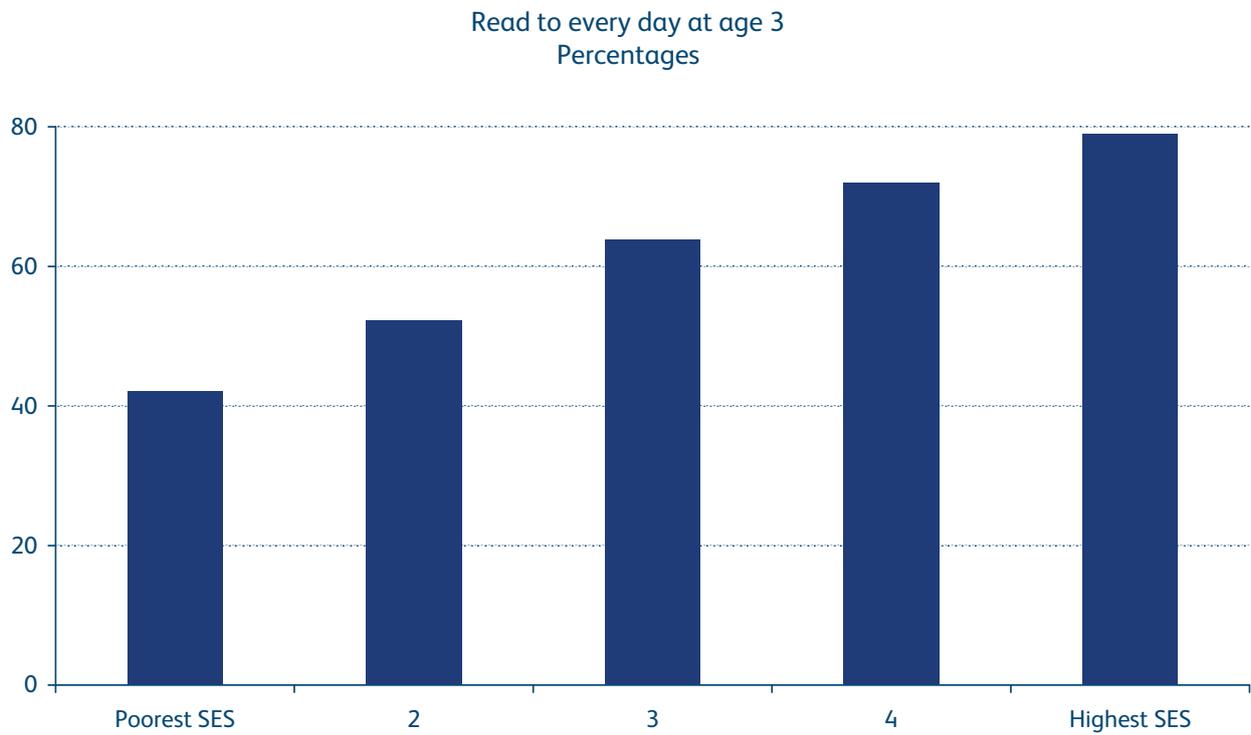


Figure 11.7: (Continued)



Source: Goodman and Gregg (forthcoming).

Note: SES is a composite index encompassing income, social class, housing tenure and other factors.

Figure 11.8 shows that where children start from, in terms of measured ‘ability’ at very young ages, does not determine what happens through the rest of their childhoods. The first of these is drawn from the research of Leon Feinstein, looking at the 1970 birth cohort. The second is drawn from the work of Jo Blanden and Stephen Machin using data from the MCS children born thirty years later. The diagrams trace the average performance in later tests at different ages of children initially assessed with high or low ‘ability’, at 22 months in the 1970 case, and at three years for the MCS children.<sup>204</sup> Of course, how a child performs on a particular day at such young ages is not likely to be a very precise measure of underlying ‘ability’. The imprecision of such assessments is shown in the way in which average later assessments of the ‘high’ ability children move downwards towards the mean, while those for ‘low’ ability children move upwards towards it. But the researchers also divided each of these ‘ability’ groups by social class, and then looked at the average performance later on within each group.

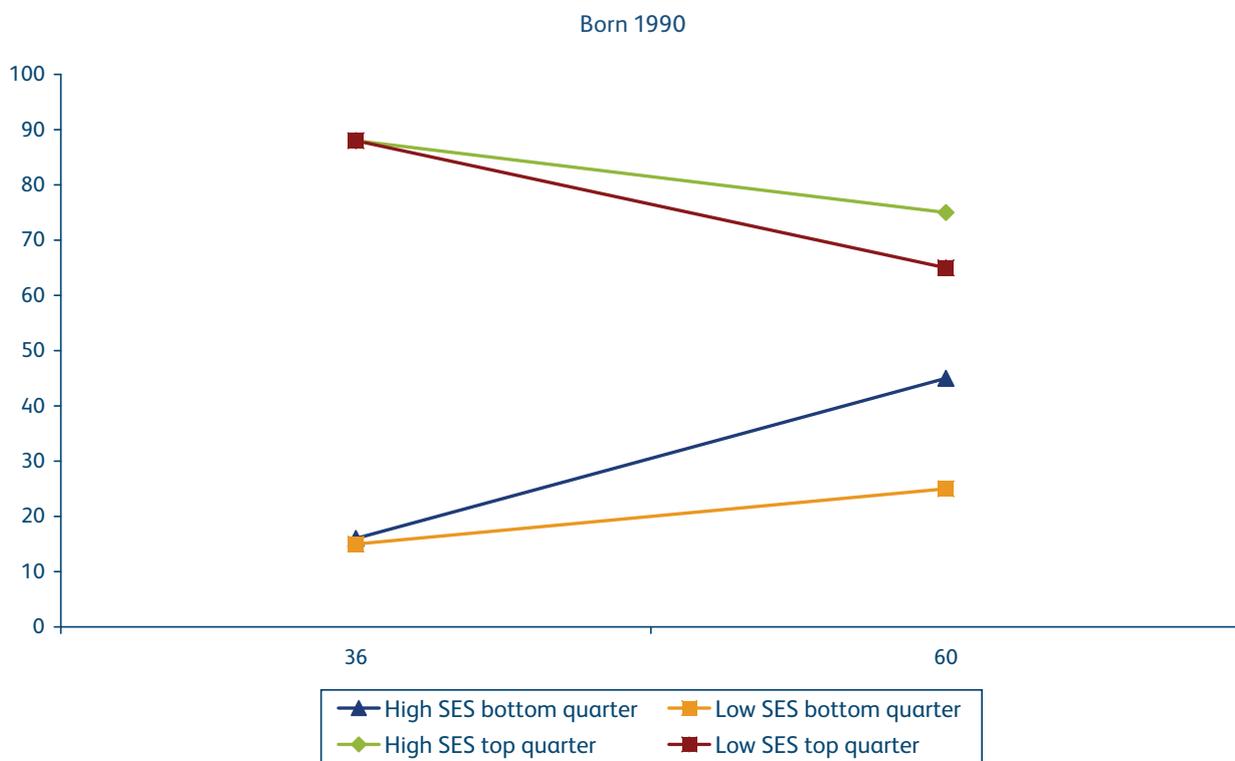
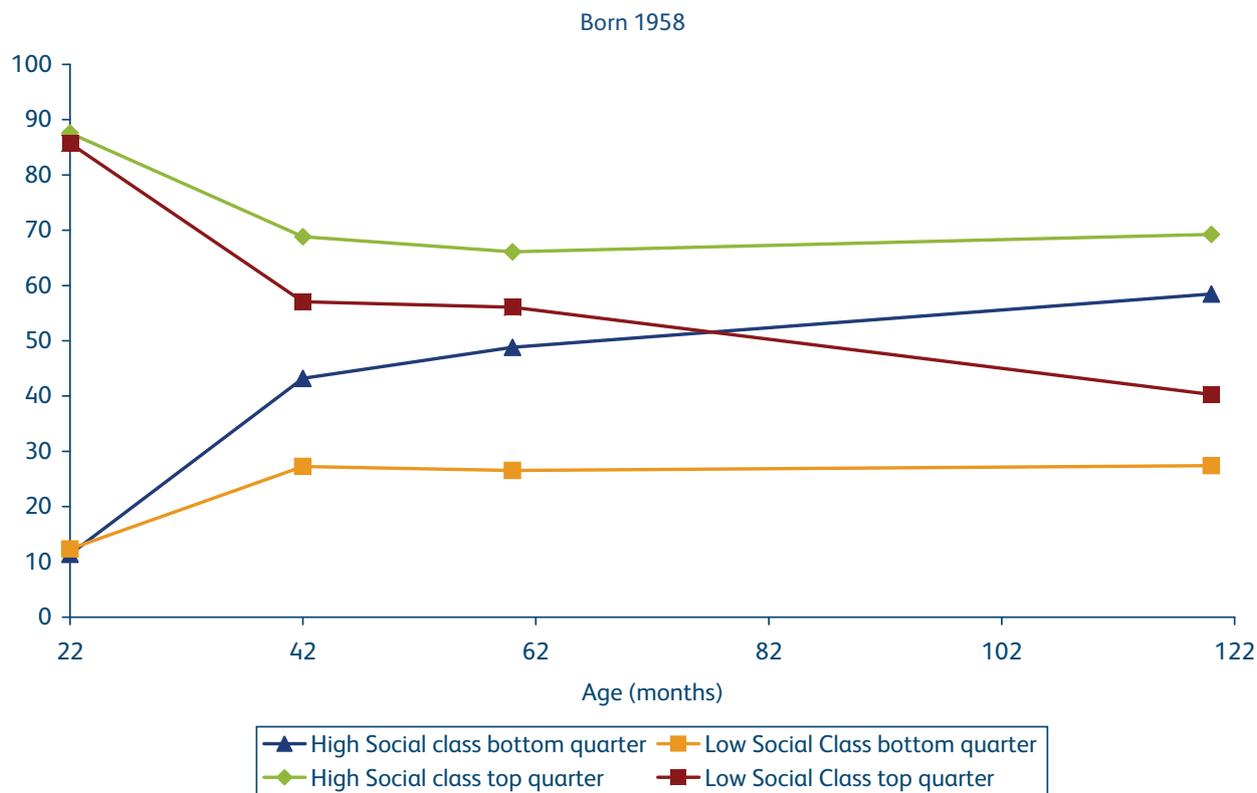
By the age of 10, the higher social class children born in 1970 who were initially assessed in the top quarter of ability had ended up 29 places higher, on average, than the lower social class children from the same initial group. The higher social class children initially assessed as having low ability also ended up 31 places out of 100 higher than the lower social class children with the same initial assessment. Indeed, by the age of 10, and probably by age 7, the higher social class children with initial *low* assessments had overtaken the lower social class children with initial *high* assessments. The second panel shows the results of a similar exercise using results from the MCS, with assessments initially made at age 3, compared with those then made when the children were 5. Exactly the same process appears to be at work, with a gap growing between children from families with higher or lower occupational social class, but similar ability assessments.

These are not the patterns one would expect to see if differences in child development were, for instance, simply a matter of genetic endowment. Instead, what we see is that differential experiences of children from different social class backgrounds are leading to expanding gaps in outcomes. Such experiences may include differences in the parenting they receive, kinds of childcare or pre-school education, quality of schooling, and the resources available to parents and their children.

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<sup>204</sup> The children’s general cognitive development was assessed with age appropriate tests. At twenty-two and forty-two months, health visitors asked them to complete a range of tasks, such as pointing to their eyes, stacking cubes, counting and speaking. The five year-old children were given drawing and basic vocabulary tests. Scores for maths and reading at age ten years were also used. The analysis was based on where the children’s attainment featured within the overall range of results.

Figure 11.8: Cognitive test scores by age and social class, children born in 1958 and 1990



Source: Cabinet Office (2008), from Feinstein (2003) and Blanden and Machin (2007). The scores show the average rank of the assessment for each group as a percentile within the range of outcomes for all children.

When the MCS children reached school, aged 5, they were assessed by teachers for their Foundation Stage Profile (FSP) in England and Devolved Administration Teacher Survey (DATS) for Wales, Scotland and Northern Ireland. Some of the results of this are shown in Table 11.3, showing mean scores for children in different groups. First, the way in which these assessments are made means that children are different ages when they are assessed. This gives a helpful benchmark for understanding the variations between other groups. For instance, in the English results, children aged 67-69 months had average scores of 93.8, while those nine months younger had average scores of 82.2. Each month older a child was made a difference of about 1.3 to the average score. The gap in assessment for English children depending on mother's highest qualification was more than 20 points – equivalent to *15 months* of typical development – between those whose mothers had no qualifications and those with the highest qualifications (degree and equivalent vocational qualifications). There were similar gradients by qualification in the other nations (which appear to correspond to even larger numbers of months of development, but the sample sizes in the study make comparisons of that kind less precise).

Dividing the children into groups by other characteristics also shows very large gaps. In the English results, these are equivalent to: a year's development between those with no parent in paid work and those with two parents working; eight months between those whose parents are in poverty and those who are not; six months between those in lone parent and two parent families; and, remembering that there may be language issues involved, ten months between those with White and with a Pakistani or Bangladeshi mother.

Table 11.3: Teachers' assessment of children on primary school entry (born 2000-01)  
 Mean Scores in FSP and DATS

	FSP England	DATS		
		Wales	Scotland	Northern Ireland
All respondents	87.7	95.6	103.3	97.4
<b>Age group at assessment</b>				
57 months or younger	80.1	-	-	-
58 to 60 months	82.2	-	-	-
61 to 63 months	86.7	89.6	103.9	96.5
64 to 66 months	90.7	89	100	97.7
67 to 69 months	93.8	96	104.6	98.4
70 months or older	-	99.4	104.2	97.4
<b>Ethnicity</b>				
White	88.5	-	-	-
Mixed	86.4	-	-	-
Indian	86.1	-	-	-
Pakistani or Bangladeshi	75.8	-	-	-
Black	82.1	-	-	-
Other	83	-	-	-
<b>Family structure</b>				
Two parents	89.1	97.2	104.3	99.1
Lone parent	81.2	88.2	99	88.4

Source: Hansen and Joshi (2008), table 7.2.

Of course, each of these factors is related – those with low qualifications are more likely to have low incomes, for instance. The differences between groups defined in one way may be the result of variations between them in other, more important, factors. Figure 11.9 shows the results of analysis by Andy Cullis and Kirstine Hansen, which looks at the relationship between scores and various child, family and parental choice factors, after controlling for the effect of the others.<sup>205</sup> It shows, from a wide range of factors, which ones remained most statistically significant after carrying out this exercise.<sup>206</sup> In this assessment, note that a child may be affected by more than one factor at once, so the effects are cumulative:

- girls had an assessment equivalent to over 3 months of development more than boys;
- Bangladeshi and Pakistani children had assessments the equivalent of 4 months behind White children;<sup>207</sup>

<sup>205</sup> Cullis and Hansen (2008). Data are for England only.

<sup>206</sup> The figure shows the factors that were significant at the 1 per cent level in the researchers' 'full model' (Cullis and Hansen, (2008, table 5).

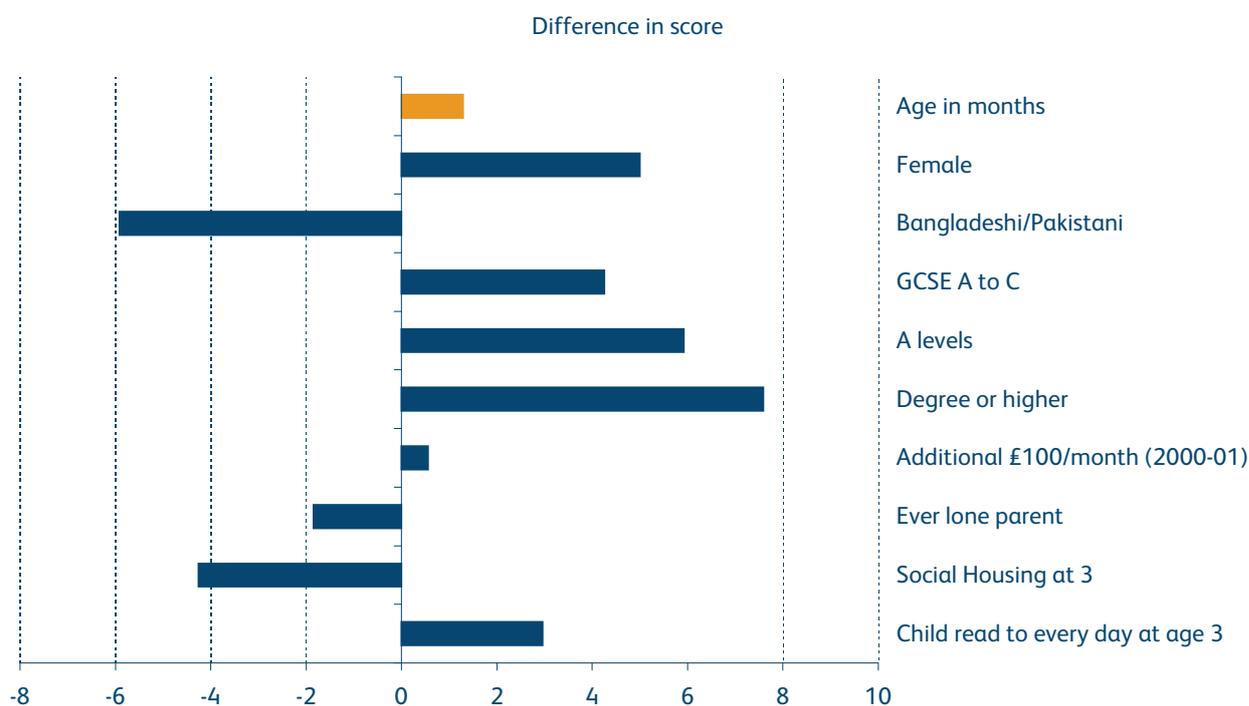
<sup>207</sup> Note that the reference category used in the study was 'White'.

## An anatomy of economic inequality in the UK

- children whose mothers had degrees were assessed 6 months ahead of those whose mothers had no qualifications above grade D at GCSE;
  - every extra £100 per month in family income when the child was first surveyed (2001-02) was associated with a difference equivalent to a month's development;
  - where mothers had ever been a lone parent, the difference from others was equivalent to more than two months; and
  - if children were in social housing at age 3, the difference was more than three months.
- On the other hand, a child read to regularly at three, had assessed development, controlling for other factors, which was the equivalent of two months extra development.

These kinds of results show associations rather than causality. It is not necessarily social housing in itself that leads to the lower assessment for children living in it, for instance, but may be other factors (beyond those allowed for in the analysis) that lead both to people qualifying for social housing as a result of their high needs and to children developing less rapidly. Box 11.1 discusses evidence that looks in much more detail at links between childhood housing tenure and later outcomes.

Figure 11.9: Impact of child and family characteristics (allowing for all factors together), England



Source: Cullis and Hansen (2008).

**Box 11.1: Childhood housing tenure and outcomes in adult life**

Recent research suggests that housing tenure in childhood may be associated with economic outcomes in adulthood.

Ruth Lupton and colleagues<sup>208</sup> examined the relationship between childhood housing tenure and a range of adult outcomes including educational qualifications and whether or not in paid employment, for people born in 1946, 1958 and 1970, drawing on the British birth cohort studies. They found that, on average, those who experienced social housing as children were worse off as adults in terms of health, well-being, education and employment than their peers who did not experience social housing during childhood. For example, at age 34 in 2004, 79 per cent of those born in 1970 who had ever been in social housing in childhood were in paid employment, while 86 per cent of others were.

Table 11A: Average outcomes for adults at 33-34 comparing those ever in social housing in childhood with those never in social housing

	Born 1958 at 33 (1981)		Born 1970 at 34 (2004)	
	Ever in SH	Never in SH	Ever in SH	Never in SH
Self-rated health (out of 4)	3.11	3.27	2.92	3.13
Malaise (out of 24)	2.84	2.11	1.88	1.56
Cigarettes smoked per day	6.9	4.2	5.5	3.0
Taking regular exercise (%)	76	80	76	81
Life satisfaction (out of 10)	7.37	7.52	7.23	7.52
In paid employment (%)	76	82	79	86
Literacy/numeracy problems	0.14	0.09	0.20	0.13

Source: Lupton, Tunstall *et al.* (2009), table 7.

For people born in 1946, these raw differences were explained by differences in family background and childhood characteristics. This implies that social housing has no inherent negative consequences. However, for people born in 1958 and more so in 1970, living in social housing as a child was still associated with some worse adult outcomes, even after accounting for these factors. About half of the gap shown above on measures of self-assessed health, cigarettes smoked and paid employment between those in social housing as children and their peers remained after controlling for background factors. Notably, there were no situations where the 'ever in social housing' group had more positive scores than others, after controls. Thus, there was no evidence of social housing appearing to counteract earlier disadvantage with positive, 'value added' effects on adult outcomes. The sizes of the associations were typically larger for the 1970 cohort than for the 1958 cohort, indicating a widening gap over time.

<sup>208</sup> Lupton, Tunstall *et al.* (2009).

The researchers found different associations for men and women. For all cohorts, there were more and stronger statistically significant associations between childhood social housing and experiences in adulthood for women than for men. One explanation for this may lie in the different pathways followed in young adulthood by men and women who have grown up in social housing. For the 1958 and 1970 cohorts, they examined the ages at which young people first moved into independent living, formed their first partnership, and had their first child. They found tenure differences, even after controlling for level of parental advantage. Young people from social housing formed partnerships and became parents earlier than their similarly advantaged counterparts in other tenures, and this was particularly the case for women. These patterns became more marked over time. This suggests that there may be an important role for interventions to support people's transitions into early adulthood, and a need for further research on how tenure may affect transitions.

They found that negative associations with social housing were greater for people who moved into social housing in childhood than those who were in social housing but moved out. This indicates that the circumstances in which people enter social housing, not just the tenure itself, may be driving later outcomes.

Whatever the reasons that explain these associations, the research provides stark evidence of the widening gap between the socio-economic circumstances of children in social housing and their peers. Mothers of those born in 1958 were more likely to work when their children were of pre-school age if they were social tenants than if they were homeowners. For the 1970 cohort there was little difference by tenure, but by the time the 2000 cohort were aged 5, the home-owner mothers were twice as likely to be working as the social tenant mothers. As inequality has increased, and the social housing sector becomes more targeted on the most disadvantaged, a wide tenure gap has opened up. This is particularly important given that it seems likely to be reflected in worse outcomes as today's generation of children move into adulthood.

Similarly, the way in which children whose mothers experienced lone parenthood had lower assessments than others may not reflect the fact of lone parenthood itself, but other circumstances it leads to – for instance – much higher rates of maternal depression. Kathleen Kiernan and Fiona Mensah found from analysis of the development of children aged 3 in the MCS that when they allowed for factors such as maternal depression, there were still strong associations between poverty and young children's intellectual and behavioural development.<sup>209</sup> Maternal depression was more weakly related to cognitive development but strongly related to behaviour problems. However, after allowing for other factors, especially poverty, family structure (one or two parent) was only weakly related with children's development.

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<sup>209</sup> Kiernan and Mensah (2009).

### Summary

Recent analysis of the ways in which children born at the start of this decade have been developing suggests that there were typically large differences between them in their assessed readiness for school by the time they entered school, depending on family background. These included differences by mother's education, ethnicity, income and the child's gender: Bangladeshi and Pakistani children were assessed 4 months behind White children; children whose mothers had degrees were assessed the equivalent of 6 months ahead of those whose mothers had no qualifications above grade D at GCSE; and every extra £100 per month in family income when the child was first surveyed (2001-02) was associated with a difference equivalent to a month's development.

Differences associated with social class appear to have widened for these children between ages 3 and 5, in the same way that they did through early childhood for those born in 1970, suggesting that these differences in early outcomes are not a simple result of differences in genetic inheritance. In the next section we look at the extent to which such differences widen or narrow during the school years, a process which leads up to the variations at age 16 that we described in Chapter 3.

## 11.3 Inequalities in the school years

We know from Chapter 3 that some of these inequalities between groups in assessments of children in their early years and as they enter school persist, at least until Key Stage 4 assessments at 16. But others narrow. This section looks at different kinds of evidence on how they change over the school years.

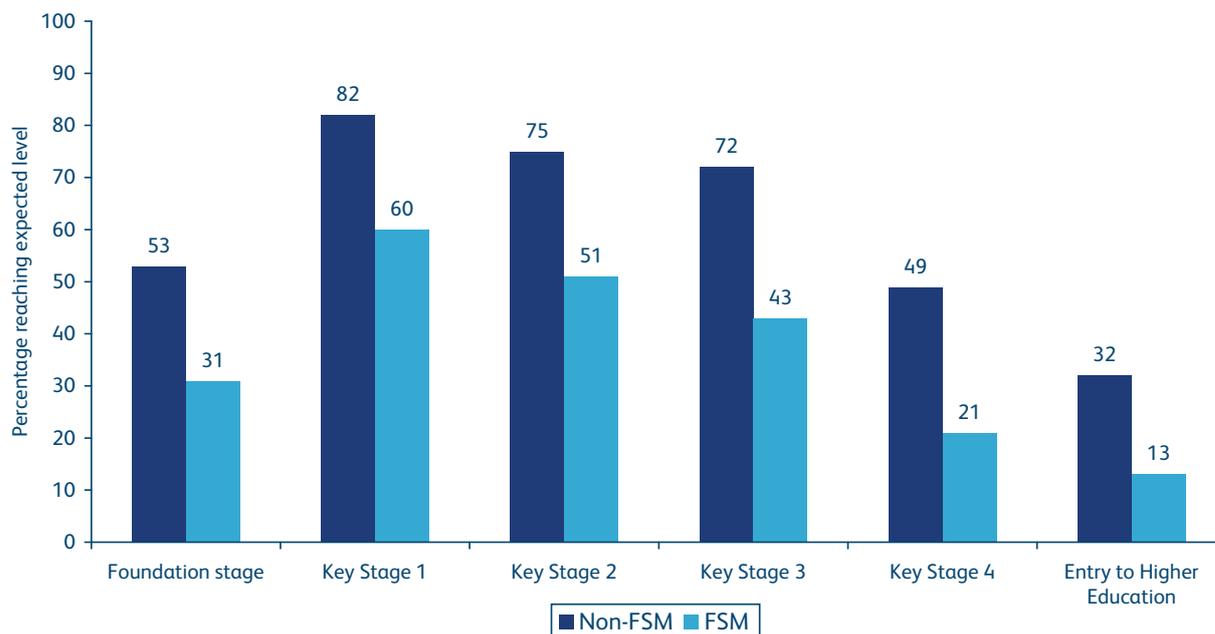
### (a) *Differences by Free School Meal status*

The gap between income groups already seen in the early years appears to widen over the school years, particularly between ages 7 and 14. Figure 11.10 presents the Department for Children, Schools and Families' (DCSF) summary of evidence on the comparative performance of children who are and are not receiving Free School Meals at each age in England through the school years.<sup>210</sup> The results are cross-sectional, rather than for the same cohort of children. As we have just seen in Figure 11.9, low income is associated with lower assessments in the 'Foundation Stage Profile' on school entry. Here the difference is shown as a 22 percentage point lower proportion of children receiving Free School Meals reaching the 'expected level' than others. In these terms, the gap was the same at Key Stage 1 (age 7), but wider for older children – 24 percentage points at Key Stage 2 (age 11), 29 percentage points at Key Stage 3 (age 14), and 28 percentage points at Key Stage 4 (age 16).<sup>211</sup> On leaving school, 32 per cent of those not receiving Free School Meals go on to higher education, but only 13 per cent of those receiving them.

<sup>210</sup> As we discussed in Chapter 3, this is an imperfect measure of low income as not all children from low-income families are entitled to Free School Meals, and not all those entitled actually claim or receive them.

<sup>211</sup> The 'expected level' at Key Stage 4 is 5 or more GCSE passes at grade C or above, including English and Maths.

Figure 11.10: Free School Meal attainment gap at different stages



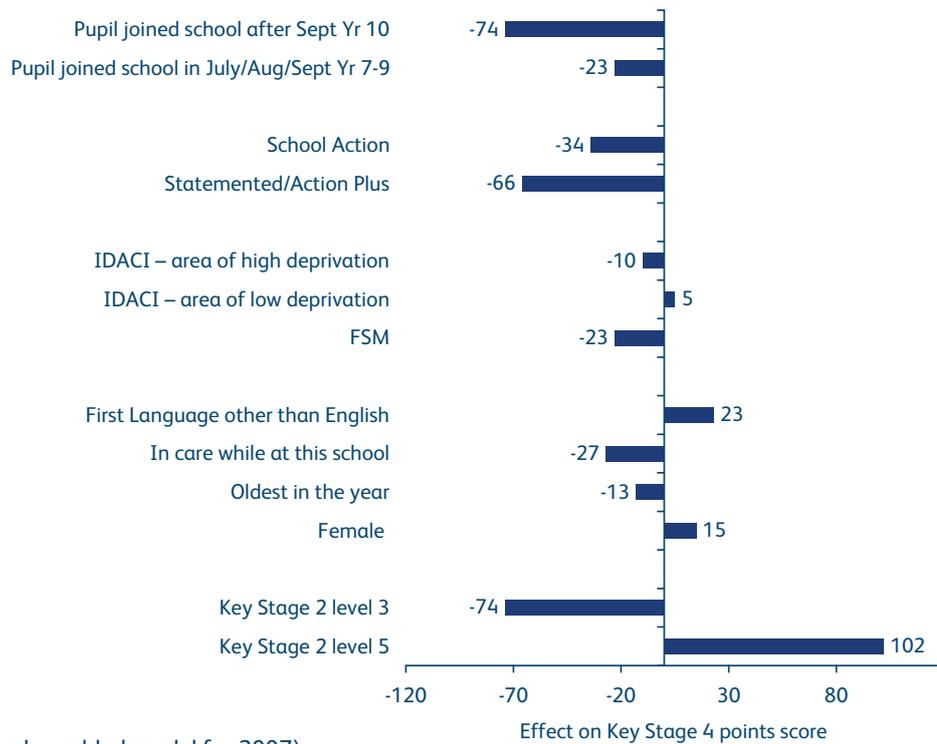
Source: DCSF (2009), figure 4.1.

Figure 11.11 shows some more specific DCSF analysis of factors associated with GCSE performance in England, showing the effects of each factor while allowing for the others, as in Figure 11.9. This analysis looked at the factors that affect performance between 11 and 16. None of these was as important as prior performance at Key Stage 2 (age 11) – in other words no other factor outweighed pupils’ starting point as they had left primary school (itself, of course, already associated with many features of their social background). However, there were *further* negative associations with gender (for boys), receiving Free School Meals, being in care, living in a deprived neighbourhood, having Special Educational Needs (see Box 11.2 below) and recent mobility between schools.<sup>212</sup> Having English as a second language was associated with improving performance at secondary school –the negative effect it had on earlier attainment wore off.<sup>213</sup>

<sup>212</sup> See Strand and Damie (2007) for discussion of the effects of frequent mobility.

<sup>213</sup> For more detailed discussion see Cassen and Kingdon (2007).

Figure 11.11: Factors that affect performance between 11 and 16



Source: DCSF (contextualised value added model for 2007).

**(b) Ethnicity and Free School Meals (FSM) status**

Using detailed data for a cohort of children who have now been assessed at ages 7 to 16, Simon Burgess, Deborah Wilson and Jack Worth investigated how differences developed between those from different ethnic groups depending on whether they were receiving Free School Meals or not as they moved through school.<sup>214</sup> The data they use are for **all** children who were aged 16 in 2007, and so were born in 1991. This means that findings for small population groups are not affected by sampling errors. The different panels of Figure 11.12 show the relative performance of boys and girls **not** on Free School Meals from different ethnic groups as they moved through school.<sup>215</sup> The upper panel compares the results of White British boys and boys from different Asian backgrounds. Figure 11.2(b) shows the equivalent picture for girls. While White British, Indian and Chinese children had similar average assessments at age 7 (boys below the overall average, girls above it), by 16, the Indian and Chinese children had much higher assessments – as we saw in Chapter 3. It also shows that Pakistani and Bangladeshi girls and Bangladeshi boys had much lower assessments at age 7 – reflecting some of what we already saw in terms of their position at

<sup>214</sup> Burgess, Wilson and Worth (2009). See Burgess, Briggs and Wilson (2005) for full details of their methodology.

<sup>215</sup> For comparability between ages, this is shown as the difference between the average score for each group and the overall average expressed as a proportion of the standard deviation of results at that age. As a rough benchmark, at Key Stage 4, one would expect around 44 per cent of pupils to be within 0.5 standard deviations of the mean. As the distribution is skewed, a group that is 0.5 points above the average is typically 16 places (out of 100) higher up the distribution than in the middle score.

school entry (Figure 11.9). However, their gap behind the White British group narrowed from then on – throughout for boys and particularly after 14 for girls. By GCSE it had effectively disappeared (for this group not on FSM). In other words, this ethnicity gap now disappears over the school years.

The lower panels compare White British children with Black Caribbean, Black African and Black Other backgrounds (not on FSM). In both cases Black Caribbean and Black Other Black children, and Black African girls tended to fall behind between ages 7 and 14, but the gap narrowed again by age 16, particularly for girls – indeed, disappeared for Black African children.<sup>216</sup>

Figure 11.13 shows results for the same ethnic group breakdowns, but this time for those receiving Free School Meals. The first panel shows that, in contrast to those not on Free School Meals, White British boys receiving Free School Meals were already assessed well behind the national average at age 7, and this position deteriorates further between 11 and 16. For White British girls on Free School Meals there was a slight improvement by 16, but they too remained well below the overall average for all children. Indian, Bangladeshi and Pakistani children on Free School Meals were also well below the national average at age 7, but improved their position as they moved through school, especially between 14 and 16. Indeed, by age 16 Indian and Bangladeshi children on Free School Meals had average performances approaching the national average for boys, and exceeding it for girls. Chinese children on free meals were assessed around the national average at age 7, but improved their performance through the school years, eventually reaching a point at age 16 where their GCSE results were better than those of any other ethnic group, even those **not** on free meals.

The various Black groups shown in the lower panels had, like White British children, worse assessments at age 7 if they received Free School Meals, and ones that also deteriorated by age 14. However, in contrast to the White British children, their position **improved** sharply between 14 and 16 for girls and for Black African boys.<sup>217</sup> Looking at the detailed results, by 16 the positions of White British and Black Caribbean boys receiving Free School Meals (alongside boys from mixed White and Black Caribbean backgrounds) were below that of any of the groups identified in this way, with the exception of Gypsy and Traveller children. As the figures show, Traveller and Gypsy boys and girls start a long way behind the overall average and then fall further behind, even for those not receiving Free School Meals.

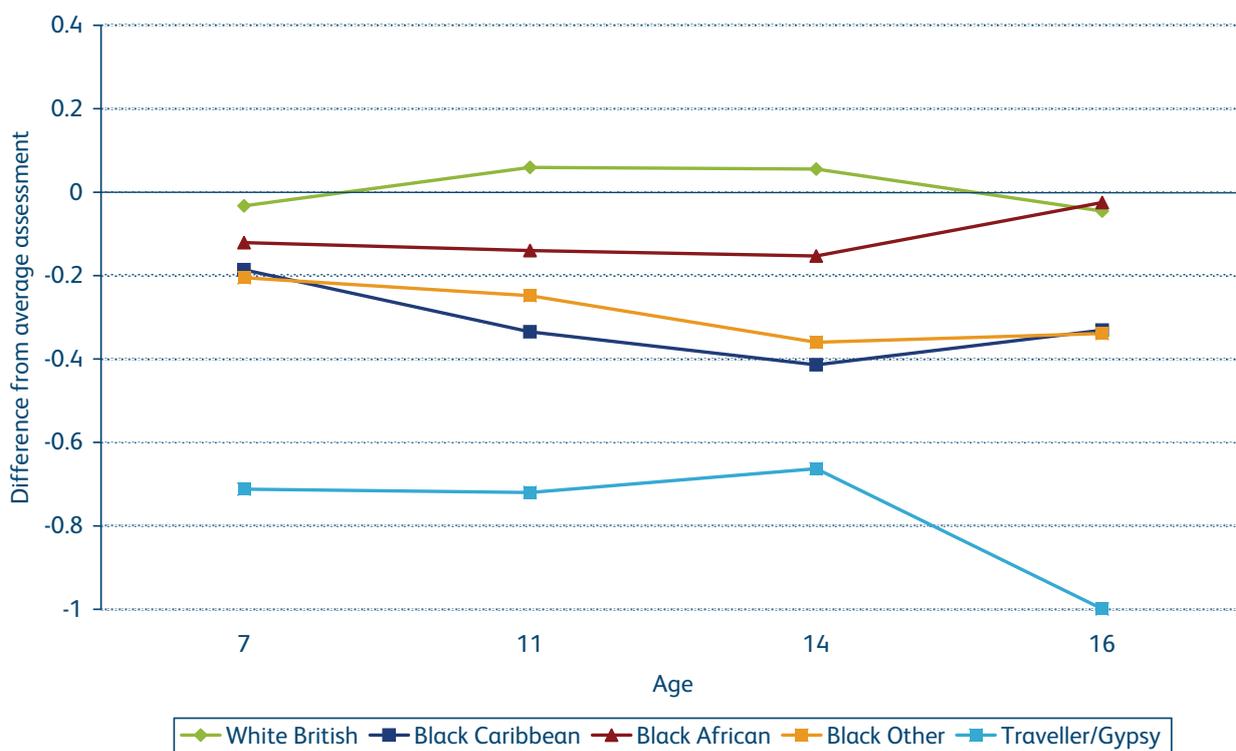
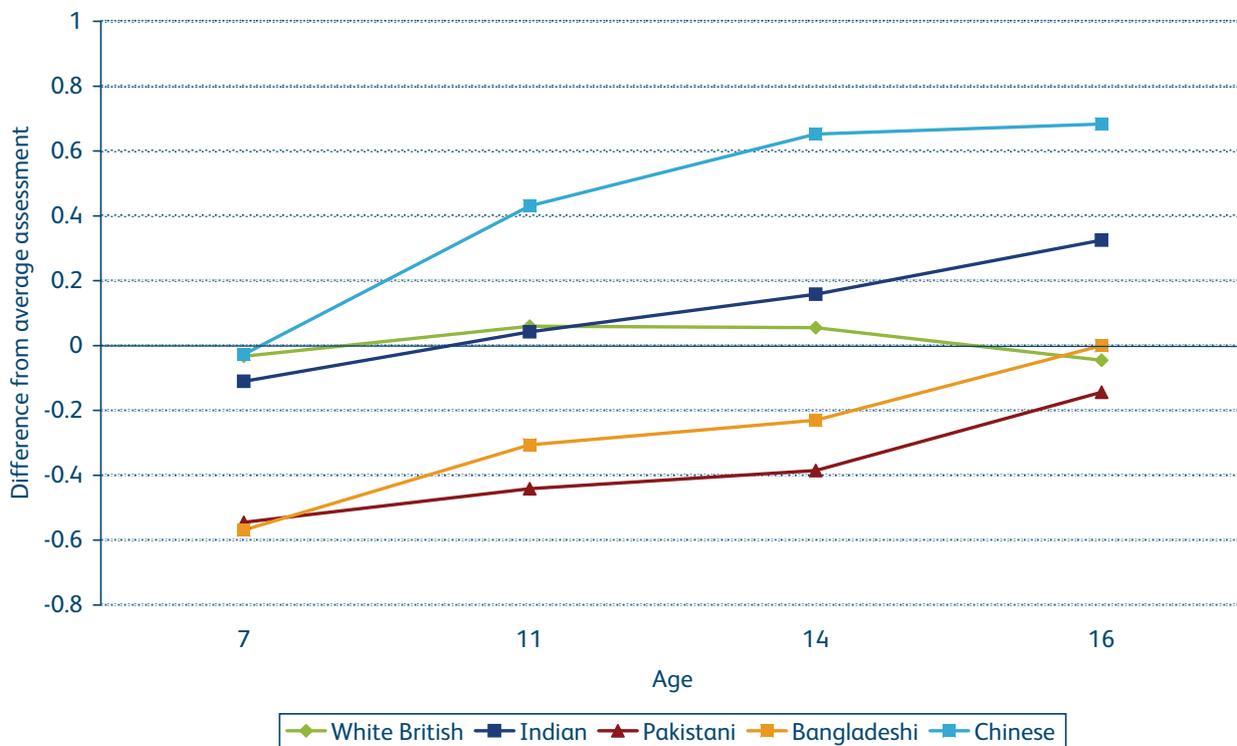
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<sup>216</sup> The research report (Burgess, Wilson and Worth, 2009) shows results for other groups.

<sup>217</sup> The detailed results show that Traveller and Gypsy children receiving Free School Meals have average assessments that remain the lowest of any of these groups that the researchers differentiate throughout the school years.

Figure 11.12: Differences from average assessments: Children not on Free School Meals, England

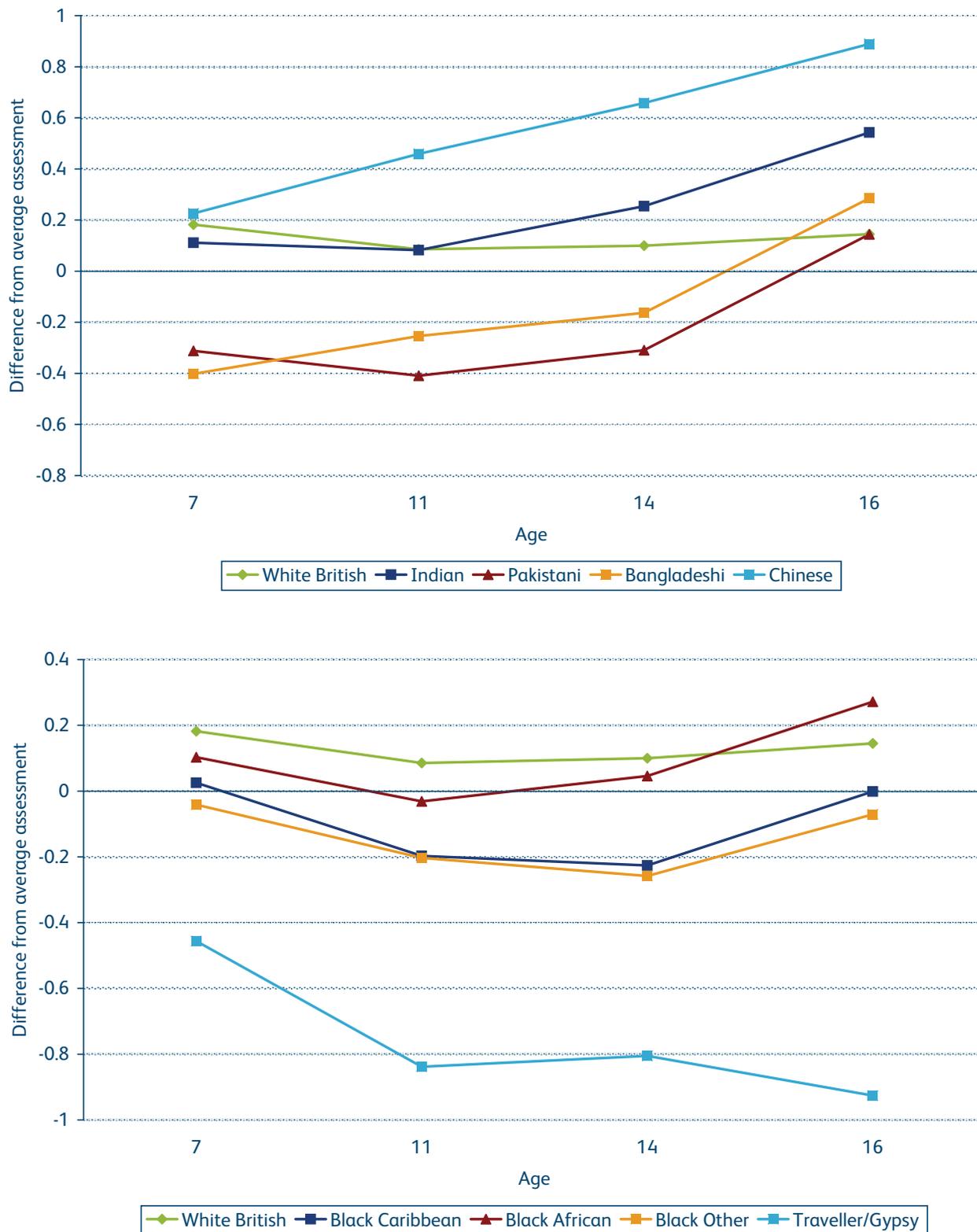
(a) Boys



# An anatomy of economic inequality in the UK

Figure 11.12: (Continued)

(b) Girls



Source: Burgess, Wilson and Worth (2009), figures 7a and 7b. The vertical scale shows the difference between the average score for a group and the overall average at that age, expressed as a proportion of the standard deviation of scores at that age.

Figure 11.13: Differences from average assessments: Children on Free School Meals, England

(a) Boys

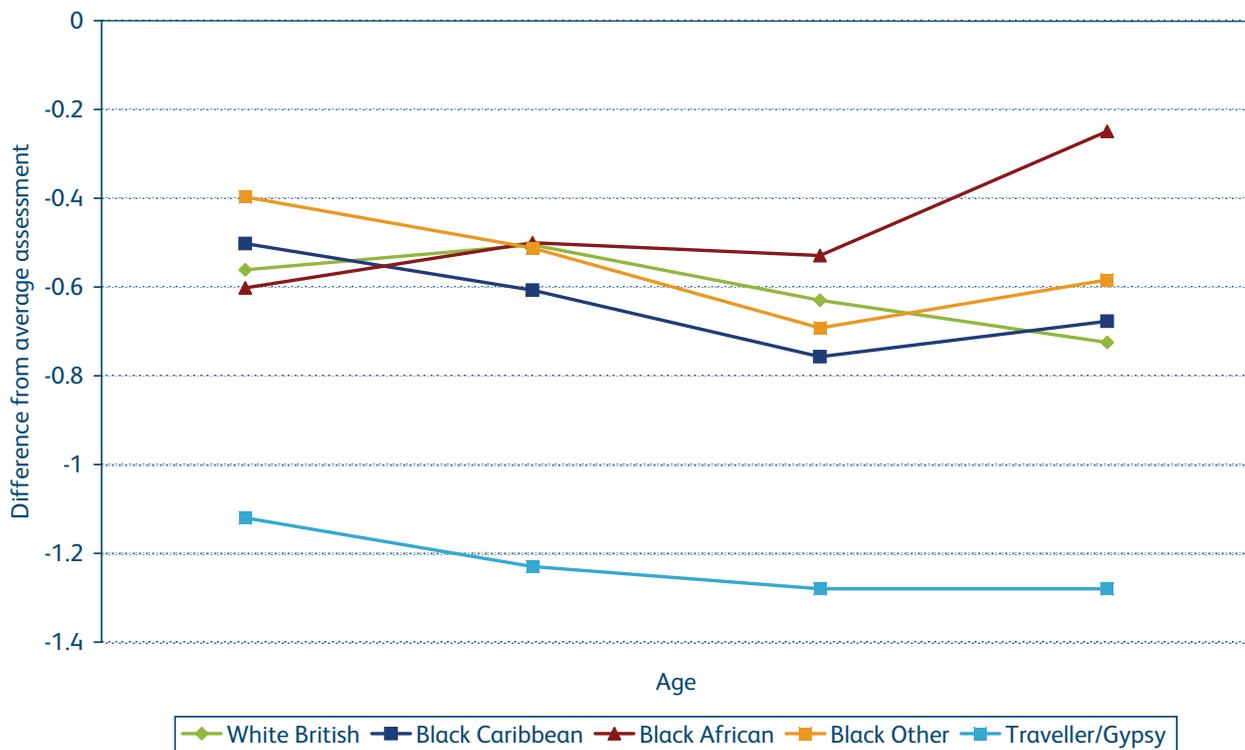
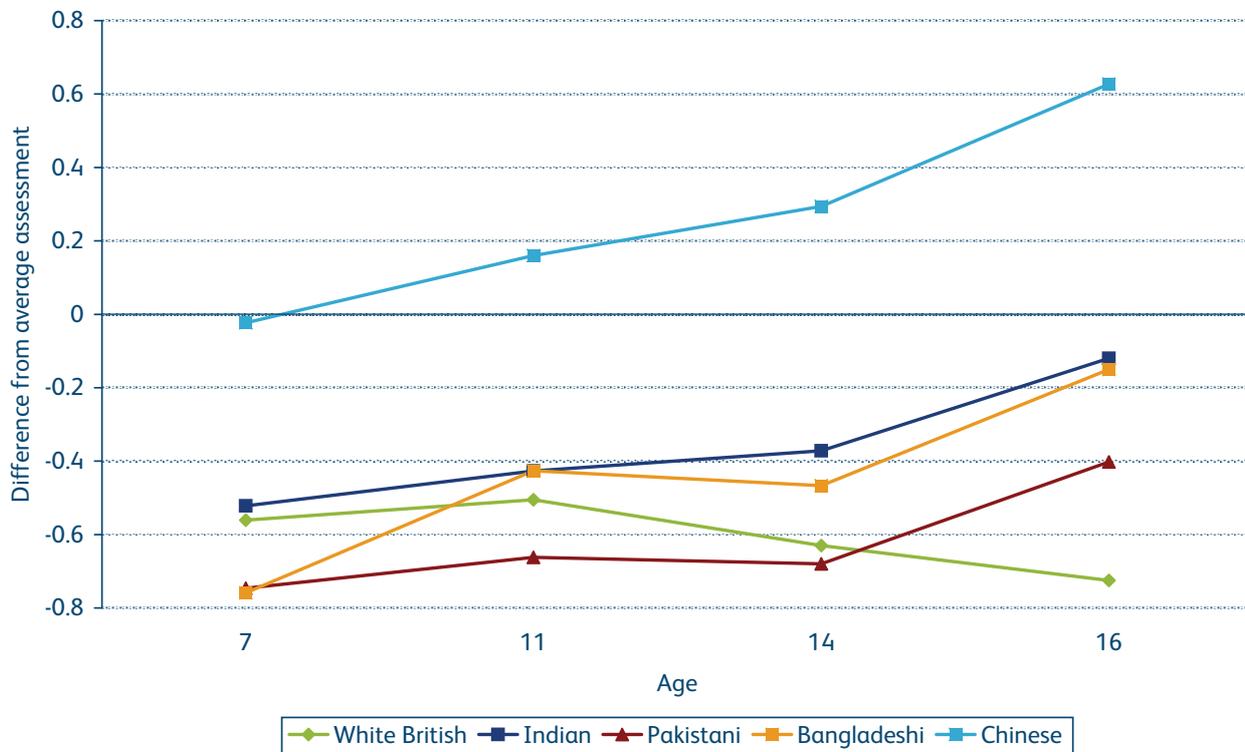
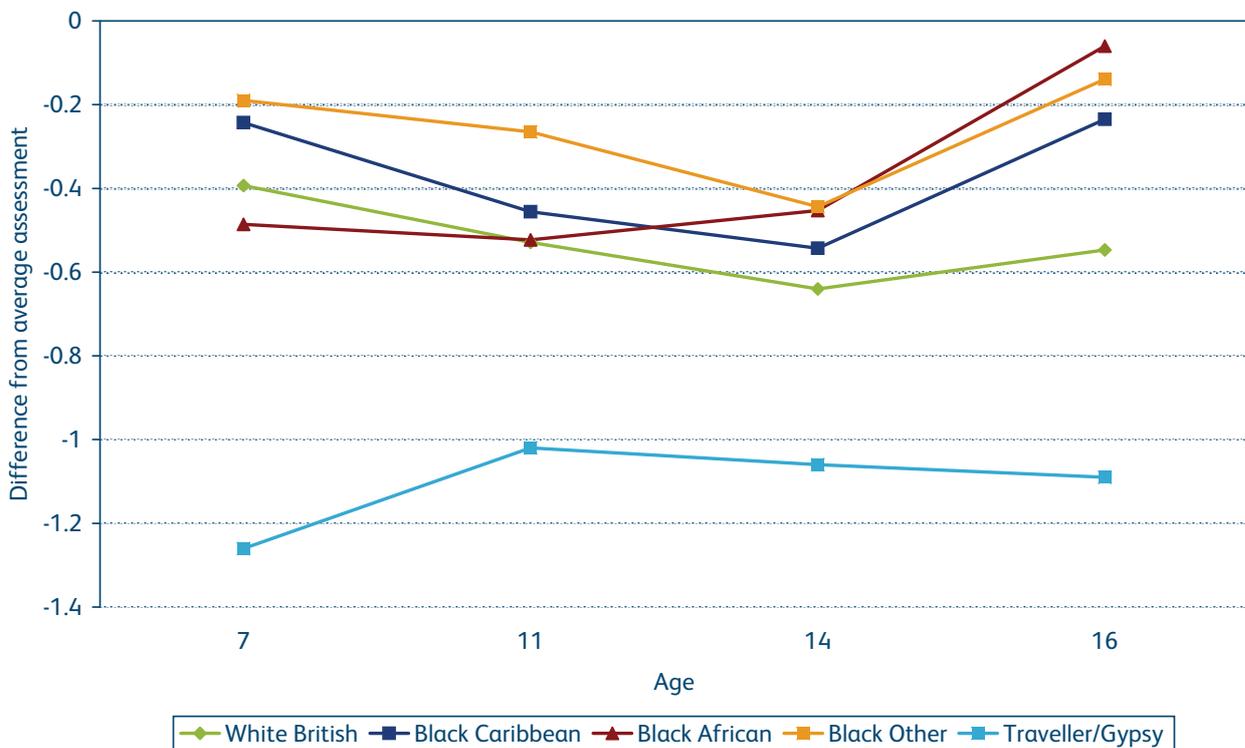
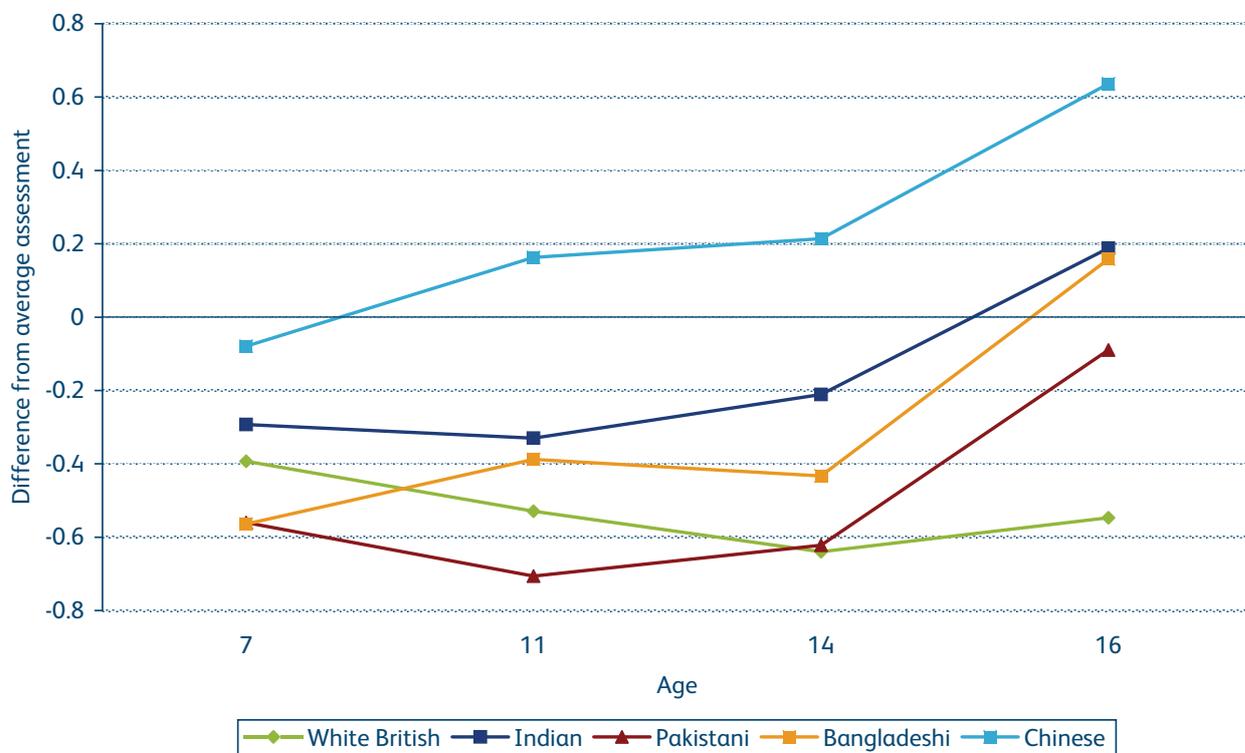


Figure 11.13: (Continued)

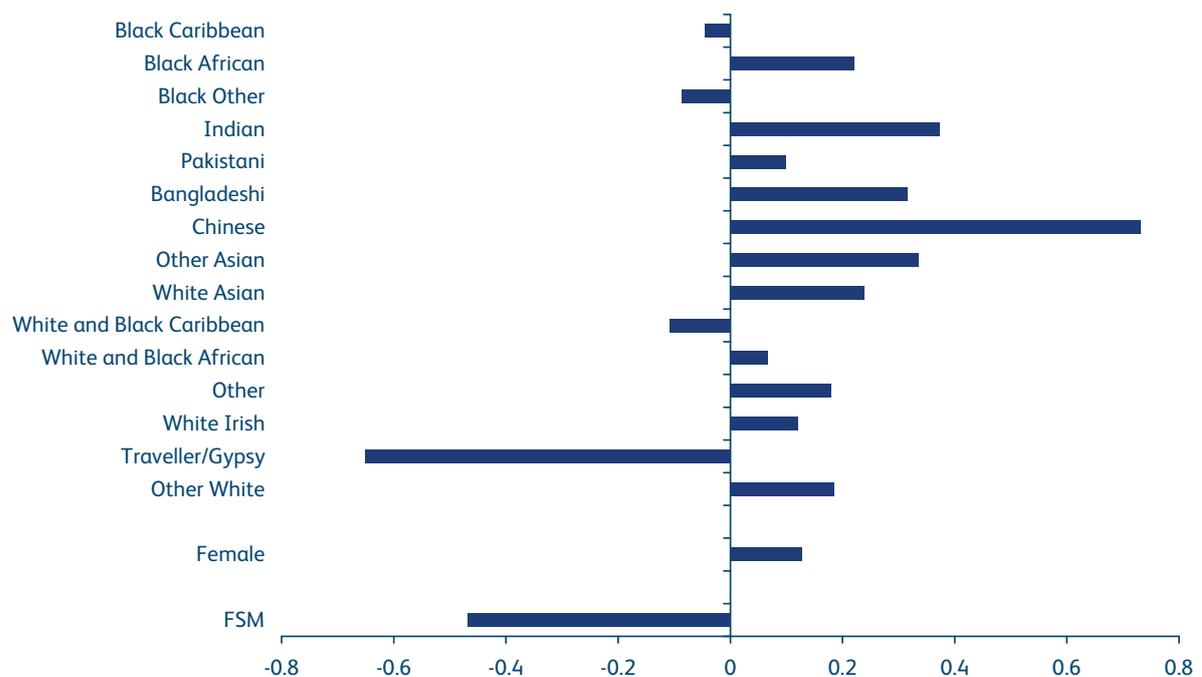
(b) Girls



Source: Burgess, Wilson and Worth (2009), figures 6a and 6b. The vertical scale shows the difference between the average score for a group and the overall average at that age, expressed as a proportion of the standard deviation of scores at that age.

Figure 11.14 shows the researchers' analysis of the effects of ethnicity on the age 16 results, controlling some other pupil characteristics (but not prior performance) in a similar way to the analysis in Figure 11.11. The figures given for each ethnic classification give a comparison with the results of White British children. Most of the other ethnic groups have positive coefficients – by age 16 they had better results on average, when controlling for gender, Special Educational Needs and Free School Meals status. The groups with worse performance are Black Caribbean, Black Other, mixed White and Black Caribbean, and – to a very large degree – Traveller and Gypsy children. In the first three cases the effect was smaller than the average difference between boys and girls, but in the latter it was far larger. The figure also shows that the 'Free School Meal effect' was larger than any of the other associations shown, with the exception of the higher performance of Chinese pupils and lower performance of Traveller and Gypsy children.<sup>218</sup>

Figure 11.14: The effect of ethnicity, gender and Free School Meals receipt on GCSE performance controlled by other factors



Source: Burgess, Wilson and Worth (2009). The horizontal scale shows the impact on a pupil's score, expressed as a proportion of the standard deviation of scores at 16, controlling for other factors.

(c) *Social factors as a whole*

In a further analysis of assessment of children from age 3 to age 16, Alissa Goodman, Luke Sibieta and Elizabeth Washbrook combined results from three samples of children from three different studies that have each followed their sample children as they get older: the MCS, born in 2000-01 at ages 3 and 5 (see (a) above); the Avon Longitudinal Study of Parents and Children (ALSPAC), born in 1991-92 at ages 7 and 11; and the Longitudinal Survey of Young People in England (LSYPE), born in 1989-90; at ages 11, 14 and 16.<sup>219</sup> The advantage of

<sup>218</sup> Burgess, Wilson and Worth (2009) also present results investigating interaction of FSM-eligibility with gender and ethnicity, but these do not change the findings presented here.

<sup>219</sup> The surveys differ in their coverage – they use data for the UK from MCS; the ALSPAC data are for all children in the Bristol area; and the LSYPE is for England (Goodman, Sibieta and Washbrook, 2009).

these surveys is that they contain much more information about parental circumstances and income than the school records used above. The panels of Figure 11.15 show the patterns over time for six of the factors they investigated, with the scale of differences between the least and most advantaged groups summarised in Figure 11.16.<sup>220</sup> In each case, the differences shown are ‘raw’ effects, that is, not controlling for others. As the factors are strongly associated with one another, the differences shown are not cumulative.

What is really striking is that the socio-economic differences tended to **widen** between ages 3 and 14, while the ethnic differences narrowed (as we saw in the last subsection).

The first panel shows the gaps between children by family income group (fifths). These widened between 3 and 5 and again (in the Bristol area study) between 7 and 11, and in the national sample between 11 and 14. There was, however, a narrowing of the difference between those with family incomes in the poorest and richest fifths between 14 and 16 (on average, and so consistent with the improvement at that age for all groups on Free School Meals except White boys shown in the last subsection). The second panel also shows a widening in the gaps by father’s occupation (close to the occupational social class definitions used in Chapters 3 to 8) between 3 and 5 and between 11 and 14 (but with no widening in the Bristol sample between 7 and 11). Again, there was some narrowing between top and bottom groups by 16. The panels showing the results by mother’s education and area deprivation show a similar pattern to those by income.

The pictures in the fifth and sixth panels contrast with these, however. Looking at changes by family marital status, children living with married parents did better throughout, but that advantage became widest through secondary school. As with pre-school children, family marital status is, of course, highly associated with the other factors (including income), so this picture looking at family marital status by itself does not show which is the dominant causal factor. The final panel shows the position by ethnicity. As would be expected from the last subsection, this is very different. There were wide ethnic gaps at 3 and 5, but these were smaller at age 11 and – apart from the better performance of Indian children – the groups shown clustered together at age 16.

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<sup>220</sup> The detailed report, Goodman, Sibieta and Washbrook (2009), also shows differences by mother’s age at child’s birth, gender, housing tenure, region, SEN status, and quarter of birth.

Figure 11.15: Assessments of children aged 3-16 by social group

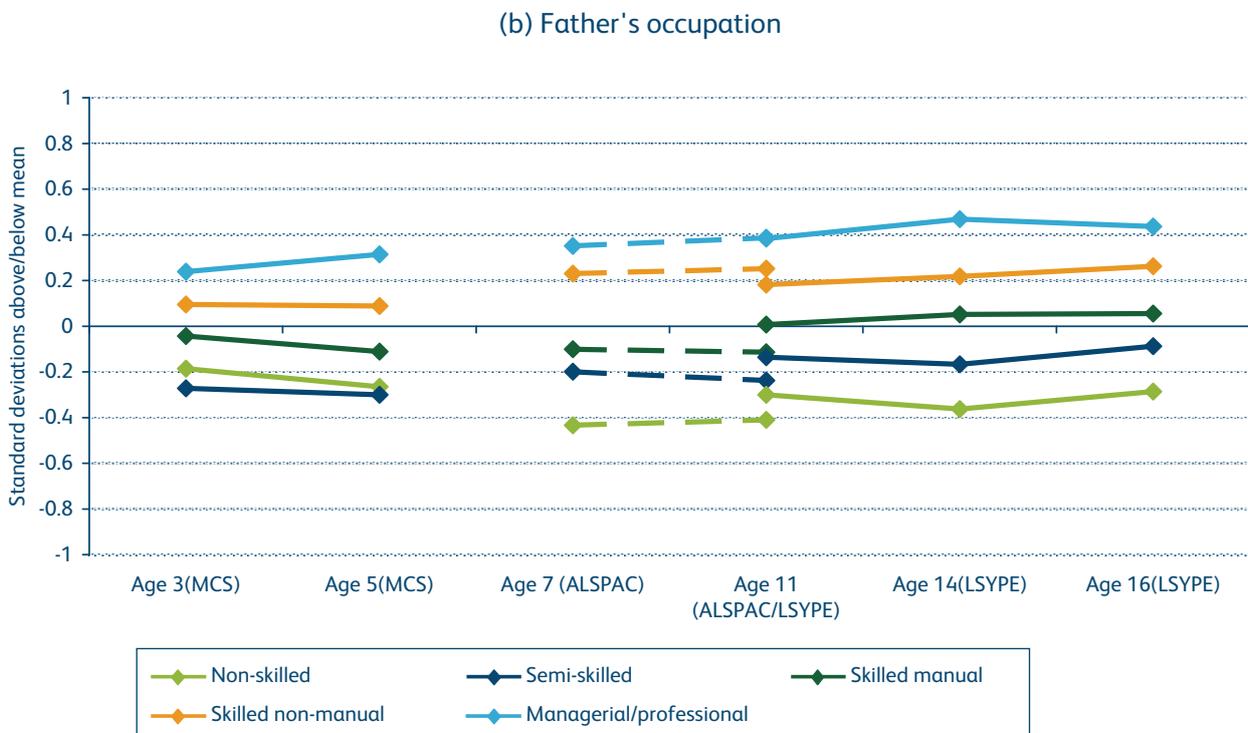
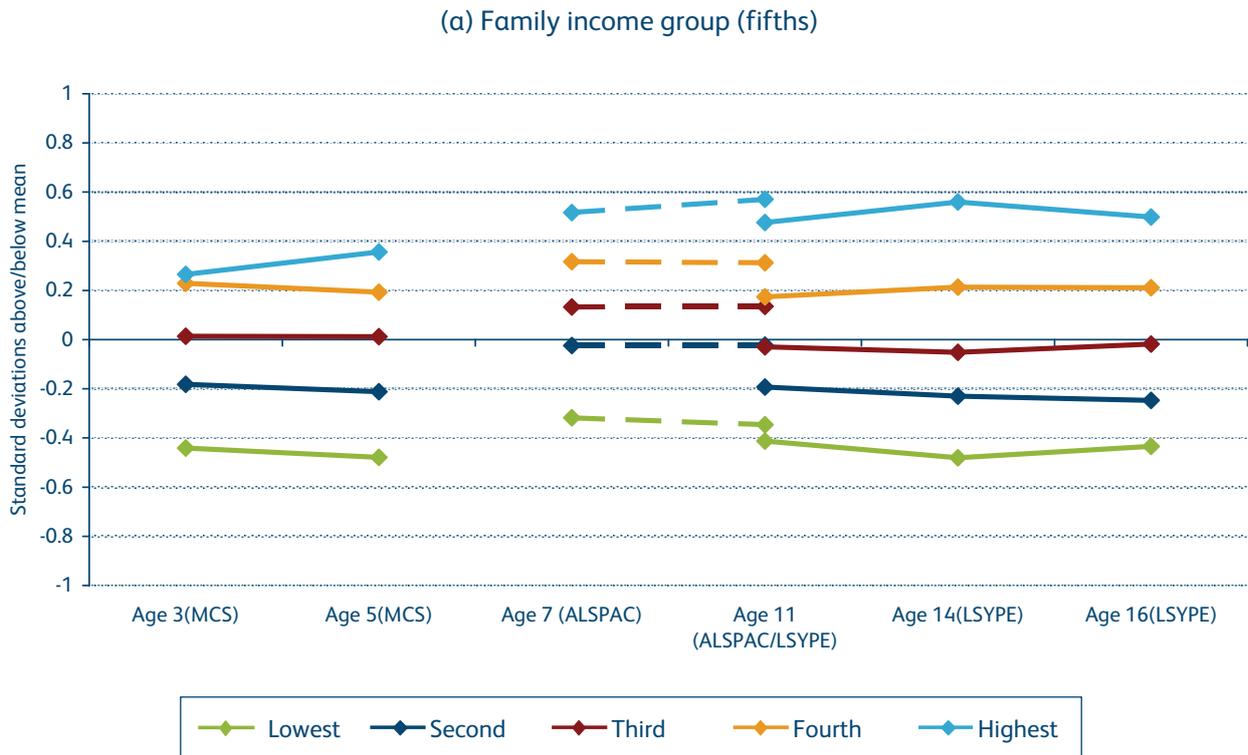
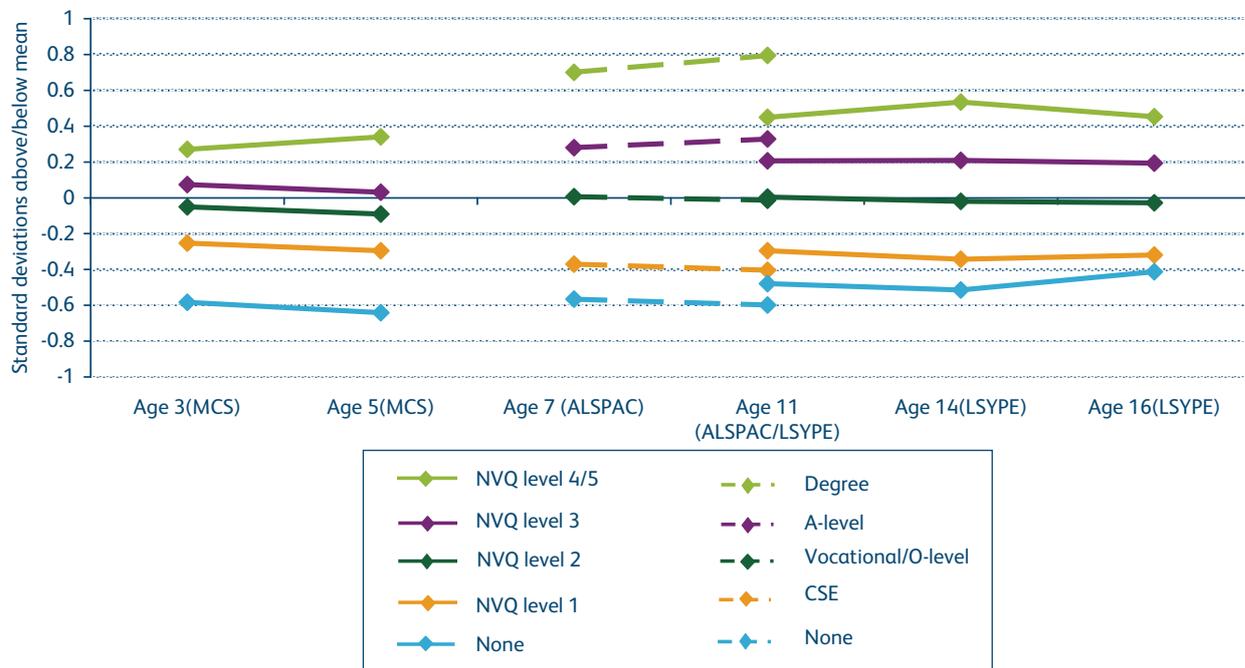


Figure 11.15: (Continued)

## (c) Mother's education



## (d) Area deprivation (fifths)

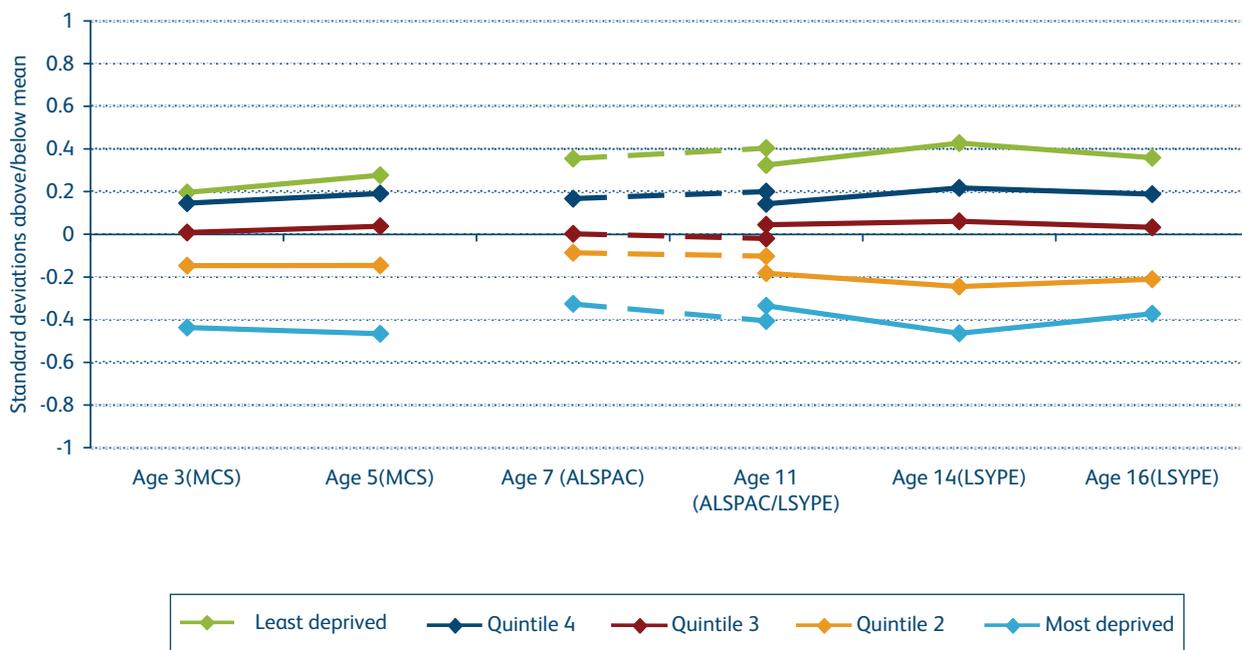
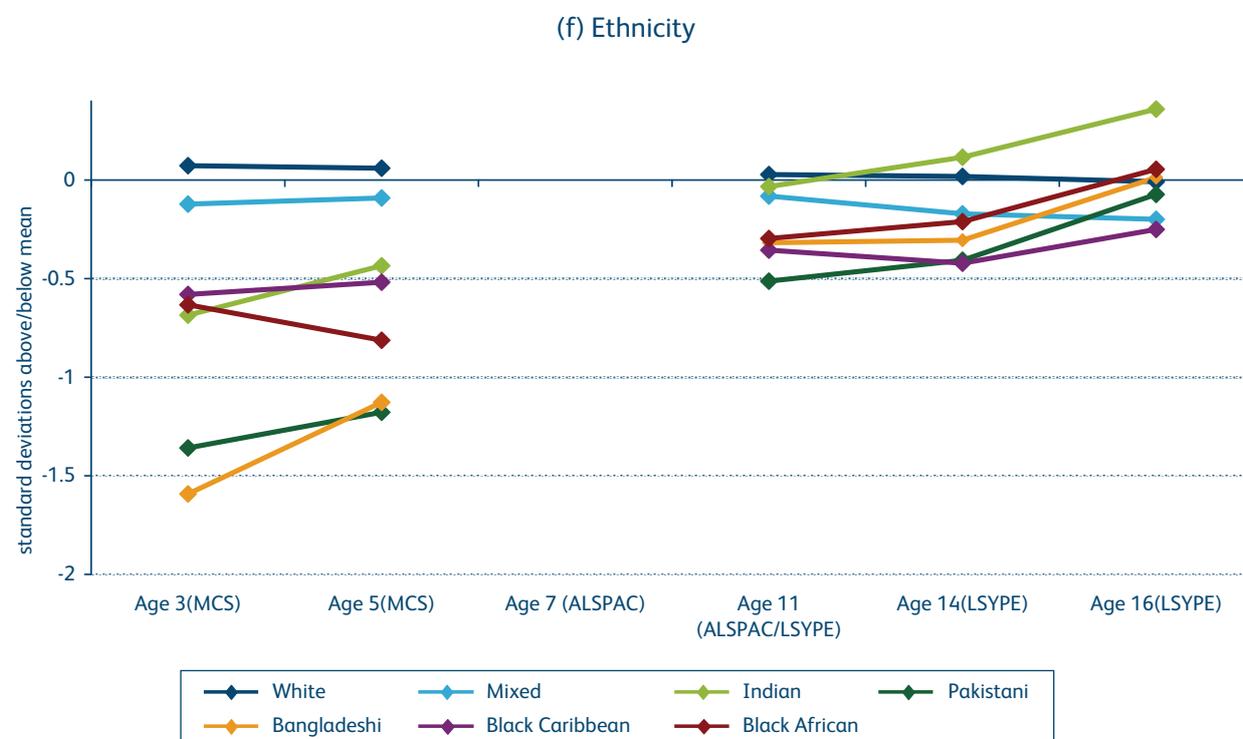
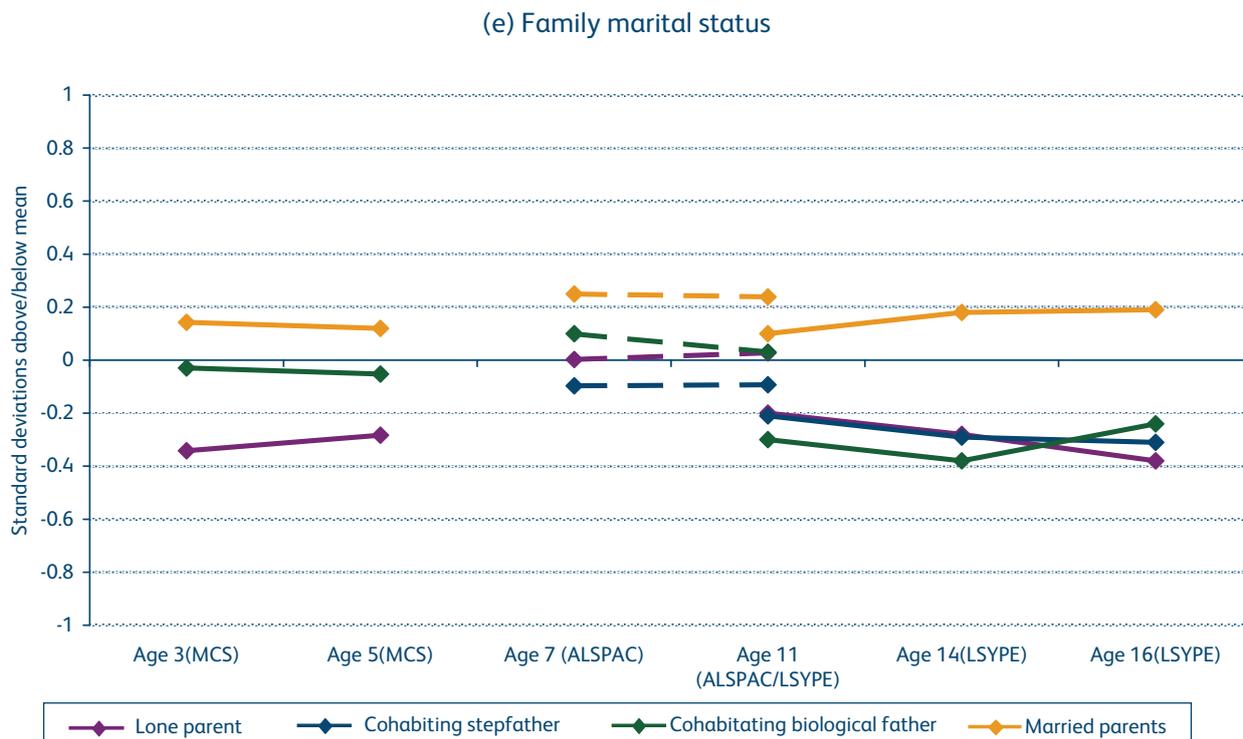


Figure 11.15: (Continued)

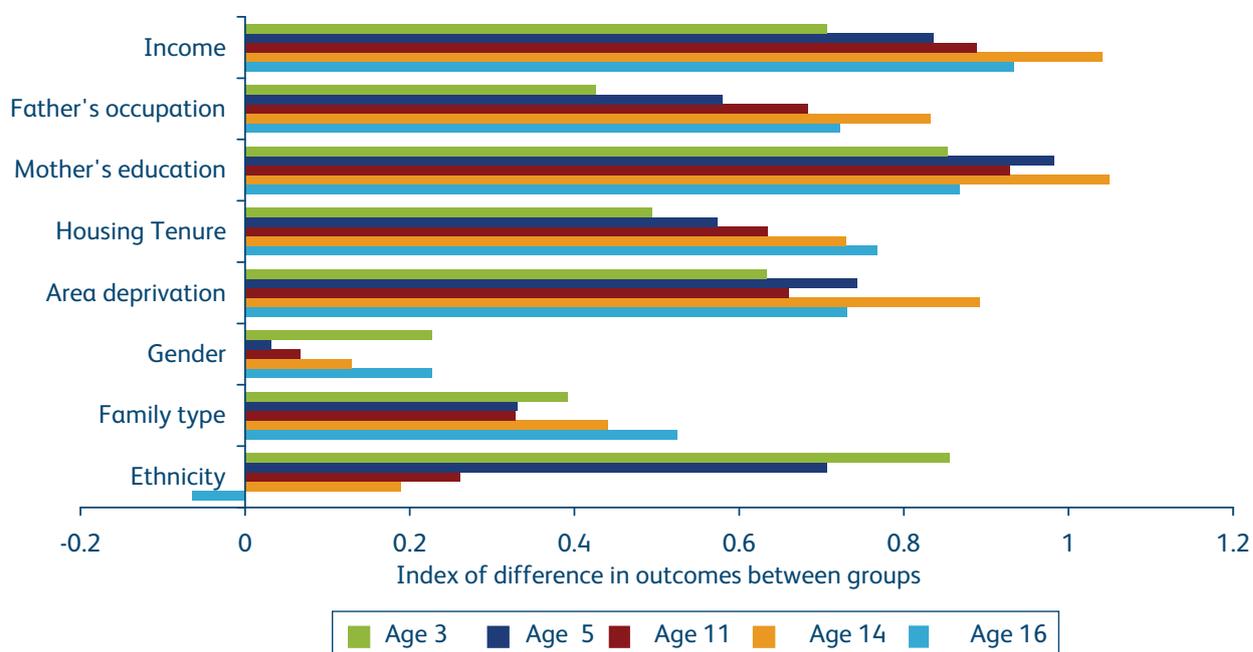


Source: Goodman, Sibieta and Washbrook (2009). The vertical scale shows the difference between the average score for a group and the overall average at that age, expressed as a proportion of the standard deviation of scores at that age.

## An anatomy of economic inequality in the UK

The differences between lowest and highest assessed groups at each stage are summarised in Figure 11.16 (including differences by tenure and gender).<sup>221</sup> It is striking that those reflecting socio-economic differences – income, father’s occupation, mother’s education, housing tenure and area deprivation – started already large and widened further up to age 14, when they narrowed a little. The difference between family types followed a more uneven pattern, but widens between 7 and 16. The pattern by ethnic group was completely different, however. The difference at age 3 between lowest and highest assessed groups was larger than that between income groups, but by 16 the gap had effectively disappeared. In these results, the gender gap narrowed between 3 and 5,<sup>222</sup> but widened for older children. It remained far smaller, however, than the gaps based on income or social class.

Figure 11.16: Overview of differences in assessments by category, age 3-16



Source: Goodman, Sibieta and Washbrook (2009).

Note: The differences shown are those between ‘top’ and ‘bottom’ groups where categories are clearly ordered (i.e. income, parental social class, education, tenure and area deprivation). They are differences between married and not-married (family type), girls and boys (gender), and White children compared to the other group with lowest average assessment at each age (ethnicity).

<sup>221</sup> For ethnicity, the comparison is between the average standard deviation gap between White and ethnic minority children. The relative progress of ethnic minority children through the school years, combined with the rising relative position of Indian children in particular, means that the average attainment at 16 of the minority children taken together is above that of White children.

<sup>222</sup> Note that this study uses a different assessment of children in the MCS at age 5 from the study used in Section 11.2, and so the results vary slightly, in particular not showing a gender gap at 5, unlike Figure 11.9.

(d) *Special Educational Needs*

Box 11.2 reports research carried out for us on the impact of different kinds of Special Educational Needs (SEN) on children's attainment at age 16 (in England). It shows how varied the categories covered by 'SEN' are, and how much variation there is in attainment between the different categories. For most groups, such as children with sensory impairments or physical needs, average attainment at 16 is closely related to attainment at the end of primary school. However, this is not the case for pupils with Behavioural, Emotional and Social Difficulty: their attainment at 16 is lower than would be expected given their average attainment levels at 11.

**Box 11.2: The educational performance of pupils with special educational needs in England**

About one-fifth of school children in England are identified by their schools or local authorities as having some form of Special Educational Needs. Official statistics show their educational performance at Key Stages (see Figure 3.3). However, much less is known about the performance of pupils with different types of Special Educational Needs. Francois Keslair and Sandra McNally carried out research to fill this gap and assess the performance of children with various types of Special Educational Needs as they progress through the education system.<sup>223</sup>

School data include information on eleven categories of Special Educational Needs, which are grouped into four main areas. Table 11B below shows these as well as the corresponding percentage of pupils with Special Educational Needs.

The Special Educational Needs population, 20 per cent of the total school population, is very varied. The research reveals that boys are more likely to be classified in all of the Special Educational Needs types than girls. In particular, they are over-represented among those classified as having Communication and Interaction Needs and as having Behaviour, Emotional and Social Difficulty.

Pupils from economically disadvantaged families, as measured by eligibility to receive Free School Meals, are over-represented in every type of Special Educational Needs.

Black students are over-represented and Chinese pupils are under-represented among most Special Educational Needs types, except for Speech, Language and Communication needs, where Chinese pupils are greatly over-represented. Asian students are under-represented in many Special Educational Needs categories. They are overrepresented among students with Moderate Learning difficulties.

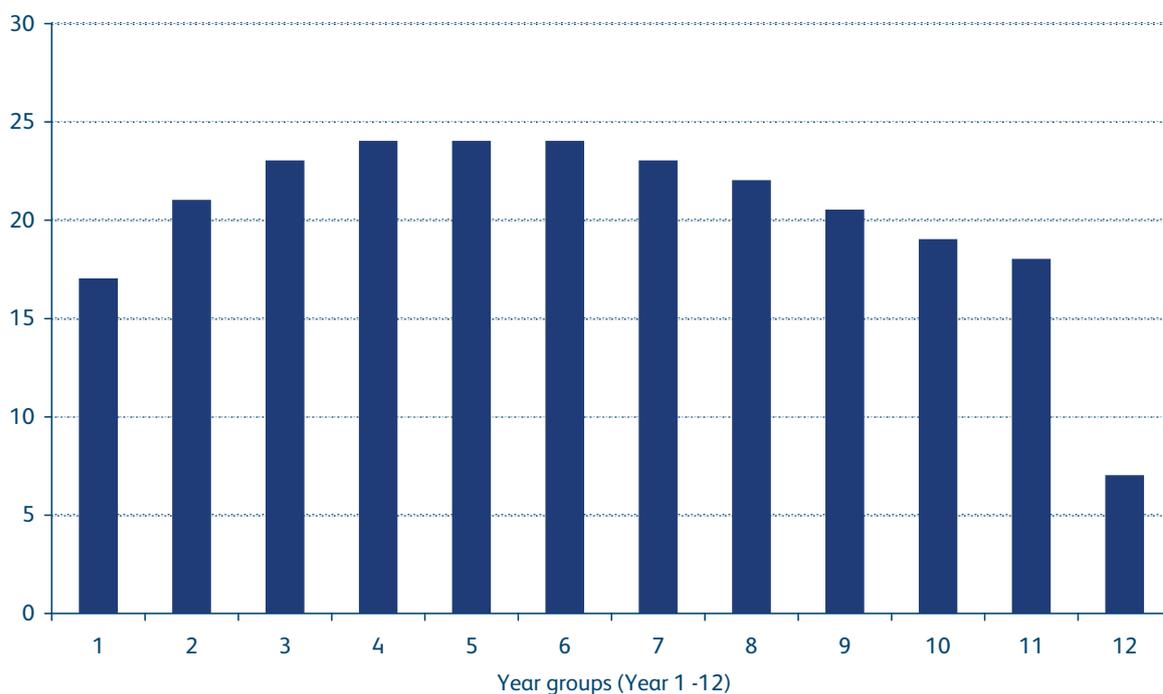
<sup>223</sup> Keslair and McNally (2009).

Table 11B: Categories of Special Educational Needs and percentage of pupils

Special Educational Needs type	% of Special Educational Needs pupils
<b>Cognition and Learning Needs</b>	
Special Learning Difficulty (SpLD)	
Modern Learning Difficulty (MLD)	
Severe Learning Difficulty (SLD)	
Profound and Multiple Learning Difficulty (PMLD)	46
<b>Behaviour, Emotional and Social Development Needs</b>	
Behaviour, Emotional and Social Difficulty (BESD)	16
<b>Communication and Interaction Needs</b>	
Speech, Language and Communication Needs (SLCN)	
Autistic Spectrum Disorder (ASD)	11
<b>Sensory and/or Physical Needs</b>	
Visual Impairment (VI)	
Hearing Impairment (HI)	
Multiple-Sensory Impairment (MSI)	
Physical Disability (PD)	4

Source: Keslair and McNally (2009) from National Pupil Database, 2006

Figure 11A: Percentage of pupils on any type of Special Educational Needs programme in each Year Group (Years 1-12, 2006)



The figure shows that 17 per cent of children are put on a Special Educational Needs programme in the first year of primary school. This increases gradually to 24 per cent by Year 4 and stays the same until Year 6, the final year of primary school. In secondary school, the percentage of children on Special Educational Needs programmes declines, to reach just above 18 per cent at the end of compulsory schooling in Year 11. However, there are differences by type of Special Educational Needs. Some, for instance Physical Disability, show no clear profile, but others, such as Speech, Language and Communication Needs being more common among younger children and Behaviour, Emotional and Social Difficulty more common among teenagers.

The research finds that there are large gaps in the exam performance of students with all types of special needs compared to other pupils, both in primary and secondary school. The gap is particularly wide for those classified as having Severe Learning Difficulty or Profound Multiple Learning Difficulty.

Wide gaps remain also when pupils are compared on a like-with-like basis (at least, according to observable characteristics). The negative association between Special Educational Needs type and school outcome does not reflect a potential association between Special Educational Needs type and characteristics such as gender, ethnicity, Free School Meal eligibility, region etc: pupils of each Special Educational Needs type have a high probability of doing worse than other pupils with the same demographic characteristics, who attend the same school and have the same attainment at Key Stage 1.

More specifically, Table 11C shows the association between Special Educational Needs type and GCSE points score, starting with a raw correlation (Column 1) and then with the correlation after controlling for demographic factors, such as gender and ethnicity, and whether on Free School Meals and English as an additional language (Column 2). Attainment at the end of primary school is controlled for in Column 3, while Column 4 presents results for those pupils who attended the same primary school. The numbers in the cells show how far away (above or below) pupils with a specific Special Educational Needs type are from the mean of the overall population. All this allows us to examine how the raw association between Special Educational Needs type and GCSE points score presented in Column 1 is mediated by demographics, prior attainment and school attended.

Clearly, there is a negative association between all Special Educational Needs types and GCSE points score, this being more pronounced for pupils with Profound and Multiple, and Severe, Learning Difficulties, and less for pupils with Visual Impairment and Hearing Impairment. Controlling for gender, ethnicity, having English as an additional language and receiving Free School Meals (Column 2) reduces the extent of this association only marginally. However, the association is much reduced after prior attainment at primary school is taken into account (Column 3), and actually becomes positive for pupils with profound and multiple learning difficulties. A further but very marginal reduction in the association results when considering pupils who attended the same primary school (Column 4).

However, results for pupils with Behavioural, Emotional and Social Difficulty depart from the general picture presented above. After taking account of all the factors, the extent of the association between Special Educational Needs type and GCSE outcome is much larger than that of other Special Educational Needs types.

Table 11C: Association between Special Educational Needs type and GCSE points score (end of secondary school, age 16)

	Association (see text):			
	1	2	3	4
A. Cognition and Learning Needs				
Special Learning Difficulty (SpLD)	-19.54	-18.72	-2.49	-1.89
Modern Learning Difficulty (MLD)	-29.26	-27.43	-3.65	-2.45
Severe Learning Difficulty (SLD)	-44.76	-41.95	2.75	0.46
Profound and Multiple Learning Difficulty (PMLD)	-47.47	-45.35	2.01	-2.07
B. Behaviour, Emotional and Social Development Needs				
Behaviour, Emotional and Social Difficulty (BESD)	-29.44	-27.06	-14.98	-13.71
C. Communication and Interaction Needs				
Speech, Language and Communication Needs (SLCN)	-22.31	-22.07	-1.16	-0.04
Autistic Spectrum Disorder (ASD)	-25.30	-22.61	-2.65	-3.18
D. Sensory and/or Physical Needs				
Visual Impairment (VI)	-12.38	-10.39	-1.92	-1.71
Hearing Impairment (HI)	-12.92	-12.00	-0.62	-0.05
Multiple-Sensory Impairment (MSI)	-21.46	-19.60	-2.56	-3.09
Physical Disability (PD)	-17.80	-15.82	-1.40	-1.48

Source: Keslair and McNally (2009).

Note: Mean in overall population is 43.07, and standard deviation is 22.94. Therefore the -19.54 in the first cell of the first column means that pupils with SpLD have a score that is 0.85 (19.54/22.94) standard deviations below the average.

### Summary

Overall data for assessments in English schools show that the gap between income groups already seen in the early years appears to widen over the school years, particularly between ages 7 and 14 (as measured by the difference between children receiving Free School Meals and others). Analysing changes in progression between 11 and 16, while the most important factor is prior attainment at 11, there are **further** negative associations with being a boy, receiving Free School Meals, being in care, living in a deprived neighbourhood, having Special Educational Needs, and recent mobility between schools.

Looking at assessments of all English school-children born in 1991 from age 7 to age 16, differentiated by gender, ethnicity and Free School Meals status, positive features include the ways in which Pakistani and Bangladeshi children caught up during compulsory schooling (even if receiving Free School Meals), and in which many of the groups with lower assessments at 14 had reduced the gap with the national average by 16. To set against this, for all ethnic groups the position of those receiving Free School Meals (apart from Chinese children) was already well below the national average at age 7, and remained below it at age 16 (apart from Indian and Bangladeshi children). The position of White British children on Free School Meals deteriorated between 7 and 14, and for White British and Black Caribbean boys deteriorated further by 16. Indeed, by 16 the position of White British boys receiving free meals (alongside boys from mixed White and Black Caribbean backgrounds on free meals) was below that of any of the groups identified in this way, with the exception of Gypsy and Traveller children.

Looking at survey data including more detail on family background, it is striking that those reflecting socio-economic differences – income, father’s occupation, mother’s education, housing tenure and area deprivation – started at already large levels before school and widened further up to age 14, when they narrowed a little by 16. The pattern by ethnic group was completely different: the gap at age three between lowest and highest assessed groups was larger than between income groups, but by 16 it had effectively disappeared. In these results, the gender gap narrowed between 3 and 5, but widened for older children. It remained far smaller, however, than those based on income or social class.

For children with sensory impairments or physical needs, differential attainment at the end of secondary school is largely predicted by attainment levels at the end of primary school. By contrast, those with Behavioural and Emotional Support Needs have attainment levels which fall further behind during secondary school.

### 11.4 Higher education and labour market entry

Box 11.3 shows analysis by the (then) Department of Innovation, Universities and Skills (DIUS) which shows how closely linked participation in higher education by young people is to their GCSE results: more than three-quarters of young men and women who achieved the best results (more than 49 points in the GCSE scores used) in 2002-03 were in higher education by 2006-07. Of pupils with the lowest attainment at 16 (under 33 points), fewer than a fifth went

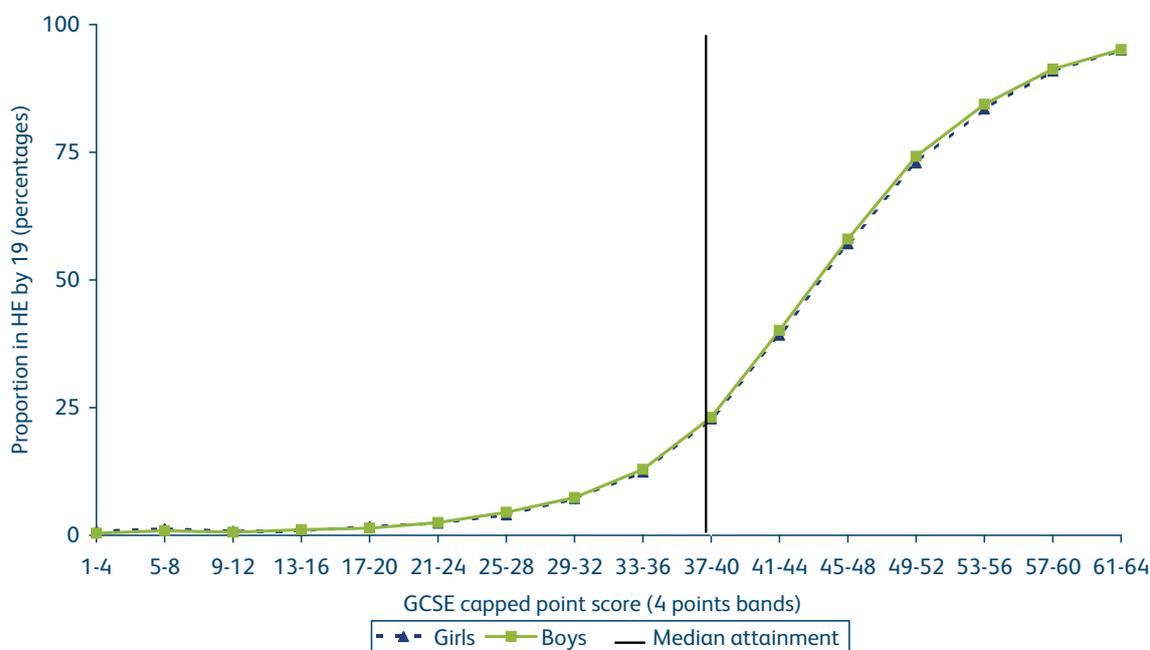
on to university. The pattern was identical for men and women. Looked at by ethnicity, those from minority ethnic groups with GCSE results around or below the national median are much more likely to go on to higher education than White British pupils with similar results. Those with higher levels of attainment are likely to go on to higher education regardless of ethnic background. However, young people who had been receiving Free School Meals at 16 and had results at the top of the range were less likely to go on to higher education than others – despite it having been less likely that they would get those results.

### Box 11.3: Higher education participation by prior attainment, gender, ethnicity and Free School Meals status

This box presents result of analysis by the (then) DIUS based on pupils aged 15/16 in maintained schools in England in 2002-03 and who have entered higher education (in any UK higher education institution or English further education college) either at age 18 in 2005-06 or at age 19 in 2006-07. The pupils have been ranked according their GCSE capped points scores.<sup>224</sup>

In Figure 11B, the two lines show the percentage of men (green) and women (blue) in higher education in 2006-07 for any level of GCSE attained in 2002-03. The figure shows that the two lines are almost identical: once GCSE attainment is taken into account, there is not a significant difference between boys and girls subsequent participation in higher education.

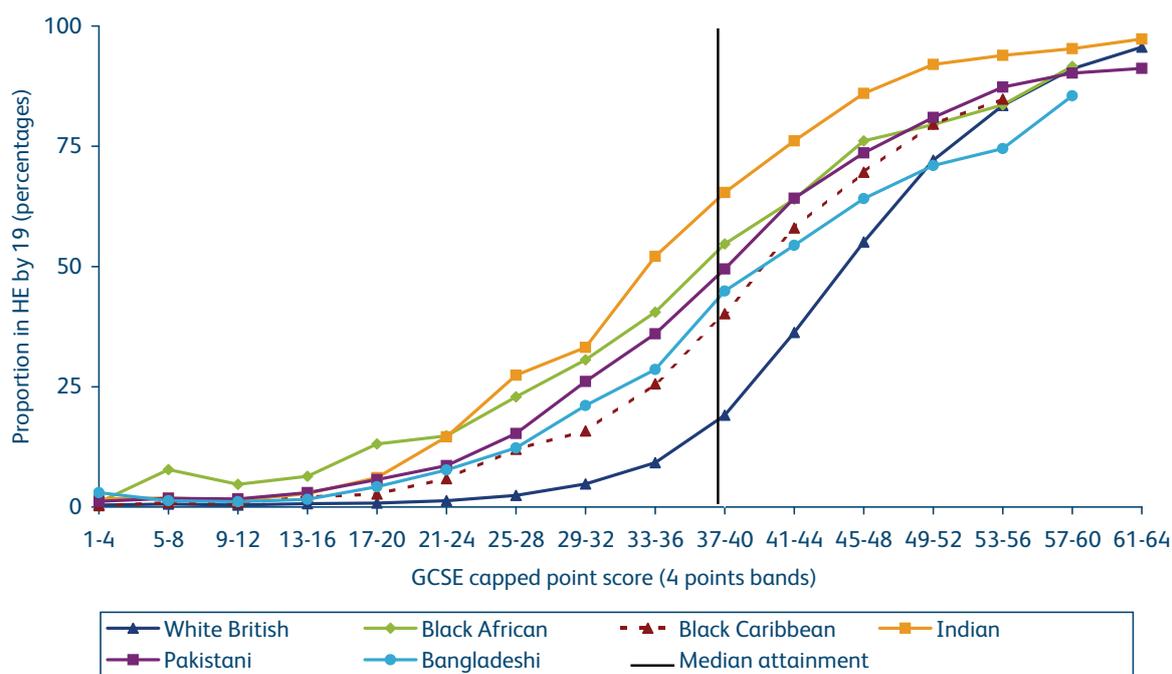
Figure 11B: Participation in higher education by age 19 by gender and prior attainment



<sup>224</sup> The calculations are based on the pre-2004 system of points scores, where A\*=8 points. The total score is the sum of the 8 highest GCSE scores.

By contrast, students from ethnic minorities are more likely to be in higher education by the age of 19 than White students with the same GCSE attainment, for most levels of attainment (up to 49 points). Figure 11C shows that the gap is widest for levels of attainment around 33-37 points. At median attainment levels – 37 capped GCSE points – only about a fifth of White British students went on to higher education by 19, compared to more than twice as many of the other groups with similar scores. Only for the highest achievers do White British children go on to higher education at a similar rate to the other groups. Within the other groups, participation is highest at any level of attainment for Indian students and lowest for Black Caribbean and Bangladeshi students. It is important to note that, as we showed in Chapter 3, students from each ethnic background tend to be found in different positions of the range of attainment shown in the chart. For instance, the median score for White British is 37 points, equal the overall median (using this scoring system). However, half of Indian students have scores above 42, but half of Black Caribbean students have scores lower than 31 points.

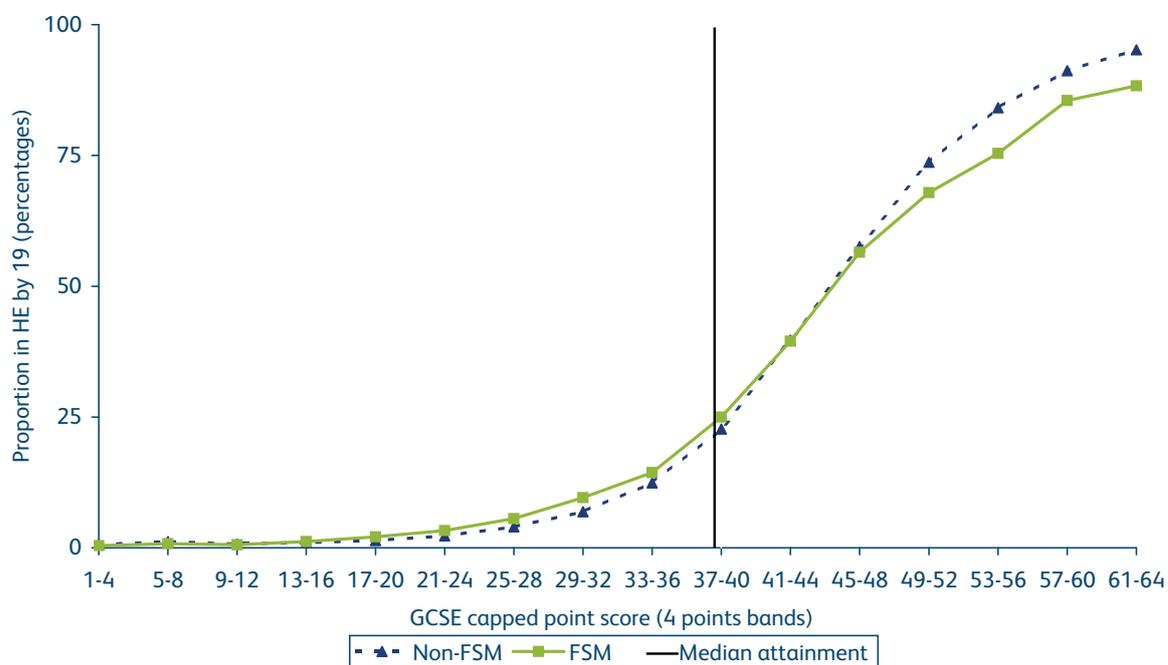
Figure 11C: Participation in higher education at 19 by prior attainment and ethnicity



Finally, Figure 11D shows participation in higher education by Free School Meals status at age 15.<sup>225</sup> In this case, the two lines cross just above the middle of the attainment distribution. Free School Meals students are less likely to be in higher education than non-Free School Meals students with the same attainment if this was above average – by more than 10 percentage points for the highest achievers. The opposite is true for lower than average attainment.

<sup>225</sup> Pupils in English maintained schools.

Figure 11D: Participation in higher education at 19 by prior attainment and Free School Meals receipt



In summary, the results show that ethnic minority students are more likely to participate in Higher Education by the age of 19, after taking into account their GCSE attainment, than White British students. Higher achieving students who are recorded as eligible for Free School Meals at the age of 15 are less likely to go on to higher education than non-Free School Meals students with similar results. There are no significant differences by gender.

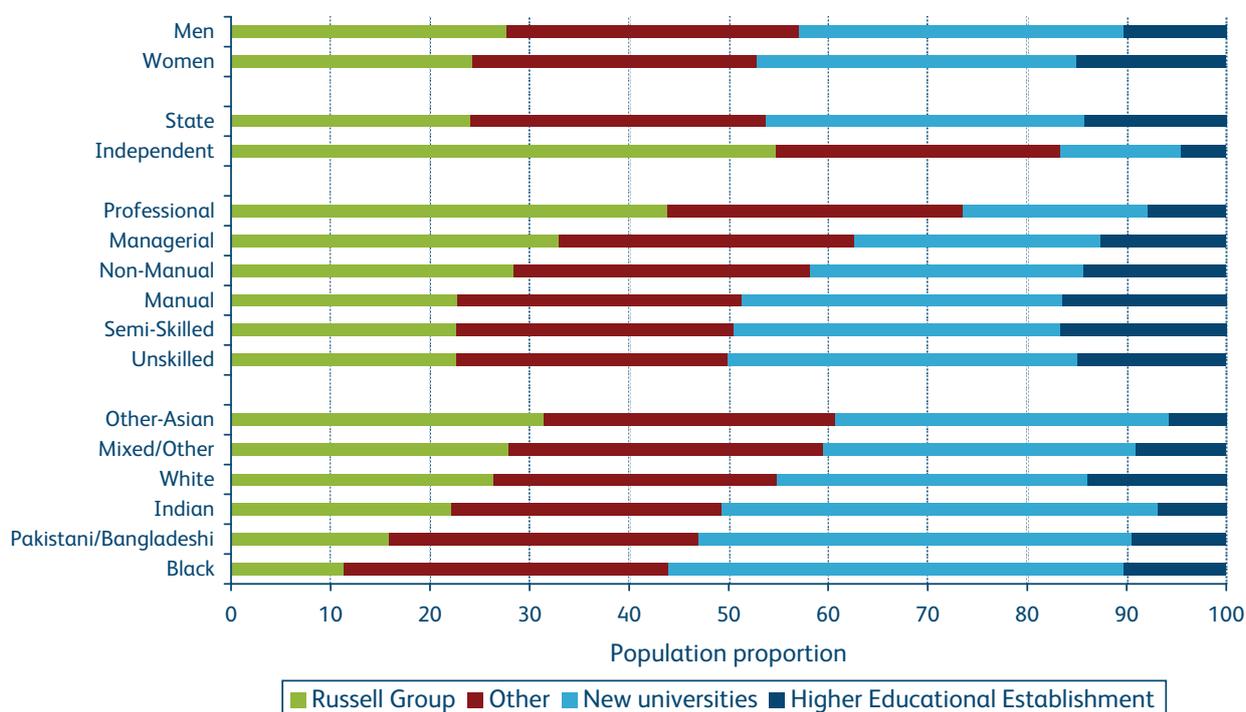
What happens to people once they enter the labour market is heavily dominated by their qualification levels, especially whether they have higher education qualifications. But not all forms of higher education or results have the same value in the labour market. What kind of university people attend and their degree class – not to mention whether they complete the degree at all – have large effects.<sup>226</sup> The three panels of Figure 11.17 show analysis carried out for us by Stephen Machin, Richard Murphy and Zeenat Soobedar of the kind of university attended by those who completed higher education in 2002-03 with different backgrounds. First, somewhat more men who had completed higher education had gone to more prestigious ‘Russell group’ universities,<sup>227</sup> and fewer had gone to ‘higher education establishments’. More dramatically, more than half of completing students who had attended

<sup>226</sup> Connor, Tyers, Modood and Hillage (2004) found that, overall, ethnic minorities are more likely to drop out of university than white students, but when allowance is made for differences between students (e.g. in entry qualifications, age and subject), this gap disappears.

<sup>227</sup> The Russell Group is an association of 20 major research-intensive universities of the United Kingdom, including the universities of Birmingham, Bristol, Cambridge, Cardiff, Edinburgh, Glasgow, Leeds, Liverpool, Manchester, Newcastle, Nottingham, Oxford, Sheffield, Southampton, Warwick, and Imperial College London, King’s College London, London School of Economics and Political Science, Queen’s University Belfast, and University College London.

private schools, but only a quarter of those from state schools, went to Russell group universities. The third panel shows an equally strong gradient by parental social class – more than 40 per cent of those with professional parents went to Russell group universities, but less than a quarter of those with manual, semi-skilled or unskilled parents. The picture by ethnicity was less straightforward. Black and Pakistani/Bangladeshi students were the least likely to have gone to Russell group universities and most likely to have gone to new universities. More than a fifth of Indian students had gone to Russell group universities, but over two-fifths to new universities.<sup>228</sup>

Figure 11.17: University attended by background, UK-born students, UK universities

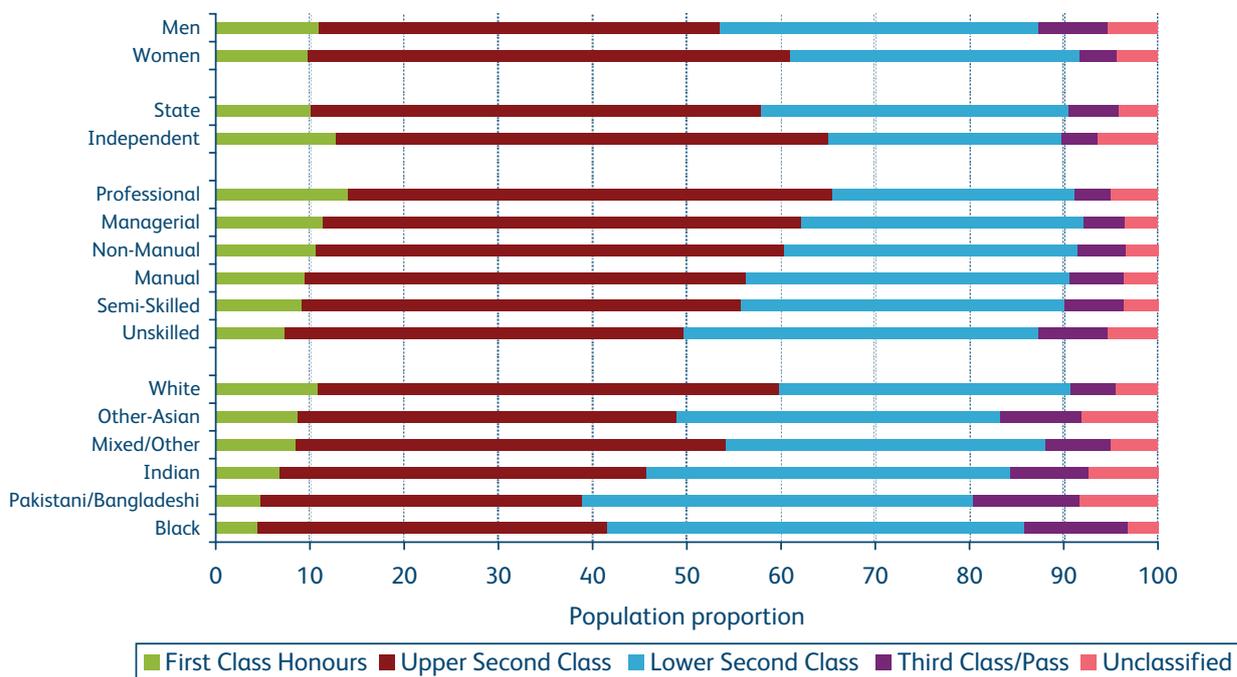


Source: Machin *et al.* (2009b).

Degree classes follow an equally strong pattern. The top panel of Figure 11.18 shows that women (who were 56 per cent of completing students) were slightly less likely to get first class degrees than men, but much more likely to get upper seconds. Those who had been to private schools were rather more likely to get first or upper seconds than those from state schools, and there was a strong gradient by class: two-thirds of those with professional parents had firsts or upper seconds, but only half of those with unskilled parents. Remembering that they were less likely to have gone on to higher education in the first place, White students were the most likely to get firsts or upper seconds, and Black and Pakistani/Bangladeshi students the least likely.

<sup>228</sup> The researchers used amalgamated ethnic categories, as the raw data were not available. For detailed groupings, see Machin, Murphy and Soobedar (2009b).

Figure 11.18: Class of degree achieved by background, UK-born students, UK universities



Source: Machin *et al.* (2009b).

These breakdowns do not, however, identify which factors are driving the associations. Analysing probabilities of men and women achieving a first or upper second class degree in a way that controls for the effects of other factors, including subject taken and the **individual university** attended,<sup>229</sup> the researchers show that:

- non-White ethnic groups were less likely to get good degrees (first or upper second class);
- those who had been to private schools were **less** likely to get a good degree (in contrast to the raw results in Figure 11.18);
- women from higher social class backgrounds were more likely to get a good degree than other women (but for men the differences were not significant).
- when both men and women are considered together in the same sample, men were 10 per cent less likely than females to achieve a good degree.

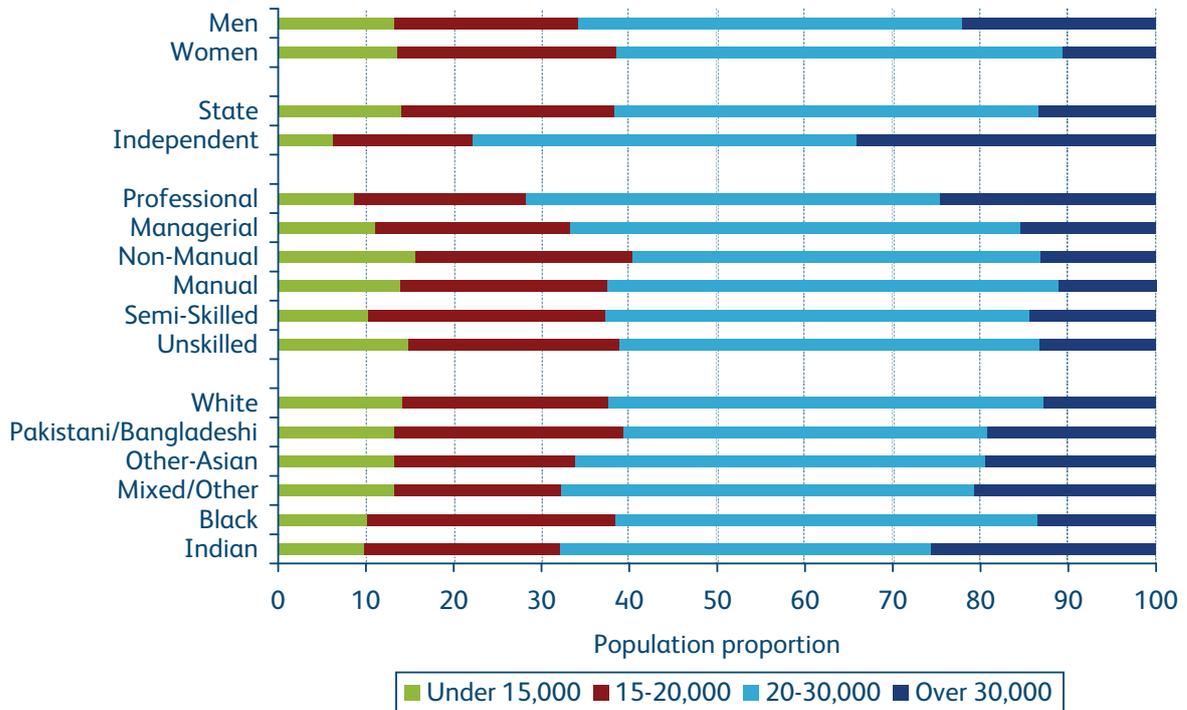
The dataset used in this analysis allowed the researchers to look at what then happened to this cohort of graduates in the labour market. Figure 11.19 shows what earnings levels looked like three and a half years after graduation.<sup>230</sup> First, despite their lower degree classes, 22 per cent of male graduates in full-time employment were earning more than £30,000 (that is, already within the top 30 per cent of full-time earners), compared to only 12 per cent of women. There was an even greater difference by schooling: a third of those who had gone to private schools earned over £30,000, but only 14 per cent of those who went to state schools.

<sup>229</sup> Machin, Murphy and Soobedar (2009b), table 4 (using results from Model 2a, with full controls).

<sup>230</sup> The full research report also looks at employment status and at outcomes six months after graduation.

A quarter of graduates who had professional parents had high earnings, but less than 15 per cent of the other groups. By ethnicity, Indian graduates had the greatest proportion with high earnings, and White graduates the lowest (despite their greater proportion of good degrees).

Figure 11.19: Gross earnings (£) 3.5 years after graduation by background, UK-born students, UK universities



Source: Machin *et al.* (2009b).

Again the researchers were able to look at which factors were most important in determining wages, controlling for other factors, including the class and subject of degree, the region the university was in,<sup>231</sup> and the sector and region of employment. Doing this separately for men and women suggested that:

- male Indian students earned 4 per cent more, but male ‘other Asian’ students 8 per cent less than White students;
- female Pakistani/Bangladeshi students earned 5 per cent less and ‘mixed/other’ female students 4 per cent less than White students;
- men who went to private schools earned 8 per cent more and women 6 per cent more than men who went to state schools.

That is, on **top** of their greater chances of high performance at GCSE, and greater chances of going on to higher education, men who had gone to private school were already earning 8 per cent more within four years of graduation than one would have expected given their gender, ethnicity, degree class, subject taken and occupation.

<sup>231</sup> But not the individual university attended. When they could allow for this as well in looking at earnings just six months after graduation, the effects of higher social class and of attendance at private schools were reduced somewhat, but remained significant apart from the effect of having professional parents for men (Machin, Murphy and Soobedar, 2009b, table 7).

### Summary

- Whether students enter higher education is very closely related to attainment at 16, with very similar patterns for boys and girls. In the middle of and lower down the attainment range, White British children are less likely than those from minority ethnic groups to go on to higher education. At the top of the attainment range, those receiving Free School Meals are less likely than others to go on to higher education.
- More than half of students who had attended private schools and more than 40 per cent of those with professional parents went to the more prestigious Russell group universities, but a quarter or less of those from state schools or with manual, semi-skilled or unskilled parents. Black, and Pakistani/Bangladeshi students were the least likely to go to Russell group universities.
- Two-thirds of those with professional parents received firsts or upper seconds, but only half of those with unskilled parents. White students were the most likely to get firsts or upper seconds, and Black and Pakistani/Bangladeshi students the least likely. Allowing for the effects of other factors, including subject taken and the university attended, non-White ethnic groups were less likely to get good degrees, as were those who had been to private schools. Women from higher social class backgrounds were more likely to get a good degree.
- Three and a half years after graduation, despite lower degree classes than women, 22 per cent of male graduates in full-time employment were earning more than £30,000, but only 12 per cent of women. A third of those who went to private schools had high earnings, but only 14 per cent of those from state schools. A quarter of graduates with professional parents had high earnings, but less than 15 per cent of the others.
- Allowing for factors affecting wages, including class and subject of degree, the impact of ethnicity on subsequent earnings was smaller than class-related factors. Men who went to private schools earned 8 per cent more and women 6 per cent more than expected, given their gender, ethnicity, degree class, subject taken and occupation.

## 11.5 Earnings, employment and incomes across working lives

The earlier parts of this chapter have looked at particular links between aspects of people's backgrounds and what happens to them through the education system in particular. Chapters 4 and 5 contain extensive material on differences between people in their employment patterns, wages and earnings when they are of working age. In Chapter 9 (particularly in Boxes 9.2 and 9.3), we presented evidence which shows that employment and wage levels of men and women from different ethno-religious groups differ, even after allowing for qualifications and other factors. In particular, women from most ethno-religious groups are affected by a 'pay penalty' compared with White British Christian men. In this section, we look in more detail at gender differences in the way employment, ages and incomes develop through working life.

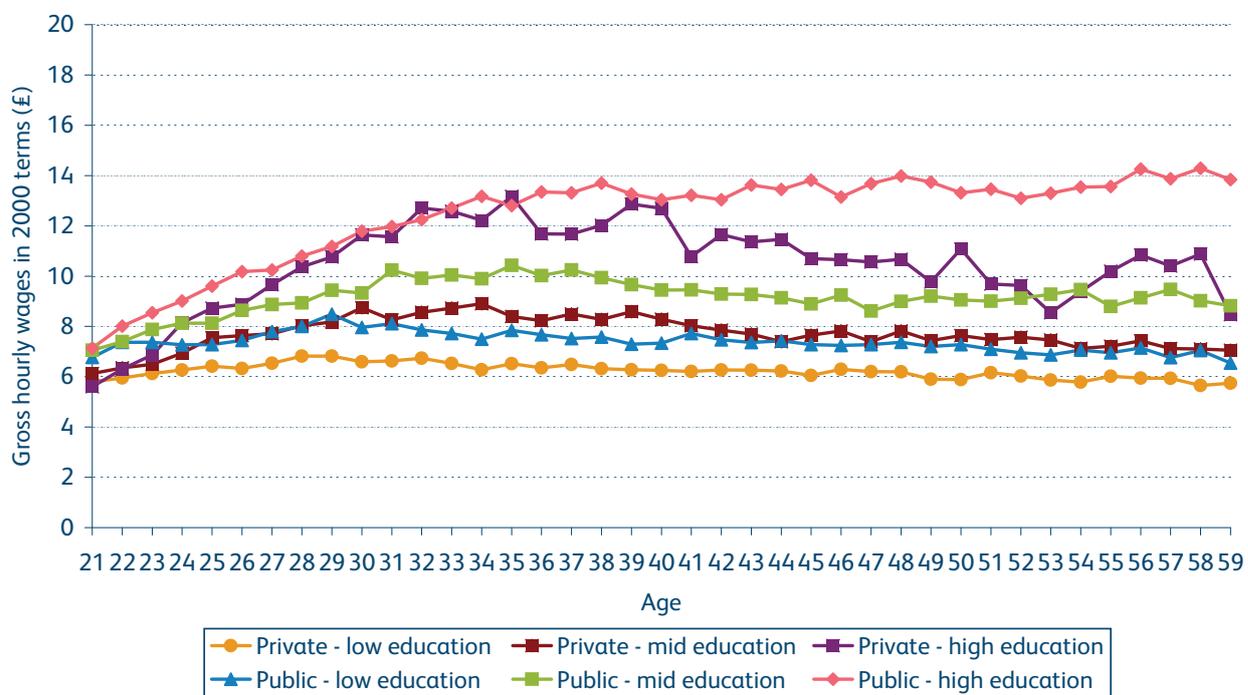
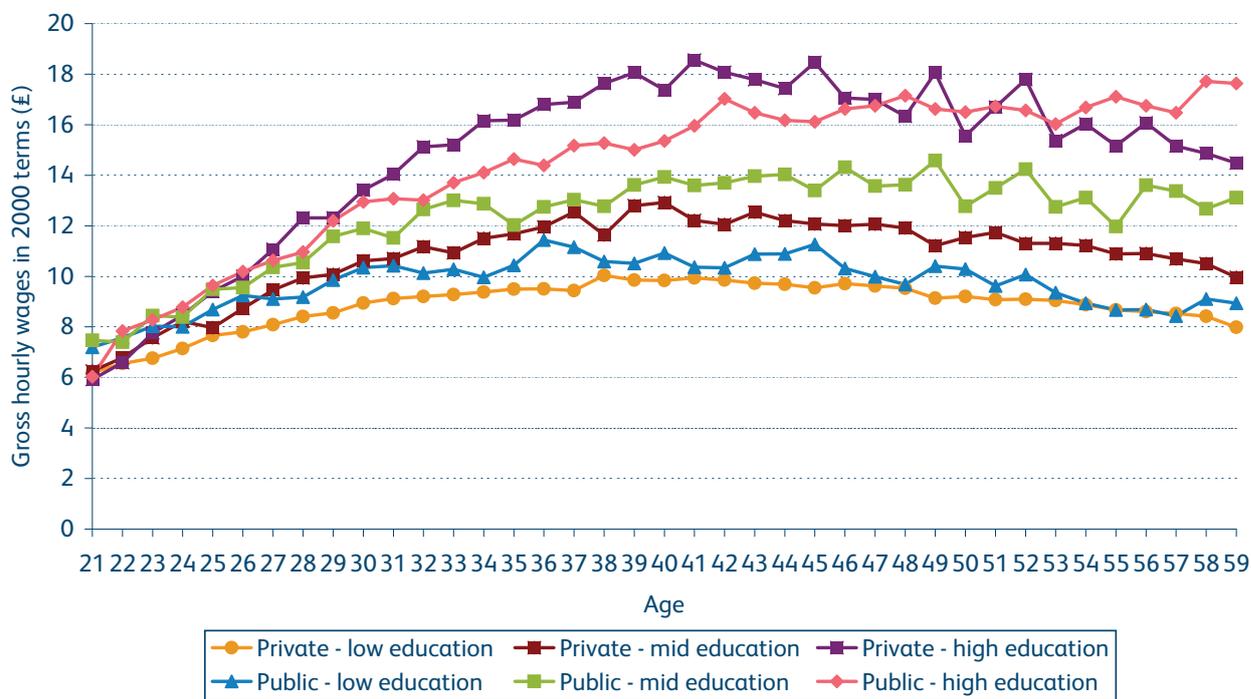
In Chapter 5, we showed the major differences between men and women in the relationship between wages and age using cross-sectional data on people of different ages today (Figures 5.2 and 5.12). In particular, we showed that hourly wages are highest for women in their early thirties, but for men in their early forties. Figure 11.20 looks at these differences in more detail, showing age-wage profiles for men and women divided into six groups – by three levels of qualification, and by whether working in the public or private sector, using data on wages between 1994 and 2006. It shows that the stereotype that wages tend to rise throughout people’s careers, reaching a maximum shortly before retirement is one that applies only to a limited group – men and women with high qualifications working in the public sector. For men with middle or low level qualifications, hourly wages are highest for those in their forties, but lower for those in their fifties. Wages are at their highest for highly qualified men in the private sector aged 40, and then lower for older groups. For women with middle or low level qualifications, there is little increase even through their twenties, but then a slow decline with age. For highly qualified women working in the private sector, highest wages are for those in their early thirties, and then there is a more rapid reduction with age.

These kinds of earnings-age profile are taken from cross-sectional data at a single time. But the way the earnings of cohorts born at different times change as they grow older has not stayed the same. Figures 11.21(a) and (b) show the results of analysis by Stephen Jenkins of data from the British Household Panel Study (BHPS), which follows the same people over time, giving average hourly wage and equivalent net income trajectories for two cohorts, those born before 1955 and those born in 1955 or afterwards.<sup>232</sup> The trajectories are shown separately for men and women with each further classified by qualification level, between those with no qualifications, with some qualifications, and with A levels or higher qualifications. The trajectories shown are from models which summarise the average relationship between age and wages or income for the people followed by the survey. The estimates are shown at January 2008 prices. Income levels are shown using a logarithmic scale on the vertical axis, which means that the same distance between any two points on the vertical scale corresponds to the same ratio of real values. The distance between a wage of £4 per hour and £8 per hour is thus shown as the same as that between £8 per hour and £16 per hour, and so on. For a group whose incomes grew at a constant percentage rate each year, the income-age trajectory would be a straight line sloping upwards.

<sup>232</sup> Jenkins (2009).

## An anatomy of economic inequality in the UK

Figure 11.20: Age-earnings profile, private and public sector by educational group, UK



Source: Disney *et al.* (2009) calculations using data from the LFS (1994 to 2006).

Note: Profiles exclude sector-specific earnings growth.

Looking at the first panels of Figure 11.21, a first point is that if one looks at wage levels as a cohort ages, then, by contrast with the cross-sectional wage-age profiles shown in Chapter 5 (see Figure 5.2), real wage growth is greater at the start of the working life (the curve is steeper), and continues until older ages (the 'peak' is later). Even if people fall back relative to the national average, overall growth means that their real wages can still be growing. Second, wages for the younger cohort were higher on average at every age than for their older cohort counterparts for nearly all the groups shown, except perhaps for the younger generation of men with no qualifications when they reached their fifties. Third, educational qualifications make a big difference on average. Within each cohort for both men and women, the trajectory for those with A level or higher qualifications lies above that for those with fewer qualifications and this, in turn, lies above the trajectory for those with no qualifications. Fourth, women earned less than men at any given wage within every group, but the gap was greatest for women with no qualifications and in the older generation. For the younger cohort of women with high qualifications, the wage gap was fairly small when they were aged 25. Their earnings then fell behind, but did tend to catch up in their forties. For better-qualified women in the older cohort, the gap with better qualified men had tended to narrow at the oldest ages, but partly as a result of the real pay of the men falling (and also as a result, presumably, of the women still in employment in their late fifties being an atypical group). These results are a reminder of the need to be cautious in interpreting cross-sectional patterns of wage progression with age as showing what will happen to any particular cohort as it ages.

The second pair of panels shown in Figure 11.21(b) – for equivalent net income – shows a number of interesting contrasts. First, most of the group trajectories are flatter than the corresponding trajectory for hourly wages, particularly for the younger cohort, and the middle and high qualification groups. The benefits of hourly wages that grew as the cohort aged were partly offset by changing family composition. For those with no qualifications, however, real incomes started at a much lower level, grew quite rapidly until they were in their late forties, but then turned down – rapidly in the case of the younger cohort.

It should be stressed that these are pictures of **average** trajectories, and the average masks substantial variation in trajectory shapes at the individual level, even within groups characterised in terms of sex, qualifications and birth cohort. This individual-level variation is hard to summarise succinctly, as it has several sources. Within each group, there are differences in wages (and income) at the beginning of the working life – some start lower and some higher – and there is then also variation in subsequent growth rates with age. Moreover, this is combined with additional fluctuation from one year to the next at the individual level. The substantial variations in individuals' income-age trajectories, even within relatively narrowly defined groups, are consistent with one of the recurring findings of our report, namely the importance of within-group inequalities.

A recurring theme of this chapter is that advantage and disadvantage tend to compound themselves over the life cycle. That is generally true when comparing between qualification groups, as in Figure 11.21. However, one of the features the detailed analysis reveals is that there is a tendency for those **within** a particular qualification group who start lower to have trajectories that grow more rapidly, that is to catch up with and even overtake their peers.<sup>233</sup>

<sup>233</sup> See Jenkins (2009) for more detailed analysis and discussion.

## An anatomy of economic inequality in the UK

Figure 11.21(a): Estimated average wage-age trajectories, by group, for employees of working age (logarithmic scale)

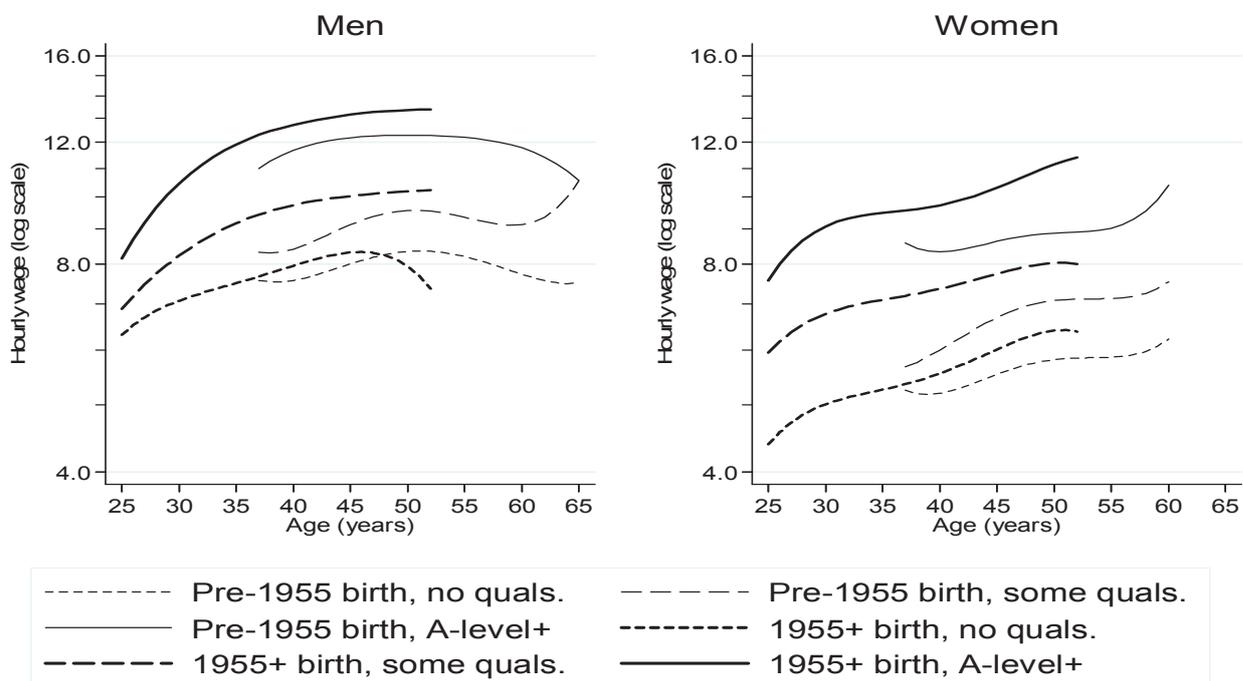
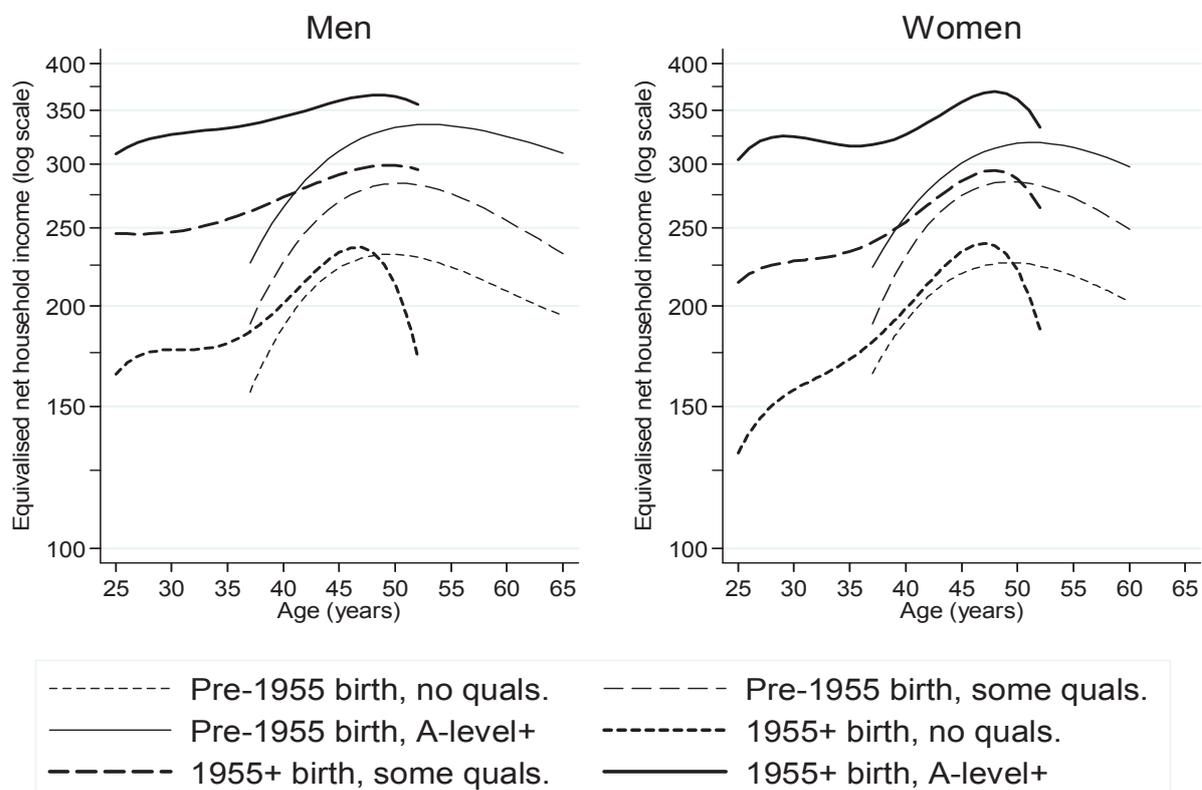


Figure 11.21(b): Estimated average income-age trajectories, by group, for individuals aged 25+, net equivalent income (logarithmic scale)



Source: Jenkins (2009)

Note: Incomes at 2008 prices.

A major factor associated with these differences is motherhood, and the lasting impact it has on women's employment patterns and earnings levels, particularly where women do not return to the same employer after a standard period of maternity leave.<sup>234</sup> Quite how profound these impacts are can be seen in Figures 11.22 and 11.23. These show the results of analysis by Mike Brewer and Gillian Paull of paid work participation rates and of earnings before and after women and men in the BHPS (surveyed between 1991 and 2003) had their first child.<sup>235</sup> The first of these shows that paid work rates for the men were a little lower before the first birth, then rose to around 90 per cent in paid work, eventually declining only 20 years later (as many of them moved into their fifties). For women, however, employment rates dipped in the year before the birth, and fell to 40 per cent in the year of birth itself. After a rebound the next year (at the end of maternity leave for some) to above 50 per cent, employment rates grew slowly over the next twenty years, but never reached as high as 80 per cent, before declining (again as many mothers reached their fifties). The overall gap does not disappear, even when the children are no longer in the household. The authors argue that the patterns shown support the hypothesis that children are crucial in explaining gender differentials in work participation, and that the impact is persistent and long-term.<sup>236</sup>

Figure 11.23 shows how the gender wage gap is affected by a first birth.<sup>237</sup> In the years before the first birth, women were earning between 80 and 90 per cent of men's earnings, regardless of whether one looks at all employees, or just those working full-time. For full-time workers the gender wage gap grew slowly, but remained below 20 per cent until ten years after the first birth, reaching a maximum of around 30 per cent shortly afterwards. But given the lower pay of part-time workers, looking at all employed women, the gender wage gap grew more rapidly, reaching nearly 40 per cent ten years after the first birth, and never falling much below 30 per cent. What this figure makes clear is that the impact of motherhood on women's relative pay is not a matter of a one-off shock from which there is gradual recovery (which is what happens with employment), but is a picture of continuing decline through most of the first childhood.

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<sup>234</sup> Sigle-Rushton and Waldfogel (2007).

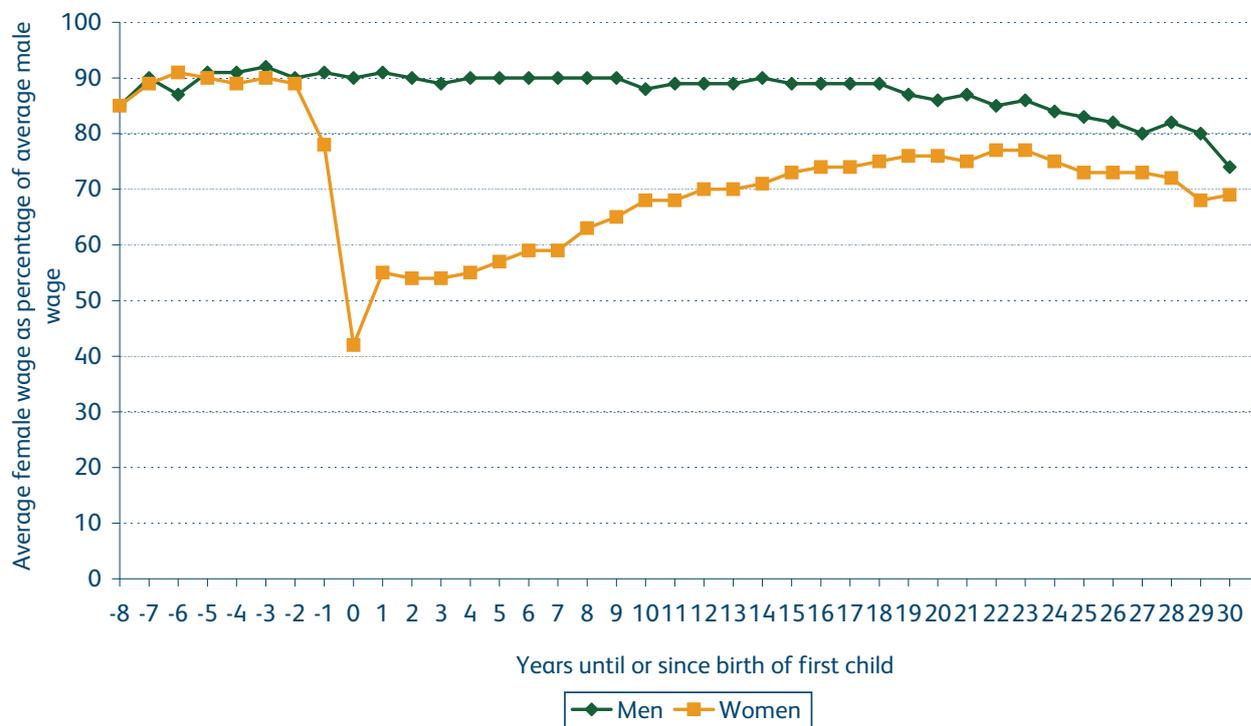
<sup>235</sup> The figures include information drawn from fertility history data collected by the survey, so the births involved happened throughout the 1980s and 1990s.

<sup>236</sup> See Brewer and Paull (2006), section 5.1.

<sup>237</sup> The wage gap is calculated by comparison with men the same distance in years from the birth.

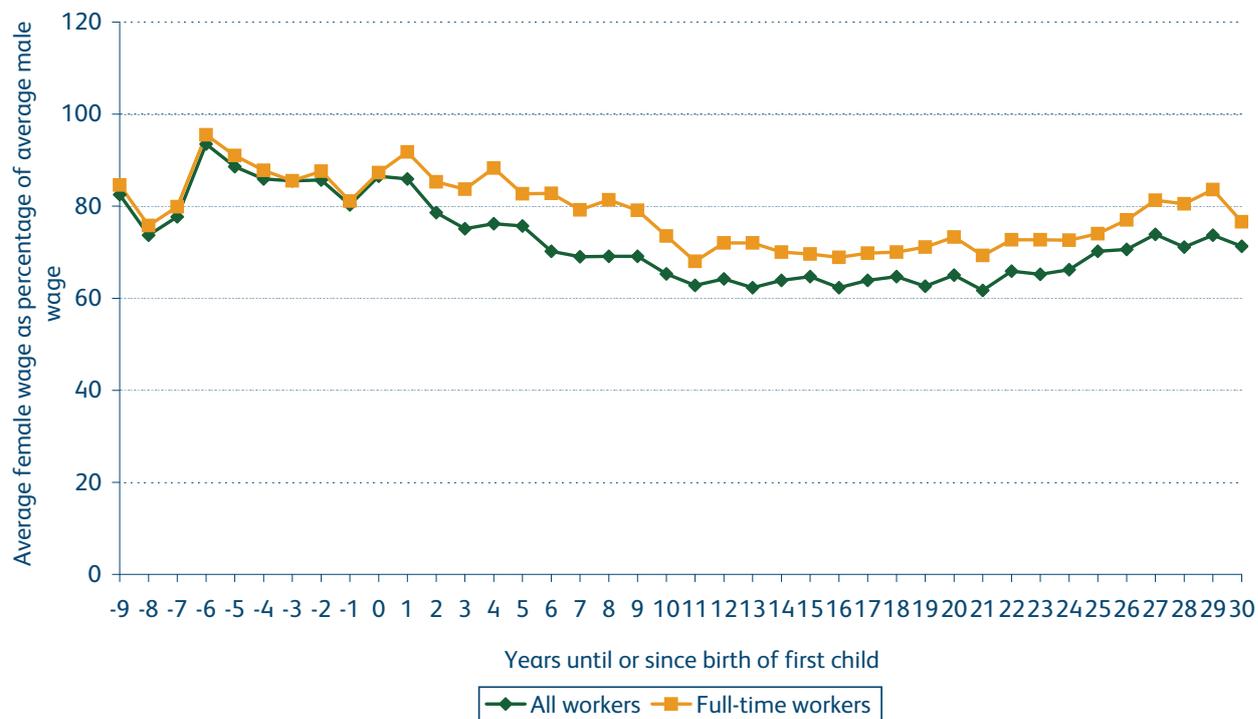
## An anatomy of economic inequality in the UK

Figure 11.22: Paid employment rates by year, before and since birth of first child, (percentages)



Source: Brewer and Paull (2006), based on BHPS data.

Figure 11.23: Mothers' wages as percentage of men's by year until or since birth of first child



Source: Brewer and Paull (2006), based on BHPS data.

### Summary

- Looking at cross-sectional data, only for men and women with high qualifications working in the public sector are earnings highest in the years close to retirement. For others, earnings are highest for younger age groups. For women with low or mid-level qualifications, they are lower for all age groups above 30.
- However, looking at longitudinal data, overall economic growth can mean that individuals' real wages can grow over time, even if they fall back relative to those who are now younger. However, real wages for women with no qualifications have fallen for recent cohorts after they were in their forties even after the effects of growth.
- Equivalent incomes have grown more slowly than wages as recent cohorts have aged as a result of changes in people's family circumstances.
- Average trajectories can mask considerable variation in the underlying trajectories for individuals within any particular group by age and gender.
- For women, birth of a first child is associated with a rapid decline in paid work participation, which does not entirely recover, even when children have left home. The gap in wages between mothers and fathers continues to grow until ten years after the birth of a first child to stay at nearly 40 per cent until the child is 20, after which it still declines only slowly.

## 11.6 Resources in retirement

Finally, in this chapter we examine the links between working life and the resources available to people in retirement. In this we concentrate on four issues: gender, ethnicity, disability, and social class. In earlier chapters we have set out the ways in which many women, those from particular minority ethnic groups, and disabled people are disadvantaged in the labour market. As pension entitlements are closely related to labour market position, these disadvantages in working life are transmitted into retirement.<sup>238</sup> Similarly, we have shown how employment and income levels in working life are closely related to occupational social class. These differences affect not only pension rights but also other components of the wealth and assets that people can accumulate by the time they reach retirement.

### (a) *Gender and resources in retirement*

Both the Pensions Commission and the Department for Work and Pensions (DWP) looked in particular at the position of women in the pension system before the recent reforms embodied in the 2007 and 2008 Pensions Acts.<sup>239</sup> The Pensions Commission identified several factors that particularly affect the position of women in retirement:

<sup>238</sup> For a description of the UK pensions system and recent changes in pensions policy, see Evandrou and Falkingham (2009).

<sup>239</sup> Pensions Commission (2004), chapter 8, and DWP (2005).

- Current single female pensioners, particularly older women, are poorer than single male pensioners. In 2007-08, the average gross income of single female pensioners was £247, but that of single male pensioners £288 per week. The main reason for the difference was that occupational and personal pensions for women averaged only £54 per week, compared to £87 for men.<sup>240</sup>
- These differences reflect women's lower levels than men of paid employment, earnings, and membership of pension schemes in the past. However, as shown extensively in Chapters 4-6 (and summarised in Section 9.1), women still have lower levels of paid employment and earnings than men, so differences in their non-state pension entitlements will continue. This is particularly important for part-time workers, given what we have shown about levels of part-time pay.
- However, since 2000, women in full-time employment have been more likely to be members of their current employer's pension scheme than men, partly reflecting the larger proportion of women who work in the public sector, where provision is more extensive. By 2007, 58 per cent of women in full-time employment were members of their employer's scheme, compared to 53 per cent of men in full-time employment, but only 38 per cent of women in part-time employment.<sup>241</sup>
- Where pension rights take the form of an accumulating pension pot, through the defined contribution schemes that are now most common in the private sector, the annual pension that can be purchased depends on life expectancy at the time an annuity is purchased. As women tend to retire earlier than men, this will tend to be lower for women.<sup>242</sup>
- State pension rights are also related to people's labour market experience, together with 'credits' for periods of time spent unemployed or in various forms of caring for children or others. The recent reforms, particularly the new '30 year rule' from April 2010, will make it much more common for women to accrue a full basic pension in their own right. The way in which the state second pension will become more flat rate and less earnings-related will also benefit many women. However, those who do not have paid work, or have low levels of part-time earnings, will not qualify for a full state second pension, even when the reforms have fully worked their way through the system.
- The assumption that women's income in retirement will effectively be provided by their husbands is increasingly outmoded. The Government Actuary's Department forecast in 2004 that by 2021, 38 per cent of women aged 55-64 will not be part of an ongoing marriage, largely because they never married or because of divorce.<sup>243</sup>
- Although widows inherit parts of their husbands' state pension rights and those from some occupational schemes, many of the more recent kind of 'defined contribution' pension are used to purchase a 'single life' annuity that does not survive the husband.

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<sup>240</sup> DWP (2009b).

<sup>241</sup> ONS (2009c), figure 7.3. Figures for the UK.

<sup>242</sup> Even if the annuity at any given age is provided on a 'unisex' basis.

<sup>243</sup> Pensions Commission (2004), p.268.

We have already seen how women's median individual net incomes are currently substantially lower than those of men for those over State Pension Age (Figure 6.2). Some of the labour market differences that have led to this for the current generation of pensioners have narrowed but they remain substantial for those who will form the next generation in retirement. Reforms to the state system will go, as Maria Evandrou and Jane Falkingham conclude, *"a long way toward closing the gap between men and women's state pension entitlement. However, fundamental differences remain between men and women – and rich and poor – in third-tier provision"*.<sup>244</sup>

### (b) Ethnicity and resources in retirement

Because of their age structure, the proportion of the minority ethnic population who are already retired is relatively small. Looking ahead, however, the factors associated with relatively weak labour market positions for particular groups during their working lives will be transmitted into lower incomes in retirement.

The first panel of Table 11.4 brings together some of the data we have examined in Chapter 4 on employment rates, and on hourly wages as in Chapter 5, but focussed on those at the ages when pension rights are most likely to be accrued (so we can only look at broad ethnic groups for this analysis). This emphasises the low levels of employment of Pakistani and Bangladeshi adults, with only 35 per cent of men and 13 per cent of women of working age employed full-time. 19 per cent of Bangladeshi and Pakistani men are self-employed, but self-employment is associated with much lower rates of accrual of both private and state pension rights. Wage levels are also much lower than for other groups for Pakistani and Bangladeshi men and women, so that any rights that are accrued will usually be smaller in proportion.

The second panel of the table shows earlier analysis by the Pensions Commission of membership of non-state pensions for those aged 20-59. This uses broader ethnic groups, but shows a strong contrast. While half of White men and 40 per cent of White women are accruing some form of non-state pension rights, the figure falls to 31 per cent for Asian/Asian British men, 30 per cent for Black/Black British men and 21 per cent for Asian/Asian British women. The final panel shows the results of recent analysis by the Pensions Policy Institute for the Equality and Human Rights Commission (EHRC). Looking very broadly at members of all ethnic minority groups together, they suggest that lower accrual of state pension rights will compound their disadvantage in occupational pension rights. In any year, 26 per cent of those of working age from minority ethnic groups are not accruing rights to the basic pension and 35 per cent are not accruing rights to the state second pension, even after allowing for the recent pension reforms.

<sup>244</sup> Evandrou and Falkingham (2009), p.176.

Table 11.4: Factors affecting pension levels and arrangements by ethnicity

(a) Employment rates and wages by ethnicity

	Employed, full-time (%)	Employed, part-time (%)	Self- employed (%)	Hourly wages (all employees), £	
				35-44	45-54
<b>Men</b>					
White	60	5	14	13.49	13.21
Mixed	45	9	9	13.50	12.53
Indian	58	7	13	12.55	11.30
Pakistani or Bangladeshi	35	12	19	7.88	8.94
Black or Black British	51	9	9	10.79	10.76
Other ethnic group (inc. Chinese and Other Asian)	48	9	12	10.43	10.06
<b>Women</b>					
White	40	27	5	9.70	9.27
Mixed	37	21	4	11.71	11.43
Indian	39	18	4	10.55	8.59
Pakistani or Bangladeshi	13	10	2	9.25	8.27
Black or Black British	41	17	3	10.86	10.32
Other ethnic group (inc. Chinese and Other Asian)	33	16	5	9.86	9.02

Source: Labour Force Survey (LFS) 2006-2008.

(b) Accrual of private pension rights by ethnicity (age 20-59, percentages)

	Occupational pension	Personal/ stakeholder pension only
White	37	15
Asian/Asian British	23	8
Black/Black British	25	5
Chinese/Other	19	7
<b>Women</b>		
White	33	7
Asian/Asian British	17	4
Black/Black British	29	4
Chinese/Other	17	3

Source: Pensions Commission, (2004), figure 3.14 (based on Family Resources Study (FRS) 2001-02 and 2002-03).

Table 11.4: (Continued)

(c) Accrual of state pension rights under reformed system (working age, percentages)

	Qualifying through earnings	Qualifying through credits	Not qualifying
<b>Basic State Pension</b>			
White	70	15	15
Ethnic minorities	56	19	26
<b>State Second Pension</b>			
White	64	13	24
Ethnic minorities	51	14	35

Source: Stevenson and Sanchez (2008), chart 18 (based on FRS 2005-06).

While the state pension system, through means-testing and the flat rate nature of the basic pension, tends to equalise resources in retirement, the factors described above suggest that the current labour market disadvantage of particular minority ethnic groups, particularly the Bangladeshi and Pakistani population, will be transmitted and even amplified into income differences in retirement.

### (c) *Disability and resources in retirement*

In the same way, the combination of lower employment rates and lower hourly wages, leads to both lower membership of private pension schemes and higher rates of non-qualification for both the basic and second state pensions by disabled people. The first panel of Table 11.5 contrasts the positions of working age adults identified as not disabled or disabled in different ways, again looking at employment and hourly wages between ages 35 and 54. Only 21 per cent of men and 14 per cent of women who are reported as both disabled under the terms of the Disability Discrimination Act (DDA) and as having a work-limiting condition are in full-time employment. When they are employed, their hourly wages are substantially less than those of other men and women.

Disabled people have an older age profile than others. Other things being equal this would mean a greater likelihood of being a member of a private (occupational or personal) pension scheme. However, the second panel of the table shows that at any given age, disabled people are up to 9 percentage points less likely to be members. The final panel shows that, even with the reformed state pension system, more disabled people fail to qualify for full state pensions than others. The Pensions Policy Institute calculates that even though 40 per cent of disabled adults are credited into the basic state pension without having earnings, and 36 per cent into the state second pension, in any given year a quarter do not accrue rights to the basic pension and a third do not accrue rights to the state second pension.

Again, a comparatively weak labour market position during working life will continue to be transmitted into lower income through retirement for many disabled people. For some, this will be compounded if another family member stops or reduces paid work to care for them, or indeed if they are caring for another (see Box 9.7 in Chapter 9).

Table 11.5: Factors affecting pension levels and arrangements by disability status

(a) Employment rates and wages by disability status

	Employed, full-time (%)	Employed, part-time (%)	Self- employed (%)	Hourly wages (all employees), £	
				35-44	45-54
<b>Men</b>					
Not disabled	65	6	14	13.50	13.36
DDA-disabled	66	6	15	12.44	12.71
Work-limiting disabled only	49	7	14	11.17	10.98
DDA-disabled and work-limiting disabled	21	5	8	10.12	10.09
Black or Black British	51	9	9	10.79	10.76
<b>Women</b>					
Not disabled	42	28	5	9.90	9.38
DDA-disabled	44	28	5	9.36	9.34
Work-limiting disabled only	31	27	5	9.37	8.96
DDA-disabled and work-limiting disabled	14	16	3	8.15	8.25
Other ethnic group (inc. Chinese and Other Asian)	33	16	5	9.86	9.02

Source: LFS, 2006-2008 (wages at 2008 prices).

(b) Accrual of private pension rights by age and disability status (employed and self-employed, percentages)

	16-24	25-34	35-44	45-54	55-59	60-64	All ages (16-64)
	Not disabled	16	48	61	64	60	48
Disabled	13	44	55	55	54	41	50

Source: Stevenson and Sanchez (2008), chart 8 (based on FRS 2005-06).

Note: Disabled people are those registered with their local authority, or with a limiting, long-standing illness or disability.

Table 11.5: (Continued)

(c) Accrual of state pension rights under reformed system (working age), percentages

	Qualifying through earnings	Qualifying through credits	Not qualifying
<b>Basic state pension</b>			
Not disabled	74	11	15
Disabled	35	40	25
<b>State second pension</b>			
Not disabled	67	9	24
Disabled	31	36	33

Source: Stevenson and Sanchez (2008), chart 7.

*(d) Income at work, occupational social class and resources in retirement*

In Chapter 8, we looked at the distribution of wealth by age and by occupational social class. As we showed, some wealth inequality across the population as a whole is the result of its life cycle pattern – building up in the years before retirement, and then running down, at least in part, through retirement. Nonetheless, there are considerable inequalities, even looking at the restricted age group approaching retirement. For households with a ‘reference person’ aged 55-64, median household wealth (including non-state pension rights) is £416,000, but a tenth have less than £28,000, and a tenth more than £1.3 million (Figure 8.2). This variation is the product of differences in the trajectories people have followed through their working lives, but then become the basis for their position through retirement.

A first observation, however, is the sheer scale of the difference – in these cross-sectional data at a particular moment – between those aged 55-64 and those aged 25-34, whose median wealth is only £66,000. The older group are £350,000 wealthier – equivalent to nearly £12,000 of extra wealth for each year of age. This in itself is remarkable, when one recalls that equivalent net income for those in their thirties, forties and fifties is around £450 per week, or £23,500 per year (Figure 7.2). If the wealth seen for the older group was simply the result of saving, this would have required them to have saved (including through house purchase and accrual of pension rights) amounts equivalent to around half of their net incomes. However, this is not the only factor in wealth accumulation. For this cohort, house price inflation will have made a major contribution – with, for instance, real house prices more than doubling in all English regions between 1996 and 2005 (after which they rose further, but then fell back again).<sup>245</sup>

<sup>245</sup> Hills (2007), figure 8.1.

Second, transfers from and inheritance from parents and grandparents make an important contribution both to people's ability to get on the housing ladder and to their other resources. These reinforce the differences in the ability to save that come with higher incomes in working lives, themselves sometimes the product of the links between children's and parents' position described earlier in this chapter. For instance, by 2005, nearly half of young first-time buyers benefited from assistance from family or friends with their deposit for house purchase. Those receiving such assistance were able to pay deposits of £34,000, compared to only £7,000 for others.<sup>246</sup> The likelihood of receiving such help is clearly related to the resources of parents and grandparents.

Similarly, the chances of receiving an inheritance are highly correlated with people's existing wealth – the already wealthiest are most likely to receive more. Analysis of the English Longitudinal Survey of Ageing of those aged 54-75 in 2006 shows that the wealthiest quarter thought they had, on average, a 24 per cent chance of receiving an inheritance in the next ten years. For the least wealthy quarter, the chance was only 12 per cent. For more significant inheritances of over £10,000, the chances were 22 per cent for the already wealthiest quarter, but 9 per cent for the least wealthy quarter.<sup>247</sup>

These factors compound the differences that follow from working life differences in earnings and incomes. Pension scheme membership has a similar effect, with those with higher earnings more likely to be members of employer pension schemes. In 2008, 76 per cent of men and 82 per cent of women in full-time employment earning more than £600 per week were members of their employer's pension scheme; for those earning less than £300 per week, only 21 per cent of men and 32 per cent of women were members.<sup>248</sup>

We do not have information on wealth just before retirement classified by the incomes people have had through their working lives. However, these are closely related to their occupational social class. Table 11.6 shows the end results of the processes described above and earlier in this chapter in terms of wealth differentials by household social class for those aged 55-64. As can be seen, they are considerable, even abstracting, as this does, from life cycle savings effects. The median total wealth of the top two groups is more than £900,000. For the bottom three groups it is less than £220,000. For the top two groups, private pension rights add £548,000 and £461,000 to the median respectively. For the bottom three groups they contribute £63,000 or less (just £16,000 for the bottom group). Looking just at financial and property wealth (excluding houses and mortgages), the top two groups have median assets of around £150,000, while the bottom two groups have less than £30,000.

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<sup>246</sup> Hills (2007), figure 12.6, based on data from Council of Mortgage Lenders.

<sup>247</sup> Ross *et al.* (2008). Figures are for England.

<sup>248</sup> ONS (2009c), figure 7.10. Figures for the UK.

Table 11.6: Household wealth for 55-64 year olds by occupational social class, GB, 2006-08 (£000s)<sup>1</sup>

	Median financial and physical wealth	Median financial, physical and property wealth	Total household wealth			Proportion of households ages 55-64 (%)
			10 <sup>th</sup> percentile	Median	90 <sup>th</sup> percentile	
Large employers/higher managerial	156	444	369	992	2431	(7)
Higher professional	142	448	290	909	2172	(10)
Lower managerial/professional	99	334	189	667	1721	(26)
Intermediate	63	230	84	397	1068	(9)
Small employers/own account work	61	275	37	357	1056	(11)
Lower supervisory/technical	50	177	20	302	815	(9)
Semi-routine	37	156	13	219	637	(13)
Routine	29	100	8	146	521	(12)
Never worked/long-term unemployed	28	43	*	59	*	(1.4)
All	66	243	28	416	1342	(100)

Source: ONS, based on the Wealth and Assets Survey (WAS), July 2006-June 2008.

Note: 1. Households where 'household reference person' is aged 55-64. Proportions of households in age group are from unweighted sample numbers. \* Sample size too small for accurate reporting.

There are also considerable differences in total wealth within the social class groupings. A tenth of those in the top two groups have household wealth of more than £2.1 million at this age, but a tenth of higher professionals have less than £290,000. A tenth of those in routine or semi-routine occupations have wealth of over £637,000, but a tenth approach retirement with less than £13,000.

As housing assets are so important within total wealth, part of the difference in wealth relates to tenure, as we saw in Chapter 8. Table 11.7 shows that tenure differences are even more acute when we focus on those aged 55-64. Median total wealth for those who have already become outright house-owners is over £572,000. For social tenants, it is only £26,000. The table also confirms the observation in Chapter 8 that tenure differences are not only about housing assets: social tenants just before retirement have median financial assets and other physical wealth of only £15,000, and private pension rights only add £10,000 to this.<sup>249</sup>

<sup>249</sup> In related analysis of the English Longitudinal Survey of Ageing (ELSA) for wealth in 2002-03 looking at those aged 50 or more (so including those aged over 64), Banks and Tetlow (2009) find a similar picture. For this older group they find all tenants (social and private together) to have had median financial and physical wealth of only £1,200, and total wealth including private pension rights of £8,200. Adding in state pension rights would only increase median wealth for tenant households by £52,000 compared to £73,000 for owner-occupiers.

Table 11.7: Household wealth for 55-64 year olds by housing tenure, GB, 2006-08 (£000s)<sup>1</sup>

	Median financial and physical wealth	Median financial, physical and property wealth	Total household wealth		
			10 <sup>th</sup> percentile	Median	90 <sup>th</sup> percentile
Outright owners	95	334	199	572	1612
Mortgagors	68	245	148	474	1262
Private tenants	25	25	*	62	*
Social tenants	15	15	3	26	186
All	66	243	28	416	1342

Source: ONS, based on the WAS, July 2006-June 2008.

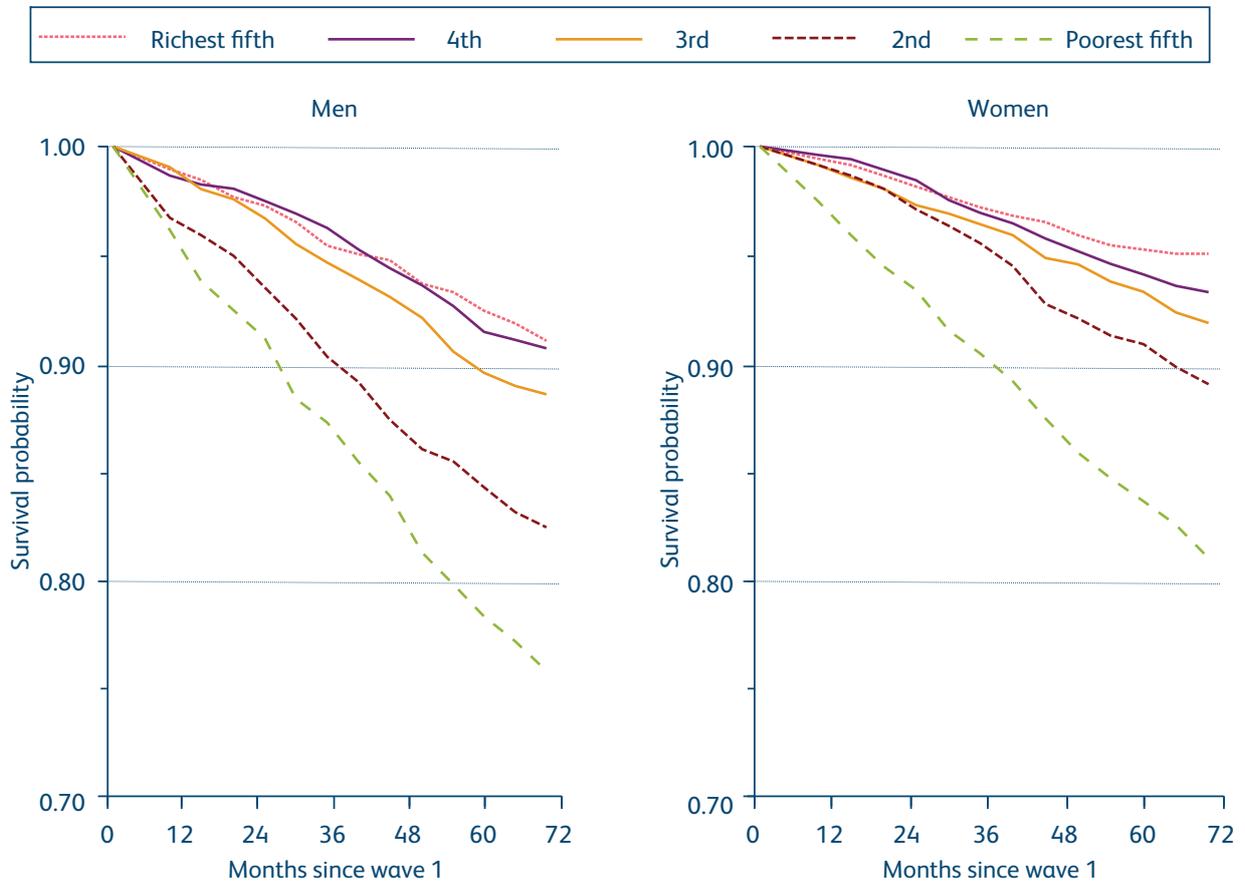
Note: 1. Households where 'household reference person' is aged 55-64. \* Sample size too small for accurate reporting.

Such differences in wealth obviously determine the living standards people can enjoy in later life. They are also closely related to the length of that later life. It is well-known that life expectancy at older ages varies considerably between those from different occupational classes. However, recent analysis of the English Longitudinal Survey of Ageing (ELSA) suggests that differences in mortality rates are in fact more closely related to wealth than they are to social class.<sup>250</sup> Our final figure, Figure 11.24, shows what proportion of members of the ELSA cohort (initially aged 50 or more) survived over a six-year period, depending on gender and where they came within the distribution of wealth. The survival rates are age-adjusted, so they represent the position of the cohort as a whole. More than 90 per cent of the men and 95 per cent of the women who were in the wealthiest fifth survived the six years. Only 81 per cent of the women and only 75 per cent of the men from the least wealthy fifth had survived. More than twice as many men, and nearly four times as many women with low wealth died within the six years as did those with high wealth.<sup>251</sup>

<sup>250</sup> Nazroo, Zaninotto and Gjonca (2008), p.267.

<sup>251</sup> See the forthcoming report of the Strategic Review of Health Inequalities in England, chaired by Sir Michael Marmot for further discussion of this kind of relationship and policies to address it.

Figure 11.24: Survival rates (age adjusted) by wealth group (fifths) and months from initial interview, over 50s, England, 2001-2006



Source: Nazroo, Zaninotto and Gjonca (2008).

We started this chapter by looking at the ways in which people's attainments in childhood and positions in entering the labour market are related to their social background and to the incomes and occupations of their parents. We described in this section how wealth and resources in later life are related to their labour market position in their working lives. The end results of this affect not only people's life chances, but also their chances of a continuing life.

### Summary

- Differences in employment and earnings during working life lead to women having lower pension rights than men. It can no longer be assumed that women's income in retirement will effectively be provided by their husbands. Some of the past labour market differences affecting the current generation of women pensioners have narrowed, but they, nevertheless, remain substantial for those who will form the next generation in retirement.
- The current labour market disadvantage of particular minority ethnic groups, particularly the Bangladeshi and Pakistani population, will be transmitted and even amplified into income differences in retirement.
- Low employment rates and low hourly wages for disabled people also lead to lower membership of private pension schemes and lower rates of qualifying for state pensions. For some this will be compounded if another family member stops or reduces paid work to care for them, or if they care for another.
- Wealth inequalities build up across people's working lives not just because of differences in incomes, pension scheme membership and the ability to save in other ways, but also because of differences in assistance and inheritances from parents and grandparents. Looking at those aged 55-64, higher managerial and professional households have median total wealth of over £900,000. Households with routine or semi-routine occupations have median total wealth of under £220,000.
- Mortality rates in later life are even more closely related to wealth levels than they are to occupational social class. For those aged over 50, more than twice as many men, and nearly four times as many women with low wealth die within a six year period as do those with high wealth.

## Part 4

# Conclusions

## Chapter 12 Key findings and policy implications

### Overview

The National Equality Panel (NEP) was set up to document the relationships between inequalities in people's economic outcomes – such as earnings, incomes and wealth – and their characteristics and circumstances – such as gender, age or ethnicity. How does who you are affect the resources and opportunities available to you?

We have mapped out in detail what these relationships look like in a way never done before. In this summary we bring together the key findings from our main report, and the challenges they create for the development of policy. There are several over-arching themes.

- Inequalities in earnings and incomes are high in Britain, both compared with other industrialised countries, and compared with thirty years ago. Over the most recent decade according to some measures, earnings inequality has narrowed a little and income inequality has stabilised, but the large inequality growth between the late 1970s and early 1990s has not been reversed.
- Some of the widest gaps in outcomes between social groups have narrowed in the last decade, particularly between the earnings of women and men, and in the educational qualifications of different ethnic groups.
- However, there remain deep-seated and systematic differences in economic outcomes between social groups across all of the dimensions we have examined – including between men and women, between different ethnic groups, between social class groups, between those living in disadvantaged and other areas, and between London and other parts of the country.
- Despite the elimination and even reversal of the differences in educational qualifications that often explain employment rates and relative pay, significant differences remain between men and women and between ethnic groups.
- Importantly, however, differences in outcomes between the more and less advantaged **within** each social group, however the population is classified, are usually only a little narrower than those across the population as a whole. They are much greater than differences **between** groups. Even if all differences between such groups were removed, overall economic inequalities would remain wide.

- The inequality growth of the last forty years is mostly attributable to growing gaps within social groups, however those groups are defined. The pattern of the last decade has been more mixed, with the effects of growing inequality within some groups offset by narrowing gaps between them.
- Many of the differences we examine cumulate across the life cycle, especially those related to people's socio-economic background. We see this before children enter school, through the school years, through entry into the labour market, and on to retirement, wealth and resources for retirement, and mortality rates in later life. Economic advantage and disadvantage reinforce themselves across the life cycle, and often on to the next generation. By implication, policy interventions to counter this are needed at each life cycle stage.
- A fundamental aim of people with widely differing political perspectives is to achieve 'equality of opportunity', but doing so is very hard when there are such wide differences between the resources which people and their families have to help them fulfil their diverse potentials.

### Key findings

We set out at the start of this report why we believe that inequality in economic outcomes matters. There are many other aspects of people's lives that are more important than those that simply relate to money, but in our society, income and wealth are closely related to whether people can achieve many of those other more fundamental outcomes. For some, the most fundamental social justice issues relate to the pervasive differences *between* the kinds of groups we examine in this report, such as by gender or ethnicity. For others, even if all such differences were eliminated *on average*, the degree of inequality within groups – and hence, within society as a whole – would remain their concern. For many readers, the sheer scale of the inequalities we have presented may have been shocking. Whatever the reasons for people's positions in the rankings of different outcomes, the sheer degree of inequality makes it impossible to create as cohesive a society as they would like. Others would point to the associations between large inequalities in economic outcomes and lower levels of happiness or well-being in other respects. For people across a wide political spectrum, a crucial test is whether outcomes reflect choices made against a background of equality of opportunity. The systematic nature of many of the differences we present, and the ways in which those advantages and disadvantages are reinforced across the life cycle make it hard, however, to suggest that there is such a background of equality of opportunity, however defined.

Whatever degree of inequality people find acceptable or unacceptable, the overall picture we have described is one of considerable differences, even if one ignores those with the very highest earnings or incomes, such as the banking bonuses or Chief Executives' pay that often attract most attention.<sup>252</sup> The measure of inequality we have concentrate on most in this report is the '90:10' ratio between the cut-offs for those in the top tenth (the 90<sup>th</sup> percentile)

<sup>252</sup> See Box 2.2 for discussion of the highest earnings and incomes.

and bottom tenth (the 10<sup>th</sup> percentile) of each distribution. This gives a measure of the differences between those near the top and near the bottom of each distribution – between the quite well-off and those who are poor, but not between the extremes.

- Those at the cut-off for the top tenth have gross **hourly wages 3.9** times the cut-off for the bottom tenth.
- For the gross **weekly earnings** of those employed full-time, the ratio is **3.7**.
- For the net individual incomes received by adults in their own right, including those not employed, it is **9.6**.
- For the whole population, the ratio for **equivalent net income**<sup>253</sup> is **4.2**.
- Households in the top tenth have **total wealth** (including private pension rights) almost **100** times those at the cut-off for the bottom tenth. Even looking more narrowly at the top half of the wealth distribution, those in the top tenth have more than 4.2 times as much wealth as those in the middle, twice the corresponding ratios for earnings or household income.

For earnings and equivalent net income, these represent high levels of inequality by comparison with those in the UK a generation ago, when, for instance, the ratio for equivalent net income was just over 3 to 1 (Figure 2.13). Most of this increase occurred during the 1980s. Over the last decade, trends have been complex. On some measures, including the 90:10 ratio described above, earnings inequality has narrowed, and income inequality stabilised. On other measures, particularly those for income inequality which look across the whole distribution, inequality has widened.

Looking at the top of the income distribution, using data from tax records, the share of the top 1 per cent in after tax income fell from 12.6 per cent of the total in 1937 to 4.7 per cent by 1979, but rose again to 8 per cent in 1990 and 10 per cent in 2000. The share of the top 0.05 per cent fell from 2.4 per cent of the total in 1937 to under 0.5 per cent in 1969. By 2000, their share had risen back to 2.5 per cent. A similar gain in the shares of those with the highest incomes occurred in other English-speaking countries in the 1980s and 1990s, but this did not occur in continental Europe (Box 2.2). Earnings and income inequality are also high in international terms, compared with other industrialised countries (Figures 2.8 and 2.14(a)), although wealth inequality does not appear to be exceptional (Table 2.1).

Some, but as we have shown, by no means all, of these inequalities have their origins in variations in skill levels and qualifications. Despite recent improvements in results at age 16, there is a ‘long tail’ of low achievement amongst 16 year-olds (Figure 2.1). The UK has lagged behind other countries in the proportion of the working age population with upper level secondary qualifications,<sup>254</sup> especially amongst the generation now aged 25-34 (Appendix 10).

<sup>253</sup> Using the Department for Work and Pensions (DWP’s) ‘Households Below Average Income’ (HBAI) definition, and so adjusted for household size, assuming equal sharing within households, and before deducting housing costs (see Box 2.5).

<sup>254</sup> GCSE passes at A\*-C or above.

In Chapters 3 to 8 we looked in turn at how inequalities in each of eight outcomes related to people's characteristics and circumstances, and at the considerable variations within social groups when the population is divided in different ways. In Chapter 9, we looked at common patterns for particular groups across different outcomes, in Chapter 10 at how they have converged or widened over time, and in Chapter 11 at how inequalities develop across the life cycle. Below we pick out some of the features of all of this material, looking at each of the dimensions we have examined in turn.

### (a) Gender

Girls have better educational outcomes than boys at 16. Out of every 100 pupils, girls have median<sup>255</sup> achievement ranked between 8 and 12 places higher than the median achievement for boys (depending on which nation is examined) (Figure 3.1). Reflecting these results, women are more likely to go on to tertiary education than men, and are more likely to achieve good (first or upper second class) degrees (Figure 11.18). More women now have higher education qualifications than men in every age group up to age 44, and fewer have no or only low qualifications, reversing the pattern in older generations (Figure 3.8).

However, women are paid less than men – 21 per cent less in terms of median hourly pay for all employees (and 13 per cent less than men for those employed full-time). Allowing for shorter working hours, weekly earnings of women in full-time employment are 22 per cent less than men (Figures 5.1 and 5.11).<sup>256</sup> For women in their twenties, the gender gap is much smaller (6-7 per cent in weekly full-time earnings at the median), but within four years of graduation, nearly twice as many men have earnings over £30,000 as women (Figure 11.19). It is sometimes assumed that wages tend to grow with age and experience. However, hourly wages for women are highest for those in their early thirties, and lower for each subsequent age group (Figure 5.2(b)). It is only for women with high qualifications and working in the public sector that one sees 'career progression' in wages (Figure 11.20). While it is not the only factor, women's pay, relative to men's, declines not just at the moment of first becoming a mother, but through most of the first child's childhood (Figure 11.23). There is, however, almost as much inequality between well-paid and low-paid women as there is between the well-paid and the low-paid overall (Table 10.5).

A crucial factor in all of this – and also in the earnings of disabled people and those from certain minority ethnic groups – is the low level of part-time pay. Half of those working part-time earn less than £7.20 per hour. Few part-timers have hourly wages above the median of £9.90 for all employees (Figure 2.4(c)).

The current position of women is, nonetheless, an improvement on what it was in the late 1990s. Looking at net individual income received by adults in their own right (from all sources including benefits and tax credits as well as wages), the median for women rose from 53 per cent of the men's median in 1995-1998 to 64 per cent in 2005-2008 (Table 10.5).

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<sup>255</sup> Within any group, half have outcomes below its median, and half above it.

<sup>256</sup> The gender pay gaps quoted here are taken based on data from the Labour Force Survey (LFS) and therefore vary slightly from those based on the Annual Survey of Hours and Earnings (ASHE) which are usually published. See Box 10.1 for discussion of this and Appendix 12 for discussion of the differences between the two surveys.

Given the size of the ‘trans population’, national sample survey evidence of the kind used in this report is unable to shed light on their economic position. However, evidence of other kinds suggests substantial difficulties in employment for some members of that population (Box 9.1).

### *(b) Age*

The position of young people (aged under 25) in the labour market and in equivalent net income has declined both over the longer-term<sup>257</sup> and in the last decade, for some because of longer periods in education, but not for others (Tables 10.6 and 10.7). Those who have most improved their relative positions in the last decade have been women of all ages over 25 (particularly those with middle and higher incomes in their thirties) and older men. Men aged 25-69 (especially poorer middle-aged men) slipped back. Equivalent net incomes – in many ways the best summary of differences in relative living standards among the measures we examine – now have a ‘crown’ shape with age, with the highest levels for those both in their early thirties and in their early fifties when looked at any one time (Figure 7.2). Those in their thirties and forties tend to have lower equivalent incomes as family sizes are then at their largest. However, other surveys that follow the same people over time show that rising general living standards mean that those in their forties tend actually to experience this as a flattening, rather than dip, in their own incomes (Figure 11.21).

As one would expect, wealth is highest for those in their late fifties and early sixties, when people are close to retirement. Including private pension rights, median wealth is £66,000 for those aged 25-34, but £416,000 for those aged 55-64. However, there are very considerable differences in wealth within each age group, with a range from £28,000 to £1.3 million between the 10<sup>th</sup> and 90<sup>th</sup> percentiles of those aged 55-64 (Figure 8.2).

### *(c) Ethnicity and religious affiliation*

Our detailed results in Chapters 3 to 8 show the complexity of differences between ethnic groups when they are defined quite narrowly and, by implication, the dangers in conflating ethnic categories (although the data available to us are sometimes only for broad categories). It is often valuable to look at differences by ethno-religious group, rather than by ethnicity by itself, and to look at the interaction between gender and ethnicity.

Looking at particular groups as they move through compulsory schooling, some of the minority ethnic groups that start with test scores well below the national average improve their relative position between 7 and 16 (Figures 11.12 and 11.13). At 16, however, Pakistani, Black African and Black Caribbean boys in England have median results well below the national figure for all pupils (Figure 3.2(a)). Other groups have results well above the national average. A tenth of Chinese girls have results in the top 1 per cent overall. Children with

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<sup>257</sup> Brewer, Muriel and Wren-Lewis (2009), figure A1.4.

Traveller or Gypsy backgrounds have assessments that fall further behind during the school years, resulting in much worse results at 16 than others.<sup>258</sup> This gap appears to have widened rapidly in recent years (Figures 11.12, 11.13 and 10.2(b)).

Those from minority ethnic groups with GCSE results around or below the national median are much more likely to go on to higher education than White British pupils with similar results (Box 11.3). However, Black and Pakistani/Bangladeshi students are less likely to go to more prestigious universities or to get higher class degrees (Figures 11.17 and 11.18). A larger proportion of those of working age from several minority ethnic groups, including those with Chinese, Indian and Black African backgrounds<sup>259</sup>, have higher education qualifications than the White British population (Figure 3.10).

Despite this, nearly all minority ethnic groups are less likely to be in paid employment than White British men and women (Figure 4.2). 44 per cent of Pakistani and 49 per cent of Bangladeshi women are economically inactive, because they are looking after family or home, compared to 20 per cent or fewer of other groups. Around 80 per cent of White British, Other White, and Indian men are in paid work, but between 60 and 70 per cent of other groups. 17 per cent of Bangladeshi men are employed part-time and 21 per cent of Pakistani men are self-employed. For some groups differences in unemployment rates are as great for the 'second generation', as for those who were born outside the UK (Box 9.2).

When employed, nearly all other groups have hourly pay less than White British men, although several groups (including Black Caribbean women) have higher pay than White British women. In Box 9.3 we report research which shows what wage levels would be predicted for people who have the same age, occupation, and qualifications (given the actual wages seen across each group). Controlling for differences in age, occupation, and qualifications in this way, Indian Hindu and Sikh men, and Black Caribbean Christian men have similar hourly wages to White British Christian men. White Jewish men are paid 24 per cent more. However, Pakistani and Bangladeshi Muslim men and Black African Christian men have a 'pay penalty', earning 13-21 per cent less than White British Christian men (see Box 9.3). Although Chinese men are one of the highest paid groups, they are paid 11 per cent less than would be expected allowing for their qualifications. Women from nearly all ethno-religious backgrounds have pay between a quarter and a third less than a White British Christian man with the same qualifications, age and occupation.

These differences are smaller for the children of migrants (the 'second generation') than for first generation migrants, and some of the largest differences in pay by ethnicity appear smaller than they were only a decade ago (Table 10.8). However, as with the position of women in general, improving or high qualifications for people from several minority ethnic groups do not appear to be translating into the labour market position one would expect. A major factor in this is not just somewhat lower pay, allowing for qualifications and type

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<sup>258</sup> There are only 141 pupils recorded as having Traveller or Gypsy backgrounds in the data for the cohort examined.

<sup>259</sup> This contrasts with the below-median attainment of Black African children at 16 (Figure 3.2).

of employment, but whether people are employed at all, and if they are, in which sector. Recent experiments show clear evidence of discrimination in whether people are offered job interviews depending on the apparent ethnicity in their CVs (Box 9.5).

The end result of all this is that some minority ethnic groups still have equivalent net incomes that are well below those of the rest of the population (Figure 7.3). Those from Bangladeshi and Pakistani households have a median equivalent net income of only £238 per week, compared to the national median of £393. Nearly half are below the official poverty line. As with the other outcomes we examine, however, there is generally as wide – or even wider – variation in the equivalent net incomes within ethnic groups as within the population as a whole (Table 7.3).

### *(d) Disability status*

There are several ways to measure disability status, and the data available to us vary in the definitions used. For those at school the categories of ‘Special Educational Needs’ and ‘Additional Support Needs’ are very broad, and there are substantial differences between the children covered by them and in their attainments. For instance, for pupils with sensory impairments or physical needs, differential attainment at the end of secondary school is largely predicted by their attainment levels at the end of primary school. By contrast, those with Behavioural and Emotional Support Needs have attainment levels which fall further behind in secondary school (Box 11.2).

In terms of both employment and wages, there are large differences between those reporting a ‘work-limiting disability’ and others. Differences for others who would be classed as disabled under the Disability Discrimination Act (DDA) definition are much smaller. Nearly half of those reporting both ‘work-limiting’ and ‘DDA’ disability have no or only low qualifications, twice the proportion of those who are not disabled (Figure 3.12). Their paid employment rates are less than half those of people who are not disabled (Figure 4.4). When employed, disabled people have median hourly earnings 20 per cent lower for men and 12 per cent lower for women (Figure 5.5). The disability employment ‘penalty’ has grown steadily over the last quarter century.<sup>260</sup> Disabled people with low or no qualifications have been particularly strongly affected, and more so than non-disabled people (Figure 10.5). Again, recent experiments suggest that those disclosing a disability are less likely to be called for interview than those with otherwise identical CVs (Box 9.5).

According to official definitions, working age adults who are DDA-disabled have a median equivalent net income that is 30 per cent lower than that for other working age adults (Figure 7.4). This is a considerable fall relative to the national median since the late 1990s (Table 10.9). However, even this understates the relative disadvantage of disabled people. As we explain in Box 7.3, this income measure includes social security benefits, including those paid to disabled people on the grounds that they face extra costs in achieving a given standard of living compared to non-disabled people. It seems perverse to include such benefits in an

<sup>260</sup> Berthoud and Blekesaune (2007).

income measure that attempts to give a guide to relative living standards, without adjusting for the extra needs they reflect (as the measure does for household size). If extra costs benefits are excluded from net income, the net income of disabled people is reduced by more than 10 per cent, and their poverty rate would be more than 30 per cent (compared to 25 per cent under the usual definition). Box 9.7 discusses the related issue of the position of carers, and the parts of the population they come from.

### *(e) Sexual orientation*

There is very little information on the economic position of people in terms of their sexual orientation (although information by sexual orientation is now being collected by the Office for National Statistics (ONS) in its regular household surveys, so this will change in the near future). The limited information that is available is potentially misleading because it relates to the position of the small proportion of the population who report to the LFS that they live in a same sex couple. People reporting this status have higher qualification levels, higher rates of employment and higher earnings than others (Figures 3.13, 4.5 and 5.6). However, these differences appear to reflect who is most likely to have the self-confidence to live and to report their status in this way. In Box 9.8, we present evidence on trends in relative employment and earnings for people reporting they live in same sex couples allowing for their qualification levels and other characteristics. This shows that men in same sex couples were less likely to be employed and paid significantly **less** than would have been expected given their other characteristics in the late 1990s, but that this penalty has now disappeared. For women in same sex couples, pay remains higher than for other women, but this difference has also narrowed. By implication, there is no reason from this kind of evidence to expect the spread of earnings or incomes for lesbian, gay or bisexual people to be much different from that of the population as a whole.

### *(f) Occupational social class*

Social class is different from some of the other dimensions we examine in that it is both an outcome of the labour market and part of the transmission mechanism that affects how people's lives develop. As one would expect, there are considerable differences in qualifications, employment rates, earnings and incomes between those from different occupational social classes. The median hourly wage for men from higher professional and managerial households is 2.5 times higher than men in routine occupations. For women the corresponding figure is 2.9 times higher (Figure 5.7). The median equivalent net income of those in higher professional and managerial households is 80 per cent higher than that for those with routine occupations, putting half of them in the top sixth of the population overall (Figure 7.5). Occupational social class is the only breakdown where within-group variation is generally substantially less than that within the population as a whole, although it remains large (Table 5.7). Growing inequality between broad occupational classes was one of the important contributors to the growth in earnings inequality over the 1980s (Figure 5.8(a)).

*(g) The impact of social background*

The evidence we examine confirms that social background really matters. There are significant differences in school readiness before and when children reach school by parental income and mother's education (Figures 11.6 and 11.9). Children entering primary school in 2005-06 whose mothers had degrees were assessed 6 months ahead of those who had no qualifications above Grade D at GCSE. In addition, every extra £100 per month in income when children were small was associated with a difference equivalent to a month's development. Rather than being fixed at birth, these differences widen through childhood. For recently born children a similar process seems at work to that already observed in the 1970s. Children with a higher social class background who start with a low assessment of relative cognitive ability when young eventually overtake those with a lower social class background who were initially assessed as having high ability (Figure 11.8). Looking from age 3 to age 14, differences in assessment related to family income, father's occupation and mother's education widen at each stage (although they then narrow slightly between 14 and 16), in contrast to differences related to ethnicity, which narrow or even reverse during childhood (Figures 11.15 and 11.16).

In the main data available on performance at school, the best available indicator of socio-economic background is whether children receive Free School Meals. By age 16, half of boys receiving Free School Meals have results in the bottom quarter in England (and in the bottom fifth in Wales). However, it is boys on Free School Meals from certain ethnic backgrounds that slip back through secondary school. By age 16 White British, Black Caribbean and mixed White and Black Caribbean boys receiving Free School Meals have the lowest average assessment of any group identified by gender, ethnicity and Free School Meals status, apart from Gypsy and Traveller children (Figure 11.13). The social class and Free School Meals gaps in GCSE attainment are, however, both a little smaller than they were a few years ago (Figures 10.3 and 10.4).

Low income acts as a barrier to post-compulsory education. Young people with GCSE results above the national median who have been on Free School Meals are less likely to go on to higher education than others with the same results (Box 11.3). Those with manual worker parents who do go to university are less likely than others to go to prestigious universities or to get higher class degrees (Figure 11.18). Within four years of graduation, men who went to private schools earn more than 8 per cent more than one would expect **after** allowing for their gender, ethnicity, social class, degree class, subject taken, occupation, industry and region of employment.<sup>261</sup> As the Panel on Fair Access to the Professions recently observed, those entering the professions who had been born in 1970 came from families whose relative incomes were substantially higher than those for their predecessors born in 1958 (Figure 11.5).

However one looks at the evidence on social mobility, it is clear that we live in a far from perfectly mobile society. People's occupational and economic destinations in early adulthood depend to an important degree on their origins. Moreover, rates of intergenerational mobility

<sup>261</sup> Machin, Murphy and Soobedar (2009b), table 10.

in terms of incomes are low in international terms, and in terms of occupation are below the international average for men and at the bottom of the range for women (Figures 11.2 and 11.4).

Parental help can also make a large difference to access to owner-occupation – nearly half of young first-time buyers had received help from family and friends with their deposit in 2005. Someone's chance of receiving an inheritance – particularly a substantial one – is higher, the greater the wealth they already have. Membership of an occupational pension scheme increases rapidly with income (Section 6.6(d)). As a result of such processes, combined with the ability to save more out of higher incomes, for those aged 55-64, the median wealth (including pension rights) of higher professional and managerial households is more than twice the median for all households, and around four times that of semi-routine or routine households (Table 11.6).

In turn, differences in wealth are highly correlated with mortality rates after age 50. More than twice as many men, and nearly four times as many women, from least wealthy fifth of over-fifties die within a six-year period as of those from the wealthiest fifth (Figure 11.24).

### *(h) Housing tenure*

Housing tenure also has a dual role, being something that both shapes people's lives and an outcome of their levels of advantage and disadvantage in other respects. In particular, access to social housing has been heavily rationed towards those in the greatest need for the last quarter century, and access to owner-occupation depends on the capacity to borrow on a mortgage and sometimes on inheritance or help from families. As a result, there are now very substantial differences in economic outcomes between those living in different tenures, and these often reflect other characteristics. Only 4 per cent of those of working age living in social housing have degrees, and nearly half have no or only low qualifications (Figure 3.14). Only half of men and 42 per cent of women of working age living in social housing are in paid work, compared with 89 per cent of men and 81 per cent of women in households with a mortgage (Figure 4.7). The median hourly wage of women in social housing is in the bottom fifth of wages overall, while the median wage for male owners with a mortgage is in the top 35 per cent (Figure 5.8). A third of social tenants have equivalent net incomes (before housing costs) below the official poverty line, and only a fifth of social tenants are in the top half of the income distribution (before or after housing costs) (Figure 7.6). However, income differences between tenures are slightly smaller than they were a decade ago (Table 10.10).

It is not surprising that social tenants have much lower total household wealth, including housing, than owner-occupiers – a median of £18,000 compared to £270,000 for mortgagors and £411,000 for outright owners (Figure 8.6). But they have little wealth in other forms too. Median financial and physical wealth is only £15,000 for social tenants, compared to £54,000 for mortgagors and £75,000 for outright owners. Private pension rights only raise the median wealth of social tenants by £3,000, but add £126,000 to the median for outright owners.

Growing up in social housing has become more strongly associated with poorer economic outcomes in adulthood than it was for previous generations (Box 11.1). This reflects, in large part, the increasing levels of relative disadvantage found in the sector compared with a quarter of a century ago.

### *(i) Nation and region*

Levels of inequality are slightly higher within England than within the devolved nations. However, recent trends are similar, whichever outcome one examines, despite the constitutional commitments to equality in the legislation establishing the Scottish Government and Welsh Assembly Government. This partly reflects the way in which some of the policies which most affect distributional outcomes are in fact UK-wide. There have been some, relatively small, differences in the last decade, and it is notable that Scotland is the only one of the four nations where inequalities in all four of the aspects of earnings and income on which we focus have fallen a little over that period (Table 10.11). While differences in median incomes are not very great between the nations, those in median total wealth are considerable, between £151,000 in Scotland, £206,000 in Wales and £211,000 in England (Figure 8.5).

Looking across the English regions does not show a simple 'North-South divide' in outcomes and their inequality. However, inequality in any dimension is wider in London than in any other region, and inequality in earnings and incomes has increased faster in London over the last decade than anywhere else (Table 10.12)

### *(j) Area deprivation*

By contrast, in all of the outcomes we examine, from education at 16 to total wealth, there are profound differences at neighbourhood level, between areas with higher and lower levels of deprivation. There is some circularity here – deprived areas are judged as such because many of the people living in them have low levels of qualifications, employment, or incomes. None the less we found the differences startling. In Scotland, for instance, the difference in educational performance at 16 between median outcomes for those in the most and least deprived tenths of areas is equivalent to crossing half of the overall range in attainment (Figure 3.6(b)). Only 55 per cent of adults in the most deprived tenth of areas in England are employed (Figure 4.9). The median equivalent net income in the poorest tenth of areas in England is 30 per cent below that for the rest of the country. Median total wealth in the poorest tenth of areas is only 16 per cent of the national median. In the least deprived tenth of areas total wealth is more than twice the national median (Figure 8.7).

It is also striking that inequality in earnings and incomes is greater, the more prosperous an area. The earnings and incomes of those in the poorest tenth within all areas, whatever the level of area deprivation, are similar – it is the middle and high incomes within the less deprived areas that are much higher than elsewhere, and so the range within them is greater.

### Box 12.1: Data issues

The analysis we have been able to present in this report is considerably richer than would have been possible, just a few years ago (as is evident from the limited nature of some of the comparisons we can make over time, which we discuss in Chapter 10). That we have been able to do this is a tribute to the advances that have been made by ONS and the DWP in the surveys that they run. The material we have been able to use from the new ONS HAS is of particular importance, and we would strongly urge that the survey continues into the future, having proved both its value and its feasibility.

We also hope that some of the innovations we have made in this report will be included within more regular analysis by government in the future, in particular the use of already available data to look at differences in outcomes both between and within groups of the kind we were asked to examine. As we explain, the latest material available to us relates to periods that end in 2008, largely predating the world financial crisis and subsequent recession. It is not yet clear how different groups will emerge from this turmoil (see Section 10.5), and repeating many of the breakdowns we have used when the economy has stabilised would be instructive.

There are also kinds of analysis which we have updated for this report and which we have found illuminating. This particularly includes the analysis of net individual incomes, where we have been able to supplement the analysis contained in the main DWP series of equivalent net income, based on household income. This is a series which has not been updated in recent years, but which shows important distinctions in trends over time, particularly so far as gender differences are concerned. We suggest that analysis on this basis is again carried out periodically.

We also found it useful to look at the whole distribution of children's educational achievement at 16, rather than just to focus on whether they have passed a single threshold, and suggest that more use is made of this kind of information, already available within government and to researchers.

We have also found analysis which looks at outcomes related to the deprivation level of the area in which people live very revealing. There are obvious data protection issues which make disclosure of actual areas of residence impossible. However, the wider use of data on the deprivation level or other characteristics of an area is not ruled out by data protection concerns and can be of great importance. There is potential for more analysis of this kind than is currently undertaken.

Having said that, it will have been clear that there have been data limitations in some of the areas which we would like to have examined further, although some of these will be improved through new questions which are already included in surveys that are already under way, for instance, with regard to sexual orientation.

The research reported in Chapter 11 shows the importance of having longitudinal as well as cross-sectional data. We strongly support current initiatives to maintain existing sources and new developments such as the new large household panel survey and plans for a new birth cohort study. At the same time, we believe that administrative record data of various kinds are an under-utilised resource, whether used by themselves

or linked to survey data. Many of our findings about inequalities in children's progress through the educational system would not have been possible without access to longitudinal data from the Annual School Census, for instance. But there are also very rich data about earnings and incomes held by the DWP, and by HM Revenue & Customs (HMRC) that could play an equally valuable role. We support initiatives to improve access to these sources for research purposes (while acknowledging that there would be important issues to resolve to safeguard data security and privacy).

Another issue which we would highlight is the way in which there are sometimes important differences between narrowly defined ethnic groups that are sometimes put together. This underlines the importance of both the way questions are asked in surveys, and the size of the samples taken (with over-sampling of particular groups often justified as a way of dealing with this). We would also draw attention to the sensitivity of the labels that result from such exercises. We have only been able to use the material from surveys in the way they were originally conducted, but are aware that this can create labels which some find inappropriate in terms of the cultural loadings they carry. We would urge ONS and DWP to keep this kind of issue under review and to consult widely to make sure that categories generated by data become and remain appropriate.

We have found the material available on the position of the Gypsy and Traveller community very striking and of great concern. Within the surveys we have looked at, it is only from the National Pupil Database (NPD) that a comprehensive (and disturbing) picture emerges. This suggests the need for better data collection on other aspects of the lives of this community. We also found few sources of quantitative information on the position of asylum-seekers or refugees, as this is not a status which the regular surveys ask about. This is also a gap to which we would also urge attention is paid.

Finally, in our analysis of the position of disabled people we were struck by two issues. First, it is often the difference between those who report a work-limiting disability and other that is more revealing than whether they have a disability as defined by the DDA. Second, the inclusion of social security benefits designed to offset the extra costs that they face gives a misleading impression of relative living standards. We would suggest that when DWP presents analysis of the relative positions of disabled and non-disabled people, these benefits are excluded from the income definition used.

### Challenges for policy

We have written this report against a back-drop of widespread public ignorance of the scale of inequality in the dimensions we have examined. Most people are unaware, for instance, either of their own position in the income distribution or of the true scale of differences between the high paid and the low paid.<sup>262</sup> This lack of awareness runs through society, from rich to poor, and acts as a constraint on any policies designed to contribute to reducing inequality. We hope that one result of the Panel's work is to provide a source of information that improves that knowledge. By the same token, public awareness would be improved by measures that increase the transparency of relative rewards for people across businesses and public organisations – not just for a few at the very top, but also across the whole range of wages and salaries.

A second conclusion is that averages can be misleading. Differences in outcomes within each social group, however the population is classified, are usually only a little narrower than those across the population as a whole, and are much greater than those between groups. The inequality growth of the last forty years is mostly attributable to growing gaps within groups rather than between them. By implication, achieving a more equal society than we have now would require not only narrowing gaps between the average outcomes for particular groups, as defined for instance in equalities legislation. It would also require gaps to be narrowed between the more and less advantaged within each social group.

Nonetheless, there remain deep-seated and systematic differences in economic outcomes between social groups across all of the dimensions we have examined – including between men and women, between different ethnic groups, between social class groups, and between those living in disadvantaged and other areas. Some of the widest gaps in outcomes between groups narrowed in the last decade, particularly between women and men and, although the data are not completely robust, the same seems true of those between the most disadvantaged ethnic groups and others. But, despite the elimination and even reversal of the qualification differences that often explain relative levels of employment and pay, significant unexplained differences in labour market outcomes remain. Such differences suggest that people are not receiving equal treatment in some way, and that the opportunities open to some are constrained in a way that they are not for others.

Fourth, economic advantage reinforces itself across the life cycle. While there is nothing deterministic in what we have described, the evidence we have looked at shows the long arm of people's origins in shaping their life chances, stretching through life stages, literally from cradle to grave. Differences in wealth in particular are associated with opportunities such as the ability to buy houses in the catchment areas of the best schools, or to afford private education, with advantages for children that continue through and beyond education. At the other end of life, wealth levels are associated with stark differences in life expectancy after 50. By implication, policy responses aimed at equalising life chances are needed across the full range of life stages and transitions between them. This is not just about differences in opportunities between the very top and bottom of society, but also between those who are quite well-off and those who are below the average, but not at the bottom.

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<sup>262</sup> Hills (2004), chapter 2, section 2.5; Sefton (2005); Toynbee and Walker (2008), chapter 2.

We were asked to comment on the implications of our findings for the direction of policy, rather than to make specific recommendations. Below, we highlight particular challenges for policy. In doing so, we reject the idea that public policies cannot make a difference. Recent reviews of the impact of policies towards inequality with which some of us have been involved suggest that they can and have made a difference, although their scale has sometimes been small by comparison with the challenges.

A recent assessment of the overall impact of tax and benefit reforms since 1979 finds that policy over the 1979 to 1997 period was equivalent to increasing benefits in line with price inflation, while policy since then has been equivalent to increasing benefits in line with the growth of national income.<sup>263</sup> Reforms since 1997 have tended to reduce income inequality, while those in the earlier period tended to increase it. Another assessment of the reforms in tax and benefit policies between 1996-97 and 2008-09 suggests that, compared with what would have happened if the 1996-97 structures had been maintained, adjusted for only price inflation, those who would have been in the poorest tenth were up to 25 per cent better off (see Box 2.4).<sup>264</sup> However, compared to a benchmark in which the 1996-97 system was adjusted in line with earnings growth, gains at the bottom were still positive, but much smaller, for instance 8 per cent for the poorest tenth. This redistribution was selective, with the biggest beneficiaries being pensioners and families with children.

Many of the issues we point to emphasise the importance of policy interventions, often aimed at having long-run effects on people's life chances. The closing of the gender gaps in pay and individual incomes – albeit slowly and from high levels – show that the kinds of difference we describe are not immutable (Table 10.5).

Equally, public policy can ensure that access to important aspects of life – from health care to safe parks and public spaces – does not depend on income, and so is not affected by the inequalities we have described.

### *Schooling and education*

- (1) Differences in school readiness by parental resources and social class are apparent in the early years and widen before school entry. But they are not set in concrete. This underscores both **the importance of early years policies** and the scale of the challenges they continue to face.
- (2) In the school years:
  - Differences by family parental resources widen through the years of compulsory schooling, resulting in what remain – despite some recent progress – wide gaps between, for instance those receiving Free School Meals and others by 16. This evidence supports both the need to **reduce child poverty** and to improve the **educational attainment of poor children** in general, and substantially to improve **staying-on rates after 16** of low-income children in particular.

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<sup>263</sup> Adam and Browne (2009).

<sup>264</sup> Sefton, Hills and Sutherland (2009).

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- Britain has a long tail of low achievement among school-leavers, especially those with low literacy, numeracy and information technology skills. **The deteriorating position through secondary school of low-income boys from White British and Black Caribbean backgrounds is a particular concern within this.**
- The overall economic position of the Gypsy and Traveller community is clearly very poor in other respects (although the main data sources available to us do not allow precise assessment), but the low – and apparently deteriorating – educational achievement of **children from Gypsy or Traveller families** is very troubling.
- The position of those with **particular forms of Special Educational/Additional Support Needs is of concern**, particularly those with Behavioural and Emotional Support Needs in secondary school.
- (3) Considerable differences remain, even after allowing for attainment at 16, **in entry into higher education, and the kind of institution attended by social class and ethnicity, and experience of private education.**

### *The labour market*

- (4) In several respects the economic position of young people has deteriorated in recent years. For some, low incomes are temporary, reflecting longer periods in education. But for other young people it reflects their very weak position in – or in attempting to enter – the labour market. The recession appears to have exacerbated these trends, raising the acute challenge of **avoiding longer-term ‘scarring’ effects from early unemployment.**
- (5) Pay levels for women and for those from most minority ethnic groups do not reflect their qualification levels or improvements in them in recent years. **Differences in pay by gender and ethnicity remain that are unrelated to qualifications and occupation. The transition from education to the labour market is failing to make the best use of people’s talents.** There are many reasons for this, but we would highlight the **processes that affect or constrain the sectors and types of employment that people end up in – or find difficult to access. There still appears to be straightforward discrimination in recruitment**, affecting both minority ethnic groups and disabled people, particularly in the private sector.
- (6) The particularly disadvantaged position of the **Bangladeshi and Pakistani working age populations**, cross-cutting with Muslim religious affiliation, was evident across each of the labour market outcomes we examined.
- (7) **The low level of hourly pay for part-time work** reflects both the low value accorded to it and a failure of the way we organise work, including the lack of opportunities for training and promotion. We need to open up part-time opportunities beyond routine and low-paid occupations, and to open up career progression for part-time workers. For some, part-time work is their preferred option, but for others, working part-time is the result of constrained choices reflecting limited childcare options and assumptions about gender roles.

- (8) We were struck across all of the breakdowns of hourly wage levels within different social groups by the way in which the National Minimum Wage has created a floor, protecting the bottom tenth of earners. **Improving the level of the minimum wage relative to other wages is a potentially powerful weapon in reducing labour market inequality.**
- (9) While a gender pay gap emerges soon after labour market entry, it widens steadily through people's thirties and forties. This is partly a result of lack of career progression for most women, underlining the potential importance of a whole series of policies related to **parental leave and flexible employment as well as childcare provision, availability and cost.**
- (10) The way in which the disability employment penalty has risen in recent years, in contrast to those related to gender and ethnicity, suggests **the need for a stronger focus on policies affecting the employment of disabled people**, particularly those with mental health conditions. As with other disadvantaged groups in the labour market, the problem is most intense for those with low and with no qualifications, in turn a greater issue for older generations. This again suggests the importance of policies that support **lifelong learning and training that extends beyond the already well-qualified.**
- (11) Differential rates of disability and ill-health towards the end of people's working lives, and in life-expectancy after them, have many earlier roots, underscoring policies to **reduce health inequalities earlier throughout adulthood** being addressed by the Strategic Review of Health Inequalities in England, chaired by Sir Michael Marmot.

### *Resources in later life*

- (12) Inequalities affecting different groups in the labour market are magnified in the resources people reaching retirement have through pensions, housing and savings. The end result is huge differences in the resources, including pension rights, with which people enter retirement. **Recent pension reforms, designed to provide a more generous and more secure base on which people with average and low incomes can more easily build their own retirement savings, are essential.** However, they will still leave gaps, affecting the self-employed in particular (affecting some ethnic groups more than others), and they cannot compensate for large-scale inequalities in people's working lives.

### *Low income neighbourhoods*

- (13) In 2001, the Government set out a vision that, “*within 10 to 20 years, no-one should be seriously disadvantaged by where they live*”.<sup>265</sup> **The evidence we have presented on the profound differences in all economic outcomes between more and less disadvantaged areas suggests we are still a very long way from achieving this goal.** Whatever the source of these differences, they imply huge disparities in the collective resources available from one area to the next, and the need for investments that counter their effects. **The ‘neighbourhood renewal’ agenda itself needs renewal,** especially as the impact of recession becomes clear.
- (14) Related to this is the very high level of disadvantage in the labour market which we have described for tenants of social housing, related to the way in which access to it is now heavily based on showing high levels of need. We need to be more successful in using the advantages of security and work incentives that social housing can offer to **support tenants in moving towards and into employment.** Most social tenants have very low levels of assets of any kind, not just of housing equity. **Measures to support saving and asset-building by tenants are needed to address this.**

### *Devolution*

- (15) Differences in outcomes between the four nations of England, Scotland, Wales and Northern Ireland open up the **possibility of learning from one another’s experiences,** an opportunity which so far is under-exploited. As yet, however, few of those differences have been large enough to show in terms of the inequalities we have examined at national scale. This in itself presents a challenge to administrations that have set strong objectives of greater equality or social justice.

### *The distributional effect of taxes and spending*

- (16) Through the structure of taxes and benefits, the Government narrows the range of incomes that would otherwise result from the market, although less in the UK than in many other European countries. Who benefits and tax credits are paid to also affects distribution within the household, where resources are not shared equally. **The progressivity of the tax system and the level of social security benefits and tax credits in relation to other incomes are central to this, and to the levels of inequality within social groups** of the kind that we have observed throughout our work. In the wake of the financial crisis and the recession, Government faces the challenge of rebalancing the public finances. How this is done will probably be the most important influence on how the inequalities both within and between groups evolve from those we have described in this report. **A fundamental question is now whether the costs of recovery will be borne by those who gained least in the period before the crisis, or by those who gained most, and are in the strongest position to bear them.**

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<sup>265</sup> Social Exclusion Unit (2001).

Britain has moved from being a society where those near the top had three times the incomes of those near the bottom in the 1960s and 1970s to one where, since the start of the 1990s, they have four times as much. We have still not seen the full results of this shift, as the gainers and losers from this process have still only had half their careers within this more unequal world.

Much of what we have described in this report shows the way economic advantage and disadvantage reinforce themselves across the life cycle, and often on to the next generation. It matters more in Britain who your parents are than in many other countries. More generally, intergenerational mobility appears lower in societies such as ours which are more unequal – moving up a ladder is harder if its rungs are further apart, and those who start higher up the ladder will, unsurprisingly, fight harder to make sure their children do not slip down it. A fundamental aim of those people with differing political perspectives is to achieve ‘equality of opportunity’, but doing so is very hard when there are such wide differences in the resources which people and their families have to help them develop their talents and fulfil their diverse potentials.



## Appendices

### Appendix 1: Members of the National Equality Panel

- Chair: John Hills, Director of the Centre for Analysis of Social Exclusion and Professor of Social Policy at the London School of Economics.
- Mike Brewer, Director of the Direct Tax and Welfare Programme at the Institute for Fiscal Studies.
- Stephen Jenkins, Professor of Economics at the Institute for Social and Economic Research, University of Essex.
- Ruth Lister, Professor of Social Policy at Loughborough University.
- Ruth Lupton, Senior Research Fellow in the Centre for Analysis of Social Exclusion at the London School of Economics.
- Stephen Machin, Professor of Economics at University College London and Research Director of the Centre for Economic Performance at the London School of Economics.
- Colin Mills, Reader, in the Sociology Department, University of Oxford.
- Tariq Modood, Professor in the Centre for the Study of Ethnicity and Citizenship, at the Bristol Institute for Public Affairs, University of Bristol.
- Teresa Rees, Professor in the School of Social Sciences and Pro Vice Chancellor (Research) at Cardiff University.
- Sheila Riddell, Professor of Inclusion and Diversity and Director of the Centre for Research in Education Inclusion and Diversity, University of Edinburgh.

## Appendix 2: Terms of reference for the National Equality Panel

The UK Government is committed to promoting a more equal society.

The Equalities Review, which reported in 2007, was a fundamental review of equalities in the UK. It focused on the major ‘equality strands’ that are subject to formal anti-discrimination measures (gender, race, disability, age, sexual orientation and religion or belief). New legislation addressing inequalities in these areas will be set out in the forthcoming Equalities Bill. The Minister for Women and Equality now wishes to consider the relationship between these ‘equality strands’ and other key dimensions of equality.

Specific questions to be asked:

- What does the best available evidence reveal about the relationships between the ‘equality strands’, other dimensions of equality such as class, tenure and geography, and employment, income and wealth?
- What does the evidence reveal about how these have changed over time?
- What are the gaps in the evidence relating to these questions and how should they be addressed?

These questions need to be considered in the context of the Public Service Agreements’ focus on narrowing gaps, including:

- PSA 15: “To address the disadvantage that people experience because of their gender, race, disability, age, sexual orientation, and religion or belief.”
- PSA 8: “Narrowing the gap between the employment rates of the following disadvantaged groups and the overall rate: disabled people, lone parents, ethnic minorities, people aged 50 and over, those with no qualifications, those living in the most deprived local authority wards.”
- PSA 11: “Narrow the gap in educational achievement between children from low income and disadvantaged backgrounds and their peers.”
- PSA 18: “Reduce health inequalities by 10 % by 2010.”

## Remit

The National Equality Panel will:

1. assemble the best available evidence relating to the questions set out above;
2. commission new research as delegated authority allows;
3. engage with key stakeholders identified in conjunction with the Government Equalities Office (GEO);
4. provide an independent analysis of the evidence;
5. provide advice to Government on the implications for the direction of policy; and
6. report to the Minister for Women and Equality by the end of 2009.

## Appendix 3: The non-household population

For statistical purposes, a household is defined as ‘one person or a group of people who have the accommodation as their only main residence and, for a group, either share at least one meal a day or share the living accommodation, that is living room or sitting room’. Non-household groups are those not living in a house, flat, mobile home or separate quarters. They are therefore excluded from the household surveys on which much of the analysis in this reports is based.

In this appendix, we present evidence from different sources on the size and the situations of some particular non-household groups.

Estimates for the population size of these groups are limited, if available at all. The Office for National Statistics (ONS) has recognised the need for a better measurement of their size.<sup>266</sup> The consequence of this is that we are not able to present the kind of detailed analysis for these groups that we can present for the rest of the population. However, although it is scant and patchy, some quantitative and qualitative research is available. In what follows we draw on this limited evidence to give an overview of both the numbers of people resident in the UK who are not part of the household population and the economic inequalities/disadvantage they experience.

The ONS mid-2008 estimate of the total population for England and Wales was 54,439,700, including those within and outside households. The estimate for the household population was 53,422,900. An estimate of the non-household population can be derived as the difference between the two numbers, suggesting that the non-household population was just over 1 million, or 1.9 per cent of the total resident population. This is similar to Evans’s estimate of between 1.7% and 2.1% of the UK population in the early 1990s.<sup>267</sup>

ONS identifies five categories: health and care establishments; access restricted establishments (such as prisons, detention centres, military camps and bases, or royal households); educational establishments; managed residential establishments; other miscellaneous establishments. This categorisation helps to identify the following groups, on which we focus in this appendix, together with their approximate sizes:

- residential care home residents (around 450,000);
- looked-after children (around 22,000 not in foster homes);
- people detained in prison, police cells and detention centres (around 85,000);
- people in armed forces accommodation (around 220,000);
- nomadic Gypsies and Travellers (around 100,000); and
- street homeless people, who are sleeping rough (several hundred or more).

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<sup>266</sup> ONS (2009a).

<sup>267</sup> Evans (1995).

### (a) *People in residential care*

The Department of Health estimates that there are around 400,000 residents in care and nursing homes in England and Wales at any one time. This is made up of council-supported residents (roughly 230,000); residents who pay for their own care (roughly 100,000) and those receiving NHS funded nursing care and continuing healthcare.<sup>268</sup> The Welsh Assembly Government estimates there are nearly 15,000 people receiving in residential care homes in Wales.<sup>269</sup> The Scottish Government estimates there are around 31,000 long-stay residents, aged over 65, in care homes in Scotland in 2009.

This substantial group, making up nearly half of the non-household population is overwhelmingly drawn from the older population, and so would be expected to have lower economic resources on average than the population as a whole. However, there will be a substantial range of resources within it, including those whose incomes and savings are paying for their own care and accommodation.

### (b) *Children in care*

There are about 60,000 looked-after children in England at any one time.<sup>270</sup> This figure is increased to about 72,500 when Scotland, Wales and Northern Ireland are included (although there are some legal differences in the definitions, especially between England and Scotland). Of those children, around 70 per cent are in foster families in England, Scotland and Wales, and 60 per cent in Northern Ireland. If fostered, the children would come within the household population, so around 22,000 children may be outside the household population for this reason.

Children leaving care are known to face particular disadvantages in education (CRAE, 2007). Research commissioned by the Department for Education and Skills found that over half the young care leavers sampled (54 per cent) had left school with no qualifications in 2003<sup>271</sup>, and over 29 per cent were not in employment, education or training in 2007<sup>272</sup>.

### (c) *People in prison*

The population in English and Welsh prisons on 20 June 2009 was 83,500, of which 79,200 were male and 4,300 female. The foreign national prison population was 11,400 (including those held under the Immigration Act 1971).

In 2008, 22,400 prisoners were from a non-white ethnic group, 27 per cent of the total prison population (mixed 4.4 per cent, Asian/Asian British 7 per cent, Black/Black British 15 per cent, Chinese/Other 1.6 per cent). Between 2007 and 2008 there was a 7 per cent increase in the

<sup>268</sup> The numbers can vary quite widely over quite a short period.

<sup>269</sup> The Welsh Assembly Government (<http://dissemination.dataunitwales.gov.uk/webview/index.jsp>).

<sup>270</sup> The Fostering Network ([http://www.fostering.net/media\\_centre/statistics.php](http://www.fostering.net/media_centre/statistics.php)).

<sup>271</sup> Dixon *et al.* (2006).

<sup>272</sup> Cabinet Office (2009b).

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number of prisoners from black and minority ethnic background compared to a 3 per cent increase in White prisoners.<sup>273</sup>

Prison inmates usually have very low levels of current income. While their past circumstances are varied, prisoners have backgrounds that disproportionately involve low levels of literacy and numeracy, high levels of unemployment and low wages. On leaving custody, former prisoners face substantial labour market and financial problems, and often have high rates of mental health problems.<sup>274</sup>

### (d) Armed forces

There are nearly 50,000 Service Family Accommodation properties in the UK in 2009, but 8,400 were vacant. At April 2009, there were around 142,000 people (service personnel and their dependants) in these properties in Great Britain.

In addition, there were 77,000 people living in 'Single Living Accommodation' (what would be popularly be known as barracks or their equivalent).

This group will by definition almost all have income from employment, with a wide range of earnings. For instance, in 2009-10, the salary for a private is £16,681; for a corporal it is £32,532. Others vary from £45,836 for a warrant officer I to £98,984 for a brigadier. The highest paid people in the army, generals, have a salary of £172,130.

### (e) Gypsies and Travellers

The precise number of nomadic Gypsies and Travellers is difficult to estimate as their numbers are not recorded at present in census records.<sup>275</sup> The Council of Europe has estimated the number at around 300,000 - 200,000 housed, and 100,000 in caravans.<sup>276</sup> Around 100,000 Gypsies and Travellers in England and Wales are therefore likely to be outside the household population.

We are able to analyse the often very low educational achievement of Gypsy and Traveller pupils, as they are recorded in the Pupil Level Annual Schools Census (PLASC) (see Chapters 3 and 11).

As Box 3.2 in Chapter 3 describes in more detail, Gypsy and Traveller communities in Britain experience wide-ranging problems associated with economic inclusion and access to employment; relationships with and experiences of accessing healthcare, social care, education and other public services; experiences of the legal and criminal justice systems; racism and discrimination; housing; political participation; literacy; and life expectancy.<sup>277</sup>

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<sup>273</sup> Ministry of Justice (2009).

<sup>274</sup> Social Exclusion Unit (2002).

<sup>275</sup> The Traveller Law Reform Project (2009). The 2011 Census in England and Wales will include Gypsies and Travellers as an ethnic group.

<sup>276</sup> Friends, Families and Travellers (2008).

<sup>277</sup> Cemlyn *et al.* (2009).

### *(f) Homeless people sleeping rough*

Communities and Local Government, from counts carried out from January 2007 to June 2008, estimates that there were 483 people sleeping rough in England on any one night, although there are many reasons why the actual numbers and their composition are hard to establish. Nearly a quarter of those were in the London Borough of Westminster alone. The Combined Homeless Action and Information Network (CHAIN) estimates around 3,000 individuals sleep rough at different times over the year in London.<sup>278</sup> The CHAIN database also showed that roughly 87 per cent of people sleeping rough were male.

There are many reasons why people become homeless, and some of these are related to the extreme ends of the economic inequalities that form the focus of this report. People may be sleeping rough because of poverty, debt, unemployment, lack of affordable housing, but also because of health issues; patterns of migration; leaving care, prison or hospital. Clearly virtually all of this group have very low resources indeed. More specifically, the reasons for sleeping rough were problems relating to alcohol (49 per cent), drugs (41 per cent), and mental health (35 per cent), which are likely to be associated with other labour market problems both before and after periods of street homelessness.

Some asylum-seekers may be street-homeless or 'sofa-surfing' in circumstances that would mean they were missed by surveys covering the household with which they were staying temporarily. Household surveys do not ask about whether people are asylum-seekers or refugees, so we have no information on their numbers in the resident population or their position within the distributions we examine. Box 9.4 reports other kinds of evidence on the circumstances of some of them.

## Summary

Approximately 1.9 per cent of the UK population, or more than one million people, are part of the non-household population. Some of those who have the very lowest levels of economic resources are outside the household population, and therefore many of the data sources we are able to use will not include them. However, some of those who are excluded are not necessarily poor. The largest groups that are omitted – those in residential care homes for the elderly and those living in armed forces accommodation – have a range of resources that are not so different from others of similar ages. As a corollary, the data we can use on the household population, while incomplete, can still present a fair picture of the circumstances of the population as a whole.

<sup>278</sup> Communities and Local Government (2008).

## Appendix 4: List of evidence gathering visits

- Institute for Economic and Social Research at the University of Essex
- Equality and Human Rights Commission
- Centre for Longitudinal Studies, Institute of Education
- Office for Disability Issues
- Department for Children, Schools and Families
- Department for Work and Pensions
- Institute for Fiscal Studies
- Cabinet Office
- Centre for Market and Public Organisation at the University of Bristol
- Centre for the Study of Ethnicity and Citizenship at the University of Bristol
- Townsend Centre for International Poverty Research at the University of Bristol
- Centre for Economic Performance (CEP) at the London School of Economics
- Centre for the Economics of Education (CEE) at the London School of Economics
- Centre for Analysis of Social Exclusion at the London School of Economics
- Joseph Rowntree Foundation
- Communities and Local Government
- Scottish Government
- Welsh Assembly Government
- HM Treasury
- Sutton Trust
- Department for Innovation, University and Skills (now part of the Department for Business, Innovation and Skills)
- Department of Social Policy and Social Work at the University of Oxford
- Department of Sociology, University of Oxford
- Office of the First Minister and Deputy First Minister in Northern Ireland

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## Appendix 5: Call for Evidence

The National Equality Panel issued a Call for Evidence in November 2008 and received 25 formal submissions from a range of organisations and academics. These formed an essential part of the Panel's gathering of its evidence.

The following organisations submitted evidence to the Panel:

- Age Concern and Help the Aged
- British Humanist Society
- British Naturism
- Carers UK
- Catholic Bishops Conference of England & Wales
- Centre for British African Caribbean Studies (CBACS)
- Confederation of British Industry (CBI)
- Centre for Research on Families and Relationships (CRFR)
- Centre for Research on Ageing and Gender
- Children's Rights Alliance England
- The Equality and Diversity Forum
- Fawcett Society
- Institute for Employment Studies
- Institute for Public Policy Research
- Learning and Skills Improvement Service
- Leonard Cheshire Disability
- The Lesbian and Gay Foundation
- National Housing Association
- Nemton Research Foundation
- Royal National Institute of Blind People
- Runnymede Trust
- Stonewall

All the submissions are available on our website.

Individuals submitting evidence included:

- Dr Jonathan Bradshaw (University of York)
- Professor Ian Plewis (University of Manchester)
- Professor Ludi Simpson (University of Manchester)

## Appendix 6: Stakeholder events

To inform its work, the Panel held two events for organisations and individuals with interests and expertise in some of the issues covered by our remit. Summaries of the main points made in discussion at these events are available on our website.

### First Stakeholder Seminar – March 2009

As part of our evidence-gathering, we held a seminar at the beginning of March 2009 to draw on the expertise of different stakeholders on issues around inequality in the UK. The day included presentations around different equality strands including gender, sexual orientation, ethnicity, religion/belief, age and disability. Presenters included:

- Katherine Rake from the Fawcett Society
- Derek Munn from Stonewall
- Karen Chouhan from 1990 Trust
- Zamila Bungawala from the Young Foundation
- Andrew Harrop from Age Concern
- Carla Garnelas from the Children’s Rights Alliance England
- Sarah Veale from the TUC
- Rowen Jade from Equality 2025

### Second Stakeholder Seminar – June 2009

We held a second seminar at the end of June to update stakeholders with some of the evidence the Panel had been drawing on during the first part of its work. The event also allowed for feedback from those who attended. The day was structured around four presentations looking at how inequalities develop across the life-course, followed by responses from experts in the field, and then general discussions. Presenters and respondents included:

- Intergenerational links and pre-school years:
  - Presentation by Professor John Hills, chair of the National Equality Panel
  - Response from Professor Jane Waldfogel, Columbia University, New York
- School years:
  - Presentation by Dr Ruth Lupton, Panel member
  - Response from Professor Geoff Whitty, Institute of Education

- Working age:
  - Presentation by Mike Brewer, Panel member
  - Response from Professor Richard Berthoud, Institute for Social and Economic Research, University of Essex
- Older age and retirement:
  - Presentation by Professor Stephen Jenkins, Panel member
  - Response from Chris Curry from the Pensions Policy Institute

## Appendix 7: List of research projects commissioned by the Panel

1. **Passing through school: the evolution of attainment of England's ethnic minorities.** Simon Burgess, Deborah Wilson and Jack Worth, Centre for Market and Public Organisation (CMPO), University of Bristol
2. **Decomposing pay gaps across the wage distribution: Investigating inequalities of ethno- religious groups and disabled people.** Simonetta Longhi, Cheti Nicoletti and Lucinda Platt, the Institute for Social and Economic Research, University of Essex
3. **Inequalities in educational outcomes among children aged 3 to 16.** Alissa Goodman, Luke Sibieta and Elizabeth Washbrook, Institute for Fiscal Studies
4. **Spaghetti unravelled: A model-based description of income-age trajectories.** Stephen Jenkins, Institute for Social and Economic Research, University of Essex
5. **Special Educational Needs in England.** Francois Keslair and Sandra McNally, Centre for Economic Performance, London School of Economics
6. **Gay pay in the UK update.** Reza Arabsheibani, Alan Marin and Jonathan Wadsworth, Centre for Economic Performance, London School of Economics
7. **Differences in the labour market gains from Higher Education participation.** Stephen Machin, Richard Murphy and Zeenat Soobedar, Centre for Economic Performance, London School of Economics
8. **Differences in the labour market gains from qualifications.** Stephen Machin, Richard Murphy and Zeenat Soobedar, Centre for Economic Performance, London School of Economics
9. **An investigation of educational outcomes by ethnicity and religion.** Simon Burgess, Ellen Greaves and Deborah Wilson, CMPO, University of Bristol
10. **Accounting for changes in inequality since 1968: Decomposition analysis for Great Britain.** Mike Brewer, Liam Wren-Lewis and Alistair Muriel, Institute for Fiscal Studies

The final reports from all of these pieces of research are available on our website and those of the institutions which carried it out.

## Appendix 8: Relationship between outcomes

The following four tables each show the ways in which outcomes in one of the dimensions we examine are related to those in another:

- Highest qualification with employment status
- Highest qualification with hourly wages
- Hourly wages and employment status with net individual income
- Net individual income with equivalent net income

The tables show what percentage of those in each category listed vertically are found within each category listed across the table (so each row totals 100). The first two tables are drawn from the Labour Force Survey, 2006-2008, and the second two from the Individual Income Series, based on the Family Resources Survey, 2005-06 to 2007-08.

Table A1: Relationship between outcomes

(a) Employment status by highest qualification, working age adults, UK

Highest qualification	Employed, full-time (%)	Employed, part-time (%)	Self-employed (%)	ILO unemployed (%)	Inactive, student (%)	Inactive, looking after family, home (%)	Inactive, disabled/long term sick (%)	Inactive, retired (%)	Inactive, other reason, no reason given (%)
Higher degree	65	12	11	2	1	3	1	3	2
Degree	62	13	12	3	2	3	1	3	2
Higher education	54	19	9	2	2	3	3	5	2
GCE A Level or equiv.	49	16	12	3	7	3	4	4	2
GCSE grades A-C or equivalent	43	21	7	5	7	7	4	3	3
Level 1	40	20	7	8	4	9	7	3	3
Other qualifications	47	14	11	4	2	7	6	5	3
No qualification	24	15	8	5	5	12	17	10	4
Don't know	56	10	12	4	4	4	5	3	3

Source: LFS, 2006-2008.

Table A1: (Continued)

(b) Hourly wages by highest qualification, all employees, UK

	Hourly wages, all employees				
	Lowest fifth (%)	2nd fifth (%)	3rd fifth (%)	4th fifth (%)	Highest fifth (%)
<b>Highest qualification</b>					
Higher degree	3	4	8	26	58
Degree	6	9	15	27	44
Higher education	9	13	20	31	27
GCE A level or equivalent	19	22	25	21	13
GCSE grades A-C or equivalent	27	27	23	15	8
Level 1	33	29	22	12	4
Other qualifications	29	27	21	14	9
No qualification	43	29	17	8	3
Don't know	25	27	23	17	8

Source: LFS 2006-2008 (at 2008 prices).

(c) Net individual income by hourly wages and by employment status, all employees, UK

	Net individual income				
	Lowest fifth (%)	2nd fifth (%)	3rd fifth (%)	4th fifth (%)	Highest fifth (%)
<b>Hourly wages, all employees</b>					
Lowest fifth	33	31	18	10	7
2nd fifth	0	11	71	14	4
3rd fifth	0	0	22	73	6
4th fifth	0	0	0	52	49
Highest fifth	0	0	0	0	100
<b>Employment status</b>					
Full-time employee	2	6	21	33	39
Part-time employee	16	31	25	19	9
Self-employed	19	15	17	19	31
Unemployed	80	14	4	2	0
Retired	23	35	23	13	6
Student	73	16	7	3	2
Looking after family/home	57	28	10	3	1
Permanently sick/disabled	39	34	19	7	1
Temporarily sick/injured	67	23	8	3	0
Other inactive	67	17	9	5	3

Source: Individual Income series 2005-06 to 2007-08 (at 2008 prices).

Table A1: (Continued)

(d) Equivalent net income by net individual income, all adults, UK

	Equivalent net income (before housing costs)				
	Lowest fifth (%)	2nd fifth (%)	3rd fifth (%)	4th fifth (%)	Highest fifth (%)
<b>Net individual income (£)</b>					
Lowest fifth	37	26	18	11	8
2nd fifth	17	40	25	12	6
3rd fifth	3	21	39	26	12
4th fifth	1	7	21	44	27
Highest fifth	1	1	6	19	75

Source: Individual Income Series 2005-06 to 2007-08 (at 2008 prices).

## Appendix 9: International comparisons of teenage attainment

International comparisons of teenage attainment have become possible thanks to studies that administer standardised tests in various subjects to a sample of children from participating countries. The Programme for International Student Assessment (PISA) by the OECD and the Third International Maths and Science Study (TIMSS) are two of the international studies that assess and compare achievements across countries. In this appendix, we present some of their findings.

### *PISA results*

PISA assessed reading, mathematics and science among 15 to 16 year-olds in the UK in 2000, 2003 and 2006. 62 countries have signed up to the fourth assessment in 2009, for which results are not yet available. The test is administered to between 4,500 and 10,000 students in each country.

In 2006, the mean score on the reading scale in the UK was 495, just above the average OECD score of 492. The inequality of the UK distribution was also very similar to the average OECD range, with scores very close to the OECD average for the 5<sup>th</sup>, 10<sup>th</sup>, 25<sup>th</sup> and 75<sup>th</sup> percentiles. It is at the very top, the 90<sup>th</sup> and 95<sup>th</sup> percentiles, that the UK score was slightly higher than that for the OECD average, resulting in a slightly higher 95:5 ratio.

The UK score of 351 on the mathematics scale was slightly above the OECD average of 346. Scores were also very similar across the whole of the distribution, resulting in a 95:5 ratio of 1.83 for the UK and 1.87 for the OECD average.

### *TIMSS results*

TIMSS provides data on trends in science and mathematics achievements over time. It is carried out every four years, with the latest results available for 2007. England and Scotland participated separately in this study; Wales and Northern Ireland were not part of it.

Mathematics achievement for English 14-year-olds, at 513, was above the TIMSS average of 500, while that of Scottish pupils, at 487, was below the TIMSS average. England was ranked seventh, and Scotland seventeenth, out of 49 countries.

The range of achievements for England and Scotland were no wider than those in many of the other countries, with the distance between the bottom 5<sup>th</sup> and the top 5<sup>th</sup> of the distributions smaller, particularly in Scotland, than in some others. However, England had lower scores at the bottom of the achievement range than the other countries that had average achievement above the overall series average.

Table A2: PISA 2006 – Mean and percentile scores on the reading and mathematics scale (15-16 year olds)

	Mean score	Percentiles					
		5 <sup>th</sup>	10 <sup>th</sup>	25 <sup>th</sup>	75 <sup>th</sup>	90 <sup>th</sup>	95 <sup>th</sup>
<b>Reading</b>							
Korea	556	399	440	503	617	663	688
Finland	547	410	441	494	603	649	675
Canada	527	357	402	468	593	644	674
New Zealand	521	339	381	453	595	651	683
Ireland	517	358	395	457	582	633	661
Australia	513	349	388	453	579	628	656
Poland	508	335	374	441	579	633	663
Sweden	507	335	378	445	575	629	658
Netherlands	507	332	379	446	578	622	649
Belgium	501	297	347	433	581	631	657
Switzerland	499	331	373	440	566	615	642
Japan	498	317	361	433	569	623	654
<b>United Kingdom</b>	<b>495</b>	<b>318</b>	<b>359</b>	<b>431</b>	<b>566</b>	<b>621</b>	<b>653</b>
Germany	495	299	350	429	573	625	657
Denmark	494	339	378	437	557	604	633
Austria	490	298	348	421	568	621	651
France	488	298	346	421	564	614	639
Iceland	484	314	356	423	552	603	633
Norway	484	301	346	416	558	613	643
Czech Republic	483	290	335	408	564	621	653
Hungary	482	318	359	422	549	595	623
Luxembourg	479	302	344	415	552	602	630
Portugal	472	299	339	408	543	594	622
Italy	469	276	325	402	546	599	627
Slovak Republic	466	281	326	398	542	597	628
Spain	461	304	343	405	523	569	594
Greece	460	272	321	398	531	583	613
Turkey	447	291	330	388	510	564	594
Mexico	410	247	285	348	478	530	559
<b>OECD average</b>	<b>492</b>	<b>317</b>	<b>360</b>	<b>429</b>	<b>562</b>	<b>613</b>	<b>642</b>

Table A2: (Continued)

	Mean score	Percentiles					
		5 <sup>th</sup>	10 <sup>th</sup>	25 <sup>th</sup>	75 <sup>th</sup>	90 <sup>th</sup>	95 <sup>th</sup>
<b>Mathematics</b>							
Finland	548	411	444	494	605	652	678
Korea	547	392	426	485	612	664	694
Netherlands	531	382	412	467	596	645	672
Switzerland	530	362	401	464	600	652	682
Canada	527	383	416	470	587	635	664
Japan	523	370	404	463	587	638	668
New Zealand	522	368	401	458	587	643	674
Belgium	520	337	381	451	598	650	678
Australia	520	375	406	460	581	633	663
Denmark	513	371	404	456	572	621	649
Czech Republic	510	340	376	441	582	644	677
Iceland	506	357	391	446	567	618	646
Austria	505	338	373	438	577	630	657
Germany	504	339	375	437	574	632	664
Sweden	502	354	387	442	565	617	649
Ireland	501	366	396	445	559	608	634
France	496	334	369	429	565	617	646
<b>United Kingdom</b>	<b>495</b>	<b>351</b>	<b>381</b>	<b>434</b>	<b>557</b>	<b>612</b>	<b>643</b>
Poland	495	353	384	435	557	610	638
Slovak Republic	492	333	370	433	558	611	640
Hungary	491	343	377	431	551	609	643
Luxembourg	490	332	368	426	555	610	641
Norway	490	339	373	428	552	609	638
Spain	480	332	366	421	542	593	622
United States	474	328	358	411	537	593	625
Portugal	466	315	348	404	530	583	612
Italy	462	305	341	398	527	584	616
Greece	459	304	341	399	522	575	607
Turkey	424	287	316	360	477	550	595
Mexico	406	268	299	349	463	514	546
<b>OECD average</b>	<b>498</b>	<b>346</b>	<b>379</b>	<b>436</b>	<b>561</b>	<b>615</b>	<b>645</b>

Source: OECD (2007).

Table A3: TIMSS 2007 – Distribution of mathematics achievement after 8 years of formal schooling (13 to 14 year-olds, on average)

	Average scale score	Percentiles					
		5 <sup>th</sup>	10 <sup>th</sup>	25 <sup>th</sup>	75 <sup>th</sup>	90 <sup>th</sup>	95 <sup>th</sup>
Chinese Taipei	598	403	448	535	672	721	748
Korea, Rep. of	597	435	475	537	662	711	738
Singapore	593	422	463	533	661	706	731
Hong Kong SAR	572	394	438	518	638	681	706
Japan	570	424	460	515	628	677	704
Hungary	517	375	405	459	576	624	652
<b>England</b>	<b>513</b>	<b>366</b>	<b>400</b>	<b>459</b>	<b>574</b>	<b>618</b>	<b>642</b>
Russian Federation	512	372	402	455	569	617	644
United States	508	379	408	456	563	607	633
Lithuania	506	371	402	453	561	609	635
Czech Republic	504	382	408	455	552	599	629
Slovenia	501	384	409	454	550	594	619
<b>TIMSS Scale Average</b>	<b>500</b>						
Armenia	499	351	390	448	554	601	629
Australia	496	365	394	443	548	600	630
Sweden	491	371	399	446	539	582	604
Malta	488	315	359	431	553	597	622
<b>Scotland</b>	<b>486</b>	<b>355</b>	<b>381</b>	<b>432</b>	<b>544</b>	<b>590</b>	<b>616</b>
Serbia	486	333	368	427	548	597	624
Italy	480	349	381	430	532	574	600
Malaysia	474	342	372	421	529	578	603
Norway	469	356	382	425	517	552	571
Cyprus	465	310	347	409	528	575	603
Bulgaria	464	280	324	398	536	586	617
Israel	463	287	328	400	533	584	615
Ukraine	462	310	346	404	523	572	603
Romania	461	289	328	395	533	587	616
Bosnia and Herzegovina	456	322	352	405	509	552	578
Lebanon	449	329	354	397	502	549	574
Thailand	441	297	327	378	501	562	600
Turkey	432	263	297	354	503	581	624
Jordan	427	253	290	356	503	556	584
Tunisia	420	313	336	375	466	508	532
Georgia	410	245	280	343	478	532	562

Table A3: (Continued)

	Average scale score	Percentiles					
		5 <sup>th</sup>	10 <sup>th</sup>	25 <sup>th</sup>	75 <sup>th</sup>	90 <sup>th</sup>	95 <sup>th</sup>
Iran, Islamic Republic of	403	266	295	344	459	516	551
Bahrain	398	259	289	340	457	505	533
Indonesia	397	254	286	338	456	509	541
Syrian Arab Republic	395	259	290	339	452	502	530
Egypt	391	222	258	321	462	521	553
Algeria	387	291	311	346	427	465	485
Colombia	380	250	281	329	431	477	507
Oman	372	207	245	309	440	492	521
Palestinian National Authority	367	195	233	297	439	498	530
Botswana	364	236	264	312	415	460	489
Kuwait	354	221	252	301	408	455	481
El Salvador	340	222	248	291	389	433	462
Saudi Arabia	329	202	231	278	382	429	457
Ghana	309	162	192	246	372	428	461
Qatar	307	152	186	243	370	427	461
Morocco	381	251	278	323	438	486	511

Source: Horne *et al.* (2008).

## Appendix 10: International comparison of highest qualifications of the working age population

*'On average in OECD countries, university-level graduation rates have risen by 15 percentage points over the last 11 years and virtually every country saw some increase. In contrast to patterns in the early 1990s, in almost every OECD country university graduation rates among females are higher than among males'.<sup>279</sup>*

Table A4 shows the distribution of educational attainment of the 25-to-64-year-old population in OECD countries, according to the International Standard Classification of Education (ISCED).

Tertiary education, according to the ISCED classification, corresponds roughly to the top three categories used in Figure 2.2 (Higher Education, Degree and Higher Degree). In 2006, 30 per cent of the United Kingdom adult population (25-64) had achieved tertiary education, which was a higher proportion than the OECD average of 27 per cent. This was a similar fraction to Ireland, the Netherlands and Sweden, but higher than that for Germany and lower than for Denmark and Finland.

The 'upper secondary' category includes GCSE grades A\*-C, A levels and equivalent qualifications. 68 per cent of the UK population had at least upper secondary education, just below the OECD average of 69 per cent. This was a lower proportion than Germany, Finland, or the Netherlands, but higher than in Spain or Greece. It was in the proportion of the working population with below upper secondary qualifications where the UK (at 31 per cent) compared most unfavourably with countries such as Germany (with only 17 per cent).

Figure A1 shows that it was the younger cohort of people between 25 and 34 years of age that were most likely to have an upper secondary education than the cohort of 55 to 64 year olds, in all countries. However, the UK's young cohort was less likely to attain at least upper secondary education than their peers in most other European countries. 75 per cent of the 25-34 year olds in the UK had attained at least upper secondary education in 2006, compared to an OECD average of 78 per cent. This comparison is more favourable for the older cohort: 61 per cent of 55-64 year olds in the UK had attained at least upper secondary education, compared to an OECD average of 55 per cent.

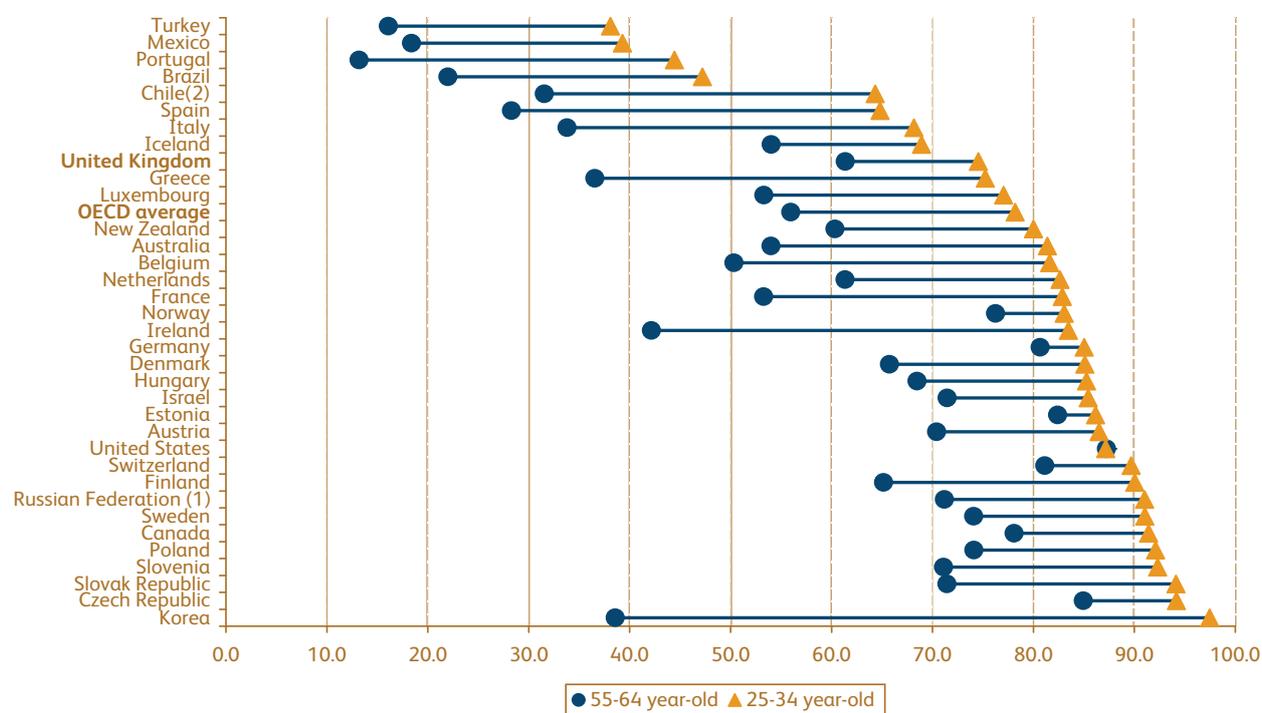
<sup>279</sup> *Education at a Glance 2008*: OECD indicators' webpage, accessed on 13 August 2009.

Table A4: Highest level of education attained, 25 to 64 year-olds, 2006

	Below upper secondary education	Upper secondary level of education	Tertiary level of education
Canada	14	39	47
Japan	0	60	40
United States	12	48	39
New Zealand	31	31	38
Finland	20	44	35
Denmark	18	47	35
Australia	33	34	33
Korea	23	44	33
Norway	21	46	33
Belgium	33	35	32
Sweden	16	54	31
Ireland	34	35	30
Netherlands	28	42	30
<b>United Kingdom</b>	<b>31</b>	<b>38</b>	<b>30</b>
Switzerland	15	55	30
Iceland	37	34	30
Spain	50	21	28
France	33	41	26
Luxembourg	34	42	24
Germany	17	59	24
Greece	41	37	22
Poland	47	35	18
Austria	20	63	18
Hungary	22	60	17
Mexico	78	7	15
Slovak Republic	13	72	14
Czech Republic	10	77	14
Portugal	72	14	13
Italy	49	38	13
Turkey	72	18	10
<b>OECD average</b>	<b>31</b>	<b>42</b>	<b>27</b>

Source: OECD (2009).

Figure A1: Population that has attained at least upper secondary education (2007)  
(percentages)



Source: OECD (2009), table A1.2a.

Notes: 1. Year of reference 2002, 2. Year of reference 2004.

## Appendix 11: International comparison of employment patterns

Data from the European Union Labour Force Survey (EULFS) provide comparable statistics on the labour markets of EU countries.

The UK had a relatively high rate of employment in 2008 compared to other European countries: 71.5 per cent overall compared to an average in the Euro area of 66 per cent. The employment rate for women was also higher (66 per cent) in the UK than in most other EU countries except for the North European and Scandinavian ones. It was 7 percentage points higher than the Euro area average of 59 per cent. However, the UK had a higher percentage of women working part-time (42 per cent) than the average for the Euro area (35 per cent). The ILO unemployment rate at 5.6 per cent was relatively low, almost 2 percentage points lower than the Euro area average of 7.5 per cent.

The UK economic inactivity rate was nearly 6 percentage points lower than the Euro area average. Within this, the inactivity rate for women, at 44 per cent, was lower than the rate for the Euro area average, at 50 per cent.

Table A5: European Union Labour Force Survey 2008 (annual results)

	Employment rate (15 to 64)			Part-time workers in % of total employment		Unemployment rate	Inactive population as a percentage of the total population (15 and above)
	Total	Men	Women	Men	Women		
	Total						
Iceland	83.6	87.3	79.6	9.5	33.7		18.1
Switzerland	79.5	85.4	73.5	13.5	59		31.8
Denmark	78.1	81.9	74.3	14.2	36.5	3.3	34
Norway	78	80.5	75.4	14.4	43.6	2.5	26.2
Netherlands	77.2	83.2	71.1	23.9	75.3	2.8	33.4
Sweden	74.3	76.7	71.8	13.3	41.4	6.2	28.7
Austria	72.1	78.5	65.8	8.1	41.5	3.8	38.8
<b>United Kingdom</b>	<b>71.5</b>	<b>77.3</b>	<b>65.8</b>	<b>11.3</b>	<b>41.8</b>	<b>5.6</b>	<b>37.2</b>
Finland	71.1	73.1	69	8.9	18.2	6.4	38.5
Cyprus	70.9	79.2	62.9	4.8	11.4	3.7	35.8
Germany	70.7	75.9	65.4	9.4	45.4	7.3	40.3
Estonia	69.8	73.6	66.3	4.1	10.4	5.5	38.9
Ireland	67.6	74.9	60.2	..	..	6	36.6
Czech Republic	66.6	75.4	57.6	2.2	8.5	4.4	41.5
Euro area <sup>1</sup>	66.1	73.4	58.8	7.7	35	7.5	42.8
France	65.2	69.8	60.7	5.8	29.4	7.8	43.1
Spain	64.3	73.5	54.9	4.2	22.7	11.3	40.9
Lithuania	64.3	67.1	61.8	4.9	8.6	5.8	43.3
Bulgaria	64	68.5	59.5	2	2.7	5.6	46.2
Luxembourg	63.4	71.5	55.1	2.7	38.3	4.9	44
Belgium	62.4	68.6	56.2	7.9	40.9	7	46.3
Slovakia	62.3	70	54.6	1.4	4.2	9.5	40.7
Greece	61.9	75	48.7	2.8	9.9	7.7	46.5
Poland	59.2	66.3	52.4	5.9	11.7	7.1	45.8
Romania	59	65.7	52.5	9.1	10.8	5.8	45.5
Italy	58.7	70.3	47.2	5.3	27.9	6.8	50.7
Croatia	57.8	64.9	50.7	6.7	11.5	8.4	51.5
Hungary	56.7	63	50.6	3.3	6.2	7.8	49.9
Malta	55.2	72.5	37.4	4.5	25.5	6	50.6
Turkey	45.9	67.7	24.3	5.6	20.8	9.8	52.4

Source: EUROSTAT (accessed 14 August 2009).

Note: 1. Euro Area: 15 member states of the European Union, which use the Euro as their currency.

## Appendix 12: Earnings in ASHE and LFS<sup>280</sup>

There are two main data sources for earnings in the UK: the Labour Force Survey (LFS) and the Annual Survey of Hours and Earnings (ASHE), formerly known as the New Earnings Survey (NES).

ASHE and LFS collect similar information on earnings and hours worked, but their purpose and the methodologies adopted are different. ASHE provides accurate information on earnings, hours and the characteristics of the employer, but little personal information on the employee. The LFS has detailed personal information but less accurate earnings information.

ASHE is an annual 1 per cent sample of employees, resulting in around 140,000 records per year. It was first carried out in 2004, replacing and extending the NES sample to improve coverage of the low paid. Employers are asked to provide detailed information on the hours and earnings of their employees and on the workplace characteristics. The only additional information about employees reported in ASHE is gender and age. This information is derived from employers' pay records.

In contrast, the LFS is a quarterly sample survey of about 60,000 households living in private addresses in the UK, resulting in 150,000 individuals being covered in each quarter. The survey collects information on respondents' personal circumstances, including personal characteristics such as ethnicity, disability, age, gender, religion, during a specific reference period, normally a period of one week or four weeks (depending on the topic) immediately prior to the interview. The earnings of the self-employed are not recorded in the LFS. Information on all individuals in the household is provided by the respondent, sometimes without any reference to documentary evidence such as pay slips. These 'proxy' responses mean that earnings data are less likely to be accurate. The measures of hours worked is also likely to differ between the two surveys. While employers report paid hours, respondents tend to report the hours they actually work, though few people keep a record of the numbers of hours they work in a week.

Table A6 compares the hourly and weekly earnings for all employees of the two surveys at different points of the distribution, the 10<sup>th</sup>, median and 90<sup>th</sup> percentile. For both hourly and weekly earnings, at all the three points of the distributions, the figures are lower (by up to 10 per cent) in the LFS than in the ASHE. This difference is slightly more pronounced for weekly pay at the bottom end of the distribution and for hourly rates at the top end of the distribution. The extent of inequality (the 90:10 ratio) is, however, very similar for the two surveys: around 3.9 for hourly pay and 7.5 for weekly pay.

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<sup>280</sup> See Ormerod and Ritchie (2007) for a technical exposition of the characteristics of the two datasets and how to link them.

Table A6: Gross pay in the LFS and ASHE, 2008 (£)

	<b>P10</b>	<b>P50</b>	<b>P90</b>
<b>LFS</b>			
Hourly	5.53	9.87	21.33
Weekly	107	363	813
<b>ASHE</b>			
Hourly	6.00	10.61	23.62
Weekly	117.2	388.4	852.8

## Appendix 13: Coverage and gaps in the data sets used

The following table presents the datasets that have informed the analysis and the findings presented in this report. The first eight are those which we make most use of in Chapters 2-8.

Dataset	Coverage	Organisation (Sponsor)
National Pupil Database and Pupil Level Annual School Census (PLASC), England, Wales	Gender; Ethnicity by narrow categories (including Gypsies and Travellers); Free school meals; Special Educational Needs; Region.	Department for Children, Schools and Families Welsh Assembly Government
Northern Ireland School Census, Northern Ireland	Gender; Religion; Ethnicity; English as second language; Special educational needs; Free school meals; Looked after children.	Department of Education, Northern Ireland
Pupil Census, Scotland	Gender; Ethnicity; Additional Support Needs; Urban/Rural.	Scottish Government
Labour Force Survey	Age; Gender; Ethnicity; Religious affiliation; Disability; Whether living as part of a same sex couple; Housing tenure; Household social class/NS SEC (National Statistics Socio-economic Classification); Region.	Office for National Statistics
National Survey of Adults Basic Skills in Wales	Gender; Age; Self-reported health; Highest qualification; Occupational category; Welsh language use; Welsh region; Social Class.	Welsh Assembly Government
Skills for Life Survey	Gender; Age; First Language; Region; Urban/Rural, Household NS-SEC (5 groups); Household Social Class (I to V); Health; Learning disabilities; Highest qualification; Occupational category.	Department for Children, Schools and Families

Annual Survey of Hourly Earnings	Age; Gender.	Office for National Statistics
Family Resources Survey	Age, Gender, Ethnicity; Disability; NS-SEC; Region; Housing tenure; Deprivation.	Office for National Statistics
Wealth and Assets Survey	Gender; Age; Ethnicity; Disability; Same-sex cohabitation, NS-SEC; Region; Housing tenure.	Office for National Statistics
Avon Longitudinal Study of Parents and Children	Gender; Deprivation; Parental Occupation and Social Class; Housing tenure; Special Educational Needs.	University of Bristol
British Household Panel Study	Age; Gender; Educational qualification.	University of Essex
Destination of Leavers from Higher Education Short Survey	Age; Gender; Subject of study; University attended; Standard Industrial Classification of employer; Standard Occupational Classification; Region of employment; Ethnicity; Parental Socio-economic classification; School type.	Higher Education Statistics Authority
Destination of Leavers from Higher Education Longitudinal Survey	Age; Gender; Subject of study; University attended; Standard Industrial Classification of Employer; Standard Occupational Classification; Region of employment; Ethnicity; Parental Socio-economic classification; School type.	Higher Education Statistics Authority
English Longitudinal Study of Ageing	Age; Gender; Family type; Ethnicity; Housing tenure; Social class; Region; Deprivation; Limiting illness and work disability; Urban/ rural; Self-reported health.	Institute for Fiscal Studies

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Longitudinal Study of Young People in England	Gender; Family NS-SEC; Special Educational Needs; Ethnicity; Free school meals; Parental highest educational qualifications; Home ownership; Deprivation; First Language; Month of birth.	Department for Children, Schools and Families
Millennium Cohort Study	Age; Gender; NS-SEC; Ethnicity; Religion; Housing tenure; Region; Language spoken; Parental occupation and social class.	Institute of Education, University of London

Chapter 15 of the EHRC Research Report 31, *Developing the Equality Measurement Framework: selecting the indicators*, by Sabine Alkire *et al.* (2009) contains a full assessment of equality data, including coverage of equality characteristics and gaps, as well as developments underway or planned to fill the main gaps, such as those for sexual orientation.

The Office for National Statistics (ONS) sexual identity project, aimed to develop questioning to be used on social surveys and for equality monitoring purposes, resulted in the inclusion of a question on sexual orientation in the Integrated Household Survey (IHS) in January 2009. The first data will become available for analysis in 2010. Data collected in the first year will be used to produce the first baseline estimates of the size and characteristics of the lesbian, gay and bisexual (LGB) populations.

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