Wales Institute of Social & Economic Research, Data & Methods

Sefydliad Ymchwil Gymdeithasol ac Economaidd, Data a Dulliau Cymru

SKILLS AND THE QUALITY OF WORK IN WALES, 2006-2012
Main Report

Alan Felstead, Rhys Davies and Sam Jones

July 2013

E·S·R·C ECONOMIC & SOCIAL RESEARCH COUNCIL

UKCES UK COMMISSION FOR EMPLOYMENT AND SKILLS

CARDIFF UNIVERSITY PRIFYSGOL CAERDYDD

The Skills and Employment Survey 2012 was funded by the ESRC/UKCES Strategic Partnership (RES-241-25-0001), with additional support from the Wales Institute of Social and Economic Research, Data and Methods (WISERD). The ESRC Centre for Learning and Life Chances in Knowledge Economies and Societies (LLAKES) acted as the host institution with the project directed by Alan Felstead (Cardiff University) in collaboration with Duncan Gallie at the University of Oxford and Francis Green at the Institute of Education, London. Hande Inanc was the Research Officer on the project.

Authors:
Alan Felstead, Cardiff University
Rhys Davies, Cardiff University
Sam Jones, Cardiff University

Address for Correspondence:
Professor Alan Felstead,
Cardiff School of Social Sciences,
Cardiff University,
Glamorgan Building,
King Edward VII Avenue,
Cardiff
CF10 3WT

Tel/fax: +44 (0) 29 2087 9050

Email: alanfelstead@cardiff.ac.uk

WISERD Hub Contact:

Cardiff University
46 Park Place
Cardiff
CF10 3BB

Tel: +44 (0) 29 2087 9338

Email: wiserd@cardiff.ac.uk

Table of Contents

List of Figures

List of Tables

ACKNOWLEDGEMENTS

This Report based on research project funded by the ESRC/UKCES Strategic Partnership (RES-241-25-0001). The Welsh boost for 2012 was provided by the Wales Institute for Social and Economic Research, Data and Methods (WISERD). The ESRC Centre for Learning and Life Chances in Knowledge Economies and Societies (LLAKES) acted as the host institution with the project directed by Alan Felstead (Cardiff University) in collaboration with Duncan Gallie at the University of Oxford and Francis Green at the Institute of Education, London. Hande Inanc was the Research Officer on the project. Material from the QLFS is Crown Copyright and has been made available by the Office for National Statistics (ONS) through The Data Archive and has been used by permission.

EXECUTIVE SUMMARY

This Report is based on survey data collected from two samples of workers: 7,213 workers aged 20-65 years old and living in Britain in 2006 and 3,200 similarly aged workers in 2012. Both surveys were boosted in Wales yielding a total sample of almost 1,000 workers in Wales – 407 respondents in 2006 and 587 in 2012.

The Report explains how several different aspects of skills and the quality of employment can be measured using surveys which ask workers to report on a range of work experiences well beyond the pay they receive (Chapters 1 and Annex 1). The Report examines how these experiences differ between particular groups of worker, in what ways these experiences have changed over the last six years and how the situation in Wales differs from other parts of Britain. The Skills and Employment Survey 2012 (SES2012) and its 2006 predecessor provide a unique insight into the impact that the prolonged economic downturn is having on the working lives of the people of Wales.

The Report focuses on the following issues:

- The nature of work in Wales, focussing upon both the key characteristics of employment (such as hours and earnings) and specific aspects of work including gender segregation at work, trade union membership and the location of work (Chapter 2).
- Broad skills as measured by the qualification level required on entry, the training time for the type of work individuals carry out and the learning time needed to do jobs well (Chapter 3).
- The use of generic skills, such as problem-solving and communication skills and the sophistication level of computer skills at work (Chapter 4);
- The incidence, intensity and quality of training as well as the prevalence of other sources of learning and the appetite workers have to get more (Chapter 5).
- Worker involvement, including discretion at work, the degree of choice and supervision at work, the involvement of workers in organisational decision-making and satisfaction levels with current communication arrangements (Chapter 6).
- How work impacts upon the well-being of workers including the incidence of long hours working, worker effort, levels of stress, strain and exhaustion arising from work, perceived effects on health and safety, and the levels of enthusiasm, commitment and satisfaction workers show towards their work (Chapter 7).
- Attitudes to work in terms of the importance of intrinsic rewards at work, such as the friendliness of work colleagues and the amount and variety of work, the importance of work and family life, and the attitudes of employees to the organisation (Chapter 8).
- Levels of organisational change experienced by workers in Wales in recent years, anxiety and fear at work, job insecurity and how workers in Wales view their future prospects (Chapter 9).

The main findings are as follows:

Employment Characteristics (Chapter 2)

- Just over a third (35%) of workers in Wales report that they are a member of a trade union. Levels of membership are higher among women (42%), those employed in larger workplaces (51%) and those employed in the public sector (61%).

- Levels of union membership in Wales in 2012 (35%) were considerably higher than levels in London and the South East (18%) and the Rest of Britain (28%). Nonetheless, Wales exhibited the largest decline in both union membership and the propensity to become a union member between 2006 and 2012.

- Those in managerial and professional occupations, those based within larger workplaces, those employed in the service sector and those based in the public and non-profit sector are more likely to indicate that their jobs are done by an equal mix of men and women.

- Workers in Wales are more likely to report that their jobs are exclusively done by men than respondents based elsewhere in Britain. Furthermore, gender segregation is more persistent in Wales.

- In Wales, over two thirds of workers (68%) are located in a single workplace away from home. One in five workers indicate that they work in a variety of workplaces. Levels of home working in Wales are considerably lower than those exhibited in London and the South East.

Broad Skills (Chapter 3)

- It remains a cause for concern that jobs in Wales require lower qualifications, on average, than jobs elsewhere in Britain. In 2012, a fifth (22%) of jobs in Wales did not need a qualification on entry compared to less than a sixth (15%) of jobs in London and the South East. The percentage point gap is even greater for jobs requiring graduate level and equivalent qualifications and, at this level, it has widened between 2006 and 2012.

- If anything, women in Wales are in more skilled jobs than their male counterparts. For example, two of the three summary measures of skills (training time required for jobs and qualifications required for entry) are higher for women than for men.

- Nevertheless, this picture masks marked differences in the skill content of jobs occupied by women who work part-time compared to those who work full-time. These differences are large and statistically significant across all three measures with women's part-time jobs significantly less skilled than their full-time counterparts.

- Moreover, part-timers in Wales do badly compared to their counterparts in other parts of Britain on all three broad skill measures. This suggests that low skills are more prevalent among part-time jobs in Wales than in other parts of Britain. The

obvious policy implication here is that in order to upskill the Welsh economy more needs to be done to lift the skills of part-time jobs.

- Skill differences in Wales are pronounced when jobs are analysed according to whether they are in the public or private sector. For example, on average, public sector jobs require qualifications almost a full level higher than jobs in the private sector.

- In 2012 in Wales, there were around 122,000 more people with degree-level or higher qualifications than there were jobs requiring this level of qualification on entry. This is up from the figure in 2006 when it was around 89,000.

- The 2012 estimates also show that there were 284,000 jobs that did not require qualifications on entry. However, there were only 82,000 people who did not have any qualifications. Nevertheless, the qualification demand-supply discrepancy at this level has narrowed since 2006.

- Although over-qualification fell more sharply in London and South East, it also fell in Wales. However, 'real' over-qualification – that is being over-qualified and not effectively using skills at work – declined more steeply in Wales than elsewhere, falling from 16% in 2006 to 10% in 2012. On this evidence, then, qualification mismatches in Wales appear to be becoming less of an issue when assessed in terms of what skills are actually used at work.

Generic Skills (Chapter 4)

- The results on generic skills confirm that jobs in Wales are of a lower skills quality than jobs elsewhere in Britain. For five out of the ten generic skill measures and for three out of the four computing skill measures, jobs in Wales comprised a lower skills content than jobs in either the Rest of Britain or London and the South East.

- To make matters worse, 11 out of these 14 generic skills indicators moved downwards in Wales between 2006 and 2012. Other parts of Britain also saw falls in some of these indicators, but the falls in Wales have been larger and more numerous.

- On average, women in Wales are more likely be in jobs that involve the use of computers or other computerised equipment. They are also more likely to be in workplaces with a greater prevalence of computer use and be in jobs where computer use is essential. However, women are less likely to be in jobs were advanced or complex computerised skills are required.

- The computing skills requirements of jobs in the public sector are higher than those in the private sector. The use of computerised equipment, the prevalence of computers in the workplace, the importance of computers to the job and the sophistication of computer use are all higher in the public sector than the private sector in Wales in 2012.

- Compared to other parts of the country, part-time work in Wales is lower skilled. On almost every indicator, lower proportions of women working part-time work report that generic skills are essential to task completion compared to their full-time counterparts. This applies in other parts of Britain, but is most pronounced in Wales where part-time jobs are especially lowly skilled.

Training and Learning (Chapter 5)

- Those in lower occupational groups and those working part-time (especially women) face a 'triple whammy'. They are less likely to receive training than their counterparts, when they do it tends to be shorter and its quality is often poorer. As a result, the appetite for future training and the expectation that it will be forthcoming are lower for these groups.

- Like training, informal learning is also skewed towards those in higher level occupational groups and against women working part-time. Around a third (32%) of Welsh respondents strongly agreed that the job they were doing required them to learn. A similar proportion (36%) strongly agreed that they were required to help others acquire new skills. Learning from others was also a key feature of teamworking with over a fifth (22%) of team members strongly agreeing that they learnt new skills from other members of their work group.

- The results suggest that training incidence in 2012 was lower in Wales than elsewhere – 64% compared to 69% in the Rest of Britain and 67% in London and the South East. The intensity of training was also lower in Wales, taking place on eleven fewer days than in the Rest of Britain and six fewer than in London and the South East.

- However, Welsh workers rated the quality of the training they received at least as highly, if not higher, than workers in other parts of Britain. More worryingly, the frequency training episodes in Wales has halved since 2006, while the fall has not been as sharp elsewhere.

- To exacerbate the problem, the prevalence of some informal sources of learning in Wales have fallen at a time when they have risen elsewhere.

Job Control and Participation at Work (Chapter 6)

- Nine out of ten Welsh workers report that they exert either a 'great deal' or 'fair amount' of individual discretion in the way in which they perform their jobs. Task discretion is lowest among younger workers, those working in elementary and operative occupations and those based in larger workplaces. Just under a third of workers indicated that they would like to have more influence over their work.

- One in five workers indicate that they either exercise 'no choice at all' or 'hardly any choice' in how they do their jobs. However, almost half of workers indicate that they are supervised either 'quite closely' or 'very closely' in their work. Two thirds of workers in Wales indicate that they do not have any discretion over when they chose to start or finish work.

- Those working managerial and professional occupations, the self-employed and those based in small workplaces generally report higher levels of choice in how they do their jobs, lower levels of supervision and greater discretion of over working time.

- Approximately three-quarters of workers report that management at their workplace organise meetings where they are informed about what is happening in the organisation. However, a third of workers have not made any suggestions to management or colleagues during the last year with respect to improving efficiency at the workplace. This figure increases to approximately half among those workers employed in routine and elementary occupations.

- Workers in Wales are generally more satisfied with arrangements for communication at the workplace than those in other areas of Britain, although workers in Wales are less likely to make suggestions than those elsewhere.

Work Effort and Well-being (Chapter 7)

- In Wales, 13% of those in employment are working longer than 48 hours per week. Long hours working is observed to be much more prevalent among men, those working in managerial or professional occupations and the self-employed. In terms of workplace characteristics, working long hours is more prevalent in the production sector of the economy, smaller workplaces and in the private sector.

- Approximately nine out of ten workers in Wales either strongly agree or agree with the statement that their job requires them to work very hard. Several measures suggest that there has been an increase in levels of worker effort in Wales during the economic crisis.

- Almost a third of workers in Wales regard their jobs as being high strain (i.e. demanding work but low levels of control). Almost half of Welsh workers report either always or often feeling exhausted when they get home from work. Almost a third believe their health and safety to be at risk as a result of their jobs.

- Males, younger workers and those employed in elementary or routine process occupations are most likely to indicate that their jobs are high strain. In terms of workplace characteristics, those in larger workplaces and those employed in the private sector are most likely to indicate that their jobs are high strain. There are a lower proportion of high strain jobs in Wales than in other parts of Britain.

- Older workers, those working at smaller workplaces and the self-employed exhibit higher levels of enthusiasm, contentment and job satisfaction. These three measures of well-being declined across Britain between 2006 and 2012. However, the rate of decline was smaller in Wales. Taking the evidence as a whole, in 2012 well-being at work in Wales was higher than it was elsewhere in Britain.

Attitudes to Work (Chapter 8)

- In terms of the relative importance of job attributes, workers in Wales place greatest emphasis upon the importance of having a secure job, having work that respondents like doing and having the opportunity to use their abilities. Relatively low levels of importance are attributed to good promotion prospects, having choice over their hours of work, fringe benefits and having an easy workload.

- Workers in Wales attach greater importance to work compared to those located in other areas. However, approximately three out of ten workers in Wales would stop working if they were able to do so. This is higher than that exhibited by workers living in London and the South East.

- The commitment of workers towards their organisation is most commonly expressed in terms of a willingness to work harder in order to help their organisation succeed, with 85% of respondents agreeing with this statement.

- Women, older workers, those employed in managerial and professional occupations and those working at small establishments display the highest levels of organisational commitment.

- Measured across a range of dimensions, workers appear to be more committed to their organisation in 2012 than they were in 2006. Levels of organisational commitment are also higher in Wales then they are in other areas.

Workplace Change, Uncertainty and Prospects for the Future (Chapter 9)

- Over half of workers in Wales report that there had been some change in the way in which work was organised within their workplace during the previous three to five years. However, workers in Wales generally report lower levels of organisational change than those in other areas of Britain, particularly in relation to capital investment.

- Approximately a third of workers report that there had been a reduction in the number of people doing the kind of work they do during the last three to five years. While the economic crisis has been associated with workforce reductions across all areas, the increase observed in Wales was much smaller than elsewhere.

- In Wales, approximately one in four workers indicate that they are anxious about being dismissed without good reason. Almost four out of ten workers in Wales report that they are anxious about future changes in their organisation that may reduce their pay.

- Workers in Wales are less likely to indicate that there was a chance of them losing their jobs in the year ahead compared to other parts of Britain. Only one in five workers in Wales believed that there was some chance of them losing their jobs compared to one in three workers in London and the South East.

- In terms of how difficult it would be for workers to find a job as good as their current one in the event of job loss, the costs of job loss are higher in Wales than in other areas of Britain.

- Almost half of workers in Wales indicate that they have no prospect of promotion. In a majority of cases, these workers indicate that they are already in the highest position for those who do their type of work. Workers in Wales rate their promotion chances much lower than those elsewhere.

CHAPTER ONE:
INTRODUCTION

1.1 Research Motivation

The previous government administration in Wales set out a vision for employment and skills which framed policy-making during its four-year term of office (Labour Party Wales and Plaid Cymru, 2007). That vision was for 'a strong and enterprising economy with full employment based on high-quality, highly-skilled jobs' (Welsh Assembly Government, 2008: 1). The world has changed considerably since then along with the political complexion of the government in Wales. Most notably, the UK economy has experienced the longest and deepest recession in living memory in 2008-09 and has been slow to recover. In the second quarter of 2008, after almost 16 years of unbroken Gross Domestic Product (GDP) growth, the UK economy entered its deepest post-war recession. Over the next year and a half the UK's GDP fell by 6.4 per cent. Since then the economy has remained, at best, flat with a 'double-dip' in output in 2011-12 followed by negligible economic growth in the first quarter of 2013.

This Report asks whether this recessionary period has had an effect on skills and job quality in Wales. We know that it certainly has taken its toll on the Welsh economy with unemployment levels rising faster here than in the UK as a whole. However, we know little about what has happened to those who remain in work. Have their working lives become more intense and have job controls tightened? Do they use more of their skills? Have they become less satisfied with their employer and the work they do, and have feelings of insecurity risen and job-related well-being fallen? Have the opportunities and prospects for training been reduced and has the quality of what they receive fallen? How do those in employment view their prospects for the future? The list goes on.

Despite the political emphasis placed on making Wales a 'high-quality, high skilled' economy, this vision was never translated into measurable targets against which progress towards turning this vision into reality could be judged. Indeed, the economic crisis has led policy makers to modify their vision with the pursuit of 'sustainable jobs' now upper most in their minds (Welsh Government, 2013). This Report aims to provide some of the tools with which analysts can use to measure what this means for the nature of work in Wales. Most notably, these instruments go beyond measuring work quality in terms of pay alone (cf. Davies *et al*., 2011). More specifically, by comparing the skills and quality of Welsh jobs in 2006 with those in 2012, we assess in what ways the quality of work in Wales has changed and hence highlight where more needs to be done to improve people's working lives. In addition, the Report benchmarks the patterns found in Wales against those experienced in the most prosperous part of Britain – London and the South East – and with the Rest of Britain. The results are based on boosted samples to two surveys carried out six years apart – the Skills Survey 2006 (SS06), and the Skills and Employment Survey 2012 (SES2012).

1.2 Objectives of the Skills and Employment Survey 2012

Britain has a long tradition of investing in major research infrastructure projects about working life. These produce results of great value to both the research and policy-

making communities, and provide high quality, individual-level surveys for secondary analyses. Hitherto, two types of individual-level survey have been developed:

- those which focus on the experience and quality of employment;
- those which focus on the skills individuals use at work.

The overall objective of the Skills and Employment Survey 2012 (SES2012) was to bring these series together in a single new survey that allows comparisons over time. A detailed description of the survey methodology is provided in Annex 1.

The experience and quality of employment has been a key feature of several individual-level surveys carried out in the past. These include the Social Change and Economic Life Initiative (SCELI) in 1986, Employment in Britain (EIB) in 1992 and Working in Britain (WIB) in 2000 (Penn *et al*., 1994; Gallie *et al*., 1998; McGovern *et al*., 2007). While SCELI consisted of several surveys, one was pivotal since it provided the sampling frame for the others. As a result, it covered many themes including the work histories of respondents, their experiences of and attitudes to work, their views of trade unions, their motivation to work and other aspects of life, what socio-political values they held, and the financial position of the household in which they lived. The EIB and WIB surveys focused more tightly on issues relating to the quality of work and employment, and consisted of one survey directed at individual workers. The 1992 EIB survey comprised many of the employment-related questions asked of individuals in the 1986 SCELI survey. Many of these questions were replicated again in the 2000 WIB survey with the addition of new ones on, for example, the psychological contract and the use of technology in the workplace.

The second data series, the Skills Surveys, has a somewhat newer lineage and a narrower focus. This series began in the late 1990s with the 1997 Skills Survey and has been repeated – with some new features – in 2001 and 2006 (Ashton *et al*., 1999; Felstead *et al*., 2002; Felstead *et al*., 2007). The series has pioneered new ways of collecting data on the skills individuals use at work, the relevance of the qualifications they hold to the work they do and the pay rates attached to generic skills. Subsequent analyses have tracked the changing distribution of skills and how this relates to other aspects of the jobs individuals hold and/or the places where they work.

Both data series have been funded from a mixture of sources, with all but one being funded, at least in part, by the Economic and Social Research Council (ESRC). Three were wholly funded by the ESRC as part of large scale research programmes (SCELI, WIB and SS97), one was entirely funded by a government department (SS01) and two have been funded from several sources (EIB and SS06). All have been made accessible for secondary analyses via the UK Data Archive.

The overarching aim of SES2012, then, was to collect survey data on the skills and employment experiences of those working in Britain, making it a key and distinctive resource for research on contemporary working life. It also provides continuity with and builds on previous surveys funded by the ESRC, sets a benchmark for future research in the field and allows some contemporaneous international comparisons to be made.

Stemming from this overarching aim, there are four further objectives to be addressed using the survey data:

i. Describe and analyse the level and distribution of skills requirements of jobs in British workplaces in 2012 and compare these patterns with earlier data points.
ii. Similarly, describe and analyse the level and distribution of key aspects of workers' experiences of their jobs in 2012, and compare with earlier data points.
iii. Use the data to develop three distinctive original and substantive contributions to scholarship surrounding job quality and job skill.
iv. Make the data available and provide the necessary data support and infrastructure for further analyses by academic or policy-based researchers in the field of skills and job quality.

1.3 Surveying Skills and Employment in Wales

In addition to funding for British-wide polls, area boosts to the two most recent surveys (SS06 and SES2012) were sought. Funds to boost the Welsh samples were successful in 2006 and 2012, although the finance came from different sources. In 2006, the Future Wales Skills Partnership funded the boost, while in 2012 the funds came from the Wales Institute for Social and Economic Research, Data and Methods (WISERD)[1]. As a result, this Report is based on two samples: 7,213 individuals in paid work and aged 20-65 years old living in Britain in 2006 (407 of whom were in Wales); and 3,200 similarly aged workers in 2012 (587 of whom were in Wales). This Report is the first in an anticipated series of outputs which will emerge from the research. It is envisaged, for example, that future analysis will build on the contrasts made in this Report between what has been happening in Wales compared to London and the South East, and the Rest of Britain (see Felstead, 2009; MacKay and Davies, 2011).

1.4 Structure of the Report

The 'skills' and 'quality' content of jobs are not readily measurable concepts since the concepts themselves have a number of dimensions and the measurement instruments adopted vary. This Report has therefore sought to provide evidence on the various dimensions of these concepts and the ways in which they can be measured in individual-level surveys. Despite this multiple source approach, the findings presented here tend to reinforce one another and therefore give validity to the overarching messages that emerge. In Chapters 2-9 we analyse the results in two ways. First, we examine the characteristics of the Welsh sample against a number of standard socio-economic categories such as gender, occupation, industry, sector and workplace size. Second, we set the 2012 results alongside the results for 2006 for Wales, London and the South East, and the Rest of Britain. This allows us to place the Welsh results in both an historical and comparative context in order to examine whether the skills and quality of jobs in Wales has improved or worsened in a period of economic austerity, both in absolute terms and in comparison with other parts of Britain. In each chapter, graphical

[1] The Future Skills Wales Partnership included the following organisations: Welsh Assembly Government, ELWa, WDA (Welsh Development Agency), Sector Skills Development Agency, ACCAC, Basic Skills Agency, Careers Wales, Confederation of British Industry in Wales, Dysgu, Higher Education Wales, HEFCW, Jobcentre Plus, ESTYN, Federation of Small Businesses, Fforwm , Local Government Data Unit - Wales, National Training Federation for Wales, Association of School and College Leaders, Wales Council for Voluntary Action, Wales TUC, and Welsh Local Government Association.

representations of the data are embedded in the text with tabular material reported in full at the end. The Report is structured as follows.

Chapter 2 provides an overview of the nature of work in Wales. The analysis firstly focuses upon some of the key characteristics of employment, such as contractual status, hours and earnings. However, particular attention is given to some of the specific aspects of work that data from the SS06 and SES2012 are uniquely placed to address, including gender segregation at work, trade union coverage and membership, and the locations in which work is undertaken in Wales.

Our findings on the distribution of 'broad skills' in Wales and patterns of historical and comparative change are presented in Chapter 3. These refer to what jobs require of workers before entry, on entry and during the early days in the job. These are measured by three proxies – the qualifications required to get the job, the length of training required for that type of work and the learning time needed to do the job well once in post. The chapter also examines the extent to which qualifications are being used more effectively in Wales in 2012 than in 2006, and how these results compare to other parts of Britain.

Chapter 4 focuses on 'generic skills', which focus on the on-going skills demands of jobs. Arguably, this offers a more direct insight into the skills used at work. These data are derived from respondents' self-assessment of the importance of a series of activities to the job they currently occupy. Again, the results are presented for Wales, over time and in comparison with other parts of Britain. A key route to the acquisition of abilities and competences at work is through the receipt of training or exposure to other learning opportunities.

Chapter 5 examines the dimensions of learning and training in Wales. The analysis considers different aspects of training and learning such as its incidence, intensity, quality and the appetite workers have to get more. Skills can also be acquired in less formal ways such as daily work experience and learning from other colleagues as the work is carried out. In addition, jobs may also require workers to help others learn, so that workers take on more of teaching role in the workplace. Both the 2006 and 2012 surveys contain information on these aspects of workplace learning, facilitating an examination of how these patterns have changed over time.

Chapter 6 examines issues of job control and participation at work in Wales. The surveys on which this Report draws asked respondents about the amount of choice they had in carrying out their job as well as a series of questions about the personal influence they had over how they worked. The analysis examines the levels of discretion at work in relation to the performance of tasks and satisfaction with this level of discretion, the degree of choice and supervision at work and the involvement of workers in organisational decision making and satisfaction with arrangements for communication at the workplace.

Work has long been acknowledged as an important social determinant of health. Recent focus has been particularly on work related psychological stress and the interaction between the new organisation of work, the psychosocial work environment and employee health. Chapter 7 considers how work impacts upon the well-being of workers. Issues examined include the incidence of long hours working, worker effort,

levels of stress, strain and exhaustion arising from work, perceived effects on health and safety, and the levels of enthusiasm, commitment and satisfaction workers show towards their work.

There is much debate about the quality of work, especially the importance of non-pecuniary benefits such as convenient hours of work, good training and promotion opportunities, and friendly colleagues. Chapter 8 considers how these job preferences are distributed among groups of workers, occupations and industries in Wales, how this has changed between 2006 and 2012, and how this varies across Britain. It also presents data on the relative importance of work and family life and on the commitment of employees to their organisation.

Finally, despite the severity of the recent recession, unemployment rates have not risen to the same degree as that witnessed during previous economic crises. Instead, response to the recession has appeared to involve other changes at the workplace, such as reductions in real earnings and hours worked rather than employment. Such changes can enhance levels of fear and anxiety at the workplace, not just in terms of concerns surrounding job security but also in relation to how the nature of employment may change. These changes may in turn affect how workers view their future prospects. Chapter 9 examines the levels of organisational change experienced by workers in Wales in recent years, anxiety and fear at the workplace, fear of job loss and how workers in Wales view their future prospects.

Additionally, Annex 1 provides a summary description of the survey methods and outcomes used in both of the surveys reported here. However, particular attention is paid to SES2012 since the fieldwork details for Wales are reported here for the first time (for details of SS06, see Felstead *et al*., 2007; for SES2012, see Felstead *et al*., 2013a).

CHAPTER TWO:
EMPLOYMENT CHARACTERISTICS

2.1 Introduction

The Quarterly Labour Force Survey (QLFS) is the largest regular household survey conducted in the UK. Face-to-face interviews being conducted in approximately 60,000 households, with information being collected from over 100,000 individuals. Its purpose is to provide information on the UK labour market that can then be used to develop, manage, evaluate and report on labour market policies. The QLFS collects information on personal characteristics, household structure, economic activity, health, education and training and earnings. Among those in employment, detailed information is collected on jobs held including occupation, hours worked, earnings and contractual status. The QLFS is generally regarded as a high quality source of data regarding the characteristics and labour market circumstances of individuals. QLFS data is one of the main sources of information used by the Welsh Government in its publications of key economic statistics.

Despite these qualities, resource constraints, reporting requirements and the importance of maintaining continuity over time means that it is not feasible for the QLFS to cover all topics in as much detail as that which can be achieved in academic led studies such as the SES2012. Whilst the SES2012 does collect information on key labour market characteristics of the employed population in Wales, the comparative advantage of this survey is in the collection of detailed information about the characteristics of employment that are not collected by the QLFS.

This chapter provides an overview of the nature of employment in Wales. Section 2.2 begins by presenting information on some key characteristics of employment in Wales. As the QLFS has been used in the derivation of survey weights for the skills surveys, these estimates will align closely to estimates derived from the QLFS. However, the remainder of the chapter goes on to explore three selected issues that are either not included within the QLFS or are not covered in detail. Given its importance in terms of understanding inequality at the workplace, Section 2.3 considers the issue of gender segregation among workers in Wales. Given the historical context of industrial relations and the relatively high levels of union density in Wales, Section 2.4 focuses on patterns of union membership in Wales. Finally, in a changing world of work, Section 2.5 examines the issue of where work is undertaken in Wales. Section 2.6 concludes with a summary of the main findings.

2.2 Key Labour Market Indicators

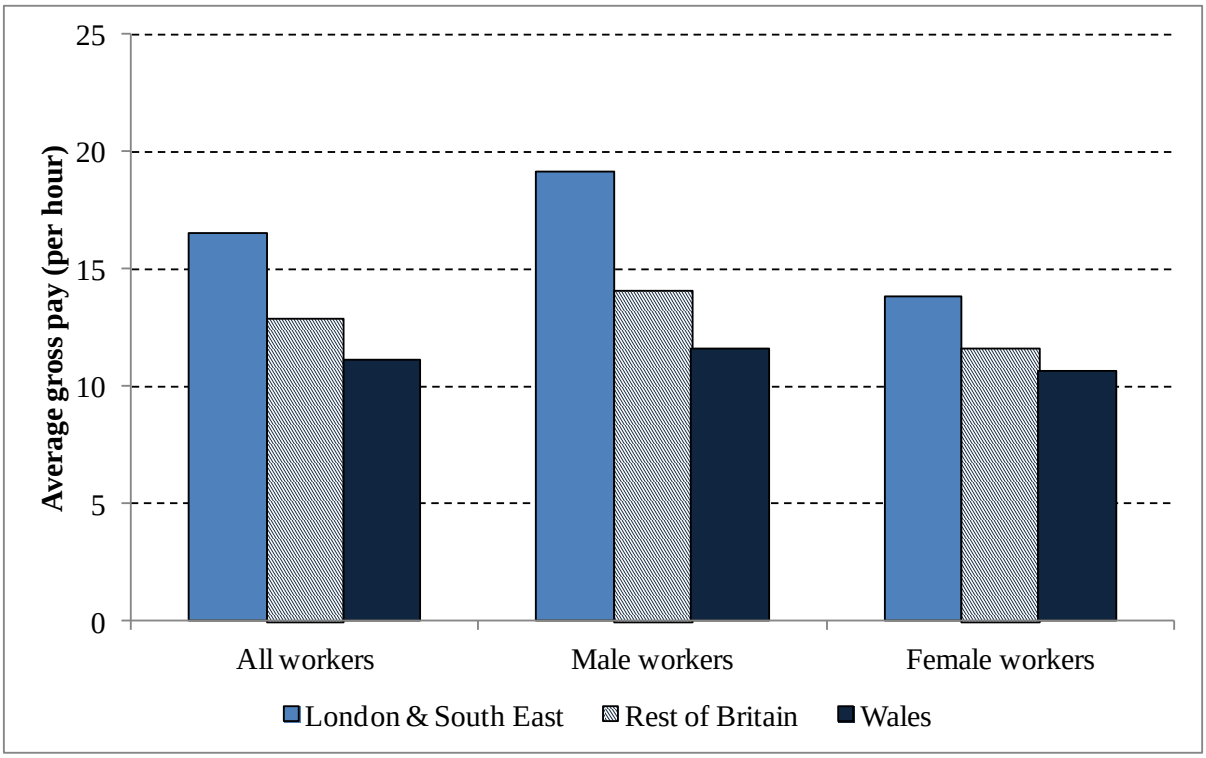
This chapter begins with an overview of the key characteristics of employment in Wales as recorded by respondents to the SES2012. It can be seen in Table 2.1 that more than nine out of ten workers (92%) in Wales are employed on permanent contracts. Younger workers, those in the services sector and those employed in the public and non-profit sector are more likely to be employed on a non-permanent basis, although the degree of variation between different subgroups of workers is relatively small. Approximately eight out of ten workers (78%) are employed on a full-time basis, with workers working 35 hours per week on average. The incidence of part-time employment is, however, relatively high among women (34%), those in relatively low skilled routine

and elementary occupations (30%) and those employed in the services sector (28%). Later in this Report, we return to the topic of hours worked in relation to a more detailed examination of long hours working (Chapter 7).

The average gross hourly earnings of workers in Wales derived from their main job are £11.14/hour (see Table 2.1). Average gross hourly earnings are higher among men, those aged 35-49 year old, those employed in managerial and professional occupations, those in the production sector and those working in larger workplaces. The SES2012 reaffirms the importance of the public sector in Wales as a source of well paid work, with hourly earnings in the public sector (£12.51/hour) being observed to be considerably higher than earnings in the private sector (£11.14/hour). Employees are estimated to earn considerably more (£11.36/hour) than those who are self-employed (£8.21/hour). This finding in part reflects the distribution of working hours among the self-employed, particularly in relation to the incidence of long hours working among the self-employed (see Chapter 7).

Of course, it is well established that average pay levels in Wales are below those found in both the Rest of Britain and London and the South East. This pattern is reflected in the data series reported here and it applies to both men and women (see Figure 2.1). This finding is in line with other studies which use pay as a proxy for the quality of employment (e.g., Davies *et al*., 2011: 13). The survey evidence reported here complements these studies by collecting data not routinely collected by official surveys, thereby yielding a richer insight into the quality of employment.

Figure 2.1:
Pay Rates Across Britain, 2012



Finally, approximately 6% of the employed workforce in Wales holds more than one job. The prevalence of multiple job holding is often higher among those groups of workers who also exhibit a relatively high propensity for part-time employment, such as those employed in the services sector and among those who work in the public or non-profit sector. However, it is also interesting to note the relatively high prevalence of multiple job holding among certain relatively well paid groups of workers, including older workers, those in managerial and professional occupations and those working in the public or non-profit sector.

2.3 Gender Segregation

For a variety of reasons, including the decline of heavy manufacturing, the growth of service sector employment, the rise in educational participation and equal opportunity policies, there has been a significant increase in the participation of women in paid employment. Despite these developments, evidence of a persistent gender pay differential remains and has been extensively documented. Estimates vary but tend to be of the order of 12-18% depending upon the estimation techniques and sources of data used (see Davies and Welpton, 2008). There are several possible reasons for the gender differential in pay (see Forth *et al*., 2001). One important area of research is that related to segmented market theory which suggests that certain areas of employment become identified as 'male' or 'female' work (Crompton and Sanderson 1990). While the causes of segmentation are debatable (sex typing of job content, organisation of working arrangements that are compatible with family life, or discrimination), 'crowding' in gender segmented labour markets can contribute to an excess supply of labour, in turn contributing to lower earnings among females.

Previous research on the relative importance of different types of segregation and their contribution to the gender pay differential is available for a range of other countries, though the findings do not provide a consistent picture of the main sources of gender pay differences. One of the difficulties associated with understanding the effects of segregation on the employment outcomes of women is defining what is meant by segregation. Segregation can be measured at the level of the workplace, occupation and job-cell. Workplace segregation relates to the composition of the workforce at the workplace (i.e. the percentage of women at the workplace). Occupational segregation refers to the relative concentration of women within certain female dominated occupations. Finally, measures of job cell segregation generally refer to whether the type of work that the respondent personally does is done mainly by men, equally by men and women or mainly by women. The complex patterns with which these three forms of segregation may interact with each other point to the difficulties associated with accurately capturing the effects of segregation on labour market outcomes.

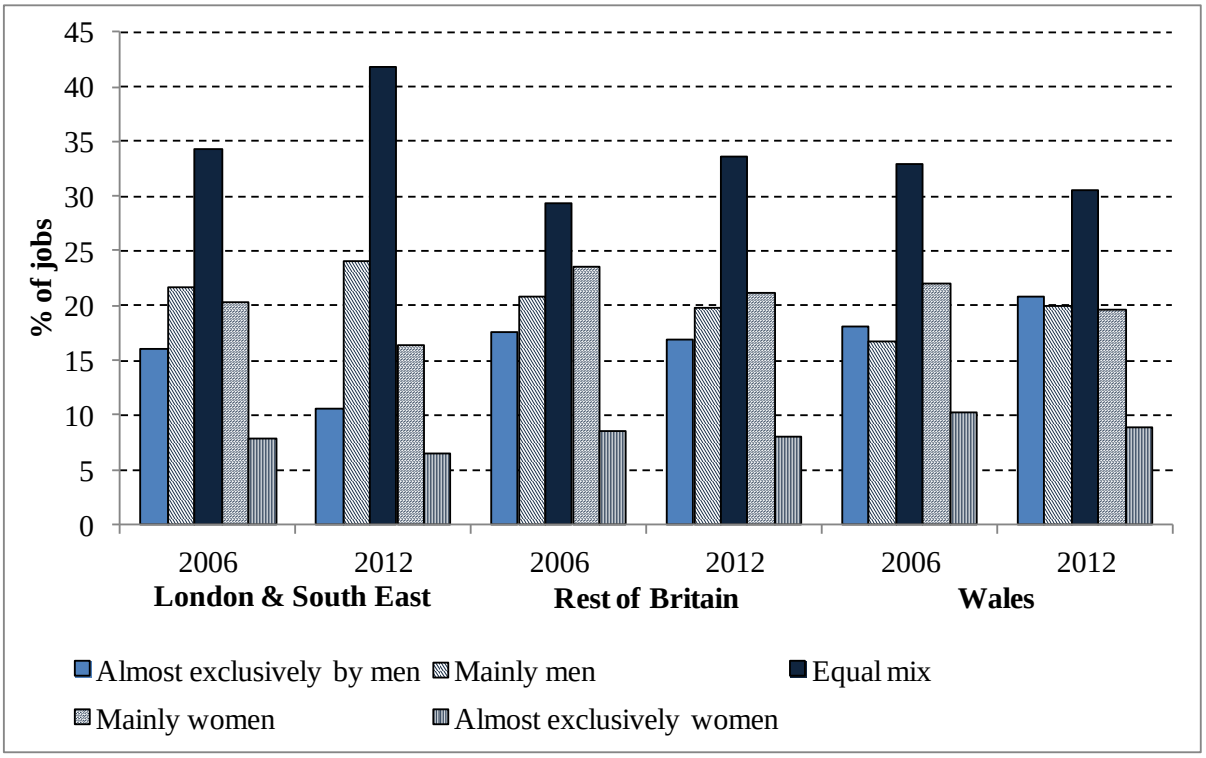
The SES2012 utilises a job cell measure of segregation, with respondents being asked whether in their workplace, their type of job is being done 'almost exclusively by men', 'mainly by men', 'by a fairly equal mixture of men and women', 'mainly by women' or, 'almost exclusively by women'. The response to this question among workers in Wales is presented in Table 2.2. It can be seen that overall, approximately four out of ten workers indicate that their work is mostly done by men, three out of ten workers indicate that their work is done equally by men and women, and that three out of ten workers indicate that their work is mostly done by women.

The higher participation of men than women in paid employment (see Table 2.1) would suggest that the distribution of gender segregation would 'lean' towards a higher prevalence of jobs that were relatively populated by men. Analysis of segregation by gender reveals that men are more likely to work in jobs that are mainly done by men and that women are more likely to work in jobs that are mainly done by women. At the outset, this finding may appear to be tautological. However, it can be seen that the patterns of segregation experienced by women are not simply a mirror image of the patterns of segregation experienced by men. Approximately 36% of men undertake jobs that are exclusively done by men. However, only 19% of women undertake jobs that are exclusively done by women. Therefore, men are more likely to be employed in highly segregated roles than women.

In terms of other groups of workers, male dominated job roles are more likely to be held by older workers, those in low skilled routine and elementary occupations, those working in the production sector, those based within smaller workplaces and those working in the private sector. Those in managerial and professional occupations, those based within larger workplaces, those employed in the service sector and those based in the public and non-profit sector are more likely to indicate that their jobs are done by an equal mix of men and women. These same characteristics are also associated with an increased likelihood of respondents saying that their type of job is mostly done by women. The one exception to this is workplace size, where small workplaces are also associated with a higher proportion of respondents saying that their jobs were mostly being done by women.

Figure 2.2 demonstrates differences in job cell segregation that exist between different parts of Britain. It can be seen that in 2012, respondents in Wales are more likely to report that their jobs are exclusively done by men than respondents based elsewhere in Britain. It can be seen that respondents based in London and the South East are most likely to report that their type of work is done by an equal mix of men and women (42%). Wales is the only area where there is an increase in the proportion of respondents indicating that their type of work was done mostly by men (either mainly or almost exclusively). Wales is also the only area where there is a decrease in the proportion of respondents indicating that their type of work is done equally by men and women.

Figure 2.2:
Geographical Variations in Gender Segregation Across Britain, 2006-2012



2.4 Union Recognition and Membership

The presence of trade unions at the workplace has been demonstrated to have an affect on a variety of characteristics and outcomes at the workplace, such as earnings, employer provided training and health and safety. Trade unions can therefore have an important role in terms individual well-being and understanding the determinants of trade union membership is therefore of importance. The downward trend in trade union membership in the UK is well recognised and has been the subject of continued debate amongst trade unionists and labour researchers for some time. However, this decline in union membership has not been uniform across different geographical areas, with particular interest being given to the persistence of relatively high levels of union membership in Wales (see Beynon *et al.*, 2012). This research suggests that their appear to be intrinsic differences in the nature of workplace representation in Wales; one linked to a particular style of trade unionism supported by the authority of a devolved state that continue to contribute to higher levels of membership.

The main source of data regarding union membership within the UK is the Quarterly Labour Force Survey (QLFS). However, the emphasis of the QLFS is upon establishing trade union membership at an individual level. In contrast, the SES2012 also includes broader questions about the presence of unions at the workplace and whether or not these unions are recognised by management for the purpose of negotiating pay and/or conditions of employment. Table 2.3 presents information on the union coverage and membership in Wales for different groups of workers. It can be seen that in terms of union presence, 56% are employed at a workplace where there is a union present. Responses to the survey indicate that approximately 90% of those employed at a workplace where a union is present indicate that the union is recognised by management.

Women (65%), those in employed in managerial and professional occupations (63%), those employed at larger workplaces (78%) and those in the public sector (90%) are most likely to report that unions are present at their workplace.

The second column in Table 2.3 presents information on union membership. Just over a third (35%) of workers in Wales report that they are a member of a trade union. Levels of membership are higher among women (42%), those employed in larger workplaces (51%) and those employed in the public sector (61%). Although being a member of a trade union is not necessarily dependent upon their being a union at the workplace to join, the availability of a union at the workplace is obviously an important factor in contributing to an individual's decision as to whether or not to join a union. To gain a clear understanding of the characteristics associated with the likelihood of joining a union, the final column in Table 2.3 simply expresses levels of union membership as a percentage of union presence. Therefore, it can be seen that, among those workplaces where unions are present, the propensity to be a member of a union is highest among older workers (71%), those working in the production sector (77%) and those working in the non-traded sector of the economy (68%).

Table 2.4 presents information on geographical variations in trade union membership. It can be seen that unions remain relatively strong in Wales. Whilst over half (56%) of respondents said that unions were present in their workplaces in Wales in 2012, this is compared to less than 40% of respondents who worked in London and the South East. The Rest of Britain exhibits levels of union presence that are closer to that observed in Wales. In terms of trends between 2006 and 2012, Wales also stands out as the only area that has exhibited an increase (albeit small) in the proportion of workers employed at workplaces where a union is present. This is in contrast to the marked decline in union presence observed in London and the South East, falling from 45% in 2006 to 38% in 2012.

Across Britain there is greater uniformity in levels of union recognition. Where unions are present, they are recognised for negotiating purposes in approximately nine out of ten workplaces. Nonetheless, regional variations in levels of union recognition are apparent, with levels of recognition in London and the South East (86%) being lower than that which exists in Wales and elsewhere in Britain (both 90%). It is noted, however, that Wales did experience the largest decline in rates of union recognition between 2006 and 2012. An important caveat to this analysis is that the recognition of unions is here being based upon the perceptions of workers who may not necessarily be in a position at their workplace to assess whether or not unions are recognised for the purposes of negotiation. Data from the 2004 Workplace Employment Relations Survey indicates that almost a fifth of Welsh employees in unionised workplaces are at workplaces where these unions are not recognised (Davies and Welpton, 2008).

Finally, it can be seen that levels of union membership in Wales during 2012 (35%) are considerably higher than those that exist in London and the South East (18%) and the Rest of Britain (28%). Nonetheless, union membership has fallen across all areas between 2006 and 2012, with Wales exhibiting the largest decline of six percentage points. Set against the context of the sustained and relatively high levels of union presence in Wales, this decline in union membership is a result of the reduced propensity of workers in Wales to join trade unions. Whilst the propensity to join trade unions in Wales remains relatively high (63%), there has been a decline in the propensity to join

unions in Wales of approximately 11 percentage points between 2006 and 2012. This is compared to a decline of just one percentage point in London and the South East and a decline of five percentage points in the Rest of Britain.

2.5 The Location of Work

Over a number of years there has been increased interest in issues surrounding the location of work (see Felstead *et al*., 2005: Felstead, 2012). The physical location of an office or factory used to clearly define the location of work and where work was done. However, a number of developments including de-industrialisation, the emergence of the services sector, improvements in travel infrastructure and the development of ICT now mean that the location of work is shifting away from a being based at a single physical location. Some occupations have always been associated with people being on the move (e.g. drivers, sales representatives, service engineers). However, the boundaries of the location of work (and implicitly working hours) are now less clearly defined for a far broader range of occupations and the ability to work in a variety of locations has become a necessity for the performance of work duties. However, for many the ability to work flexibly (e.g. at home) represents an attractive characteristic of employment that can allow workers to balance the responsibilities of work with those of home and family life, although managing conflicts between work and family life within a domestic setting comes with its own challenges.

The main source of evidence in the UK relating to the location of work is provided by the Quarterly Labour Force Survey. Since 1997, respondents to the QLFS are asked 'do you work mainly in one of four locations: in your own home, in the same building or grounds as you home, in different places using home as a base or somewhere quite different from home. The emphasis of the QLFS questions is therefore upon identifying those who work at home versus those who work at a conventional workplace and how those who work at home use that space. The QLFS questions however do not consider the nature of the relationship that workers have with their conventional workplace; i.e. do workers not based at home also use their workplace as a base around which they generally working on the move.

To consider these issues, both the 2006 and 2012 surveys asked respondents where they mainly worked in their jobs. Responses to the SES2012 for workers in Wales are presented in Table 2.5. It can be seen that in Wales, over two thirds of workers (68%) are located in a single workplace away from home. One in five workers indicate that they work in a variety of workplaces. Table 2.5 also shows how the typical location of work does vary for particular sub-groups of the workforce in Wales. It can be seen that women are much more likely than men to work at a single workplace (80% compared to 59%). This differential of over 20 percentage points can largely be accounted for by the higher proportion of men who indicate that they work in a variety of places (25% compared to 13%) and the higher proportion who indicate that they work on the move (8% compared to 1%). Within Wales, less than 10% of men and less than 6% of women work at home. It is perhaps interesting to note that whilst women's primary responsibility for the home and children has remain unchanged, women do not appear to be in roles that allow them to take up the increased opportunities to work at home.

In terms of occupational differences, working on the move is generally related to being within a low skilled occupational group. This relates to the location of transport

operatives (largely drivers of goods and passenger vehicles) in this part of the occupational classification. Working at or around home is more common among those employed in managerial and professional occupations, although even among these groups it still only accounts for 11% of the workers. Those working in the production sector of the economy are more likely to report working in a variety of places (27%) compared to those working in the services sector (17%). This will again reflect the occupational composition of employment in this sector. For example, skilled tradesmen and construction operatives are obvious examples of workers who may be based at a variety of workplaces.

Table 2.6 compares the location of work reported by respondents to the SES2012 based in Wales with those located elsewhere in Britain. Within Wales it can be seen that there has been little change in the reported location of work between 2006 and 2012 and that in 2012, the location of work in Wales is the same as that reported by workers in the Rest of Britain. However, differences do emerge when comparisons are made with workers based in London and the South East. Considering 2012, it can be seen that the proportion of workers based in a single workplace away from home is eight percentage points higher in Wales than it is in London and the South East. This differential is accounted for by the higher proportion of workers in London and the South East who work at home (14% compared to 8% in Wales). What is also striking is that these differences in work location between London and the South East and the rest of Britain have emerged since 2006.

2.6 Summary of Main Findings

Previous research has focused on relatively low pay as the key feature of the work quality in Wales, often because other data are not available. This Report examines work quality using a wider range of indicators made available through the Skills and Employment Survey 2012 and its 2006 predecessor. This chapter has begun that task by outlining some further ways in which employment in Wales differs from that found in other parts of the country.

- Just over a third (35%) of workers in Wales report that they are a member of a trade union. Levels of membership are higher among women (42%), those employed in larger workplaces (51%) and those employed in the public sector (61%).

- Levels of union membership in Wales in 2012 (35%) were considerably higher than levels in London and the South East (18%) and the Rest of Britain (28%). Nonetheless, Wales has exhibited the largest decline in both union membership and the propensity to become a union member between 2006 and 2012.

- Those in managerial and professional occupations, those based within larger workplaces, those employed in the service sector and those based in the public and non-profit sector report higher levels of are more likely to indicate that their jobs are done by an equal mix of men and women.

- Workers in Wales are more likely to report that their jobs are exclusively done by men than respondents based elsewhere in Britain. Furthermore, gender segregation is more persistent in Wales.

- In Wales, over two thirds of workers are (68%) located in a single workplace away from home. One in five workers indicate that they work in a variety of workplaces. Levels of home working in Wales are considerably lower than those exhibited in London and the South East.

Table 2.1:
Characteristics of Employment in Wales, 2012

	Permanent	Full-time	Hours per week	Gross hourly pay	More than one job
Gender					
Male	90.2	89.6	38.1	11.58	5.5
Female	91.9	65.5	28.7	10.65	6.0
Age					
20-34	84.1	76.4	31.1	9.39	5.5
35-49	92.3	81.3	35.5	12.03	5.4
50-64	96.0	77.6	34.2	11.74	6.4
Occupation					
Managerial and professional (SOC 1-3)	88.5	84.3	36.6	14.49	6.5
Admin, trades and services (SOC 4-7)	92.3	77.9	33.6	9.69	5.8
Operatives and other (SOC 8-9)	92.9	69.7	29.1	7.69	4.4
Industry					
Production industries, divisions A-F	95.3	95.6	40.4	11.91	4.4
Service industries, divisions G-O	89.5	72.0	31.2	10.88	6.3
Workplace size					
Up to 24 workers	91.6	76.1	34.1	10.62	6.4
25 workers and over	91.8	82.2	34.4	11.55	4.9
Sector					
Public	86.4	74.3	33.2	12.51	6.7
Private	93.9	81.2	34.3	10.38	5.3
Employment type					
Employee	92.3	79.0	34.1	11.36	5.0
Self-employed	37.3	77.0	32.2	8.21	9.9
Total	92.1	78.7	34.8	11.14	5.7

Table 2.2:
Gender Segregation within Wales, 2012

	Work done by…				
	Almost exclusively by men	**Mainly men**	**Equal mix**	**Mainly women**	**Almost exclusively women**
Gender					
Male	35.9	29.9	28.1	5.8	0.2
Female	2.8	8.2	33.4	36.5	19.2
Age					
20-34	15.0	20.0	31.8	24.3	8.9
35-49	22.0	19.2	30.0	19.0	9.7
50-64	24.8	21.2	29.9	16.5	7.6
Occupation					
Managerial and professional (SOC 1-3)	6.5	17.2	42.5	23.6	10.3
Admin, trades and services (SOC 4-7)	30.4	19.0	21.1	19.3	10.2
Operatives and other (SOC 8-9)	28.7	26.2	28.2	13.4	3.5
Industry					
Production industries, divisions A-F	46.3	34.1	15.8	1.9	1.9
Service industries, divisions G-O	10.8	14.5	36.3	26.8	11.6
Workplace size					
Up to 24 workers	28.5	17.8	22.8	18.0	13.0
25 workers and over	15.9	22.2	36.8	20.0	5.1
Sector					
Public	6.0	8.0	36.9	37.0	12.2
Private	28.4	26.2	27.2	11.1	7.1
Total	20.9	20.1	30.5	19.7	8.8

Note:
Respondents were asked: 'In your workplace, is your type of job done. (1) almost exclusively by men, (2) mainly by men, (3) by a fairly equal mixture of men and women, (4) mainly by women or (5) almost exclusively by women.'

Table 2.3:
Trade Union Membership in Wales, 2012

	Unions present[1]	Unions member[2]	Propensity to join[3]
Gender			
Male	48.5	29.7	61.3
Female	64.6	41.8	64.7
Age			
20-34	48.4	26.4	54.5
35-49	61.6	38.6	62.7
50-64	54.8	39.0	71.1
Occupation			
Managerial and professional (SOC 1-3)	62.6	38.7	61.9
Admin, trades and services (SOC 4-7)	52.0	37.4	71.9
Operatives and other (SOC 8-9)	51.2	24.0	46.9
Industry			
Production industries, divisions A-F	46.3	35.8	77.4
Service industries, divisions G-O	59.8	35.0	58.5
Workplace size			
Up to 24 workers	27.7	15.4	55.7
25 workers and over	77.9	51.3	65.8
Sector			
Public	89.8	61.0	67.9
Private	37.8	22.5	59.6
Total	55.8	35.2	63.1

Notes:
1. Respondents were asked 'At your workplace are there unions or staff associations?'
2. Respondents were asked 'Are you a member of a trade union or staff association?'
3. The propensity to join unions is estimated as the level of membership among those individuals who indicate that unions or staff associations are present at their workplace.

Table 2.4:
Geographical Variations in Trade Union Membership Across Britain, 2006-2012

	London & South East		Rest of Britain		Wales	
	2006	**2012**	**2006**	**2012**	**2006**	**2012**
Unions present[1]	44.7	37.8	51.3	50.6	54.8	55.8
Member of union[2]	22.0	18.3	30.6	27.6	40.8	35.2
Propensity to join[3]	49.3	48.4	59.7	54.7	74.5	63.1
Unions recognised[4]	85.2	86.4	92.0	90.0	94.6	90.1

Notes:
1, 2, and 3 see Table 2.3.
4. Is any union or staff association recognised by management for negotiating pay and/or conditions of employment?'

Table 2.5:
Location of Work in Wales, 2012[1]

	At home	In the same grounds as home	Single workplace away from home	Variety of workplaces	Working on the move
Gender					
Male	5.5	3.7	58.2	24.8	7.8
Female	3.5	2.2	79.8	13.3	1.3
Occupation					
Managerial and professional (SOC 1-3)	6.7	4.1	71.2	17.3	0.7
Admin, trades and services (SOC 4-7)	4.2	2.9	68.7	23.9	0.3
Operatives and other (SOC 8-9)	1.4	1.5	61.7	15.0	20.3
Industry					
Production industries, divisions A-F	7.2	2.8	61.3	27.2	1.5
Service industries, divisions G-O	3.6	3.1	70.6	16.6	6.2
Total	4.6	3.0	68.0	19.6	4.8

Note:

1. Respondents are asked 'In your job, where do you mainly work?' to which they could respond 1) at home, 2) In the same grounds and buildings as home (e.g. in adjoining property or surrounding land), 3) At a single workplace away from home (eg, office, factory or shop), 4) In a variety of different places of work (eg, working on clients' premises or in their homes or 5) Working on the move (eg, delivering products or people to different places).

Table 2.6:
Geographical Variations in the Location of Work Across Britain, 2006-2012

	London & South East		Rest of Britain		Wales	
	2006	**2012**	**2006**	**2012**	**2006**	**2012**
At home	4.2	7.0	3.3	3.7	3.9	4.6
In the same grounds as home	2.2	8.6	2.4	3.2	2.8	3.0
Single workplace away from home	68.5	59.9	70.9	68.5	67.6	68.0
Variety of workplaces	20.0	21.0	18.3	19.8	20.4	19.6
Working on the move	5.1	3.5	5.1	4.8	5.3	4.8

Note:
See Table 2.5.

CHAPTER THREE:
BROAD SKILLS

3.1 Introduction

This and the following chapter focus on measuring, tracking and comparing 'job skills' in Wales. The 2012 results are set alongside those recorded for 2006 as well as against the patterns for London and the South East, and the Rest of Britain. Job skills refer to the abilities workers need to carry out their jobs. These are embedded in the nature of the job, although the information comes from workers themselves. Job skills can be categorised as either 'broad skills' or 'generic skills'. The former refer to a series of job requirements needed before entry, on entry and during the early days in the job, while the latter refer to a range of on-going activities that form part of the job.

The chapter is divided into four substantive sections. Section 3.2 outlines the instruments used as proxies for the abilities acquired by workers through prior education and training, and required by employers for effective job performance, i.e. broad skills. Chapter 4 (which follows) complements this approach by presenting data which measures the importance of a range of job activities undertaken by individuals at work, i.e. generic skills. Section 3.3 examines how broad skills are distributed in Wales in 2012. It therefore highlights the broad skill position of certain groups of workers, occupations and industries in order to highlight where skills inequalities are at their most pronounced. The third substantive section of the chapter (Section 3.4) extends the analysis by examining how the 2012 situation in Wales differs from that found in 2006 and how this differs, if at all, from the pattern of skill change found in other parts of Britain. However, skills supply may not always be in alignment with skills demand. For example, employment that effectively uses the skills and educational qualifications workers have may be difficult to find. The pace of educational expansion may exacerbate this situation by outstripping the demand from employers which, while rising, may not be rising as fast. Similarly, job search processes by employers and employees are often imperfect, making mismatches likely. Section 3.5 considers the scale of the mismatch problem in Wales in 2012 as well as comparing the current situation with 2006 and other parts of Britain. The chapter ends with a short summary of the main findings.

3.2 Measuring Broad Skills

Typically, skills are measured by examining the stock of qualifications held by the workforce. The Quarterly Labour Force Survey (QLFS) and equivalents in other countries adopt such an approach. This makes analyses of the stock of 'skills' possible on a regular basis. One aspect of the skills debate, therefore, has been to compare the qualifications of the British workforce with those of competitor nations. While this is a complex and difficult task since adjustments have to be made which take into account different qualification standards, norms and scope between nations, several studies have adopted such an approach (e.g. DfEE and Cabinet Office, 1996; HM Treasury, 2005). This type of research identifies the strengths and weaknesses of the British educational system. Its strength lies in the production of graduates – approaching a quarter of the population have qualifications above National Vocational Qualification (NVQ) level 3, a proportion which has more than doubled over the last decade. Furthermore, significant progress has been made in raising the qualifications levels of the workforce and stimulating supply over the last 10 years, so that compared to other OECD nations the

supply of highly qualified people is predicted to put the UK 10th in the OECD by 2020 (UKCES, 2010). However, the UK has proportionately more people with low qualification levels than many of its major comparators and is ranked 18th across the Organisation for Economic Co-operation and Development (OECD) on this measure. Five million people have no formal qualifications at all (HM Treasury, 2005: 40). It also has a smaller than average proportion of people with intermediate-level qualifications which puts it 20th out of the 30 countries in the OECD (HM Treasury, 2005: 43).

Performance in Wales is poorer still with a higher proportion of adults without qualifications compared to England or Scotland and fewer people with high level qualifications (Welsh Assembly Government, 2008: Table 1). In 2011 around 30% of the working age population in Wales were not qualified to level 2, while around 30% were qualified to a minimum of level 4. Twenty per cent were qualified to level 3. However, the proportion qualified to level 3 – the level most closely associated with intermediate jobs, has remained largely static over time – whereas there has been a significant increase in recent years in the proportion qualified to level 4 and above, and a similar reduction in the proportion with low/no qualifications (UKCES, 2011).

This type of approach, however, focuses exclusively on the supply of skills as proxied by qualifications. Although it is possible to examine the qualifications held by those actually in employment, the match between the qualifications held by jobholders and the qualifications their employers and their jobs require is likely to be less than perfect. We therefore need accurate data on the qualifications that are required for each job. Moreover, an academic or a vocational qualification may be only a loose proxy for the skills and abilities that an individual possesses. There is a need for other broad measures of job skills to supplement the measure derived from the qualifications needed to get jobs.

The Skills Survey 2006 and the Skills and Employment Survey 2012 contain measures both of the qualifications held by the jobholder, and three separate measures of the broad skills required in the job. This approach recognises that skills are acquired in different ways, and that it is important therefore to have a multi-dimensional picture rather than any single measure. The series therefore collected information on:

- the qualifications required to get the job;
- the length of training for the type of work undertaken;
- the time taken to learn to do the job well.

These broad skill measures have been successfully tested in previous surveys. By repeating the same questions (word-for-word and prompt-for-prompt) a firm basis from which to make comparisons over time was secured. In this Report, we compare the answers given in two surveys carried out six years apart – in 2006 and then again in 2012.

The two surveys collected data on three broad skill dimensions. First, each respondent to the surveys was asked to judge what qualifications would be required to get his or her current job in today's labour market. They were asked: 'If they were applying today, what qualifications, if any, would someone need to *get* the type of job you have now?' A range of qualification options was given. From this, the highest qualification level ranked by NVQ equivalents was derived. Hence, the responses were grouped into five categories, with the top category (level 4 and above) further sub-divided into degrees

and professional qualifications. As a summary measure of the entire scale, the Required Qualifications Index was derived ranging from zero to four, corresponding to the five qualification levels.

This survey question also allows us to compare the required qualification level of jobs (as perceived by jobholders) with the supply of qualifications available in the labour market. Using evidence drawn from contemporaneous Quarterly Labour Force Surveys the profile of skills supply among the economically active can be mapped, the Vacancies Survey for the equivalent months can provide data on the level of unmet labour demand (ONS, 2006; Williams, 2004) and data from the 2006/2012 surveys can be used to estimate the number of jobs requiring a particular level of qualification on entry (for more detail see Tables 3.7 and 3.8). By restricting these three sources of data to the relevant 20-65 year old Welsh population (however, the vacancy data cannot be restricted in this way as vacancies are open to all irrespective of age), it is possible to identify at which levels in the qualification hierarchy the aggregate qualification requirements and qualifications supply are in equilibrium and where, if at all, they are out of step with one another. However, in these analyses it should be remembered that required qualifications are merely one aspect used in recruitment, and are only one measure of the complex skills needed in jobs. Other factors such as experience, natural ability and motivation also play a part and give further insights into the demands of the job.

This Report also examines whether those 'over-qualified' (that is, they have qualifications which exceed the level of qualification required for the job) are also unable to use their skills at work effectively. It therefore considers trends in 'real' and 'formal' over-qualification.

A second broad skill measure is based on responses to a series of questions on the length of training time required for the particular type of work carried out by respondents. It is based on the premise that the training time required for different jobs reflects various ability levels and knowledge demanded by contrasting types of work. Respondents were asked: 'Since completing full-time education, have you ever had, or are you currently undertaking, training for the type of work that you currently do?' If 'yes', 'How long, in total, did (or will) that training last?' If training was still on-going respondents were asked to estimate how long it would take. For the purposes of presentation, we examine the proportions reporting 'short' (less than three months) and 'long' (over two years) training times i.e. the points at either end of the continuum. We also use a summary measure of the complete range of options allowed, ranging from zero to six, entitled the Training Time Index. We report the average Training Time Index for various groups.

The third broad skill measure is similarly constructed. Respondents were asked: 'How long did it take for you after you first started doing this type of job to learn to do it well?' If they answered 'still learning' they were asked: 'How long do you *think* it will take?' Again, for the purposes of presentation, we examine the proportions at either end of the continuum – 'short' learning time denoting less than one month and 'long' denoting over two years. The Learning Time Index is a summary measure of all the answers given ranging from one to six. Our basic expectation is that the more skilled jobs take longer to learn. Nevertheless, some ambiguity still remains. It might be the case, for example, that since a better-educated person could learn to do some jobs well more quickly than a person with less education, a high learning time may be a negative rather than a positive indicator of skill. Alternatively, if the job called for manual dexterity, then

perhaps the better educated would be slower learners since they may have put more emphasis on the development of their cognitive abilities at the expense of manual skills. However, the analysis that follows confirms our basic expectation that learning time is positively correlated with other skills indicators and provides a reasonable indicator of the skill level demanded of those in work.

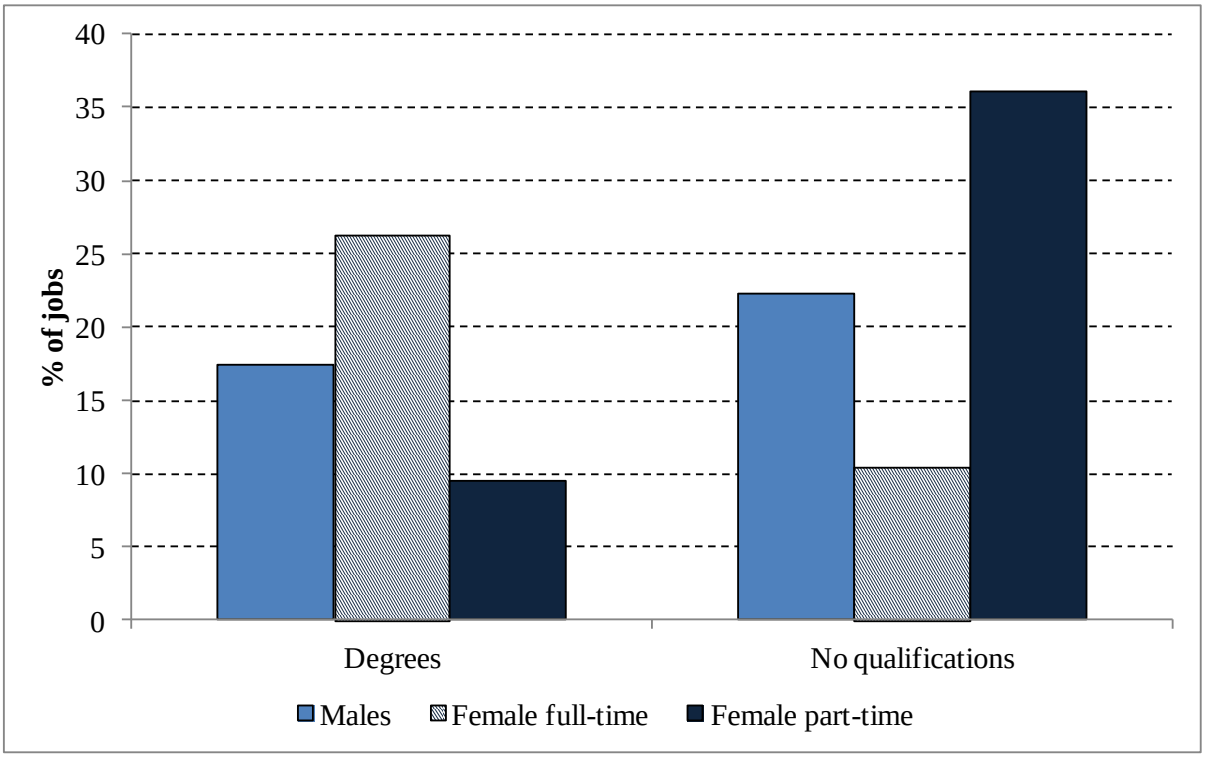
3.3 Distribution of Broad Skills in Wales, 2012

Table 3.1 gives the distribution of broad skills according to the gender and job status of the jobholder, as measured in the three ways outlined above. This shows that three out of ten jobs (30%) in Wales in 2012 required a level 4 or above qualification for entry – that is, a professional qualification such as SRN in nursing, or an undergraduate or post-graduate degree. However, more than a fifth (22%) of jobs required no qualifications on entry. A similar polarisation of jobs is reflected in the training times respondents reported for their current type of work and the length of time it took to learn to do the job well. For example, three-fifths of jobs (63%) in Wales were reported as requiring less than three months' training time, while around a quarter (24%) reported training times of over two years. Similarly, some jobs took a long time to do well, while others were picked up relatively quickly. Just under a quarter of jobs (24%) could only be done well after spending more than two years in post, but a similar proportion of jobs (23%) could be learnt in just under a month.

If anything, women in Wales are in more skilled jobs than their male counterparts. Two of the three summary measures of skills (training time required for jobs and qualifications required for entry) are higher for women than for men, although these differences are not statistically significant. A fifth (21%) of women reported that they would need a degree to secure entry to their current job compared to a sixth (15%) of men. At the other end of the spectrum, a quarter (25%) of men reported that newcomers would not need any qualifications at all on entry, this fell to around a fifth (19%) of women.

Nevertheless, this picture masks marked differences in the skill content of jobs occupied by women who work part-time compared to those who work full-time. These differences are large and statistically significant across all three measures. The required qualification index for women full-timers, for example, is 2.63 compared to a figure of 1.62 for women who work part-time. This pattern is repeated for the other two broad skills indices and is evident in the component measures of the indices. Over a third (36%) of female part-timers, for example, reported that they did not need a qualification for the job they currently occupied compared to around a tenth (10%) of women who worked full-time (see Figure 3.1).

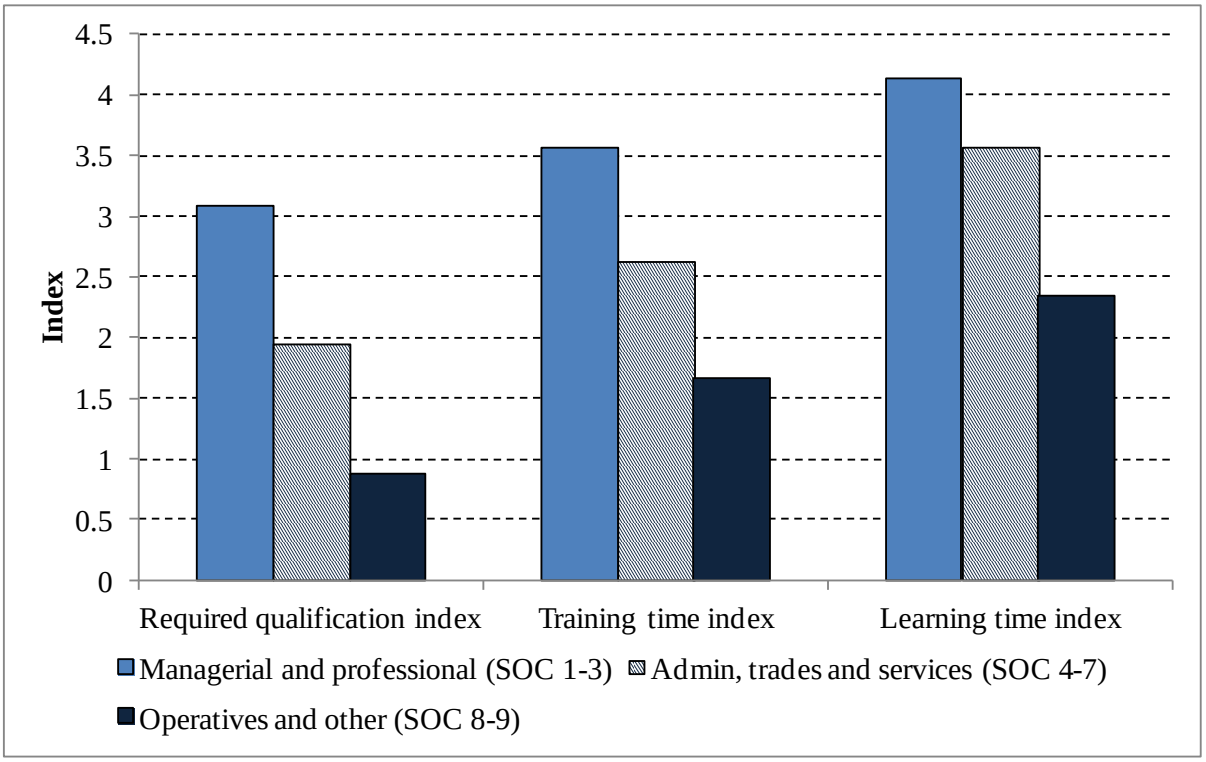
Figure 3.1:
Qualifications Required by Gender and Working Time, Wales, 2012



Job skills in Wales are distributed in line with occupational expectations with those at the top of the hierarchy requiring more skills than those at the bottom (see Table 3.2). Given the relatively small sample size for the Welsh boost we have constructed three groups: those in the top three occupational categories; those in the middle four; and those in the bottom two. This categorisation results in reasonable cell sizes – for 2006 and 2012 there are 100 or more respondents in each category. This categorisation is used throughout this Report. Similar categorisations have been made for sector, industry and size of workplace.

On this evidence, we find that those in the top occupational category have the highest score across all three broad skills indices, whereas those at the bottom scored the lowest. This means that, on average, 'Managers, Professionals and Associate Professionals' are in jobs that require a level 3 qualification, have a training period of 6-12 months and take 6-12 months to learn to do well. This compares to 'Operative' and 'Elementary' jobs which, on average, need a level 1 qualification on entry, require a training period of less than 1-3 months and take 1-3 months to learn to do well. In indices terms, these contrasts are similarly pronounced (see Figure 3.2).

Figure 3.2:
Broad Skills Indices by Occupational Group, Wales, 2012



Skills used at work also vary by industry, sector and size of establishment (see Table 3.3). The results for Wales confirm this pattern. Jobs in smaller workplaces tend to be lower skilled than those where larger numbers of workers are employed. For example, there are differences in the indices for required qualifications and training time according to workplace size. However, it takes longer to learn to do jobs in small workplaces than larger ones.

Skill differences in Wales are more pronounced when jobs are analysed according to whether they are in the public or private sector. Here, the gaps are considerable. For example, on average public sector jobs require qualifications almost a full level higher than jobs in the private sector (required qualification index of 2.91 versus 1.78). Similarly, average training times are longer in the public sector compared to the private sector (training time index of 3.50 versus 2.42). 'Production' and 'Service' industries also differ in terms of their skill requirements in Wales, with the latter demanding lower level skills from its workforces than the former.

3.4 Trends in Broad Skills in Wales and Other Parts of Britain, 2006-2012

One of the most significant findings of previous analyses of this type was that the skills content of jobs in Wales was of a poorer quality than jobs elsewhere in Britain. This may, of course, help to explain the greater prevalence of low pay in Wales and lower average rates of pay (cf. Figure 2.1). Furthermore, the trend data suggested that the skill content of Welsh jobs fell between 1992 and 2006, while it rose elsewhere (Felstead, 2009).

In some respects, the 2012 results are more comforting. While it is still the case that jobs in Wales are less demanding in terms of the qualification levels required on entry, they require similar levels of prior learning and initial post-entry learning to jobs in other parts of Britain. For example, in terms of qualification requirements jobs in Wales, on average, need lower level credentials than jobs in London and the South East. In 2012, a fifth (22%) of jobs in Wales did not need a qualification on entry compared to less than a sixth (15%) of jobs in London and the South East. The percentage point gap is even greater for jobs requiring graduate level and equivalent qualifications and has risen since 2006. However, the proportion of no qualification jobs in Wales fell more rapidly between 2006 and 2012 than in other parts of Britain (see Table 3.4). A steep gradient between parts of Britain still remains in terms of qualifications required on entry (see Figure 3.3). However, levels of prior training vary little between different parts of Britain (see Figure 3.4). With regard to initial post-entry learning times, the picture is less clear-cut (see Figure 3.5). Nevertheless, when taken as a whole both the training and learning times indices suggest little variation across Britain (see Table 3.4).

Figure 3.3:
Required Qualifications Across Britain, 2012

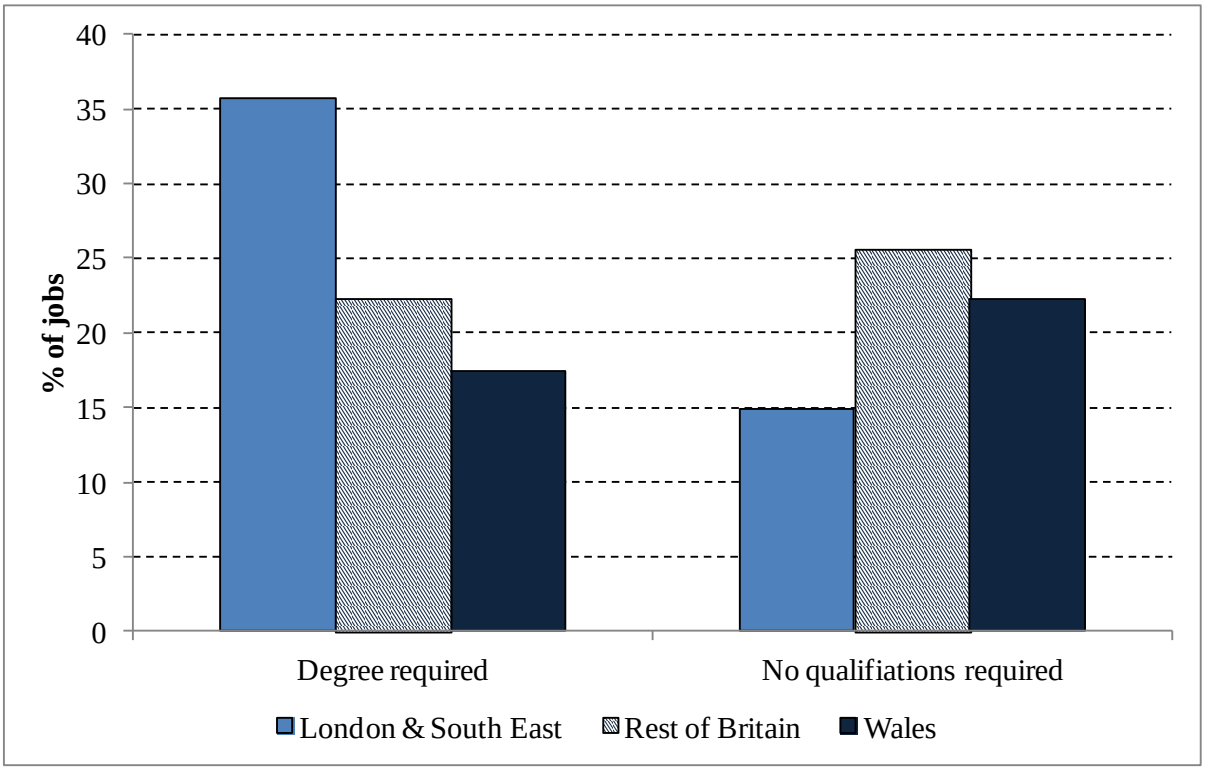


Figure 3.4:
Prior Training Requirements Across Britain, 2012

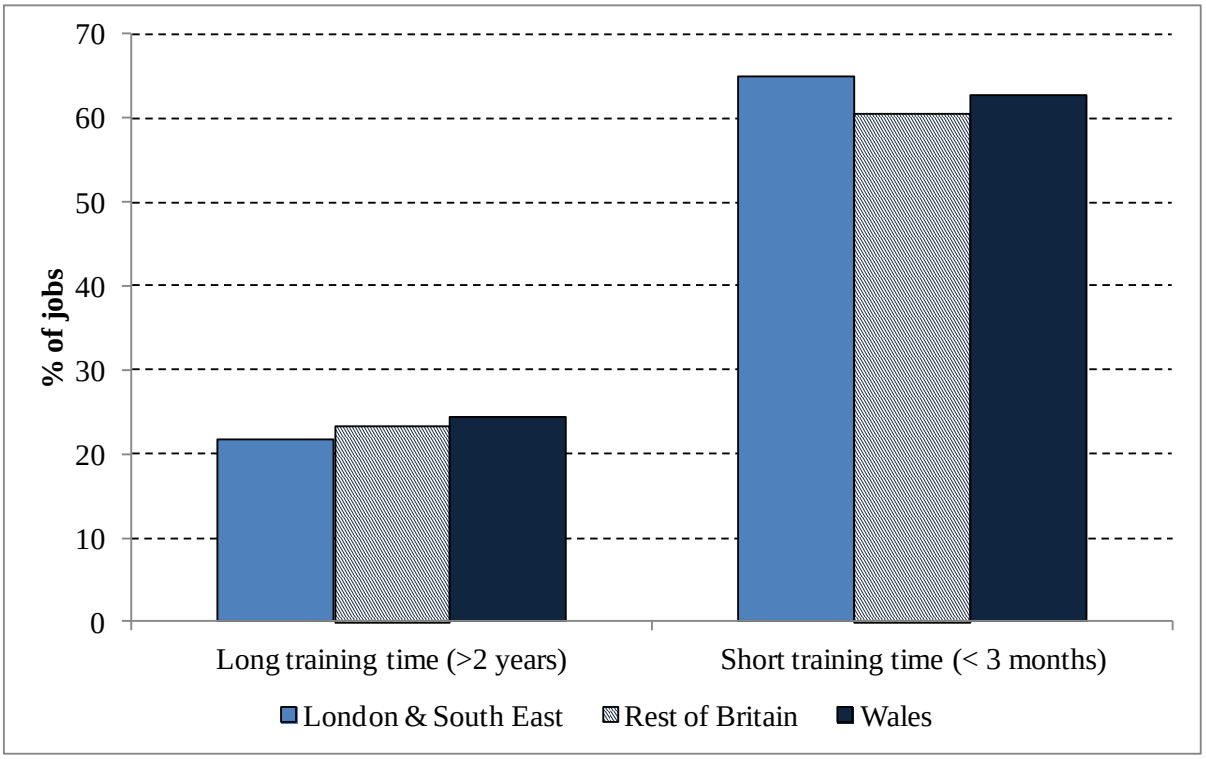
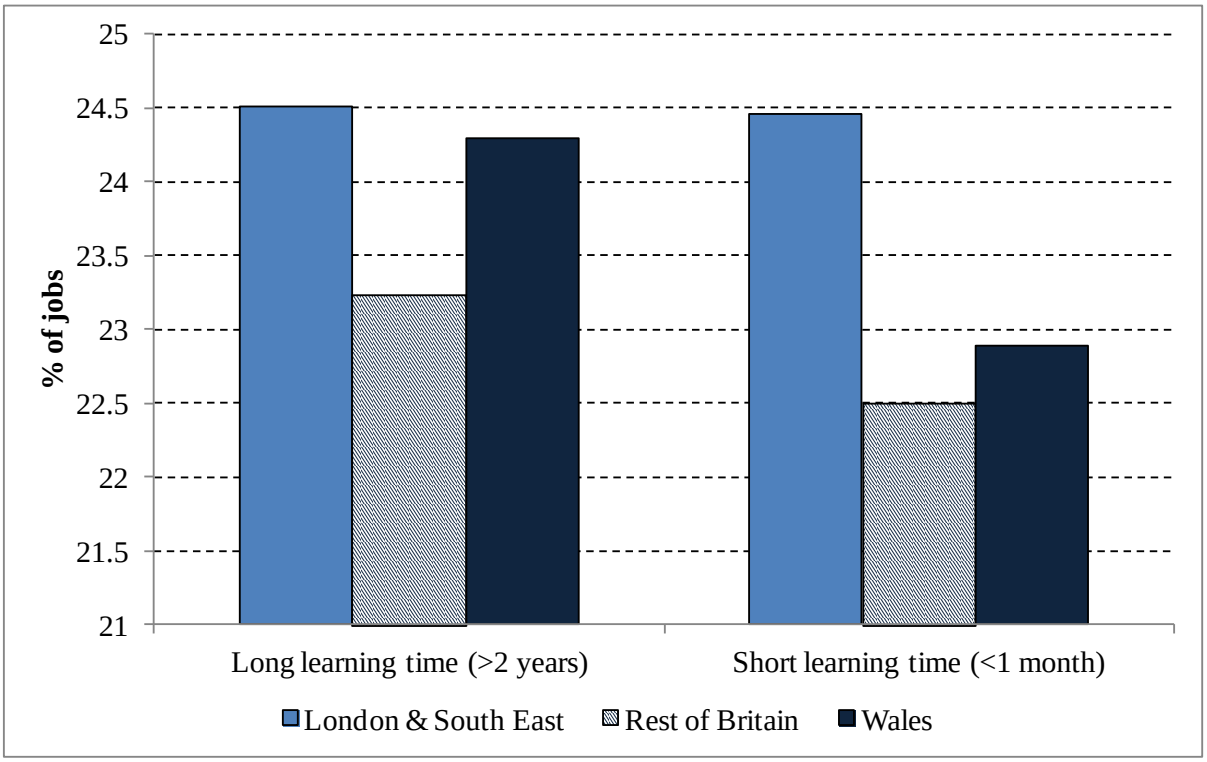


Figure 3.5:
Initial Post-entry Learning Across Britain, 2012



The 2012 results across the whole of Britain show that the qualification requirements of jobs rose dramatically with jobs requiring degrees on entry rising to an all time high (26%) and jobs requiring no qualifications falling to a historically low level (23%). Yet, overall the evidence for continued upskilling is mixed, because there has also been a shortening of training and learning times for jobs – a reversal of trends previously recorded (Felstead *et al*., 2013b). The results presented here suggest that this pattern is more evident in particular parts of Britain.

Differences across Britain in prior training times, for example, were narrower in 2012 than they were in 2006. The proportion of jobs requiring training of over two years fell a little more outside Wales – a six percentage point drop was recorded in the Rest of Britain and a five point drop in London and the South East compared to a more modest fall of between three to four percentage points in Wales. The growth in jobs requiring short training times mirrors this pattern – with a rise of four points in the Rest of Britain and Wales compared to seven points in London and the South East (see Table 3.4).

This pattern is reflected in the training time index which fell markedly outside of Wales between 2006 and 2012, but fell more modestly in Wales. On this measure, jobs in Wales were of a *higher* skill level in 2012 compared to jobs in London and the South East but not to other parts of Britain (see Table 3.5).

The trajectory of learning times also varied across Britain between 2006 and 2012. The rise in the proportion of jobs requiring less than one month's learning time rose by almost seven percentage points in London and the South East but rose by around half of that elsewhere. However, at the other end of the spectrum the proportion of jobs in London and the South East requiring lengthy learning times fell more modestly than it did elsewhere (see Table 3.4). These conflicting patterns largely cancelled each other out, leaving little to choose between areas in terms of the length of time required for initial post-entry learning. As a result, the learning index fell in all three areas between 2006 and 2012 at more or less than same pace (see Table 3.5).

However, placing the Welsh results for full-timers and part-timers alongside the results for the Rest of Britain, and London and the South East reveals the relative size of the divide between these two groups. It has already been noted that women part-timers in Wales are in significantly less skilled jobs than their full-time counterparts. This is well-known British finding (Gallie and Zhou, 2011). However, the results presented here suggest that the situation is even worse for part-timers in Wales. Full-timers in Wales (and the Rest of Britain) are in jobs that require longer prior training times and longer learning times than their counterparts working in London and the South East. Having said that, the level of qualifications required on entry is lower. However, part-timers in Wales do badly compared to their counterparts in other parts of Britain on all three broad skill measures (see Table 3.6). The gap between the skills of part-timers' jobs in Wales and those in either the Rest of Britain or London and the South East are large. This suggests that low skills are more prevalent among part-time jobs in Wales than in other parts of Britain. The obvious policy implication here is that in order to upskill the Welsh economy more needs to be done to lift the skills of part-timers' jobs.

To summarise: the broad skills measures paint a mixture picture with respect to the changing pattern of regional inequality. In terms of the qualification required measure Wales fell further behind London and the South East between 2006 and 2012,

narrowed the gap (even overtook London and the South East) in terms of the average length of time to train and maintained parity with other regions in terms of the length of time needed to learn to do the job well (as measured by the three indices). On this basis it is difficult to draw any firm conclusions regarding the changing geography of jobs skills over recent years. The best we can say on this evidence is that the situation has not worsened, but neither has it improved. Nevertheless, the continuing low skills content of part-time jobs in Wales does give cause for concern.

3.5 Qualification Mismatch, Overqualification and Skills Underutilisation in Wales and Other Parts of Britain, 2006-2012

It is now well recognised that the supply of skills may not always be in alignment with employer demand. This may be reflected in skill shortages which arise because employers find it difficult to fill their vacancies with appropriately skilled applicants. However, the occurrence of skill shortages is low and, when they do occur, they tend to affect particular occupations, sectors and localities – frequently making newspaper headlines given the wage rises they often spark (e.g., *Financial Times*, 19 June 2013; *The Times*, 23 January 2006; *The Guardian*, 9 March 2002). More widespread are skill gaps, which are ten times more prevalent according to some estimates (UKCES, 2009). These refer to a deficiency in the skills of the existing workforce that holds back the business from meeting its goals.

Both the evidence for skills shortages and skills gaps is based on employer surveys, which collect data mostly on the deficiencies of current or potential workers and not on whether the skills of the existing workforce are used effectively or underutilised (Davies *et al*., 2012). The individual-level surveys reported here, on the other hand, collect data from which it is possible to estimate the extent of the imbalances between the number of skilled jobs and skilled people, and how this has changed. Unlike the much larger employer skills surveys on which skill shortage and skills gap evidence is based, these individual-level skills surveys gather information from workers themselves.

One of the major advantages of the 2006 and 2012 surveys reported here is that they measure skills actually used in the workplace. Although it is possible to track accurately the qualifications held by those actually in employment (using the Quarterly Labour Force Survey, see Sloane *et al*., 2005), the mismatch between the qualifications held by jobholders and the qualifications they require is only possible using data sets which collect both types of information. The 2006 and 2012 surveys are unique in this respect.

Tables 3.7 and 3.8 present estimates of the numbers of jobs (including vacancies) which require qualifications at various levels on entry and puts these alongside the numbers of economically active people holding each level of qualification. We refer to the former as the 'demand' for qualifications, because it is an estimate of employers' demand for labour at each qualification level as perceived by current jobholders. We thus use the conventional assumption that, in a relatively flexible labour market, the actual number of jobs would not remain in the long term above employers' planned demand for qualified labour; and the inclusion of vacancies accounts for sectors where the demand exceeds the current number of jobs as well as friction in the labour market. In effect, 'demand' equates to the number of jobs occupied by level of qualification required by new entrants plus an estimate for unfilled posts at each of these levels.

The estimates of demand for qualifications are based on the 2006/2012 evidence for the highest qualification required to get the job respondents occupied at the time of interview. These proportions are grossed up to the numbers of 20-65 year olds recorded to be in work in Wales according to the Quarterly Labour Force Surveys for their respective second quarters. It should be remembered that these demand estimates derive from the jobholders' perceptions of the required qualifications, rather than their employers' perceptions. Evidence from elsewhere suggests that line managers' perceptions of the qualification requirements of jobs are, on average, not substantially different from the perceptions of their subordinates (Green and James, 2003). Nevertheless, it should be noted that qualifications are only loose measures of the demand for different skill levels.

The details of the calculation are as follows. In order to provide a complete picture of the demand for labour at each qualification level we need to take into account vacancies in the labour market and apportion these to each of the qualification levels. The numbers (shown in column 3, Tables 3.7 and 3.8) are derived from two sources. The first source is the Vacancies Survey which is carried out every month and asks businesses (who have to take part in the survey by law) to report the number of 'unoccupied or soon to be vacated' posts for which recruitment activities – such as placing adverts or approaching potential recruits – have already taken place (Machin, 2003). We take a three-month rolling average covering the months January-March in 2006 and 2012.[2] To produce a Welsh estimate we multiply this figure by the proportion of UK jobs held in Wales. We do the same for the Rest of Britain, and London and the South East calculations.

Our second source of data derives from the 2006 and 2012 surveys reported in this Report and is used to produce estimates of the qualification level of vacancies and the qualification level of existing jobs. To approximate the qualification levels of vacancies, we multiplied the total number of vacancies available by the required qualification levels reported by our respondents. The number of jobs requiring different qualification levels is estimated by doing the same calculation but using the total number of jobs in Wales as the multiplier. Then, by adding the number of jobs and vacancies at each qualification level, we estimate the total demand for labour in Wales according to the level of certification required on entry. The results are shown in column 4 in Tables 3.7 and 3.8 which are headed 'Total demand'. Again, the same protocols were used when producing similar tables (not shown here) for the Rest of Britain, and London and the South East.

Estimates of the supply of qualifications are more straightforward. These are based on the second quarter results from the QLFS 2006/2012 and cover 20-65 year olds who were economically active at the time of interview. A breakdown of the supply of individuals qualified at each level whether in, or actively seeking, work is given in column 5 of Tables 3.7 and 3.8. These data have been categorised in the same

[2] In the period January-March 2012, 425 interviews were carried out for SES2012. This represents 72% of the final Welsh sample. Around 56% of interviews for SS06 were carried in the months March-May 2006. The January-March period is used for consistency.

qualification groups as the demand data derived from the Skills Survey 2006 and the Skills and Employment Survey 2012.[3]

Tables 3.7 and 3.8 provide estimates of the numbers of jobs requiring qualifications ranging from level 4 or above to none, and these are set against the numbers of people who report holding qualifications at these levels. The results provide a balance sheet of qualifications demand and qualifications supply. On this evidence, in 2012 there were around 122,000 more people in Wales with degree-level qualifications than there were jobs requiring degrees on entry. This is up from the figure in 2006 when it was around 82,000. On the other hand, the data suggest that there continues to be many more people with qualifications of any level than there are jobs that do not require qualifications for entry in Wales. Estimates from the Skills and Employment Survey 2012 show that there are 284,000 jobs in Wales that do not require qualifications on entry. However, there are only 82,000 people who possess no qualifications to their name. Nevertheless, the qualification demand-supply discrepancy at this level has fallen from 247,000 in 2006 to 202,000.

Rather than presenting these mismatches in terms of absolute numerical estimates, another way is to examine the percentage point differences between qualification demand and qualification supply. These results are presented in Table 3.9. This shows that the level 4 and above mismatch in Wales is largely driven by the growing mismatch between graduates and graduate level jobs. At the same time, the Welsh economy has reduced its demand for unqualified labour at a much faster rate than education has been able to equip the economically active with certifiable skills. This can be seen in the declining percentage point mismatch at the 'no qualifications' level – falling from around 20 points in 2006 to around 16 in 2012 (see Table 3.9). Nevertheless, London and the South East has reduced its proportion of no-qualification jobs more quickly and by 2012, the percentage point gap was in single figures.

However, the mismatches are greater in Wales than in London and the South East at the top and bottom of the labour market. In 2012 there was a eight percentage point gap in Wales between the proportion of graduate-level jobs and the proportion of graduates in the workforce – this was up by two percentage points on the gap recorded in 2006 (see Table 3.9). The gap for London and the South East was 3.1 percentage points in 2012 and 2.4 points in 2006 (and 2.9 and 2.8 points respectively for the Rest of Britain). In other words, the graduate mismatches in the demand for, and supply of, graduate labour were higher in both 2006 and 2012 in Wales than in other parts of Britain.

In order to take the analysis further we examine whether those 'over-qualified' (that is, they have qualifications which exceed the level of qualification required for the job) are also unable to use their skills at work effectively. Rather than estimating numbers of people and jobs associated with particular qualification levels and then examining aggregate mismatches (as above), this analysis focuses on individual-level experience of over-qualification (Green and Zhu, 2010; see also UKCES, 2009: 120).

[3] Details are given in the notes to Tables 3.7 and 3.8. These supply and demand estimates do not take account of the supply of economically active people and the available jobs for people over 65 and below 20. The fact that a small proportion of people (around 6%) hold second jobs is also not taken into account.

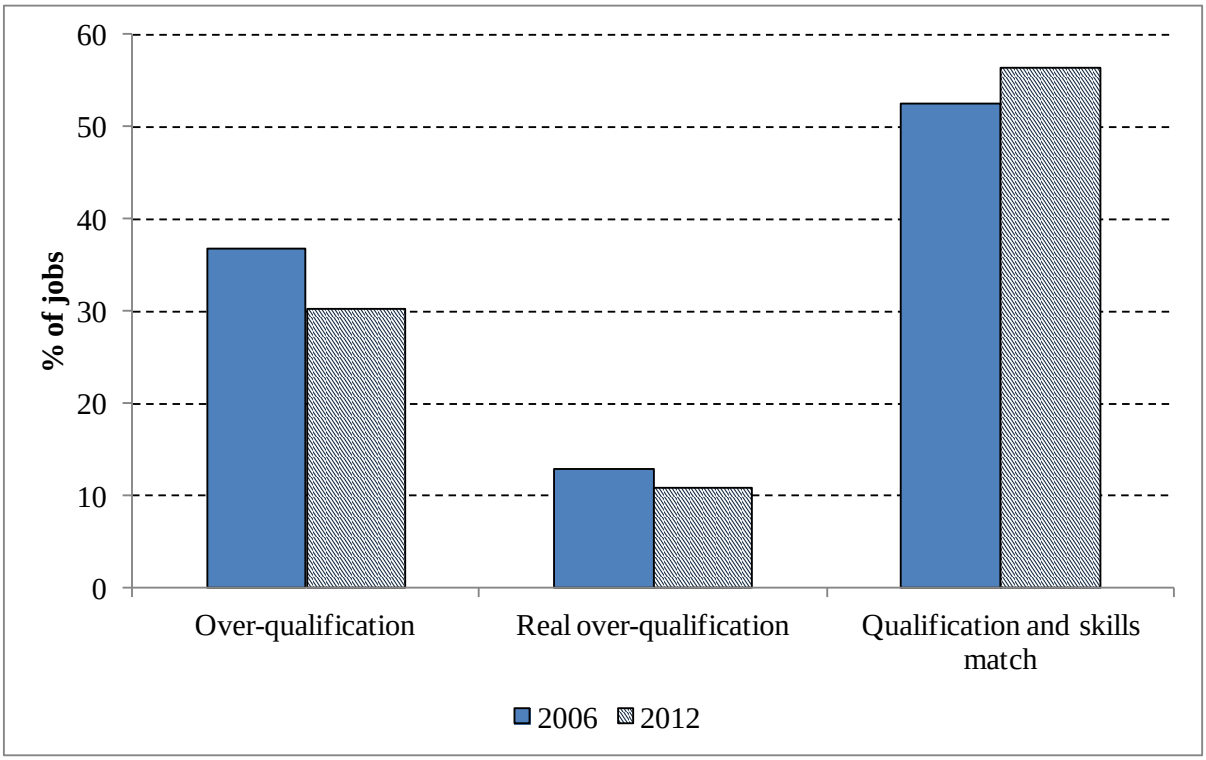
Previous research shows that qualification mismatch has increased over time in Britain. The proportion defined as over-qualified has risen from 29% in 1992 to 39% in 2006 (Felstead and Green, 2013). However, despite this rise the proportion of workers over-qualified and over-skilled has remained at around 13% (what Green and Zhu, 2010 refer to this as 'real' as opposed to 'formal over-qualification'). Instead, around two-thirds of the over-qualified reported that they were able to use their skills at work despite holding a qualification which exceeded the qualification level entry requirement (i.e. formal over-qualification). This proportion remained more or less constant over the 1992-2006 period.

The Welsh results show that over-qualification has started for fall for the first time. Between 2006 and 2012 there was a three percentage point fall in the proportion of respondents reporting that they possess qualifications in excess of those required for job entry (see Table 3.10). Furthermore, 'real' over-qualification has declined since 2006 in Wales, falling from 16% to 10% in 2012 and the under-use of skills at work has also fallen. On this evidence, then, qualification mismatches in Wales are becoming less of an issue when assessed in terms of what skills are actually utilised at work. The fall in real over-qualification, and the rise in the proportion who report that *both* their qualification level matches that required on entry and that they are able to use quite a lot or more of their skills at work suggests that once in work the skills of jobs and workers are becoming better matched. Moreover, these improvements have been greatest in Wales (note the bar chart changes in Figures 3.6, 3.7 and 3.8).

Figure 3.6:
Underutilisation of Skills at Work, Wales, 2012

Figure 3.7:
Underutilisation of Skills at Work, Rest of Britain, 2012

Figure 3.8:
Underutilisation of Skills at Work, London and the South East, 2012



Despite the earlier finding that broad skill change in Wales appears to have been neither faster nor slower than elsewhere in Britain, other data suggests there may be some cause for concern. Respondents who were in a job three, four or five years ago (whichever was applicable) were asked if there 'had been a significant *increase* between then and now, a significant *decrease* or little or no change in the level of skill you use in your job?' The results suggest a slowing down in the reported rate of skill change nationally. However, in Wales these changes have been more dramatic than elsewhere. For example, the proportion reporting little or no change in job skills rose by nine percentage points between 2006 and 2012 in Wales compared to a seven point rise in the Rest of Britain and a three point rise in London and the South East (see Table 3.11). These changes were balanced by a fall in the proportion of workers who reported that their skills had increased, with the greatest fall in Wales.

3.6 Summary of the Main Findings

These results provide a number of mixed messages. Some of the results suggest that improvements have been made to the broad skills of Welsh jobs both historically and comparatively. However, other findings are less comforting and suggest that more needs to done to raise the skills content of Welsh jobs.

- It remains a cause for concern that jobs in Wales require lower qualifications, on average, than jobs elsewhere in Britain. In 2012, a fifth (22%) of jobs in Wales did not need a qualification on entry compared to less than a sixth (15%) of jobs in London and the South East. The percentage point gap is even greater for jobs requiring graduate level and equivalent qualifications and, at this level, it has widened between 2006 and 2012.

- If anything, women in Wales are in more skilled jobs than their male counterparts. For example, two of the three summary measures of skills (training time required for jobs and qualifications required for entry) are higher for women than for men.

- Nevertheless, this picture masks marked differences in the skill content of jobs occupied by women who work part-time compared to those who work full-time. These differences are large and statistically significant across all three measures with women's part-time jobs significantly less skilled than their full-time counterparts.

- Moreover, part-timers in Wales do badly compared to their counterparts in other parts of Britain on all three broad skill measures. This suggests that low skills are more prevalent among part-time jobs in Wales than in other parts of Britain. The obvious policy implication here is that in order to upskill the Welsh economy more needs to be done to lift the skills of part-time jobs.

- Skill differences in Wales are pronounced when jobs are analysed according to whether they are in the public or private sector. For example, on average, public sector jobs require qualifications almost a full level higher than jobs in the private sector.

- In 2012 in Wales, there were around 122,000 more people with degree-level or higher qualifications than there were jobs requiring this level of qualification on entry. This is up from the figure in 2006 when it was around 89,000.

- The 2012 estimates also show that there were 284,000 jobs that did not require qualifications on entry. However, there were only 82,000 people who did not have any qualifications. Nevertheless, the qualification demand-supply discrepancy at this level has narrowed since 2006.

- Although over-qualification fell more sharply in London and South East, it also fell in Wales. However, 'real' over-qualification – that is being over-qualified and not effectively using skills at work – declined more steeply in Wales than elsewhere, falling from 16% in 2006 to 10% in 2012. On this evidence, then, qualification mismatches in Wales appear to be becoming less of an issue when assessed in terms of what skills are actually used at work.

Table 3.1:
Distribution of Broad Skills by Gender and by Full-Time/Part-Time Status, Wales, 2012

Broad skills[1]	Sample percentages/scores				
	All	Males	Females	Female full-time	Female part-time
Highest qualification required[2]					
Degrees	17.4	14.9	20.5	26.2	9.5
Professional qualifications	12.1	11.5	12.9	15.6	7.8†
Level 4 & above	29.6	26.4	33.3	41.8	17.3†
Level 3	18.0	20.9	14.6	15.2	13.5
Level 2	13.5	9.2	18.6*	18.1	19.6
Level 1	16.7	18.8	14.2	14.5	13.5
No qualifications	22.3	24.8	19.3	10.4	36.1†
Required qualification index	2.16	2.05	2.28	2.63	1.62†
Training time[3]					
> 2 years	24.3	25.7	22.7	27.2	11.7†
< 3 months	62.7	65.3	59.6	63.1	84.8†
Training index	2.79	2.74	2.84	3.34	1.93†
Learning time[4]					
> 2 years	24.3	28.9	18.9*	30.0	19.0†
< 1 month	22.9	20.6	25.6	17.9	45.4†
Learning time index	3.53	3.75	3.28*	3.64	2.59†

Notes:

* = a statistically significant difference between male and female workers ($p<0.05$).

† = a statistically significant difference between female full-time and female part-time workers ($p<0.1$).

1. The data reported here and throughout have been weighted by a factor that takes into account the slight over-representation and the under-representation of certain groups (see Tables A1.1 and A1.2). In addition, the data has been weighted to take into account the variation in the number of eligible respondents at each address visited. All calculations exclude missing values.

2. Respondents were asked: 'If they were applying today, what qualifications, if any, would someone need to get the type of job you have now?' A range of options was given. From this the highest qualification level, ranked by NVQ equivalents, was derived. The following qualification mapping was applied:
Level 4 or above = masters or PhD degree, university or CNAA degree, other professional (eg, law, medicine), teaching, nursing (eg SCM, RGN, SRN, SEN), NVQ level 4 (or SNVQ4) or HNC/HNC (or SHNC/SHNC); Degree = masters or PhD degree, university or CNAA degree; Professional qualifications =

other professional (eg, law, medicine), teaching, nursing (eg SCM, RGN, SRN, SEN), NVQ level 4 (or SNVQ4) or HNC/HNC (or SHNC/SHNC);
Level 3 = GCE 'A' level or GNVQ advanced, SCE higher or SLC/SUPE higher, certificate of 6th year studies, university certificate/diploma (not degree), SCOTVEC national certificate, SCOTBEC/SCOTBEC certificate/diploma, completion of trade apprenticeship, NVQ level 3 (or SNVQ 3) or ONC/OND (or SNC/SND);
Level 2 = GCSE A*-C or GNVQ intermediate or GCE 'O' level or CSE grade 1 or school certificate of matriculation, SCE standard (1-3)/ordinary (A-C) or SLC/SUPE lower, clerical/commercial (eg typing or bookkeeping), professional qualification without sitting exam, NVQ level 2 (or SNVQ 2);
Level 1 = GCSE D-G or CSE (other than grade 1) or GNVQ foundation, other, NVQ level 1 (or SNVQ 1);
No qualifications = none reported.
The Required Qualifications Index was calculated from the responses: none=0; level 1=1; level 2=2; level 3 =3; and level 4 or above=4.
3. Respondents were asked: 'Since completing full-time education, have you ever had, or are you currently undertaking, training for the type of work that you currently do? Respondents answering 'yes' were then asked: 'How long, in total, did (or will) that training last?' A range of options was given. The Training Time Index was calculated from the responses: none=0; less than 1 month=1; 1=3 months=2; 3-6 months=3; 6-12 months=4; 1-2 years=5; and over 2 years=6.
4. Respondents were asked: 'How long did it take for you after you first started doing this type of job to learn to do it well?' The Learning Time Index was calculated from the responses: less than 1 month=1; less than 3 months=2; 3-6 months=3; 6-12 months=4; 1-2 years=5; and over 2 years=6.

Table 3.2:
Distribution of Broad Skills by Occupation, Wales, 2012

Occupation[1]	Required qualification index	Training time index	Learning time index
Managerial and professional (SOC 1-3)	3.08	3.57	4.14
Admin, trades and services (SOC 4-7)	1.95	2.63	3.57
Operatives and other (SOC 8-9)	0.88	1.66	2.34

Note:

1. Occupations are classified by SOC2000 Major Groups and grouped as shown in table. The indices are derived as outlined in Table 3.1.

Table 3.3:
Distribution of Broad Skills by Industry, Sector and Workplace Size, Wales, 2012

	Required qualification index[1]	Training time index	Learning time index
Industry			
Production industries, divisions A-F[2]	2.17	3.07	4.08
Service industries, divisions G-O[3]	2.15	2.68	3.31
Sector[4]			
Public	2.91	3.50	3.90
Private	1.78	2.42	3.36
Workplace size			
Up to 24 workers	2.08	2.57	3.66
25 workers and over	2.22	2.88	3.45

Notes:
1. The indices are derived as outlined in Table 3.1.
2. Agriculture, Fishing, Mining, Manufacturing, Energy, Construction.
3. Wholesale & Retail, Transport & Storage, Real Estate & Business Services, Public Administration, Education, Health & Social Work, Personal Services.
4. This is defined according to the responses given. Here, non-profit organisations are included in the public sector.

Table 3.4:
Trends in Broad Skills, Wales, 2006-2012

Broad skills at work	Percentage	
	2006	2012
Degrees and above required[1]		
London & South East	26.3	35.8
Rest of Britain	17.0	22.3
Wales	13.1	17.4
No qualifications required[2]		
London & South East	22.7	14.9
Rest of Britain	30.5	25.6
Wales	31.9	22.3
'Long' prior training needed[3]		
London & South East	26.7	21.7
Rest of Britain	29.6	23.4
Wales	27.9	24.3
'Short' prior training needed[4]		
London & South East	58.1	64.8
Rest of Britain	56.5	60.4
Wales	59.0	62.7
'Long' learning time needed[5]		
London & South East	25.4	24.5
Rest of Britain	29.8	23.2
Wales	26.2	24.3
'Short' learning time needed[6]		
London & South East	17.3	24.5
Rest of Britain	19.1	22.5
Wales	18.3	22.9

Notes:
1-6, see Table 4.1.

Table 3.5:
Trends in Broad Skills Indices, Wales. Rest of Britain, and London and the South East, 2006-2012

Broad skills at work	Scores	
	2006	2012
Qualifications index[1]		
London & South East	2.32	2.66*
Rest of Britain	2.01	2.18*
Wales	1.93	2.16†
Training time index[2]		
London & South East	2.96	2.58*
Rest of Britain	3.07	2.82*
Wales	2.88	2.79
Learning time index[3]		
London & South East	3.71	3.49†
Rest of Britain	3.73	3.51*
Wales	3.70	3.53

Notes:
1, 2 and 3, see Table 3.1.
* = a statistically significant difference between 2012 and 2006 ($p<0.05$);
† = a statistically significant difference between 2012 and 2006 ($p<0.1$).

Table 3.6:
Trends in Broad Skills Indices, Wales. Rest of Britain, and London and the South East by Working Hours, 2006-2012

Broad skills at work	Full-time jobs		Part-time jobs	
	2006	2012	2006	2012
Qualifications index				
London & South East	2.45	2.76	1.86	2.38
Rest of Britain	2.13	2.31	1.58	1.79
Wales	2.08	2.34	1.37	1.49
Training time index				
London & South East	3.05	2.75	2.68	2.09
Rest of Britain	3.24	3.04	2.51	2.15
Wales	3.14	3.08	1.97	1.72
Learning time index				
London & South East	3.92	3.61	3.02	3.14
Rest of Britain	3.95	3.75	2.97	2.77
Wales	3.99	3.80	2.65	2.55

Table 3.7:
Qualifications Demand and Supply, Wales, 2006

Qualification level	Demand			Supply
	Highest qualification required[1]			Highest qualification held[2]
	Number of jobs (%)			Number of people (%)
	Jobs	Vacancies	Total demand	
(1)	(2)	(3)	(4)	(5)
Level 4 or above	308,101	6,229	314,829	371,042
	(-25.3)	(-25.3)	(-25.3)	(-28.9)
Degree	159,530	3,484	163,014	245,221
	(-13.1)	(-13.1)	(-13.1)	(-19.1)
Professional qualifications	149,788	3,271	153,059	125,821
	(-12.3)	(-12.3)	(-12.3)	(-9.9)
Level 3	196,064	4,282	200,346	315,835
	(-16.1)	(-16.1)	(-16.1)	(-24.5
Level 2	199,717	4,363	204,079	300,429
	(-16.4)	(-16.4)	(-16.4)	(-23.4)
Level 1	124,214	2,713	126,927	146,362
	(-10.2)	(-10.2)	(-10.2)	(-11.4)
No qualifications	388,475	8,484	396,958	150,214
	(-31.9)	(-31.9)	(-31.9)	(-11.7)
Column totals	1,217,789	26,595	1,244,384	1,283,883

Notes:

1. Using the Quarterly Labour Force Survey for the second quarter of 2006, an estimate was derived of the total number of individuals aged 20-65 years old who were in paid work in Wales. This figure was then multiplied by the percentage of respondents to the 2006 Skills Survey who reported that access to their jobs required qualifications at one of the levels shown in column 1. Column 2, then, comprises estimates of the number of jobs in Britain that demand qualifications at various levels in the NVQ hierarchy. The analysis here is restricted to an individuals' main job; secondary jobs are not included. In addition, vacancies

represent the number of posts for which employers are seeking recruits, hence column 3. These need to be added to the demand column of jobs filled (Machin, 2003; Williams, 2004). These data are taken from the Vacancy Survey for the months January-March 2006 (ONS, 2012, Table VACS01). To give a Welsh estimate we divide this by the proportion of UK jobs held in Wales (4.5% of jobs). These are apportioned again according to the qualifications required by those in work. These proportions are multiplied to produce estimates of vacancies in the labour market at each qualification level. Column 4 combines the jobs and vacancies columns to produce an estimate of total qualification demand at each level in the hierarchy.

2. Using the Quarterly Labour Force Survey for the second quarter of 2006, an estimate was also made of the total number of individuals who possess qualifications at each of these levels. To capture the complete supply of individuals available for work, we selected not only those in paid work – employees and the self-employed – but also those recorded as ILO unemployed (using the INECAC05 derived variable). For comparability with evidence from the 2006 Skills Survey, we restrict the analysis to those aged 20-65 years old living in Wales. The figures in column 5, then, provide estimates of the numbers of individuals qualified to particular levels in the NVQ hierarchy. The QLFS proportions are multiplied by the total number of individuals available for work. To maximise comparability with the 2006 Skills Survey qualifications mapping protocols, the highest qualification variable, HIQUAL5, was categorised as follows:

- Level 4 or above = higher degree, NVQ level 5, first/foundation degree, other degree, NVQ level 4, diploma in higher education, HNC/HND, BTEC higher etc, teaching – further education, teaching – secondary, teaching – primary, teaching – foundation stage, teaching – level not stated, nursing etc, RSA higher diploma, other higher education below degree level;
- Degree = higher degree, first/foundation degree, other degree;
- Professional qualifications = NVQ level 5, NVQ level 4, diploma in higher education, HNC/HND, BTEC higher etc, teaching – further education, teaching – secondary, teaching – primary, teaching – foundation stage, teaching – level not stated, nursing etc, RSA higher diploma, other higher education below degree level;
- Level 3 = A level or equivalent, RSA advanced diploma, OND/ONC, BTEC/SCOTVEC national, City and Guilds advanced craft/part1, Scottish 6th year certificate (CSYS), SCE higher or equivalent, access qualifications, AS level or equivalent, trade apprenticeship;
- Level 2 = NVQ level 2 or equivalent, intermediate Welsh baccalaureate, GNVQ intermediate, RSA diploma, City and Guilds craft/part 2, BTEC/SCOTVEC first or general diploma, O level, GCSE grade A-C or equivalent;
- Level 1 = NVQ level 1 or equivalent, GNVQ/GSVQ foundation level, CSE below grade 1, GCSE below grade C, BTEC/SCOTVEC first or general certificate, SCOTVEC modules, RSA other, City and Guilds other, YT/YTP certificate, key skills qualification, basic skills qualification, entry level qualification, other qualifications;
- No qualifications = none reported.

On occasion, rounding errors mean that some columns totals may not add up precisely.

Table 3.8:
Qualifications Demand and Supply, Wales, 2012

Qualification level	Demand			Supply
	Highest qualification required[1]			Highest qualification held[2]
	Number of jobs (%)			Number of people (%)
	Jobs	Vacancies	Total demand	
(1)	(2)	(3)	(4)	(5)
Level 4 or above	369,062	6,229	375,290	477,958
	(-29.5)	(-29.5)	(-29.5)	(-35.4)
Degree	217,684	3,674	221,358	342,941
	(-17.4)	(-17.4)	(-17.4)	(-25.4)
Professional qualifications	151,378	2,555	153,933	133,666
	(-12.1)	(-12.1)	(-12.1)	(-9.9)
Level 3	225,190	3,801	228,991	336,191
	(-18.0)	(-18.0)	(-18.0)	(-24.9)
Level 2	168,893	2,850	171,743	329,440
	(-13.5)	(-13.5)	(-13.5)	(-24.4)
Level 1	208,927	3,526	212,453	124,215
	(-16.7)	(-16.7)	(-16.7)	(-9.2)
No qualifications	278,986	4,708	283,694	82,360
	(-22.3)	(-22.3)	(-22.3)	(-6.1)
Column totals	1,251,057	21,114	1,272,171	1,350,163

Notes:

1. The same principles used in Table 3.7 are applied here. However, some of the specifics differ. The Quarterly Labour Force Survey for the second quarter of 2012 was used in order to provide a like with like comparison to data presented in Table 3.7. As in Table 3.7, the vacancy data are taken from the Vacancy Survey, but in this case for the months January-March 2012 (ONS, 2012, Table VACS01). To give a Welsh estimate we divide this by the proportion of UK jobs held in Wales (4.6% of jobs).

2. To estimate the supply of qualifications, the data was restricted to those in work (using INECAC05). Individuals with particular qualifications were placed into five levels using the highest qualification derived variable HIQUAL11. This is an expanded list of qualifications which runs to 80 options (up from 49 in 2006). To maximise comparability with the 2012 Skills and Employment Survey qualifications mapping protocols, the highest qualification variable, HIQUAL11, was categorised as follows:

- Level 4 or above = Higher degree; NVQ level 5; Level 8 Certificate; Level 7 Diploma; Level 8 Award; First degree/foundation degree; Other degree; NVQ level 4; Level 6 Diploma; Level 6 Certificate; Diploma in higher education; Level 5 Diploma; Level 5 Certificate; HNC/HND/BTEC higher etc; Teaching – further education; Teaching – secondary education; Teaching – primary education; Teaching – foundation stage; Teaching – level not stated; Nursing etc; RSA higher diploma; Other higher education below degree; Level 4 Diploma; Level 4 Certificate; Level 5 Award; Level 4 Award;
- Degree = Higher degree; First degree/foundation degree; Other degree;
- Professional qualifications = NVQ level 5; Level 8 Certificate; Level 7 Diploma; Level 8 Award; NVQ level 4; Level 6 Diploma; Level 6 Certificate; Diploma in higher education; Level 5 Diploma; Level 5 Certificate; HNC/HND/BTEC higher etc; Teaching – further education; Teaching – secondary education; Teaching – primary education; Teaching – foundation stage; Teaching – level not stated; Nursing etc; RSA higher diploma; Other higher education below degree; Level 4 Diploma; Level 4 Certificate; Level 5 Award; Level 4 Award;
- Level 3 = NVQ level 3; Advanced/Progression (14-19) Diploma; Level 3 Diploma; Advanced Welsh Baccalaureate; International Baccalaureate; GNVQ/GSVQ advanced A-level or equivalent; RSA advanced diploma; OND/ONC/BTEC/SCOTVEC National etc; City & Guilds Advanced Craft/Part 1; Scottish 6 year certificate/CSYS SCE higher or equivalent; Access qualifications; AS-level or equivalent; Trade apprenticeship; Level 3 Certificate; Level 3 Award;
- Level 2 = NVQ level 2 or equivalent; GNVQ/GSVQ intermediate; RSA diploma; City & Guilds Craft/Part 2; BTEC/SCOTVEC First or General diploma; Higher (14-19) Diploma; Level 2 Diploma; Level 2 Certificate O-level, GCSE grade A*-C or equivalent; Level 2 Award;
- Level 1 = NVQ level 1 or equivalent; GNVQ/GSVQ foundation level; Foundation (14-19) Diploma; Level 1 Diploma; CSE below grade 1, GCSE below grade C; BTEC/SCOTVEC First or General certificate; SCOTVEC modules; RSA other; City & Guilds foundation/Part 1; Level 1 Certificate; YT/YTP certificate; Key skills qualification; Basic skills qualification; Entry level qualification; Entry level Certificate; Level 1 Award; Entry level Award; Other qualification;
- No qualifications = none reported.

On occasion, rounding errors mean that some columns totals may not add up precisely.

Table 3.9:
Patterns of Qualification Mismatch, Wales, Rest of Britain and London and the South East, 2006-2012

	Qualification mismatch (% of jobs requiring qualifications at each level minus % of the workforce qualified at each level)					
	London & South East		**Rest of Britain**		**Wales**	
	2006	**2012**	**2006**	**2012**	**2006**	**2012**
Level 4 and above	-0.1	-1.5	-2.5	-3.3	-3.6	-5.9
Degree and above	-2.4	-3.1	-2.8	-2.9	-6.0	-8.0
Professional qualification	2.3	1.7	0.3	-0.3	2.5	2.2
Level 3	-6.4	-5.8	-8.6	-9.8	-8.5	-6.9
Level 2	-5.0	-5.1	-9.2	-8.4	-7.0	-10.9
Level 1	-3.0	2.3	0.8	2.5	-1.2	7.5
No qualifications	14.5	9.9	21.0	19.0	20.2	16.2

Note:
London and the South East in the Quarterly Labour Force Survey is taken from data gathered on respondents' usual place of residence and is defined here as including 'inner London', 'outer London' and the 'rest of the South East'. The Rest of Britain is defined as areas beyond London and the South East so defined and Wales. A positive figure indicates excess demand, while a negative figure indicates over-supply.

Table 3.10:
Underutilisation of Skills at Work, Wales, 2006-2012

Underutilisation of skills at work	Percentage	
	2006	2012
Extent to which use can be made of past experience, skill and abilities in current job[1]		
Very little	15.6	9.7
A little	15.4	10.2
Quite a lot	33.4	37.4
Almost all	35.6	42.8
Over-qualification and over-skilling[2]		
Over-qualified	39.5	37.5
of which:		
over-qualified & over-skilled ('real' over-qualification)	15.5	9.5
over-qualified but skill matched ('formal' over-qualification)	24.0	28.0
Qualification matched but skills under-used	16.3	9.7
Qualification and skills matched	43.2	52.8

Notes:

1. Responses taken from the question: 'How much of your past experience, skill and abilities can you make use of in your present job?

2. The 'over-qualified' are defined as those workers who have qualifications which exceed the level of qualification required for the job. This group is then sub-divided according to the response given to the question: 'How much of your past experience, skill and abilities can you make use of in your present job?' Those answering 'very little' or 'a little' (and reporting over-qualification) are classified as experiencing 'real' over-qualification. The remainder; that is, those responding 'quite a lot' or 'almost all' are classified as experiencing 'formal' over-qualification (cf. Green and Zhu, 2010: 750-752). Those whose qualifications do not exceed those required are similarly split into those under-using their skills at work ('very little' or 'a little' use of skills at work) and those whose skills are used at work (i.e. they report using 'quite a lot' or 'almost all' of their skills at work).

Table 3.11:
Self-reported Skill Change, Wales, Rest of Britain and London and the South East, 2006-2012

	Self-reported skill change					
	London & South East		Rest of Britain		Wales	
	2006	2012	2006	2012	2006	2012
Increase	56.0	54.2	56.1	50.5	53.6	46.2
Decrease	9.8	8.5	8.8	7.5	10.1	8.6
Little or no change	34.3	37.3	35.1	42.0	36.3	45.2

CHAPTER FOUR:
GENERIC SKILLS

4.1 Introduction

Previous surveys in the Skills Survey series have pioneered the development of measures of the use of 'generic skills' in workplaces. The idea of a generic skill refers to a skill which is used across a wide range of occupations and industrial situations, in contrast to occupation-specific or firm-specific skills that are needed in particular jobs. A widely-cited example is the skill of communication, which is needed in many jobs, but to differing degrees and at varying levels. There is nothing new in this: communication has been necessary in many jobs since the dawn of cooperative working. Computing skills, on the other hand, are newer. These skills are now generic in that they are used widely in many businesses and sectors, they are becoming an essential skill in modern life in and outside of work, and there is robust evidence that their use at work increases pay (Green *et al*., 2007). Correspondingly, computing skills are considered to be the most far-reaching 'generic skill'; that is, a skill that is used in various ways and at various levels in many different occupations. In what follows we pay particular attention to their development and as such the Report often refers to 'computing skills' separately, although they are the most generic of all in the modern era.

The desire to measure generic skills arose in the 1990s owing to the suspicion that there were certain identifiable skills that were growing in importance in modern workplaces, and for which workers were not always being well-prepared either at school or through training. A policy focus on 'key skills' emerged, and these became part of the school and university curricula as well as part of the qualification framework. Policy interest has continued to focus on these type of skills, although the nomenclature used has changed. For example, in Wales in September 2010 what were previously referred to as Key Skills qualifications were renamed Essential Skills Wales. Whatever they are called, they continue to be the focus of policy initiatives as exemplified in the recently announced National Literacy Programme for Wales. As part of this programme, key skills will be embedded in all school subjects across the curriculum – not just confined to English, Welsh and maths – as from September 2013 (Wales Online, 17 May 2012).

The aim in this chapter is to describe how measures of generic skills used at work are obtained from the survey responses. These operational procedures are described in Section 4.2 which follows. Section 4.3 then goes onto examine how generic skills are distributed across jobs held in Wales in order to highlight the relative generic skill position of groups of workers, occupations and industries. The third and final substantive section of the chapter (Section 4.4) extends the analysis by comparing the distribution of generic skills in Wales in 2012 with the pattern for 2006 and the pattern found elsewhere in Britain. The chapter ends with a short summary of the main findings.

4.2 Measuring Generic Skills

The overall approach taken to devising measures of generic skills from the Skills and Employment Survey 2012 responses follows identical principles to those adopted in the Skills Survey 2006 (and, for that matter, its predecessors in 1997 and 2001). Respondents were asked a series of questions about particular activities their job might involve. This section of the questionnaire (see Annex 1) was prefaced by the following:

'You will be asked about different activities which may or may not be part of your job. At this stage we are only interested in finding out what types of activities your job involves and how important these are'. Respondents were then asked: 'in your job, how important is [a particular job activity]'. Examples of the activities included 'caring for others', 'dealing with people', 'using a computer', 'analysing complex problems' and 'planning the activities of others'. The questionnaire covered over 40 activities designed to span the tasks carried out in a wide range of jobs. The response scale ranged from 'essential' to 'not at all important', with 'very important', 'fairly important' and 'not very important' in between.

Additional skills areas were added to the Skills Survey 2006 and these were retained in 2012 questionnaire. Five additional items were added in total. Two of these focused the importance of managing one's own feelings and the feelings of others while doing the job, so called 'emotional skills'. There were also two questions on 'aesthetic skills', which focused on the importance of 'looking the part' and 'sounding right' as part of the job. These items were introduced into the survey because it has been argued that there are a number of jobs, particularly in the service sector where it is common to interact with the public or with colleagues, where such skills are becoming especially important (Nickson *et al*., 2003; Korczynski, 2005; Payne, 2006). Finally, the fifth newly introduced question in 2006 concerned the use of foreign language skills in addition to English or Welsh. This was also retained in the 2012 survey.

The Report presents the results for Wales for each of these questions. However, in order to examine distributional patterns (within Wales and between different parts of Britain) and the change in patterns between 2006 and 2012, we report the proportion of respondents who said that these skills were 'essential' to their jobs. Labels are applied to the ten generic skills and have been chosen to be indicative of the survey questions they represent (see Table 4.1 for a list). The derivation of these ten generic skills is supported by factor analysis and is an approach adopted in analysis of previous surveys in the series (see Felstead *et al*., 2007: 27-29).

Some of the labels we use are more obvious than others. 'Literacy', for example, covers reading and writing activities and 'numeracy' covers a range of mathematical calculations that need to be completed in the job. Other generic skills are less immediately obvious, but hopefully the labels used are indicative of the type of activities covered. 'Professional communication' skills, for instance, capture elements of the job such as instructing others, making speeches and persuading others. It should also be pointed out that some questions were not asked of all sample respondents. Only those with managerial or supervisory responsibilities, for example, were asked about what management skills their jobs required them to exercise.

Other questions were filtered by earlier responses given. As an example, only those using computers at work were asked whether they drew on either 'complex' or 'advanced' skills to do so. They were given anchored illustrations of how to interpret such terms. They were told that advanced computing skills involved 'using computer syntax and/or formulae for programming', whereas complex skills involved 'using a computer for analysing information or design, including use of computer aided design or statistical analysis packages'. In this Report, we present data on the proportions in the whole sample who said that their jobs required them to use advanced or complex computing skills. The surveys reported here also asked respondents about the prevalence

of computing in the workplace and whether or not they used computers or other automated equipment. We present these data for completeness and as a further confirmation of our other results. The 2006 and 2012 surveys contain four measures of computing skills: the use of computerised equipment; the prevalence of computers in the workplace; the importance of computers to the job; and the sophistication of computer use.

4.3 Distribution of Generic Skills in Wales, 2012

The responses given to the generic skills questions suggest that job skills vary widely as measured by the importance rating given to different work activities. For example, 70% of respondents in Wales in 2012 reported that dealing with people was an essential part of their job. However, only 12% said that making speeches was essential and fewer still (5%) reported that the ability to speak another language (other than English or Welsh) was an essential part of the job (see Table 4.2).

The importance of computing also varies. While seven out of ten (71%) respondents in Wales said that they used computerised or automated equipment, only half (47%) said that such equipment was prevalent where they worked (i.e. over three-quarters of the workforce was using computerised or automated equipment). Similarly, while two-fifths (44%) of workers in Wales in 2012 said that computer use was essential to their jobs, only a fraction said that they computer use was advanced (9%). Furthermore, when questioned about their computer use at work along with a follow-up on its sophistication, over a fifth (22%) said that they did not use a computer or other type of computerised equipment (see Table 4.3).

To make meaningful contrasts within Wales, we restrict the remaining analysis to an examination of the ten generic skill indicators and four measures of computing skill use. By these means we can plot the distribution of skills by gender, working time, occupation, industrial group, sector and workplace size.

On some measures men outperform women, but on many more the reverse is the case. Women say their jobs place more emphasis on aesthetic and emotional skills such as sounding the part and managing the emotions of others. These skills are essential for 43% and 32% of jobs held by women in Wales in 2012 compared to 27% and 20% of jobs held by men. However, physical skills remain essential for almost a quarter (24%) of jobs held by men compared to around a tenth (10%) of jobs held by women. Nevertheless, the most striking contrast is between women working full-time and those working part-time. On every indicator – except physical skills – higher proportions of women working full-time work report that generic skills are essential to task completion compared to their part-time counterparts (see Table 4.4).

The same pattern is found in terms of computing skills. On average, women do not appear to be disadvantaged, if anything, the reverse, with women more likely be in jobs that involve the use of computers or other computerised equipment, in workplaces with a greater prevalence of computer use and in jobs where computer use is essential. However, women are less likely to be in jobs where advanced or complex computerised skills are required (see Table 4.5).

The use of generic skills by broad occupational group varies as per expectations. Those categorised as 'Managers, Professionals and Associate Professionals' – the top three SOC groups – are more likely than other groups to report that literacy, numeracy, professional communication, planning, client communication, problem-solving, emotional, aesthetic and management skills are 'essential' to their jobs. They only fail to top the list for physical skills. In this case, it is those in the lower ranking jobs which exercise the highest levels of skill. Bottom of the list across almost all generic skill domains come 'Plant & Machine Operatives and Elementary Occupations' which make up the bottom two SOC groups (see Table 4.6). A similar, if not more pronounced, pattern is evident for computing skills. Around two-fifths (39%) of 'Managers, Professionals and Associate Professionals' say that they use advanced or complex computing skills compared to one in twelve (8%) respondents in the bottom two SOC categories. Similarly, 71% of 'Managers' report that computer use is an essential part of their jobs compared to 11% of 'Plant & Machine Operatives and Elementary Occupations' (see Table 4.7).

Generic skill variation is less pronounced by industrial group with no overall pattern (see Table 4.6). However, computing skills vary markedly. Compared to 'Production Industries' computers in the 'Service Industries' are more widely used by individuals and they are more prevalent where individuals work. Furthermore, workers in the 'Service Industries' are more likely to report that computing skills are essential to task completion and use skills at a higher level than their counterparts in 'Production Industries' (see Table 4.7).

It has recently been suggested that those working in the public sector are 'more than 40% better off' than private sector workers (Holmes and Oakley, 2011). Some of this difference has been accounted the higher qualification levels of those working in the public sector (e.g., Income Data Services, 2011; Damant and Jenkins, 2011). The data presented here suggests that some generic skills used in the public sector are higher than in the private sector and vice versa (see Table 4.8). However, the computing skills data is clear-cut. Like the broad skills data presented in Chapter 3, public sector jobs as measured by their computing skills requirements are more skilled than jobs in the private sector. The use of computerised equipment, the prevalence of computers in the workplace, the importance of computers to the job and the sophistication of computer use are all higher in the public sector than the private sector in Wales in 2012 (see Table 4.9).

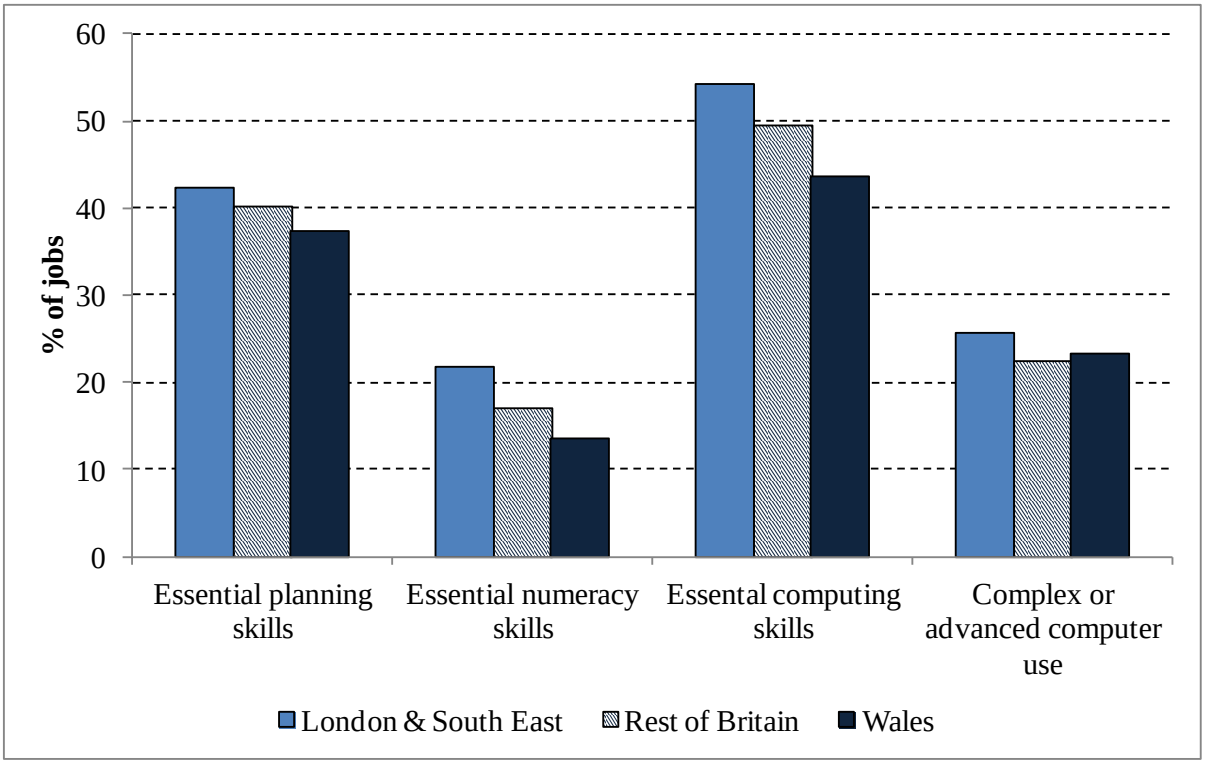
4.4 Trends in Generic Skills in Wales and Other Parts of Britain, 2006-2012

Earlier results presented in this Report (Chapter 3) as well as other published research (e.g., Felstead, 2009) has suggested that jobs in Wales are of a lower skills quality than jobs elsewhere in Britain and that this may account for the relatively poor rates of pay in Wales. Measuring the skills content of jobs according to the importance of activities for effective work performance provides further confirmation for this finding.

This is illustrated by Figure 4.1 which takes two of the ten generic skills along with two of the four computing skills measures and plots the results for Wales, the Rest of Britain, and London and the South East. This shows the skills content of jobs in Wales in 2012 was below that of the other parts of Britain on three out of four measures. The same applies to the complete suite of the skills considered here. According to five out of

the ten generic skill measures and three out of the four computing skill measures, jobs in Wales in 2012 comprised a lower skills content than jobs in either the Rest of Britain or London and the South East. To make matters worse, between 2006 and 2012 11 out of these 14 generic skills indicators moved downwards in Wales, while there was little movement across Britain as a whole (Felstead *et al*., 2013b). Other parts of Britain have, however, seen falls in some of these indicators, but the falls in Wales have been larger and more numerous (see Tables 4.10, 4.11 and 4.12).

Figure 4.1:
Selected Generic and Computing Skills Across Britain, 2012



One factor which may lie behind this comparative performance is the plight of part-timers in Wales. Compared to other parts of the country, part-time work in Wales involves much lower skilled work as measured by many of the ten generic skill indicators (see Figure 4.2). The differences are even more pronounced when computing skills are considered (see Figure 4.3). On this basis, part-time jobs in Wales are especially low skilled. The same message emerged from the previous chapter in this Report which was based on measuring the skills needed for jobs before entry, on entry and shortly after entry. Taken together these results provide strong evidence that low skills are more concentrated among part-timers in Wales than in other parts of Britain. Policy attention should therefore be directed towards improving the skill content of part-time jobs.

Figure 4.2:
Generic Skills Across Britain, Part-time Work, 2012

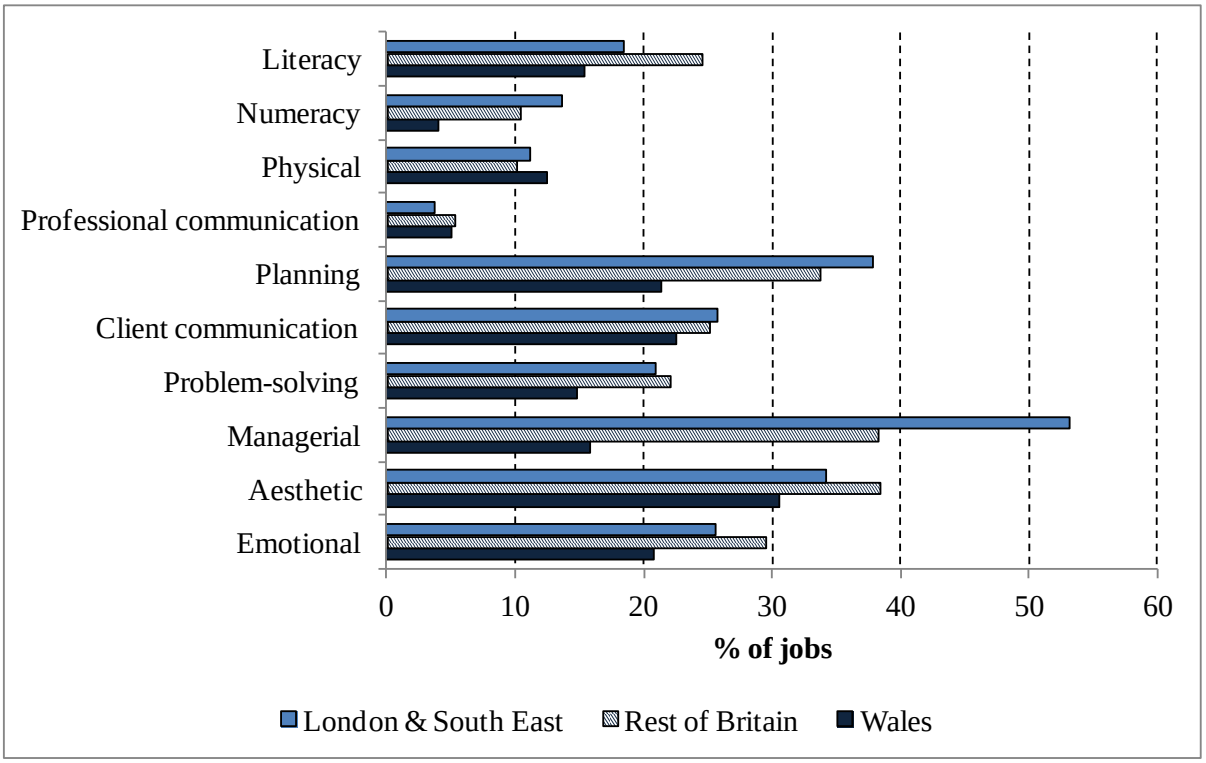
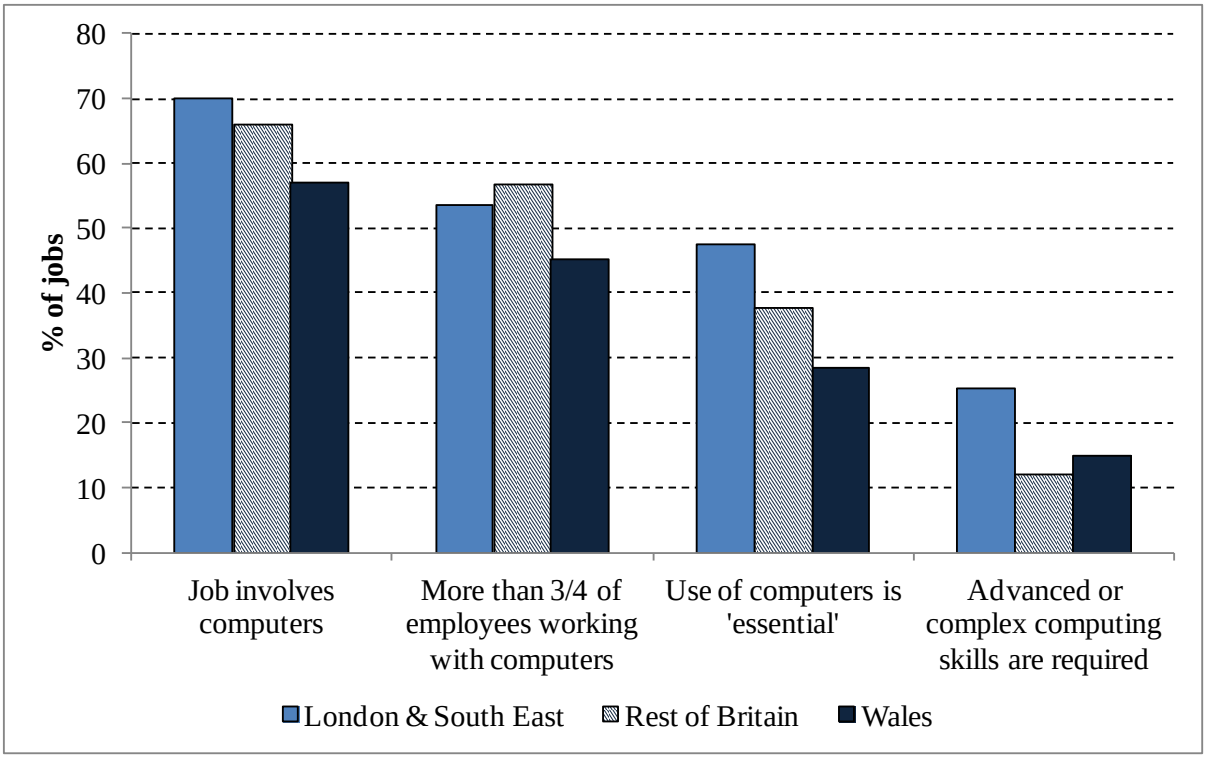


Figure 4.3:
Computing Skills Across Britain, Part-time Work, 2012



4.5 Summary of the Main Findings

These results confirm some of the findings of the previous chapter by providing detail on the skills content of jobs – as measured by the activities workers report doing on a daily basis. The findings also identify the type of work and the type of skills where more needs to be done in order for jobs in Wales to be upskilled.

- The results on generic skills confirm that jobs in Wales are of a lower skills quality than jobs elsewhere in Britain. On five out of the ten generic skill measures and on three out of the four computing skill measures, jobs in Wales comprised a lower skills content than jobs in either the Rest of Britain or London and the South East.

- To make matters worse, 11 out of these 14 generic skills indicators moved downwards in Wales between 2006 and 2012. Other parts of Britain also saw falls in some of these indicators, but the falls in Wales have been larger and more numerous.

- On average, women in Wales are more likely be in jobs that involve the use of computers or other computerised equipment, in workplaces with a greater prevalence of computer use and in jobs where computer use is essential. However, women are less likely to be in jobs were advanced or complex computerised skills are required.

- The computing skills requirements of jobs in the public sector are higher than those in the private sector. The use of computerised equipment, the prevalence of computers in the workplace, the importance of computers to the job and the sophistication of computer use are all higher in the public sector than the private sector in Wales in 2012.

- Compared to other parts of the country, part-time work in Wales is lower skilled. On almost every indicator, lower proportions of women in part-time work report that generic skills are essential to task completion compared to their full-time counterparts. This applies in other parts of Britain, but is most pronounced in Wales where part-time jobs are especially lowly skilled.

Table 4.1:
Survey Question Origins of the Ten Generic Skills

Ten Generic Skills	Activity
Literacy	Reading written information such as forms, notices or signs Reading short documents such as short reports, manuals, articles or books Reading long documents such as long reports, manuals, articles or books Writing material such as forms, notices or signs Writing short documents (for example, short reports, manuals, articles or books Writing long documents with correct grammar spelling and grammar (for example, long reports, manuals, articles or books
Numeracy	Adding, subtracting, multiplying or dividing numbers (note: using a calculator or computer, if necessary) Calculations using decimals, percentages or fractions (note: using a calculator or computer, if necessary) Using more advanced mathematical or statistical procedures (note: using a calculator or computer, if necessary)
Physical	Physical strength (for example, to carry, push or pull heaving objects) Physical stamina (to work for long periods in physical activities) Skill or accuracy in using your hands or fingers (for example, to mend, repair, assemble, construct, or adjust things) Knowledge of how to use or operate tools, equipment or machinery
Professional communication	Instructing, training or teaching people, individually or in groups Making speeches or presentations Persuading or influencing others Planning the activities of others Listening carefully to colleagues
Planning	Planning your own activities Organising your own time Thinking ahead
Client communication	Dealing with people Selling a product or service Counseling, advising or caring for customers or clients Knowledge of particular products or services
Problem-solving	Spotting problems or faults (the problems or faults could be with your own work, someone else's work or equipment) Working out the cause of problems or faults (the problems could be with your own work, someone else's work or equipment) Thinking of solutions to problems (the problems or faults could be with your own work, someone else's work or equipment) Analyse complex problems in depth
Management (where applicable)	Motivating the staff whom you manage or supervise Keeping a close control over resources Coaching the staff whom you manage Developing the careers of the staff whom you manage

Ten Generic Skills	Activity
Management (where applicable) (cont.)	Making strategic decisions about the future of your organisation
Emotional	Managing your own feelings Handling the feelings of others
Aesthetic	Looking the part Sounding the part

Table 4.2:
Importance of Particular Skills in Jobs, Wales, 2012

Particular skills[1]	Percentage				
	Essential	Very important	Fairly important	Not very important	Not at all important/Does not apply
Dealing with people	70.4	18.7	7.0	2.6	1.4
Instructing, training or teaching people, individually or in groups	33.2	25.7	18.6	12.3	10.2
Making speeches or presentations	12.0	12.5	18.8	24.8	31.8
Persuading or influencing others	21.2	26.0	27.2	14.5	11.0
Selling a product or service	23.6	16.1	13.5	13.3	33.6
Counseling, advising or caring for customers or clients	37.6	23.3	14.6	7.9	16.6
Working with a team of people	49.7	28.1	11.9	5.5	4.9
Listening carefully to colleagues	43.4	36.3	12.7	3.3	4.3
Physical strength (for example, to carry, push or pull heavy objects)	15.7	15.4	19.2	22.1	27.6
Physical stamina (to work for long periods on physical activities)	17.4	18.7	22.2	19.0	22.6
Skill or accuracy in using your hands or fingers (for example, to mend, repair, assemble, construct or adjust things)	23.9	14.9	15.3	19.8	26.1
Knowledge of how to use or operate tools, equipment or machinery	32.2	16.4	13.2	15.5	22.8
Knowledge of particular products or services	41.1	27.6	17.4	7.0	7.0
Specialist knowledge or understanding	49.4	28.3	13.6	4.7	4.0
Knowledge of how your organisation works	36.0	33.7	19.7	6.2	4.4
Spotting problems or faults. (The problems or faults could be with your own work, someone else's work or equipment)	42.3	33.9	14.2	5.5	4.2
Working out the cause of problems or faults. (The problems or faults could be with your own work, someone else's work or equipment).	34.1	32.4	18.3	9.4	5.8

Particular skills[1]	Percentage				
	Essential	Very important	Fairly important	Not very important	Not at all important/Does not apply
Thinking of solutions to problems? (The problems could be with your own work, someone else's work or equipment)	37.5	33.9	17.8	6.1	4.8
Analysing complex problems in depth	25.7	26.2	21.6	13.6	12.9
Planning your own activities	38.4	31.9	16.9	7.5	5.3
Planning the activities of others	15.3	20.3	21.6	21.8	21.0
Organising your own time	45.6	29.9	14.5	5.7	4.4
Thinking ahead	45.3	35.1	14.1	3.8	1.7
Reading written information such as forms, notices or signs	43.2	28.8	16.2	7.7	4.1
Reading short documents such as short reports, letters or memos	40.0	26.7	17.1	8.5	7.7
Reading long documents such as long reports, manuals, articles or books.†	27.3	21.9	21.3	18.0	11.5
Writing material such as forms, notices or signs	27.9	22.5	20.5	17.2	11.9
Writing short documents (for example, short reports, letters or memos)	30.4	22.9	18.8	14.3	13.6
Writing long documents with correct spelling and grammar (for example, long reports, manuals, articles or books)†	21.9	16.8	17.3	25.9	18.2
Adding, subtracting, multiplying or dividing numbers? (using a calculator or computer if necessary)	33.0	18.4	19.1	16.4	13.2
Calculations using decimals, percentages or fractions?' (using a calculator or computer if necessary)	25.0	14.9	16.2	21.4	22.5
Calculations using more advanced mathematical or statistical procedures?' (Using a calculator or computer if necessary)†	15.1	12.2	15.2	28.8	28.6
Cooperating with colleagues	56.4	28.0	9.5	2.1	4.2

Particular skills[1]	Percentage				
	Essential	**Very important**	**Fairly important**	**Not very important**	**Not at all important/Does not apply**
*Motivating the staff whom you manage or supervise	51.2	34.5	10.4	2.6	1.3
*Keeping a close control over resources	35.8	37.6	19.1	5.0	2.5
*Coaching the staff whom you manage	34.8	37.9	18.6	5.5	3.2
*Developing the careers of the staff whom you manage	18.5	38.4	19.0	14.8	9.3
*Making strategic decisions about the future of your organisation	17.8	25.0	22.0	16.1	19.1
Managing your own feelings	31.7	37.1	21.0	7.0	3.3
Handling the feelings of other people	30.9	36.0	21.4	7.2	4.5
Looking the part	22.5	30.9	25.5	15.3	5.8
Sounding the part	29.9	37.7	18.1	8.7	5.6
Being able to speak fluently a language other than English or Welsh	5.4	3.8	6.1	23.3	61.4

Notes:

1. Respondents were asked: 'We are interested in finding out what activities your job involves and how important these are … in your job, how important is [a series of statements which appear in the left hand column of this table]'? Respondents could choose from the options listed in the table.

* Managers and supervisors only.

† Excludes those answering Not at all important/Does not apply to previous two questions.

Table 4.3:
Importance of Computer Usage, Wales, 2012

	Percentage
Use of computers at work	
Job involves 'use of computerised or automated equipment'[1]	71.2
Proportion of employees working with computerised or automated equipment[2]	
More than three-quarters	47.4
Half to three-quarters	10.5
About half	9.1
A quarter to half	7.0
Less than a quarter	16.6
None	9.4
Importance of using a computer, 'PC', or other types of computerised equipment[3]	
Essential	43.6
Very important	15.6
Fairly important	11.3
Not very important	14.8
Not at all important/Does not apply	14.8
Sophistication of computer use[4]	
Advanced	7.7
Complex	15.6
Moderate	34.4
Straightforward	20.2
Computers not used	22.2

Notes:

1. Affirmatives taken from the question: 'Does your own job involve use of computerised or automated equipment?'
2. Responses taken from the question: 'In your workplace, what proportion of employees work with computerised or automated equipment?'
3. Respondents were asked: 'In your job, how important is 'using a computer, 'PC', or other types of computerised equipment?' The response scale is as shown in this table.
4. Responses taken from the question: 'Which of the words in CAPITALS best describes your use of computers or computerised equipment in your job?'

i) ...STRAIGHTFORWARD (for example, using a computer for straightforward routine procedures such as printing out an invoice in a shop);
ii) ...MODERATE (for example, using a computer for word-processing and/or spreadsheets or communicating with others by 'e-mail');
iii) ...COMPLEX (for example, using a computer for analysing information or design, including use of computer aided design or statistical analysis packages);
iv) ...or ADVANCED (for example, using computer syntax and/or formulae for programming).
The proportion recorded as not using computers comprises all those answering 'not at all important/does not apply' according to the computing importance question, supplemented by others who said that they did not use computers in response to the above computer sophistication question (most of whom had answered that computers were "not very important" to the importance of computers question)'.

Table 4.4:
Distribution of Generic Skills by Gender and by Full-Time/Part-Time Status, Wales, 2012

Generic skills[1]	Percentages rating activities as 'essential'				
	All	Males	Females	Female full-time	Female part-time
Literacy	27.6	21.1	35.4	45.3	16.5
Numeracy	13.5	15.0	11.7	15.7	4.1
Physical	17.5	23.9	9.8	9.6	10.2
Professional communication	9.6	8.6	10.8	14.2	4.3
Planning	37.4	32.3	43.5	53.9	23.7
Client communication	22.7	21.2	24.4	27.8	18.1
Problem-solving	34.9	38.6	30.5	38.3	15.6
Managerial (where applicable)	48.4	45.4	52.3	59.4	18.8
Aesthetic	34.1	26.7	43.1	49.3	31.4
Emotional	25.3	19.6	32.1	37.5	21.9

Notes:
1. See Table 4.1 for description of skills.

Table 4.5:
Distribution of Computing Skills by Gender and by Full-Time/Part-Time Status, Wales, 2012

Computing skills	Percentage				
	All	Males	Females	Female full-time	Female part-time
Job involves computers	71.2	67.6	75.5	83.8	59.8
More than 3/4 of employees working with computers	47.4	39.2	57.3	62.2	47.7
Use of computers is 'essential'	43.6	36.0	52.7	63.9	31.4
Advanced or complex computing skills are required	23.2	27.0	18.5	21.3	13.3

Table 4.6:
Distribution of Generic Skills by Occupational Group and Industrial Sector, Wales, 2012

Generic skills[1]	Percentages rating activities as 'essential'				
	Occupational group			Industry group	
	Managerial and professional (SOC 1-3)	Admin, trades and services (SOC 4-7)	Operatives and other (SOC 8-9)	Production industries, divisions A-F	Service industries, divisions G-O
Literacy	44.8	32.3	9.8	33.0	32.2
Numeracy	18.4	12.9	10.7	21.2	12.1
Physical	9.8	28.8	24.7	35.5	14.4
Professional communication	24.1	9.4	0.7	12.2	13.7
Planning	62.5	35.9	19.5	45.3	41.5
Client communication	35.1	29.7	14.6	20.0	31.3
Problem-solving	40.1	32.9	19.2	43.5	28.2
Managerial (where applicable)	59.0	47.1	28.7	44.8	53.7
Aesthetic	48.5	37.1	22.9	28.8	42.0
Emotional	32.4	25.4	20.1	19.5	29.8

Notes:
1. See Table 4.1 for description of skills.

Table 4.7:
Distribution of Computing Skills by Occupational Group and Industrial Sector, Wales, 2012

Computing skills	Percentage				
	Occupational group			Industry group	
	Managerial and professional (SOC 1-3)	Admin, trades and services (SOC 4-7)	Operatives and other (SOC 8-9)	Production industries, divisions A-F	Service industries, divisions G-O
Job involves computers	93.0	62.2	49.2	60.8	75.3
More than 3/4 of employees working with computers	65.8	37.8	31.6	21.9	57.4
Use of computers is 'essential'	71.2	34.2	10.9	25.5	50.8
Advanced or complex computing skills are required	39.4	15.8	8.3	20.7	24.2

Table 4.8:
Distribution of Generic Skills by Ownership Sector and Workplace Size, Wales, 2012

Generic skills[1]	Percentages rating activities as 'essential'			
	Sector		Size of workplace	
	Public	Private	Up to 24 workers	25 workers and over
Literacy	36.6	30.0	30.6	34.4
Numeracy	12.9	15.8	12.9	16.6
Physical	7.0	29.7	29.4	15.0
Professional communication	17.2	10.9	9.7	13.9
Planning	46.5	40.8	43.5	44.6
Client communication	19.5	34.6	32.5	26.1
Problem-solving	29.7	35.1	34.5	32.2
Managerial (where applicable)	58.5	48.4	59.2	49.4
Aesthetic	48.1	32.7	39.3	37.0
Emotional	25.4	28.1	27.6	23.9

Notes:
1. See Table 4.1 for description of skills.

Table 4.9:
Distribution of Computing Skills by Ownership Sector and Workplace Size, Wales, 2012

Computing skills	Percentage			
	Sector		Size of workplace	
	Public	Private	Up to 24 workers	25 workers and over
Job involves computers	80.8	66.5	66.0	76.3
More than 3/4 of employees working with computers	64.7	38.8	41.6	52.0
Use of computers is 'essential'	58.1	36.4	39.5	47.2
Advanced or complex computing skills are required	26.2	21.7	22.0	23.8

Table 4.10:
Change in Generic and Computing Skills, Wales, 2006-2012

	2006	2012	Percentage point change (2012-2006)
Ten generic skills (percentage rating 'essential')			
Literacy	32.4	27.6	-4.8
Numeracy	14.6	13.5	-1.1
Physical	20.5	17.5	-3.0
Professional communication	13.3	9.6	-3.7
Planning	42.7	37.4	-5.3
Client communication	28.6	22.7	-5.9
Problem-solving	32.8	34.9	2.1
Managerial (where applicable)	52.0	48.4	-3.6
Aesthetic	38.5	34.1	-4.4
Emotional	27.0	25.3	-1.7
Computing skills (percentage)			
Job involves computers	72.1	71.2	-0.9
More than 3/4 of employees working with computers	43.0	47.4	4.4
Use of computers is 'essential'	44.5	43.6	-0.9
Advanced or complex computing skills are required	17.4	23.2	5.8

Table 4.11:
Change in Generic and Computing Skills, Rest of Britain, 2006-2012

	2006	2012	Percentage point change (2012-2006)
Ten generic skills (percentage rating 'essential')			
Literacy	27.7	28.9	1.2
Numeracy	14.5	17.1	2.6
Physical	14.5	15.7	1.2
Professional communication	9.0	9.2	0.2
Planning	38.3	40.3	2.0
Client communication	25.5	27.4	1.9
Problem-solving	34.6	33.4	-1.2
Managerial (where applicable)	49.6	45.5	-4.1
Aesthetic	38.2	36.6	-1.6
Emotional	26.7	29.0	2.3
Computing skills (percentage)			
Job involves computers	72.3	75.0	2.7
More than 3/4 of employees working with computers	50.6	56.2	5.6
Use of computers is 'essential'	43.8	49.6	5.8
Advanced or complex computing skills are required	19.0	22.5	3.5

Table 4.12:
Change in Generic and Computing Skills, London and the South East, 2006-2012

	2006	2012	Percentage point change (2012-2006)
Ten generic skills (percentage rating 'essential')			
Literacy	31.0	29.5	-1.5
Numeracy	16.4	21.8	5.4
Physical	10.3	11.2	0.9
Professional communication	9.6	9.9	0.3
Planning	42.5	42.4	-0.1
Client communication	25.8	28.6	2.8
Problem-solving	36.5	32.4	-4.1
Managerial (where applicable)	50.3	50.1	-0.2
Aesthetic	39.3	33.8	-5.5
Emotional	28.2	27.3	-0.9
Computing skills (percentage)			
Job involves computers	78.6	79.0	0.4
More than 3/4 of employees working with computers	61.7	63.2	1.5
Use of computers is 'essential'	52.0	54.2	2.2
Advanced or complex computing skills are required	27.8	25.6	-2.2

CHAPTER FIVE:
DIMENSIONS OF LEARNING AND TRAINING

5.1 Introduction

There is a consensus that learning and training is beneficial to many of those involved: the individuals who receive it, the organisations which deliver or arrange it, and the economies to which workers and organisations belong. Numerous government reports have raised the profile of the workplace as an important, if hitherto neglected, source of such activity (e.g., DfES, DTI, HM Treasury and DWP, 2003; Strategy Unit, 2002; PIU, 2001). On this basis, workplace learning and training has attracted much attention. The fact that 70% of the workforce of 2020 are already in work has increased its saliency still further since most of those in work are beyond the reach of the formal educational system (HM Treasury, 2006). The rallying cry of all these investigations is for more workplace learning and training, especially for those who may have missed out or done poorly at school.

There is an abundance of statistics on the formal aspects of workplace learning and training which provide many valuable insights. These are regularly reported in a number of government publications which review the state of the labour market. These statistics are even more regularly available via the Office for National Statistics web site. This evidence is based on surveys of individuals or employers. The individual-level data tells us whether a respondent has participated in job-related training in a specified period before interview – such as the previous four weeks, thirteen weeks or the preceding calendar year. Follow-up questions provide more detail by revealing the length of the training episode, where it took place and who paid for it (Felstead *et al*., 2013). Employer surveys, on the other hand, tend to focus on the cost of training, its prevalence by establishment and the type of training undertaken (e.g., Davies *et al*., 2012).

These data can be readily compared with similar data collected across the European Union (EU). For example, as part of their membership of the EU all Member States are required to carry out a Labour Force Survey (LFS) at least once a year. The survey must contain a list of common questions, use a common coding framework for the replies received and adopt agreed definitions. The advent of this international dataset, along with similar others such as the European Community Household Panel, has spawned a wealth of comparative analyses (e.g., Arulampalam *et al*., 2004; Dieckhoff *et al*., 2007; Dieckhoff, 2008).

At first glance, some of the results provide comforting and reassuring news for UK policy-makers keen to promote training and learning. The UK is well above the EU average and is ranked fourth in terms of the extent to which its adult population receives education and training (European Communities, 2005: 105). Other internationally comparable surveys, such as the Continuing Vocational Training Survey, suggest that UK employers spend relatively more on training than countries such as Germany and Austria (Ok and Tergeist, 2003: Table 1). However, closer examination of the data highlights a number of issues. Training incidence, for example, varies significantly between countries with some reporting participation rates well into double figures (e.g., Sweden, Denmark, Finland and the UK), while others are well below the European average (e.g., Hungary, Slovakia and Greece). Furthermore, countries which are renowned for the emphasis they place on continuing professional development, such as France, through its training levy

and Germany, through its apprenticeship system, are in the bottom half of the league table. These variations may reflect some of the differences in training activity across Europe, but also suggest that the meaning of 'training' may differ between Member States in ways not easily picked up in household surveys of this type (see Méhaut, 1992; Campanelli *et al*., 1994).

Another problem is that reliance on a *single* indicator can paint a misleading picture of training activity within a single country, let alone across 25 Member States. As a result, time series evidence based on training *incidence* can only tell part of the story. Statements about trends in training activity based on participation rates alone can therefore be misleading since incidence may be rising at the same time as intensity is falling. In these circumstances, training may be spread more thinly among a higher proportion of workers which makes the actual trajectory of training volumes uncertain (Felstead *et al*., 1999).

We know a lot about who gets training, how long it lasts and how much it costs. We can even make international comparisons of the answers we get to these questions. However, we know far less about the quality of training. Previous research, for example, suggests that not all training episodes are intended to raise skills by the same amount and some are not about raising skill levels at all. Instead, some training is designed to enhance employee commitment and has little to do with raising skills, and some aims to ensure conformity with standardised and prescribed ways of working which restrict the skills used at work (Felstead *et al*., 2009). The quality of training can differ in other respects too. For example, even where skills are acquired as result of training, they may or may not be important enough for the employer to award a pay rise (Kellaway, 2013). The quality of training may also differ according to whether or not it raises levels of job satisfaction and enjoyment. Focusing exclusively on the incidence and intensity of training fails to acknowledge the many ways in which the quality of training episodes may differ, hence providing another source of labour market disadvantage. An important aspect of the 2006 Skills Survey was the addition of a set of questions designed to shed light on some of these issues (Felstead *et al*., 2010). These survey items were repeated in the Skills and Employment Survey 2012. It is on these data that this chapter is based.

The chapter is divided into a number of sections which consider how the 2012 results vary by occupation, industry and gender as well as how these patterns have changed since 2006. The following section, therefore, outlines how the survey instruments capture different aspects of training and learning such as its incidence, intensity, quality and the appetite workers have to get more. Section 5.3 considers the distribution of training in Wales in 2012 using these concepts as operationalised by the Skills and Employment Survey 2012. Skills can also be acquired in less formal ways such as daily work experience and learning from other colleagues as the work is carried out. In addition, jobs may also require workers to help others learn, so that workers take on more of teaching role in the workplace. Both surveys contain information on these aspects of workplace learning – the results for Wales in 2012 are presented in Section 5.4. The final substantive section presents data on these patterns have changed since 2006 and how these patterns differ from those found elsewhere in Britain. The chapter ends with a summary of the chapter's main findings.

5.2 Measuring Training and Learning

The Skills and Employment Survey 2012 and the 2006 Skills Survey provide consistent data on several aspects of training. This Report focuses on the volume of training, its quality and future demand. The volume of training is captured, first, by whether or not workers participated over the previous year in each of several explicitly-stated forms of training. Respondents to both the 2006 and 2012 surveys were asked: 'In the last year (that is since [Month] 2011), have you done any of these types of training or education connected with your *current* job?' The card of options included the following: 'received instruction or training from someone which took you away from your normal job' (off-the-job); 'received instruction whilst performing your normal job' (on-the-job); 'taught yourself from a book/manual/video/computer/DVD/internet' (self taught); 'followed a correspondence or Internet course (such as Open University (at a distance)'; 'taken an evening class' (out of hours class); 'done some other work-related training' (other work related); and 'none of these'. Using this information we calculate a training incidence rate; that is, the proportion of respondents who said that they had taken part in any of these types of training in the year immediately before interview.

However, since the length of training can vary from an hour or so at one extreme to several months at the other, we also focus on participation in 'long training', defined as training that took place on 10 days or more in the previous year. In 2012 nearly a half of those getting any workplace training were receiving 'long training'. From the time estimates our respondents gave, we also provide data on the average number of days when training took place.

Capturing the quality of training is more problematic. We do so by examining multiple indicators covering how workers experienced their training. While no one indicator alone should be relied upon, collectively they are informative about perceptions of whether and how far skills have been improved through the training:

Indicators applying to the latest training spell

- whether the training is certified (that is, leads to a qualification)
- whether the training 'improved my skills' 'a lot'
- whether the training 'made you think harder about different ways of doing your job' ('a great deal' or 'quite a lot')
- whether the training 'needs to be memorised off by heart' ('a great deal' or 'quite a lot').

Indicators applying to all training through the year

- whether the training 'helped me improve the way I work'
- whether the training 'made me enjoy my job more'

To capture future demand respondents were asked 'How much do you want to get any training in the future'. We classify those who answered 'very much' as having a perceived demand for future training. Respondents were offered a four-point scale ranging from 'very much' to 'not at all'. We also report respondents' training expectations. They were asked how strongly they agreed with that statement: 'I will have

many opportunities to get training in the future'. Here, we report the proportions who said that they 'strongly agreed' with this statement.

It is increasingly becoming recognised that learning can take on many forms at the workplace well beyond traditional training events and activities. This includes other forms of learning activity – such as watching, listening and learning from others – which can only be undertaken on an on-going basis as an active participant in the workplace (Felstead *et al*., 2005 and 2009; Boreham *et al*., 2002; Fuller and Unwin, 2004). To gauge this form of learning, respondents were asked whether they strongly agreed, agreed, disagreed or strongly disagreed with a number of statements. These included: 'My job requires that I keep learning new things'; 'My job requires that I help my colleagues to learn new things'; and 'I am able to learn new skills through working with other members of my work group'. Here, we report the proportions who 'strongly agreed' with these statements, with the latter proportions referring to those who worked in teams.

5.3 Distribution of Training in Wales, 2012

Two-thirds (64%) of Welsh workers received some form of training in the last year (see Table 5.1). This figure is much higher than the figures given by the Quarterly Labour Force Survey (QLFS) – the figure for Wales in 2012 was 14% (Felstead *et al*., 2013c). There are number of reasons for the difference. First, the surveys reported here ask respondents to report over a much longer time period (12 months as opposed to four weeks). Secondly, our surveys provide respondent with a list of concrete activities designed to elicit respondent recall, whereas the QLFS relies on respondent self-defining training and responding accordingly. Thirdly, the QLFS relies on mixture of telephone and face-to-face interviews as well as allowing a responsible adult to complete the survey on someone else's behalf. The 2012 and 2006 surveys, however, were based on personal face-to-face interviews with proxy interviewing prohibited.

However, many of the training incidence patterns are in line with QLFS data. For example, training incidence among women was higher than among men in Wales in 2012, although it was relatively low among female part-time workers. Around three-quarters (77%) of female full-timers received training in the year before interview compared to around half (50%) of part-time workers (see Table 5.1). Training incidence was higher among the groups towards the top of the occupational hierarchy, in the public sector, in services and in larger establishments (see Tables 5.2 and 5.3).

However, the 2012 survey also allows us to analyse training in other ways, notably in terms of its intensity and its quality. Those undertaking training were asked about both. The results suggest that many of the same patterns for training incidence are also evident in patterns of training intensity and quality. This suggests that groups less likely to receive training get less of it when they do. It is also more likely to be of a poorer quality. As a result, the most disadvantaged suffer a 'triple whammy' which reinforces patterns of inequality. So, for example, only an eighth (13%) of female part-timers reported training occurring on 10 days or more in the year before interview compared to two-fifths (42%) of female full-timers. On many indicators, the quality of the training they received was poorer. For example, female part-timers who received it were less likely than their full-time counterparts to report that their skills had improved 'a lot' because of the training (42% compared to 59% respectively). Similarly, the training was less likely to promote enhanced enjoyment in the job and prompt new thinking about

how to do the job. Also the demand for future workplace training as well as the expectation that this would be forthcoming in the next three years was lowest among female part-timers (see Table 5.1).

Access to training in Wales is strongly related to occupational position with three-quarters (73%) of 'Managers, Professionals and Associate Professionals' in 2012 getting training compared to a third (36%) of 'Plant and Operatives and Elementary' workers (see Table 5.2). This steep 'ski slope' is repeated for the proportions receiving lengthy training with only a fifth (19%) of the latter receiving 10 days or more training in the year before interview compared to two-fifths (42%) of the former. This inequality persists even when training is received. Most of our quality indicators vary sharply by occupational group. For example, certification rates fall by occupational group as do the chances that it enhances skills, raises enjoyment and promotes new thinking. The demand for future training and the expectation that it will be forthcoming follow a similar downward path by occupation (see Table 5.2).

Industry, sector and workplace size differences, on the other hand, are narrower. Even so, those working in the public sector in Wales in 2012 stood a better chance of getting training and receiving longer training than those working in the private sector. Working in larger establishments conferred similar advantages (see Table 5.3). The industrial pattern was more mixed; training incidence was higher in 'Service Industries' (62%) than in 'Production Industries' (53%), but the chances of receiving training lasting 10 days or more was lower (31% and 36% respectively).

However, variation in the quality of training by industry, sector and workplace size is even less clear-cut; there are few stand-out differences. The biggest contrast is between the demand for and expectation of getting training between sectors in Wales in 2012. A third (33%) of public sector workers wanted training compared to around one-fifth (22%) of private sector workers with similar sectoral differences in expectations (see Table 5.3).

5.4 Distribution of the Sources of Learning at Work, Wales, 2012

Around a third (32%) of Welsh respondents strongly agreed that the job they were doing required them to learn. A similar proportion (36%) strongly agreed that they were required to help others acquire new skills. Learning from others was also a key feature of teamworking with over a fifth (22%) of team members strongly agreeing that they learnt new skills from other members of their work group (see Table 5.4).

According to the Welsh data for 2012 these sources of learning in Wales were strongest among women and especially those working full-time, putting them well ahead of their male counterparts. As a result, women working part-time were the least likely to benefit from these informal sources of learning.

Like training, informal learning is also skewed towards those in higher level occupational groups. For example, almost half (46%) of 'Managers, Professionals and Associate Professionals' strongly agreed that their jobs required them to 'keep learning new things'. In the middle occupational group this fell to around a quarter (28%) and in the lowest of the three groups the proportion fell to around an eighth (13%). Other features of informal learning captured in this survey – helping others learn and learning from others in the work group – mirrored this occupational pattern (see Table 5.5).

However, unlike training, informal learning did vary by industry, sector and workplace size. In short, informal sources of learning were more prevalent in 'Services', in the public sector and in smaller workplaces. Take, for example, the requirement to learn on-the-job. This was nine percentage points higher in 'Services' than 'Production', it was sixteen percentage points higher in the public sector than in the private sector and it was three percentage points higher in small establishments than in larger ones (see Table 5.6).

5.5 Trends in Training and Learning in Wales and Other Parts of Britain, 2006-2012

Other research suggests that training incidence in Wales is not out of line with rates recorded in other parts of Britain. This evidence comes from the QLFS which suggests that in 2012 14% of workers in Wales received training in the four weeks before interview compared to 13% of workers in England and 13% of workers in Scotland (Felstead *et al*., 2013c: Table 4.1). Similarly, employer surveys suggest little variation in the proportions of establishments offering training to their workers. According to the 2011 UKCES Employer Skills Survey, for example, the figures stood at 59% for Wales compared to 58% for England (Davies *et al*., 2012: 83).

However, the results from the Skills and Employment Survey 2012 tell a different, less optimistic, story. It must be remembered, of course, that the training used here takes a wider conception of 'training' and captures activity over a longer time period (a year as opposed to the QLFS measure of the last four weeks). The data are not therefore comparable, but they do shed a different light on the same phenomenon. Furthermore, the data presented here are based on training and learning questions that were asked of respondents to the Skills Survey 2006 as well as those who took part in the Skills and Employment Survey 2012. All respondents to each survey were asked the same questions, word-for-word and prompt-for-prompt.

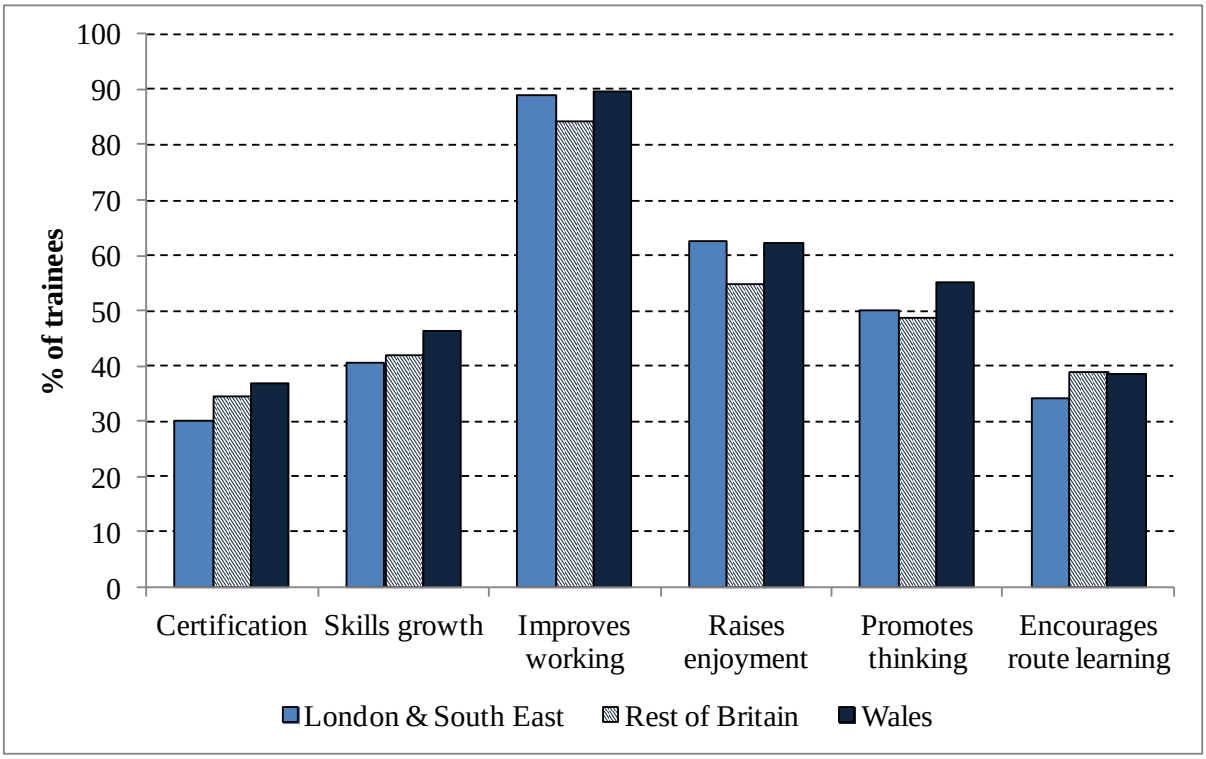
The results suggest that training incidence in 2012 was lower in Wales than elsewhere (see Figure 5.1) – 64% compared to 69% in the Rest of Britain and 67% in London and the South East. The intensity of training was also lower in Wales, occurring for only a few days in a year (see Figure 5.2). However, the appetite for training was just as strong in Wales as elsewhere – three out of ten workers wanted training in the future and around one in five expected to get it within the next three years.

Figure 5.1:
Training Incidence Across Britain, 2012

Figure 5.2:
Training Intensity Across Britain, 2012

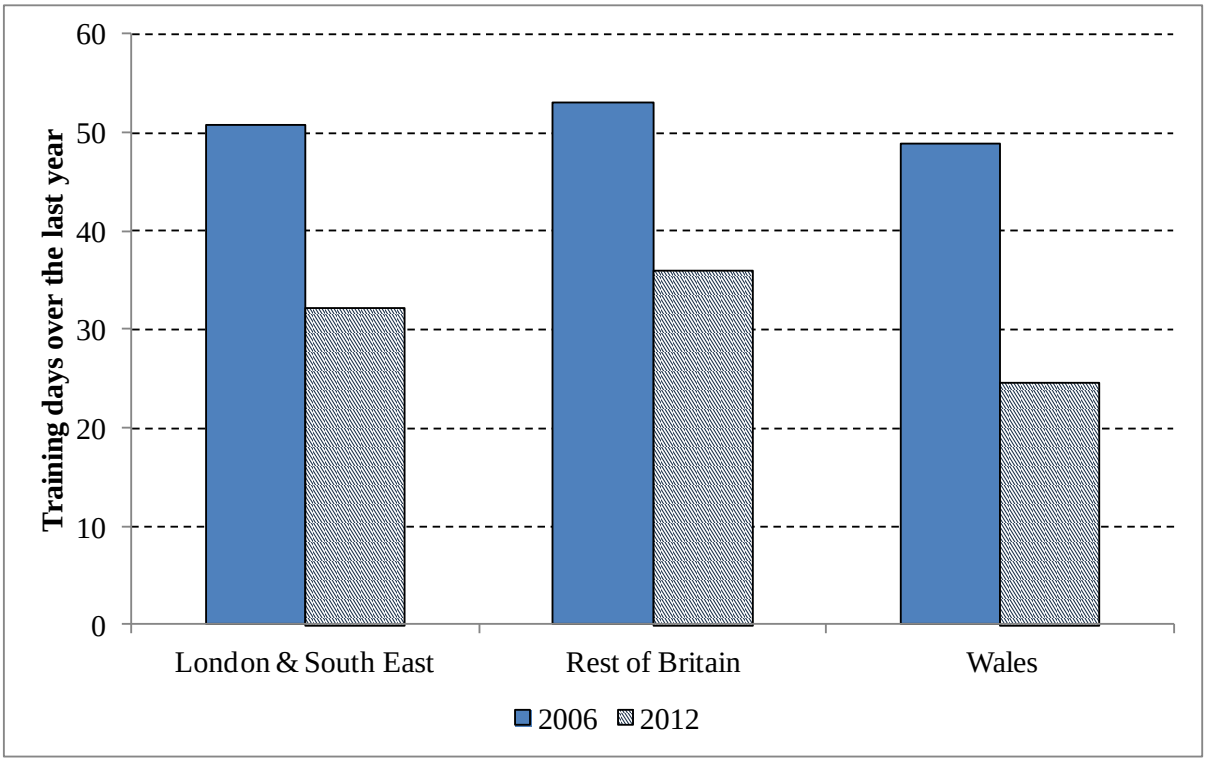
However, Welsh workers rated the quality of the training they received at least as highly, if not higher, than workers in other parts of Britain. Training received was more likely to lead to certification, raise skill levels and promote thinking. But on other measures there was little variation across Britain.

Figure 5.3:
Training Quality Across Britain, 2012



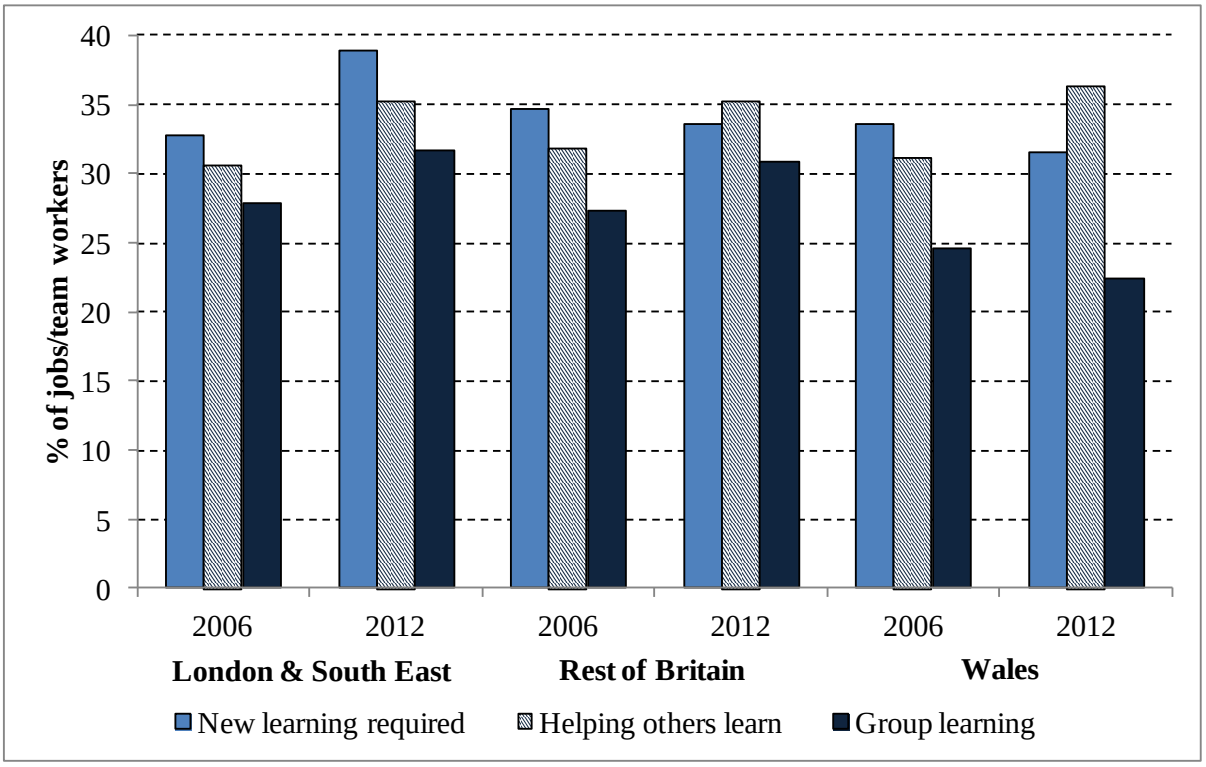
More worryingly, the data suggest that training intensity in Wales has fallen faster than elsewhere over the last six years. Intensity levels in Wales have more or less halved since 2006, falling from 49 days in 2006 to 25 days in 2012. This compares to falls from 53 days to 36 days in the Rest of Britain and 51 days to 32 days in London and the South East (see Figure 5.4).

Figure 5.4:
Training Intensity Across Britain, 2006-2012



To exacerbate the problem further, the prevalence of some informal sources of learning in Wales have fallen at a time when they have risen elsewhere. For example, jobs which require incumbents to learn new things on-the-job have fallen in Wales while they have risen in other parts of Britain. Learning from others in the work group has also fallen in Wales, while it has risen elsewhere as a source of learning (see Figure 5.5).

Figure 5.5:
Informal Sources of Learning, 2006-2012



5.6 Summary of the Main Findings

By no means is this the only data source on training and learning across Britain. Neither is it among the largest. Surveys such the QLFS can boast many more respondents than either of the surveys reported here. However, the Report and the datasets which underpin it serve to highlight the importance of going beyond focusing on the incidence of training alone to include measures of its intensity and its outcomes. This approach identifies where training and learning in Wales is good and where more needs to be done.

- Those in lower occupational groups and those working part-time (especially women) face a 'triple whammy'. They are less likely to receive training than their counterparts, when they do it tends to be shorter and its quality is often poorer. As a result, the appetite for future training and the expectation that it will be forthcoming are lower for these groups.

- Like training, informal learning is also skewed towards those in higher level occupational groups and against women working part-time. Around a third (32%) of Welsh respondents strongly agreed that the job they were doing required them to learn. A similar proportion (36%) strongly agreed that they were required to help others acquire new skills. Learning from others was also a key feature of teamworking with over a fifth (22%) of team members strongly agreeing that they learnt new skills from other members of their work group.

- The results suggest that training incidence in 2012 was lower in Wales than elsewhere – 64% compared to 69% in the Rest of Britain and 67% in London and

the South East. The intensity of training was also lower in Wales, taking place on eleven fewer days than in the Rest of Britain and six fewer than in London and the South East.

- However, Welsh workers rated the quality of the training they received at least as highly, if not higher, than workers in other parts of Britain. More worryingly, the frequency of training episodes in Wales has halved since 2006, while the fall has not been as sharp elsewhere.

- To exacerbate the problem, the prevalence of some informal sources of learning in Wales have fallen at a time when they have risen elsewhere.

Table 5.1:
Training Participation, Volume and Quality by Gender and by Full-time/Part-Time Status, Wales, 2012

Aspects of training	Percentage				
	All	Males	Females	Female full-time	Female part-time
Training participation					
Incidence[1]	64.2	61.8	67.2	76.5	49.6
Long training (>10 hours)[2]	28.9	26.7	31.5	41.7	12.9
Training quality					
Certification[3]	36.8	36.9	36.7	36.5	37.5
Skills growth[4]	46.5	39.2	54.5	58.3	43.5
Improved working arrangements[5]	89.5	87.7	91.4	91.6	90.7
Increased enjoyment in the job[6]	62.3	58.3	66.9	70.5	56.1
Emphasis placed on thinking about new ways of doing the job[7]	55.1	52.5	57.9	60.0	51.8
Emphasis placed on memorization[8]	38.4	37.3	39.7	41.7	33.9
Future demand for training					
Strong demand for training[9]	31.0	31.2	30.6	32.9	26.0
Strong expectation of future training[10]	21.0	17.6	25.1	26.1	23.0

Notes:

1. Training incidence refers to the percentage of respondents receiving some training in the previous 12 months. This is taken from responses to the question: 'In the last year (that is since [Month] 2005), have you done any of these types of training or education connected with your *current* job?' The list included the following: received instruction or training from someone which took you away from your normal job; received instruction whilst performing your normal job; taught yourself from a book/manual/video/computer/cassette; followed a correspondence or Internet course (such as Open University); taken an evening class; and done some other work-related training.

2. This is calculated from the estimates given by the respondents to the time they spent doing each of the training activities identified in response to the above. Respondents were asked to estimate the total number of days on which they undertook each activity.
3. This refers to the percentage of 'trainees' (as identified by note 1) who said that their most recent spell of education or training led to a qualification or a credit towards a qualification.
4. This refers to the percentage of 'trainees' (as identified by note 1) who said that their most recent spell of education or training improved their skills 'a lot'.
5. This refers to the percentage of 'trainees' (as identified by note 1) who agreed that this training 'has helped me improve the way I work in my job'.
6. This refers to the percentage of 'trainees' (as identified by note 1) who said agreed that this training 'has made me enjoy my job more'.
7. This refers to the percentage of 'trainees' (as identified by note 1) who said that their most recent spell of education or training made them 'think harder about different ways of doing' their job 'a great deal' or 'quite a lot'.
8. This refers to the percentage of 'trainees' (as identified by note 1) who said that their most recent spell of education or training made them memorise things off by heart 'a great deal' or 'quite a lot'.
9. Responses taken from the question: 'How much do you want to get any training in the future?' Here, we report the proportion who said 'very much'.
10. Responses taken from the question: 'How much do you agree or disagree with the following statement: 'I will have many opportunities to get training in the future?' Here, we report the proportion who 'strongly agreed'.

Table 5.2:
Training Participation, Volume and Quality by Occupational Group and Industrial Sector, Wales, 2012

Aspects of training	Percentage				
	Occupational group			Industry group	
	Managerial and professional (SOC 1-3)	Admin, trades and services (SOC 4-7)	Operatives and other (SOC 8-9)	Production industries, divisions A-F	Service industries, divisions G-O
Training participation					
Incidence	72.6	60.2	36.4	53.1	61.8
Long training (>10 hours)	41.8	32.0	19.3	35.6	31.2
Training quality					
Certification	38.7	43.4	21.5	50.4	31.8
Skills growth	45.7	47.6	37.3	53.7	41.9
Improved working arrangements	89.8	82.1	78.4	85.8	85.1
Increased enjoyment in the job	59.1	62.7	45.4	59.5	59.9
Emphasis placed on thinking about new ways of doing the job	55.3	61.0	38.2	52.5	55.9
Emphasis placed on memorization	33.6	44.7	35.6	44.6	36.5
Future demand for training					
Strong demand for training	30.4	26.5	19.0	24.5	27.2
Strong expectation of future training	27.2	22.6	12.6	18.8	24.3

Table 5.3:
Training Participation, Volume and Quality by Ownership Sector and Workplace Size, Wales, 2012

Aspects of training	Percentage			
	Sector		Size of workplace	
	Public	Private	Up to 24 workers	25 workers and over
Training participation				
Incidence	74.9	48.7	50.4	69.6
Long training (>10 hours)	37.1	30.1	27.7	39.5
Training quality				
Certification	34.7	42.1	45.5	34.4
Skills growth	37.9	53.8	53.6	42.4
Improved working arrangements	84.4	85.9	84.3	86.6
Increased enjoyment in the job	58.2	60.2	54.4	58.7
Emphasis placed on thinking about new ways of doing the job	57.4	53.4	61.2	50.5
Emphasis placed on memorization	39.6	37.5	36.3	38.9
Future demand for training				
Strong demand for training	33.3	22.1	26.0	26.4
Strong expectation of future training	30.1	17.4	20.9	22.4

Table 5.4:
Sources of Learning by Gender and by Full-time/Part-Time Status, Wales, 2012

Sources of learning	Percentage				
	All	Males	Females	Female full-time	Female part-time
Strongly agree that job requires learning[1]	31.5	25.6	38.6	45.4	25.8
Strongly agree that job requires that others are helped to learn[2]	36.2	34.6	38.1	46.1	22.0
Strongly agree that job involves learning from team members (where applicable)[3]	22.4	21.0	24.2	26.5	19.1

Notes:
1. Responses taken from the question: 'My job requires that I keep learning new things'.
2. Responses taken from the question: 'My job requires that I help my colleagues to learn new things'.
3. Responses taken from the question: 'I am able to learn new skills through working with other members of my work group?'

Table 5.5:
Sources of Learning by Occupational Group and Industrial Sector, Wales, 2012

Sources of learning	Percentage				
	Occupational group			Industry group	
	Managerial and professional (SOC 1-3)	Admin, trades and services (SOC 4-7)	Operatives and other (SOC 8-9)	Production industries, divisions A-F	Service industries, divisions G-O
Strongly agree that job requires learning[1]	46.0	27.7	12.8	25.1	34.0
Strongly agree that job requires that others are helped to learn[2]	45.2	34.3	23.9	37.0	35.9
Strongly agree that job involves learning from team members (where applicable)[3]	28.3	20.9	15.0	16.6	25.3

Notes:
1-3. See notes on Table 5.4.

Table 5.6:
Sources of Learning by Ownership Sector and Workplace Size, Wales, 2012

Sources of learning	Percentage			
	Sector		Size of workplace	
	Public	Private	Up to 24 workers	25 workers and over
Strongly agree that job requires learning[1]	48.8	22.8	32.7	29.7
Strongly agree that job requires that others are helped to learn[2]	42.2	33.0	36.0	34.5
Strongly agree that job involves learning from team members (where applicable)[3]	32.6	16.0	31.2	18.3

Notes:
1-3. See notes on Table 5.4.

CHAPTER SIX:
JOB CONTROL AND PARTICIPATION AT WORK

6.1 Introduction

Despite different emphases and nuances, most studies of skill focus on either the complexity of jobs or the discretion job-holders exercise in carrying out the tasks involved (Spenner, 1990). Complexity varies according to the nature of the job such as the abilities and techniques required, the intricacies of the steps involved, and the knowledge of equipment, products and processes needed for competent performance. The data series reported here measures the complexity of jobs in two ways. First, by the attributes respondents report they require for the job. These include: the qualifications required to get the job; the length of training required for that type of work; and the time taken to learn to do the job well. Secondly, by asking respondents to rate the importance of a series of generic activities to their work. These results have been presented in Chapters 3 and 4.

However, authors working in the labour process traditionally conceptualise skill as varying according to the extent to which job-holders can exercise discretion and judgement at work (e.g., Braverman, 1974; Zuboff, 1988). While all jobs are carried out within prescribed rules – whether set by law, occupational standards or custom and practice – an element of choice/judgement remains. For labour process theorists, the greater the choice and discretion, the higher the skill regardless of the intricacies of the jobs itself (as outlined in Chapters 3 and 4).

The surveys on which this Report draws asked respondents about the amount of choice they had in carrying out their job as well as a series of questions about the personal influence they had over how hard they worked, what tasks they did, how tasks were to be completed and what standards they had to achieve. Teamwork has also been regarded as being associated with higher levels of discretionary work effort and an increased scope for workers to use and develop their skills. In addition to these, the involvement of employees in organisational decisions has also been viewed as important in terms of fostering high levels of commitment.

The chapter therefore proceeds as follows. Section 6.2 outlines how employee task discretion is measured in the 2006 and 2012 surveys and goes onto examine which groups of workers in Wales have the most (least) discretion in how they carry out their jobs and how these levels of discretion compare to those enjoyed in other areas. Levels of satisfaction with discretion are also considered. Section 6.3 provides further insight as to the level of control that respondents exert over their work through questions included in the survey that relate to levels of choice and supervision at work. Section 6.4 provides an overview of the degree to which workers in Wales are involved in organisational decision making and their satisfaction with communication arrangements. The chapter concludes with a summary of the main findings in Section 6.5.

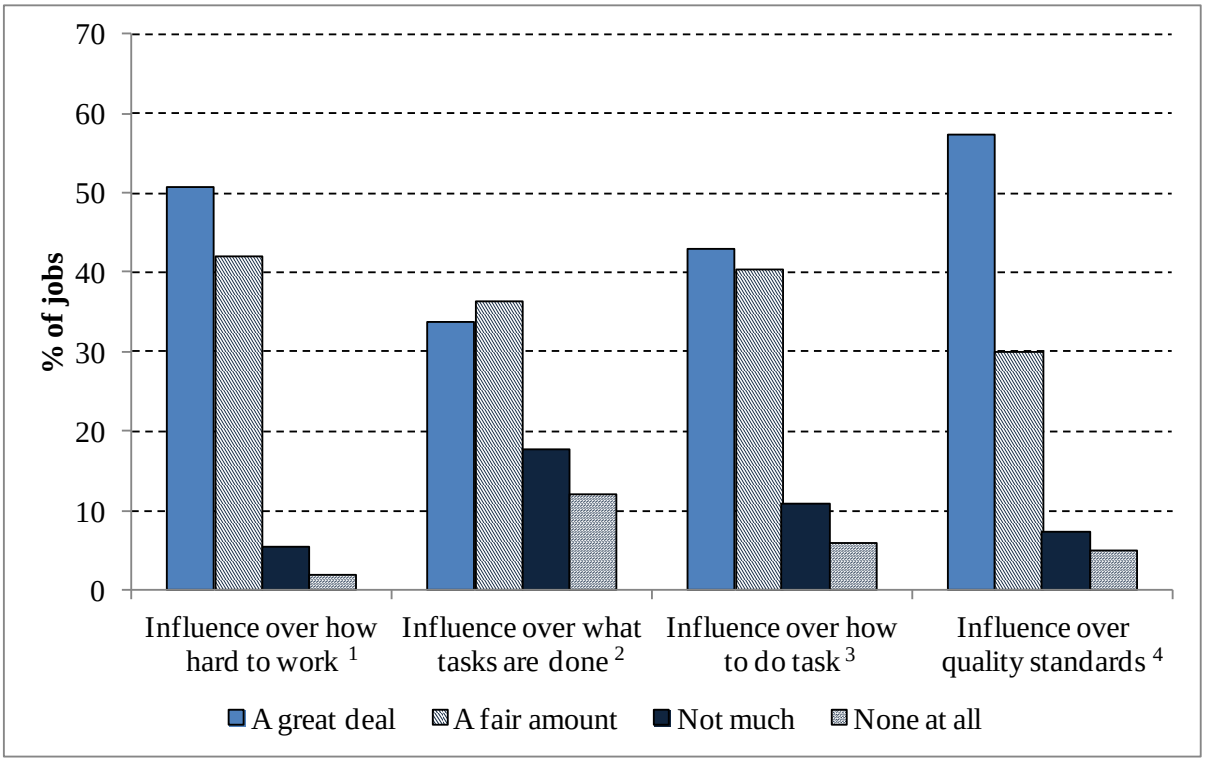
6.2 Task Discretion

Both the Skills Survey 2006 and Skills and Employment Survey 2012 carry an identical set of questions which allow us to construct a consistent measure of discretion at work over the six year period for jobs in Wales. These four questions allow us to assess

how much personal influence workers have over specific aspects of their work. Respondents were asked: 'How much influence do *you personally* have on how hard you work?' The options were: 'a great deal'; 'a fair amount'; 'not much'; and 'none at all'. The same question format was used to determine employee influence on: 'deciding what tasks you are to do'; 'deciding on how you are to do the task'; and 'deciding the quality standards to which you work'. These questions were asked of the entire sample and in this chapter we report results for both employees and the self-employed. It is acknowledged that the self-employed will generally have more control over their working environment than employees. Nonetheless, many of these questions will still be relevant to the self-employed, particularly among those who work closely with a number of clients. By asking these questions in an identical way in both surveys, we have a common benchmark on which to make comparisons over time. To provide an overall picture from the different items measuring task discretion, a summary index was constructed by giving a score ranging from 0 (no influence at all) to 3 (a great deal of influence) and then taking the average of the summed scores.

Figure 6.1 considers workers' perceptions regarding the discretion that they have *as individuals* in the performance of their jobs. Across each of the four individual measures of task discretion, it can be seen that a majority of workers in Wales report that they exert either a 'great deal' or 'fair amount' of individual discretion in the way in which they perform their jobs. In terms of the different types of individual discretion, approximately nine out of ten Welsh workers report that they exert 'a great deal' or a 'fair amount' of discretion in how hard they work (93%). Similar levels of discretion are reported by respondents with respect to quality standards, with approximately 88% reporting that they have either 'a great deal' or 'fair amount' of discretion. Levels of individual discretion are observed to be relatively low with respect to determining what tasks are done. Here, almost a third of respondents report that they have either no (12%) or not much (18%) influence over what tasks are done.

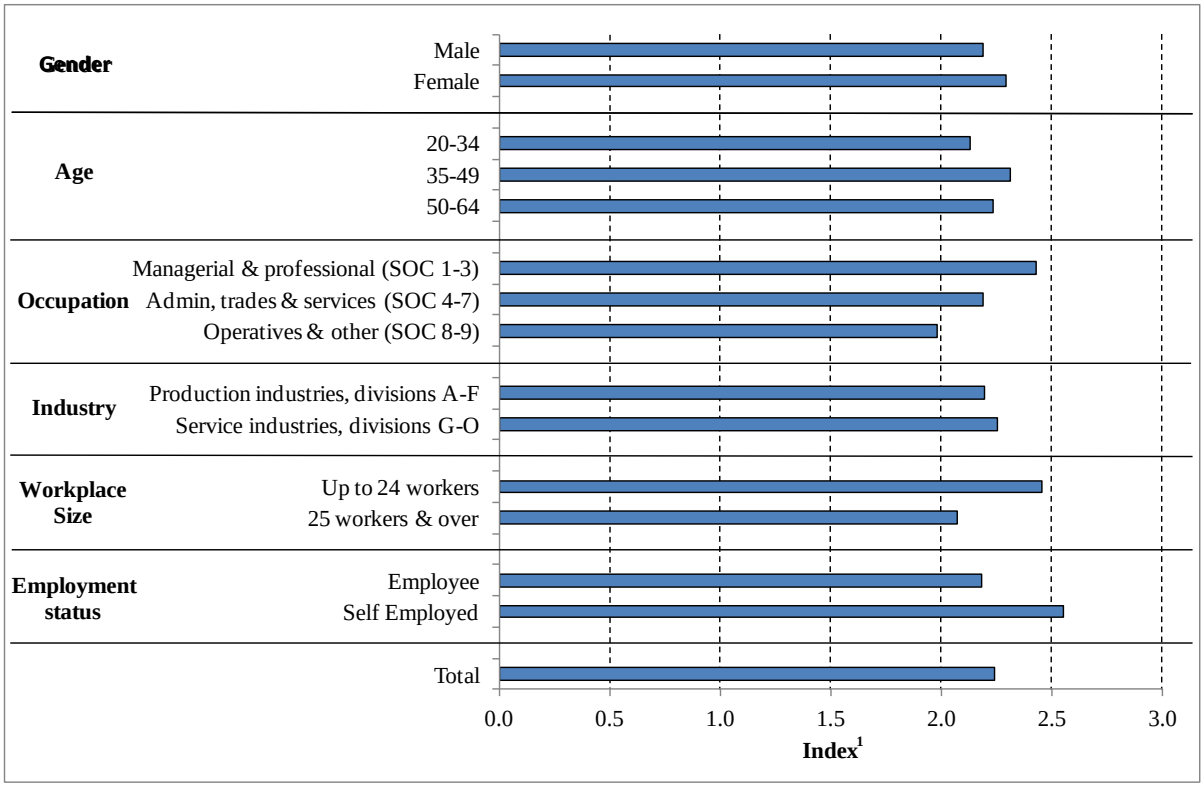
Figure 6.1:
Individual Task Discretion at Work, Wales, 2012



Notes:
1. Respondents were asked: 'How much influence do *you personally* have on how hard you work?'
2. Respondents were asked: 'And how much influence do *you personally* have on deciding what tasks you are to do? '
3. Respondents were asked: 'And how much influence do *you personally* have on deciding how you are to do the task?
4. Respondents were asked: 'And how much influence do *you personally* have on deciding the quality standards to which you work?'

As described above, the responses to these questions on individual task discretion have been combined to form a single index of individual task discretion. The responses provided across a variety of dimensions can therefore be summarised for ease of exposition, allowing comparisons between population sub-groups to be made more easily. Using this index, Figure 6.2 considers variations in individual task discretion between different subgroups of workers as defined by selected personal, job and workplace characteristics. It can be seen that individual task discretion is lowest among younger workers, those working in elementary and operative occupations and those based in larger workplaces. As would be expected, levels of task discretion are higher among the self-employed compared to employees. However, it is interesting to note that the size of this differential is smaller than that observed between high and low skilled occupational groups, indicating that the nature and context of work tasks are of greater importance to our understanding of individual discretion than employment status.

Figure 6.2:
Variations in Individual Task Discretion[1], Wales, 2012



Note:
1. The Individual Task Discretion Index allocates scores of 3, 2, 1 and 0 to the responses 'a great deal', 'a fair amount', 'not much' and 'none at all' respectively. This are summed and average is taken produce this Index with a range of 0 to 3.

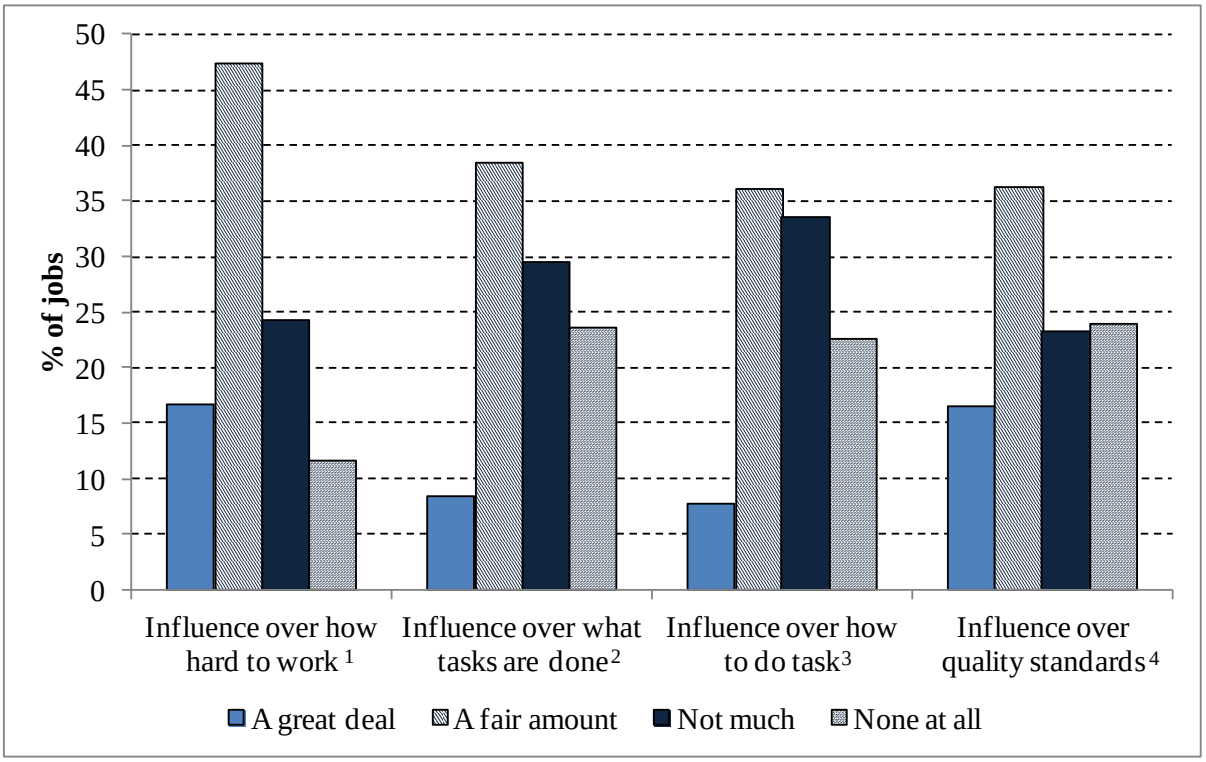
6.2.1 Team Working and Group Discretion

The SES2012 asked workers whether they usually worked on their own or whether their work involves working together as a group with one or more other workers in a position similar to theirs. In Wales, the proportion of workers working in teams in 2012 is estimated to be 59%. In addition, for those who worked in teams, their scope for making decisions was explored through a set of questions on the level of control exercised by the team over key features of their work. Respondents who reported working as part of a group were asked: 'Earlier, you said you work as part of a group. Thinking about the group in which you spend most time, and excluding the supervisor if there is one, how much influence do the others in this group have on how hard you work?' The options were: 'a great deal'; 'a fair amount'; 'not much'; and 'none at all'. This question was repeated for the same remaining categories as those asked of respondents in respect of their own individual task discretion.

The distribution of these responses is summarised in Figure 6.3. What is immediately apparent across the various dimensions of task discretion is that the level of influence exerted by a respondent's work group over their work tasks is less than their own levels of individual discretion. Those working in groups are most likely to report that the group has 'a great deal' or 'a fair amount' of control over how hard they work

(64%). Otherwise, the influence of the group on work tasks are relatively evenly distributed across response categories, with over half of workers reporting that their group exerts either not much or no influence over what tasks are done or how these tasks are done.

Figure 6.3:
Group Task Discretion at Work, Wales, 2012

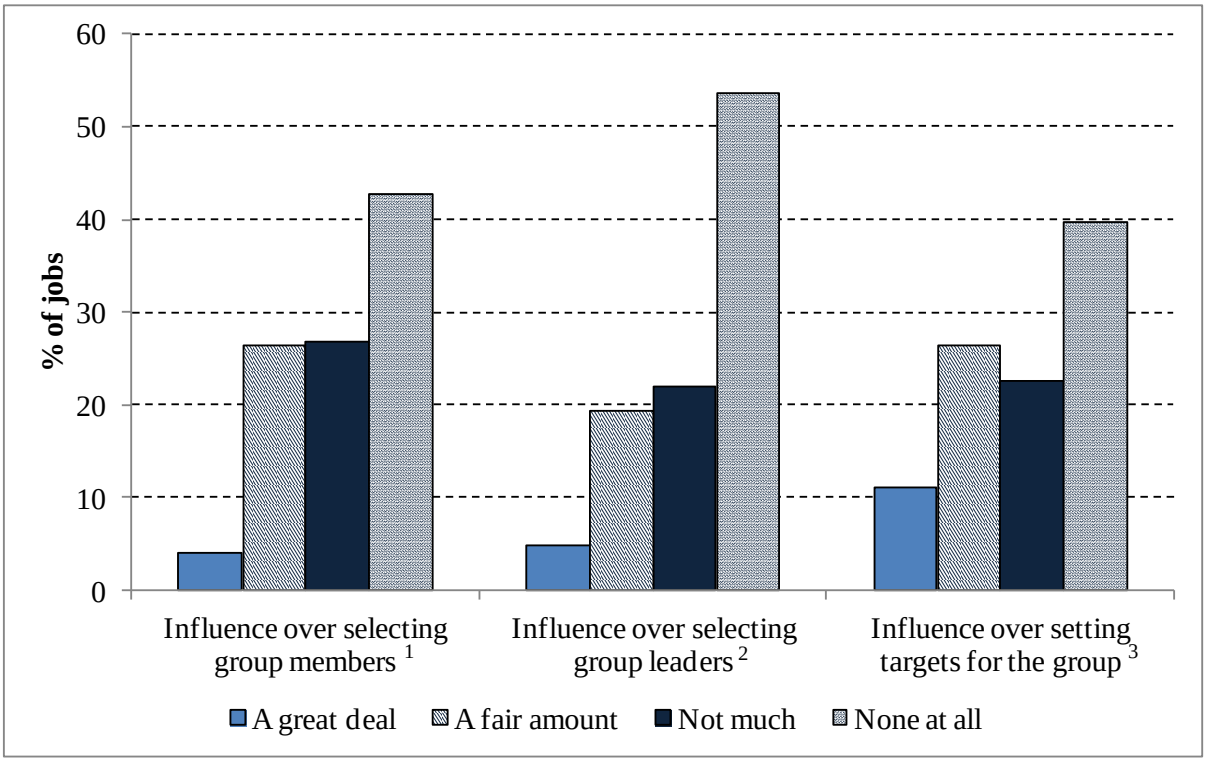


Notes:

1. Respondents who reported working as part of group (58% of the employee sample) were asked: 'Earlier, you said you work as part of a group. Thinking about the group in which you spend most time, and excluding the supervisor if there is one, how much influence do the others in this group have on how hard you work?'
2. Respondents were asked: 'And how much influence does your work group have on deciding what tasks you are to do?'
3. Respondents were asked: 'And how much influence does your work group have on deciding how you are to do the task?
4. Respondents were asked: 'And how much influence does your work group have on deciding the quality standards to which you work?

In addition, respondents were also asked about three further aspects of group task discretion. These included the influence that their work group had over the selection of group members, the selection of group leaders and the setting of targets. Figure 6.4 considers how much influence the respondents work group has with respect to the membership and operation of the group as a whole. It can be seen that around 70% report that their group has either not much or no influence on the selection of group members. Approximately three-quarters of respondents report that their group has no influence over the selection of group leaders. Finally, almost two-thirds (62%) of those who work in groups have not much or no influence in setting targets for the group.

Figure 6.4:
Self Management in Teams, Wales, 2012

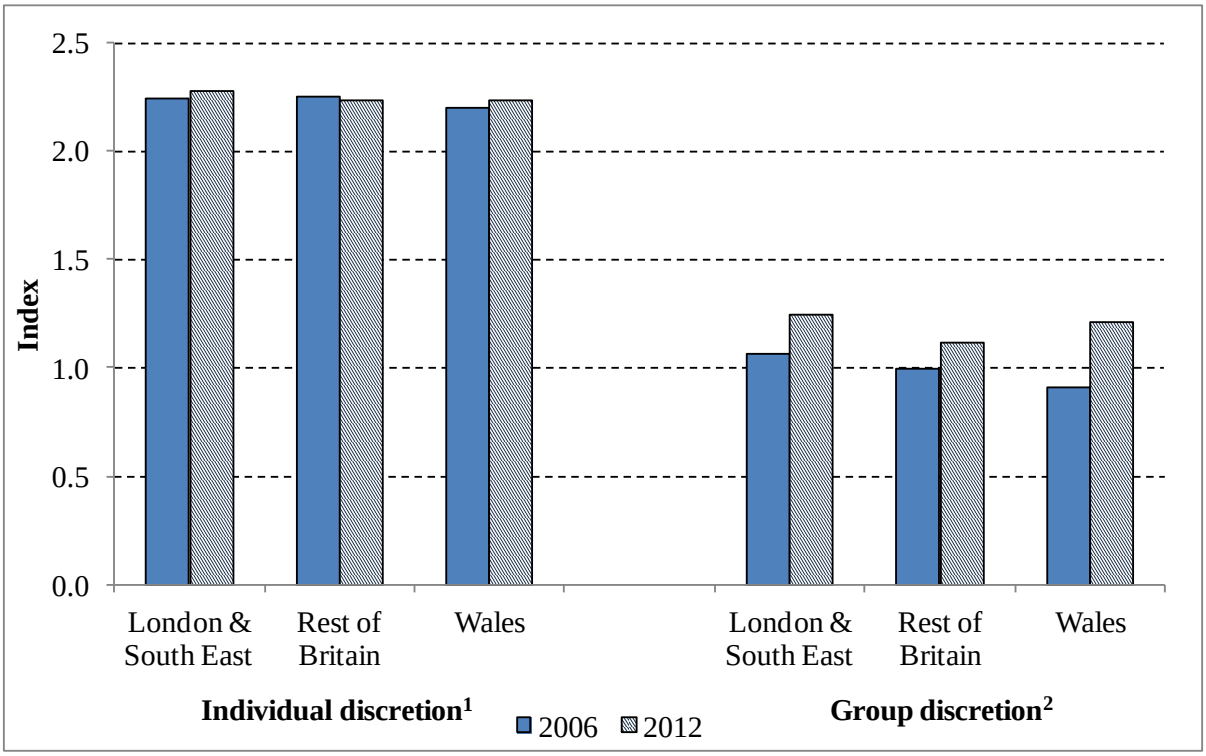


Notes:
1. Respondents were asked: 'And how much influence does your work group have on selecting group members?'
2. Respondents were asked: 'And how much influence does your work group have on selecting group leaders?'
3. Respondents were asked: 'And how much influence does your work group have on setting targets for the group?'

6.2.2 Regional Variations in Individual and Group Task Discretion

Across each of the different dimensions of individual task discretion and (by construction) the composite index of individual task discretion, there is no evidence to suggest that the discretion with which individuals perform their jobs has changed in Wales during the last six years (see Figure 6.5). However, among those workers who work in groups, there does appear to be an increase in the reported influence that other members of a group exert on the work of respondents in Wales, as indicated by an increase in the group task discretion index from 0.91 in 2006 to 1.21 in 2012. This increase in group task discretion is observed across different sub-groups of respondents (results not shown), indicating that the overall change in group task discretion cannot simply be attributed to changes in the composition of the workforce over time. The increase in group task discretion resulted in the disappearance of the gap that existed between Wales and other parts of Britain in 2006.

Figure 6.5:
Regional Variations in Discretion at Work Across Britain, 2006-2012

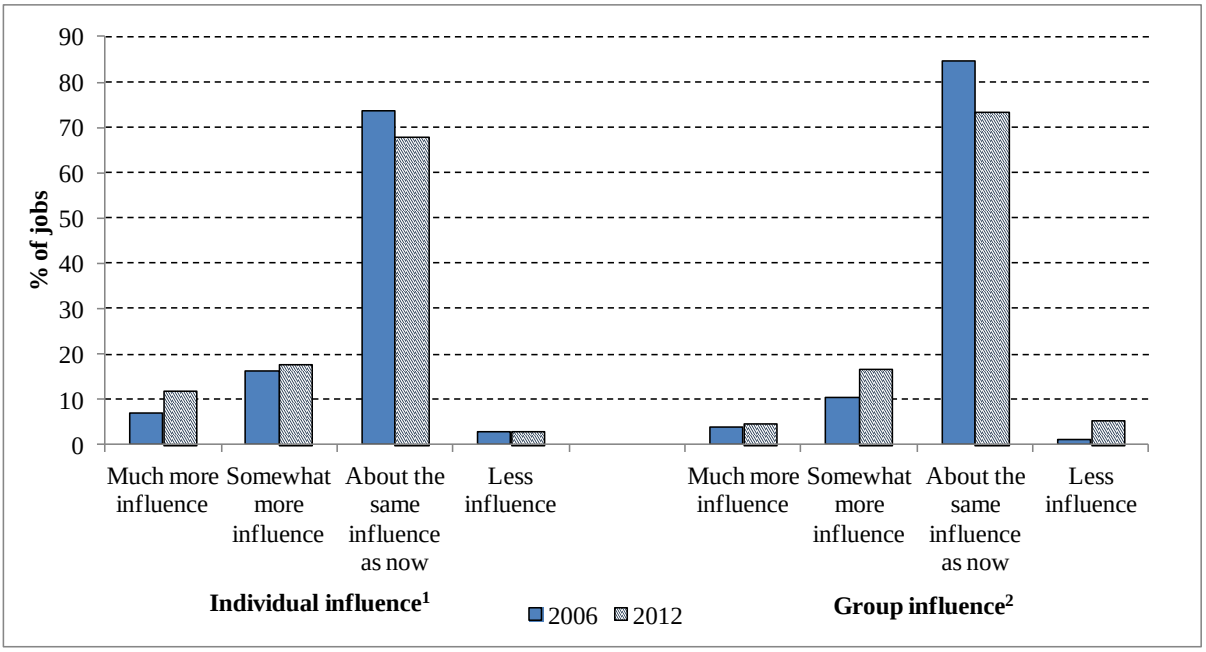


Notes:
1. See Table 6.1 footnote 3.
2. The Group Task Discretion Index allocates scores of 3, 2, 1 and 0 to the responses 'a great deal', 'a fair amount', 'not much' and 'none at all' respectively. This are summed and average is taken produce this Index with a range of 0 to 3.

6.2.3 Satisfaction with Task Discretion

The survey also invited respondents to reflect upon the level of individual and group task discretion. All respondents were asked: 'Thinking about the influence you personally have on the way you are able to do your job, would you like to have more influence, about the same as you have now, or would you prefer to have less influence?. Furthermore, respondents who were a member of a team were asked: 'Thinking about the influence your work group has on the way you are able to do your job, would you like it to have more influence, about the same as it has now, or would you prefer it to have less influence?. Responses to these questions are presented in Figure 6.6. It can be seen that approximately 12% of workers in Wales would like to have much more individual influence over their work. Fewer respondents (5%) indicate that they would like their work group to have much more influence over their work. Approximately 5% of respondents indicated that they would like their work group to have less influence. It can also be seen that since 2006, there has been a clear increase in the desire of workers to have more individual and group influence over how their jobs are performed.

Figure 6.6:
Satisfaction with Discretion at Work, Wales, 2006-2012



Notes:

1. All respondents were asked: 'Thinking about the influence you personally have on the way you are able to do your job, would you like to have more influence, about the same as you have now, or would you prefer to have less influence?'

2. Respondents who were a member of a team were asked: 'Thinking about the influence your work group has on the way you are able to do your job, would you like it to have more influence, about the same as it has now, or would you prefer it to have less influence?'

6.3 Choice and Supervision at Work

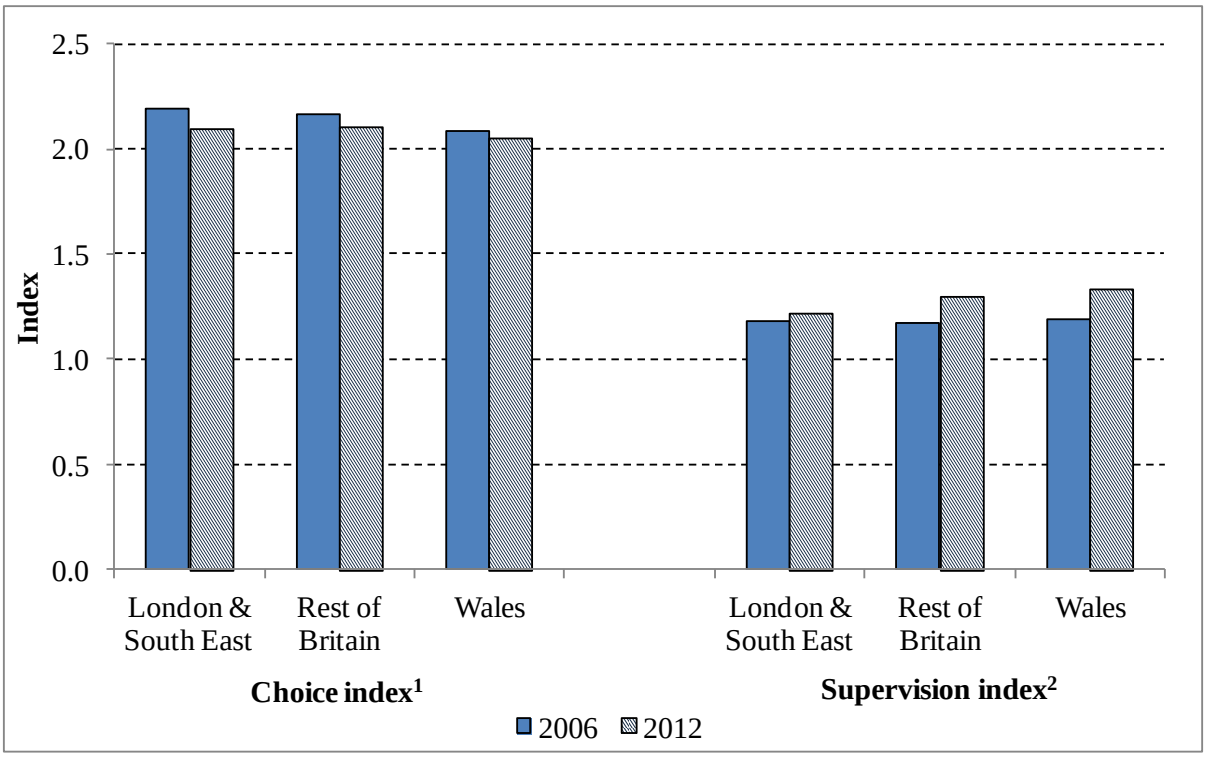
An alternative insight as to the level of control that respondents exert over their work is provided by further questions included in the survey related to choice and supervision. With respect to choice, respondents were asked 'How much choice do you have over the way in which you do your job?' With respect to supervision, respondents were asked 'How closely are you supervised in your job?' The distribution of responses to these questions is provided in Table 6.1. Almost a third of workers (33%) report that they exercise 'a great deal of choice' in the way in which they do their jobs. Only one in five respondents (20%) indicate that they either exercise 'no choice at all' or 'hardly any choice' in how they did their jobs. It can be seen, however, that a lack of choice is not necessarily synonymous with close supervision. Over half of workers (56%) report that they are supervised 'very closely' or 'quite closely', implying that many workers who have choice over their jobs are also being closely supervised in their work. Finally, a further insight in to the level of discretion exercised by workers is provided by the question 'How much do you agree or disagree with the following statement – I can decide the time I start and finish work?' It is observed that almost two-thirds of respondents (64%) disagree with this statement.

To examine differences in these responses between population sub-groups, summary measures of these variables are created. A Choice Index is derived by awarding values of 0, 1, 2 and 3 to responses indicating increasing levels of choice.

Similarly, a Supervision Index is derived by awarding values of 0, 1, 2 and 3 to responses indicating increasing levels of supervision. Finally, discretion over working time is summarised by the proportion of respondents who agree with the statement that they can decide what time they start and finish work. Analysis reveals (see Table 6.2) that levels of choice are highest among those in more highly skilled occupations and those workers who are self-employed. Levels of supervision are lowest among those working in small workplaces and the self-employed; whilst younger workers report that they are subject to relatively high levels of supervision. Finally, older workers, those in managerial and professional occupations, those working in small workplaces and the self-employed exhibit the highest levels of discretion in terms of when they start and finish work.

Figure 6.7 provides information on regional variations on levels of choice and supervision at work. It can be seen that in both 2006 and 2012, workers in Wales appear to exhibit relatively low levels of choice over how they do their jobs. However, this gap appears to have narrowed between 2006 and 2012 as levels of choice elsewhere in Britain appears to have declined, particularly in London and the South East. Declining levels of choice among workers over how they do their jobs have coincided with increased levels of supervision. During 2006, relatively little variation was observed in the degree of supervision experienced by workers in different parts of Britain. Since this time, an increase in closeness of supervision has been particularly apparent outside of London and the South East.

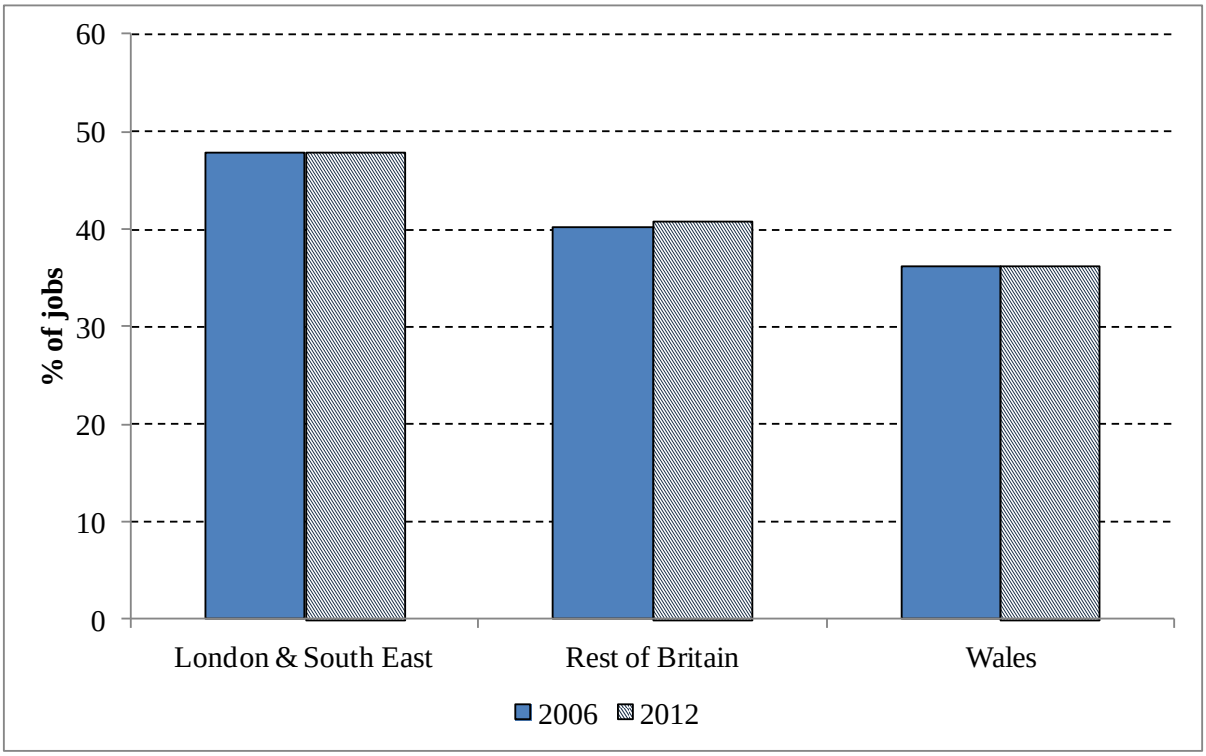
Figure 6.7:
Regional Variations in Choice and Supervision at Work Across Britain, 2006-2012



Notes:
1 and 2, See Table 6.1 footnotes 1 and 2 respectively.

Workers in Wales are demonstrated to have both the lowest levels of choice over how they do their jobs and are subject to the highest levels of supervision during 2012. This picture is consistent with regional variations in the ability of workers to decide their start and finish times presented in Figure 6.8. Whilst there are no discernible trends over time, it can be seen that in both 2006 and 2012, approximately a third workers in Wales (36%) agree that they have some choice over when they start and finish work. This is compared to almost half workers in London and the South East (48%) and approximately four out of ten workers in the Rest of Britain.

Figure 6.8:
Regional Variations in Ability to Decide Start/Finish Time[1] Across Britain, 2006-2012



Notes:
1. See Table 6.1 footnote 3.

6.4 Organisational Participation

The SES2012 includes a suite of questions relating to the degree to which workers are involved in organisational decision making and their satisfaction with communication arrangements. An overview of responses to these questions from workers in Wales is provided in Table 6.3. An initial question on organisational participation asked whether management organise meetings that provide information about what is happening in the organisation. In Wales, more than three-quarters of those in employment (76%) reported that managers arranged such meetings. Respondents to the SES2012 were also asked whether they had actually made any suggestions over the course of the last year to people that they work with, or to their managers, about ways of improving the efficiency with which work is carried out. Table 6.3 reveals that approximately a third of workers in Wales made no such suggestions during the course of the last year. Over 40% of workers

in Wales report being either very or completely satisfied with arrangements for communication. Nonetheless, 40% of workers in Wales also report that they would like more say in decisions.

Responses to these questions among different sub-groups of the working population are presented in Table 6.4. It can be seen that older workers (82%), those employed in managerial and professional occupations (85%), those employed at larger workplaces (82%) and those employed in the public sector (88%) are more likely to report that managers arrange meetings to inform staff. It must be noted that the interpretation of these responses should be treated with some caution. These differences will, in part, reflect real differences in communication practices between different types of workplace (e.g., such as the emphasis placed on divisional/directorate level meetings within the public sector), they will also reflect the exposure of workers to these communication activities (e.g., younger workers perceiving lower levels of workplace communication) and whether or not the respondents to the survey are themselves in a management position (as is alluded to by the variations in response according to occupation held).

The relative incidence with which different groups of workers report having made a suggestion during the past year follows a similar pattern to that of the arrangement of meetings to inform staff. However, it is generally observed that the degree of variation in response to this question is smaller, indicating that the apparent availability of meetings to inform staff does not necessarily increase the propensity of different groups of staff to make suggestions. The largest differences in the propensity to make suggestions are those that are observed between staff within different occupational groups. Whilst almost eight out of ten workers (78%) employed within managerial and professional occupations indicated that they had made a suggestion during the past 12 months, only 53% of those employed in routine and elementary occupations indicated the same.

To summarise levels of satisfaction with communication arrangements between management and workers, the responses collected on the seven-point scale described in Table 6.3 were converted to a score ranging from 3 for completely satisfied to -3 for completely dissatisfied. Table 6.4 reports the average values for these scores among different sub-groups of respondents. It can be seen that women (1.23) and those working at smaller workplaces (1.24) report the highest levels of satisfaction with communication arrangements. Despite the apparent availability of meetings with management, those employed in large organisations are among those who least satisfied (0.94) with communication arrangements. The final column of Table 6.4 generally confirms that those who are least satisfied with communication arrangements are also more likely to indicate that they would like more say in decisions. The exception to this is with respect to occupation where, despite apparent dissatisfaction with communication arrangements, those employed in routine and elementary occupations do not indicate that they would like more say in decisions.

Finally, Table 6.5 presents summaries of these four measures of organisational participation for Wales compared to other parts of Britain. It can be seen that, across all areas, there has been a reported increase in the proportion of workers who report that managers arrange meetings to inform staff. Overall, workers in Wales are more satisfied with communication arrangements at their workplace, although levels of satisfaction have fallen slightly between 2006 and 2009. However, suggestions are less frequently made in

Wales than elsewhere. The relatively low incidence with which Welsh workers made suggestions in 2006 was compounded further by the relatively large decline (five percentage points) in suggestions made by Welsh workers between 2006 and 2012.

6.5 Summary of the Main Findings

Exercising influence at work is one of the most important factors affecting motivation and psychological well-being, and it is also associated with good health. There is also an economic case for increased job control with some studies suggesting that it enhances business performance. The survey evidence suggests that more needs to be done in Wales to reap these benefits.

- Nine out of ten workers in Wales report that they exert either a 'great deal' or 'fair amount' of individual discretion in the way in which they perform their jobs. Task discretion is lowest among younger workers, those working in elementary and operative occupations and those based in larger workplaces. Just under a third of workers indicated that they would like to have more influence – as individuals – over their work tasks.

- One in five workers say that they either exercise 'no choice at all' or 'hardly any choice' in how they do their jobs. However, almost half of workers indicate that they are supervised either 'quite closely' or 'very closely' in their work. Two thirds of workers in Wales indicate that they do not have any discretion over when they chose to start or finish work.

- Those working managerial and professional occupations, the self-employed and those based in small workplaces generally report higher levels of choice in how they do their jobs, lower levels of supervision and greater discretion of over working time.

- Approximately three-quarters of workers report that management at their workplace organise meetings where they are informed about what is happening in the organisation. However, a third of workers have not made any suggestions to management or colleagues during the last year with respect to improving efficiency at the workplace. This figure increases to approximately half among those workers employed in routine and elementary occupations.

- Workers in Wales are generally more satisfied with arrangements for communication at the workplace than those in other areas of Britain, although workers in Wales are less likely to make suggestions than those working in other parts of Britain.

Table 6.1:
Choice and Supervision at Work, Wales, 2012

Supervision and choice	Percentage
Choice over doing job[1]	
A great deal of choice	32.6
Some choice	47.5
Hardly any choice	13.0
No choice at all	7.0
Choice Index	2.1
Degree of supervision[2]	
Not at all closely	21.6
Not very closely	34.1
Quite closely	33.6
Very closely	10.6
Supervision Index	1.3
Ability to decide when to start and finish work[3]	
Strongly agree	14.0
Agree	22.2
Disagree	29.8
Strongly disagree	33.9

Notes:
1. Responses taken from the question: 'How much choice do you have over the way in which you do your job?'
2. Responses taken from the question: 'How closely are you supervised in your job?'
3. Taken from responses to the question: 'How much do you agree or disagree with the following statement - I can decide the time I start and finish work?'

Table 6.2:
The Relative Incidence of Choice and Supervision at Work, Wales, 2012

	Choice index[1]	Supervision index[2]	Ability to decide start/finish[3]
Gender			
Male	2.1	1.3	37.1
Female	2.0	1.4	35.3
Age group			
20-34	2.0	1.6	30.5
35-49	2.1	1.3	38.6
50-64	2.1	1.1	38.5
Occupation			
Managerial and professional (SOC 1-3)	2.3	1.2	50.5
Admin, trades and services (SOC 4-7)	2.0	1.5	33.6
Operatives and Other (SOC 8-9)	1.7	1.3	15.0
Workplace size			
Up to 24 workers	2.3	1.0	49.1
25 workers and over	1.9	1.6	24.9
Employment status			
Employee	2.0	1.4	29.3
Self employed	2.4	0.8	77.4
Total	2.1	1.3	36.3

Notes:
1, 2 and 3, See Table 6.1 footnotes 1, 2 and 3 respectively.

Table 6.3:
Organisational Participation in Wales, 2012

	Percent
Managers arrange meetings to inform staff[1]	76.1
Made suggestions in the last year[2]	
Yes, more than once	58.0
Yes, once	9.1
No	32.9
Satisfaction with communications[3]	
Completely dissatisfied	1.9
Very dissatisfied	2.8
Fairly dissatisfied	7.7
Neither	10.8
Fairly satisfied	35.9
Very satisfied	30.9
Completely satisfied	10.1
Satisfaction with say in decisions[4]	
Satisfied	59.8
Want more say	40.2

Notes:

1. Responses taken from the question: 'At your workplace, does management organise meetings where you are informed about what is happening in the organisation?'

2. Responses taken from the question 'Over the last year have you ever made suggestions to the people you work with, or to your managers, about ways of improving the efficiency with which work is carried out?'

3. Responses taken from the question: 'Overall, how satisfied are you with communications between management and employees in your organisation?'

4. Taken from responses to the question: 'Do you think that you should have more or less say in the decisions that affect your work, or are you satisfied with the way things are?'

Table 6.4:
Variations in Organisational Participation in Wales, 2012

	Managers inform staff with meetings[1]	Made suggestion in past year[2]	Mean satisfaction with communications[3]	More say in decisions[4]
Gender				
Male	72.4	66.6	0.96	44.7
Female	80.0	67.7	1.23	35.3
Age				
20-34	71.5	61.9	1.14	34.2
35-49	75.0	66.7	1.05	45.3
50-64	82.1	73.0	1.09	38.9
Occupation				
Managerial and professional (SOC 1-3)	85.3	78.4	1.10	41.9
Admin, trades and services (SOC 4-7)	77.6	63.7	1.16	39.3
Operatives and other (SOC 8-9)	55.4	52.9	0.94	38.7
Industry				
Production	76.9	69.0	1.01	46.5
Service	75.7	66.5	1.12	37.9
Workplace size				
Up to 24 workers	66.5	65.9	1.24	31.9
25 workers and over	82.3	69.6	0.95	45.4
Sector				
Public	88.0	70.1	1.02	41.8
Private	68.9	65.5	1.13	39.2
Total	76.1	67.1	1.09	40.2

Notes:
1, 2, 3 and 4, see Table 6.3.

Table 6.5:
Geographical Variations in Organisational Participation Across Britain, 2006-2012

	London & South East		Rest of Britain		Wales	
	2006	**2012**	**2006**	**2012**	**2006**	**2012**
Managers arrange meetings to inform staff[1]	76.5	79.8	72.9	74.9	72.9	76.1
Made suggestions in the last year[2]	76.7	74.6	74.5	72.7	72.1	67.1
Mean satisfaction with communications[3]	0.94	1.07	0.92	0.93	1.13	1.09
More say in decisions[4]	40.3	38.9	40.9	41.3	39.6	40.2

Notes:
1, 2, 3 and 4, see Table 6.3.

CHAPTER SEVEN:
WORK EFFORT AND WELL-BEING

7.1 Introduction

Work has long been acknowledged as an important social determinant of health with research being conducted as to how a range of workplace, personal and job characteristics influence the well-being of workers. A well developed literature which attempts to measure and examine the determinants of work-related health has emerged across academic disciplines (see Benavides *et al*., 2000; Benach *et al*., 2004). The central theme within the literature has been on substantiating the link between current working conditions, including physical and psychosocial risks, and health. Recent attention has focused on work-related psychological stress and the interaction between the organisation of work, the psychosocial work environment and employee health. Epidemiological research within the UK, such as the Whitehall civil service studies, has suggested a strong relationship between levels of employee work demands, job control and social support, and inequalities in health status (Marmot *et al*., 1991; 1997). Perceived stress at work is widespread in the UK (Smith *et al*., 2000). Indeed, the World Health Organisation has identified work stress as a worldwide epidemic (Leka *et al.*, 2003), and one which is strongly linked to ill-health in general (Jones *et al*., 1998).

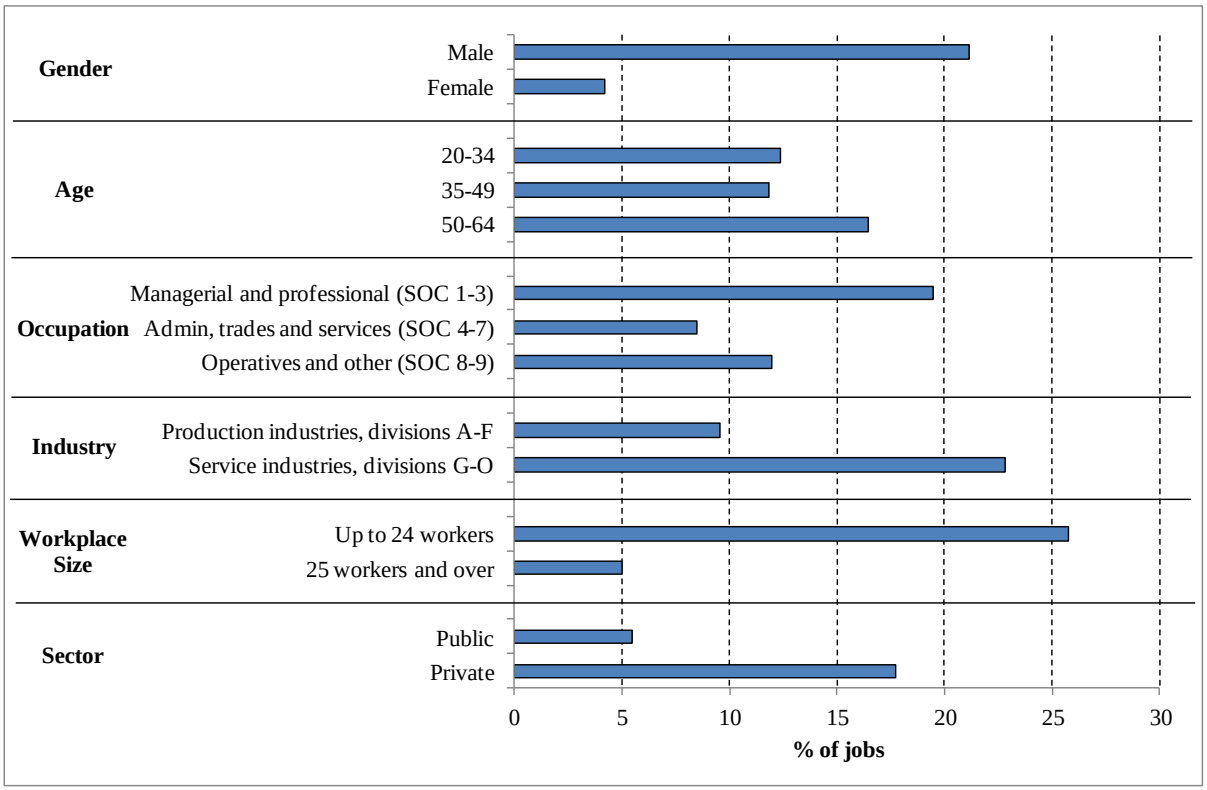
Whilst work has been shown to impact directly upon health, the effects of the global recession on work related well-being and ill-health is less clear. Some researchers have indicated that the global recession is likely to lead to even more examples of stress-related illnesses and adverse occupational health outcomes (Cooper, 2009). Possible causal mechanisms relate to stress associated with job insecurity, deferral of investment in new plant and equipment that embodies the most up-to-date health and safety standards, or the reliance upon the intensification of labour to meet demand as opposed to the recruitment of new staff. Alternatively, reductions in demand may lead to the hoarding of labour during a recession. Such hoarding behaviour may be associated with a reduction in the pace of working. Secondly, in the absence of recruiting new and relatively inexperienced workers, the average experience of the incumbent workforce will increase, further contributing to higher average levels of well-being among existing staff. It is therefore unclear as to how levels of work related well-being would have been expected to vary between 2006 and 2012.

7.2 Work Intensification

In this chapter we examine worker reports of work intensity. The 2006 and 2012 surveys ask respondents about their working hours. Information is collected on usual weekly hours; that is, the usual number of hours worked per week including both paid and unpaid overtime. An individual is defined as working long hours if they work longer than 48 hours per week. Figure 7.1 indicates that in Wales, 13% of those in employment are working 'long hours'. However, clear differences emerge between different sub-groups of the population. Long hours working is observed to be much more prevalent among men (21%), older workers (17%) and those working in managerial, professional or associate professional occupations (20%). Most strikingly, the incidence of long hours working is approximately five times greater among those who are self-employed (45%) compared to those who are working as employees (9%). In terms of workplace characteristics, working long hours is more prevalent in the service sector of the economy

(23%) as opposed to those working in the production sector (10%); in smaller (26%) as opposed to larger workplaces (5%); and in the private sector (18%) as opposed to the public and non-profit sector of the economy (6%).

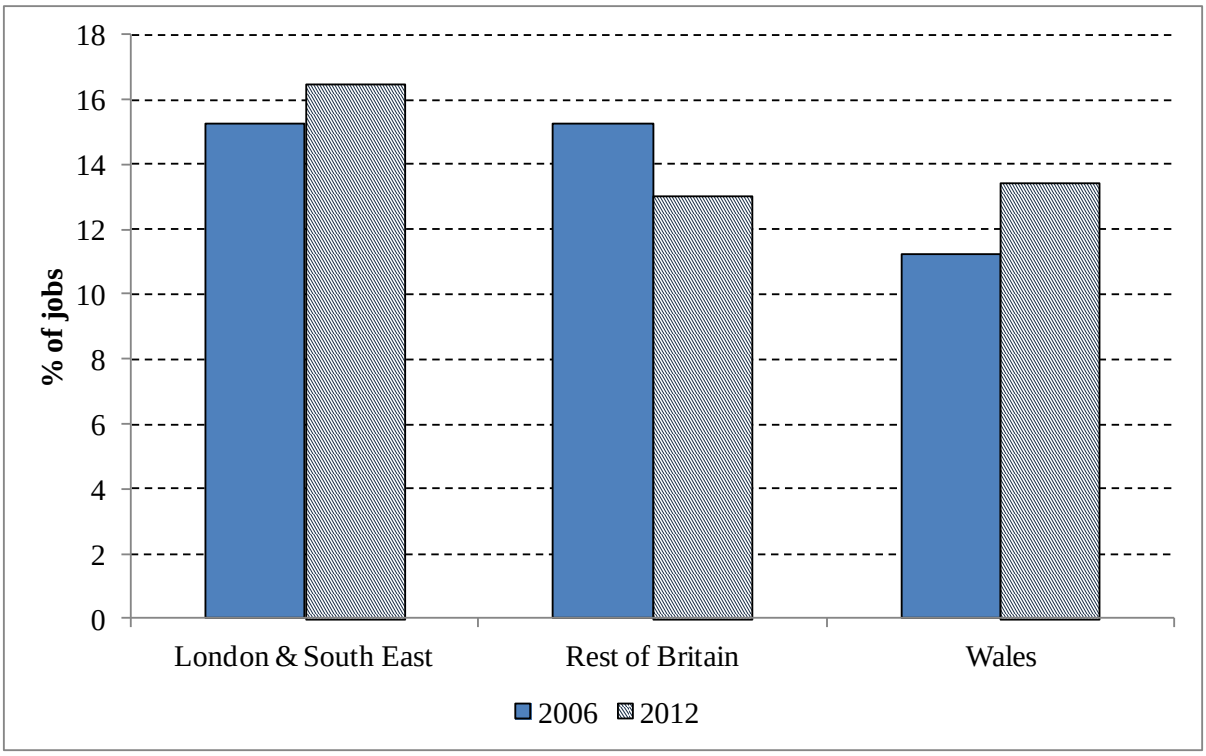
Figure 7.1:
The Incidence of Long Hours Working[1] in Wales, 2012



Note:
1. Respondents are asked 'How many hours per week do you usually work, excluding meal breaks but including usual overtime'.

Within the wider economy, the incidence of long hours working has remained relatively stable between 2006 and 2012 (approximately 15%). However, this overall position disguises differences that emerge between different parts of Britain as shown in Figure 7.2. In Wales, the overall incidence of long hours working has increased by more than two percentage points, from 11% in 2006 to 13% in 2012. This is higher than the one percentage point increase observed in London and the South East, and the two percentage point reduction in the Rest of Britain.

Figure 7.2:
Geographical Variations in the Incidence of Long Hours Working[1] Across Britain, 2006-2012



Note:
1. See footnote Figure 7.1.

SES2012 asks respondents about a number of issues related to the level of effort they put in to their job and, of particular importance, the discretion associated with this effort. Respondents were asked to what extent they agree with the following statements: 'My job requires that I work very hard' and 'I work under a great deal of tension'. The distribution of responses to these questions are provided in Table 7.1. It can be seen that approximately nine out of ten workers in Wales either strongly agree or agree with the statement that their job requires them to work very hard. Whilst there is little change in this figure between 2006 and 2012, it is observed that proportion of workers in Wales who strongly agree with this statement fell by eight percentage points, suggesting lower levels of work intensity during the economic crisis. In terms of the proportion of workers who agree with the statement that their work requires them to work under a great deal of tension, figures for 2012 suggest that levels of tension at the workplace have not changed greatly.

These two measures of intensity therefore do not appear to coincide with increased incidence of long hours working observed in Wales. Two further questions in the SES2012 asked respondents 'How much effort do you put into your job beyond what is required?' and how true do they regard the following statement 'I often have to work extra time, over and above the formal hours of my job, to get through the work or to help out'. Approximately seven out of ten workers report that they put more effort in to their jobs than what is required. Only 8% of workers report that they exert only a little or no extra effort in their jobs. Over a half of workers (53%) report that they have to work

extra time to get through their job over and above their formal hours of employment. It is observed that the proportion of those in employment who report that this statement is 'very true' has increased by three percentage points between 2006 and 2012, providing further circumstantial support for the argument that the incidence of long hours working in Wales has increased.

7.3 Job Strain, Job Stress and Exhaustion from Work

Working long hours and at high levels of intensity can be associated with significant costs to those involved, such as an increase in the risk of workplace accidents or an increased incidence of work related ill-health. Significant costs can also be imposed upon the families of those working intensively in terms of family breakdown. However, it must also be acknowledged that high level of work intensity can also bring benefits in terms of higher earnings and opportunities for promotion. Indeed, work provides more than simply a source of income for many in employment, such as intrinsic interest and a sense of belonging. Previous research has therefore established that the effects of work intensity have to be considered in the context of the level of autonomy that can be exercised at work.

The most widely used model of job strain is the model of job demand and job control proposed by Karasek (1979). The basic hypothesis of his model was that the negative health outcomes of stress occur most often when the worker has to work hard, but enjoys low levels of autonomy. Ideally, demanding work should be accompanied by a higher degree of control. We combine the responses to a number of survey questions in order to identify jobs where workers report high work effort in the context of low job control. 'High strain' jobs are defined as those in which respondents 'strongly agree' or 'agree' with the statement that 'my job requires that I work very hard' and they have little say over at least one of the following: work intensity; task selection; task execution; and quality standards.

It can be seen in Table 7.2 that almost a third of workers in Wales are in high strain jobs. It can be seen that males (34%), younger workers aged 20-34 (37%) and those employed in elementary or routine process occupations (46%) are most likely to indicate that their jobs are high strain. In terms of workplace characteristics, those in larger workplaces with more than 25 workers (38%) and those employed in the private sector (33%) are most likely to indicate that their jobs are high strain. Higher levels of strain emerge in the private sector despite the higher levels of worker effort reported among workers in the public sector, reflecting the relatively high levels of autonomy at work among those in the public sector.

As well as job strain, the 2012 and 2006 surveys also collected data on job stress. Column 2 of Table 7.2 uses a derived index of job stress that was obtained by averaging responses to three questions about the frequency of experiencing 'worry about job problems', 'difficulty to unwind at the end of a workday', or 'feeling used up at the end of a workday'. The responses to these questions ranged from 1 ('never') to 6 ('all of the time'). On the basis of this index, a score of 2 or below is taken as indicating low job stress. It can be seen that males (47%), those aged 50-64 (54%) and those employed in elementary or routine process occupations (56%) are the most likely occupiers of low stress jobs. In terms of workplace characteristics, those in the services sector (45%),

those based in larger workplaces (47%) and those in the private sector (45%) are more likely to be in low stress jobs.

Finally, the third column of Table 7.2 presents information on the proportion of workers who report that they always or often come home from work feeling exhausted. Almost half (47%) of Welsh workers report that they either always or often feel exhausted when they get home from work. Generally, levels of exhaustion tend to show less variation between different sub-groups of those in employment compared to levels of job stain or job stress. The largest differences emerge in terms of sector, where 54% of those working in the public sector report feeling exhausted when they get home compared to 44% of those in the private sector.

In terms of geographical comparisons, those working in London and the South East are most likely to report feeling exhausted when they get home (48% in 2012). However, relatively little difference is observed in this measure either when comparing different parts of Britain or when comparing changes between 2006 and 2012. Wider variations, however, occur in the incidence of high strain and low stress jobs. It can be seen in Figure 7.3 that Wales exhibits a decline in the proportion of workers employed in high strain jobs of five percentage points. In the context of relatively stable levels of work intensity, this reduction will therefore reflect increased levels of autonomy among Welsh workers. It can be seen that Wales exhibits lower levels of employment in high strain jobs compared to other parts of the country.

Across all areas of Britain levels of job-related well-being have declined between 2006 and 2012, with the proportion of workers reporting low levels of job stress declining. This reduction in job-related well-being in most apparent in London and the South East, as represented by a decline of six percentage points in the proportion of workers reporting low levels of job stress. In both 2006 and 2012, Wales exhibits the highest proportion of workers who are employed in jobs that are characterised by low levels of job stress. During 2012, the proportion of workers in low stress jobs is approximately ten percentage points higher in Wales (44%) compared to London and the South East.

Figure 7.3:
Regional Variations in Job Strain and Job Stress Across Britain, 2006-2012

Notes:
See Table 7.2, footnotes 1 and 2 respectively.

7.4 Occupational Health

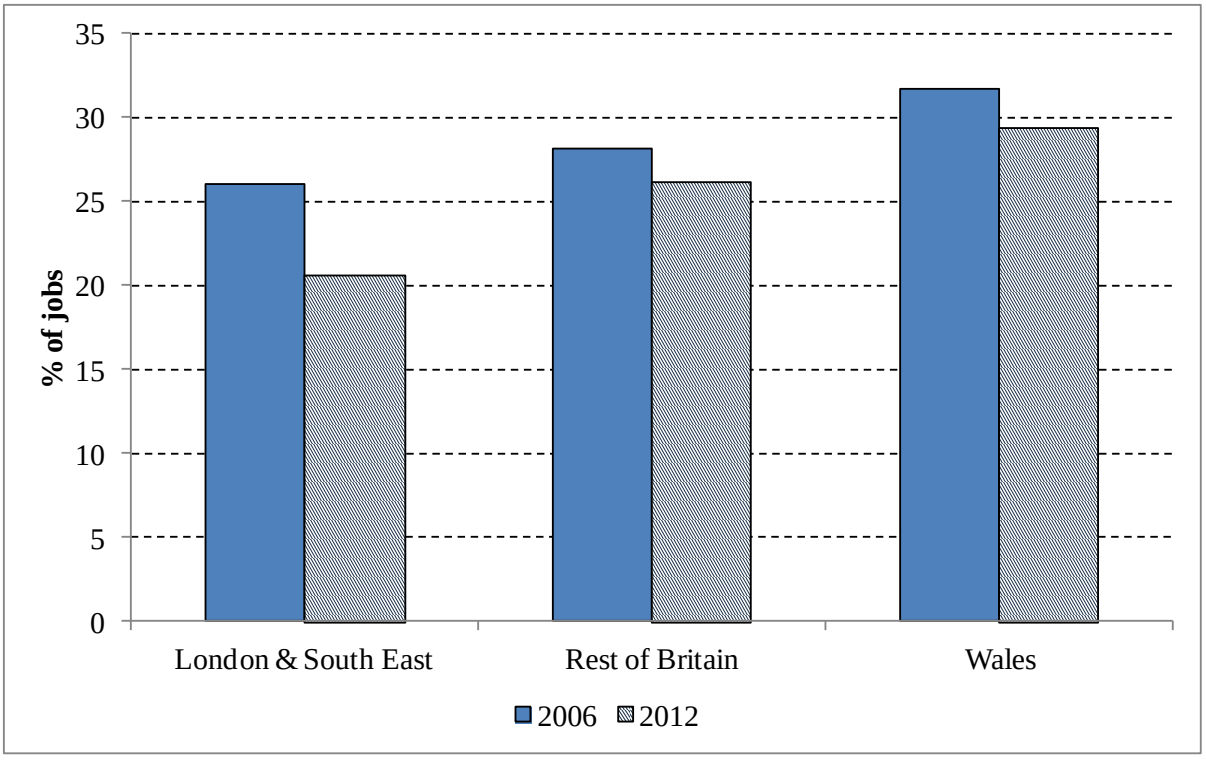
Previous research reveals that high levels of work strain is associated with lower levels of occupational health. To directly capture the opinions of respondents on this issue, the surveys ask whether respondents feel that their health and safety is at risk because of their job. It is acknowledged at the outset that there are well documented problems associated with subjective self-reported assessments of occupational ill-health, such as the ability of survey respondents to accurately diagnose whether or not an existing health condition has actually been caused by their work, or their ability to assess whether certain workplace characteristics are associated with poorer health outcomes. However, in the absence of diagnoses from medical practitioners or the assessments of health and safety professionals, such subjective assessments are commonly used in surveys of working conditions such as the European Working Conditions Survey. The 2006 and 2012 surveys therefore provide a unique insight in to the perceptions of workers regarding the risks to their health posed by their jobs.

Almost a third (29%) of workers in Wales report that they believe their health and safety to be at risk as a result of their jobs. Whilst the question is designed to encompass both physical and psychosocial impacts of work upon ill-health, the variations that emerge in perceptions of risk to health between different population sub-groups generally reflect exposure to physical hazards. For example, men (38%) are more likely than women (20%) to report that their health and safety is at risk. This is undoubtedly because of gender differences in the occupational composition of employment. This is further

demonstrated in the analysis by industry, where more than four out of ten workers in the production sector (45%) report that they are at risk compared to approximately one in four workers (23%) employed in the services sector.

Figure 7.4 demonstrates that the perceptions of perceived risks to health and safety have declined across all areas between 2006 and 2012, although this decline is most apparent among workers based in London and the South East (a decline of five percentage points). During 2012, workers in Wales are most likely to perceive that their health and safety is a risk as a result of their jobs. Again, this is likely to reflect differences in the industrial composition of employment in Wales compared to other parts of Britain with heavy industry and manufacturing employment associated with increased exposure to physical hazards.

Figure 7.4:
Geographical Variation in Health and Safety[1] Across Britain, at Risk, 2006-2012



Note:
1. Responses taken from the question 'Do you think your health and safety is at risk because of your work?' to which respondents could reply 'yes' or 'no'.

7.5 Job Enthusiasm, Contentment and Satisfaction

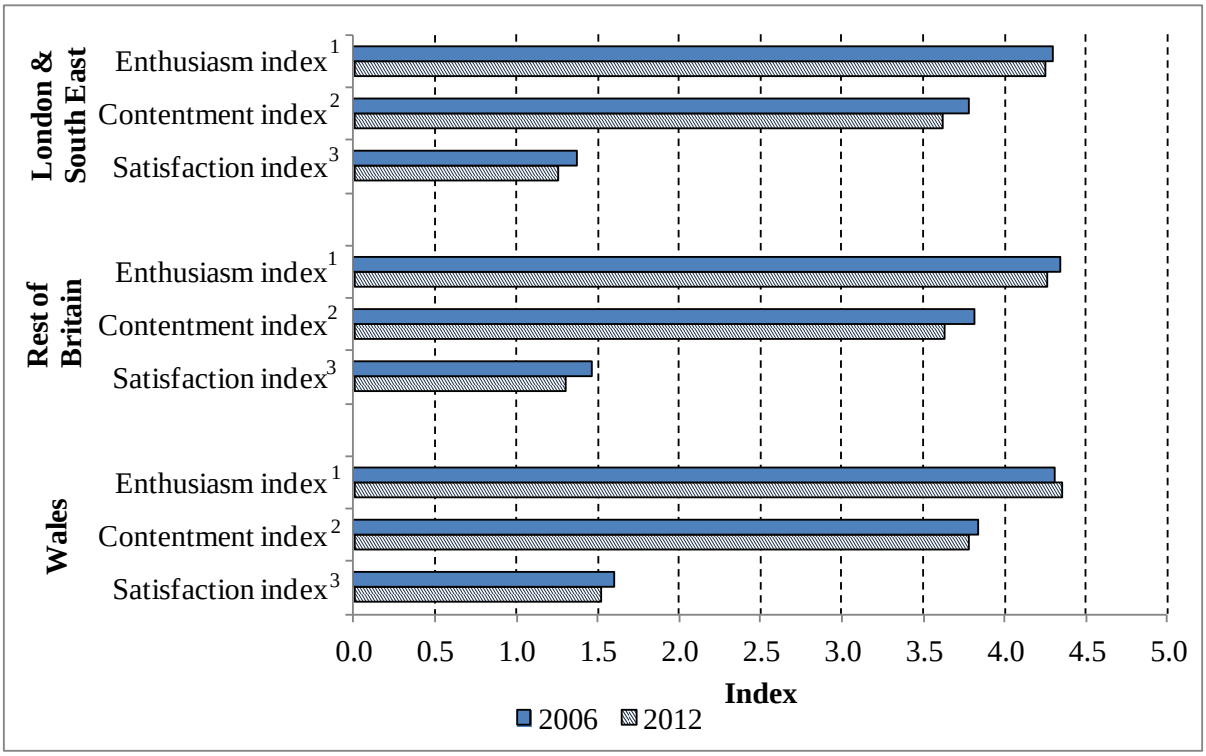
In the final section of this chapter, we present information on three further measures of subjective job-related well-being that place particular emphasis upon levels of satisfaction with work. As opposed to a simple 'catch all' question related to overall levels of satisfaction with work, the analysis uses a more sophisticated concept of job related well-being using Warr's (1990) enthusiasm-depression and contentment-anxiety scales. The SES2012 included a series of questions that were introduced with the words 'Thinking about the past few weeks, how much of the time has your job made you feel

each of the following?', each followed by an adjective describing a different feeling. The enthusiasm scale ranges from the feeling of 'depression' (low pleasure, low arousal) to its opposite, 'enthusiasm' (high pleasure, high arousal). The contentment scale ranges from 'anxiety' (low pleasure, high arousal) to its opposite, 'contentment' (high pleasure, low arousal). The adjectives used for the contentment scale included 'tense', 'uneasy', 'worried', 'calm', 'contented' and 'relaxed'. A third measure of job satisfaction was obtained from the combined responses to questions about 14 separate domains of work. The responses to these questions were averaged, ranging from -3 ('completely dissatisfied') to +3 ('completely satisfied').

Table 7.3 presents data on these three measures of job-related well-being for workers in Wales. For each index, higher values represent higher levels of well-being or job satisfaction. The importance of distinguishing between the measures of enthusiasm and contentment becomes apparent as it can be seen that high levels of contentment do not necessarily correspond with high levels of enthusiasm and vice versa. Those workers that exhibit higher levels of enthusiasm include older workers, those employed within managerial and professional occupations, those in small workplaces and (perhaps tautologically) the self-employed. Older workers, those working in small workplaces and the self-employed also exhibit higher levels of contentment. However, contentment was also observed to be higher among those employed in low skilled routine and elementary occupations and those employed in the private sector. In terms of the overall measure of job satisfaction, older workers, those employed within occupations characterised by intermediate levels of skills, those in the production sector, those employed in smaller workplaces and the self-employed appear to exhibit the highest levels of job satisfaction.

Figure 7.5 provides an overview of geographical variations in the three measures of job-related well-being. It can be seen that whilst there was little variation observed in levels of enthusiasm in 2006, by 2012 regional differences had emerged with enthusiasm levels in Wales bucking the national trend by rising at a time when well-being was declining elsewhere. In terms of the contentment scale, workers in Wales were more contented than elsewhere both in 2006 and 2012. While that pattern did not change it became more pronounced given the fact that contentment levels in Wales fell more slowly than those in either the Rest of Britain or London and the South East. There was a six point fall in the contentment index in Wales between 2006 and 2012 compared to 18 and 16 point declines in the Rest of Britain and London and the South East respectively. Finally, it can be seen that levels of job satisfaction in Wales were higher in both 2006 and 2012 compared to other parts of Britain. Whilst levels of satisfaction have fallen across all areas, the scale of this decline has been lower in Wales than that observed elsewhere. This means that levels of satisfaction in Wales are notably higher in 2012 than in other parts of Britain. Taking the evidence as a whole, overall, well-being at work in Wales remains higher than elsewhere in Britain.

Figure 7.5:
Regional Variations in Job Satisfaction Across Britain, 2006-2012



Notes:
See Table 7.3, footnotes 1, 2 and 3 respectively.

7.6 Summary of the Main Findings

Happiness at work has become a popular topic with governments now keen to measure well-being not just in terms of economic rewards. However, previous recessions have dampened well-being, even for those who have remained in work, who may have experienced a rise in work intensity. The surveys reported here provide some much needed evidence on both of these issues.

- In Wales, 13% of those in employment are working longer than 48 hours per week. Long hours working is observed to be much more prevalent among men, those working in managerial or professional occupations, the self-employed. In terms of workplace characteristics, working long hours is more prevalent in the production sector of the economy, smaller workplaces and in the private sector.

- Approximately nine out of ten workers in Wales either strongly agree or agree with the statement that their job requires them to work very hard. Several measures suggest that there has been a reduction in levels of worker effort in Wales between 2006 and 2012, while work intensification has risen elsewhere.

- Almost a third of workers in Wales regard their jobs as being high strain (i.e. demanding work but low levels of control). Almost half of workers in Wales report that they either always or often feel exhausted when they get home from

work. Almost a third believe their health and safety to be at risk as a result of their jobs. This is higher than in other parts of Britain.

- Males, younger workers and those employed in elementary or routine process occupations are most likely to indicate that their jobs are high strain. In terms of workplace characteristics, those in larger workplaces and those employed in the private sector are most likely to indicate that their jobs are high strain. There are a lower proportion of high strain jobs in Wales than in other parts of Britain.

- Older workers, those working at smaller workplaces and the self-employed exhibit higher levels of enthusiasm, contentment and job satisfaction. Across Britain, between 2006 and 2012, these three measures of well-being declined. However, the rate of decline was smaller in Wales. Taking the evidence as a whole, in 2012 well-being at work in Wales was higher than it was elsewhere in Britain.

Table 7.1:
Changes in Levels of Worker Effort in Wales, 2012

Aspects of work effort	Percentage	
	2006	2012
Requirement to work hard[1]		
Strongly agree	49.5	41.8
Agree	40.2	48.5
Disagree	9.5	9.3
Strongly disagree	0.8	0.3
Working under a great deal of tension[2]		
Strongly agree	21.7	18.1
Agree	34.3	37.6
Disagree	34.8	40.7
Strongly disagree	9.2	3.7
Exercising discretionary work effort[3]		
A lot	72.3	69.8
Some	19.6	22.1
Only a little	4.6	5.1
None	3.6	2.9
Voluntary overtime[4]		
Very true	27.7	30.9
True	26.0	21.5
Somewhat true	20.1	22.3
Not at all true	26.2	25.4

Notes:
1. Respondents are asked: 'My job requires that I work very hard'.
2. Respondents are asked: 'I work under a great deal of tension'.
3. Respondents are asked: 'How much effort do you put into your job beyond what is required?
4. Respondents are asked: 'How true would you say each of the following statements is about your job: 'I often have to work extra time, over and above the formal hours of my job, to get through the work or to help out'?

Table 7.2:
The Incidence of Job Strain, Job Stress and Exhaustion in Wales, 2012

	High strain[1]	Low stress[2]	Exhausted when get home[3]
Gender			
Male	33.7	47.0	43.5
Female	27.4	39.8	50.9
Age			
20-34	36.6	38.8	47.8
35-49	27.5	39.4	51.5
50-64	29.9	53.6	40.1
Occupation			
Managerial and professional (SOC 1-3)	25.1	32.3	48.0
Admin, trades and services (SOC 4-7)	29.0	48.3	48.0
Operatives and other (SOC 8-9)	45.5	56.0	41.0
Industry			
Production industries, divisions A-F	30.6	41.9	49.8
Service industries, divisions G-O	31.0	44.5	45.7
Workplace size			
Up to 24 workers	21.0	40.3	46.9
25 workers and over	38.1	46.6	47.5
Sector			
Public	27.1	40.2	53.9
Private	32.8	45.4	43.2
Employment type			
Employee	33.6	43.9	46.6
Self-employed	14.8	43.1	48.1
Total	30.9	43.8	46.8

Notes:
1. 'High strain' jobs are defined as those in which respondents 'strongly agree' or 'agree' with the statement that 'my job requires that I work very hard' and they respond 'not much' or 'none at all' to at least one of the

following: ‘How much influence do you personally have on how hard you work?’; ‘….deciding what tasks you are to do?’; ‘….deciding how you are to do the task?’; ‘…..deciding the quality standards to which you work?’

2. Respondents to the survey were asked ‘Thinking of the past few weeks, how much of the time has your job made you feel each of the following...?’ Following this lead, respondents were asked how frequently they felt the following ‘After I leave my work I keep worrying about job problems’; ‘I find it difficult to unwind at the end of a workday’; ‘I feel used up at the end of a workday’. Respondents were asked to choose from 6 options ranging from ‘never’ to ‘all of the time’.

3. .Respondents were asked: ‘How often do you come home from work exhausted?’ Respondents were asked to choose from five options: ‘always’; ‘often’; ‘sometimes’; ‘hardly ever’ and ‘never’.

Table 7.3:
Enthusiasm, Contentment and Satisfaction, Wales, 2012

	Enthusiasm index[1]	Contentment index[2]	Satisfaction index[3]
Gender			
Male	4.31	3.82	1.47
Female	4.39	3.74	1.58
Age			
20-34	4.36	3.77	1.42
35-49	4.29	3.67	1.49
50-64	4.41	3.93	1.66
Occupation			
Managerial and professional (SOC 1-3)	4.46	3.60	1.56
Admin, trades and services (SOC 4-7)	4.34	3.88	1.71
Operatives and other (SOC 8-9)	4.18	3.93	1.09
Industry			
Production industries, divisions A-F	4.35	3.85	1.63
Service industries, divisions G-O	4.35	3.76	1.48
Workplace size			
Up to 24 workers	4.51	3.87	1.66
25 workers and over	4.21	3.70	1.40
Sector			
Public	4.31	3.62	1.56
Private	4.37	3.87	1.44
Employment type			
Employee	4.29	3.72	1.47
Self-employed	4.73	4.15	1.86
Total	4.35	3.78	1.52

Notes:

1. Respondents to the survey were asked 'Thinking of the past few weeks, how much of the time has your job made you feel each of the following...?' Following this lead, respondents were asked how

frequently they felt the following: `depressed', `gloomy', 'miserable', 'cheerful', `enthusiastic' and `optimistic'.

2. The contentment scale is derived from the same suite of questions as the enthusiasm index. The adjectives used for the contentment scale included `tense', `uneasy', `worried', `calm', `contented' and `relaxed'.
3. Respondents were asked 'How satisfied or dissatisfied are you with this particular aspect of your own present job'. Fourteen job related aspects were considered related to pay, promotion prospects, relations with the boss, job security, opportunity to use abilities, ability to use initiative, quality of management, hours, fringe benefits, the work itself, the amount of work, variety in the work, training and the friendliness of co-workers. Respondents were asked to rate each of these on a 7 point scale ranging from 'completely satisfied' to 'completely dissatisfied'.

CHAPTER EIGHT:
ATTITUDES TO WORK

8.1 Introduction

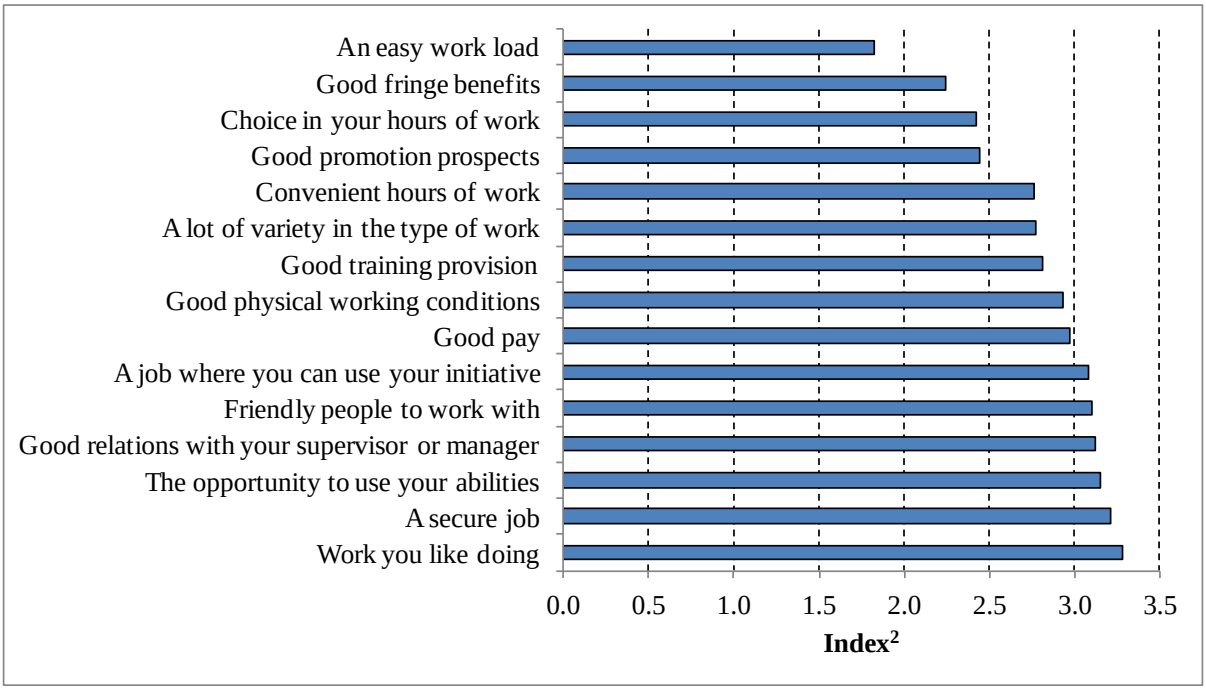
Whether workers' preferences about jobs are changing is of central importance to debates about the quality of work. Since the Lisbon summit of 2000, the European Union has placed the achievement of better jobs as one of the key objectives of the Union alongside that of higher competitiveness (European Commission, 2008). However, what aspects of work are most important to workers and how has the emphasis given to each aspect been changing? The literature provides quite diverse and somewhat speculative answers. Some have argued that workers are becoming increasingly instrumental focusing primarily upon the economic rewards of work; others have suggested that needs for self-realisation in work have become more prevalent with rising economic affluence. If it is the case that workers have been becoming less attached to the intrinsic aspects of work, then policies of job enrichment would seem of relatively low importance. If, on the other hand, expectations have been rising, there should be an increasing urgency to find ways of improving the intrinsic quality of jobs in the interests both of worker motivation and of worker well-being. However, there is currently little empirical evidence about the way in which aspirations of, and satisfaction with, various aspects of job quality have been changing. The surveys reported here also tap into the organisational commitment of respondents. This refers to 'feelings of attachment to goals and values of the organisation, one's role in relation to this, and attachment to the organisation for its own sake rather than for its strictly instrumental value' (Cook and Wall, 1980: 40).

This chapter is organised around these four themes by examining how they are distributed in Wales in 2012 and how they have changed since 2006. Section 8.2 is focused on job orientations of workers, i.e. those characteristics of work that are of importance to respondents. Section 8.3 considers the job preferences and employment commitment of respondents in terms of the relative importance that they place on work and family life. Section 8.4 considers respondents' attitudes to their current employing organisation. The chapter ends with a summary of the main findings.

8.2 Job Orientation

In terms of determining the attitudes of respondents towards work, respondents were asked to rate the importance of a range of job attributes, choosing from one of four options: 'essential'; 'very important'; 'fairly important'; and 'not very important'. To summarise these responses, importance scores were derived based upon the responses given as follows: 'essential' = 4; 'very important' = 3; 'fairly important' = 2; and 'not very important' =1. Respondents were asked to rate the importance of 15 job attributes. Responses to these questions reveal that workers place greatest emphasis upon the importance of working hours and promotion prospects (see Figure 8.1). Relatively low levels of importance are attributed to good promotion prospects, having choice over their hours of work, fringe benefits and having an easy workload. Relatively high levels of importance were attached to having a secure job, having work that respondents liked doing and having the opportunity to use their abilities.

Figure 8.1
Importance of Job Characteristics[1], Wales, 2012

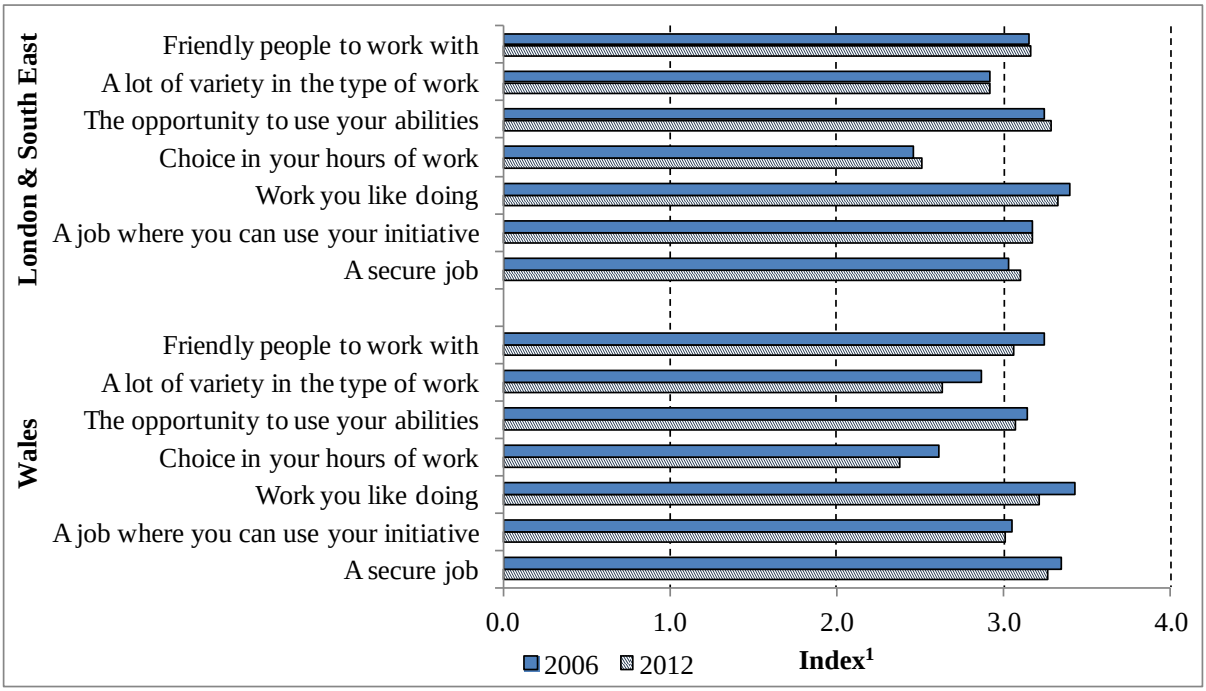


Notes:
1. Respondents were asked: 'I am going to read out a list of some of the things people may look for in a job and I would like you to tell me how important you feel each is for you'. Respondents were asked to choose from four options: 'essential'; 'very important'; 'fairly important'; and 'not very important'.
2. The importance scores rate the responses given as follows: 'essential' = 4; 'very important' = 3; 'fairly important' = 2; and 'not very important' =1.

There are variations in the relative importance of job orientations among workers in different parts of Britain and in particular between Wales and London and the South East. Figure 8.2 presents information on changes in selected job orientations between 2006 and 2012. The analysis only provides information for Wales compared to London and the South East. It is generally the case that estimates for the Rest of Britain takes up an intermediate position and exhibit relatively little change in their importance scores between 2006 and 2012. For ease of exposition, estimates of importance scores for the Rest of Britain are not presented here.

It can be seen that in Wales, having a secure job is regarded as being more important than it is to workers located within London and the South East. Conversely, the ability to use ones' own initiative is regarded as less important in Wales. The relative importance of job attributes tends to remain relatively stable over time. However, there are several examples of job characteristics that have become noticeably less important to workers in Wales between 2006 and 2012. Having a job that respondents like doing, having choice over hours of work, having a lot of variety in the type of work undertaken and having friendly people to work with have all diminished in importance for workers in Wales. This decline has been so great that the level of importance attached to these characteristics is now lower in Wales than it is in other parts of Britain.

Figure 8.2
Geographical Variations in Job Orientations in Britain, 2006-2012



Note:
1. See Figure 8.1 note 2.

8.3 The Importance of Work and Family Life

Job orientations are likely to be related to how attached individuals are to work in general. To tap into these feelings, the 2012 survey asked respondents how important they regarded their job and their family in their lives. Table 8.1 reveals that respondents place much more emphasis upon the importance of their families in their lives than their work. In Wales, approximately two-thirds (64%) of workers indicated that their families were extremely important to them. In contrast, only one in four workers (24%) revealed that work was extremely important to them. There is relatively little variation in the importance attributed to family life between respondents from different parts of Britain. Nonetheless, it is observed that workers within Wales are less likely to indicate that family life is only 'fairly important to them'. Respondents from London and the South East are twice as likely as those living in Wales to indicate that family life is only fairly important to them (6% compared to 3%).

Larger differences, however, do emerge in the importance attached to work among respondents from different parts of Britain. It is observed that workers in Wales actually attach the highest levels of importance to work. In Wales, only 28% of respondents report that their work is only 'fairly important' to them. This is approximately eight percentage points lower than that observed in both London and the South East and the Rest of Britain. The increased importance attached by respondents in Wales to family life is, therefore, not matched with a reduced emphasis upon the importance of work. These attitudes may reflect local labour market conditions and the increased importance that workers attach to their jobs in the absence of alternative opportunities within a labour market that is characterised by relatively high levels of

unemployment and economic inactivity. The importance attached to work may diminish in areas of relatively high employment where work is easier to come by.

To gain further insight in to the relative importance attached to work among respondents to the SES2012, the survey also asked 'if you were to get enough money to live as comfortably as you would like for the rest of your life, would you continue to work, not necessarily in your present job, or would you stop working?' The lower panel of Table 8.1 reveals that in Wales, just under a third of workers (29%) would stop working if they were able to do so. The proportion of workers who would stop work if they were able to do so is clearly associated with the level of importance that respondents attach to work in their lives. In Wales, approximately one in five workers (21%) who regard their work as being extremely important indicate that they would stop work if they were able to do so. This figure increases to almost two in five workers (38%) among those who regard their work as only being 'fairly important'.

Interesting differences emerge when comparing the position of workers in Wales with those based in London and the South East. Overall, in London and the South East 25% of workers indicate that they would stop work if they were able to do so. This figure is approximately four percentage points lower than that observed in Wales (29%). The increased propensity to stop work in Wales is observed in spite of the higher levels of importance that respondents in Wales attach to work. Whilst workers in Wales attach greater importance to work, perhaps reflecting the higher levels of unemployment and economic inactivity in Wales, they would be more willing to stop work if they were able to do so. This is despite the higher levels of contentment, enthusiasm and satisfaction with work in Wales as outlined in Chapter 7.

8.4 Organisational Commitment in Wales

Having considered the commitment of workers to employment in general, the survey also collects data on workers' feelings towards the organisation they work for. Organisational commitment is defined as 'feelings of attachment to goals and values of the organisation, one's role in relation to this, and attachment to the organisation for its own sake rather than for its strictly instrumental value' (Cook and Wall, 1980: 40). From this, survey questions have been developed which tap employees' attitudes towards their organisations and the nature of the behaviours employees exercise within the organisation. Respondents were asked to what extent they agreed or disagreed with the following statements using a four point scale.

- 'I find that my values and the organisation's values are very similar'.
- 'I am proud to be working for this organisation'.
- 'I feel very little loyalty to this organisation' (note reversal).
- 'I am willing to work harder than I have to in order to help this organisation succeed.'
- 'I would take almost any job to keep working for this organisation'.
- 'I would turn down another job with more pay in order to stay with this organisation'.

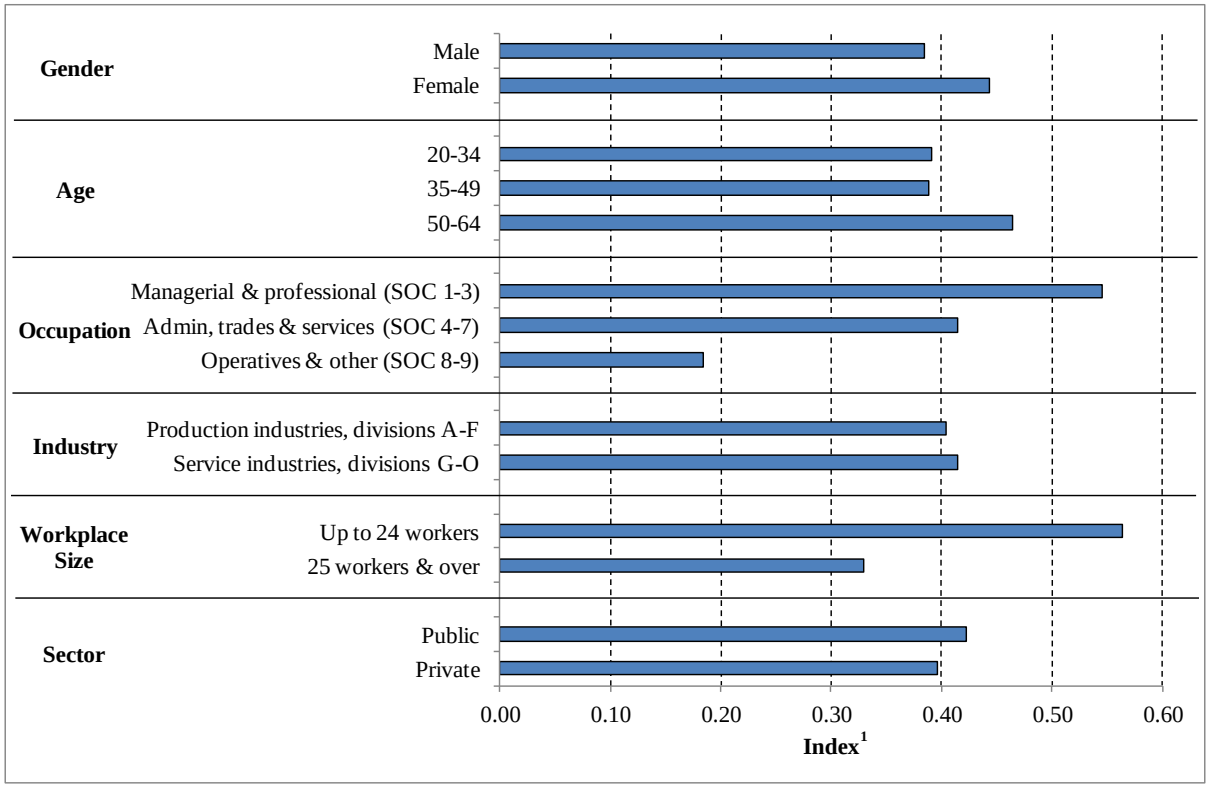
The distributions of responses to these questions are provided in Table 8.2. It can be seen that the highest levels of commitment towards the organisation among workers in Wales are expressed in terms of the willingness of respondents to work harder in order to

help their organisation succeed, with approximately 85% of respondents reporting that they either strongly agreed (27%) or agreed (58%) with this statement. Approximately eight out of ten respondents reveal that they are loyal to their organisation (82%), share similar values to their organisation (80%) and that they are proud to work for their organisation (81%). Approximately seven out of ten respondents report that their organisation inspires them in terms of their job performance (69%). Commitment of workers to their organisation is, however, observed to be lower when it is framed in terms of their willingness to stay with the organisation. Just over a third of respondents (36%) reported that they were keen to stay with the organisation. Similarly, just under a third of respondents (29%) agreed with the statement that they would turn down other jobs to stay with the organisation.

To summarise the information collected across these measures of organisational commitment so that comparisons can be made across population sub-groups, an Organisation Commitment Index has been constructed. For the analysis, we first awarded values of +2 for 'strongly agree', +1 for 'agree', –1 for 'disagree' and –2 for 'strongly disagree' for the responses given. For the purpose of constructing the index, six of the questions listed above, widely used to derive levels of organisational commitment, were used – three relating to employee attitudes and three relating to employee behaviours. The index of organisational commitment was then constructed by adding the scales for these selected questions and dividing by six. A higher score, therefore, indicates a greater level of organisational commitment.

Figure 8.3 shows how levels of organisation commitment vary among different sub-groups of those in employment. Analysis of the Organisational Commitment Index reveals that women and older workers in Wales appear to display higher levels of organisational commitment. In terms of occupation, it can be clearly seen that those employed in relatively low skilled routine and elementary occupations display the lowest levels of organisational commitment. A clear difference in levels of organisation commitment can be observed in terms of size of workplace, with those employees in smaller workplaces exhibiting the highest values for organisational commitment. Interestingly and perhaps surprisingly, levels of organisational commitment do not appear to vary greatly when comparing workers in the public and private sectors. Being part of a public sector organisation does not appear to engender higher levels of commitment, although this of course may disguise variations in organisational commitment that may exist among different parts of the public sector, where certain occupations may be more likely to be regarded as vocations.

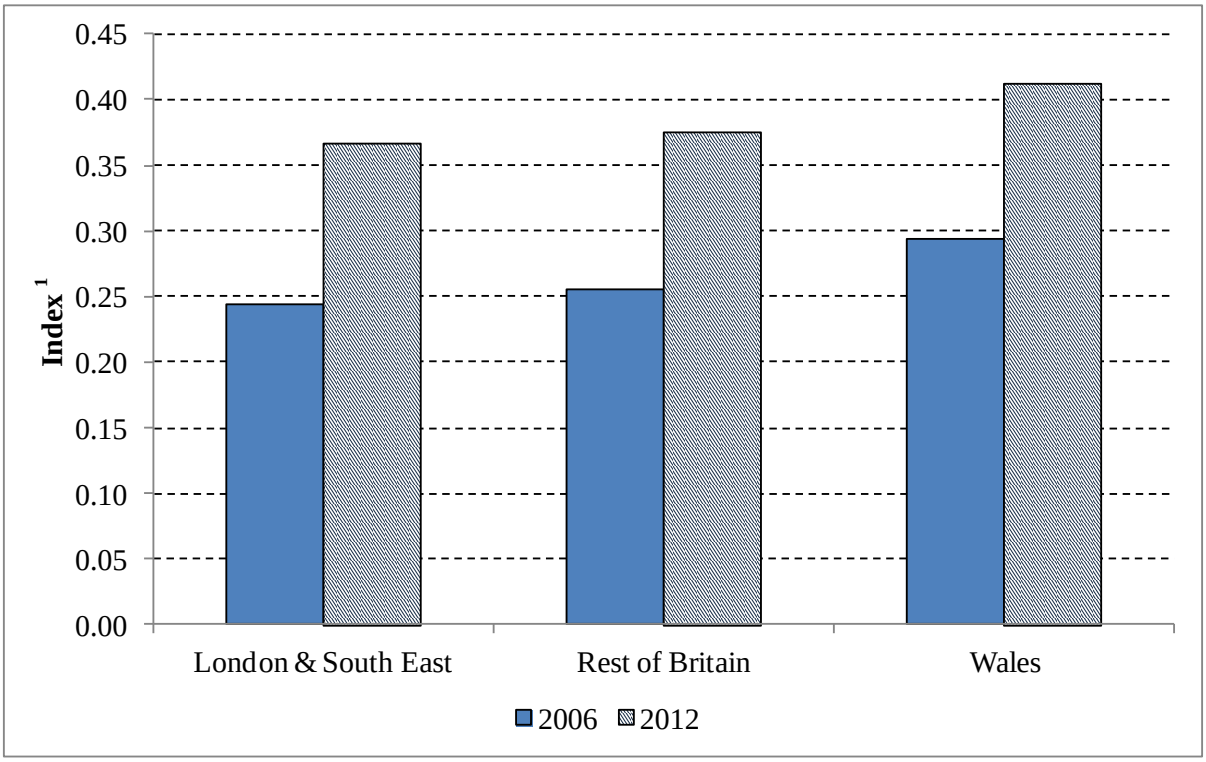
Figure 8.3:
Variations in Organisational Commitment[1], Wales, 2012



Notes:
1. See Table 8.2 notes 1-7.

Finally, we consider how both trends and levels in organisational commitment vary between different areas of Britain. The analysis presented in Figure 8.4 reveals that across each of the three parts of the country, levels of organisational commitment appear to be rising at a similar pace. However, the results also demonstrate that organisational commitment is highest in Wales and lowest in London and the South East. This finding is consistent with the greater importance attached to work by respondents in Wales.

Figure 8.4:
Geographical Variations in Organisational Commitment[1] Across Britain, 2012



Notes:
1. See Table 8.2 notes 1-7.

8.5 Summary of the Main Findings

It is often said that different groups in society have different orientations to work and levels of commitment to the employing organisation – sometimes negative, sometimes positive. This chapter presents up-to-date evidence on these patterns in Wales and how they differ with other parts of Britain.

- In terms of the relative importance of job attributes, workers in Wales place greatest emphasis upon the importance of having a secure job, having work that respondents like doing and having the opportunity to use their abilities. Relatively low levels of importance are attributed to good promotion prospects, having choice over their hours of work, fringe benefits and having an easy workload.

- Workers in Wales attach greater importance to work compared to those located in other areas. However, approximately three out of ten workers in Wales would stop working if they were able to do so. This is higher than that exhibited by workers living in London and the South East.

- The commitment of workers towards their organisation is most commonly expressed in terms a willingness to work harder in order to help their organisation succeed, with 85% of respondents agreeing with this statement.

- Women, older workers, those employed in managerial and professional occupations and those working at small establishments display the highest levels of organisational commitment.

- Measured across a range of dimensions, workers were more committed to their organisation in 2012 than they were in 2006. Levels of organisational commitment were also higher in Wales than they were in other areas.

Table 8.1:
Importance of Work and Family Life Across Britain, 2012

	London & South East		Rest of Britain		Wales	
	Work	**Family**	**Work**	**Family**	**Work**	**Family**
Importance of work/family in life						
Extremely important	21.6	63.2	22.5	66.6	23.8	63.8
Very important	41.8	30.2	42.0	28.7	48.5	32.9
Fairly important	36.1	6.4	35.5	4.7	27.7	3.3
% who would stop work if did not need the money						
Extremely important	16.8	23.6	21.0	31.6	21.2	27.7
Very important	21.6	27.7	29.2	31.6	27.9	31.6
Fairly important	34.6	28.7	41.0	29.6	38.3	32.7
All	25.2		31.5		29.2	

Table 8.2:
Organisational Commitment in Wales, 2012

Dimensions of organisational commitment	Strongly disagree	Disagree	Agree	Strongly agree
Willingness to work hard for organisation[1]	2.6	12.3	57.7	27.4
Little loyalty to organisation[2]	33.8	48.1	15.1	3.0
Similar values to organisation[3]	4.6	15.3	66.3	13.8
Inspiration of organisation[4]	4.9	25.9	54.4	14.9
Proud to be working for organisation[5]	4.1	14.5	60.9	20.5
Keen to stay with organisation[6]	13.3	50.4	27.6	8.7
Turn other jobs down to stay with organisation[7]	21.8	49.5	23.2	5.6
Organisational commitment index	0.41			

Notes:

1. Respondents were asked: 'Thinking about your feelings towards the organisation you work for, I would like to ask you to what extent you agree or disagree with the following statements. Firstly: 'I am willing to work harder than I have to in order to help this organisation succeed.' Respondents were asked to indicate how strongly they agreed or disagreed with this statement using a four point scale.
2. As above but with the statement: 'I feel very little loyalty to this organisation' (note reversal).
3. As above but with the statement: 'I find that my values and the organisation's values are very similar'.
4. As above but with the statement: 'And to what extent do you agree that this organisation really inspires the very best in me in the way of job performance?'
5. As above but with the statement: 'I am proud to be working for this organisation'.
6. As above but with the statement: 'How much do you agree or disagree with the following statement: 'I would take almost any job to keep working for this organisation'.
7. As above but with the statement: 'How much do you agree or disagree with the following statement: I would turn down another job with more pay in order to stay with this organisation'.

CHAPTER NINE:
WORKPLACE CHANGE, UNCERTAINTY AND PROSPECTS FOR THE FUTURE

9.1 Introduction

Having recently avoided a 'triple dip recession' the UK is struggling to recover from the worst downturn since the 1930s. In terms of lost output, the 2008-09 recession has been more severe than those experienced during the early 1980s and 1990s. Despite this, unemployment rates have remained lower and employment rates have remained higher than those observed in previous recessions. Instead, the response has involved adjustments to other labour market indicators, such as reductions in real earnings and hours worked and a rise in underemployment (Bell and Blanchflower, 2013; Felstead, 2011). Some commentators have attributed these responses to the reforms that took place during the 1980s and 1990s which enhanced the flexibility of the labour market. These made redundancies and lay-offs one possible response to an economic downturn.

Even so, many employers have made redundancies, imposed restrictions on new hires, deferred investment in new equipment and have changed the organisation of work (such as reduced hours). Such changes can enhance levels of fear and anxiety at the workplace, not just in terms of concerns surrounding job security but also in relation to how the nature of employment may change. These changes may in turn affect how workers view their future employment prospects.

This chapter is organised around these themes. Section 9.2 considers the levels and nature of organisational change experienced by workers in Wales in recent years. Section 9.3 considers levels of fear and anxiety at the workplace, with particular attention given to the fair treatment of workers and whether workers believe that the quality of their jobs may diminish as a result of organisational change. Section 9.4 examines job insecurity and cost of job loss and Section 9.5 considers how workers view their future prospects in the light of the difficult economic times. Section 9.6 concludes with a summary of the chapter's main findings.

9.2 Change at the Workplace

Respondents who were in the same workplace at the time of the survey (either within the same job or in a different job) as they were at least three years ago were asked a series of questions about workplace level changes. Respondents were firstly asked whether or not there had been any change in the way in which work was organised. Those respondents who indicated that there had been changes in the way in which work had been organised were then subsequently asked whether these changes were minor or major in nature. Respondents were then asked about whether there had been changes in the use of different forms of capital equipment. These questions encompassed the introduction of new computers or automated equipment, new communications technology equipment or other new equipment. A final question considered whether or not there had been a reduction in the number of people doing similar work at the establishment in the preceding three to five year period.

Table 9.1 provides information on the levels of organisation change in Wales reported among respondents to SES2012. Over half (54%) of workers report that there

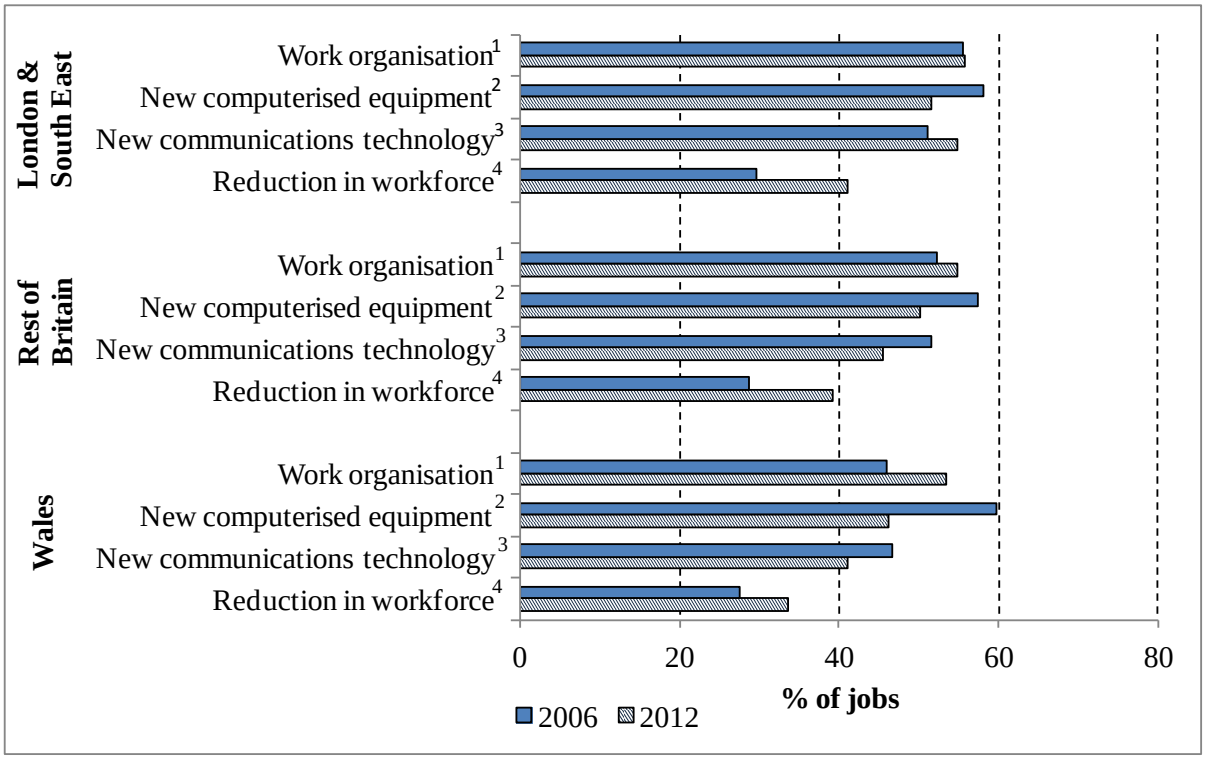
had been some change in the way in which work was organised within their workplace during the previous three to five years. In terms of changes to capital equipment, 46% of workers indicate that new computers or automated equipment had been introduced, 41% report that new communications technology equipment had been introduced and 44% report that other new forms of equipment had been introduced. Approximately a third of workers (34%) report that there had been a reduction in the number of people doing this kind of work during the last three to five years.

In terms of which types of workplace are most likely to experience such organisational changes, it can be seen that large workplaces are most likely to experience organisational change. This is observed for changes in the organisation of work and the introduction of new equipment. Similarly, workers from the public sector are also more likely to report having experienced organisational change or the introduction of new forms of equipment compared to workers in the private sector. The scale of these differences are, however, not as large as those observed between small and large workplaces. In terms of differences by industry, whilst workers in the service sector are more likely to report the introduction of new communication technology (45% compared to 35% in the production sector), workers in the production sector are more likely to report the introduction of other new forms of equipment.

Reductions in the size of the workforce were more likely to be reported by workers employed in large organisations. In some respects, this finding is tautological insofar that the scope for employers to reduce the size of their workforce is greater within larger workplaces. Differences between the production and services sector, with workers in the production sector being more likely to have experienced a reduction in the size of the workforce at their workplace, may also reflect differences in the size of workplaces between these sectors. Interestingly, no differences were observed in the proportion of workers from the public and private sectors reporting that their workplace had experienced a reduction in the workforce. However, it is noted that many of the cuts to public expenditure in light of the economic crisis have yet to take effect.

Figure 9.1 shows how the incidence of organisational change has changed between different areas over the period 2006 to 2012. The introduction of 'other new equipment' shows relatively little variation either over time or between different parts of Britain and so this form of organisational change is not included in Figure 9.1 for ease of exposition. It can be seen that, with the exception of changes in the organisation of work, workers in Wales in 2012 report lower levels of organisational change than those in other areas. Workers in Wales report relatively low levels of change in terms of capital investment. Across all areas, the 2012 data reveal that there has been a reduction in the proportion of workers reporting new computerised equipment and new communications technology between 2006 and 2012. However, the level of decline observed in Wales in relation to the introduction of new computerised equipment (a fall of 14 percentage points) is approximately twice that observed in other areas of Britain. Wales also stands out in terms of it being the only area where there has been an increase in the proportion of respondents who report that there has been a change in the way in which work has been organised at their workplace (an increase of eight percentage points). As a result, levels of organisational change in Wales during 2012 are comparable to those reported by workers elsewhere in Britain.

Figure 9.1:
Geographical Variations in Organisational Change Across Britain, 2006-2012



Notes:
1, 2, 3 and 4, See Table 9.1 footnotes 1, 2, 3 and 5 respectively.

Although workers in Wales are less likely to report that new capital equipment has been introduced at their workplace in recent years, it is also apparent that, during 2012, workers in Wales are also less likely to report that there has been a reduction in the workforce at their workplace. During 2006, the proportion of workers who indicated that there had been a reduction in the workforce at their workplace was relatively uniform across the three different areas of Britain (27-30%). The economic crisis has clearly been associated with an increase in the proportion of workers who reported that there had been a reduction in the workforce at their workplace between 2006 and 2012. However, the increase observed in Wales (six percentage points) is much smaller than that observed within London and the South East and the Rest of Britain (11 percentage points in both areas). This finding could suggest that employers in Wales have responded to the economic crisis differently and in a way that has resulted in fewer job losses and/or that the full effects of the crisis, such as reductions in employment in the public sector, have not yet been fully implemented.

9.3 Fear and Anxiety at Work

Fear at work may take different forms. Concern about losing employment with an organisation is the most widely discussed aspect of fear at the workplace and we will therefore focus on this issue separately in the next section of this chapter. In this section, however, we firstly consider two other dimensions of fear. First, fear may consist of anxiety about unfair treatment at work. Such anxiety may manifest itself, for example, through worry about discrimination or victimisation at work. Secondly, fear at work may

take the form of anxiety about loss of job status. Such anxiety may manifest itself through concern regarding displacement to another job in the organisation that offers less opportunity to utilise acquired skills, is intrinsically less interesting or is associated with lower levels of autonomy.

Table 9.2 presents information on the levels of fear with respect to unfair treatment in Wales. The indicators of fear of unfair treatment are a set of three items where respondents to the SES2012 are asked about their levels of anxiety with respect to 'being dismissed without good reason', 'being unfairly treated through discrimination' and 'victimisation by management'. The table reports the proportion of workers who indicated that they were either 'very' or 'fairly anxious' about unfair treatment. Overall, approximately one in four workers indicate that they are anxious about being dismissed without good reason. Approximately one in five workers indicate that they are anxious about being treated unfairly through discrimination. One in five workers are also fearful about being victimised by management.

Table 9.2 also demonstrates the differences in levels of fear that exist between different groups of workers. It can be seen that levels of fear of unfair treatment are considerably higher among men than they are among women. Whilst one in four men are fearful of discrimination at the workplace, less than one in six women also share these concerns. Fear of unfair treatment increases with age across each of the three measures of unfair treatment. The differences observed between younger and older workers are, however, generally narrower than the differences observed between men and women, although older workers appear to exhibit particular concerns with respect to being dismissed without good reason. Those employed in intermediate level occupations and those working in the production sector exhibit higher levels of fear of unfair treatment. Interestingly, fear of unfair treatment with respect to dismissal and discrimination does not appear to differ between workers in the public and private sectors. However, those in the private sector do exhibit higher levels of fear in relation to victimisation at the workplace.

Table 9.3 presents information on concerns surrounding job status loss. Once again, respondents are asked about their levels of anxiety with respect to 'future changes to my job that may give me less say over how it is done', 'future changes to my job that may make it more difficult to use my skills and abilities', 'future changes that may reduce my pay' and 'being transferred to a less interesting job in the organisation'. The table reports the proportion of workers who indicated that they were either 'very' or 'quite anxious' about job status loss. In Wales, the greatest concern regarding loss of job status relates to a reduction in pay. Almost four out of ten workers (37%) report that they are anxious about future changes that may reduce their pay. Just under a third of workers also report that they are anxious about future changes to their job that may give them less say over how it is done. Approximately one in four workers report being anxious about changes that may make it more difficult for them to use their skills and abilities. A similar proportion are also concerned about being transferred to a less interesting job within the organisation.

In terms of differences in the level of concern surrounding job status loss, it can be seen that older workers are less concerned about issues surrounding skill use or being moved to a less interesting job. Those employed in routine process or elementary occupations also exhibit relatively low levels of concern regarding each of the four

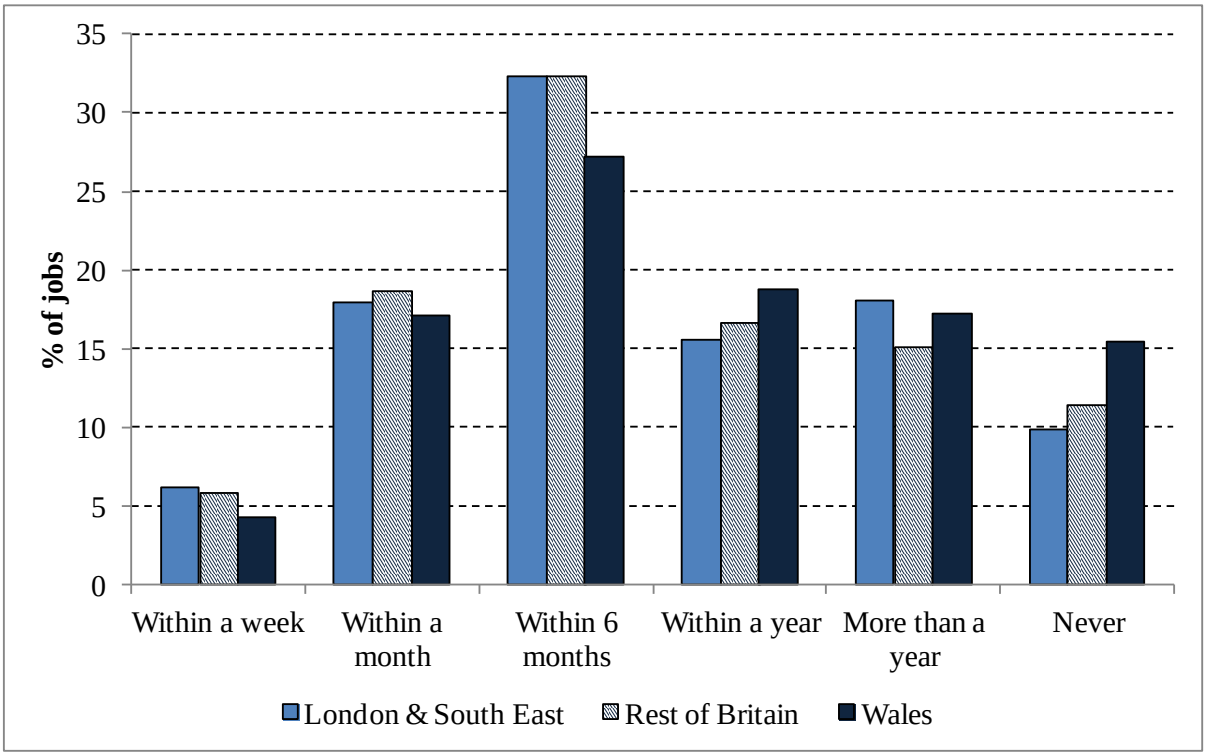
measures of job status loss. Their concerns regarding skills use are particularly low. Workers in the production sector express higher levels of anxiety with respect to issues surrounding a loss of say at work and a loss of pay. Relatively little variation is observed in terms of size of workplace, with the exception that those in larger organisations are more likely to express concerns surrounding being moved to a less interesting job. Again, to some degree this finding may be tautological as the likelihood of being moved to a less interesting job requires that alternative posts are available – a more likely scenario the larger the workplace. Similar results are found with respect to comparisons made between workers in the public and private sectors, where workers in the public sector in Wales are the group who are most likely to express concerns with respect to being moved to a less interesting job. Whilst this may in part reflect a lack of intrinsic interest in some posts, it is also likely to be a function of the larger size of public sector workplaces.

9.4 Job Security

Concern about losing employment with an organisation is the most widely discussed aspect of fear at the workplace. As well as having detrimental effects on health, job security has also been demonstrated being important in terms of supporting motivation at the workplace. For example, workers are less likely to undertake training activities that enhance human capital, that are specific to their organisations, if they feel that there is a risk that they will lose their jobs and will not be rewarded for the effort that they make in acquiring such skills. However, it must also be acknowledged that job security may also have adverse affects on productivity at the workplace if those in work felt that their jobs were so secure that they were immune from the consequences of poor performance. Such levels of security impose costs on the employing organisation in terms of both the opportunity cost of lost productivity and in terms of increased time and effort associated with managing poor performance.

The 2012 survey included two questions that aimed to explore the issue of job security in relation to poor performance at the workplace. Respondents to the survey were asked how long it would take somebody within their organisation *and* doing their kind of jobs to be dismissed as a result of persistently arriving late at work and persistently not working hard. Similar results are derived from both measures and so for ease of exposition we focus on dismissal in relation to not working hard. Figure 9.2 reveals that the duration of time it would take to be dismissed as a result of not working hard is longer in Wales than it is for other parts of Britain. Almost one in six workers in Wales (16%) indicate that people in their organisation could never be dismissed as a result of not working hard. This is compared to one in ten workers in London and the South East and one in nine workers in other areas. In Wales, 56% of respondents indicate that either workers would never be dismissed or it would take longer than six months. This compares to approximately 44% in other areas of Britain.

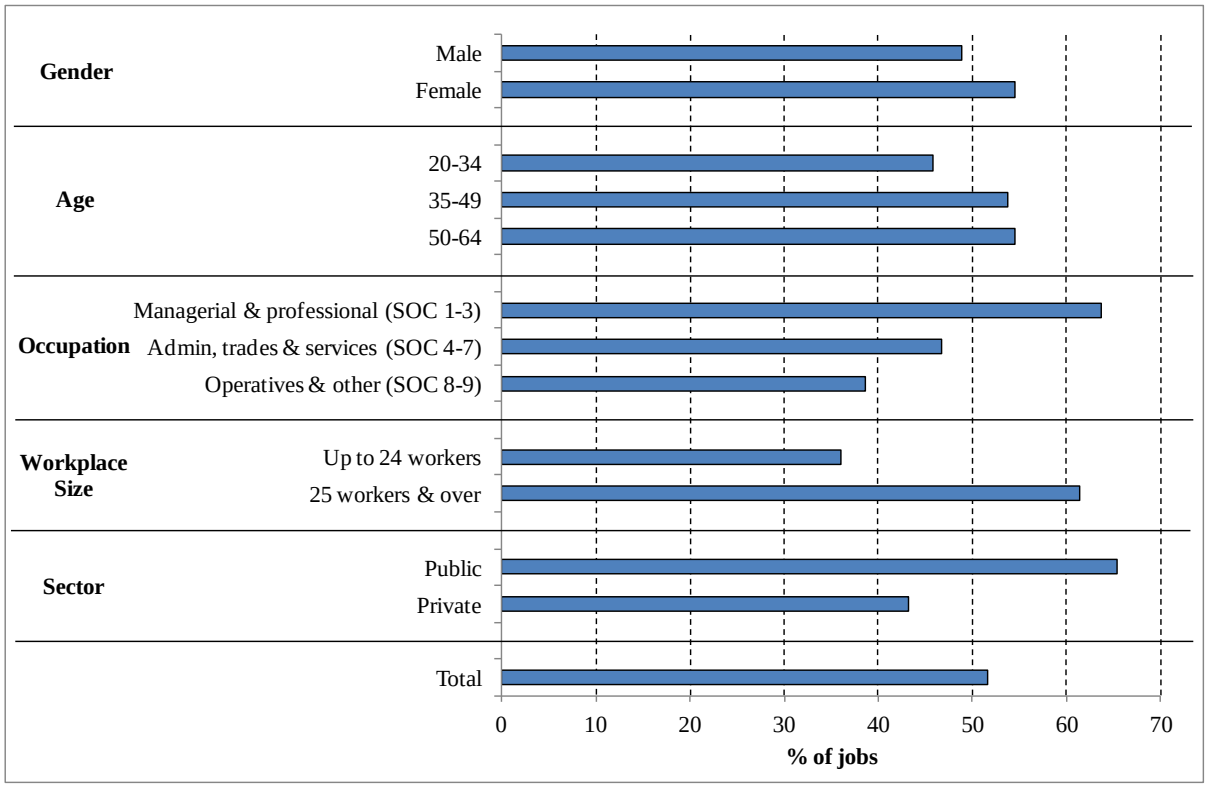
Figure 9.2:
Working Hard and Likelihood of Dismissal[1] Across Britain, 2012



Note:
1. Respondents were asked 'How long do you think it would be before a person in your organisation, doing your sort of job, would be eventually dismissed if they persistently did not work hard'.

The data suggest that it would take longer in Wales than elsewhere in Britain to be dismissed as a result of poor performance at the workplace. Figure 9.3 considers how this time elapsed to dismissal is associated with the characteristics of survey respondents. It can be seen that women and older workers indicate that it would take longer for someone in their organisation doing their kind of work to be dismissed than men and younger workers respectively. It must be noted that respondents were not asked how long it would take for *themselves* to be dismissed as a result of poor performance. The gender differential is therefore likely to reflect differences in the type of workplace where women are more likely to be employed, as opposed to any separate and additional effect of gender. For example, almost two-thirds of workers in the public sector (65%) indicate that it would take longer than six months for someone to be dismissed as a result of not working hard. By contrast, only approximately one third of respondents (36%) based at small workplaces indicated that it would take longer than six months for someone to be dismissed for not working hard. It can be seen that those employed in managerial and professional occupations also report longer durations of time elapsed until dismissal as a result of poor performance compared to those employed in routine and elementary occupations.

Figure 9.3:
Working Hard and Likelihood of Dismissal After Six Months[1] by Selected Characteristics, Wales, 2012



Note:
1. See Figure 9.2 note 1.

The 2012 survey also included a suite of questions that asked respondents to provide an assessment of their job security. Responses to these questions are provided in Figure 9.4. Respondents were firstly asked to provide an assessment of how easy or difficult they felt it would be for them to find a job as good as their current one? We refer to responses from this question as representing the cost of job loss. The first panel of Figure 9.4 presents information on the proportion of workers who report that it would be 'very difficult' to find a comparable job. It can be seen that there are perceived differences in the cost of job loss between different areas of Britain. During 2012, costs of job loss are perceived to be lowest within London and the South East, where less than a third of workers (30%) report that it would be very difficult to find a comparable job. This figure increases to almost four out of ten workers in Wales. Wales has also exhibited the highest increase in perceived costs associated with job loss, with the proportion reporting it would be very difficult to find a comparable job increasing from 25% to 39% between 2006 and 2012.

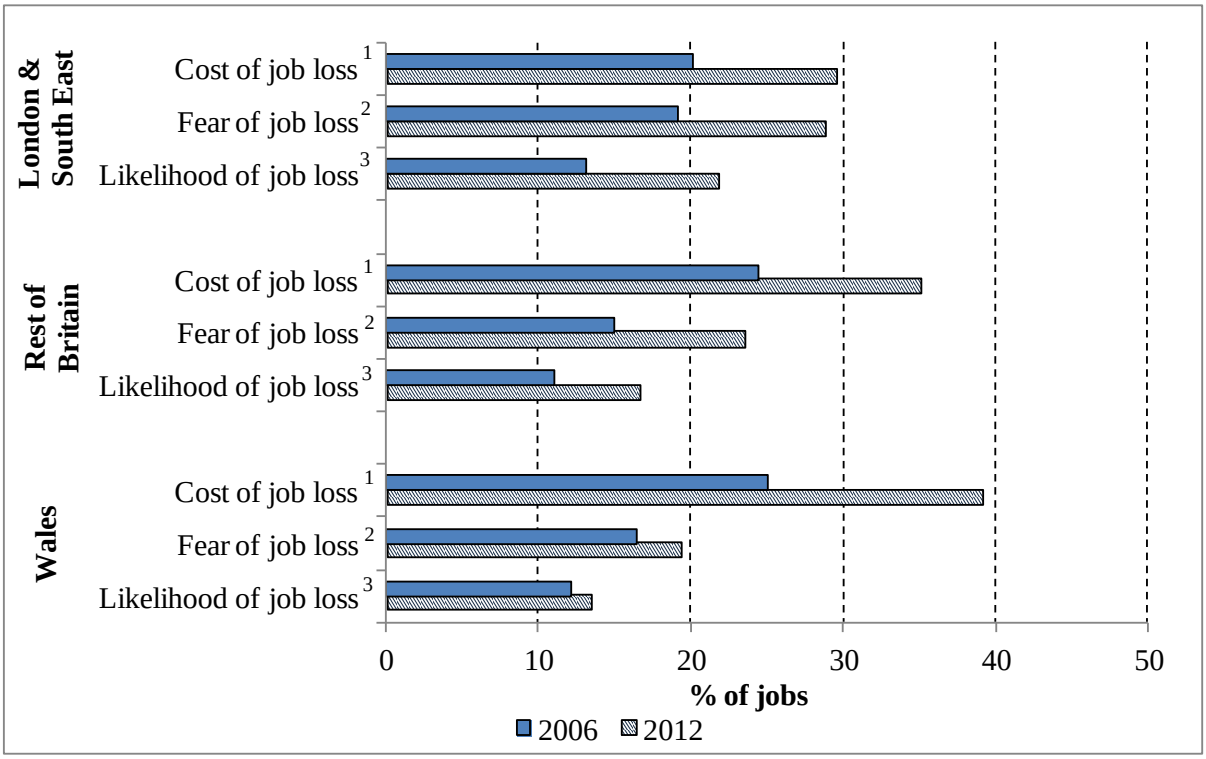
Respondents to these surveys were then asked: 'Do you think there is any chance at all of you losing your job and becoming unemployed in the next twelve months?' Responses to this questions are shown in the second panel of Figure 9.4 where we report the proportion of workers who indicated that there was at least some chance of them losing their jobs in the year ahead. Despite the current economic environment, only one in five workers in Wales believed that there was some chance of them losing their jobs.

The perceptions of workers in Wales is very different to those in London and the South East, where almost one in three workers perceive there being a chance of them losing their jobs during the next 12 months. It is interesting to note that during 2006 there was relatively little difference in perceptions of job loss between different parts of Britain. The differences apparent in 2012 emerged as a result of the relative increase in job insecurity observed beyond Wales between 2006 and 2012.

Finally, respondents who said thought there was a chance that they would lose their job in the next 12 months were asked to rate the chances that this would happen. The final panel of Figure 9.4 shows the proportion of all workers who rated their chances of unemployment as evens or higher. The fear of job loss on this indicator, too, suggests that workers in London and the South East feel the most insecure and that this insecurity has emerged during the period of economic crisis. In Wales, among those workers who felt that there was a chance of them losing their job during the next 12 months, 14% rated the chances of this happening as being evens or higher. In London and the South East, this figure is 22%.

Given the prolonged nature of the current economic crisis, this relatively optimistic view of workers based in Wales may reflect that those who remain in their jobs have already survived redundancy and do not have real concerns regarding job loss. However, as noted earlier in this chapter, workers in Wales have also reported that they have experienced fewer job losses at their workplaces during the previous three to five years. If the full effects of the economic crisis, such as reductions in employment within the public sector, have not yet been realised in Wales, we may expect fear of job loss to increase in the next couple of years as the effects of reductions in expenditure in the public sector become apparent.

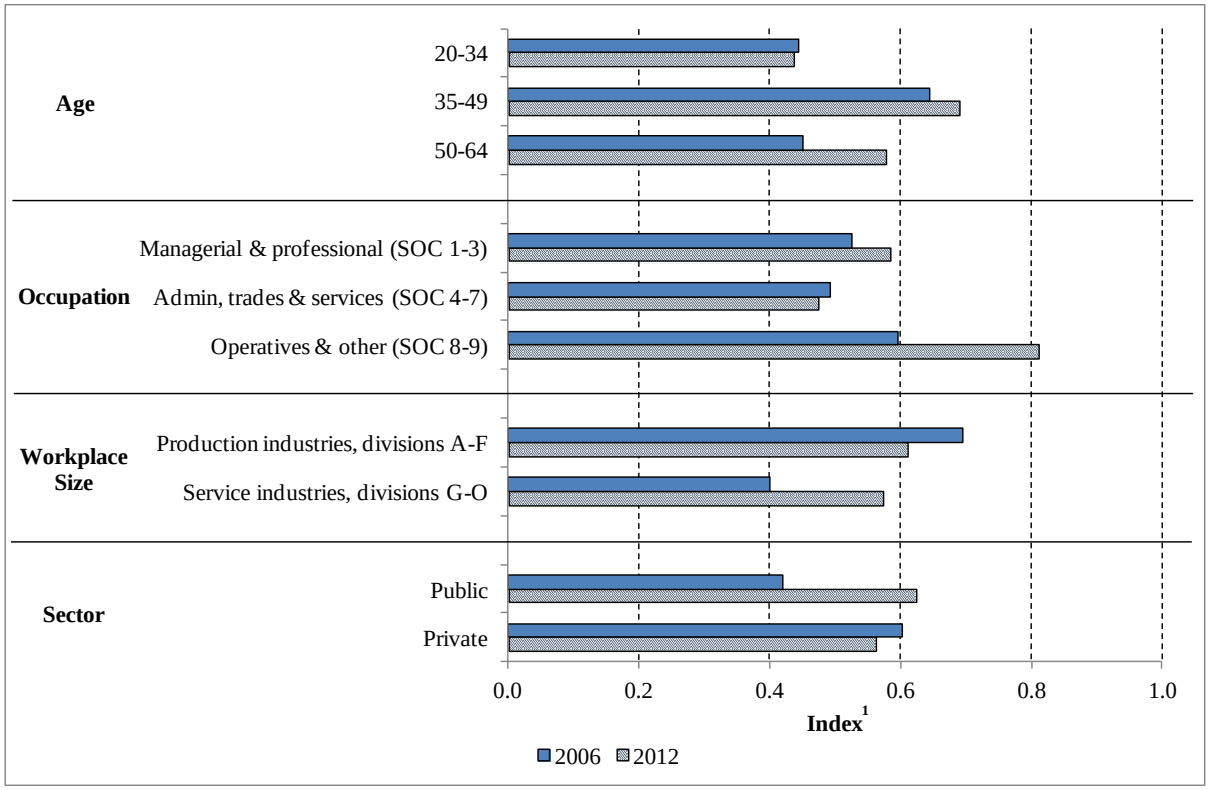
Figure 9.4:
Fear of Job Loss Across Britain, 2006-2012



Notes:
1. Respondents were asked: 'If you were looking for work today, how easy or difficult do you think it would be for you to find as good a job as your current one?' The options were: 'very easy'; 'quite easy'; 'quite difficult'; and 'very difficult'.
2. Respondents were asked: 'Do you think there is any chance at all of you losing your job and becoming unemployed in the next twelve months?' The options were 'yes' or 'no'.
3. Those respondents who indicated that there was a chance of them losing their job in the next 12 months were asked 'How would you rate the likelihood of this happening?' Options included: 'very likely'; 'quite likely'; 'evens'; 'quite unlikely'; and 'very unlikely'.

To summarise the responses of workers across questions related to job security, a Job Insecurity Index was derived from assigning ascending values to the likelihood of job loss, so that 'no chance' of job loss was given a value of 0 and respondents rating this likelihood as 'very likely' were awarded a score of 5. Figure 9.5 explores variations in the Job Insecurity Index between different groups of workers in Wales according to selected job characteristics. Given the importance of the economic crisis in shaping opinions regarding job security, figures are derived from both the 2006 and 2012 surveys. During 2012, it can be seen that insecurity is perceived to be highest amongst those employed in routine and elementary occupations (index = 0.81). Whilst there is relatively little difference observed between other population subgroups during 2012, larger differences emerge in terms of the relative increase in job insecurity perceived by different population sub-groups. Those groups experiencing the highest increases in job insecurity within Wales between 2006 and 2012 include older workers, routine operatives and elementary occupations, those working in the services sector and those employed in the public sector.

Figure 9.5:
Job Security[1] in Wales, 2006-2012



Notes:
1. See Figure 9.4 notes 1-3.

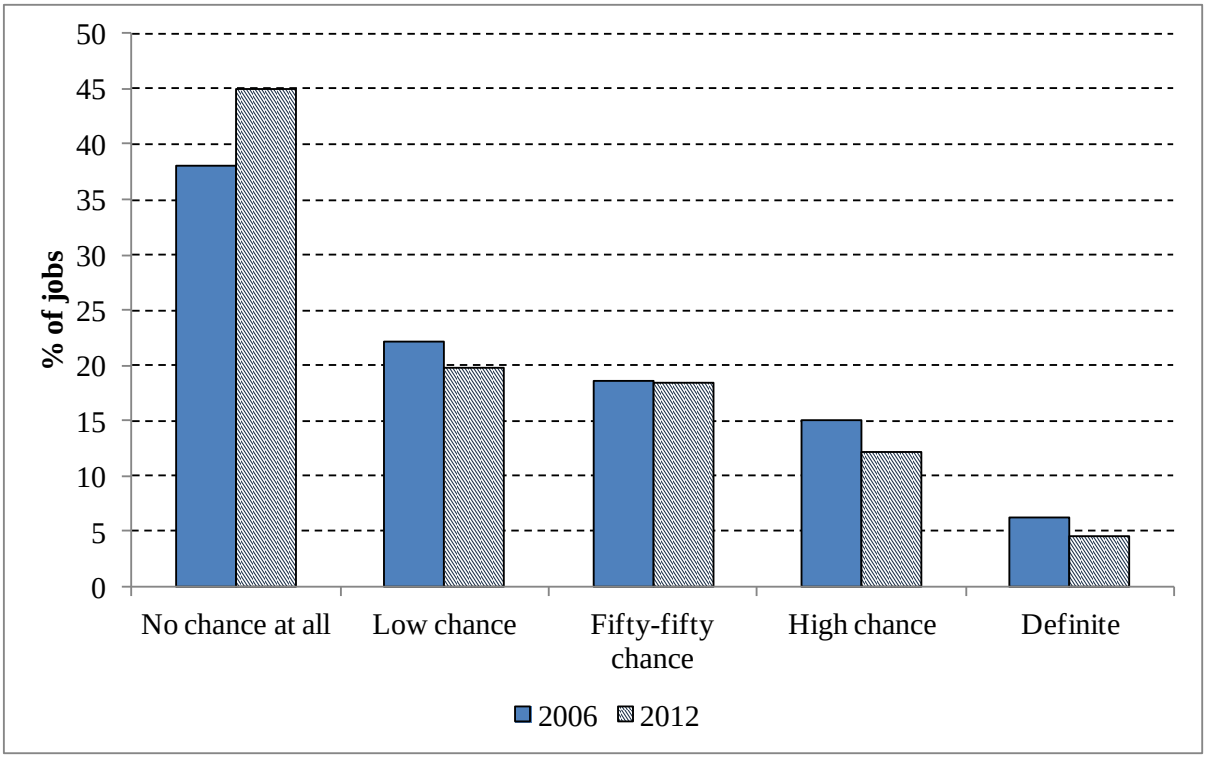
9.5 Prospects for the Future

Analysis of Chapter 7 touched upon the importance of promotion prospects to workers as a positive job attribute and upon the satisfaction of workers with their own promotion prospects. Analysis revealed that good promotion prospects were cited by respondents to the survey as the second most important job attribute. However, in terms of satisfaction with their jobs, workers reported relatively low levels of satisfaction when it came to their promotion prospects. This chapter concludes with a more detailed assessment of how workers view their promotion prospects.

Respondents to the survey were asked 'How high do you think *your* chances are of being given a significant promotion with your *present* organisation in the next five years (assuming that you did want promotion)?' Responses to this question are presented in Figure 9.6. It can be seen that during 2012, almost half of workers in Wales (45%) indicate that they have no prospect of promotion. This represents an increase of seven percentage points since 2006. However, those who indicated that they had no chance of promotion were also asked whether or not this was because they were already in the highest type of job for people who do their sort of work. It can be seen that the increase in the proportion of those who report that they have no chance of promotion is being driven by an eight percentage point increase in the proportion of workers who indicate that they are already in the highest position for those who do their type of work. Previous research on changes in the labour market over the course of the business cycle have

indicated that the average experience of workers increases during periods of relatively slow economic growth. This could reflect several issues, such as cutbacks on new hires, during a recession, risk aversion among workers who prefer to retain their existing jobs during an economic downturn and the concentration of redundancies among relatively inexperienced younger workers (e.g., last in-first out). Evidence from the 2006 and 2012 surveys confirm that average levels of experience have increased during the economic downturn.

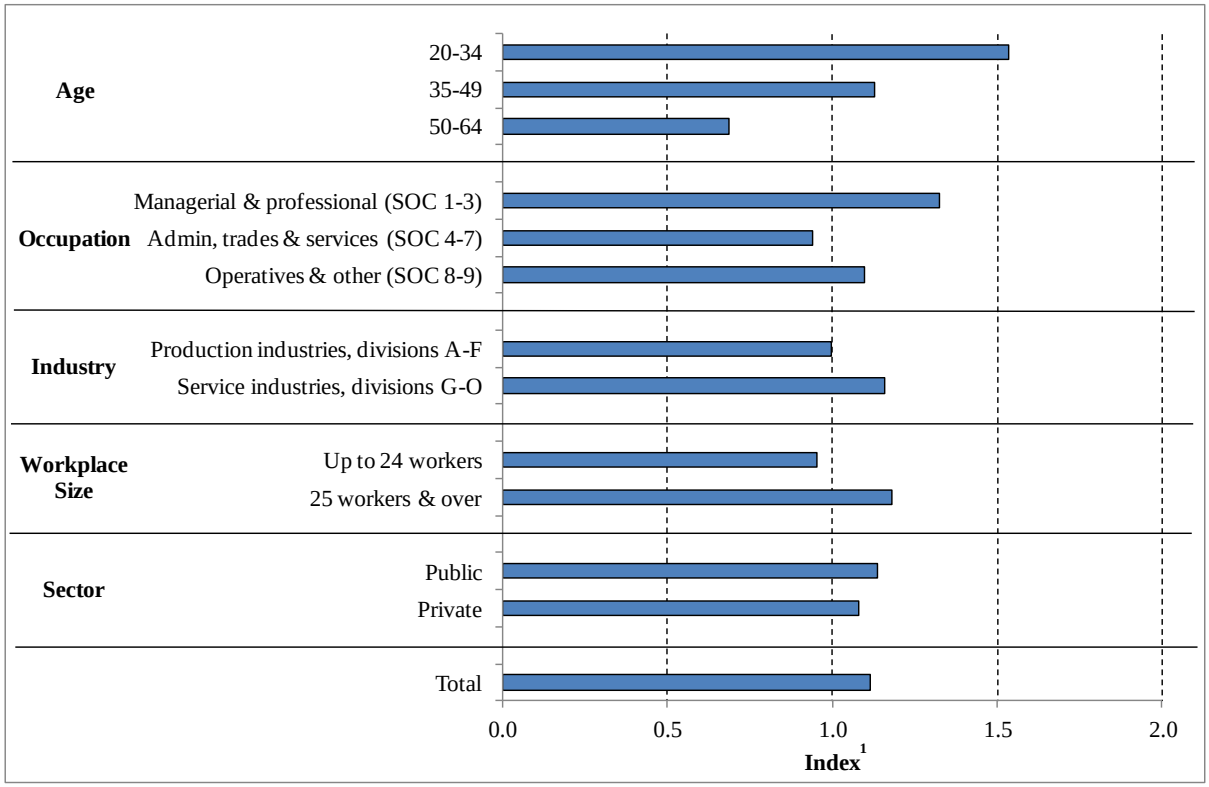
Figure 9.6:
Future Promotion Prospects[1] in Wales, 2006-2012



Note:
1. Respondents were asked: 'How high do you think *your* chances are of being given a significant promotion with your *present* organisation in the next five years (assuming that you did want promotion)?'

For ease of exposition, the information provided by respondents in relation to their promotion prospects was used to derive a Promotion Prospects Index. This index was derived by allocating scores ranging from 0 to 5 depending on the prospects of promotion as reported by respondents. Those who are already in the highest position for the type of work that they do are retained within the index. Figure 9.7 demonstrates how future prospects for promotion vary between different groups of workers in Wales. The analysis reveals that younger workers, those in managerial and professional occupations, those in the services sector, those based in larger workplaces and those working in the Non-Traded sector (i.e. predominantly the Public Sector) report having a greater chance of achieving promotion within their present organisation in the next five years.

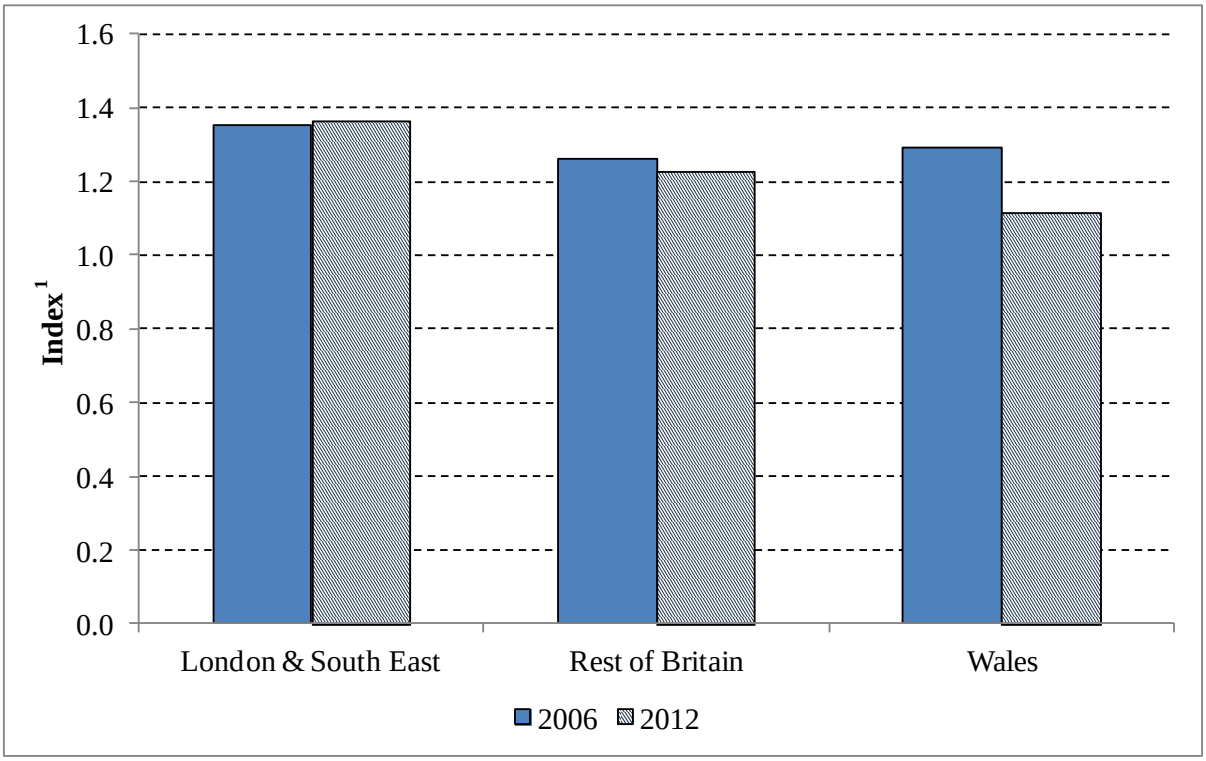
Figure 9.7:
Future Promotion Prospects[1] by Respondent Characteristics, Wales, 2012



Note:
1. The Promotion Prospects Index was derived by allocating scores ranging from 0 to 5 depending on the prospects of promotion as reported by respondents.

Finally, Figure 9.8 demonstrates how opportunities for promotion vary geographically across Britain. It can be seen that on this basis, respondents in Wales rate their promotion chances much lower than respondents working elsewhere. During 2012, there is a gap of 0.25 in the promotion prospects index when comparing the responses of workers in Wales (1.12) with those based in London and the South East (1.37). Moreover, the relatively limited opportunities for promotion in Wales were not as marked in 2006. It is therefore observed that between 2006 and 2012, promotion chances shrank more dramatically in Wales than elsewhere. In the context of less experience of job loss at the workplace and lower levels of job insecurity, reduced opportunities for promotion may provide further evidence of a more experienced group of incumbent workers in Wales compared to elsewhere in Britain.

Figure 9.8:
Geographical Variations in Opportunities for Promotion[1] Across Britain, 2006-2012



Note:
1. See Figure 9.7 note 1.

9.6 Summary of the Main Findings

Given the severity of the 2008-09 recession and sluggish recovery, there is still much uncertainty regarding the security of jobs and it is frequently suggested that those who remain in work – the survivors – are suffering fears and anxieties about what the future might hold. This chapter has examined the scale and pattern of those anxieties in Wales.

- Over half of workers in Wales report that there had been some change in the way in which work was organised within their workplace in the three to five years before interview. However, workers in Wales generally report lower levels of organisational change than those in other areas of Britain, particularly in relation to capital investment.

- Approximately a third of workers report that there had been a reduction in the number of people doing the kind of work they do during the last three to five years. While the economic crisis has been associated workforce reductions across all areas, the increase observed in Wales was much smaller than elsewhere.

- In Wales, approximately one in four workers report that they are anxious about being dismissed without good reason. Almost four out of ten workers in Wales report that they are anxious about future changes in their organisation that may reduce their pay.

- Workers in Wales are less likely to indicate that there was a chance of them losing their jobs in the year ahead compared to other parts of Britain. Only one in five workers in Wales believed that there was some chance of them losing their jobs compared to one in three workers in London and the South East.

- In terms of how difficult it would for workers to find a job as good as their current one in the event of job loss, the costs of job loss are higher in Wales than in other areas of Britain.

- Almost half of workers in Wales indicate that they have no prospect of promotion. In a majority of cases, these workers indicate that they are already in the highest position for those who do their type of work. Workers in Wales rate their promotion chances much lower than those elsewhere.

Table 9.1:
Organisational Change in Wales, 2012

	Work organisation[1]	New computerised equipment[2]	New communications technology[3]	Other new equipment[4]	Reduction in workforce[5]
Industry					
Production industries, divisions A-F	55.6	47.3	34.5	50.0	40.0
Service industries, divisions G-O	52.5	45.8	44.5	40.8	30.7
Workplace size					
Up to 24 workers	37.0	36.1	31.2	31.8	24.8
25 workers and over	64.6	52.1	47.4	51.7	40.2
Sector					
Public	59.4	51.3	49.5	45.5	34.4
Private	49.9	43.1	36.1	42.6	33.3
Total	53.5	46.3	41.2	43.8	33.7

Notes:
Respondents were asked 'Since 5/4/3 years ago', did any of the following changes occur in your workplace:
1. 'There was a change in the way work was organised'.
2. 'New computerised or automated equipment was introduced into the workplace'.
3. 'New communications technology equipment was introduced into the workplace'.
4. 'Other new equipment was introduced'.
5. 'There was a reduction in the number of people doing this sort of work'.

Table 9.2:
Fear of Unfair Treatment, Wales, 2012

	Anxious about dismissal[1]	Anxious about discrimination[2]	Anxious about victimisation[3]
Gender			
Male	29.1	24.6	24.2
Female	19.0	15.3	13.0
Age			
20-34	19.8	16.9	16.8
35-49	22.6	20.1	18.5
50-64	31.1	23.7	21.3
Occupation			
Managerial and professional (SOC 1-3)	17.0	16.5	15.0
Admin, trades and services (SOC 4-7)	31.8	25.6	23.7
Operatives and other (SOC 8-9)	22.0	15.5	15.5
Industry			
Production industries, divisions A-F	31.5	27.6	23.8
Service industries, divisions G-O	21.7	17.5	17.1
Workplace size			
Up to 24 workers	22.9	19.3	18.7
25 workers and over	24.9	20.2	18.8
Sector			
Public	22.3	19.0	15.9
Private	25.5	20.8	20.5
Total	24.3	20.2	18.8

Notes:
Introduced with the wording, 'How anxious are you about these situations affecting you at work' respondents are asked about:
1. 'Being dismissed without good reason',
2. 'Being unfairly treated through discrimination' and
3. 'Victimisation by management'.
Each question has four response options ranging from 'very anxious' to 'not anxious at all'.

Table 9.3:
Anxiety Surrounding Loss of Job Status, Wales, 2012

	Say at Work[1]	Skills Use[2]	Pay[3]	Less interesting job[4]
Gender				
Male	30.8	24.5	35.8	25.4
Female	27.8	22.3	38.4	23.8
Age				
20-34	27.9	25.0	36.3	26.9
35-49	30.8	24.1	36.0	26.0
50-64	28.9	20.8	39.3	20.4
Occupation				
Managerial and professional (SOC 1-3)	30.5	24.2	31.7	24.2
Admin, trades and services (SOC 4-7)	33.9	27.2	47.3	29.1
Operatives and other (SOC 8-9)	17.8	14.2	26.4	16.6
Industry				
Production industries, divisions A-F	35.3	24.0	45.1	24.5
Service industries, divisions G-O	27.3	23.3	34.2	24.7
Workplace size				
Up to 24 workers	26.4	20.7	34.7	19.5
25 workers and over	30.8	24.8	38.4	27.6
Sector				
Public	31.6	25.5	38.6	31.0
Private	28.0	22.1	36.1	20.8
Total	29.4	23.4	37.1	24.6

Notes:
Each question is introduced with the wording, 'How anxious are you about these situations affecting you at work' respondents are asked about:
1. 'Future changes to my job that may give me less say over how it is done',
2. 'Future changes to my job that may make it more difficult to use my skills and abilities',
3. 'Future changes that may reduce my pay',
4. 'Being transferred to a less interesting job in the organisation'.
Each question has four response options ranging from 'very anxious' to 'not anxious at all'.

REFERENCES

Arulampalam, W, Booth, A L and Bryan, M (2004) 'Training in Europe', *Journal of the European Economic Association*, 2(2-3): 346-360.

Ashton, D, Davies, B, Felstead, A and Green, F (1999) *Work Skills in Britain*, Oxford: ESRC Centre on Skills, Knowledge and Organisational Performance.

Bell, D N F and Blanchflower, D G (2013) 'Underemployment in the UK revisted', *National Institute Economic Review*, 224: F8-F22.

Benach, J., Gimeno, D., Benavides, F.G., Martinez, J.M and Tornè, M. (2004). 'Types of employment and health in the European Union: changes from 1995 to 2000', *European Journal of Public Health*, 14: 314-321.

Benavides, F G., Benach, J, Diez-Roug, A V and Roman, C (2000). 'How do types of employment relate to health indicators? Findings from the second European Survey on Working Conditions', *Journal of Epidemiology and Community Health*, 54: 494-501.

Beynon, H, Davies, R and Davies, S (2012) 'Sources of variation in trade union membership across the UK: the case of Wales', *Industrial Relations Journal*, 43(3): 200-221.

Boreham, N, Samurçay, R and Fischer, M (2002) (eds) *Work Process Knowledge*, London: Routledge.

Braverman, H (1974) *Labor and Monopoly Capital*, New York: Monthly Review Press.

Campanelli, P, Thomas, R, Channell, L, McAulay, L and Renouf, A (1994) 'Training: an exploration of the word and the concept with an analysis of the implications for survey design', *Department for Education and Employment Research Series No 30*, London: Department for Education and Employment.

Cook, J and Wall, T (1980) 'New work attitude measures of trust, organizational commitment and personal need and non-fulfilment', *Journal of Occupational Psychology*, 53(1): 39-52.

Cooper C.L. (2009). Stress and the Global Recession, *Stress and Health* 25(2) p127.

Crompton, R and Sanderson, K (1990) *Gendered Jobs and Social Change*, London: Unwin Hyman.

Damant, A and Jenkins, J (2011) 'Estimating differences in public and private sector pay', Newport: Office for National Statistics, downloaded from http://www.nomisweb.co.uk/articles/ref/stories/8/public_private_sector_pay_july2011.pdf on 26 March 2012.

Davies, B, Gore, K, Gunstone, B, Shury, J, Vivian, D, Winterbotham, M, Constable, S and Manson, K (2012) 'UK Commission's Employer Skills Survey 2011: Wales results', *Evidence Report 62*, Wath-upon-Dearne: UK Commission for Employment and Skills.

Davies, B, Gore, K, Shury, J, Vivian, D, Winterbotham, M and Constable, S (2012) 'UK Commission's Employer Skills Survey 2011: UK results', *UKCES Evidence Report 45*, May, Wath-upon-Dearne: UK Commission for Employment and Skills.

Davies, R and Welpton, R (2008) 'How does workplace monitoring affect the gender wage differential? Analysis of the Annual Survey of Hours and Earnings and the 2004 WERS', *British Journal of Industrial Relations*, 46(4): 732-749.

Davies, R, Drinkwater, S, Joll, C, Jones, M, Lloyd-Williams, H, Makepeace, G, Parhi,M, Parken, A, Robinson, C, Taylor, C and Wass, V (2011) An *Anatomy of Economic Inequality in Wales*, Cardiff: Equality and Human Rights Commission.

DfEE and Cabinet Office (1996) *The Skills Audit Report: A Report from an Interdepartmental Group, Occasional Paper*, London: HMSO.

DfES, DTI, HM Treasury and DWP (2003) *21st Century Skills: Realising Our Potential – Individuals, Employers, Nation*, Cm 5810, London: HMSO.

Dieckhoff, M (2008) 'Skills and occupational attainment in Germany, Denmark and the UK', *Work, Employment and Society*, 22(1): 89-108.

Dieckhoff, M, Jungblut, J-M and O'Connell, P (2007) 'Job-related training in Europe: do institutions matter?', in Gallie, D (ed.) *Employment Regimes and the Quality of Work*, Oxford: Oxford University Press.

European Commission (2008) *Employment in Europe 2008*, Brussels: European Commission, Directorate-General for Employment and Social Affairs.

European Communities (2005) *Europe in Figures: Eurostat Yearbook 2005*, Luxembourg: Office for Official Publications of the European Communities.

Felstead, A (2009) 'Are jobs in Wales high skilled and high quality? Baselining the *One Wales* vision and tracking recent trends', *Contemporary Wales*, 22: 36-61.

Felstead, A (2011) 'Patterns of under-utilization in the recession', *Skills in Focus*, December, Glasgow: Skills Development Scotland.

Felstead, A (2012) 'Rapid change or slow evolution? Changing places of work and their consequences in the UK', *Journal of Transport Geography*, 21(2): 31-38.

Felstead, A and Green, F (2013) 'Underutilization, overqualification and skills mismatch: patterns and trends', *Skills in Focus*, June, Glasgow: Skills Development Scotland

Felstead, A, Fuller, A, Jewson, N and Unwin, L (2009) *Improving Working as Learning*, Routledge, London.

Felstead, A, Fuller, A, Unwin, L, Ashton, D, Butler, P and Lee, T (2005) 'Surveying the scene: learning metaphors, survey design and the workplace context', *Journal of Education and Work*, 18 (4): 359-383.

Felstead, A, Gallie, D and Green, F (2002) *Work Skills in Britain, 1986-2001*, London: Department for Education and Skills.

Felstead, A, Gallie, D, Green, F and Inanc, I (2013a) *Skills and Employment Survey 2012: Technical Briefing*, London: Centre for Learning and Life Chances in Knowledge Economies and Societies, Institute of Education.

Felstead, A, Gallie, D, Green, F and Inanc, I (2013b) *Skills at Work: First Findings from the Skills and Employment Survey 2012*, London: Centre for Learning and Life Chances in Knowledge Economies and Societies, Institute of Education.

Felstead, A, Gallie, D, Green, F and Zhou, Y (2007) *Skills at Work in Britain, 1986 to 2006*, Oxford: ESRC Centre on Skills, Knowledge and Organisational Performance.

Felstead, A, Gallie, D, Green, F and Zhou, Y (2010) 'Employee involvement, the quality of training and the learning environment: an individual-level analysis', *International Journal of Human Resource Management*, 21(10): 1667-1688.

Felstead, A, Green, F and Jewson, N. (2013c) 'Training in the recession', *Evidence Report*, Wath-upon-Dearne: UK Commission for Employment and Skills.

Felstead, A, Green, F and Mayhew, K (1999) 'Britain's training statistics: a cautionary tale', *Work, Employment and Society*, 13(1): 107-115.

Felstead, A, Jewson, N and Walters, S (2005) 'The shifting locations of work: new statistical evidence on the spaces and places of employment', *Work, Employment and Society*, 19(2): 415-431.

Financial Times (2013) 'Employers report battle to hire qualified staff', by Groom, B, 19 June.

Financial Times (2012) 'Services sector gives growing cause for concern', by Cohen, N and O'Connor, S, 26 April.

Forth, J, Metcalf, H, Kirby, S and Anderson, T (2001) *The Gender Pay Gap*. London: Women and Equality Unit.

Fuller, A and Unwin, L (2004) 'Expansive learning environments: integrating organizational and personal development', in Rainbird, H., Fuller, A. and Munro, A. (Ed.) *Workplace Learning in Context*, London: Routledge.

Gallie, D and Zhou, Y (2011) 'The changing job skills of female part-time workers in Britain 1992–2006', *Human Resource Management*, 21(1): 28-44.

Gallie, D, White, M, Cheng, Y and Tomlinson, M (1998) *Restructuring the Employment Relationship*, Oxford: Clarendon Press.

Green, F and James, D (2003) 'Assessing skills and autonomy: the job holder versus the line manager', *Human Resource Management Journal*, 13(1): 63-77.

Green, F and Zhu Y (2010) 'Overqualification, job dissatisfaction, and increasing dispersion in the returns to graduate education', *Oxford Economic Papers*, 62: 740-763.

Green, F, Felstead, A, Gallie, D, and Zhou, Y (2007) 'Computers and pay', *National Institute Economic Review*, no 201, July: 63-75.

HM Treasury (2005) *Skills in the UK: The Long Term Challenge – Interim Report*, London: HM Treasury.

HM Treasury (2006) *Prosperity for All in the Global Economy – World Class Skills*, London: HMSO.

Holmes, E and Oakley, M (2011) 'Public and private sector terms, conditions, and the issue of fairness', *Policy Exchange Research Note*, May, London: Policy Exchange.

Income Data Services (2011) 'Public and private sector earnings: fact and fiction', *IDS Pay Report No 1075*: London: Income Data Services.

Jones J, Hodgson JT, Clegg T, Elliott R. *Self-reported Work Related Illness in 1995: Results of a Household Survey*. Sudbury: HSE Books; 1998.

Kellaway, L (2013) 'Why should my staff get a pay rise for their MBAs?', *Financial Times*, 24 April.

Korczynski, M (2005) 'Skills in service work: an overview', *Human Resource Management Journal*, 15(2): 3-14.

Labour Party Wales and Plaid Cymru (2007) *One Wales: A Progressive Agenda for the Government of Wales*, Cardiff: Labour Party Wales and Plaid Cymru.

Leka, S., Griffiths, A., & Cox, T. (2003). *Work Organization and Stress*. Geneva: World Health Organization.

Machin, A (2003) 'The Vacancy Survey: a new series of National Statistics', *Labour Market Trends*, 111(7): 349-362.

MacKay, R and Davies, R (2011) 'Collective learning, effective demand, loss of work and loss of direction: the growing regional divide within the UK', *Regional Studies*, 45: 1-13.

Marmot, M G, Bosma H, Hemingway, H, Burnner, E, and Stansfeld, S A (1997). 'Contribution of job control and other risk factors to social variations in coronary heart disease incidence', *Lancet;* 350: 235-239.

Marmot, M., Smith, G; Stansfeld, S., et al. (1991). 'Health inequalities among British civil servants – the Whitehall II study', *The Lancet*, 337 (8754): 1387-1393.

Méhaut, P (1992) 'Further education, vocational training and the labour market: the French and German systems compared' in Castro, A, Méhaut, P and Rubery, J (eds) *International Integration and Labour Market Organisation*, London: Academic Press.

Murphy, P, Latreille, P L, Jones, M and Blackaby, D (2008) 'Is there a public sector training advantage? Evidence from the Workplace Employment Relations Survey', *British Journal of Industrial Relations*, 46(4): 674-701.

Nickson, D, Warhurst, C, Cullen, A M and Watt, A (2003) 'Bringing in the excluded? Aesthetic labour, skills and training in the 'new' economy', *Journal of Education and Work*, 16 (3): 185-203.

Ok, W and Tergeist, P (2003) 'Improving workers' skills: analytical evidence and the role of the social partners', *OECD Social, Employment and Migration Working Papers* DELSA/ELSA/WD/SEM(2003)10, Paris: Organisation for Economic Co-operation and Development.

ONS (2012) *Vacancies and Unemployment VACS01*, Newport: Office of National Statistics, downloaded from www.ons.gov.uk on 17 May 2012.

Payne, J (2006) 'What's wrong with emotional labour?', *SKOPE Research Paper No. 65*. Coventry: SKOPE, University of Warwick.

Penn, R, Rose, M and Rubery, J (1994) (eds) *Skill and Occupational Change*, Oxford: Oxford University Press.

PIU (2001) *In Demand: Adult Skills in the 21st Century*, London: Performance and Innovation Unit, Cabinet Office.

Sloane, P J, O'Leary, N and Watson, D (2005) 'The long tail of low skills in Wales and the UK – A review of the evidence', *Report to the Economic Research Unit, Welsh Assembly, Tender Contract No 99/2005*.

Smith, A, Johal, SS, Wadsworth, E, Davey Smith, G and Peters, T.(2000) *The Scale of Occupational Stress: The Bristol Stress and Health at Work Study*. Sudbury: HSE Research Report 265.

Spenner, K I (1990) 'Skill, meanings, methods and measures', *Work and Occupations*, 17: 399-421.

Strategy Unit (2002) *In Demand – Adult Skills in the 21st Century – Part 2*, London: Strategy Unit, Cabinet Office.

The Guardian (2002) 'Anyone know a good plumber?', by Mary O'Hara, 9 March.

The Times (2006) 'Work dries up for City boys lured to plumbing', by Will Pavia, 23 January.

UKCES (2009) *Ambition 2020: World Class Skills and Jobs for the UK*, Wath-upon-Dearne: UK Commission for Employment and Skill.

UKCES (2010) *Skills for Jobs: Today and Tomorrow – The National Strategic Skills Adult for England, Volume 2, The Evidence Report*, Wath-upon-Dearne: UK Commission for Employment and Skills.

UKCES (2011) *Skills for Jobs: National Strategic Skills Audit for Wales 2011 – Volume 2: Evidence Report*, Wath-upon-Dearne: UK Commission for Employment and Skills.

Wales Online (2012) 'New plan launched to revolutionise teaching of key skills in Welsh schools' by Gareth Evans, 17 May, www.walesonline.co.uk, downloaded on 17 May 2012.

Welsh Assembly Government (2008) *Skills That Work for Wales: A Skills and Employment Strategy*, Cardiff: Welsh Assembly Government.

Welsh Government (2013) *Programme for Government: Annual Report June 2013*, Cardiff: Welsh Government.

Williams, D (2004) 'Sources of data for measuring labour demand', *Labour Market Trends*, 112 (9): 375-383.

Zuboff, S. (1988) *In the Age of the Smart Machine: The Future of Work and Power*, New York: Basic Books.

ANNEX 1: METHODOLOGY

A1.1 Survey Instrument

The overarching aim of SES2012 was to produce an integrative survey which collected data on skills and the quality of employment as well as provide a link with the past and a benchmark for the future. As a result, researchers will be able to thoroughly monitor trends in skills use and changes in the quality of employment as well as explore the links between work organisation, employee relations, skills and training. The survey consolidates Britain's longstanding investment in research data, and keeps it at the forefront of international research on skills and the quality of work.

The survey instrument was therefore designed with a keen eye on this overarching aim. So, while SES2012 questionnaire contains many of the questions used in the three previous Skills Surveys in the series carried out in 1997, 2001 and 2006, it also includes others drawn from surveys which have given more emphasis to collecting data on the quality of employment. As a result, around one-tenth of the questions used in the Skills Survey 2006 were removed in order to make way for such questions. Deletions were made on the grounds of the usefulness of questions in data analysis, repetition with data collected elsewhere in the survey and overlaps with information collected by other surveys. An expert group was set-up to guide us in this process.[4]

The selection of additional survey questions was also guided by one of the new survey's subsidiary objectives, namely the development of three distinctive original and substantive contributions to scholarship in the area of skills and employment. These topics are: the nature of learning and training; education, skill and well-being; and fear at work. Additional questions were added to the survey to achieve this aim. These new questions are based on a mixture of tried and tested items used in other surveys (such as Programme for the International Assessment of Adult Competences (PIAAC) and Working in Britain) and new ones devised especially for the survey. To this end, the research team investigated what survey items have been used in the past, how they have performed in the field and how they relate to theoretical developments in the areas of study.

The questionnaire was ordered into twelve thematic blocks (the lack of complete alphabetical ordering was due to a number of historical legacies and a requirement to keep variable names, if possible, unchanged). The twelve blocks are shown below.

Block A	Checking Eligibility	Block G	Pay Questions
Block B	Broad Questions About the Job	Block H	The Job Five Years Ago
Block C	Detailed Job Analysis Questions	Block J	Recent Skill Changes and Future Perspectives
Block D	Computing Skills and Qualifications Questions	Block I	Well-being at Work
Block F	The Organisation	Block K	Personal Details
Block E	Work Attitudes	Block Q	Follow-up, Workplace Details and Conclusion

[4] This comprised: Peter Elias (ESRC), Caroline Berry (UKCES), John Forth (NIESR) plus the research team of Alan Felstead (Cardiff), Francis Green (LLAKES, IoE), Duncan Gallie (Oxford) and Hande Inanc (Oxford).

The resulting data series comprises seven cross-sectional surveys of workers in Britain aged 20-60/65.[5] Most notably, data from Working in Britain 2000 (WIB2000) has been added to the series where questions asked in 2000 have been asked word-for-word in 2012 or, in some cases, in the intervening period. This allows researchers to examine change over a longer time horizon and over wider range of issues than has hitherto been possible. To ensure comparability across data points, each survey included similar, if not identical, the methods of sample selection based on random probability principles, question wording, points of emphasis and response sets. By these means, comparability between the seven surveys was maximised and the samples were proven to be representative of the working population at the time.

However, only two out of the seven surveys in the resulting series had their samples boosted for Wales – in 2006 and in 2012. The results presented in this Report focus on these two data points in order to examine how far Wales has progressed to become a high skills, high quality jobs economy and what impact the recession is having on achieving this goal.

A1.2 Fieldwork Preparation

Questions which were not part of the 2006 Skills Survey or had not been taken from other tried and tested surveys (such as Working in Britain or piloted by PIAAC), were cognitively tested by GfK-NOP. The aim of cognitive testing is to provide some insights into the thought processes that a respondent goes through in understanding and answering a survey question. The aim is not to test questionnaire length or flow, but rather to see whether the respondent understands the question in the intended manner – it is clearly important to ensure that all respondents interpret the questions in the same way and that there is no room for alternate interpretations. It is a valuable tool in fine-tuning the wording of new questions and response items. A total of 12 such questions were included in the cognitive interviews in addition to four which have been repeated in this and other surveys.

Cognitive interview participants were recruited from door-to-door enquiries made by experienced interviewers, but the interviews themselves were conducted by the GfK-NOP research team. In four interviews, a member of the research team was also in attendance. The researchers probed respondents about what they understood about specific aspects of the interview and how they had composed their answers. A total of 26 cognitive interviews were carried out in two stages, with 13 interviews carried out in each stage. Alterations to the questions were made after stage one and final versions of the questions were inserted into the questionnaire.

In preparation for the pilot as well as the main stage of the fieldwork, the wording of advance letters was drafted and agreed with the sponsors. These letters were designed to show both the ESRC's and UKCES's logos and appropriate signatories were added. A decision was taken to include only UK-wide sponsors, and so WISERD was not mentioned but its role did appear on the survey web site (see below). Following the same principles, a two-colour leaflet was produced for advance use as well as on the

[5] Both the 2006 and 2012 surveys focus on those aged 20-65 inclusive and all, but the 2006 survey, are focused on Britain (south of the Caledonian Canal). The 2006 results reported here refer to Britain south of the Caledonian Canal in order to be comparable with the geographical scope of the 2012 survey.

doorstep. All of this material was translated into Welsh for fieldwork taking place in Wales.

A web site (www.cardiff.ac.uk/socsi/ses2012) was set-up for would be respondents and others to consult in readiness for the pilot and in accordance with our timetable. In the course of preparing the website, a letter was sent (via the Economic and Social Data Service) to the 160 or so users of the Skills Survey series. Of these, around 70% gave permission to be contacted by the ESDS or survey depositors regarding their use of the data. Users were asked to provide up-to-date details of any publications they have produced which make use of the data. The publications list on the web site, therefore, provides an up-to-date and comprehensive listing of outputs which use data from the series.

Entries were also inserted onto the LLAKES web site, which is co-hosting the project with Cardiff University, as well as on the sponsors' websites:

- www.llakes.org/llakes-research-strands/skills-and-employment-survey-2012/
- www.esrc.ac.uk/funding-and-guidance/tools-and-resources/research-resources/surveys/skills-and-employment-survey.aspx)
- www.ukces.org.uk/news/Articles/2012/Feb/skills-and-employment-survey
- http://www.wiserd.ac.uk/research/current-projects/skills-and-employment-survey/

A pilot of the survey was carried out in ten sample points, selected to be as representative as possible of the type of sample points encountered in the main stage. The pilot was carried out over a three week period – 10 November 2011 to 2 December 2011. All members of the research team attended both the Pilot Briefing and Debriefing sessions held in Wolverhampton. In addition, one member of the team accompanied one of the interviews on two separate occasions to see the doorstep screening and interview process in action on the ground.

Both before and after the pilot, the electronic script of the questionnaire was checked and double-checked against the paper version often by two, sometimes three, members of the research team. This included small alternations to the layout of questions 'on screen'.

The pilot comprised a total of 61 interviews carried out over the three week period. The resulting pilot dataset was provided to the research team. This provided another opportunity to check the electronic 'on screen' version of the questionnaire. The question filters were also checked using the results and response patterns were compared to previous surveys in order to identify possible alterations.

A1.3 Fieldwork Activities and Outcomes

The sample selection was based on a conventional multi-stage design which ensured that postcode sectors were spread throughout Britain and reflected the socio-economic composition of the country. Then, within each of the chosen postcode sectors, addresses were drawn from a random start point with the interval determined by the number of addresses sought per sample point. Initially, a total of 247 interviewers were briefed and 324 sample points were issued. This comprised 278 points for the British sample and 46 points for the Welsh boost (see Figure 2.1). A total of 14,866 addresses

were initially issued, of which 2,438 were for the Welsh boost. Further addresses were issued as part of the British sample. Together with the reserve sample addresses 3,375 were issued in Wales.

For the main fieldwork, a total of 16 Briefings have been carried out, three in January and the remainder in February 2012 with a final 'mop up' briefing in early March 2012. On seven occasions, at least one member of the research team was in attendance and participated in the Briefing by introducing the background to the survey and providing clarification when required. There were three Briefings for the Welsh sample with a member of the research team in attendance on all three occasions. Both the Welsh and 'research team supported' Briefings took place early on in the Briefing programme, thereby ensuring that clarifications and amendments were incorporated into subsequent sessions (or versions of the on-screen script). A total of 38 interviewers were used in Wales.

Once in the field, interviewers first had to determine whether there was an eligible individual to interview at each of the addresses they were given. For our purposes, they needed to be in work and aged 20-65 years old. When the interviewer was faced with a choice about selection, the procedure was based on a 'Kish grid', a table of randomly-generated numbers individually prepared for each address. In aggregate, the effect of using a Kish grid is to give each eligible person an equal chance of selection. It is used both for selection of the dwelling unit, where the postal delivery point contains more than one, and, far more often, for selection of a single adult person, when the dwelling unit contained two or more eligible for selection. The process of selection was fully documented on an 'Address Contact Sheet' (ACS), a paper document used by the interviewer to record all attempts to contact those at the address. As a measure to protect the identity of sample members the ACS was returned by interviewers to the office, separately from the computer data file.

As there are differences in the probability of selecting each individual, depending on the number of dwelling units at the address and the number of eligible adults in the selected dwelling unit, Kish weights are used in the analysis. The data set supplied contained a Kish weight designed to take into account the differential probabilities of sample selection according to the number of dwelling units at each issued address and the number of eligible interview respondents. In other words, those from households with more eligible members for interview were given a higher weight than those from smaller households.

In order to achieve the targeted the number of interviews – in the light of corrected estimates of eligibility – a reserve sample was selected. The reserve sample was not selected at the same time as the main stage sample, but used the same principles. A total of five reserve sample points and 3,375 addresses were issued in Wales, with three-quarters of interviews carried out in the first three months of 2012. All Welsh interviews were completed by the end May 2012.

In addition to allocation of addresses to interviewers at the outset of the project, selected cases were 're-issued', usually to a very experienced interviewer, both to ensure that reasonable response rates were achieved in more difficult areas and to maximise the overall response rate. Feedback from the original issue determined whether it would be appropriate to re-issue those addresses again, using information collected on the contact

sheet. Rather than quickly re-issuing individual outcomes to available interviewers, time was spent matching cases up to the more successful interviewers on the project. A small team of re-issue interviewers was utilised. The re-issue strategy involved assessing cases on a micro level to establish the anticipated success rate with the preferred choice of interviewer. In Wales, a total of 433 addresses were reissued which resulted in 36 interviews out of a total of 587.

The survey data were collected by computer-aided personal interviewing (CAPI). This means that a computer version of the questionnaire appeared on the interviewers' laptop computer. Interviewers read out the questions from the screen and entered the responses given by selected respondents. Interviewees were asked whether they would like the interview in English or Welsh. Those requesting Welsh were contacted by a Welsh-speaking interviewer and a fully translated CAPI script was used for this purpose. A total of two interviews were carried out in Welsh. Interviews took place in respondents' homes and lasted, on average, 59 minutes. At the end of each interview, respondents were given a £10 gift voucher redeemable at a number of well-known high street stores.

To get insights into the fieldwork performance on the ground members of the research team have separately accompanied an interviewer in the field; on three occasions these took place in Wales. In addition, throughout the fieldwork period GfK-NOP supplied the research team with a weekly account of fieldwork performance.

A1.4 Weighting Procedures

SES2012 is the seventh in a series of nationally representative sample surveys of individuals in employment aged 20-60 years old (although the 2006 and 2012 surveys additionally sampled those aged 61-65). Not all of these surveys had a Welsh sample. Furthermore, we have chosen to focus only on the 2012 and 2006 datasets in this Report because only these surveys boosted the sample size for Wales.

The data files for both the 2012 and 2006 surveys were supplied with design weights. These were provided by the market research companies responsible for the fieldwork. They ensure that the data were representative of the target population by correcting for differential probabilities of selection. Unequal selection probabilities can occur at three points in the design process:

- The selection of one dwelling per address;
- The selection of one household per selected dwelling;
- The selection of one eligible adult per (selected) household.

In many datasets, these are referred to as 'kish weights'. We use the kish weights to produce the sample distributions produced below (see Tables 2.1 and 2.2). The distribution of the samples for Wales, London and the South East, and the Rest of Britain were examined according to some standard socio-economic variables. These distributions were compared with results generated for the same areas but produced by the Quarterly Labour Force Survey (QLFS) for the second quarter of that year. Since the QLFS has a substantially larger sample size, and since it gleans information from every member of households, it can be argued that the QLFS sample is likely to be closely representative of the employed workforce.

Tables 2.1 and 2.2 present these comparisons. The base is those in employment and aged between 20 and 65 years old inclusive. We compare the representation of the kish weighted survey results against the results given by the QLFS for the second quarter of that year. We compare the results by sex, age and occupation. These results are then used to produce sex, age and occupational weights which when applied adjust for the under-representation of men, the young and certain occupational groups. To make occupational comparisons, we used the classification system in place at the time:

- for 2006 we used SOC2000;
- for 2012 we used SOC2010.

Throughout this Report the data are weighted using the three weights separately derived for Wales, London and the South East, and the Rest of Britain. The findings presented here, therefore, correct for both design effects and non-response rates by sex, age and occupational group. This ensures that the findings we present are robust.

Figure A1.1:
SES2012 Welsh Sample Points

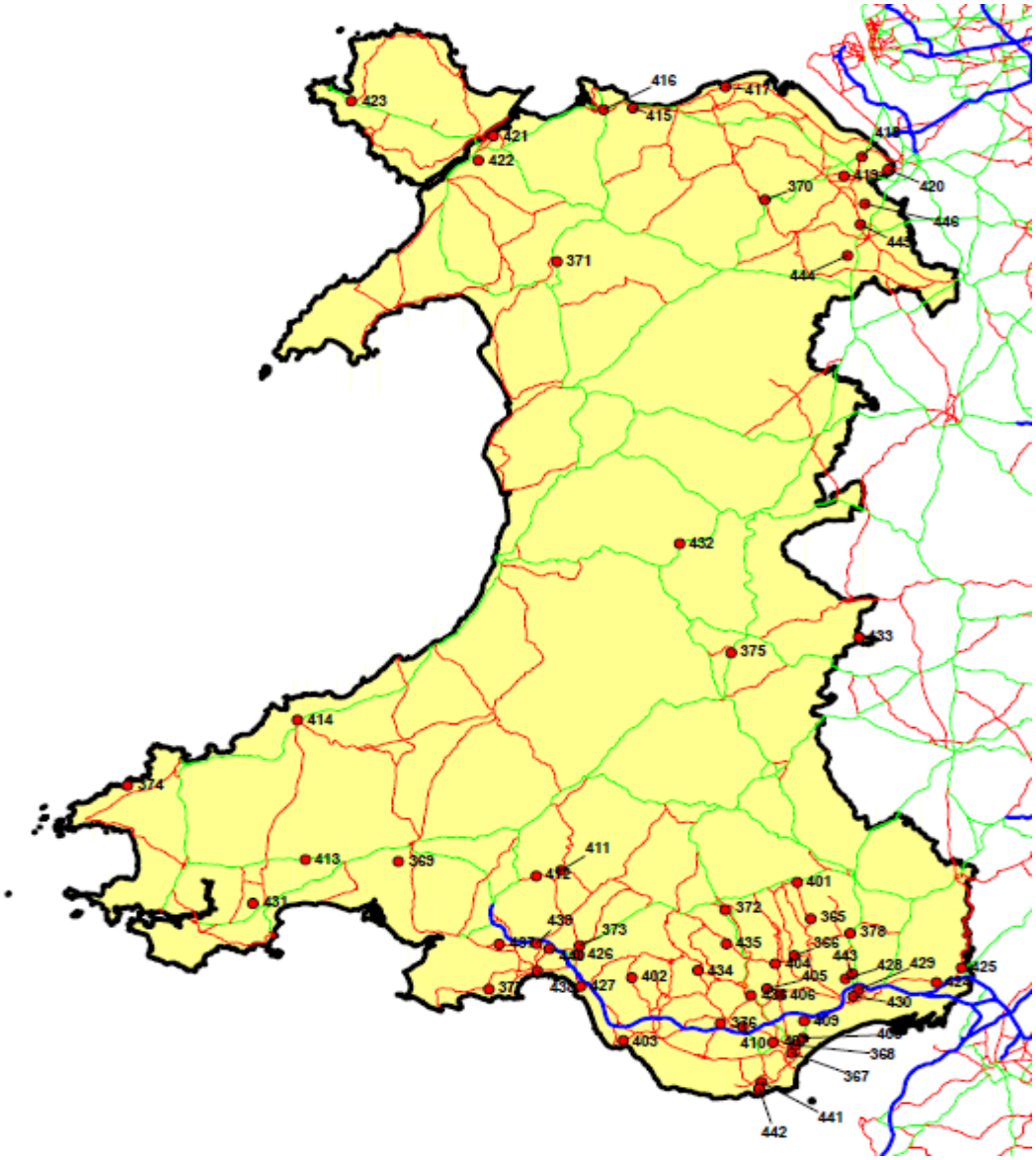


Table A1.1:
Representativeness of the Skills and Employment Survey 2012

(a) Wales

	SES2012	QLFS Quarter 2, 2012	With weights applied
Gender			
Male	46.3	53.0	54.6
Female	53.7	47.0	45.4
Age			
20-29	17.2	21.2	19.5
30-39	21.6	22.2	22.1
40-49	26.8	26.9	26.7
50-60	27.3	23.6	26.2
61-65	7.1	6.0	5.5
SOC 2010 Occupations			
Managers, Directors and Senior Official	6.2	9.0	8.9
Professionals	17.5	18.1	17.2
Associate Professionals	19.3	12.7	12.7
Administrative & Secretarial	5.9	10.4	10.3
Skilled Trades	12.9	13.4	14.7
Caring and Leisure	16.2	10.1	9.7
Sales and Customer Service	3.6	8.0	8.1
Plant & Machine Operatives	10.0	8.2	8.8
Elementary	8.5	10.2	9.7

(b) London and the South East

	SES2012	QLFS Quarter 2, 2012	With weights applied
Gender			
Male	51.4	54.8	54.7
Female	48.6	45.3	45.3
Age			
20-29	18.9	21.8	22.0
30-39	23.5	25.6	25.5
40-49	25.5	26.8	26.4

50-60	25.2	20.8	21.0
61-65	7.0	5.0	5.1
SOC 2010 Occupations			
Managers, Directors and Senior Official	14.6	12.0	12.0
Professionals	24.6	23.3	23.2
Associate Professionals	16.3	16.9	17.4
Administrative & Secretarial	8.5	11.0	10.4
Skilled Trades	7.3	9.3	9.4
Caring and Leisure	8.1	8.0	7.6
Sales and Customer Service	6.7	6.5	6.6
Plant & Machine Operatives	4.8	4.5	4.5
Elementary	9.0	8.4	8.8

(c) Rest of Britain

	SES2012	**QLFS Quarter 2, 2012**	**With weights applied**
Gender			
Male	46.2	53.3	53.4
Female	53.8	46.7	46.6
Age			
20-29	17.0	21.8	21.6
30-39	21.0	21.9	22.1
40-49	29.9	27.4	26.7
50-60	25.8	23.8	24.1
61-65	6.3	5.2	5.5
SOC 2010 Occupations			
Managers, Directors and Senior Official	9.1	9.6	9.8
Professionals	15.8	18.6	17.9
Associate Professionals	14.1	13.0	13.6
Administrative & Secretarial	11.4	11.4	10.6
Skilled Trades	13.0	11.5	12.8
Caring and Leisure	12.8	9.5	8.5
Sales and Customer Service	7.0	8.2	7.9
Plant & Machine Operatives	6.7	7.5	8.1
Elementary	10.0	10.8	11.0

Note:

The survey is weighted by the design weight (column 2) and the QLFS by the representativeness weight supplied with the data (column 3). The final column (column 4) shows the survey results produced after applying both the design weight and the non-response weight calculated using QLFS data. All the QLFS point estimates fall within the 95% confidence intervals which surround the survey estimates when weights are applied.

Table A1.2:
Representativeness of the Skills Survey 2006

(a) *Wales*

	SS06	QLFS Quarter 2, 2006	With weights applied
Gender			
Male	47.7	53.1	52.4
Female	52.3	46.9	47.6
Age			
20-29	18.0	20.1	19.9
30-39	23.5	24.2	24.6
40-49	29.0	27.4	26.9
50-60	25.8	23.7	23.9
61-65	3.8	4.6	4.7
SOC 2000 Occupations			
Managers	11.6	14.7	14.5
Professionals	12.5	11.1	11.0
Associate Professionals	13.7	13.6	13.4
Administrative & Secretarial	11.9	11.5	10.9
Skilled Trades	12.5	12.9	14.3
Personal Services	9.1	9.1	8.4
Sales	3.9	6.8	6.3
Plant & Machine Operatives	11.5	10.2	10.6
Elementary	13.3	10.8	10.6

(b)London and the South East

	SS06	QLFS Quarter 2, 2006	With weights applied
Gender			
Male	49.2	54.6	54.5
Female	50.8	45.4	45.5
Age			
20-29	17.9	21.9	21.6
30-39	30.3	27.2	27.2
40-49	26.7	26.2	26.0
50-60	21.3	20.7	20.9
61-65	3.9	4.1	4.2

	SS06	QLFS Quarter 2, 2006	With weights applied
SOC 2000 Occupations			
Managers	17.5	18.3	18.6
Professionals	15.1	15.8	15.3
Associate Professionals	19.4	17.2	17.8
Administrative & Secretarial	11.7	12.6	12.0
Skilled Trades	9.7	9.2	10.0
Personal Services	7.6	7.1	6.4
Sales	5.9	5.6	5.4
Plant & Machine Operatives	5.4	5.2	5.6
Elementary	7.7	8.8	8.9

(b) *Rest of Britain*

	SS06	QLFS Quarter 2, 2006	With weights applied
Gender			
Male	49.8	53.7	53.3
Female	50.2	46.3	46.7
Age			
20-29	16.2	20.5	20.3
30-39	24.5	25.0	25.0
40-49	29.8	27.3	27.2
50-60	25.3	22.9	23.0
61-65	4.2	4.3	4.4
SOC 2000 Occupations			
Managers	14.1	14.8	14.8
Professionals	11.8	12.9	12.7
Associate Professionals	13.8	13.9	13.7
Administrative & Secretarial	12.4	12.0	11.5
Skilled Trades	12.4	11.4	12.0
Personal Services	8.4	8.0	7.7
Sales	7.0	7.0	7.0
Plant & Machine Operatives	9.1	8.8	9.2
Elementary	11.0	11.3	11.5

Note:

The survey is weighted by the design weight (column 2) and the QLFS by the representativeness weight supplied with the data (column 3). The final column (column 4) shows the survey results produced after applying both the design weight and the non-response weight calculated using QLFS data. All the QLFS point estimates fall within the 95% confidence intervals which surround the survey estimates when weights are applied.