Contextualising diversity management: challenging the effectiveness of the business case

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CONTEXTUALISING DIVERSITY MANAGEMENT:

CHALLENGING THE EFFECTIVENESS OF THE BUSINESS CASE

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Contextualising diversity management: Challenging the effectiveness of the business case

Abstract

This PhD challenges, through the discussion of eleven publications, the effectiveness of the employer-led 'business case' to achieving greater equality and diversity in organisations and highlights the need for a systemic and contextual approach through inclusion of employee voice. The absence of employee participation in building diversity strategies leads to inconsistent initiatives whose relevance and impact are not shaped or interrogated by relevant groups in their specific contexts, undermining effectiveness.

These publications, mainly based on qualitative case-study research, discuss diversity management from a sectoral or organisational perspective, focusing on 'good practice' analysis, whilst also critiquing this concept. The earlier publications show that the structural and cultural barriers to female employment in the male-dominated construction sector impact the participation of other disadvantaged groups. They also discuss the impact of social class and the effectiveness of inclusion strategies for disabled workers, as well as the positive influence of collective employee voice on conflict management in organisations. The later publications look at diversity management from a management perspective; within specific sectoral contexts, mostly male-dominated (e.g. science, technology, engineering, mathematics and medicine (STEMM). The sectoral analysis highlights the importance of employment context (sector, occupation, organisation, job role) in the understanding and implementation of equality and diversity.

The publications show the limitations of employer-led diversity management initiatives, which fail to break down entrenched structural and cultural barriers. These barriers are shaped by organisational expectations of employees' availability in terms of working time and place, and adaptability to set ways of working. The business case approach does not change these expectations, and leads to a narrow interpretation of diversity and target populations, dominance of employer voice in discourse and actions, lack of contextualised multi-level implementation of diversity measures, the singularity of business benefit as driver and lack of diversity monitoring to support decision making, therefore explaining the lack of progress in equality and diversity.

Employee participation is weak in terms of depth and scope, with evidence only of top-down communication. Where collective employee participation is increased, diversity management is improved through enhanced contextualisation and more systemic implementation, reducing barriers to equality and diversity.

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List of tables and figures

List of accompanying materials: published works included

The eleven published works considered as part of this PhD are listed below, in chronological order, ending with the most recent publication: six refereed journal articles (RJA), one book chapter and four books (research reports).

The published works submitted are eligible to be included (see 11.12 and 11.13 of the University of Westminster Regulations for the award of Master of Philosophy and Doctor of Philosophy 2015/16).

For each publication the following is listed: reference in Westminster University Harvard style, type (refereed journal article, book chapter or book), ISSN or ISBN number, word count, ABS 2015 ranking[1] for RJAs and if relevant, URL for e-copy.

The total word count[2] of the eleven publications listed below is **119,547.**

The full-text versions of these publications are included within a separate file.

As all are joint publications, co-authors have signed an endorsement of my contributions made to the work undertaken. Copies of these are available in Appendix A. **The published works included are:**

1 Clarke, L., Frydendal-Pedersen, E., Michielsens, E. and Susman, B. (2005). The European construction social partners: gender equality in theory and practice. *European Journal of Industrial Relations,* 11 (2), 151-177.
    - RJA
    - Online ISSN: 1461-7129
    - word count: 6,575
    - ABS 2015 ranking: 3
    - URL: http://ejd.sagepub.com/content/11/2/151.refs

2 Clarke, L., Michielsens, E. and Wall, C. (2006). Women in manual trades. In: Gale, A.W. and Davidson, M. J. (eds.) *Managing diversity and equality in construction: initiatives and practice.* London: Taylor & Francis, 151-168.
    - BOOK CHAPTER
    - ISBN 0-415-28869-X
    - word count: 6,307

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[1] Association of Business School's 2010 ranking: see http://charteredabs.org/abs-academic-journal-guide-launched/ .

[2] Word count excludes tables, graphs and references.

3 Liddle, J. and Michielsens, E. (2007a). 'NQOC': Social Identity and Representation in British Politics. *The British Journal of Politics & International Relations*, 9 (4), 670-695.
  - RJA
  - Online ISSN: 1467-856X
  - word count: 12,293
  - ABS 2015: not listed; Impact Factor: 1.566; ISI Journal Citation Reports Ranking: 2014: 16/85 (International Relations); 32/161 (Political Science)
  - URL: http://onlinelibrary.wiley.com/doi/10.1111/j.1467-856X.2007.00268.x/full

4 Urwin, P., Murphy, R., and Michielsens, E. (2007). Employee voice regimes and the characteristics of conflict: an analysis of the 2003 survey of employment tribunal applications. *Human Resource Management Journal,* 17 (2), 178-197.
  - RJA
  - Online ISSN: 1748-8583
  - word count: 5,367
  - ABS 2015 ranking: 4
  - URL: http://onlinelibrary.wiley.com/doi/10.1111/j.1748-8583.2007.00037.x/full

5 Clarke, L., Bingham, C., Michielsens, E., Miller, S. and van de Meer, M. (2007). *Enabling and disabling labour market sectors: disability and employment in Britain and the Netherlands in the construction, ICT and health sectors.* Final report prepared for the Norwegian Work Research Institute as part of the project 'Disabled, Working Life and Welfare State'. London: CLR/ProBE.
  - BOOK (Research Report)
  - ISBN 978-0-903109-44-4 (hard copy) and 978-0-903109-45-1 (e-copy)
  - word count: 64,757 for full report[3] (152 pages)
    chapter A2 pages 41-60 (sole authored): word count 7,915
    background A1 pages 5-11 (co-authored): word count 1,865

6 Clarke, L., van der Meer, M., Bingham, C., Michielsens, E. and Miller, S. (2009). Enabling and disabling: disability in the British and Dutch construction sectors. *Construction Management and Economics,* 27 (6), 555-566.
  - RJA
  - Online ISSN: 1466-433X
  - word count: 7,553
  - ABS 2015 ranking: 2
  - URL: http://www.tandfonline.com/doi/abs/10.1080/01446190902977445#.U5N6DvldWSo

[3] The full report is not part of the word count of the 11 publications. I included the word count of the report parts I contributed to: chapter A2 and the background/introduction.

7 Bingham, C., Michielsens, E., Clarke, L. and van der Meer, M. (2013). Towards a social model approach?: British and Dutch disability policies in the health sector compared. *Personnel Review,* 42 (5), 613-637.
   - RJA
   - ISSN: 0048-3486
   - word count: 8,937
   - ABS 2015 ranking: 2
   - URL: http://www.emeraldinsight.com/journals.htm?articleid=17094254

8 Michielsens, E., Bingham, C., Clarke, L., Miller, S., Urwin, P., Siara, B. and Karuk, V. (2008). *Implementing diversity employment policies: examples from large London companies.* London: WBS Diversity (Westminster University) & London First.
   - BOOK (Research Report)
   - ISBN number 978-0-903109-43-7 (hard copy).
   - word count: 16,087

9 Michielsens, E., Bingham, C. and Clarke, L. (2014). Managing diversity through flexible-work arrangements: management perspectives. *Employee Relations,* 36 (1), 49-69.
   - RJA
   - ISSN: 0142-5455
   - word count: 8,076
   - ABS 2015 ranking: 2
   - URL: http://www.emeraldinsight.com/journals.htm?articleid=17102261

10 Wright, A., Michielsens, E., Snijders, S., Kumarappan L., Williamson, M., Clarke, L., and Urwin, P. (2014). *Diversity in STEMM: Establishing a Business Case — Report of research by the University of Westminster for the Royal Society's diversity programme 'Leading the way: increasing diversity in the scientific workforce'.* London: WBS Diversity (Westminster University) and Royal Society.
   - BOOK (Research Report)
   - ISBN 978-0-903109-46-8 (hard copy) 978-0-903109-47-5 (e-copy)
   - word count: 25,590 (106 pages)
   - URL: https://royalsociety.org/~/media/policy/projects/leading-the-way/diversity-business-case-june-2014.pdf

11 Clarke, L., Michielsens, E., Snijders, S., Wall, C., Dainty, A., Bagilhole, B., and Barnard, S. (2015). *'No more softly, softly': Review of women in the construction workforce.* London: ProBE — Centre for the Study of the Production of the Built Environment (Westminster University).
   - BOOK (Research Report)
   - ISBN 978-0-903109-50-5 (hard copy) ISBN 978-0-903109-51-2 (e-copy)
   - word count: 12,982 (39 pages)
   - URL: https://www.westminster.ac.uk/file/41891/download

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This PhD by publication is in the making for more than ten years, so I am conscious there are a lot of people that have been instrumental in this journey. First of all I want to thank both my supervisors, Professor Jan Druker and Professor Shona Bettany, for their time and kind and constructive critique; and their patience with my frequent requests to postpone supervision sessions. Even though I considered myself an experienced researcher, in the last two years I have learned especially being more realistic about the time it takes to think, write, and 'sign-post'. You both gave me the sense that I could knock on your doors at any point, which gave me a great sense of security and support.

As the publications show, all of them are based on teamwork, and I would not be at this point without my colleagues with whom this research was conducted and the publications written. Especially the women who recruited me as researcher: Dr Joanna Liddle, under whom I started my research career in the UK, and whose eye for detail, interest in feminist research and writing was infectious. Professor Linda Clarke's influence on my research career is huge: through working with her I feel I became an academic. Her passion and perseverance have been very influential, it is through her example that I have learned to not give up. It seems there is one thing Linda has not been able to teach me though, despite many efforts: punctuation! So thank you Jan, Shona and Linda for your kind editing.

Thanks also Cec, Chris, Angela, Peter, Sue, Sylvia, Deborah and other co-authors for the teamwork in research and writing, and your support in my journey with this PhD. We have not experienced conflict or competitiveness which seems to be so common amongst others, this makes it even more special. Valerie, your encouragement was great, walking and chatting!

Christine, thanks for your support and specifically going out of your way to make my research leave a reality last autumn. I could not have done it otherwise. Fefie, thanks for generously sharing your PhD journey wisdom, and the coffee breaks to vent frustration about writing and family together with Keith. I'll bring in some Lidl prosecco to celebrate when I submit this. HRM colleagues and especially Kevin, and Iwona, Angela, Kieran, Petar and Lisa for taking over my responsibilities during my research leave – you all have been very supportive.

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Mama en papa – bedankt dat ik altijd bij jullie terecht kan en dat jullie me steunen en stimuleren in alles wat ik doe. Maar vraag me niet deze thesis in het Nederlands te vertalen. Bonma and bonpa, this is dedicated to you. While you may not be here anymore, you are in everything I do.   Elisabeth

Author's declaration

I declare that

a. The submission as a whole or in part is not substantially the same as any that I have previously made or am currently making, whether in published or unpublished form, for a degree, diploma or similar qualification at any university or similar institution.

b. Until the outcome of the current application to the University is known, the work or works submitted will not be submitted for any such qualification at another university or similar institution.

Elisabeth Michielsens

June 2016

Abbreviations

ACAS	Advisory, Conciliation and Arbitration Service
ADLO	Association of Direct Labour Organisations
BAME	Black, Asian and Minority Ethnic
DDA	Disability Discrimination Act
DLO	Direct Labour Organisation
DM	Diversity Management
DTI	Department of Trade and Industry
E&D	Equality and Diversity
EFBWW	European Federation of Building and Woodworkers
EO	Equal Opportunities
LF	London First
FIEC	European Construction Industry Federation
HRM	Human Resource Management
ICT	Information and Communications Technology
LGBT	Lesbian, Gay, Bisexual and Transgender
LWAMT	London Women and Manual Trades
RJA	Refereed Journal Article
RS	Royal Society
SETA	Survey of Employment Tribunal Applications
STEMM	Science, Technology, Engineering, Mathematics and Medicine
TTT	Thames Tideway Tunnel
UOW	University of Westminster
WERS	Workplace Employment Relations Survey
WLB	Work-Life balance

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CHAPTER A: Introduction

A.1. Purpose and context of PhD

This PhD by Published Work is based on 11 publications, published over the course of the last ten years. The publications are based on research I was involved in as researcher at Warwick University (1995-1997) and as Research Fellow, Senior and Principal Lecturer at Westminster Business School (since 1997). My research area has mainly focused on gender equality and diversity (E&D) for the last 20 years, with a particular interest in European comparative research of employment contexts where women, and other marginalised groups such as disabled workers, are in a significant minority — such as business and political 'elites', and construction and STEMM sectors (Clarke et al. 2015b and 2007, Wright et al. 2014, Michielsens et al. 2008, Liddle and Michielsens 2000a).

The debate and research on E&D has developed over the last ten years, from equality and anti-discrimination to diversity and inclusion (Healy et al. 2011a). This is reflected in the publications presented through a series of contextual analyses. As in the wider debate, the focus and questioning of the employer-led business case becomes more prominent in the later publications, challenging its effectiveness to achieving greater E&D in organisations, and highlighting the need for a systemic and contextual approach.

The context of employment has changed also over this decade: workplaces have become more diverse in the UK; women made up over half of all employees in 52% of workplaces in 2011; ethnic minorities account for at least 10% of employees in 21% of workplaces (18% in 2004); and disabled workers account for 2% of all employees (1% in 2004) (Wanrooy et al. 2013). Social, political, legislative and organisational action has contributed to this increase. Legislative changes have provided an important framework for equality policies and practices: since the Race Relations Act in 1965 and Equal Pay Act in 1970, anti-discrimination law referring to gender, race, religion, disability and age amongst others, is now consolidated under the Equality Act 2010. With initiatives from European Union Directives, minimum standards on working time and leave, part-time work and parental leave have been

implemented; and have had a positive impact on the participation and working conditions of employees, especially women with care responsibilities (42-45% of women now work part-time (ONS 2013a)).

While this is a positive trend, equality remains distant in terms of access to employment, career development and reward. These groups continue to be disadvantaged compared to white, able-bodied, middle class men. A glass ceiling, symbolising obstacles to vertical progression persists: only 39 of FTSE 100 companies have at least 25% female board members (BIS 2014). The hourly gender pay gap, while reduced, still stands at nearly 20% (ONS 2015). BAME (Black, Asian and Minority Ethnic) groups have higher unemployment rates and, despite high levels of ambition, BAME workers feel disadvantaged in career progression (ONS 2013a, RFO 2011).

Certain parts of the labour market do worse in terms of participation and career opportunities for these disadvantaged groups, such as STEMM occupations (Science, Technology, Engineering, Mathematics and Medicine), given special attention in this PhD. We have to question why decades of legislative, societal and organisational actions to encourage diversity in STEMM have not delivered greater E&D. While the number of female STEMM students has increased, there are still significantly fewer women in STEMM careers[4] (IET 2015, WISE 2015).

The extensive research in this area confirms the complexity of improving E&D at organisational level. Acker (1990) and Burton (1987) show how organisations reproduce inequalities, resulting in entrenched stereotypes that are difficult to shift. The employer-led 'business case for managing diversity' has dominated both the discourse and the implementation of change. The research suggests a potential positive link between diversity and organisational performance (i.e. a business case); but evidence is lacking (Urwin et al. 2013). The 2011 Workplace Employment Relations (WERS) survey shows a paucity of business-led diversity actions: while diversity policies are common (77% of workplaces are covered by formal written equal opportunity (EO) or diversity policies), only 33% of UK workplaces have a

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[4] In these statistics, medical occupations are excluded.

formal strategic plan covering employee diversity with objectives to be achieved and most workplaces take little action to combat discrimination (Wanrooy et al. 2013).

The lack of employer action and the limited nature of outcomes in terms of E&D therefore lead into the focus of this PhD.

A.2. Focus of PhD

The published works comprised within this PhD critically evaluate the impact and effectiveness of an employer-led approach in diversity management (DM) towards greater E&D[5] in organisations.

The aim and original contribution of this thesis is to provide a conceptual framework to critique DM discourse and practice through considering its focus, voice, drivers and measures. The business case approach lacks effectiveness through its narrow interpretation of diversity meaning and target populations, dominance of employer voice in discourse and actions, lack of collective employee participation, the singularity of business benefit as driver, lack of contextualised multi-level implementation of diversity measures and lack of diversity monitoring to support decision making.

The publications show the limitations of employer-led DM in breaking down entrenched structural and cultural barriers. While promoting diversity, work arrangements and working time, which prove obstacles to inclusion remain unchanged, so explaining the lack of progress in E&D for women as well as other disadvantaged groups. Organisations have DM initiatives, but hidden areas of disadvantage remain. **These publications highlight that the current approaches to DM are insufficient, as they result more in 'window dressing' than structural transformations. They show that a concerted, systemic approach which includes the voice of employees is needed to challenge and change organisational**

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[5] In this commentary I use both terms Equality & Diversity (E&D) to indicate the usefulness of taking a broad approach.

expectations of commitment and ways of working which obstruct inclusion, diversity and equality, in ways relevant and feasible in their particular contexts.

Organisational E&D initiatives have largely been shaped by government and employers: through changes in employment legislation, and human resource management (HRM), in recruitment, training and development, networking and mentoring. On this model, structural inequalities are not challenged. These ad-hoc initiatives are owned by management and lack employee input, resulting in generic actions which are not adjusted to the specific sectoral or occupational context. The absence of employee voice and contextualisation can explain the lack of diversity as outcome, as the employees who are the subject of the change within their particular context have not participated in directing the actions to establish change.

The management of diversity in Science, Technology, Engineering and Mathematics (STEMM[6]) and the construction sector, and disability DM is of special interest because of their usefulness to evaluate DM effectiveness:

1) STEMM is important in terms of employment, but remains highly segregated in terms of gender, ethnicity, disability and social class. This is also the case in the construction industry[7], despite concerted diversity action over decades, and it is considered here as a critical case for the evaluation of effectiveness of DM. Table B.3 (see Appendix B) shows that, despite an increased female participation rate in selected STEMM and construction occupations between 1991 and 2011, it is still segregated, mostly so for construction trades.

2) As disability in the workplace is a relative concept (e.g. dyslexia has a different impact in nursing versus electrical work), it provides a useful base to analyse the importance of contextualisation in DM.

This commentary will discuss the contributions of these 11 publications to the debate on the value of the business case to diversity. The type of publications

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[6] Core STEM occupations comprise Biological sciences; Agricultural sciences; Physical / environmental sciences; Mathematical sciences and Computing; Engineering, Technology and Architecture (Bosworth et al. 2013). For STEMM, Medicine is added.

[7] Construction and STEMM overlap, but are seen as separate sectors here, as construction includes both professionals and operatives. The latter is not included in STEMM.

(including books, journal articles and book chapters, excluding conference papers), the ten year time period of the publications, the content, format and structure of this commentary and accompanying file of publications, are in line with the University Regulations for PhD by Published Work,[8] and Research Degrees handbook 2015/16. It is divided in the following chapters:

Figure A: Structure of this document
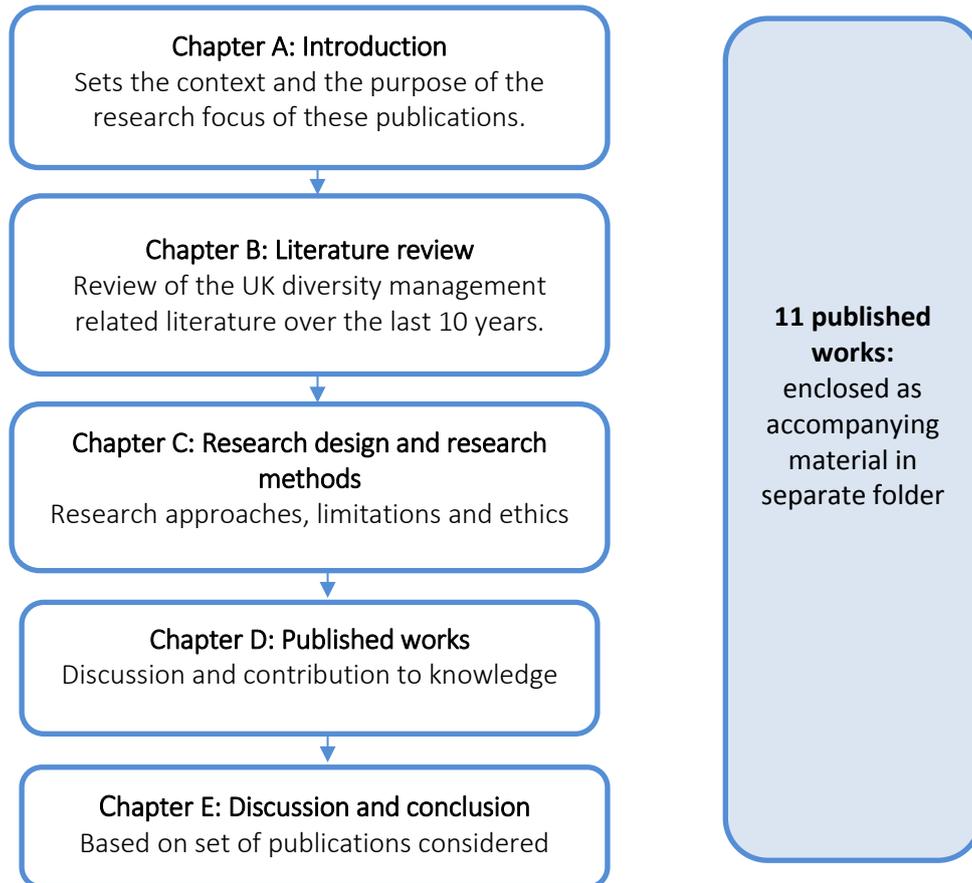
The literature review chapter will summarise the development of the discourse from Equality to DM, and review research evidence on the effectiveness of DM. This is followed by a discussion of the research designs and methods of the publications (chapter C), the main findings and knowledge contribution of the publications (Chapter D and E). The published works under discussion are enclosed in a separate folder.

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[8] See 11.12-11.17 of the University of Westminster Regulations for the award of Master of Philosophy and Doctor of Philosophy (2015/16).

CHAPTER B: Literature Review

B.1. Purpose

This chapter reviews the academic literature on DM, within the discourse from 'equality' to 'diversity' and 'inclusion'. It centres on the business case approach as the dominant conceptual and normative framework for DM. Its effectiveness is reviewed, and arguments challenging its validity and usefulness as a change management approach set out. As the publications of this PhD focus on segregated sectors such as STEMM, and on disability as a dimension of diversity, the research in these areas is reviewed separately.

The chapter is organised as follows. First, it addresses the main developments in the debate; then arguments and evidence for the business case rationale are discussed, followed by literature providing counter arguments, with reference to the need for collective employee voice. Under separate heading, DM literature in STEMM (Box A) and connected to disability (Box B) are reviewed.

B.2. Diversity management: developments in debate

The current academic and practitioner literature on DM at the workplace has moved away from the 'equality' and 'equal opportunities' (EO) approaches of the 1970s and 1980s which was based on a collective social rights agenda, allowing minorities to improve their disadvantaged starting position via positive action. From the 1990s, neo-liberal developments through legislative deregulation and focus on HRM shifted the debate towards the concept of 'diversity' (Oswick and Noon 2014, Harriss 2002). This was based on the value of individual differences to improving organisational performance, shifting the debate away from collective social justice (Healy et al. 2011a, Özbilgin and Tatli 2011). More recently the literature has moved on to 'inclusion', considered more pro-active and participatory than diversity (Kossek and Pichler 2006). Noon (2012, 2010) argues for 'equality of outcome' through positive discrimination, achieving a diverse workforce using threshold selection recruitment criteria.

The shift from equality to diversity and inclusion is seen as positive by some as it values individuals in organisations (CIPD/HODES 2012, Kandola and Fullerton 1994). Others view it as negative due to the lack of structural change, the individualisation of structural inequalities and reduction of diversity to a benefit instead of a moral or social right (Healy et al. 2011a, Kirton and Greene 2010, Noon 2007, Dickens 1999, Liff 1999). While considered as opposing views, Tatli (2011) shows that the DM/EO divide is not clear-cut as organisational DM discourse co-exists with EO inspired practices. Oswick and Noon (2014) argue that blending equality, diversity and inclusion concepts will increase their usefulness in providing solutions to anti-discrimination.

While there is no agreement about the value of this development, the prominence of the employer-led DM approach in the literature of the last two decades is undisputed. In the next section, this is evaluated in terms of rationale and evidence for and against enhancing E&D as outcome.

B.3. Literature on diversity management

DM has been defined as a "*management philosophy of recognising and valuing heterogeneity in organisations with a view to improve organisational performance*" (Tatli and Özbilgin 2009:244). It refers to the development of policy and programmes to enhance diversity in the workplace (recruitment, training, career development, mentoring). The literature has various angles: organisational factors contributing to its success (Kossek et al. 2006), the discourse of DM (Prasad et al. 2011, Zanoni and Janssens 2004) and the assessment of the effectiveness of DM to diversity (Kossek and Pichler 2006).

We focus on the latter, first reviewing evidence supporting the business case in enhancing business and diversity, with reference to specific HR management measures such as work-life balance (WLB), and awareness training; and secondly, reviewing the conceptual arguments against the business case.

B.3.1. Diversity management: business case rationale and evidence

The business case rationale of DM relies on the business benefits it provides, and focuses on employer action. Urwin et al. (2013) updated Cox and Blake's (1991) DM benefits into external and internal dimensions: 'external' benefits relate to the context of the organisation, such as recruitment of best talent, compliance with legislation and employer branding; 'internal' business benefits result from improved operations within the firm.

Both academic and practitioner literature confirm widespread belief in the business case argument, but empirical evidence on the positive impact on performance remains mixed (Theodorakopoulos and Budhwar 2015, Guillaume et al. 2013, Riley et al. 2013, Kochan et al. 2003). The lack of diversity target monitoring is a serious limitation in providing hard evidence for the business case. There is no effective use of business metrics from employee surveys to evaluate DM success (Wright et al. 2014, Wiley 2012, Broughton and Strebler 2008, Friday and Friday 2003).

Studies show diversity enhances organisational flexibility, recruitment, retention, engagement and financial sustainability, which may link to better performance (Armstrong et al. 2010, Allen et al. 2007). A diverse workforce can provide competitive advantage and enhance organisational adaptability to changing marketplaces (Zanoni et al. 2010, Kochan et al. 2003, Ely and Thomas 2001) or increase innovation (Østergaard et al. 2011). But others question these benefits — for example the link between diversity and innovation or improved team-working — as the complexity of organisational processes makes it impossible to identify discrete effects (Hamdani and Buckley 2011, Fisher 2009, Homan et al. 2007).

Equally, the literature on effectiveness of diversity-related HRM actions, such as WLB, diversity awareness training and management support, shows barriers, questioning its positive impact on diversity, which is addressed below.

The wide implementation of WLB through flexible work and care leave arrangements, has helped women's participation at work, and has made gender equity the main focus of the WLB research (Lewis and Humbert 2010). Woodhams and Corby (2007) and Kamenou (2008) show that WLB arrangements can positively

impact age, ethnic and disability participation. But effectiveness of WLB initiatives for E&D are constrained by cultural and structural barriers such as expectations around career development and managerial control (Kossek and Hammer 2008, Callan 2007, Stanworth 2000). Hence, WLB initiatives rarely lead to changes in organisational equity, especially vertical progression, as WLB sits uneasily with the concept of the 'ideal worker' and high expectations around work commitment (Kossek et al. 2010, Lewis and Humbert 2010). Working part-time is seen unfavourably in terms of commitment, negatively impacting on promotion (Crompton and Lyonette 2011, Corby and Stanworth 2009, den Dulk and de Rujiter 2008). The impact of austerity on WLB has increased the dominance of the economic efficiency argument, away from social justice (Lewis et al. 2016).

Awareness training and formalising procedures such as in recruitment, especially in the public sector, show benefits for E&D, although Noon et al. (2013) warn of the negative equality impact of 'hyper-formalisation' of selection procedures. A current popular focus is on 'unconscious bias' awareness training. However, there is no evidence these initiatives have led to increased E&D in organisation (for instance, see Raymond 2013, Mervis 2012, McCullough 2011). Critics of the business approach suggest that E&D is undermined, as the instrumental approach of managers prioritises short-term business objectives (Greene and Kirton 2011b, Noon 2007). Indeed, problems in retaining disadvantaged groups show an ad-hoc recruitment strategy for increasing diversity is not effective in the longer run (Michielsens et al. 2008).

The importance of managerial commitment for the successful implementation of diversity policies has been documented (Lapierre et al. 2008, Maxwell 2005), so senior management development programmes are crucial (Broughton and Strebler 2008). However, the impact of DM on line-managers' goals has received less attention, leaving implementation of policies unsupported or problematic (Kirton and Greene 2010, Foster and Harris 2005, Glynn et al. 2002).

This review shows that support for the business case for increased performance and diversity is weak due to the lack of diversity monitoring and the qualitative

nature of the research which restricts generalisations (Shen et al. 2009, Monks 2007, exception: Herring 2009). The conceptual arguments against the business case for DM are reviewed next. First models explaining the necessary elements for the effectiveness of DM are considered, followed by discussion of the core weaknesses of the business case and the importance of employee participation for DM.

B.3.2. Diversity management: conceptual critiques
Business case rationale: missing elements for effectiveness

DM research is multi-faceted; the work of Thomas and Ely (1996) and recently Kossek and Pichler (2006), Syed and Özbilgin (2009) and Kulik (2014) helps to structure the complexity of the field, and identify the elements that are missing in the business-led approach to DM.

For Kossek and Pichler (2006), the three most effective processes for achieving diversity are promoting organisational justice; reducing discrimination and improving competitiveness. As DM focuses exclusively on the business rationale, it is problematic from an equality or anti-discrimination viewpoint (Knights and Omanovic 2016, Noon 2007). Similarly Thomas and Ely (1996) identified three organisational approaches to DM: a 'discrimination and fairness' approach; an 'access and legitimacy' approach (arguing that a diverse workforce helps organisations cater to the needs of a diverse market) and a 'learning and effectiveness' approach, which allows employees to make choices based on their own cultural backgrounds. The latter — rarely achieved — is in line with the goal of an inclusive environment as defined by Syed and Özbilgin's (2009) multi-level relational approach. It implies that for effective DM, a relational approach is needed, incorporating actions at macro (societal), meso (organisational) and micro (individual agency) levels.

The necessity of incorporating different dimensions for effective DM returns in the work of Kulik (2014), who transfers Arthur and Boyles' (2007) HRM research typology to DM, showing that employees' perceptions of DM have been prioritised

over organisational policy/programmes research from a management perspective, leaving a gap in the knowledge. These frameworks highlight the narrowness of the employer-led business case approach. These weaknesses are expanded on below.

Diversity management: conceptual flaws of the business case rationale

Acker (2006), Dickens (1999, 1994), Kirton and Greene (2010) and Noon's (2007) analyses are useful in discussing the conceptual limitations of the business case for E&D. Essentially, they show its inability to challenge structural inequalities, to confront power relations or dominant, discriminatory ideologies. These limitations are categorised as follows: individual focus, the voluntary and ad-hoc nature of implementation, and lack of contextualization:

- *Individualising and de-politicising structural inequality:* The business approach hides the power relations that are at the core of inequality. With individuated diversity the collective 'voices of the disadvantaged' are neglected (Broadbridge and Simpson 2011, Crompton 2010, Dickens 1994). This 'dissolving differences' approach considers individual characteristics, but dilutes by inclusion of all differences (Kirton and Greene 2010, Noon 2007). This makes structural inequalities invisible, and therefore problematic. Compounded inequalities (defined as intersectionality) are not addressed (Walby et al. 2012, Healy et al. 2011b).

- *Voluntary and ad-hoc implementation justified by business benefit:* Diversity is seen as a benefit to the organisation rather than a social right (Noon 2007, Dickens 1999). The voluntary and employer-led nature of the business case makes it "*contingent, variable, selective and partial*'" (Dickens 1999:10). Dependent on business pressures, DM is dealt with in an instrumental way, with the risk of making it invisible (Kirton and Greene 2010, Foster and Harris 2005). In line with the critique on management enforced 'empowerment' in organisations (Moon and Stanworth 1999), diversity, if solely used as part of a competitiveness agenda, may be discredited. Critics therefore argue for a moral case versus a business case to ensure a long-term impact or at least recognition

that moral values should not be secondary to business efficiency needs (John et al. 2012, Bleijenbergh et al. 2010, Noon 2010, Tomlinson and Schwabenland 2010).

- *Lack of contextualisation*. The importance of considering context in DM is acknowledged in terms of national, institutional and cultural differences (Frandale et al. 2015). But DM literature does not reflect on sectoral or occupational context, leading to 'institutional isomorphism' (Chow 2004, DiMaggio and Powell 1983); organisations mimic each other's most successful policies and practices, leading to generic DM approaches. As these isomorphic initiatives or programmes are lacking in local relevance, the results are disappointing (Prasad et al. 2011). The heavy reliance on 'good practice' models in this area reinforces this and opposes 'institutional innovation. (Evans 2014:487). **The published works in this thesis (see Chapter D) show the importance of occupational or sectoral interpretations of barriers in DM (e.g. Wright et al. 2014).**

These core weaknesses in DM can be explained by the dominance of the employer voice in the DM agenda and implementation. Evidence on the positive impact of employee participation in implementing DM is discussed next.

B.3.3. Creating a diverse workforce: importance of collective employee voice

To improve effectiveness, Dickens (1999), reviewing the business case, suggested it needs to be supported by: first, a legal framework which can set minimum standards in terms of equality and anti-discrimination policies and practices; and secondly, a 'social regulations strategy', which incorporates a social partnership approach, extending employer commitment and offering a voice to the disadvantaged groups for whom the equality initiatives are developed. Indeed, where legal and social approaches have been linked to the business case, this has boosted effectiveness. Legal compliance has had a positive impact on DM, creating a minimum standard and an incentive for employer action (see CIPD survey 2007).

The effect of employee participation on quality of the work environment is under-researched, but Dickens' views are echoed by Bell et al. (2011) calling for mechanisms that facilitate the expression of voice for silenced minorities. Findings show that high organisational participation is linked to high well-being (Knudsen et al. 2011). Urwin et al.'s (2007) publication included in this PhD portfolio confirms the advantages of union presence for resolution of conflict at the workplace. But the current DM approach does not give room to "*worker-rights-oriented stakeholders such as trade unions or other employee representatives*" (Greene and Kirton 2011a:121).

We assess the routes for increasing employee voice for DM below.

Need for social dialogue and trade union involvement over voluntary representation

Voice can be introduced via trade union dialogue, or through other forms of employee representation. Research on the effectiveness of partnership in the absence of trade unions has been inconclusive (Wilkinson et al. 2014). Our research suggest that voluntary and non-union voice and participation or consultation is ineffective; for example, employee networks remain marginal in terms of recognition and the organisational diversity strategy (Wright et al. 2014). Trade unions have more impact (Moore and Wright 2012, Greene and Kirton 2011a). Charlwood and Terry (2007) confirm representation without unions serves neither employer nor employee interests. Although EO policies are found more in unionized workplaces, they often remain unsupported by EO practices (Hoque and Noon 2004); where found, they resulted most commonly from negotiation/consultation (Hoque and Bacon 2014).

Including trade unions will not automatically be positive for E&D. Their positive impact remains limited because of the general shift to individualised employee relations, and the reluctance of unions to engage with the diversity agenda. Disputes resolution has been transferred from the collective social partner environment, to individual resolution before an employee tribunal. ACAS research confirms the decline of collective bargaining in UK, except for Scotland (NIESR 2014). Early conciliation (since 2014) via ACAS was introduced to encourage conflict

resolution outside of Tribunals, with only 24% of cases (1000-1600 per week) now progressing to a tribunal. As Tribunal claims now incur a lodging and hearing fee, the number of single claims received in April to June 2014 are 70% fewer than in the same period of 2013 (ACAS 2014).

Unions have over the last two decades put equality on their agenda and endorsed gender proportionality (Beirne and Wilson 2016, Foster and Williams 2011), but internal, legal and employer obstacles sustain power relations that work against gender equality (Dean 2015, Kirton 2015, Jenkins et al. 2002). The less consensual climate in UK industrial relations, with lower membership engagement fosters business friendly initiatives, although historically UK unions identify more with equal opportunities and an anti-discrimination approach than with DM (Greene et al. 2005). Bargaining activity related to E&D is low (Greene and Kirton 2011a; McBride and Waddington 2008) although union attention to equality issues has been helped by the existence of specialist internal structures and equality officers (Bacon and Hoque 2012, Heery 2005).

The research conducted as part of this PhD portfolio has contributed to this debate in the area of gender and disability DM, showing that, through the lack of employee voice, policies are insufficiently adapted to occupational, organisational or sectoral contexts (Bingham et al. 2013). These contexts and inequalities are complex, needing a participatory approach to DM to predict limitations of intended actions.

In summary, this review shows the dominance of the employer-led approach in DM research, whose validity in enhancing E&D has been fundamentally criticised. The research evidence for DM's effectiveness in the segregated contexts of STEMM and construction (Box A), and secondly related to disability (Box B) is reviewed separately. As in the aggregate literature, the limitations of the business case approach in tackling the significant barriers to E&D are highlighted at these specific sectoral and occupational levels, as well as related to the integration of disabled workers.

BOX A — Research evidence on effectiveness of managing diversity in STEMM and construction.

Research evidence on DM in Science, Technology, Engineering and Mathematics (STEMM) shows the limitations of the business case approach in a context of segregation. Despite long-term initiatives to improve STEMM E&D, the sector is still very male, white, middle class focused: less than one in ten employed in STEMM are female. Ethnicity and disability also pose significant disadvantage to employment – BAME men are 28% less likely to work in STEMM than white men (CASE 2014).

The lack of progress is explained through the inability of DM to change entrenched barriers to diversity. The persistence of traditional male working practices; gendered perceptions about skill (manual trade and technology related skills are still stereotyped as male); homosocial behaviour; lack of an inclusive culture and work organisation; fragmentation through subcontracting and project work — all mitigate against inclusion of non-mainstream groups (Powell and Sang 2013, Ness 2012, Guerrier et al. 2009, Powell et al. 2009, Watts 2009, Greed 2006, Stanworth 2000, Wacqman 2000).

DM initiatives have not changed the traditional male norms and high commitment practices necessary for successful career development, such as long working hours and presenteeism (Ness 2012). The non-acceptance of flexible work patterns especially explains the absence of gender diversity, at its most extreme in the engineering sector (Hart and Roberts 2011).

Recent research by Francis (2015) shows 'sponsored' initiatives such as networking and mentoring progress male engineers' career, but not women's: 'individual agency' characteristics (such as tenure, work experience and work hours) are more significant for female engineers' career development.

UK research on age, ethnicity and disability in this sector is unusual (Powell and Sang 2013, Hanappi-Egger 2012, Wright 2011, Byrne et al. 2006). The academic literature on E&D in STEMM and construction has mainly focussed on female professionals (see above and Barnard et al. 2010, Dainty et al. 2007, Bagilhole and Dainty 2006). In our research, other groups such as BAME and disabled workers featured, as well as tradeswomen. In this male-dominated area — with less than 1% females, structural and cultural barriers to integration are entrenched: working and employment conditions, long working hours, discriminatory recruitment practices, short-term concerns with output and the persistence of a macho culture amongst colleagues and clients (CLR 2015, Clarke et al. 2004, Michielsens et al. 2001, Wall and Clarke 1996).

This highlights the limitations of the business case as business imperatives remain prioritised over E&D; structural changes are not achieved.

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BOX B — Research evidence on diversity management and disability.

Disability and DM is under-researched, but evidence available shows the limitations of the organisational measures introduced, and the need for context specific debate and adaptation, which is lacking in the UK (Theodorakopoulos and Budhwar 2015, Jones and Wass 2013).

Theoretically, the debate on disabled people's position in UK society has largely focussed on the contrast between two models: 'medical or functional limitations' versus the 'social model'. The medical model pathologises disability, requiring the disabled individual to adapt in order to 'function' within the labour market (Thomas 2004). Before 2005, disability policies in the UK focused on the linked 'capabilities' model as defined by Sen (1980), exploring possibilities rather than limitations. In contrast, the social model of disability, which grew in importance in the 1970s and 1980s, argues that people are disabled by society, not by their functional limitation (Barnes and Mercer 2005, Thomas 2004). While the medical model requires 'treatment' for improvement, the social model requires political action, as disability is associated with social oppression – on a par with the debate on the moral case for diversity (Mitra 2006). Challenging and confirming 'ableism' from the viewpoint of the disabled worker has been a focus of recent studies (Jammaers et al. 2016).

The applied literature on disability and employment focuses at macro or organisational level, prompted by Disability Discrimination Act (DDA) legislative changes (e.g. Jones et al. 2006, DRC 2004, Roberts et al. 2004). Changing group characteristics due to higher reporting and the increase in flexible work, non-manual labour and public sector employment led to a modest improvement in disabled employment in UK (1998-2007) (Jones and Wass 2013), although disability can lead to ill-treatment and lack of employment progress or satisfaction (Fevre et al. 2013, Berthoud 2008).

In terms of organisational measures for DM, strong actions are promoted: DDA legislation has been an incentive to shape HRM practices and positive action / discrimination are argued for (Woodhams and Corby 2007). Evidence on the effectiveness of HRM practices to encourage disabled employment is mixed (Fujimoto et al. 2014, Hoque et al. 2014, Woodhams and Corby 2007). But, as in gender related literature, trying to fit with an 'ideal worker' concept is core to organisations resisting structural adjustments to improve the inclusion of anyone not fitting this category (Foster and Wass 2013).

As a relative term, disability may be understood not as an individual attribute but as a factor affecting the task or activity to be undertaken (Mont 2007). Analysis of sectoral and occupational differences is scarce (for some exemptions: Houtenville and Kalargyrou 2015, Duff et al. 2007, Morris and Turnbull 2007).

There is little research on disabled workers in construction (Ormerod and Newton 2013, Sang and Powell 2012), but the sector can be described as a 'disabler' – construction workers have higher prevalence of health conditions (Clarke et al. 2009) and employers are reluctant to make reasonable adjustments (Lingard and Saunders 2004).

The sectoral approach in the PhD publications included here is therefore important as it evaluates the relative nature of abilities (rather than disabilities) in terms of the particular occupation or job to be undertaken and its impact on DM. Dependence on broad, aggregate definitions of disability may even serve to 'disable' or deter persons with disabilities from working in particular sectors and occupations, though they have the capacity or ability to do so.

Review of diversity management literature — conclusion

In conclusion, this review of the discourse and evidence for DM demonstrates the complex nature of inequality. The business-led approach lacks supporting evidence of its positive impact on performance and E&D and fails to challenge structural inequalities as diversity is treated as a corporate benefit rather than a social right, leading to partial and voluntary management implementation. This reinforces an individual approach that hinders collective participation of employees in the identification, assessment and adaption of diversity measures to specific contexts. The dominance of the employer voice therefore explains the limitations of the business case. This is especially relevant in segregated contexts such as STEMM and construction, where structural and cultural barriers to E&D are more entrenched and therefore in need of more concerted and appropriate actions than the business case offers.

The national, sectoral, organisational and occupational contexts are critical to the approach and shape of the initiatives taken to promote equality and counter the lack of diversity, especially in segregated settings. Barriers are formed by contextual expectations in terms of commitment, which impact employment and working conditions: employees need to be available for clients and customers, and adaptable to set work arrangements in these contexts.

Collective stakeholder participation is needed to achieve this (especially, but not exclusively, including disadvantaged employee groups). The sector based evidence indicates that where DM was more participatory in nature, policies and practices are more targeted toward specific contexts and are therefore more effective. The PhD publications therefore confirm the limitations of the business case approach.

These publications, their main findings and contribution to knowledge in the DM field are discussed in chapters D and E. We first address their research designs and methodologies.

CHAPTER C: Research design and research methods

The chapter explains research methodologies and methods deployed and approaches taken. The eleven publications in this PhD link to eight different research projects identified by number (see Table 1 on page 33).

Outputs include practitioner and academic dissemination at ABS 2* and 3* level. All are in the field of DM. The conceptual framework and methodology focuses on societal rather than individual factors: uncovering organisational barriers and enablers to DM, and analysing good practice within specific organisational and sectoral contexts.

All research was conducted as part of a team, resulting in joint publications. This was a conscious decision: a preference to work with others to combine expertise and competences, and stimulate discussion. My input to these works is substantial in terms of data collection, analysis and writing-up. I was the only or one of the main researchers dealing with: primary qualitative and quantitative data collection (projects 1, 2, 3, 5, 6 and 7); analysis of qualitative data (all projects); analysis of quantitative data (projects 1, 2, 3 and 8); and writing up the research report and resulting academic journal articles (all projects). This will be elaborated on in the discussion chapter E.

This chapter is structured as follows: explaining the methodological interpretivist context, client-based research implications, mixed-method and case-study research designs, data analysis and indicators of methodological rigour, sampling and research ethics considerations.

C.1. Epistemological and ontological context

The subjectivist ontology here is linked to an interpretivist epistemology with focus on 'verstehen' (Flick 2009). This results partly from my own feminist sociologist identity. Questioning the representation of women and other disadvantaged groups within positivistic 'universal knowledge' (DuBois 1983) influenced the research objectives and designs chosen, especially the importance given to partnership in

the research relationship, allowing the voice of marginalised women, BAME and disabled workers to be heard.

Positivistic methods were rejected; the social constructivist epistemology is more appropriate as it acknowledges different constructs of reality, exploring these within their particular contexts within a partnership approach with the research participants and 'situated knowledge' (Caretta 2015).

C.2. Client-based research and gatekeepers: implications

Research projects 2, 5, 6 and 7 identified in Table 1 are client-based contract research, prioritising client relevant themes, within a tight timeframe. As some of the clients had no academic links (2, 6), discussion of the findings combines academic and client priorities and the research methodology is justified and acceptable to clients (Brown 2010).

As Greene and Kirton (2011a) contend, DM research can be seen as sensitive and controversial even in 'good practice' case-studies, making it is difficult to secure research participants. The access to the research participants was negotiated via gate-keepers. Some gatekeepers were research clients (2, 6, 7 and 8); others (1) had been contacted by our clients. This strategy allowed access to controlled settings, but also constrained the research, leading to practical and ethical dilemmas as direct negotiations were restricted (confirming Reeves' (2010) findings). Access was encouraged to participants with management agendas — so that, for instance, there was easier access to managers rather than to an employees or employee representatives (see Jacobsson and Åkerström 2013). See Table 1 for more detail.

Table 1: Overview of methodologies and methods by research project

Project no.	Research Project	Publication	Methodology	Main methods of data collection	Details of data collection	Research clients / funders Gatekeepers: limitations to access data / participants	Years	Analysis	Quality checks
1	Gender diversity in construction: industrial relations	Clarke et al. (2005)	Cross sectional survey design Exploratory, descriptive Sectoral focus	Primary data collection: Semi-structured postal survey (20+15)[9]	Respondents survey: 20 international trade unions: Scandinavia (9), Spain (2), UK (2), the Netherlands, Italy, Switzerland, France, Russia, Bulgaria, the Czech Republic and Serbia. 15 employers' organisations (Portugal, Italy, UK, Cyprus, France, the Czech Republic, Germany and Scandinavia: Sweden, Denmark, Norway and Finland.	Internal university funded. Trade unions: EFBWW supplied list and the questionnaire was sent to the 65 members and 25 East European affiliated members. Employers' organisations: FIEC distributed to 21 members Follow up, in Scandinavia, was done by the candidate.	2002-2003	Manual coding of open ended questions.	Internal, in research team.
2	ADLO/LWAMT: Gender diversity in construction	Clarke et al. (2006)	Mixed-method: qualitative and quantitative. Sectoral focus	Primary data collection: a. In-depth interviews (36) b. Semi-structured survey (93)	Interviews: with 36 out of 52 tradeswomen, supervisors and trainees employed by three London local authority DLOs on access to training, working and employment conditions and aspirations. Semi-structured survey: national survey of DLOS on workforce demographics, training and career development, EO and working conditions. 93 questionnaires returned = 43% response.	Research client for survey part: Association of Direct Labour Organisations (ADLO). Research client for interview part: London Women and Manual Trades (LWAMT) Access to tradeswomen in three DLOs via LWAMT. ADLO as research clients sent out the survey to their member DLOs of their Building Advisory Group.	1997	Interviews: through manual coding, based on themes identified in initial research. Survey: descriptive statistics, as well as cross-tabulations via SPSS.	Steering group of 'NOW' project (reps London DLOs) oversaw research. Included tradeswomen's representatives, women's officers employed by the participating boroughs, a representative from Local labour in Construction and a UOW research team representative. Survey and Interview question list created in collaboration with steering group.

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[9] Between brackets: number of survey responses/interviewees/focus groups.

Project no.	Research Project	Publication	Methodology	Main methods of data collection	Details of data collection	Research clients / funders / Gatekeepers: limitations to access data / participants	Years	Analysis	Quality checks
3	Gender and Elites	Liddle and Michielsens (2007a)	Mixed-method: Qualitative and quantitative / Explanatory / (paper based on qualitative findings only – comparative case-study)	Primary data collection: a. Structured survey (60) b. In-depth interviews (60)	Research conducted uniformly in 27 countries. / Male and female participants were matched on relevant criteria. UK: in-depth interviews and survey with 15 each of male and female high level politicians and business leaders (60 total).	Partly funded by European Commission.	1995-1997	Survey: quantitative analysis via SPSS / Interviews: manual coding, inductive iterative process / Paper: narrative analysis	Most interviews were done by one interviewer. / Interviews in each section (politics and business) were done by the same researcher, to generate consistency.
4	Employee Voice — ETAs	Urwin et al. (2007)	Quantitative analysis of public data.	Secondary analysis of UK governmental survey (2003 SETA)	2003 survey of employment tribunal applications (SETA): jointly commissioned by ACAS, the Employment Tribunals Service and DTI.	Internal university funded.	2005	Regression analysis.	
5	Disability and diversity (barriers and enablers to integration of disabled workers)	Clarke et al. (2007) / Clarke et al. (2009) / Bingham et al. (2013)	Qualitative / Exploratory / Comparative case-study design / Sectoral level	Secondary analysis of quantitative data / Document analysis of sectoral and organisational info. / Primary qualitative data collection: a. In-depth interviews (21) b. Full-day expert seminar /focus group (1)	Three case sectors (construction, ICT and health) over two case countries (UK and The Netherlands). / 21 interviews with key stakeholder for diversity issues (such as HR, disability advisors' education/training experts) national disability organizations, employers' associations, nursing labour organisations, as well as health trusts/hospitals. / Focus group day: attended by 30 experts.	Research client: Norwegian Work Research Institute, funded by the Norwegian Research Council.	2006-2008	Manual coding of in-depth interviews; + focus group day. / SPSS: background quantitative data. / Document analysis: thematic manual coding.	Internal, in research team: cross checking

Project no.	Research Project	Publication	Methodology	Main methods of data collection	Details of data collection	Research clients / funders / Gatekeepers: limitations to access data / participants	Years	Analysis	Quality checks
6	Diversity in London firms (road to success in DM)	Michielsens et al. (2008) / Michielsens et al. (2014)	Qualitative / Critical 'good practice' case studies of 4 large multi-national London-based leading service companies / Regional focus (London)	Document analysis. / Primary data collection: Qualitative mixed-method (concurrently and sequentially) / Semi-structured survey (4) / In-depth interviews (19)	Stage 1: 1) Collection of relevant documents and website information; 2) Open-ended questionnaires to HRM representative in each case organisation. / Stage 2: 19 individual interviews (4-6 per case). In-depth interviews using topic list. All interviews at management level, including diversity leads; and senior managers such as CEO or manager-diversity champions.	'London First' (LF) were the research clients, also acting as gatekeepers to access research participants in their membership organisations. All interviews were organised by LF, who were also present at each interview.	2007-2008	Interview topic lists based on broad questions, with prompts for explanations.	Project team, consisting of representatives of each company, LF and the research team, met monthly to discuss.
7	Diversity in STEMM: establishing a business case	Wright et al. (2014)	Multi-level case-study / Mainly qualitative exploratory research / Sectoral focus: STEMM sector	Primary data collection: Qualitative mixed-method (concurrently and sequentially) / Semi-structured interviews (4) and in-depth interviews (15+5) / Focus groups (5) / Secondary analysis of governmental surveys	Stage 1: semi-structured interviews with 4 key stakeholders from key organisations. / Stage 2: five focus groups and in-depth interviews with representative sample STEMM organisations. - Five focus groups: 2 on gender issues (female), 1 on disability, 1 on ethnicity and 1 on gender (male). 18 participants - Interviews with HR/Diversity leads, 15 interviewees across with ten organisations / Stage 3: 5 strategic level interviews and secondary analysis of national statistics on STEMM labour force.	Research client: Royal Society (RS) / Participants sourced via 1) RS network by RS and 2) own research group STEMM networks / RS as research clients acted as gatekeepers to the focus group participants: the invitations were send via their mailing lists. The lack of responses was difficult to mitigate by this restriction to access contact details.	2013-2014	Interview topic lists + focus group broad question list from Phase 1 info.	Steering group as quality inspection. / Topic lists uniform. Interviews mostly by 2 researchers. / Focus groups: 2 facilitators and one note taker. / Regular meetings research team and steering group. Interim report RS.

Project no.	Research Project	Publication	Methodology	Main methods of data collection	Details of data collection	Research clients / funders Gatekeepers: limitations to access data / participants	Years	Analysis	Quality checks
8	Raising the bar: women in construction	Clarke et al. (2015)	Mixed-method Semi-structured survey Secondary data analysis (qualitative and quantitative – census)	Primary data collection: Semi- structured survey, 151 responses (34% response rate) Secondary analysis of UK census data 2011. Document analysis and incorporation of photo evidence.	Semi structured survey focused on WLB, educational, employment history and demographic background of the respondents. Participants: TTT staff survey. Distributed online to 441 staff. As the data is identifiable, it is not published externally. The secondary analysis of public data has been incorporated in the research publication included.	Research client: Thames Tideway Tunnel (TTT). No access problems at data collection stage, but as the small survey makes data identifiable, the full report is not published externally.	2014-2015	SPSS and Excel.	Internal, in research team: cross-checking.

C.3. Methodologies, research designs and methods

In line with an interpretivist approach, qualitative and mixed-method (combining quantitative and qualitative, or different qualitative methods) are deemed appropriate here as they allow complexity and different perspectives to emerge (Silverman 2013). Qualitative case-study is the main research design as it aligns most closely with research(er) considerations, as discussed below.

Case-study design

Case-studies are extensively used in people management, as they permit exploration of complex groups of issues as one whole (Yin 2009). In Research Projects 5, 6, 7 and 8, a case-study design based on single or comparative 'critical' cases (Yin 2009) is chosen because of their illustrative importance in relation to the general research question as 'good practice' cases for DM. The comparative design of projects 5 and 6 (comparing cases by sector and countries) permits the analysis of contextual factors in the management of diversity. As Crompton and Lyonette (2005) argue, complex topics are best researched by case-oriented comparative work. In all these case-study projects, multiple sources of evidence are brought together to enable triangulation, to increase confidence in the data – for detail on sources of evidence see Table 1. They were not implemented as action research due to issues concerning researcher integrity (Huzzard and Björkman 2012).

In several projects (2, 3, 6 and 7) evidence was collected in phases, creating an embedded design as one phase supported the next (Saunders et al. 2016:172). While project 3 has a mixed-method design, the publication included here uses a comparative narrative case-study design only, to compare the careers of two Members of Parliament from different social class perspectives.

Mixed-method design

Project 2 adopts mixed methods. Using more than one method or source of data can overcome weaknesses associated with a single approach (Creswell 2013, Teddlie and Tashakkori 2009). It allows increased credibility and validity through

verification of the findings from different angles, the combination of explanatory and exploratory dimensions and the focus on different levels (macro to micro) (Anderson 2013). Using Easterby-Smith's classification of mixed-method research (2012:62), project 2 has a concurrent 'partnership design' as both the survey and interviews are of similar importance in the study, the former focusing on the organisational level and the latter on the individual level. See Table 1 for details on data collection.

Cross-sectional survey

Project 1 has a cross-sectional survey design, using a postal semi-structured questionnaire sent to all European employers' and employees' representative organisations in construction, in order to examine gender diversity policies and practices. The survey data are both quantitative and qualitative in nature to capture and compare policies and practices internationally.

Secondary and primary survey data were used for contextual case information, situating these within their larger national or sectoral context. As part of the primary data surveys; 192 individuals or representatives of organisations in total participated: in project 1 (35), project 2 (93), project 3 (60) and project 6 (4).

Specific methodological features
Use of interview method

The most prominent data collection method is semi-structured or in-depth interviews, in line with the interpretive and participatory nature of the research values, aiming to capture the (differences in) 'voice' of the participants as authentically as possible (Oakley 1981). The data collection in projects 5 and 6 particularly focuses on management; access to employees was restricted.

Across the eight projects, 160 interviews[10] were conducted, plus six focus groups organised. Personally I interviewed in 94 and (co)facilitated four focus groups.

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[10] 160 interviews + six focus groups in total: project 2 (36 interviews); project 3 (60); project 5 (21+1 focus group); project 6 (19); project 7 (4+20+5 focus groups).

Significance of sectoral approach

The sectoral focus is a characteristic in most of the publications, contributing to the body of knowledge through uncovering the relative nature of barriers to integration as the literature looks mainly at aggregate level analysis. In DM research, it is especially necessary to reflect on context (Kamenou 2007). The sectors analysed in the research are:

- The construction industry in UK and EU as a case of segregation in terms of gender and disability (project 1,2,5,7 and 8).

- The comparison of health, ICT (Information and Communications Technology) and construction sectors in UK and the Netherlands in terms of disability and integration (project 5).

- STEMM as a case-study of a segregated sector in terms of gender, ethnicity, disability and social class in UK (project 7).

C.4. Data analysis

The data are analysed through qualitative content analysis and critical discourse analysis. Liddle and Michielsens (2007a) uses narrative analysis to highlight the journey and justification given for the career paths of the case politicians.

In most projects, qualitative data such as interview data and documents are analysed through an iterative process of coding, mainly inductive. Where themes have been established through the literature or earlier phases in the research, a thematic analysis is conducted.

Quantitative analyses are conducted using SPSS (project 4) or STATA (project 7). Project 4 uses a quantitative multivariate approach (regression analysis) of the 2003 Survey of Employment Tribunal Applications (SETA) to examine the link between union presence / HRM departments and the effectiveness of workplace voice.

Personally 94 interviews and three focus groups: project 2 (36); project 3 (30); project 5 (8+1FG); project 6 (15); project 7 (0+5+3 focus groups).

C.5.Indicators of methodological rigour

Symon and Cassell (2012) argue that for qualitative research, the common indicators of rigour such as validity or reliability are not useful, as these are linked to positivistic aims of generalisability and objectivity. Using Johnson et al.'s contingent criteriology (2006:138-139), interpretivist research should be assessed through an internal audit trail demonstrating transferability (extent of applicability), credibility (authentic representations), dependability (minimization of researcher idiosyncrasies), confirmability (researcher self-criticism) and ecological validity (extent research approximates real world). Judging my research, I argue rigour is maintained based on these 5 indicators (based on Lee 2014, Gibbert and Ruigrok 2010, Crompton and Lyonette 2005, Shenton 2004):

- Transferability via the provision of information on influential contextual factors and limits to the research.

- Credibility and ecological validity through the use of well-established research methods to uncover rich data, developing profound familiarity with the research issues and organisations and enabling triangulation of findings in each project. This started during the research, with presentation of findings to steering groups or project teams, which included the research team and client representatives. Similarly, findings extend, but do not contradict other literature in the field, which suggests their credibility.

- Dependability by a detailed audit trail of research decisions and process, scrutiny of the research process by the steering groups and by peers. Where data collection was conducted by multiple researchers, the team liaised regularly to ensure this was consistent (e.g. the use of two researchers per interview; analysis by sub groups of researchers which was reviewed by peers).

- Confirmability — the degree to which the results are corroborated by others was maintained through strategies such as: triangulation; comparison with other research; and the provision of a detailed methodological audit trail.

- Ecological validity by the very nature of the organisational case-study research which is based in real life settings.

C.6. Sampling

For the qualitative research elements, sampling was based on non-probability principles: convenience sampling (where cases were presented to us – projects 2, 6 and 7), snowball sampling (to find 'invisible' participants such as women working in construction or STEMM –projects 2 and 7) or purposive sampling (to include critical cases – projects 5, 6 and 7).

Of the surveys conducted, in project 1 this was sent to all members of FIEC and EFBWW[11] and in project 3 to all women at the appropriate level of seniority in business and political fields. Here a matched sample of male respondents was selected, based on relevant characteristics (age, sector of company or role in government / parliament). In project 8, the online survey was made available to all staff.

C.7. Research ethics consideration

All publications but one in this PhD were published as part of University of Westminster research; project 3 was based at University of Warwick. For project 5 and 8, the Westminster team are principal investigators, with University of Amsterdam and Loughborough University respectively as research partners. The research ethics consideration/approval process of these institutions was followed. All research conformed to the Westminster University's Code of Practice. Details are provided in Appendix C.

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[11] FIEC = European Construction Industry Federation — representing European construction enterprises in 26 countries. EFBWW = European Industry Federation for the construction industry — the building materials industry, the wood and furniture industry and the forestry industry. The EFBWW has 76 affiliated unions in 34 countries.

CHAPTER D: Published works and contribution to knowledge

D.1. Published works and their relevance

In this chapter the publications are set out, including their main findings and key contribution to knowledge, guided by the research aim: to critically evaluate the effectiveness of an employer-led approach to DM for increased E&D in UK organisations, with reference to the significance of a context-specific (occupational, sectoral) and participatory approach to DM.

The body of eleven published works for consideration are discussed chronologically, in five groups (see Figure B on page 45 for overview). In this chapter, the rationale for the groups is first set out, followed by a discussion of the publications by group. The author's contribution to each is clarified in Table 2 at the end of the chapter. The impact of the publications as a whole to the knowledge in the field is discussed in chapter E.

D.2. Grouping of the published works: rationale

All publications focus on DM, but each has a different emphasis. They vary according to: the dimensions of E&D discussed (gender, disability, social class and ethnicity); the sectoral focus, ranging from construction, STEMM and service industries to the broader labour force. The publications are discussed within the following themes:

- Group A (2005-2006): two publications focusing on gender in construction.

- Publication B (2007): E&D in terms of social class: importance of social class to explain career development.

- Publication C (2007): Impact of trade union representation on workplace conflict.

- Group D (2007-2013): three publications focusing on disability DM.

- Group E (2008-2015): four publications focusing on evaluating the business case for diversity.

Most of these publications discuss DM from a sectoral or organisational perspective. Viewed chronologically, the earlier publications focus on structural barriers to female participation in the male-dominated construction sector (Group A). Following on from this, the research was broadened to investigate whether the enablers and barriers to gender diversity influenced the representation of other disadvantaged groups (in terms of social class, ethnicity and disability) in construction and other sectors. More specifically, the research focused on: the importance of social class in explaining barriers to career development and in identifying strategies taken by the individual for inclusion (publication B); and DM for the inclusion of disabled workers (Group D). The later publications look at diversity management within specific sectoral contexts, mostly male-dominated (Group E). The positive influence of trade union representation on conflict management in organisations shows the benefits of including collective employee voice in workplace people management, which could be extended to DM (publication C). Figure B charts the place of each the groups, with reference to the research aims, focus and target group, viewpoint and level of analysis (organisational, macro or individual), the main findings and their contribution in the overall aim of challenging the effectiveness of employer-led DM.

The set of publications conclude that gender, ethnicity, disability and class continue to be significant in explaining barriers to career development. Managers acknowledge the necessity of DM, and perceive DM as beneficial to the organisation, but cannot provide factual evidence. Even in good practice cases, DM lacks scope and application and therefore sustained impact and success. DM focuses (mainly) on gender representation, with ad-hoc voluntary initiatives around recruitment, WLB and networking. There is a lack of focus on social class especially, and a lack of systemic implementation of DM policies within micro-level practices. The role of stakeholders, such as line-managers, clients and employees, in facilitating successful examples is key: the overall findings show that, where participation and communication between line-managers, employees and clients is enhanced (such as public sector construction, health sector (NHS), or the Dutch disability management), especially through the inclusion of collective voice

mechanisms, conflict is managed more effectively at organisational level and barriers to diversity are reduced.

But overall, the publications, which span ten years, show that disadvantages in terms of gender, ethnicity, disability and class persist: the prevalence of the business case approach to E&D has failed to significantly reduce barriers to inclusion in segregated areas. These barriers relate to organisational expectations of employers, managers, clients and customers in terms of commitment, availability to work, and adaptability to set ways of working in specific national, sectoral, organisational and occupational contexts. While gender focused DM is more 'visible', ethnicity, disability and especially social class barriers remain 'hidden', and unaffected. The ineffectiveness and blindness of DM is explained by the lack of contextualisation and the absence of collective employee voice in this implementation. Below, the eleven published works are outlined, identifying the key contribution to knowledge of each.

Figure B: Focus and contribution of each of the publications within the evolution of the research

GROUP A (2005-6)

AIM: IDENTIFYING STRUCTURAL BARRIERS & ENABLERS TO INCREASING GENDER DIVERSITY IN CONSTRUCTION
FOCUS: GENDER
CONTEXT: CONSTRUCTION
MEANING: EO and DIVERSITY
LEVEL: ORGANISATION; SECTOR
FINDINGS:
- Construction sector resist change.
- Entrenched barriers against diversity.
- DM measures: minimal.

PUBLICATION B (2007)

AIM: INFLUENCE SOCIAL CLASS ON CAREER
FOCUS: SOCIAL CLASS
CONTEXT: POLITICAL 'ELITES'
MEANING: EQUALITY
VIEWPOINT: INDIVIDUAL
LEVEL: ORGANISATION
FINDINGS:
- 'Legitimising' career progress to self and others harder for working class.
- As acceptance by others is key, DM needs target all.
- Institutional measures insufficient: social change through interaction.

PUBLICATION C (2007)

AIM: IMPACT of HRM and Trade Unions (TU) on OUTCOME ETAs
FOCUS: EMPLOYEE VOICE
CONTEXT: AGGREGATE
LEVEL: ORGANISATION
FINDINGS: Collective employee voice through TU enables effective workplace conflict resolution.

Contextualising diversity management (DM): challenging the effectiveness of the business case

- ✓ Entrenched barriers against change, especially in STEMM and construction.
- ✓ Barriers similar for disadvantaged groups, but DM for gender is more visible than for ethnicity, disability and social class (hidden).
- ✓ Barriers due to organisational expectations of employees' availability (time and place) and adaptability.
- ✓ DM is ineffective to challenge barriers: too partial, generic and voluntarist without monitoring or feedback.
- ✓ Need to fit to sectoral, organisational and occupational contexts through employee voice inclusion.

GROUP E (2008 - 15)

AIM: EVALUATING GOOD PRACTICE IN DM; BUSINESS CASE
FOCUS: GENDER, ETHNICITY, DISABILITY AND SOCIAL CLASS
CONTEXT: STEMM and CONSTRUCTION, SERVICE SECTOR
MEANING: DIVERSITY (MANAGEMENT)
VIEWPOINT: MANAGER, 'CHAMPION', (EMPLOYEE)
LEVEL: SECTOR, ORGANISATION
FINDINGS:
- STEMM and construction resist change.
- Barriers related to need for availability and lack of adaptability.
- Barriers similar for target groups.
- MD: narrow, employer voice only voluntary and partial, leading to visible and invisible areas.
- MD: Lack of monitoring

GROUP D (2007-13)

AIM: IDENTIFYING STRUCURAL BARRIERS AND ENABLERS TO INCREASE DIVERSITY IN 3 SECTORS IN UK AND NL
FOCUS: DISABILITY
CONTEXT: CONSTRUCTION, ICT, HEALTH
MEANING: DIVERSITY (MANAGEMENT)
VIEWPOINT: MANAGER, 'CHAMPION', POLICY MAKER
LEVEL: MACRO, SECTOR
FINDINGS:
- Importance of context and employee participation.
- Sectoral differences in meaning and impact of disability experience.
- Implementation of DM is enhanced where social model is adopted and sectoral measures are agreed by social partners (NL).

D.3. Group A: gender diversity in construction

- Clarke, L., Frydendal-Pedersen, E., Michielsens, E. and Susman, B. (2005). The European construction social partners: gender equality in theory and practice. *European Journal of Industrial Relations*, 11 (2), 151-177.

- Clarke, L., Michielsens, E. and Wall, C. (2006). Women in manual trades. In: Gale, A.W. and Davidson, M. J. (eds.) *Managing diversity and equality in construction: initiatives and practice*. London: Taylor & Francis, 151-168.

These publications are part of the author's research on the position of women's training and employment in construction, resulting in several publications since 1997 (see Arkani et al. 2003a and b, Clarke and Michielsens 2001, Michielsens et al. 1997), including the book "Women in Construction" (2004) (eds. Clarke, Pedersen, Michielsens, Susman and Wall). Because of university regulations, these pre-2005 publications are excluded from this PhD, but are the base from which the included studies have developed.

Both Group A publications evaluate policies and actions to enhance the position of tradeswomen in construction, addressing a gap in the academic literature which concentrates on construction professionals (e.g. engineers and architects).

The 2005 RJA[12] shows that at macro-level, the European construction social partners are more committed in principle than in practice to gender equality. While policies and collective agreements articulate a discourse of gender equality, trade union and employer representative organisations do not translate this into explicit actions. This questions their commitment to the gender equality agenda and provides evidence of inertia and conservatism, albeit less pronounced in Scandinavia and Eastern Europe.

The key contributions are, first, the account of variation in gender diversity measures of the employee and employer representative organisations in construction at European and national levels, and, secondly, that these organisations, which have a central role in gender diversity development, hide their lack of interest and commitment to change behind a minimal gender

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[12] A more extensive version of this RJA is published as a book chapter in Clarke et al. (2004).

equality discourse, especially in south and west Europe. The lack of vigorous union activity was endorsed by other research at a later stage (see Kirsch 2012, Hansen 2008, McBride and Waddington 2008). Recent research showed some improvement, albeit constrained (Ledwith 2012).

The book chapter (Clarke et al. 2006) discusses the segregated nature of the construction sector in UK, underlining the structural obstacles to inclusion of women in manual trades, such as employer-based training, informal recruitment and the fragmented nature of the sector, which discourages the recruitment and retention of groups different from the mainstream.

The key contribution of this publication consists primarily in the identification of the importance of the sectoral context: particular work arrangements in the construction sector lead to structural obstacles which exclude non-mainstream groups to a greater extent than in other sectors. Secondly, it shows that most DM in this strongly gender segregated context is passive and accidental in nature. To be effective, explicit leverage is necessary through proactive recruitment and distinctive training and employment support. This active diversity implementation is exemplified through the 'good practice' case-study of Leicester City Council's building department. This successful approach can be found in pockets in the public, but not in the private construction sector, suggesting it is not the nature of the work in itself which is important, but the particular context in which it is performed.

Overall, the publications in this group show that: the male-dominated construction sector in the EU resists change; and E&D policies and actions at macro and organisational levels are largely minimal, voluntarist and ad-hoc in nature, making them ineffective in tackling the structural obstacles that marginalise women. In the pockets where policies in parts are converted into pro-active and holistic practices both in training and employment, the presence of women increased in a sustained way.

D.4. Publication B: diversity and social class

Liddle, J. and Michielsens, E. (2007a). 'NQOC': Social Identity and Representation in British Politics. *The British Journal of Politics & International Relations*, 9 (4), 670-695.

This RJA discusses career advancement of disadvantaged groups in politics, focusing on social class, and is part of a broader study on career advancement, gender and social class within business and political elites (see Liddle and Michielsens 2007b, Liddle and Michielsens 2000a, b and c). It uses Bourdieu's theoretical framework to critique the economistic explanations of under-representation as two aspects of the same complex process.

The narrative analysis of working class and middle class MPs shows how entitlement to power or inclusion is negotiated by gaining access via 'spaces' of possibilities which grant 'symbolic capital' – e.g. where authority is recognised by others. It shows entitlement for inclusion is embedded both in the actors and the 'field' of action: it is not the lack of capital of disadvantaged groups, but the lack of recognition by others of their capital as legitimate, which explains exclusion.

***The key contribution of the publication* is to show that social class influences career development**, and is therefore important to include in diversity policy and research, recently substantiated by Randle et al. (2015). This publication links to the Group E publications, which illustrate how the employer-led DM agenda is too partial and limited as it addresses mainly gender diversity. Not addressing social class 'hides' this real barrier (see Figure C), leaving class disadvantages unchanged, and confirms the ineffectiveness of DM. Secondly, it shows that, as recognition by others is important for inclusion, institutional measures alone are insufficient to improve E&D. Only the social practices of non-traditional group members will embed change which will be a slow process (confirmed by Syed and Özbilgin 2009). Finally, the publication shows the added value of a qualitative approach to analyse the complex nature of inclusion/exclusion.

D.5. Publication C: collective employee voice and conflict

Urwin, P., Murphy, R., and Michielsens, E. (2007). Employee voice regimes and the characteristics of conflict: an analysis of the 2003 survey of employment tribunal applications. *Human Resource Management Journal,* 17 (2), 178-197.

This RJA investigates the extent to which the characteristics and outcomes of Employment Tribunal Applications (ETAs) differ according to whether trade unions and HRM departments have a role in workplace voice. Findings from SETA 2003 show that: ETAs from workplaces with a union representation are less likely to result in an adverse ruling against the employer; Employment Tribunals give unions a framework to improve workplace democracy; and the possible threat of using ETAs can be used by unions to advance the interests of members.

Key contribution of publication: **This paper shows that, where collective employee voice is available through union presence, unresolved conflict with management (in terms of adverse rulings against) is minimised**, suggesting advantages in the union presence. This publication contributes to the thesis that employer-led DM lacks effectiveness, by highlighting the positive influence of organised employee voice through union presence for social justice in the work environment, which can be extended to diversity. Thereby it links to several other publications showing that enhanced collective employee participation is associated with more effective diversity practices. These include Clarke et al. (2006) in Group A, analysing the case of tradeswomen involvement in DLO Leicester; in Group E Wright et al. (2014) showing more effective DM in the NHS sector; and the advantages of sectoral level social dialogue in Dutch disability DM (Group C publications).

D.6. Group D: disability diversity management

- Clarke, L., Bingham, C., Michielsens, E., Miller, S. and van de Meer, M. (2007). *Enabling and disabling labour market sectors: disability and employment in Britain and the Netherlands in the construction, ICT and health sectors*. Final report prepared for the Norwegian Work Research Institute as part of the project 'Disabled, Working Life and Welfare State'. London: CLR/ProBE.

- Clarke, L., van der Meer, M., Bingham, C., Michielsens, E. and Miller, S. (2009). Enabling and disabling: disability in the British and Dutch construction sectors. *Construction Management and Economics*, 27 (6), 555-566.

- Bingham, C., Michielsens, E., Clarke, L. and van der Meer, M. (2013). Towards a social model approach?: British and Dutch disability policies in the health sector compared. *Personnel Review*, 42 (5), 613-637.

This group of publications compares DM for disability in the UK and the Netherlands, in three different sectors: construction, health and ICT. The research was commissioned by the Norwegian Research Council, as a follow-up to research for the European Commission on gender and ethnic diversity in the same sectors for which I was coordinator (see Beck et al. 2003). The disability research resulted in a research report (Clarke et al. 2007) and two RJAs (Bingham et al. 2013, Clarke et al. 2009) comparing the barriers and enabling factors for labour market participation of disabled workers in the UK and the Netherlands for these sectors, looking at structural issues (education/training, wage, recruitment and selection, employment and working conditions, social dialogue and EO policies). The two RJAs discuss the interplay between employment conditions and policy measures in construction (2009) and the health sector (2013) in the UK and the Netherlands using updated data and identifying how these contexts both facilitate and limit employment participation for disabled workers. The findings show that barriers for inclusion of disabled workers in construction are to a large extent similar to those women face. This is more pronounced in the UK than the Netherlands. The positive impact of social dialogue (in NL) for disabled workers in both health and construction is apparent.

In terms of the contribution to knowledge, this group of publications primarily highlights the importance of the sectoral or occupational context in understanding the relative nature of disability. Barriers to 'fitness to work' in construction are different from ICT or health and therefore generic actions are

less appropriate. Secondly, these publications show that the individualistic 'capabilities' approach in the UK is less effective than the Dutch social model, which acknowledges that sectoral contexts shape disability and therefore require structural adaptation. Finally, the Dutch comparison shows that sector-specific inclusion measures, identified and monitored by social partnership dialogue, result in more appropriate inclusive measures for disabled workers.

D.7. Group E: evaluation of the business case argument

- Michielsens, E., Bingham, C., Clarke, L., Miller, S., Urwin, P., Siara, B. and Karuk, V. (2008). *Implementing diversity employment policies: examples from large London companies.* London: WBS Diversity (University of Westminster) and London First.

- Michielsens, E., Bingham, C. and Clarke, L. (2014). Managing diversity through flexible-work arrangements: management perspectives. *Employee Relations*, 36 (1), 49-69.

- Wright, A., Michielsens, E., Snijders, S., Kumarappan L., Williamson, M., Clarke, L., and Urwin, P. (2014). *Diversity in STEMM: Establishing a Business Case — Report of research by the University of Westminster for the Royal Society's diversity programme 'Leading the way: increasing diversity in the scientific workforce'.* London: WBS Diversity (University of Westminster) and Royal Society.

- Clarke, L., Michielsens, E., Snijders, S., Wall, C., Dainty, A., Bagilhole, B., and Barnard, S. (2015b). *'No more softly, softly': Review of women in the construction workforce.* London: ProBE - Centre for the Study of the Production of the Built Environment (University of Westminster).

The publications in this group feature three books (research reports) (Clarke et al. 2015, Wright et al. 2014, Michielsens et al. 2008) and one RJA (Michielsens et al. 2014), evaluating DM (gender, ethnicity, disability and age) in different sectoral / occupation settings in UK.

Michielsens et al. (2008) reports on case-study research commissioned by business membership organisation 'London First'. The access to four large London organisations (members identified by London First as good practice DM leaders) allowed the use of unique qualitative data exploring the business case. Findings showed diversity is interpreted in various ways. The implementation of diversity measures narrows down in the main to a focus on gender and recruitment, WLB practices, and internal and external awareness raising initiatives — with parallels across institutions. Restricted recruitment and

selection leads to a lack of class diversity, a finding recently confirmed by Ashley and Empson (2016) in their study on elite professional firms.

Success factors enabling DM include: senior and line management endorsement and communication; accountability for diversity objectives and embedding in functional business goals; and establishing information and feedback mechanisms through awareness raising and monitoring. Success is notable where diversity has a close link to product development, procurement and compliance. Even in these self-reported supportive contexts, the focus, scope and impact of DM is fragile, with a belief in the business case predominating over evidence as DM-related monitoring is lacking. There are major challenges to sustained E&D such as: the diversity in experienced hires; the retention of female workers; the changing image of professions, especially in terms of disability; a long-hours culture; and functional, temporal and contractual flexibility. These factors highlight the discrepancy between on the one hand belief and reality, and on the other policies and practice, even at this good practice level.

The RJA (Michielsens et al. 2014), based on this research, focuses on the effectiveness of flexible work arrangements (FWA) as a key element of diversity practices. The predominance of the employer voice, particularly management concerns about client interaction, constrains FWA. The paper argues that policies and practices should be targeted contextually (e.g. to job character and level) to maximise impact.

The research report commissioned by the Royal Society (Wright et al. 2014) has a similar focus: to examine the business case for diversity in the science field (STEMM), in the context of gender, minority ethic, disability and social class inclusion. The findings echo the previous London First research, showing a belief rather than evidence of the positive impact of DM, and a discrepancy between policies and practices (Michielsens et al. 2008). Overall, the findings suggest that diversity implementation is highly contextualised. Where diversity responsibilities are more regulated (as in the health sector which is largely public), diversity practices are more advanced, suggesting compliance and minimal standards regarding monitoring and benchmarking helps. Diversity

practices in STEMM remain disparate, leading to 'visible' target groups and issues (female recruitment, WLB and networking initiatives), leaving other underrepresented groups and barriers 'invisible'. Organisational barriers to effective DM include: the lack of strategic integration of innovation; entrenched conservative cultural norms, resulting in an absence of alternative working arrangement; and a lack of managerial and employee diversity awareness and involvement, especially on the part of the dominant white male able-bodied group.

The 2015 review of women in the construction workforce was commissioned as part of a larger study by Thames Tideway Tunnel (Clarke et al. 2015a). The full research report is confidential and unpublished. The publication included here summarises the literature review and secondary data, showing that structural and cultural barriers remain a significant challenge to this industry, with limited progress over the last two decades, as shown in Table B.3, on changes in women's participation in selected STEMM and construction occupations (see Appendix B).

Key contribution: **this group of articles highlight the impact of structural and cultural obstacles in implementing diversity in segregated sectors and confirms that employer-led diversity policies do not lead to significant changes in the workforce diversity because of:**

- Their generic nature and lack of application to context specific obstacles, linked specially to the negative impact of flexible working (in time and place) on perceptions of employees' availability and commitment, organisational reluctance to change set ways of working, and the expectancy of adaptability from employees.
- Their narrow scope with organisations having a partial approach to implementation of diversity policies. Diversity practices mainly target the recruitment of female graduates. Ethnicity, and especially social class and disability, are not addressed in practice.

- The insufficient and inappropriate translation of E&D policies to practices. The lack of voice of stakeholders such as employees or funders in identifying, assessing and monitoring diversity initiatives appropriate to a specific context.

- The lack of integration of diversity with business strategy. Most diversity measures are voluntary ad-hoc initiatives, which are not integrated to broader business strategies or monitoring.

- Finally, the lack of external accountability. In contexts where compliance with diversity policies is of greater importance for external reputation or penalties, they are more effectively translated into some (more gender based) practices for inclusion.

Conclusion: Chapter D

The eleven publications considered here focus on DM in the workplace, mainly from a management perspective. Evaluating organisational practices to counter the underrepresentation of certain groups (women, minority ethnic, disabled workers, working class) in certain sectors (construction, STEMM, parliamentary representation) is a common theme.

These publications, predominantly based on qualitative case-study research, discuss DM from a national, sectoral, occupational or organisational perspective, focusing on 'good practice' analysis, whilst also critiquing this concept by highlighting the existence of conceptual, sectoral and organisational structural barriers to employer-led DM.

The earlier publications analyse female employment in the male-dominated construction sector, extending this to investigate whether similar structural processes obstruct the participation of other disadvantaged groups (based on class, ethnicity and disability). Subsequent publications show the impact of social class on career development, and the positive influence of trade unions presence on conflict management, confirming the advantages of collective employee voice mechanisms in the workplace. The later publications look at DM from a management perspective; within specific sectoral contexts, which are largely

male-dominated (e.g. STEMM). An overview of their impact on the knowledge in the field in terms of citations is set out in Appendix D.

The publications confirm that employer-led DM is ineffective. There is limited evidence of its impact on E&D, as it does not challenge employment and working arrangements which act as barriers. DM initiatives themselves are too partial, generic and voluntarist. The publications contribute to the DM literature, showing that poor collective employee participation reduces E&D and leads to lack of identification, assessment and contextualisation of initiatives, and a fracture between policy and practice. This will be discussed in the next chapter.

Table 2: Personal contributions to published works

As required by the University of Westminster Regulations for the award of Master of Philosophy and Doctor of Philosophy 2015/16 (11.17), I submit evidence of the extent of my contribution to each joint publication. Confirmations of endorsement by co-authors are enclosed in Appendix A.

No.	Publication name	My contribution
1	Clarke, L., Frydendal-Pedersen, E., Michielsens, E. and Susman, B. (2005). The European construction social partners: gender equality in theory and practice. *European Journal of Industrial Relations,* 11 (2), 151-177.	*Data collection and analysis:* This RJA is based on the 2002-2003 research 'Gender diversity in construction: industrial relations', led by Professor Linda Clarke. (For details see project 1 in methodology chapter and Table 1) I was the main person responsible for coordination of the data collection and execution of the data analysis of the international survey construction trade unions and employers' organisations. *Authorship of this publication:* I co-authored this RJA with Linda Clarke on an equal basis. The other two authors had a minor role.
2	Clarke, L., Michielsens, E. and Wall, C. (2006). Women in manual trades. In: Gale, A.W. and Davidson, M.J. (eds.) *Managing diversity and equality in construction: initiatives and practice.* London: Taylor & Francis, 151-168.	*Data collection and analysis:* This book chapter is based on the 1997 research 'ADLO/LWAMT: gender diversity in construction' led by Professor Linda Clarke. I was the research fellow responsible for data collection and analysis of the ADLO survey of Direct Labour Organisations; and coordinated the LWAMT interview stage (data collection and analysis) on an equal basis with Chris Wall. (for details see project 2 in methodology chapter and Table 1) *Authorship of this publication:* I co-authored this book chapter (and research report[13] on which this book chapter was partly based) on an equal basis with Linda Clarke and Chris Wall.

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[13] Michielsens et al. (1997).

3	Liddle, J. and Michielsens, E. (2007a). 'NQOC': Social Identity and Representation in British Politics. *The British Journal of Politics & International Relations*, 9 (4), 670-695.	*Data collection and analysis:* This RJA is based on the 27-country research 'Gender differences in political and business elites of industrial countries' (1994-1997) coordinated by Mino Vianello and Gwen Moore, for which I worked as researcher for the UK, Belgian and Irish research teams. (for details see project 3 in methodology chapter and Table 1) In the UK (where the research was led by Dr Joanna Liddle) I had a central role in the UK data collection and analysis, planning and collecting at least 50% of the UK data, and responsible for quantitative coding and data analysis (1995-1997). In the Belgian team (led by Professor Alison Woodward) I started the data collection, identifying relevant research participants, and translated the questionnaire into Dutch and French (6 months 1994-95). In Ireland (where the research was led by Professor Eileen Drew), I conducted part of the quantitative data analysis (December 1996). *Authorship of this publication:* In the UK, I collaborated with Joanna Liddle in writing four publications based on the UK data (two in 2000 and two in 2007), one of which is included here. My contribution in terms of writing this RJA was secondary to Joanna Liddle, focusing on Bourdieu's framework.
4	Urwin, P., Murphy, R., and Michielsens, E. (2007). Employee voice regimes and the characteristics of conflict: an analysis of the 2003 survey of employment tribunal applications. *Human Resource Management Journal,* 17 (2), 178-197.	*Data collection and analysis:* This RJA is based on the 2005 research of UK employment tribunal applications, led by Professor Peter Urwin. (for details see project 4 in methodology chapter and Table 1) *Authorship of this publication:* I had a minor part in writing this RJA (focusing on the literature review).
5	Clarke, L., Bingham, C., Michielsens, E., Miller, S. and van de Meer, M. (2007). *Enabling and disabling labour market sectors: disability and employment in Britain and the Netherlands in the construction, ICT and health sectors.* Final report prepared for the Norwegian Work	*Data collection and analysis:* The 2006-2008 research 'Disability and diversity' was led by Professor Linda Clarke. It focused on two countries (UK and the Netherlands) and three sectors (construction, Information Technology (ICT) and health). (for details see project 5 in methodology chapter and Table 1) I was entirely responsible for data collection and analysis of the ICT sector data in the UK. In addition, I contributed significantly to the coordination of the whole project, especially the focus group and part of the quantitative data collection and analysis for all sectors.

	Research Institute as part of the project 'Disabled, Working Life and Welfare State'. London: CLR/ProBE.	*Authorship of this publication:* I was the sole author for the chapter on the UK ICT sector (pages 41-60 of this research report). I co-authored with Linda Clarke the 'Background' chapter and led on the review of the theoretical literature/models which are central to this chapter. I assisted in editing the Dutch part of the study, mainly focusing on assuring Dutch terminology was accurately translated.
6	Clarke, L., van der Meer, M., Bingham, C., Michielsens, E. and Miller, S. (2009). Enabling and disabling: disability in the British and Dutch construction sectors. *Construction Management and Economics,* 27 (6), 555-566.	*Data collection and analysis:* This publication is based on the construction sector data of research project 5 'Disability and diversity' (see above), in which I had a minor part: it was led by Linda Clarke and Marc van de Meer. *Authorship of this publication:* I had a minor part in the writing of the RJA: focusing on a review of the theoretical literature on disability management and labour market disability data.
7	Bingham, C., Michielsens, E., Clarke, L. and van der Meer, M. (2013). Towards a social model approach?: British and Dutch disability policies in the health sector compared. *Personnel Review,* 42 (5), 613-637.	*Data collection and analysis:* This publication is based on the health sector data of research project 5 'Disability and diversity' (see above). I was the main person responsible for literature review and background data for this research, and I conducted an equal part of the data analysis. *Authorship of this publication:* I co-authored this RJA on equal basis with Cecilie Bingham and Linda Clarke. The fourth author (van de Meer) had a minor role in this RJA publication.
8	Michielsens, E., Bingham, C., Clarke, L., Miller, S., Urwin, P., Siara, B. and Karuk, V. (2008). *Implementing diversity employment policies: examples from large London companies.* London: WBS Diversity (University of Westminster) and London First.	*Data collection and analysis:* The 2007-2008 research 'Diversity in London Firms' was led by Professor Peter Urwin and me. (for details see project 6 in methodology chapter and Table 1) I was involved in more than 50% of data collection and coordination (planning and carrying out qualitative interviews and obtaining secondary case-study data), and led on data analysis and communication with the client and steering group. *Authorship of this publication:* I am the main author for this research report.
9	Michielsens, E., Bingham, C. and Clarke, L. (2014). Managing diversity through flexible-work	*Data collection and analysis:* This publication is based on the 2007-2008 research 'Diversity in London Firms' which was led by Professor Peter Urwin and me. (for details see project 6 in methodology chapter and Table 1).

	arrangements: management perspectives. *Employee Relations,* 36 (1), 49-69.	I was involved in more than 50% of data collection and coordination (planning and conduction of qualitative interviews and secondary case-study data), and led on data analysis and communication with the client and steering group.
		Authorship of this publication: I am the leading author for this RJA.
10	Wright, A., Michielsens, E., Snijders, S., Kumarappan L., Williamson, M., Clarke, L., and Urwin, P. (2014). *Diversity in STEMM: Establishing a Business Case* — Report of research by the University of Westminster for the Royal Society's diversity programme 'Leading the way: increasing diversity in the scientific workforce'. London: WBS Diversity (University of Westminster) and Royal Society.	*Data collection and analysis:* The 2013-14 research 'Diversity in STEMM: establishing a business case' was led by Dr Angela Wright. (for details see project 7 in methodology chapter and Table 1)
		I was part of the main research team, involved in every phase, including data collection and analysis: I conducted three out of 15 in-depth interviews and facilitated two out of five focus groups. I contributed to the qualitative analysis (less than 50%), and the overall conceptual framework.
		Authorship of this publication: I co-authored both the interim report and this final report. My contribution relates especially to the literature review which is intertwined with primary data in every chapter of the final report; the executive summary, chapters two and three on diversity concepts, business case and meaning of diversity. I also wrote the methodology (Chapter 3 and Appendix 2).
11	Clarke, L., Michielsens, E., Snijders, S., Wall, C., Dainty, A., Bagilhole, B., and Barnard, S. (2015). '*No more softly, softly': Review of women in the construction workforce.* London: ProBE - Centre for the Study of the Production of the Built Environment (University of Westminster).	*Data Collection and analysis:* The 2014-15 research ''Raising the bar' for the representation of women in the construction workforce' was led by Professor Linda Clarke (for details see project 8 in methodology chapter and Table 1).
		I contributed to the survey design (less than 50%) and was responsible for the literature review, and secondary analysis of 2011 census data. The full research report is confidential, is not published externally and therefore not part of this PhD. The part of the research findings which are not confidential make up this publication.
		Authorship of this publication: I co-authored the literature review for the full research report made available to the clients only. I had a small part in writing this report: my contribution relates especially to Chapters 1 and 3.

CHAPTER E: Discussion and conclusions

This chapter assesses the overall contribution to knowledge of the publications in question. It is organised as follows. It begins with a consolidation of the findings and contribution to knowledge of the publications as a whole, presenting a conceptual framework to analyse the effectiveness of the business case. It then moves on to discuss the need for employee participation and contextualisation.

The research focuses on the evaluation of the effectiveness of employer-led initiatives to managing diversity. We note that, despite the number of diversity initiatives at macro and organisational level, areas such as STEMM and construction, remain segregated in terms of gender, ethnicity and disability (CASE 2014). Table B.3 (in Appendix B) shows a limited increase in female participation in key STEMM and construction professions between 1991 and 2011, but no change at operative level. While wider societal, educational and labour market developments will influence this participation, it is nevertheless appropriate to question the effectiveness of DM at organisational level.

Published works included analyse DM at sectoral level – in STEMM, with construction as a core focus, health and ICT — in terms of gender, ethnicity, disability, age and social class. In summary, the publications contribute the following confirmations and new insights to knowledge in the field:

1. The presence of structural and social barriers to diversity, entrenched in segregated sectors, imply that change will be slow. These barriers are particular to sectors, occupations and organisations, calling for contextualised DM as a response. Their impact will to a large extent be similar across disadvantaged groups, calling for a co-ordinated and multi-faceted DM approach. For instance, presenteeism, lack of or negative career impact of flexible work arrangements or the necessity to travel for work might affect women, because of care responsibilities, as well as disabled workers. It is highlighted that these are barriers linked to organisational expectations of commitment and employees' availability and adaptability; for instance part-time working (and therefore lack

of availability during what are considered 'normal' working hours) is an obstacle in an organisational culture where the timeframe for work is dictated by clients, 24/7 customer communication or project deadlines that can only be met by full-time resourcing.

2. DM is dominated by employer-led priorities and employer / senior manager and diversity practitioner (HRM) voice, with employee participation severely marginalised.

3. DM is too limited to be effective in breaking down the structural and cultural barriers discussed. These limitations relate to the focus of DM (including the meaning of diversity and target populations), ownership of the discourse (voice); diversity measures introduced in organisations (their level, application, and implementation as policies and practices), the drivers and support given to DM. The ineffectiveness of DM, largely partial and voluntary in their implementation, leads to 'visible', 'hidden' and 'emerging' E&D areas in organisations. This is set out in Figure C below.

Clarifying Figure C, in terms of focus (1), the publications show DM includes a variety of diversity interpretations and target populations at organisational levels, linked to their particular industry and occupational contexts, but always partial in approach and lacking employee perspectives (2). The meanings and target population for DM are identified by the employer / HRM - diversity practitioner / senior manager, as owner of this discourse, based on the business benefit (3) as the driver. There is a lack of evidence of a moral case or human rights agenda (apart from compliance).

The publications included in this PhD suggest that certain meanings of diversity are more *visible* (in terms of discourse, policies and practices). Diversity as internationalisation, individualised inclusion and anti-discrimination (especially linked to legislative compliance) is more visible than diversity in terms of citizenship and migration, which is *emerging*. This means that citizenship is highlighted as a barrier to diversity by some at certain institutions, but is neither an established part of the internal diversity debate nor of implementation and practice. Citizenship, for

instance, emerges as a career progression problem for PhD or post-doc scientists as it is a condition to access research funding and therefore necessary for career development.

Figure C: Dimensions of diversity management in organisations: visible, emerging and hidden facets of equality & diversity

DIVERSITY MANAGEMENT	VISIBLE	EMERGING	HIDDEN
FOCUS (1)			
Meaning of diversity	INTERNATIONALITY IDEAS INDIVIDUAL INCLUSION ANTI-DISCRIMINATION	CITIZENSHIP MIGRATION	EQUAL OPPORTUNITIES EQUAL TREATMENT EQUAL OUTCOME POSITIVE DISCRIMINATION
Target	INDIVIDUAL DISCRETE GROUPS: women, BAME	COLLECTIVE DISCRETE GROUPS: older workers; LGBT	INTERSECTIONS CLASS
VOICE (2)	EMPLOYER SENIOR MANAGER DIVERSITY PRACTICIONER HRM	LINE MANAGER CLIENT SUPPLIER	EMPLOYEE EMPLOYEE REPRESENTATIVES
DRIVERS (3)	BUSINESS BENEFIT LEGAL COMPLIANCE		MORAL CASE SOCIAL JUSTICE HUMAN RIGHTS
MEASURES (4)			
Level (a)	MACRO: National	MESO: senior management	MACRO: sectoral & occupational MESO: line & middle management MICRO: employee
Application (b)	GENERIC, ISOMORPHIC AD HOC		CONTEXTUALISED SYSTEMIC
Implementation (c) POLICIES	POLICIES gender disability ethnicity	POLICIES age	POLICIES social class
PRACTICES	PRACTICES gender	PRACTICES disability ethnicity age	PRACTICES social class
Supported by (d)	BELIEF		MONITORING DATA FEEDBACK

While the relevant scientists and their immediate teams are aware of this barrier, it is not taken up in organisational discourse and action. Diversity management does not provide for positive discrimination and positive action remains *invisible*,

meaning that it is currently not part of the diversity-related discourse and actions in organisations. In terms of target groups, DM is largely targeting individuals or identifies certain discrete groups for DM action, mostly related to women and ethnic minority employees (in a very ad-hoc way that sees initiatives to recruit, for instance, female graduates, but leaves the retention problems for experienced female employees unattended). Targeting the recruitment or retention of older workers and LGBT is *emerging*. The absence of discourse and initiatives around class or intersectionality render it *invisible*. As barriers to diversity are quite similar for the different disadvantaged groups, this lack of a co-ordinated approach is particularly revealing.

The framework displays the limitations to the effectiveness of current DM measures (4), through limits in their level (4a), application (4b), implementation (4c) and supporting data (4d). The absence of contextualised and systemic approaches leads to identical generic 'tick-box' initiatives across organisations without real relevance and impact. Lack of monitoring metrics leaves DM unsupported and unevaluated, and the fracture between DM policies and practices means DM gives more prominence to discourse and plans at macro-level or senior management level than practices and their implementation at meso (line-management) and micro (employee) level, especially related to ethnicity, disability and social class, so confirming that Hoque and Noon's 'empty-shell' thesis (2004) is still present.

The publications confirm that, where DM is shaped by the inclusion of employee voice, its focus and measures are more contextualised leading to more systemic and integrated implementation and therefore greater overall effectiveness. These two crucial elements for enhancing DM – employee participation and contextualisation – are discussed below, with reference to the macro, meso and micro level implementation of DM.

E.1. Enhancing diversity management: need for employee participation

Using the framework of Marchington and Wilkinson (2005), who define three levels of employee participation (the individually focused top-down direct

communication, upward problem solving and representative participation), the publications show employee participation in DM is weak in terms of depth (i.e. influence) and scope (operational/strategic), with evidence only of the first level (top-down communication of DM policies). In terms of diversity practices, the publications show the frequent breakdown at this first level of participation and the importance of the line manager role in positively influencing this. The higher levels of participation were only exceptionally present. In line with Greene and Kirton (2011a), I argue that E&D related policies will be more successful when a broader set of stakeholders is involved in their development, implementation and assessment.

The literature on employee participation shows a similar shift as with the equality-diversity debate. Participation in the form of collectivism made way for more managerial driven HRM approaches, such as networks, and individualist 'employee empowerment' and 'employee voice' concepts (Wilkinson et al. 2010, Donaghey et al. 2011). These works do not offer evidence that this is beneficial for the effectiveness of diversity strategy; for instance 'employee networks' remain marginal in terms of recognition and organisational diversity strategy (Wright et al. 2014).

As with Wilkinson et al. (2014), it is not contended here that participation or partnership will rid the organisation of all ills, but enhanced participation of employees through collective representation links to more effective diversity practices (leading to increased and longer term diversity). Examples include: tradeswomen participation in the DLO in Leicester County Council (Clarke et al. 2006); the NHS sector (Wright et al. 2014); Urwin et al.'s (2007) findings indicate the positive impact of union presence on internal conflict resolution; and the disability management approach in the Netherlands (Group C publications) suggesting the positive effect of a social partnership approach.

The lack of interaction or collaboration between managerial and employee levels in shaping and assessing diversity policies and practices highlights the divide between 'above the line' (organisational policy/programmes research) and 'below-the-line'

(employee) perspectives in DM research. Kulik (2014) argues that diversity research has focused too much on the employee dimension, and needs to focus more on the 'above the line' managerial perceptions to evaluate effectiveness. The publications comprised within this PhD show data based on managerial perspectives is valuable — confirming Kulik's comment — but indicate it is imperative that the 'above the line' analysis is informed by 'below-the-line' data in order to be useful in analysing the effectiveness of DM. This 'bottom-up' feedback is necessary, at least in the form of communication (diversity metrics and monitoring) and preferably participation.

The lack of employee participation leads to lack of appropriate strategy (contextualisation) and a lack of systemic and integrated implementation of policies and practices, as discussed below.

E.2. Enhancing diversity management: contextualisation and systemic implementation

While many scholars agree that the analysis of context is important to understanding the impact of DM, hitherto, its application has been limited mostly in terms of differences in time and place — acknowledging changes in the DM discourse and application over the last decades within and between countries (see for instance Klarsfeld et al. (2012) and Tatli et al. (2012)). The publications in this PhD show that this acknowledgement is insufficient in terms of examining the importance of context, as occupational, sectoral and especially organisational settings are significant when implementing and evaluating the effectiveness of DM. At the same time and in the same place, effective DM will require different implementation strategies in different settings.

For instance, comparing disability diversity management in the different contexts of the nursing and accountancy professions, the publications (Clarke et al 2007, Bingham et al. 2013; Wright et al. 2014) show that to be successful, the integration of disabled nurses needs to follow a different strategy and practice than for disabled professional accountants, adapted to particular l barriers such as 'fitness to practice' and client or team expectations. This recognition of importance of context

is taken up only recently by more scholars (see Greeff (2015), Pringle and Ryan (2015), Tatli and Özbilgin (2012) and Zanoni et al. (2010)).

The need to "contextualise" DM for it to be effective refers therefore to the necessity to transform the general aims and motives of E&D to fit within particular occupational, sectoral and especially organisational settings, in order for E&D objectives to be realised. The organisational setting is especially crucial to take into account as it encapsulates not just organisational, but also occupational and sectoral contexts: the organisation is where day-to-day work activities are played out, and opportunities as well as barriers to increasing diversity are tangible. Employees engage with co-workers, clients and managers, who are all internal and external stakeholders and the requirements of working practices (e.g. working time) and pressures (such as client expectations) will create opportunities but also barriers to enhance E&D. Therefore, it is at organisational level especially that on the one hand, work structures and expectations need to be evaluated with view to the improvement of E&D by the employer and employees, and on the other data gathered and monitored in order for targets to be set and feasible change to occur.

The employer-led business case or DM has failed to take this process of contextualisation on board, making it ineffective as DM is not evaluating outcomes and structural obstacles to overcome at organisational level, leading to an only partially 'visible', superficial approach where DM is more present in name (and in policies) than in practice. With significant areas of disadvantage not addressed, these remain 'hidden' barriers to E&D.

The need for employee participation in this process of contextualisation is crucial, as discussed above. It also implies the importance of evaluating DM at different levels, including inside an organisation. This is not only important for establishing an appropriate, contextualised approach to DM, but a systemic focus: next to contextualisation, the publications highlight the lack of a systemic focus in employer-led DM, limiting its effectiveness.

The relational framework of DM practices of Syed and Özbilgin (2009) identifies the need for a multilevel conceptualisation of DM between the *macro* (societal-

sectoral-contextual-legal), *meso* (organisational processes and behaviours) and *micro* (individual agency) levels, based on Bourdieu's 'field', 'habitus' and 'capital' dimensions (1998). While this relational model of analysis is helpful, my publications suggest the need to adjustment in two aspects: first a 'feedback loop' from micro to macro levels is needed. Secondly, the 'meso' level must be delayered, as discussed below.

A 'learning and effectiveness approach' of DM (see Thomas and Ely 1996) can only be developed by introducing 'bottom-up' feedback from the micro to macro levels with monitoring and evaluation of the effectiveness and impact of DM practices, obtained through employee voice. Secondly, the organisational 'meso' level has in reality different sub-layers, each of which acts as enabler or barrier to the translation of DM into practice. Senior and HR management will incorporate external macro policies and translate them into generic organisational policies/practices. These are implemented by middle and line management which act as filters — both positively and negatively — and through which the reception and evaluation at the micro-level by employees will be coloured. This set of publications shows the importance of these layers. Senior management sets the agenda for DM in terms of its meaning, significance and practical feasibility (linked to business strategy); whilst middle and line managers impact on the interpretation and dissemination of DM to their staff, based on their sensibilities in terms of resources and client/customer needs. The existence of these sublayers increases the likelihood of discrepancy between policies and practices, which is especially high for DM in terms of disability and social class.

In conclusion, this PhD by Published Work integrates the findings and contributions of research published over ten years. The publications discussed demonstrate a development and range of thought, focus and findings which does not lend itself to easy summary. Overall, it highlights that the workplace is an important field to all: employers, managers, and current, past and future workers. Working towards improving employment and career opportunities by minimising

disadvantage and discrimination and understanding that differences and change are constant (between groups and over the life of an individual) is therefore an important goal both for society and for organisations. These publications suggest that the current approaches to DM are insufficient as they result more in 'window dressing' than structural transformations. A concerted, systemic approach that includes the voice of employees is needed to challenge and change organisational expectations of commitment and ways of working, which obstruct inclusion, diversity and equality, and this in ways relevant and feasible in their particular contexts.

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APPENDICES

Where practicable I have contacted co-authors whose endorsements are attached. Included are co-author endorsements of following co-authors:

Name co-author	Publication number										
Professor L. Clarke	1	2			5	6	7	8	9	10	11
Dr C. Wall		2									11
Dr J. Liddle			3								
Professor P. Urwin				4				8		10	
C. Bingham					5	6	7	8	9		
S. Miller					5	6		8			
Dr A. Wright										10	
Dr S. Snijders										10	11
M. Williamson										10	

The following authors were not asked for endorsement as they had a secondary role (as research assistant or subcontractor) in the publication / research:

Name co-author	Publication number										
E. Pedersen Frydendal	1										
Dr M. van der Meer					5	6	7				
B. Susman	1										
Dr R. Murphy				4							
Dr B. Siara								8			
V. Karuk								8			
Dr L. Kumarappan										10	
Professor A. Dainty											11
Dr S Barnard											11

Endorsement co-author Professor Linda Clarke

By signing below I confirm Elisabeth Michielsens' contribution to our nine joint publications:

Publication name

Clarke, L., Pedersen Frydendal, E., Michielsens, E. and Susman, B. (2005). The European construction social partners: gender equality in theory and practice. *European Journal of Industrial Relations,* 11(2), 151-177.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: This RJA is based on the 2002-2003 research 'Gender diversity in construction: industrial relations', led by Professor Linda Clarke.

EM was the main person responsible for coordination of the data collection and execution of the data analysis of the international survey construction trade unions and employers' organisations.

Authorship of this publication: EM co-authored this RJA with Linda Clarke on an equal basis. The other two authors had a minor role.

Publication name

Clarke, L., Michielsens, E. and Wall, C. (2006). Women in manual trades. In: Gale, A.W. and Davidson, M. J. (eds.) *Managing diversity and equality in construction: initiatives and practice.* London: Taylor & Francis, 151-168.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: This book chapter is based on the 1997 research 'ADLO/LWAMT: gender diversity in construction' led by Professor Linda Clarke.

EM was the research fellow responsible for data collection and analysis of the ADLO survey of Direct Labour Organisations; and coordinated the LWAMT interview stage (data collection and analysis) on an equal basis with Chris Wall.

Authorship of this publication: EM co-authored this book chapter on an equal basis with Linda Clarke and Chris Wall.

Publication name

Clarke, L., Bingham, C., Michielsens, E., Miller, S. and van de Meer, M. (2007). *Enabling and disabling labour market sectors: disability and employment in Britain and the Netherlands in the construction, ICT and health sectors.* Final report prepared for the Norwegian Work Research Institute as part of the project 'Disabled, Working Life and Welfare State'. London: CLR/ProBE.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: The 2006-2008 research 'Disability and diversity' was led by Professor Linda Clarke. It focused on two countries (UK and the Netherlands) and three sectors (construction, Information Technology (ICT) and health).

EM was entirely responsible for data collection and analysis of the ICT sector data in the UK. In addition, EM contributed significantly to the coordination of the whole project, especially the focus group and part of the quantitative data collection and analysis for all sectors.

Authorship of this publication: EM was the sole author for the chapter on the UK ICT sector (pages 41-60 of this research report). EM co-authored with Linda Clarke the 'Background' chapter and led on the review of the theoretical literature/models which

1

are central to this chapter. EM assisted in editing the Dutch part of the study, mainly focusing on assuring Dutch (legal) terminology was accurately translated.

Publication name

Clarke, L., van der Meer, M., Bingham, C., Michielsens, E. and Miller, S. (2009). Enabling and disabling: disability in the British and Dutch construction sectors. *Construction Management and Economics,* 27(6), 555-566.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: This publication is based on the construction sector data of research project 5 'Disability and diversity' (see above), in which EM had a minor part: it was led by Linda Clarke and Marc van de Meer.

Authorship of this publication: EM had a minor part in the writing of the RJA: focusing on a review of the theoretical literature on disability management and labour market disability data.

Publication name

Bingham, C., Michielsens, E., Clarke, L. and van der Meer, M. (2013). Towards a social model approach?: British and Dutch disability policies in the health sector compared. *Personnel Review,* 42(5), 613-637.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: This publication is based on the health sector data of research project 5 'Disability and diversity' (see above). EM was the main person responsible for literature review and background data for this research, and EM conducted an equal part of the data analysis.

Authorship of this publication: EM co-authored this RJA on equal basis with Cecilie Bingham and Linda Clarke. The fourth author (van de Meer) had a minor role in this RJA publication.

Publication name

Michielsens, E., Bingham, C., Clarke, L., Miller, S., Urwin, P., Siara, B. and Karuk, V. (2008). *Implementing diversity employment policies: examples from large London companies.* London: WBS Diversity (University of Westminster) and London First.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: The 2007-2008 research 'Diversity in London Firms' was led by Professor Peter Urwin and EM.

EM was involved in more than 50% of data collection and coordination (planning and carrying out qualitative interviews and obtaining secondary case study data), and led on data analysis and communication with the client and steering group.

Authorship of this publication: EM is the main author for this research report.

Publication name

Michielsens, E., Bingham, C. and Clarke, L. (2014). Managing diversity through flexible-work arrangements: management perspectives. *Employee Relations,* 36(1), 49-69.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: This publication is based on the 2007-2008 research 'Diversity in London Firms' which was led by Professor Peter Urwin and EM.

2

EM was involved in more than 50% of data collection and coordination (planning and conduction of qualitative interviews and secondary case study data), and led on data analysis and communication with the client and steering group.

Authorship of this publication: EM is the leading author for this RJA.

Publication name

Wright, A., Michielsens, E., Snijders, S., Kumarappan L., Williamson, M., Clarke, L., and Urwin, P. (2014). *Diversity in STEMM: Establishing a Business Case- Report of research by the University of Westminster for the Royal Society's diversity programme 'Leading the way: increasing diversity in the scientific workforce'.* London: WBS Diversity (University of Westminster) and Royal Society.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: The 2013-14 research 'Diversity in STEMM: establishing a business case' was led by Dr Angela Wright.

EM was part of the main research team, involved in every phase, including data collection and analysis: EM conducted three out of 15 in-depth interviews and facilitated two out of five focus groups. EM contributed to the qualitative analysis (less than 50%), and the overall conceptual framework.

Authorship of this publication: EM co-authored both the interim report and this final report. Her contribution relates especially to the literature review which is intertwined with primary data in every chapter of the final report; the executive summary, chapters two and three on diversity concepts, business case and meaning of diversity. EM wrote the methodology (chapter 3 and appendix 2).

Publication name

Clarke, L., Michielsens, E., Snijders, S., Wall, C., Dainty, A., Bagilhole, B., and Barnard, S. (2015). *'No more softly, softly': Review of women in the construction workforce.* London: ProBE - Centre for the Study of the Production of the Built Environment (University of Westminster).

Contribution Elisabeth Michielsens (EM)

Data Collection and analysis: The 2014-15 research ' 'Raising the bar' for the representation of women in the construction workforce' was led by Professor Linda Clarke.

EM contributed to the survey design (less than 50%) and was responsible for the literature review, and secondary analysis of 2011 census data. The full research report is confidential, not published externally and therefore not part of this PhD. The part of the research findings which are not confidential have been published here.

Authorship of this publication: EM co-authored the literature review for the full research report made available to the clients only. EM had a small part in writing this report: her contribution relates especially to Chapters 1 and 3.

Professor Linda Clarke

L. Clarke — 16ᵗʰ June 2016

Endorsement co-author Dr Christine Wall

By signing below I confirm Elisabeth Michielsens' contribution to our two joint publications:

Publication name

Clarke, L., Michielsens, E. and Wall, C. (2006). Women in manual trades. In: Gale, A.W. and Davidson, M. J. (eds.) *Managing diversity and equality in construction: initiatives and practice.* London: Taylor & Francis, 151-168.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: This book chapter is based on the 1997 research 'ADLO/LWAMT: gender diversity in construction' led by professor Linda Clarke.

EM was the research fellow responsible for data collection and analysis of the ADLO survey of Direct Labour Organisations; and coordinated the LWAMT interview stage (data collection and analysis) on an equal basis with Christine Wall.

Authorship of this publication: EM co-authored this book chapter on an equal basis with Linda Clarke and Christine Wall.

Publication name

Clarke, L., Michielsens, E., Snijders, S., Wall, C., Dainty, A., Bagilhole, B., and Barnard, S. (2015). *'No more softly, softly': Review of women in the construction workforce.* London: ProBE - Centre for the Study of the Production of the Built Environment (University of Westminster).

Contribution Elisabeth Michielsens (EM)

Data Collection and analysis: The 2014-15 research ' 'Raising the bar' for the representation of women in the construction workforce' was led by Professor Linda Clarke.

EM contributed to the survey design (less than 50%) and was responsible for the literature review, and secondary analysis of 2011 census data. The full research report is confidential, not published externally and therefore not part of this PhD. The part of the research findings which are not confidential have been published here.

Authorship of this publication: EM co-authored the literature review for the full research report made available to the clients only. EM had a small part in writing this report: her contribution relates especially to Chapters 1 and 3.

Dr Christine Wall
Reader
University of Westminster
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London NW1 5LS

Date: 08/06/2016

Endorsement co-author Dr Joanna Liddle

By signing below I confirm Elisabeth Michielsens' contribution to our joint publication:

Publication name

Liddle, J. and Michielsens, E. (2007a). 'NQOC': Social Identity and Representation in British Politics. *The British Journal of Politics & International Relations*, 9(4), 670-695.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: This RJA is based on the 27 country research 'Gender differences in political and business elites of industrial countries' (1994-1997) coordinated by Mino Vianello and Gwen Moore, for which EM worked as researcher for the UK, Belgian and Irish research teams.

In the UK (where the research was led by Dr Joanna Liddle) EM had a central role in the UK data collection and analysis, planning and collecting at least 50% of the UK data, and responsible for quantitative coding and data analysis (1995-1997). In the Belgian team (led by Professor Alison Woodward) EM started the data collection, identifying relevant research participants, and translated the questionnaire into Dutch and French (6 months 1994-95). In Ireland (where the research was led by Professor Eileen Drew), EM conducted part of the quantitative data analysis (1 month 1996).

Authorship of this publication: In the UK, EM collaborated with Joanna Liddle in writing four publications based on the UK data (two in 2000 and two in 2007), one of which is included here. Her contribution in terms of writing this RJA was secondary to Joanna Liddle, focusing on Bourdieu's framework.

Dr Joanna Liddle

Endorsement co-author Professor Peter Urwin

By signing below I confirm Elisabeth Michielsens' contribution to our three joint publications:

Publication name

Urwin, P., Murphy, R., and Michielsens, E. (2007). Employee voice regimes and the characteristics of conflict: an analysis of the 2003 survey of employment tribunal applications. *Human Resource Management Journal*, 17(2), 178-197.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: This RJA is based on the 2005 research of UK employment tribunal applications, led by Professor Peter Urwin.

Authorship of this publication: EM had a minor part in writing of this RJA (focusing on the literature review).

Publication name

Michielsens, E., Bingham, C., Clarke, L., Miller, S., Urwin, P., Siara, B. and Karuk, V. (2008). *Implementing diversity employment policies: examples from large London companies.* London: WBS Diversity (University of Westminster) and London First.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: The 2007-2008 research 'Diversity in London Firms' was led by Professor Peter Urwin and EM.

EM was involved in more than 50% of data collection and coordination (planning and carrying out qualitative interviews and obtaining secondary case study data), and led on data analysis and communication with the client and steering group.

Authorship of this publication: EM is the main author for this research report.

Publication name

Wright, A., Michielsens, E., Snijders, S., Kumarappan L., Williamson, M., Clarke, L., and Urwin, P. (2014). *Diversity in STEMM: Establishing a Business Case- Report of research by the University of Westminster for the Royal Society's diversity programme 'Leading the way: increasing diversity in the scientific workforce'.* London: WBS Diversity (University of Westminster) and Royal Society.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: The 2013-14 research 'Diversity in STEMM: establishing a business case' was led by Dr Angela Wright.

EM was part of the main research team, involved in every phase, including data collection and analysis: EM conducted three out of 15 in-depth interviews and facilitated two out of five focus groups. EM contributed to the qualitative analysis (less than 50%), focusing on the theme of diversity meanings and the overall conceptual framework.

Authorship of this publication: EM co-authored both the interim report and this final report. Her contribution relates especially to the literature review which is intertwined with primary data in every chapter of the final report; the executive summary, chapters two and three on diversity concepts, business case and meaning of diversity. EM was responsible for writing of the methodology (chapter 3 and appendix 2).

Professor Peter Urwin
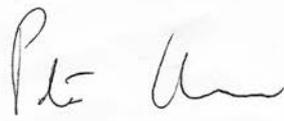
13/06/2016

Endorsement from co-author Cecilie Bingham

I am more than happy to confirm Elisabeth Michielsens' contribution to our five joint publications:

Publication name

Clarke, L., Bingham, C., Michielsens, E., Miller, S. and van de Meer, M. (2007). *Enabling and disabling labour market sectors: disability and employment in Britain and the Netherlands in the construction, ICT and health sectors.* Final report prepared for the Norwegian Work Research Institute as part of the project 'Disabled, Working Life and Welfare State'. London: CLR/ProBE.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: The 2006-2008 research 'Disability and diversity' was led by Professor Linda Clarke. It focused on two countries (UK and the Netherlands) and three sectors (construction, Information Technology (ICT) and health).

EM was entirely responsible for data collection and analysis of the ICT sector data in the UK. In addition, EM contributed significantly to the coordination of the whole project, especially the focus group and part of the quantitative data collection and analysis for all sectors.

Authorship of this publication: EM was the sole author for the chapter on the UK ICT sector (pages 41-60 of this research report). EM co-authored with Linda Clarke the 'Background' chapter and led on the review of the theoretical literature/models which are central to this chapter. EM assisted in editing the Dutch part of the study, mainly focusing on assuring Dutch (legal) terminology was accurately translated.

Publication name

Clarke, L., van der Meer, M., Bingham, C., Michielsens, E. and Miller, S. (2009). Enabling and disabling: disability in the British and Dutch construction sectors. *Construction Management and Economics*, 27(6), 555-566.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: This publication is based on the construction sector data of research project 5 'Disability and diversity' (see above), in which EM had a minor part: it was led by Linda Clarke and Marc van de Meer.

Authorship of this publication: EM had a minor part in the writing of the RJA: focusing on a review of the theoretical literature on disability management and labour market disability data.

Publication name

Bingham, C., Michielsens, E., Clarke, L. and van der Meer, M. (2013). Towards a social model approach?: British and Dutch disability policies in the health sector compared. *Personnel Review*, 42(5), 613-637.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: This publication is based on the health sector data of research project 5 'Disability and diversity' (see above). EM was the main person responsible for literature review and background data for this research, and EM conducted an equal part of the data analysis.

Authorship of this publication: EM co-authored this RJA on equal basis with Cecilie Bingham and Linda Clarke. The fourth author (van de Meer) had a minor role in this

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RJA publication.

Publication name

Michielsens, E., Bingham, C., Clarke, L., Miller, S., Urwin, P., Siara, B. and Karuk, V. (2008). *Implementing diversity employment policies: examples from large London companies.* London: WBS Diversity (University of Westminster) and London First.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: The 2007-2008 research 'Diversity in London Firms' was led by Professor Peter Urwin and EM.

EM was involved in more than 50% of data collection and coordination (planning and carrying out qualitative interviews and obtaining secondary case study data), and led on data analysis and communication with the client and steering group.

Authorship of this publication: EM is the main author for this research report.

Publication name

Michielsens, E., Bingham, C. and Clarke, L. (2014). Managing diversity through flexible-work arrangements: management perspectives. *Employee Relations,* 36(1), 49-69.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: This publication is based on the 2007-2008 research 'Diversity in London Firms' which was led by Professor Peter Urwin and EM.

EM was involved in more than 50% of data collection and coordination (planning and conduction of qualitative interviews and secondary case study data), and led on data analysis and communication with the client and steering group.

Authorship of this publication: EM is the leading author for this RJA.

5. 6. 2016

Cecilie Bingham

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By signing below I confirm Elisabeth Michielsens' contribution to our three joint publications:

Publication name

Clarke, L., Bingham, C., Michielsens, E., Miller, S. and van de Meer, M. (2007). *Enabling and disabling labour market sectors: disability and employment in Britain and the Netherlands in the construction, ICT and health sectors.* Final report prepared for the Norwegian Work Research Institute as part of the project 'Disabled, Working Life and Welfare State'. London: CLR/ProBE.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: The 2006-2008 research 'Disability and diversity' was led by Professor Linda Clarke. It focused on two countries (UK and the Netherlands) and three sectors (construction, Information Technology (ICT) and health).

EM was entirely responsible for data collection and analysis of the ICT sector data in the UK. In addition, EM contributed significantly to the coordination of the whole project, especially the focus group and part of the quantitative data collection and analysis for all sectors.

Authorship of this publication: EM was the sole author for the chapter on the UK ICT sector (pages 41-60 of this research report). EM co-authored with Linda Clarke the 'Background' chapter and led on the review of the theoretical literature/models which are central to this chapter. EM assisted in editing the Dutch part of the study, mainly focusing on assuring Dutch (legal) terminology was accurately translated.

Publication name

Clarke, L., van der Meer, M., Bingham, C., Michielsens, E. and Miller, S. (2009). Enabling and disabling: disability in the British and Dutch construction sectors. *Construction Management and Economics*, 27(6), 555-566.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: This publication is based on the construction sector data of research project 5 'Disability and diversity' (see above), in which EM had a minor part: it was led by Linda Clarke and Marc van de Meer.

Authorship of this publication: EM had a minor part in the writing of the RJA: focusing on a review of the theoretical literature on disability management and labour market disability data.

Publication name

Michielsens, E., Bingham, C., Clarke, L., Miller, S., Urwin, P., Siara, B. and Karuk, V. (2008). *Implementing diversity employment policies: examples from large London companies.* London: WBS Diversity (University of Westminster) and London First.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: The 2007-2008 research 'Diversity in London Firms' was led by Professor Peter Urwin and EM.

EM was involved in more than 50% of data collection and coordination (planning and carrying out qualitative interviews and obtaining secondary case study data), and led on data analysis and communication with the client and steering group.

Authorship of this publication: EM is the main author for this research report.

Sue Miller

7/6/'16

Endorsement co-author Dr Angela Wright

By signing below I confirm Elisabeth Michielsens' contribution to our joint publication:

Publication name

Wright, A., Michielsens, E., Snijders, S., Kumarappan L., Williamson, M., Clarke, L., and Urwin, P. (2014). *Diversity in STEMM: Establishing a Business Case- Report of research by the University of Westminster for the Royal Society's diversity programme 'Leading the way: increasing diversity in the scientific workforce'.* London: WBS Diversity (University of Westminster) and Royal Society.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: The 2013-14 research 'Diversity in STEMM: establishing a business case' was led by Dr Angela Wright.

EM was part of the main research team, involved in every phase, including data collection and analysis: EM conducted three out of 15 in-depth interviews and facilitated two out of five focus groups. EM contributed to the qualitative analysis (less than 50%) and the overall conceptual framework.

Authorship of this publication: EM co-authored both the interim report and this final report. Her contribution relates especially to the literature review which is intertwined with primary data in every chapter of the final report; the executive summary, chapters two and three on diversity concepts, business case and meaning of diversity. EM wrote the methodology (chapter 3 and appendix 2).

Dr Angela Wright

A MWright.
8/6/16

June 2016

Endorsement co-author Dr Sylvia Snijders

By signing below I confirm Elisabeth Michielsens' contribution to our two joint publications:

Publication name

Wright, A., Michielsens, E., Snijders, S., Kumarappan L., Williamson, M., Clarke, L., and Urwin, P. (2014). *Diversity in STEMM: Establishing a Business Case- Report of research by the University of Westminster for the Royal Society's diversity programme 'Leading the way: increasing diversity in the scientific workforce'*. London: WBS Diversity (University of Westminster) and Royal Society.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: The 2013-14 research 'Diversity in STEMM: establishing a business case' was led by Dr Angela Wright.

EM was part of the main research team, involved in every phase, including data collection and analysis: EM conducted three out of 15 in-depth interviews and facilitated two out of five focus groups. EM contributed to the qualitative analysis (less than 50%), focusing on the theme of diversity meanings and the overall conceptual framework.

Authorship of this publication: EM co-authored both the interim report and this final report. Her contribution relates especially to the literature review which is intertwined with primary data in every chapter of the final report; the executive summary, chapters two and three on diversity concepts, business case and meaning of diversity. EM wrote the methodology (chapter 3 and appendix 2).

Publication name

Clarke, L., Michielsens, E., Snijders, S., Wall, C., Dainty, A., Bagilhole, B., and Barnard, S. (2015). *'No more softly, softly': Review of women in the construction workforce*. London: ProBE - Centre for the Study of the Production of the Built Environment (University of Westminster).

Contribution Elisabeth Michielsens (EM)

Data Collection and analysis: The 2014-15 research ' 'Raising the bar' for the representation of women in the construction workforce' was led by Professor Linda Clarke (for details see project 8 in methodology chapter and Table 1).

EM contributed to the survey design (less than 50%) and was responsible for the literature review, and secondary analysis of 2011 census data. The full research report is confidential, not published externally and therefore not part of this PhD. The part of the research findings which are not confidential have been published here.

Authorship of this publication: EM co-authored the literature review for the full research report made available to the clients only. EM had a small part in writing this report: her contribution relates especially to Chapters 1 and 3.

Dr Sylvia Snijders

Senior Lecturer, WBS

Sylvia Snijders

9/6/16

Endorsement co-author Michele Williamson

By signing below I confirm Elisabeth Michielsens' contribution to our joint publication:

Publication name

Wright, A., Michielsens, E., Snijders, S., Kumarappan L., Williamson, M., Clarke, L., and Urwin, P. (2014). *Diversity in STEMM: Establishing a Business Case- Report of research by the University of Westminster for the Royal Society's diversity programme 'Leading the way: increasing diversity in the scientific workforce'*. London: WBS Diversity (University of Westminster) and Royal Society.

Contribution Elisabeth Michielsens (EM)

Data collection and analysis: The 2013-14 research 'Diversity in STEMM: establishing a business case' was led by Dr Angela Wright. (for details see project 7 in methodology chapter and Table 1)

EM was part of the main research team, involved in every phase, including data collection and analysis: EM conducted three out of 15 in-depth interviews and facilitated two out of five focus groups. EM contributed to the qualitative analysis (less than 50%), focusing on the theme of diversity meanings and the overall conceptual framework.

Authorship of this publication: EM co-authored both the interim report and this final report. Her contribution relates especially to the literature review which is intertwined with primary data in every chapter of the final report; the executive summary, chapters two and three on diversity concepts, business case and meaning of diversity. EM was solely responsible for writing of the methodology parts (chapter 3 and appendix 2).

Michele Williamson

9/6/16.

APPENDIX B: Table B.3: Changes in female participation in STEMM and construction occupations: 1991 to 2011

Sex by occupation SOC90 Census 1991: 10% sample	% women 1991	Sex by occupation SOC2010 Census 2011: England/Wales	% women 2011	Female participation: % change 1991 and 2011	
TOTAL	44.04	TOTAL	47.09	3.06	
1 Managers And Administrators	32.04	1 Managers, directors and senior officials	35.12	3.08	
111 Managers in building and contracting	5.80	1122 Production managers and directors in construction	11.60	5.80	
2 Professional Occupations	38.76	2 Professional occupations	50.32	11.56	
2a. Science and engineering professionals	10.27	21 Science, research, engineering and technology professionals	18.85	8.59	
200 Chemists	16.44	2111 Chemical scientists	29.81	13.37	
201 Biological scientists and biochemists	43.04	2112 Biological scientists and biochemists	54.81	11.78	
202 Physicists, geologists and meteorologists	12.68	2113 Physical scientists	22.66	9.98	
21 Engineers And Technologists	5.31				
210 Civil, structural, municipal, mining, quarrying engineers	2.12	2121 Civil engineers	8.37	6.25	
211 Mechanical engineers	2.70	2122 Mechanical engineers	5.08	2.38	
212 Electrical engineers	1.59	2123 Electrical engineers	3.20	1.62	
213 Electronic engineers	2.66	2124 Electronics engineers	6.09	3.43	
215 Chemical engineers	6.93				
216 Design and development engineers	2.33	2126 Design and development engineers	7.70	5.36	
217 Process and production engineers	3.38	2127 Production and process engineers	12.37	8.99	
219 Other engineers and technologists n.e.c.	7.35	2129 Engineering professionals n.e.c.	13.56	6.21	
214 Software engineers	13.37	2136 Programmers and software development professionals	13.53	0.15	
23 Teaching Professionals	62.12	23 Teaching and educational professionals	68.47	6.35	
26 Architects, Town Planners And Surveyors	8.48				
260 Architects	10.77	2431 Architects	21.53	10.76	
261 Town planners	21.83	2432 Town planning officers	39.59	17.76	
262 Building, land, mining and general practice surveyors	5.14				

Table B.3: Changes in female participation in STEMM and construction occupations: 1991 to 2011(continued)

Sex by occupation SOC90 Census 1991: 10% sample	% women 1991	Sex by occupation SOC2010 Census 2011: England/Wales	% women 2011	Female participation: % change 1991 and 2011	
312 Quantity surveyors	4.57	2433 Quantity surveyors	10.13	5.56	
		2434 Chartered surveyors	11.46		
		2435 Chartered architectural technologists	10.11		
		2436 Construction project managers and related professionals	7.33		
2180 Planning and quality control engineers	8.16	2461 Quality control and planning engineers	23.12	14.96	
3 Associate Professional And Technical Occupations	49.70	3 Associate professional and technical occupations	42.16	-7.54	
3a. Science and engineering associate professionals	19.86	31 Science, engineering and technology associate professionals	26.04	6.18	
30 Scientific technicians	24.00				
300 Laboratory tecahnicians	43.66	3111 Laboratory technicians	52.49	8.83	
302 Electrical/electronic technicians	4.32	3112 Electrical and electronics technicians	7.22	2.91	
301 Engineering technicians	4.25	3113 Engineering technicians	8.80	4.54	
304 Building and civil engineering technicians	11.20	3114 Building and civil engineering technicians	19.70	8.49	
		3115 Quality assurance technicians	39.49		
		3116 Planning, process and production technicians	26.32		
309 Other scientific technicians n.e.c.	20.86	3119 Science, engineering and production technicians n.e.c.	26.15	5.30	
303 Architectural and town planning technicians	14.95	3121 Architectural and town planning technicians	27.99	13.04	
31 draughtsperson, quantity and other surveyors	7.62				
310 Draughtspersons	9.86	3122 Draughtspersons	17.35	7.48	
4 Clerical And Secretarial Occupations	76.74	4 Administrative and secretarial occupations	77.83	1.09	
5 Craft And Related Occupations	10.79	5 Skilled trades occupations	11.03	0.24	
52 Electrical/Electronic Trades	2.66	52 Skilled metal, electrical and electronic trades	2.62	-0.04	
530 Smiths and forge workers	8.58	5211 Smiths and forge workers	7.08	-1.51	
533 Sheet metal workers	1.50	5213 Sheet metal workers	2.37	0.87	
534 Metal plate workers, shipwrights, riveters	1.67	5214 Metal plate workers, and riveters	1.91	0.24	

Table B.3: Changes in female participation in STEMM and construction occupations: 1991 to 2011(continued)

Sex by occupation SOC90 Census 1991: 10% sample	% women 1991	Sex by occupation SOC2010 Census 2011: England/Wales	% women 2011	Female participation: % change 1991 and 2011
537 Welding trades	5.74	5215 Welding trades	2.29	-3.45
5b. Skilled engineering trades	2.46			
51 Metal Machining, Fitting And Instrument Making Trades	2.31	5221 Metal machining setters and setter-operators	2.65	0.34
5150 Tool makers, tool fitters, markers out	1.48	5222 Tool makers, tool fitters and markers-out	1.85	0.38
5160 Metal working production and maintenance fitters	1.49	5223 Metal working production and maintenance fitters	2.20	0.71
5210 Electricians, electrical maintenance fitters	1.24	5241 Electricians and electrical fitters	1.72	0.47
5290 Other electrical/electronic trades n.e.c.	3.29	5249 Electrical and electronic trades n.e.c.	2.92	-0.37
50 Construction Trades	1.35	53 Skilled construction and building trades	2.28	0.93
535 Steel erectors	0.80	5311 Steel erectors	1.29	0.49
500 Bricklayers, masons	0.58	5312 Bricklayers and masons	1.41	0.83
501 Roofers, slaters, tilers, sheeters, cladders	0.81	5313 Roofers, roof tilers and slaters	1.62	0.82
532 Plumbers, heating and ventilating engineers and related trades	1.24	5314 Plumbers and heating and ventilating engineers	1.73	0.49
570 Carpenters and joiners	0.83	5315 Carpenters and joiners	1.21	0.38
503 Glaziers	2.15	5316 Glaziers, window fabricators and fitters	2.74	0.59
509 Other construction trades n.e.c.	1.34	5319 Construction and building trades n.e.c.	2.67	1.34
502 Plasterers	0.43	5321 Plasterers	1.18	0.75
506 Floorers, floor coverers, carpet fitters and planners, floor and wall tile fitters	0.86	5322 Floorers and wall tilers	2.03	1.17
507 Painters and decorators	2.61	5323 Painters and decorators	4.62	2.01
8970 Woodworking machine operatives	9.30	5442 Furniture makers and other craft woodworkers	9.28	-0.02
6 Personal And Protective Service Occupations	62.57	6 Caring, leisure and other service occupations	81.62	19.05
7 Sales Occupations	64.52	7 Sales and customer service occupations	64.41	-0.11
8 Plant And Machine Operatives	21.89	8 Process, plant and machine operatives	12.20	-9.69
89 Plant And Machine Operatives Nec	12.44	81 Process, plant and machine operatives	19.44	7.00

Table B.3: Changes in female participation in STEMM and construction occupations: 1991 to 2011(continued)

Sex by occupation SOC90 Census 1991: 10% sample	% women 1991	Sex by occupation SOC2010 Census 2011: England/Wales	% women 2011	Female participation: % change 1991 and 2011
505 Scaffolders, stagers, steeplejacks, riggers	0.52	8141 Scaffolders, stagers and riggers	1.15	0.63
9230 Road construction and maintenance workers	1.04	8142 Road construction operatives	2.11	1.08
9220 Rail construction and maintenance workers	0.83	8143 Rail construction and maintenance operatives	2.30	1.47
9290 Other building and civil engineering labourers n.e.c.	0.93	8149 Construction operatives n.e.c.	2.80	1.87
		8221 Crane drivers	1.71	
		8222 Fork-lift truck drivers	2.37	
		8229 Mobile machine drivers and operatives n.e.c.	2.14	
9 Other Occupations	50.97	9 Elementary occupations	45.45	-5.52

Source: own calculations based on ONS (2013b and c) for 2011 census data; and OPCSC (1994) for 1991 census data.

Table B.3.: Percentage of female participation in selected STEMM and construction occupations in 1991 and 2011 (based on usual residents aged 16 or over and in employment), and percentage change between 2011 and 1991.

For 1991, occupations are listed using SOC90 for Great Britain. For 2011, occupation are listed using SOC2010 for England and Wales. For both years, the table includes all major categories at 1-digit level. At sub-levels STEMM and construction occupations are listed (1991 occupations which did not have a suitable comparison in 2011 were excluded). The last column indicates the % change in female participation between 1991 and 2011. An increase is highlighted by a blue bar, a decrease by a red bar. The table shows between 1991 and 2011 female participation has increased at professional level, but not at operative level.

APPENDIX C: RESEARCH ETHICS CONSIDERATION

All research conformed to the Westminster University's Code of Practice. Research ethics at Westminster University follows a two-step process: before primary data collection or secondary data use can start, all research needs to consider research ethics implications. If risk is identified, a full ethics approval needs to be obtained (University of Westminster 2009).

While the principles of research ethics have not changed, the procedure has been tightened over the course of ten years, monitored by formal Faculty research ethics committees since 2013.

Considered research projects and research ethics consideration

All research conformed to the Westminster University's Code or Practice[14]. As none of the seven research projects was deemed to incur risks, full approval was not needed. Projects 5 and 7, focusing on barriers to participation for disadvantaged groups can be seen as 'sensitive', but the majority of the research participants were at management level or had a role in 'championing' the diversity issues. The participants were therefore not defined as vulnerable groups discussing sensitive experiences. In certain focus groups for project 7, personal career issues were discussed. As the invitation made that clear, those who objected did not participate.

For all research projects which included primary data collection, participants were informed of the purpose of the research and explicit consent to use their data provided for reporting and academic publications was given.

Participation in each project was voluntary, and participants could withdraw before data analysis and reporting. In project 6, one case organisation withdrew after the first interview round. As this research project relied heavily on access via gatekeepers, the research team was conscious of potential risk of coercion or

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[14] See for current Code of Practice: https://www.westminster.ac.uk/research/research-framework/research-ethics .

subjectivity in selection of interviewees, so care was taken as far as possible to monitor this.

Confidentiality was offered to all research participants where possible. In project 2 confidentiality was not possible, as policies of particular organisations were discussed by name. Research participants were aware of this. If secondary data was used (such as policy documents for document analysis in projects 5 and 6), permission was granted in writing through the gatekeeper.

APPENDIX D: IMPACT PUBLISHED WORK

The impact of each of the published works is indicated by the number of citations in Google Scholar on 17 June 2016.

	Publication	No. citations
1	Clarke, L., Frydendal-Pedersen, E., Michielsens, E. and Susman, B. (2005). The European construction social partners: gender equality in theory and practice. *European Journal of Industrial Relations,* 11 (2), 151-177.	**23**
2	Clarke, L., Michielsens, E. and Wall, C. (2006). Women in manual trades. In: Gale, A.W. and Davidson, M. J. (eds.) *Managing diversity and equality in construction: initiatives and practice.* London: Taylor & Francis, 151-168.	**3**
3	Liddle, J. and Michielsens, E. (2007a). 'NQOC': Social Identity and Representation in British Politics. *The British Journal of Politics & International Relations*, 9 (4), 670-695.	**9**
4	Urwin, P., Murphy, R., and Michielsens, E. (2007). Employee voice regimes and the characteristics of conflict: an analysis of the 2003 survey of employment tribunal applications. *Human Resource Management Journal,* 17 (2), 178-197.	**9**
5	Clarke, L., Bingham, C., Michielsens, E., Miller, S. and van de Meer, M. (2007). *Enabling and disabling labour market sectors: disability and employment in Britain and the Netherlands in the construction, ICT and health sectors.* Final report prepared for the Norwegian Work Research Institute as part of the project 'Disabled, Working Life and Welfare State'. London: CLR/ProBE.	**0**
6	Clarke, L., van der Meer, M., Bingham, C., Michielsens, E. and Miller, S. (2009). Enabling and disabling: disability in the British and Dutch construction sectors. *Construction Management and Economics,* 27 (6), 555-566.	**13**
7	Bingham, C., Michielsens, E., Clarke, L. and van der Meer, M. (2013). Towards a social model approach?: British and Dutch disability policies in the health sector compared. *Personnel Review,* 42 (5), 613-637.	**4**
8	Michielsens, E., Bingham, C., Clarke, L., Miller, S., Urwin, P., Siara, B. and Karuk, V. (2008). *Implementing diversity employment policies: examples from large London companies.* London: WBS Diversity (Westminster University) and London First.	**1**
9	Michielsens, E., Bingham, C. and Clarke, L. (2014). Managing diversity through flexible-work arrangements: management perspectives. *Employee Relations,* 36 (1), 49-69.	**6**
10	Wright, A., Michielsens, E., Snijders, S., Kumarappan L., Williamson, M., Clarke, L., and Urwin, P. (2014). *Diversity in STEMM: Establishing a Business Case* — Report of research by the University of Westminster for the Royal Society's diversity programme 'Leading the way: increasing diversity in the scientific workforce'. London: WBS Diversity (Westminster University) and Royal Society.	**0**
11	Clarke, L., Michielsens, E., Snijders, S., Wall, C., Dainty, A., Bagilhole, B., and Barnard, S. (2015). *'No more softly, softly': Review of women in the construction workforce.* London: ProBE — Centre for the Study of the Production of the Built Environment (Westminster University).	**0**

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Accompanying materials:

Published Works

List of accompanying materials: published works included

The published works[1] included are:

	Reference publication	Page number[2]
1	Clarke, L., Pedersen Frydendal, E., Michielsens, E. and Susman, B. (2005). The European construction social partners: gender equality in theory and practice. *European Journal of Industrial Relations,* 11(2), 151-177.	4-31
2	Clarke, L., Michielsens, E. and Wall, C. (2006). Women in manual trades. In: Gale, A.W. and Davidson, M. J. (eds.) *Managing diversity and equality in construction: initiatives and practice.* London: Taylor & Francis, 151-168.	32-54
3	Liddle, J. and Michielsens, E. (2007a). 'NQOC': Social Identity and Representation in British Politics. *The British Journal of Politics & International Relations*, 9(4), 670-695.	55-81
4	Urwin, P., Murphy, R., and Michielsens, E. (2007). Employee voice regimes and the characteristics of conflict: an analysis of the 2003 survey of employment tribunal applications. *Human Resource Management Journal,* 17(2), 178-197.	82-102
5	Clarke, L., Bingham, C., Michielsens, E., Miller, S. and van de Meer, M. (2007). *Enabling and disabling labour market sectors: disability and employment in Britain and the Netherlands in the construction, ICT and health sectors.* Final report prepared for the Norwegian Work Research Institute as part of the project 'Disabled, Working Life and Welfare State'. London: CLR/ProBE.	103-256

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[1] Co-authors have signed an endorsement of my contributions made to the work undertaken. Copies of these are available in Appendix A of the commentary.

[2] Continuous page numbers (p1-505) have been added bottom centre.

6 Clarke, L., van der Meer, M., Bingham, C., Michielsens, E. and Miller, S. (2009). Enabling and disabling: disability in the British and Dutch construction sectors. *Construction Management and Economics,* 27(6), 555-566.

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The European Construction Social Partners: Gender Equality in Theory and Practice

ABSTRACT ▪ This article explores the social partners' role in the gender equality agenda in construction at skilled operative level. It draws on a survey of the European construction social partners that investigated the presence of women in skilled trades and the policies, collective agreements and practices that play a role in women's integration. The responses indicate that the construction industry still displays inertia and conservatism, and that the social partners corroborate rather than counter this. They express a 'discourse' of gender equality, but this does not automatically lead to equal opportunity policies or programmes. The social partners have the platform to make inroads and to change the industry from within, but need further encouragement to put this on their agenda.

Introduction

There are few sectors in Europe where gender segregation in the labour market is more evident than the construction industry, particularly at the skilled operative level. In this article, we explore the position of the social partners towards the gender equality agenda, especially regarding skilled trades such as carpenters, painters and bricklayers. We ask whether the social partners in construction advance the inclusion of women, in line with the European employment and equality agenda, or whether they are guilty of preserving women's present marginalization.

The article draws on a survey of the social partners in construction in both western and eastern Europe.[1] This investigated the presence of women in skilled trades in each country and the existence of policies, collective agreements, or practices that play a role in their integration. The findings show that there are few exceptions to the dominant picture of low female representation in construction, little changed over the past

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10 years. The social partners have had little impact on increasing the representation of women in the industry overall and there appear to be few internal or external forces driving them to change the situation.

EU social and employment policies have a long-standing focus on gender inequalities in Europe, embracing the principles of equal opportunities and gender mainstreaming. Key objectives are to reduce both the gender pay gap and sectoral as well as occupational gender segregation, which are seen as creating 'rigidity in the labour market, reducing the market's ability to respond to change' (EC, 2001). However, research shows that the impact of this agenda in national member states remains uneven, and that there is a tension between the targets of increasing participation and reducing segregation (Gonäs, 2004; Rubery et al., 2003).

The social partners, the European Trade Union Confederation (ETUC), the peak private-sector employers' organization (UNICE) and the peak public-sector organization (CEEP) play a very important role in regulating European employment and equality issues (Léonard, 2001). The first two agreements reached under the Maastricht procedures and subsequently adopted as directives, on parental leave (1995) and part-time work (1997), had clear gender equality implications. EU policy puts considerable stress on the potential of collective agreements to address labour market inequalities: 'if collective bargaining lacks a gender perspective, it is very likely that agreements will institutionalise discriminatory practice, entrench rather than challenge gender segregation of work, and operate on a male norm of employment, to the obvious disadvantage of women' (EIRO, 2000). Yet are the social partners really in the forefront in ensuring the implementation of this agenda at European and national levels?

Much research has addressed the role of trade unions on gender issues (for instance, Cockburn, 1991; Dickens, 2000; Kirton and Greene, 2002; Wajcman, 2000). Colgan and Ledwith (2002) provide an international overview of unions and the promotion and participation of women, revealing a wide range of different agendas across the globe. Research on women's groups or committees in unions confirms their role as catalysts for change, contributing to an environment where 'women can develop strengths and advance their concerns' (Foley, 2003; Parker, 2003). Studies by Munro (2001) and McBride (2001) in the UK indicate that women's equality and employment issues have become part of the central agenda of unions such as Unison, which operate in areas of high female employment. The actions of trade unions to promote the participation of women and the incorporation of gender equality issues can, however, be summarized as more reactive than proactive.

In this article, we explore the actions of the social partners in a sector in which women's employment and therefore female representation is minimal. The European social partners may have taken part in setting the

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European equality agenda of increased female participation in the workplace and reduction of gender segregation, but how far has this agenda been embraced and implemented by the national social partners in construction? As this is a very important and, at the same time, highly male-dominated sector, it is particularly critical to the European aim of reducing gender segregation. The eastern European social partners have not been fully part of this European employment agenda, but the comparison with their western European partners is illuminating, as the pattern of employment of women is very different (Pollert, 1999).

Women's participation in construction in eastern Europe remains high despite the weakness of the social partners, and this indicates the problem we face in establishing how far the social partners themselves exert an impact on the gender division of labour (Clarke et al., 2003). Recent research has shown that the structures and mechanisms of gender exclusion differ across Europe, depending on the productive system in place (EC Consortium, 2003). In the highly regulated, skilled, and industrialized construction industries of northern Europe, in particular Germany, the Netherlands and Scandinavia, entry depends very much on formal qualifications and hence on the training system (Bosch and Philips, 2002; Clarke and Wall, 2000). In the more craft-based and unregulated industries of southern Europe and even Britain, in contrast, where skills are often acquired on the job, employment is much more casual and the training system has far less importance as a 'gatekeeper' to entry. Also, in terms of employment and the wage system (factors upon which social partners can have a decisive impact), the prevalence of labour-only subcontracting, casual employment, and piecework appear to have far more exclusionary gender implications than firm-based systems of stable employment and time-based, graded wage systems (Byrne et al., 2005). Thus each country will have a different combination of factors which influence gender exclusion. In the Netherlands, for instance, this has been attributed to recruitment from the countryside and lack of political will on the part of the social partners and the training institutions (EC Consortium, 2003; Westerhuis, 2004).

National institutions do not excuse the social partners from their role in perpetuating and even reinforcing gender exclusion in construction. There is ample evidence that they have played a critical role in enforcing the gender division of labour, for example, in postwar Britain, when the trade unions colluded with the employers and the state in excluding women from skilled work (Boston, 1980; Clarke and Wall, 2004). In Germany at the same time, women were also increasingly and systematically excluded from construction in the Western zones, in contrast to the East (Janssen, 2004).

Our intention here is not only to chart the situation, but to identify where the construction social partners have taken initiatives to be more

gender inclusive and why in certain places actions appear to be success-
ful.

European Level: Gender Equality and Social Partners in Construction

The construction sector plays a significant part in the European
economy: in 2002, it accounted directly for 8 percent of employment
(more than 12.7 million persons) and indirectly for up to 20 percent (EC,
2002a). In many EU countries, including Britain and Italy, severe skill and
labour shortages are reported, with the additional immigrant (as opposed
to female) workforce insufficient to cover increased demand.

   How many women work in construction? The majority of women
working in the western European construction sectors undertake admin-
istrative, technical and professional work. European Labour Force
Survey statistics do not allow us to distinguish between occupations: the
figures combine manual and administrative and professional occupations.
Nevertheless, even in aggregate terms women are severely underrepre-
sented in each western European country (there is no comparable eastern
European information). Three blocks can be distinguished: Germany and
Switzerland have the highest female employment in their national
construction sectors (13 and 12 percent, respectively); the Mediterranean
block of Spain, Portugal and Greece (5, 4, and 2 percent, respectively) has
the lowest representation of women; while Scandinavia (Sweden at 7
percent, Norway and Denmark at 8 percent and Finland at 9 percent)
together with the Netherlands and Belgium (8 and 7 percent, respec-
tively) take a middle position, around the EU average of 9 percent (EC,
2002a). Data on women in manual trades are scarce to non-existent, but
the available information suggests that in most countries these represent
less than 1 percent of the workforce at skilled operative level (Byrne et
al., 2005).

   After commerce, construction is the largest sector where a sectoral
social dialogue exists at European level and is covered by EU protocols
(EC, 2002b). Most of the national employers' federations are affiliated
to the European Construction Industry Federation (Fédération de
l'industrie européenne de la construction or FIEC), which, with a
membership of 32 federations in 25 countries, is more representative
than its main alternative, the European Builders' Confederation. The
trade unions are part of the European Federation of Building and Wood
Workers (EFBWW) and the Nordic Federation of Building and Wood
Workers (NBTF), the European arms of the International Federation of
Building and Wood Workers (IFBWW), which (as their titles indicate)
cover both the construction and woodworking industries. With some

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exceptions, in particular Greece, the EFBWW and NBTF represent all the building trade unions in EU member states that have collective bargaining power.

Collective bargaining has survived in the construction industry in most European countries (Schnepf et al., 1997). At European level, construction has one of 26 sectoral social dialogue committees bringing together European-level representatives of trade unions and employers for discussions on employment, competitiveness, and social issues (EC, 2002b). Since 1999 this has taken place in a more formal way through the committee for the construction sector, on which the FIEC and EFBWW are representatives. The main themes discussed are health and safety, the image of the sector, life-long learning, social dumping, posted workers and the consequences of EU enlargement (EC, 2003).

In 2000, a joint declaration on employment was signed, but there is no evidence of consideration of workforce diversity, gender issues, or equal opportunities. In contrast, other sectoral committees have addressed such issues: codes of conduct on fundamental rights and equal opportunities have been signed in leather and tanning, footwear and hairdressing, while good practice guides have been adopted in textiles, clothing and postal services, and the telecommunications industry has established a diversity working party covering subjects such as equal opportunities and disabled and migrant workers.

Neither the FIEC nor EFBWW has women's or equal opportunities committees or working groups. The FIEC subcommittee on vocational training does, however, consider that the issues relating to encouraging young people into the industry are very similar to those that would attract women. At a subcommittee meeting in 2001, discussions of common concern emerged on the following issues: recruiting and retaining young people in the sector, training trainers, the equivalence of diplomas, worker mobility, the use of new technology in the field of vocational training and the recruitment of women (FIEC, 2002). On the union side, only the IFBWW has a stated commitment to women's rights: one of the nine priorities of its strategic plan for 2001–05 is to 'promote and support women', and in October 2002, its conference on Europe for the first time elected a European Women's Committee (IFBWW, 2003).

The issues of the integration of women and gender equality do not therefore appear to have a place on the agenda of social dialogue at European level, although they might be addressed on the margins when discussing other matters. If not at European level, perhaps there is a debate at national social partner level? As no comparative information on this was available, a survey of the European social partners in construction (including in eastern Europe) was undertaken by the authors.

National Level: Gender Equality and Social Partners in Construction

There is at national level across Europe a diversity of unions represent-ing the interests of building workers. In Germany, building workers are represented by a single union, IG BAU; in other countries, the trade unions are split along occupational lines, as in the UK and Denmark, or along political or religious lines (or both), as in Switzerland, France, and Italy (Schnepf et al., 1997). Trade union density varies from 85–90 percent in Denmark, Finland, Sweden, and Belgium to 60 percent in Italy, 40 percent in Germany, 21 percent in the UK (14 percent in the private sector), and 10 percent in Spain (Byrne and Van de Meer, 2002). Member-ship levels in some countries do not necessarily reflect the representa-tiveness of the unions or coverage of collective agreements, particularly when the principle of *erga omnes* applies (as in France and Germany), extending coverage of collective agreements to all employees.

Associations at national level represent the construction employers' interests in diverse ways. In many countries, they are divided by firm size or area of construction activity; for instance, in France and Germany separate associations represent smaller craft firms. In some countries, such as the UK, one national confederation (the Construction Confed-eration) represents the interests of the different federations at national and European level. A relatively high level of employer representative-ness is found across western Europe, though not everywhere (for instance, coverage is lower in Spain and to a lesser extent the Nether-lands). The level of employer organization is in many countries similar to that of unionization, giving a strong basis for negotiation. However, it is notable that in Spain employers have an even lower level of organiz-ation (5 percent) than the unions, while the reverse is true in the UK, with a rate of more than 80 percent (UCL, 2001). In the eastern European countries, employer organization is especially weak or even non-existent, more so than membership of the company-based unions (Clarke et al., 2003).

In order to investigate the extent to which women are represented in skilled trades and equality issues figure on the social partners' agenda, we conducted a survey in 2003. A questionnaire was sent to employer and trade union organizations covering such topics as the numbers and occu-pations of women workers in the member firms or union (particularly in the skilled trades); women's involvement in the union or employers' organization; the inclusion of work–life balance issues in collective agree-ments (such as maternity pay or hours); the obstacles to women's access to the sector; and recommendations to overcome these.

Trade union and employer organizations were contacted by different routes. For trade unions, a postal questionnaire was sent to 50 EFBWW

members and 25 eastern European affiliates in one of six languages as appropriate. In total, after follow-up contact, 21 trade unions completed the questionnaire. All nine of the Scandinavian trade unions contacted completed the questionnaire; the other responses came from Spain and the UK (two each) and one each from France, Germany, Italy, the Netherlands, and Switzerland in the west, and Bulgaria, the Czech Republic, Russia, and Serbia in the east.

The survey of employers' organizations took place in collaboration with FIEC, which distributed the questionnaire to the 21 members of its Vocational Training Working Group (SOC-1). Some 12 responses were received: from Cyprus, Denmark, Finland, France, Germany, Italy, Portugal, Norway, Sweden, and the UK, and from the Czech Republic and Slovakia.

Significant omissions included the Union of Construction and Allied Technical Trades (UCATT), the union with the largest share of construction workers in the UK, and the French construction unions. On the positive side, replies from all the Scandinavian social partners were especially valuable, enabling us to examine, for example, whether the increase in the number of women painters in Denmark was part of a larger regional trend. The low response rate, particularly from the trade unions, and the lack of response from important unions in the larger EU countries despite repeated follow-ups, while influencing our data also reflect a lack of concern with the subject.

Skilled Women Workers in Construction

The data from both the employer and trade union organizations confirm very low numbers of women working in the sector (and therefore as members), generally reported to be less than 10 percent. This is consistent with overall figures of 8.6 percent for female employment in the sector in Europe (EC, 2002a). On the employers' side, only the French Building Federation presented data on operatives, with the number of women craft-workers put at 1.1 percent. More trade-specific information was given by the unions. Table 1 gives an overview for each of the unions, including: the occupations it covers (which varies greatly); the proportion of women members (of the construction part of the union only); their occupations; the percentage of the construction labour force unionized; and the total union membership in construction. In countries where union membership is high, we can assume that most, if not all, women are included in the information provided, especially for the manual trades.

The manual occupations covered by the construction unions differ. In Finland and Germany, cleaners are included in the construction union

TABLE 1. Women Construction Union Membership in Western and Eastern Europe

Country	Name of union	Main construction occupations represented	Union members in the construction industry	Construction labour force unionized (%)	Women union members in construction (%)	Construction occupations of women members
Denmark	SiD	Bricklayers and concreters	44,000	80–85	>1	Bricklayers
	Dansk EL-Forbund (EL-F)	Electricians	5,000	90	5	Electricians
	Blik og Rørarbejderforbundet	Plumbers/heating	n/a	84	>1	Plumbers/heating
	Malerforbundet i Danmark	Painters	9,917	90	30 (3,000)	Painters
	Forbundet Træ-Industri-Byg i Danmark (TIB)	Carpenters and joiners	30,700	90	1 (300)	Carpenters and joiners
Germany	IG-Bauen-Agrar-Umwelt	General construction	236,000	30	14.8	All trades, including cleaners, gardeners, architects, engineers, etc.
Sweden	Byggnads	General construction	100,000	85	0.8 (800)	Cleaners, etc.
Norway	Fellesforbundet	General construction	28,500	50	4.2 (1,200)	–
Finland	Finnish Electrical Workers' Union	Electricians	10,687	50	0.9 (97)	Electricians
		General construction	80,793	78	3 (+ 1,500 retired members)	Mainly painters

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TABLE 1. Continued

Country	Name of union	Main construction occupations represented	Union members in the construction industry	Construction labour force unionized (%)	Women union members in construction (%)	Construction occupations of women members
Netherlands	FNV-Bouw	General/all trades	160,000	50	10 (410)	10% includes support jobs, but not finishing trades –
Britain	AMICUS-MSF	Heating and ventilating	3,900	40 (heating and ventilating)	3 (116)	
	Transport and General Workers' Union	General/all trades	21,255	21 (public sector 75; private sector 14)	1.5 (329)	Construction trades and other occupations
Spain	ELA	General construction	3,700	15	8.1 (300)	Mainly administration
	MCA-UGT	General construction	20,000	5	10 (2,000)	Mainly administration
Italy	FILCA-CISL	General construction and wood industries	209,730	40	construction 1; wood industries 30	Mainly administration
Switzerland	Gewerkschaft Bau und Industrie (GBI)	General construction	57,000	Building 80; ancillary 50	2.1 (1,211)	Building (662 women) and finishing trades (535)

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TABLE 1. Continued

Country	Name of union	Main construction occupations represented	Union members in the construction industry	Construction labour force unionized (%)	Women union members in construction (%)	Construction occupations of women members
Russia	Construction and Building Materials Workers' Union	All construction-related occupations: architecture, design, building materials manufacture and construction	c. 1 million	Over 50 (25 in other unions and 50 irregular migrant workers and private sector)	3	Architects, designers and managers; machine operators; crane drivers, painters, plasterers.
Bulgaria	Federation of Construction Industry and Water Supply (PODKREPA)	All trades	4,300	+/− 25	28	More women in administration
Czech Republic	Building Workers' Union of the Czech Republic	Building and building materials	25,758	40.8	25 (6,620)	Management, administration, production workers, trainers
Serbia	Civil engineering and construction materials industry union (NEZAVISINOST)	Civil engineering, building materials, wood industry	2,500	20	20	

Source: own survey, 2003.

and in Sweden, they represent the majority of women members. Although women are to be found in the unions in increasing numbers, the vast majority work not as tradeswomen, but in administrative and increasingly in technical and professional occupations, with architecture and engineering specifically mentioned. Increases in female membership were reported by the Danish painting union, Malerforbundet i Danmark (an increase of 800), the Dutch building union, FNV-Bouw (an increase of 10 percent, mostly in support jobs), the Spanish construction union, ELA, and the Italian general construction and wood industry union, FILCA-CISL. The German union, IG BAU, which experienced a fall in overall membership levels because of the crisis in the sector, is campaigning to recruit more women cleaners and for improvement in their working and employment conditions. Wages and conditions in cleaning are generally considered poor, and currently only 6.4 percent of the nearly 400,000 employees in the area are union members (EIRO, 2001). However, women constitute as much as 15 percent of the membership of IG BAU, half of these in cleaning, 14 percent in gardening and agriculture and 11 percent in professional and technical occupations, including architecture and engineering (IG BAU, 2004).

The Nordic countries present some interesting exceptions to the general picture of very few women (around 1 percent) in manual trades in the old EU countries. A significant proportion of painters are women in Denmark (33 percent) and Finland (10 percent). In Denmark, the numbers of female and male painting apprentices are now equal (Pedersen, 2004). This 'breakthrough' is attributable to a number of specific factors. Health and safety concerns in the 1970s led to a labour shortage in the trade, after which employers looked to women as potential recruits (Clarke et al., 1999). The move to a vocational college-based training system, lessening the dependence on employers, has also played a role in consolidating women's presence in the trade. But even where women have made significant gains, there remain barriers. The Danish Painters Employers' Federation, though noting that some women own small firms and that sole traders might not be members, reports that only 2–3 percent of its 1500 member firms are owned by women. The Danish electricians' union, Dansk El-Forbund, also reports increasing numbers of women electricians (5 percent of members), and cites the reason for this as the decrease in the physical demands of the work.

In the UK, against a background of almost total exclusion, small pockets of women are to be found working for public-sector employers in local authority building departments or direct labour organizations (DLOs) (Clarke and Wall, 2004). But overall, women's participation has decreased: in a survey of building occupations in the private sector, the proportion of women building trade operatives in the UK was found to be 0.2 percent, with the highest proportion in painting, at 0.8 percent

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(CITB, 2002). In the UK, this decline is generally attributed to the declining importance of the DLOs since the 1980s (Michielsens et al., 1997). A similar situation can be seen in the Netherlands, where female membership has also fallen.

The Italian figure for female union membership in construction is revealing of the gender difference between factory- and site-based work, with tradeswomen more likely to be found working in workshops than on site: in the FILCA-CISL, women represent 1 percent of membership in construction (site), but 30 percent in the wood industry (workshop). In Spain, where the construction industry, in common with the UK, has high levels of self-employment, temporary work and casual labour, including immigrants (all factors militating against women), women's presence on site has been claimed to be 'purely anecdotal' (Byrne and Van de Meer, 2002).

Eastern Europe provides a contrast: women do not play an equal role in the industry, but there is significantly greater integration into the workforce. Though female union membership is not broken down by trades, this is overall much higher than in western European countries, at 20 percent in Serbia, 25 percent in the Czech Republic, and 35 percent in Russia. Women members are found not only in professional occupations (as architects, designers, and managers), but also as machine operators, crane drivers, painters and plasterers. Women's employment in the construction industry and female union membership have decreased in most eastern European countries since the end of the Soviet Union, along with a general decline in construction activity and in employment. Since the change to a market economy, the building industry has also been privatized and union membership is no longer compulsory, giving rise to changes in the gender division of work. The Czech Republic employers' federation (Svaz podnikatelů) reported that women were employed as construction workers (for example, as crane operators) during the communist period, but suggested that this has changed and that they are now working only in administrative and white-collar occupations.

Obstacles to Women's Inclusion in Construction

Both employer and employee organizations show a mixture of enlightenment and prejudice in their assessment of possible obstacles to women working and training in the construction industry. Some respondents saw no obstacles, including the Finnish Electrical Union (Sähköliitto), the Danish Painters' Union, and the Bulgarian and Czech unions (although the latter conceded that the sector did not offer good working conditions). There were no marked differences between the responses of the trade unions and employers, apart from reference by two of the

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employers' federations to the self-exclusion of women and their lack of interest in working in the sector. Overall, the employers represented extremes, with at one end, the German Zentralverband des deutschen Baugewerbes (ZDB), which was strongly negative, and at the other, the French Fédération Française du Bâtiment (FFB), which was very positive that 'women in construction is possible'. Other respondents recognize barriers to the integration of women, highlighting the male domination of the industry in terms of its image, culture, and practices and the slow pace of change.

Respondents identified a number of factors seen to constitute this 'male world' and possible obstacles to women's greater integration, as follows.

1. About half mentioned *the physical workload*. The ZDB, representing craft employers, stated that although it supported women having the opportunity to work in manual occupations in construction, their scarcity suggested that they could not cope with the physical demands of the job. This essentially static view of the industry was countered by the Spanish union, ELA, which pointed out that although 'many people think the work is too heavy for women', the increasing use of machinery (and women taking up professional careers) should mean increasing numbers of women in the sector. The Swedish employers' federation also acknowledged that 'we have to find new methods' to tackle the issue of 'heavy loads', while Dansk El-Forbund suggested that women's participation involved a division of tasks.

2. *Unfavourable working conditions*. Such as the generally poor conditions on site, no washing and changing facilities for women and the high level of accidents, were mentioned as obstacles by a number of unions, including FNV-Bouw and the British general union the TGWU, and employers' organizations such as the Associaçao de Empresas de Construçao e Obras Publicas in Portugal, the Construction Confederation in the UK, and FFB in France. Nearly all the respondents felt that the industry's working hours present a difficulty and are incompatible with childcare responsibilities.

3. MCA-UGT, the Spanish union, suggested that *employers' reluctance* to hire women was at the root of their lack of participation. According to the German ZDB, employing women would require 'much stricter working and health regulations', thus imposing additional cost and organizational burdens on the employer.

4. *Organization of work*. The Danish Forbundet Trae-Industri-Byg (TIB) suggested that the organization of work, mainly in 'close-knit gangs', acts as a barrier to the entry of any new person or atypical workers. This exclusive tendency of the gang system, closely linked to performance and wages, has been acknowledged by other research in

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the area as a barrier to the entry of women and ethnic minorities (Byrne et al., 2005). IG BAU also considered that subcontracting does not favour the integration of women in recruitment.

Recommendations for change by the social partners in our survey emphasized the need for women craft-workers to be more visible and for good practice to be disseminated. The FFB, for example, suggested that 'testimonies of female workers and the entrepreneurs hiring them seem like one of the best ways of communicating that women in construction is a possibility'. The Cypriot employers' federation, OSEOK, specifically mentioned promoting the opportunity for self-employment to women. The need for government support in terms of public services and initiating equality measures was emphasized by the Czech, Spanish and Swiss unions. These reasons given by social partners echo those by firms in research on access to construction employment for women and ethnic minorities in Europe (EC Consortium, 2003).

Women's Involvement in the Construction Unions

One question posed in our survey was how far women participate in their union as delegates or representatives on health and safety, equal opportunity, or women's committees (where these exist) and how far they are supported in this. Our survey shows that the level of women's union involvement generally reflects, with some rare exceptions, their limited membership. Support measures, if available, are mostly related to the provision of training courses (see Table 2). These are provided by several of the western European unions, but none in the East, which with their already broad female participation, do not see a necessity.

The responses reflected the unions' approach and commitment to equal opportunities and the degree of women's activism, even if they are present only in small numbers. Differences in the approach to equal opportunities are highlighted by the examples of the Finnish and Swiss trade unions. The Swiss Gewerkschaft Bau und Industrie (GBI) has women's committees at national and regional levels and regulations concerning the proportional representation of women: all committees have to have at least two women and at least 30 percent of all trade union posts have to be filled by women. In contrast, The Finnish construction union (Rakennusliitto) claimed that 'women's involvement does not differ from men's. There are no special women's committees and gender issues are dealt with by the committee for cultural and gender issues.' In practice, Rakennusliitto is possibly the most active trade union of all those we surveyed in supporting women members and women in construction generally, providing women-only training courses, an

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TABLE 2 Involvement of Women Members in their Construction Union

Country	Name of union	Women as union representatives?	Support measures for the involvement of women ?
Denmark	SiD (bricklayers/concreters etc.)	No	No
	EL-F (electricians)	Yes: TU delegate; H&S and EO committee	Yes, conferences
	Blik og Rør (plumbers)	No	No
	Maler (painters)	Yes: TU delegate; H&S and EO committee	No
	The Union of Wood, Industrial and Building Workers (TIB)	Yes: on various committees (industrial, youth, education etc.) and as shop stewards: 100 women (1235 men)	In the 1980s, equal rights committee
Sweden	Byggnads	Yes: TU delegate	Course on collective bargaining (50 women attended)
Finland	FEWU	No	No
	Rakennusliitto	No	Women-only collective bargaining training; Gender Committee
Norway	Fellesforbundet (TU)	No	
Germany	IG-Bauen-Agrar-Umwelt	Yes, but EO committees refer mostly to construction professions; some women delegates at district levels	Yes, courses for women at federal and district level
The Netherlands	FNV-Bouw	Yes: TU delegate; EO committee and as policy coordinator/advisor	Yes
Britain	Amicus	No	No
	Transport and General	Yes: TU delegate; H&S and EO committee; shop stewards	Yes, participation through regional/national structure

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TABLE 2 Continued

Country	Name of union	Women as union representatives?	Support measures for the involvement of women ?
Spain	ELA	Yes: TU delegate; H&S and EO committee	Yes: EO training courses for TU representatives
	MCA-UGT	No	Yes: minimum percentage of women to partake of support measures and a quota of female candidates for election
Italy	FILCA-CISL	Yes: TU delegate	No
Switzerland	GBI	Yes: TU delegate and EO committee	Quotas: all committees at least 2 women and 30 percent of all posts; women's committees; courses for women
Russia	Construction and Building Materials Workers' Union	Yes: 50 percent of TU delegates at the workplace level, 21 percent regional; 23 percent national. Also H&S and EO committees	
Bulgaria	Federation of Construction Industry and Water Supply (PODKREPA)	Yes: as TU delegates, 31 percent of factory union leaders are women. Women part of most H&S committees. No EO committees	
Czech Republic	Building Workers' Union of the Czech Republic	Yes: TU delegates, H&S and EO committee	
Serbia	Branch Trade Union of Civil Engineering And Construction Materials Industry (NEZAVISINOST)	Yes: TU delegate. 30 percent of union executive committee; also EO committee	Local network of women's sections in local organizations

Notes: TU = trade union delegate; H&S = Health and Safety representatives; EO committee = Equal Opportunities or Women's Committee members.
Source: own survey, 2002.

annual women's conference, and opportunities to network. The apparently understated Scandinavian position is perhaps attributable to the approach to equality measures and legislation in these countries, which falls within the social-democratic model whereby men and women engage as equal individuals in the labour market (Esping-Andersen, 1990). While this is associated with a high level of female labour market participation, it also means that equality policies are firmly based on the principle of equal treatment and special measures for 'disadvantaged' groups have not been common (Michielsens et al., 2000; Peters, 1996).

In the Danish TIB, women's involvement exceeds their membership level: there are very few women (1 percent), but relatively high levels of union representation. Some 100 women are shop stewards (7.5 percent of all shop stewards). Additionally, this union has four female union officials and an official responsible for equality issues. The executive, youth, industrial, education, and vocational training committees all have women representatives. One likely reason for this high representation is that shop stewards are mostly drawn from the more stable employment environment of the workshop, where tradeswomen are concentrated (as joiners and, to a lesser extent, upholsterers), rather than from construction sites with their less stable employment patterns (a difference also mentioned by the Italian FILCA-CISL). Another reason could lie in the history of the former Carpenters and Joiners' Union, which established an equal rights committee and a programme of meetings and activities for women in the 1980s (Fabricius, 1997). When this union amalgamated with TIB, the equal rights committee was merged into the general work of the union. The women's club situated in Copenhagen, however, continues to function on a voluntary basis.

Other unions reported that they are taking steps to increase women's involvement. The Swedish union, Byggnads, has run a two-week course on collective bargaining attended by 50 women and has set up a women's network. The Swiss GBI aims to promote emancipation 'inside and outside' the union, including through courses for women members, regional women's committees, a national women's committee, a women's trade union representatives conference, and a national women's conference held every two years. In Germany, a significant effort has been made to monitor the involvement of women in IG BAU. In general, the higher up the hierarchy, the fewer the women to be found, though participation at local levels is mixed, with, for instance, a relatively high number of female delegates from areas such as Bonn and none from some other localities. There is a rather weak imposition of a quota whereby women are represented in the organization according to their level of membership (14.8 percent). Nevertheless, 2 of the 56 district committees have female chairpersons and there are significant numbers of female works councillors, especially in cleaning (64 percent of the total) and

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painting (10 percent) and architectural and engineering offices (35 percent) (IG BAU, 2004). In general, therefore, female representation in the construction unions conforms with membership, with little attempt made to improve this, apart from in the Scandinavian countries.

Support Measures to Promote Female Employment and Training

A proactive approach to gender inclusion is indicated not only by female representation within the unions, but also by specific measures taken to accommodate and encourage women. The social partners were therefore asked if support measures to promote the employment or training of women in construction were part of their agenda. These were specified as including clauses in collective agreements or participation in relevant networks or support programmes (concerning, for instance, career guidance, training, recruitment, employment conditions, working time, childcare and other caring responsibilities and health and safety).

In terms of collective agreements, clauses on maternity leave and maternity pay were most often mentioned and no specific clauses were identified relating to training or working time. The Danish Malerforbundet additionally has policies on working conditions during pregnancy, as does the Czech union. 'Positive action' was only mentioned by one respondent, the Italian FILCA-CISL, in relation to the wood industry, where 30 percent of employees are women. In Spain, MCA-UGT has measures to improve access and career progression for women and a policy of 'horizontal' agreements is being introduced whereby gains made by women in one sector are automatically applied across all sectors.

Overall, as apparent in Table 3, support is offered mostly in terms of participation in networks, though several unions also listed support programmes, for instance, relating to childcare and health and safety or more general conditions of employment. Rakennusliitto in Finland is also involved in a special campaign in comprehensive schools to introduce construction occupations to girls, including visits to vocational schools. This was also the only union to refer to gender pay differentials as an important area of union concern. Women painters' pay is approximately 80 percent of men's, and such a gender pay differential applies to construction occupations generally in Finland and indeed throughout western Europe.

While union support policies and programmes are not common, participation in networks or conferences on women in construction or related subjects is rather more widespread, although specific women's networks are still scarce. In Britain, the TGWU has a link with the

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TABLE 3 Unions: Collective Agreements and Support Measures to Promote the Employment or Training of Women in Construction

Country	Name of union	Policies/collective agreement clauses in relation to women in construction	Programmes/support with impact on women in construction	Networks and participation in conferences
Denmark	SiD	No	No	Involvement in family and equality issues committees
	EL-F	No	No	A network is in the process of being established
	Blik og Rør	No		
	Maler	Yes	Policies on pregnancy and working conditions during pregnancy	
	The Union of Wood, Industrial and Building Workers (TIB)	Yes		Not the federation itself, but local departments (i.e. Copenhagen) have established a women's network
Sweden	Byggnads	No	Relating to career guidance; recruitment related (EQUAL Libra Project)	Women's network established
Finland	FEWU		No	No
	Rakennusliitto	No special clauses. Plumbers have maternity pay of 56 days in their agreement	Yes: relating to conditions of employment; childcare; H&S; school campaigns to show construction occupations to girls	Network of women painters; meetings of women in the sector; the Femina Baltica network; annual women's conference; Nordic countries equality seminar

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TABLE 3 Continued

Country	Name of union	Policies/collective agreement clauses in relation to women in construction	Programmes/support with impact on women in construction	Networks and participation in conferences
Norway	Fellesforbundet (TU)	Yes, aimed at employment not education		
Germany	IG-Bauen-Agrar-Umwelt	No	No	Yes, via IFBWW
The Netherlands	FNV-Bouw	Yes: Women and Employment Secretary, women's groups, women-only training	Yes: conditions of employment; working time; childcare	No
Britain	Amicus	No	No	No
	Transport and General	(Yes: removed references to male gender for specific rates of pay)	Yes: relating to career guidance, training, recruitment: CITB promotional weekend to encourage women into the industry	Links with groups promoting women in the industry, such as WAMT
Spain	ELA	No – only the maternity clause	Yes: childcare, H&S	No
	MCA-UGT	Yes: measures to improve access and career progression for women; introducing horizontal rights*	Yes: childcare, H&S	Yes
Italy	FILCA-CISL	Yes: positive action agreements particularly in the wood industry	Yes: relating to training, conditions of employment, working time, childcare, H&S	No

TABLE 3 Continued

Country	Name of union	Policies/collective agreement clauses in relation to women in construction	Programmes/support with impact on women in construction	Networks and participation in conferences
Switzerland	GBI	No	EO project 'Women in Building'; Workshop to build women networks in industry	Women's commission of the SGB (Swiss Trade Union Congress); other conferences on flexible work and gender issues
Russia	Construction and Building materials Workers' Union	No: everything is fixed by the Labour Code	No, women are well presented	No
Bulgaria	Federation of Construction Industry and Water Supply (PODKREPA)	No	No	No
Czech Republic	Building Workers' Union of the Czech Republic	The sectoral-level agreement details the working operations and places forbidden for women, pregnant/nursing mothers. Detailed clauses at enterprise level in relation to women working.	TU is represented on the EO committee of the Czech Moravian Trade Union Confederation (CMKOS)	Union is represented on the EO Committee of the Czech Moravian Trade Union Confederation (CMKOS)
Serbia	Branch Trade Union of civil engineering and construction materials industry. (NEZAVISINOST)	No	Career guidance; training and childcare arrangements; women's network	International branch women's network

Note: TU = trade union delegate; H&S = Health and Safety representatives; EO committee = Equal Opportunities or Women's Committee members.
* If women gain a right in one sector, this automatically applies across sectors.
Source: own survey, 2002.

campaign group Women and Manual Trades. Rakennusliitto again provides a prime example of 'good practice' in its support for female painters through networks and conferences. It organizes an annual national women's conference, focusing on collective agreement policies (such as health and safety in 2002), social policies and broader societal questions. Involvement in the Femina Baltica network (a cooperation of Baltic women's organizations and the trade union movement in the Baltic countries) has led to participation in seminars in Lithuania, Latvia, and Estonia on subjects such as violence towards women in their working life. The union acknowledges that such meetings have been very important for their women members as 'in the individual workplaces there are very few women employed'.

Almost no employer federation has staff members or units dealing with women's or equal opportunities issues or participates in women's networks or conferences. The Construction Confederation in the UK indicated activities relating to career guidance, training, recruitment, employment conditions, childcare arrangements, and health and safety. The Norwegian Byggenaeringens Landsforening also participates in the women's network of the peak confederation, the NHO, and, though having no specific programmes to promote women, stated that: 'there is a general wish to have more women in the construction industry. Therefore the larger companies try to recruit women, also in high positions.' The Swedish Byggindustrier also reported that 'to meet the expected labour shortage our members have decided to widen the target group for recruitment to include both women and immigrants [and this is one of our] most important tasks'.

There are very few policies and programmes to support women's recruitment and retention in construction at the level of individual employers' federations or member firms. The French FFB reported policies specifically relating to women's recruitment and training, part of a nation-wide initiative based on an agreement with six ministries to promote the image of the sector and the training and employment of women. The FFB, uniquely, has also established a network of what are termed 'co-spouses', that is, women working with husbands or other family members in running a construction business. In addition, some of the local FFB offices have set up projects with employment agencies and training centres for recruiting women.

Several projects concerned with training or encouraging women to work in the industry, and retaining those that succeed, have been launched under the EC EQUAL programme aimed at countering gender segregation (EQUAL, 2003). These have often involved collaboration with one or both of the social partners, though this was not in the main reported in the survey responses, possibly because it occurs at regional or local levels. Swedish union (Byggnads) involvement in the EC Libra

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project also aims to achieve a more even gender distribution in construction, partly by promoting courses in building techniques to girls at secondary school and university level. In Spain in Asturias, projects involving social partners train women in a variety of construction skills. However, the transition from these schemes into the mainstream of the industry remains a formidable obstacle.

Overall, focused support measures related to the training, recruitment, and retention of women in construction by either the unions or the employers' federations are not at all common, especially for skilled trades. There are some notable exceptions to the rule, such as the Finnish painters' union and the employers in France, Norway, and Sweden. In the UK, the employer-based Construction Industry Training Board (CITB) is also working with employers and other agencies in regionally based 'collaborative partnerships' to increase female and ethnic minority representation in the industry.

Conclusion

The extent of male domination in skilled building work in western Europe, little changed over the past 20 years, while not unexpected, is nonetheless still striking. The picture of uniformity is surprising in the context of the diversity of labour markets and welfare and industrial systems in Europe. The male domination of construction is one of the most extreme examples of labour market segregation. Eastern Europe, where there is significantly greater integration of women into the workforce, provides a contrast to the picture in the West. The survey data confirm the pattern of extreme segregation, extending to the social partner organizations themselves, with the notable exceptions of the Danish and Finnish female painters and the actions of the Finnish painters' union. Women's inclusion in the construction sector is not a priority issue (or even on the agenda) for the majority of the social partners. The responses reflect, on the one hand, the 'conservatism' of an industry where it still remains acceptable to suggest that women lack an increasingly less essential requirement to do the job — physical strength. On the other hand, the responses pander to a 'discourse' of gender equality, but one that does not automatically lead to equal opportunity policies or programmes. Indeed, the theoretical equality of women and men in the labour market was given several times as a reason for inaction.

In general, the social partners appear to have had little impact on the inclusion of women in the sector, showing more commitment in principle than in practice. The suggestions that only by changing production processes and by the increasing use of mechanization will women be allowed more access reflects the reluctance to address the often very

different obstacles to inclusion from a variety of angles and in a proactive way. Changing technology will not of itself bring about a change in the gender division of labour. Even with the removal of structural obstacles to integration, such as inappropriate and poor working and employment conditions and discriminatory recruitment practices, other more intangible obstacles will remain. The industry is still marked by a high level of health and safety risks in all countries, not improved by the persistence of a macho culture and the short-term concern with output at the cost of developing the potential of the workforce. This macho character, with its own language, jokes, and working attitudes, continues to act as an important deterrent to entry by women. The social partners have the platform to start to make inroads and to change the industry from within, but still need to be encouraged to put women in construction on their agenda.

NOTE

1   The full results of this survey on which this article is based are found in, L. Clarke et al. (2004) 'The Social Partners for Construction: Force for Exclusion or Inclusion?' in L. Clark et al. (eds) *Women in Construction*, Construction Labour Research Studies 2. Brussels: CLR and Reed International.

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Initiatives and practice

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Contents

Chapter 8

Women in manual trades

Linda Clarke, Elisabeth Michielsens and Christine Wall

Introduction

Although women occupy a prominent position in the British labour market, making up 44 per cent of the labour force, they are subject to both horizontal and vertical segregation. The most severely male-segregated sector is the construction industry (90 per cent male) according to *Census 2001* (National Statistics, 2003a). This chapter examines the reasons for gender segregation in this sector and the impact of policies to combat social and economic structural discrimination. It draws on a programme of research undertaken over the last decade, Women in Construction in Europe, including surveys of tradeswomen employed by local authority building departments or DLOs (Direct Labour Organisations).

The construction sector, public and private, employs nearly 1.6 million people and accounts for at least 7.2 per cent and up to 12 per cent of all employment (EC, 2002; DTI, 2003). It is highly segregated at all levels, although in certain professions there is some change through 'the qualification lever', as greater numbers of women study construction subjects in universities: 14.5 per cent of all UK civil engineering students and 27 per cent of architecture, building and planning students are female (HESA, 2002). For the past decade women have made up about 6 per cent of the total membership of construction professions (Court and Moralee, 1995; Greed, 2000), but at skilled operative level, gender segregation remains typical of a 'sex-typed' manual occupation, with women in 2002 making up less than 1 per cent of the manual workforce, a proportion that has even declined in the past decade (CITB, 2003). As in the professions, there are occupational variations in the trade, with consistently higher numbers in painting (CIB, 1996; CITB, 2002).

In this chapter the relative significance of different factors affecting gender segregation in the manual trades are explored. It begins with a review of theoretical interpretations of gender-segregated labour markets, followed by an account of the empirical context of our research and the methodology used, and an historical overview of the role of the state in the

formation of gender-segregated labour markets. The main body of the chapter consists of an analysis of our research findings, covering the areas of equal opportunities (EO) policies, training and qualifications, and work and employment conditions. We conclude with recommendations for the removal of the structural obstacles preventing women from working in manual occupations alongside men.

Approaches to gender segregation

The position of women in the labour market has been variously explained through theories based on the premise of rational, economic decision making and individual choice such as neoclassical or preference theories (e.g. Anker, 1998; Hakim, 1998; Blackburn et al., 2002), more integrated approaches such as that of Reskin and Roos (1990), focusing on the dynamic of change and emphasising the structural determinants of segregation rather than the characteristics of female workers; labour market segmentation (e.g. Doeringer and Piore, 1971; Kenrick, 1981; Rubery and Fagan, 1995); and more complex approaches that include social, institutional and political factors such as the role of the unions and productive systems (e.g. Crompton and Sanderson, 1990; Crompton and Harris, 1998; Rubery et al., 2003). Segregation has also been shown to be inscribed within the structure of the wage relations, particularly through the persistence of the 'family' wage and the male breadwinner (e.g. Black et al., 1999; Bruegel, 2000; Picchio, 2000). One consistent factor to emerge is the importance of the relation between unpaid work in the home and the position of women in the labour market with respect to the kind of work undertaken and employment conditions, including hours of work (Crompton, 1997; Blackwell, 2001).

In our studies of women in construction in the United Kingdom our concern has been both to examine the relative importance of different factors in determining segregation and to understand how the situation can be changed. The research, whilst designed to examine gender exclusion and segregation specifically in construction, has resonance for other male-dominated sectors, for example software engineering and printing (Beck et al., 2003). Why has occupational segregation, though declining overall, remained persistent in these traditional areas? According to Reskin and Roos (1990), women make inroads in an occupation principally as a result of demand factors, for example shortage of qualified male workers, declining attractiveness of the sector to male workers or reorganisation of the sector towards more 'feminine' occupations. However, in the construction industry endemic skill shortages have not been a catalyst for employers to make a greater use of the female workforce, implying that demand explanations are insufficient (Corcoran-Nantes and Roberts, 1995; Clarke and Wall, 1998; Clarke et al., 2004). Indeed, as skill shortages have worsened, the proportion of women in the manual trades has even declined, from 1.7 per cent in 1992 to under 1 per cent in 2002 (CITB, 2003).

Explanations based on masculinity and organisational sexuality offer valuable insights into men's resistance to female entry into male-dominated occupations (Cockburn, 1991; Pringle and Winning, 1998). There is no avoiding the fact that society views construction as epitomising a particular version of 'masculinity'. The ways in which occupations become gendered and the social construction of gender have, however, been well investigated elsewhere (e.g. Cockburn, 1985; Connell, 1995). Our intention here is rather to show how training and recruitment, as well as labour relations, the wage system and employment conditions in construction represent important forces of exclusion. They act as factors of structural discrimination, pre- and post-employment, embedded in the historical development of industrial relations in the sector. Through confronting these structural factors at local level, inroads – however small – have been made.

The research context

Our empirical studies have focused on UK local authority repair and maintenance departments because of their prominent position, compared with the private sector, in terms of training, implementing EO policies, employing the workforce directly, accountability and availability of information. Three London boroughs investigated in detail were involved in a European Commission-funded project co-ordinated by Women and Manual Trades and involving partners in Spain and Denmark. The aim was to identify the further training needs of the tradeswomen employed and to give them an opportunity to meet women elsewhere and learn about each other's good practice. In-depth interviews, of up to two hours, were made with 46 of the 61 tradeswomen employed by the 3 building service departments or DLOs. These interviews – covering their training and qualifications, working environment, employment conditions and aspirations towards further and higher qualifications in the industry – provided an invaluable source of socio-economic data as well as a unique record of their individual experiences. The findings were used as a basis for the design of in-house training courses and meetings for the tradeswomen. Re-interviewing of largely the same group of women 18 months later, provided the opportunity to analyse changes in their position and the effectiveness of the extra training provided (Wall and Clarke, 1996; Michielsens et al., 1997, 2000; Clarke et al., 1999).

To situate these in-depth survey findings, a national survey of DLOs was conducted with the co-operation of ADLO (Association of Direct Labour Organisations), providing the first detailed national overview of their workforces, training policies, EO policies and employment conditions. A total of 93 questionnaires were returned, giving a 43 per cent response rate. The DLOs' sampled varied greatly in workforce size, from 6 to over 2,000, and 40 per cent of them employed female operatives, in most cases just 1 or 2 women; only 7 per cent had two or more women working, including one

exceptional case where a total of 7 per cent of tradespersons were women (42 in absolute numbers). Half of those DLOs not employing women were part of District Councils, whilst 81 per cent of Metropolitan District Councils and 75 per cent of London Boroughs did employ women. Although the DLOs have been drastically reduced, they still accounted at the time of the survey for 25 per cent of directly employed operatives and 13 per cent of the repair and maintenance output of the construction industry, though this has subsequently been reduced to 6 per cent (DTI, 2003). The survey focused on the tradeswomen and men employed and covered: their occupations, qualifications, ethnicity and gender; training and career development; EO policies and special support; and employment conditions.

The workforce employed in the construction trades in our national DLO sample, a total of 26,652, was almost entirely male; only 0.9 per cent, or 231 were women. Statistics on women in construction are sparse and this poor figure is proof of the extremely male-dominated nature of construction work. Indeed, the overall proportion of women in construction in the DLOs is the same as that in general. Broken down according to job status, however, the relative position of women within the DLOs differs significantly. Women operatives constitute 0.6 per cent of all operatives. Women trainees/ apprentices are a much higher proportion of all trainees, at 4.5 per cent. And 1.2 per cent of supervisors are female, a higher proportion than for operatives, indicating perhaps that women are often well suited to supervisory positions because of their training and higher levels of qualification. Segregation is, therefore, less at trainee than at operative or supervisory levels and less than in the private sector, where only 1.1 per cent of the surveyed apprentices in 2001 (aged 17–24) were female (CITB, 2001). If we look at the sum total of female construction trainees, including those training full time in Further Education (FE) colleges, the disparity between the proportion of trainees and of operatives who are female becomes even starker: 3 per cent of trainees are female compared with only 1 per cent of operatives, suggesting that women trainees are confronted with very significant barriers to entry and to obtaining work experience in the industry (CITB, 2003).

The proportion of trainee entrants also rises considerably for females over 19 years old, to 8 per cent. The implication is that adult entry is particularly appropriate for women, who as 16-year olds may be unaware of opportunities or may find the minority position too daunting. This was clear from our interviews, especially among the older women (over 30 years):

> It's something I wanted to do over a long while. I tried everywhere but no-one knew anything. I spent 2 or 3 years looking for a traineeship in painting and decorating. I wish I'd done it when I was younger.
>
> (trainee painter, age 39)

> There was no guidance at school – it was either office work or nursing.
>
> (gas fitter, age 38)

I wanted to be a motor mechanic, but my Dad laughed – I wasn't allowed to stay on at school; I had to leave and work in a bank. This is what I wanted – I would have jumped at this given the chance.

(supervisor and former plumber, age 39)

The state and gendered labour markets

Historically, it could be argued that the mechanisms maintaining the extreme gender segregation in what remain 'craft' trades pre-date industrial capitalism and follow a course dating from the feudal development of the apprenticeship system and waged labour. Women have perhaps been successfully excluded from construction for so long precisely because wage labour originated so early, the craft tradition remains strong, and this is one of the few sectors with a statutory training board maintaining apprenticeships (Clarke, 1999). In the twentieth century women were only actively encouraged to learn construction skills during the two world wars, substantiating research theories of the reserve army of labour (Siltanen, 1994). During the First World War, through government policy, skilled workers were substituted by women, who were publicly acclaimed for successfully and rapidly acquiring male skills and being more productive workers. At the end of the war, these women were quickly ousted from their jobs in an expeditious reversal of policies (Briar, 1997). Government strategy for the recruitment of women during the Second World War was careful to maintain a gendered hierarchical division of labour. Men were employed in key positions such as foremen and women either placed in semi-skilled jobs or, where they did gain access to skilled occupations, warned that their skills would not be needed for post-war reconstruction work.

The collusion of the trade unions with both the employers and the state in the exclusion of women from skilled work, particularly in the second post-war period in an attempt to provide 'full (male) employment' was a major factor in the reassertion of occupational segregation in construction (Boston, 1987). With the reversion to traditional training, wage and industrial relations systems, training and employment for women were severely restricted, being confined to industries deemed suitable by the government, which, despite an acute scarcity of building labour, did not include construction (Phelps Brown, 1968; Wilson, 1980).

Only with the implementation of the Sex Discrimination Act in 1976 were women given access to state-run training schemes in construction trades under the Training Opportunities Programme (TOPs), aimed at unemployed adults. Women were not actively encouraged onto these schemes, but nevertheless, quite inadvertently, the state had provided a means to acquire craft skills independently of the patronage of an employer. The timing coincided with the height of the second wave of British feminism and, although the actual numbers of women succeeding in training in

non-traditional areas were extremely small, they provided valuable role models (Payne, 1991). Subsequent programmes superseding TOPs – Employment Training and Training for Work – involved employers in training provision, a factor that, together with a restrictive funding arrangement routed through the Training and Enterprise Councils (TECs), reinforced patterns of inequality for women in non-traditional occupations (Felstead, 1995).

In general, national equality legislation has been negligible in changing the nature of occupational segregation in construction, partly due to the notion of equality implied. This has been based on providing opportunities for women in what remains an unequal labour market (Michielsens *et al.*, 2000). Government policy has tended to be advisory, market-led and individualistic rather than enforcing and collective, with the result that the implementation of EO initiatives has been extremely backward, especially in the private sector. Since the United Kingdom's adoption of the Maastricht Social Charter (1998) and the Amsterdam Treaty (1999) with positive action at its core, minimal collective equality and employment policies have been enacted by the Labour government, but have made little significant difference to EOs in construction in the United Kingdom.

Equal opportunities policies at local level

If state intervention has been limited and relatively ineffective at national level apart from during the wars, the local level shows what can be achieved – albeit only in pockets – if active EO policies are pursued. EO policies were pioneered by the urban metropolitan councils in the early 1980s and by the late 1980s the effects were obvious in Inner London DLOs: in Haringey alone over 100 tradeswomen were employed and a total of 266 in just 7 boroughs.

The urban legacy of EO policies is reflected in our DLO survey. The majority of urban authorities had measures in place to encourage women to train or seek employment. Many, though considering themselves 'Equal Opportunity' employers and perhaps even having a women's unit, were very passive in their approach and targeted women in much the same way as they would men. Such authorities were also found to be the least successful in recruiting women into the construction workforce. In contrast, those succeeding took more active measures such as:

- targeting recruitment (including through positive images and a range of outlets for advertising) and having women in the recruitment team. For example, as described by one DLO manager:

  When we recruit trainees, an advertisement plus a radio advert is produced stating that we are keen to train new people – with applications particularly welcome from women and ethnic minorities.

- providing 'Taster' days, work experience for trainees, information on entry, guidelines on harassment and working alone, flexibility in working arrangements and support for pregnant women and childcare;
- establishing links between the women's unit and the DLO and with women-only training workshops;
- running training programmes aimed at women;
- facilitating women-only meetings with elected women representatives. One DLO, for example, gave pre-employment training and close support through a craftswomen's group. Another described how:

> Proactive monitoring of employees' daily experience in a male-dominated environment is conducted by female personnel officers outside the management chain of command.

All such support takes into account the fact that women are entering a male-dominated workforce and undertaking work traditionally seen as a man's. It suggests that, where EO policies are systematically and very proactively implemented and positive action measures taken, then success is much greater. However, the fact that results remain relatively poor indicates that the typical instruments of EO policy leave untouched key societal determinants of gender segregation.

Though the implementation of EO policies in the 1980s had a positive effect on the training and employment of women in the DLOs, by the early 1990s numbers had plummeted. This can be attributed to other factors, in particular to the demise of new local authority housebuilding and the introduction of compulsory competitive tendering, which meant drastic reductions in the DLO workforces (often on a last in-first out principle, disproportionately affecting the women) and the eradication of new-build training schemes – the best environment for work experience – and of adult traineeships. By 1994 over two-thirds of the 266 women employed by 7 councils in 1989 had disappeared. This well illustrates the devastating effects, particularly for women, of government deregulation (Escott and Whitfield, 1995).

Training and qualifications

Women's entry into construction is especially sensitive to any changes or weakness in the training regime. Our findings show a clear link between the level of training and the proportion of women employed: the average proportion of trainees in the DLO workforce was 6.5 per cent but, for those DLOs employing women, it was slightly higher at 7.8 per cent and for the top 7 in terms of female employment it was very significantly higher at 11.7 per cent. Male trainees and operatives dominate overwhelmingly in each of the trades, with the proportion of females in most cases under 7 per cent for trainees and under 1 per cent for operatives. Only with painting and decorating are higher proportions to be observed, at 24 per cent for trainees, constituting over half of all female new entrants in construction, and

1.6 per cent for operatives. This higher share of women in the decorative trades is also found in the private sector, with women making up 0.8 per cent of employees, followed by wood trades at 0.6 per cent (CITB, 2002). Throughout much of Europe, painting and decorating emerges as the most popular trade for women, employing as many as 27 per cent of women operatives and 40 per cent of trainees in Denmark and 6 per cent of operatives in Germany (Beck *et al.*, 2003). As a trade painting is confronted with similar dangers as the traditional trades, including dangerous chemicals in use, working at heights and the hard, physical work involved (CLR News, 1997; Clarke *et al.*, 1999). One explanation for its accessibility to women is a weaker craft tradition than carpentry and other traditional trades and often lower earnings, as well as a greater familiarity in the domestic environment.

A key difference in the characteristics of the male and female DLO workforces relates to the level of qualifications. In comparison with their male colleagues, women were on average found to be more qualified: while most of the tradesmen, about 60 per cent, had a qualification to at least craft level (NVQ2 or City and Guilds Craft) and 37 per cent were qualified to advanced level or above, *all* tradeswomen were qualified to craft level and most (65 per cent) also to advanced level (NVQ3 or City and Guilds Advanced) or above. It was found that 53 per cent of local authorities employed men with no trade qualifications at all, confirming the supposition that, whereas for men informal means of entry still remain important, aided by male social networks and the possibility of informally picking up construction skills, for a woman being able to prove her ability through her qualifications is the only way to get a job. Women are largely excluded from the informal network that acts as a 'gatekeeper' giving men inside information about job openings, promotion and other opportunities (Reskin and Padavic, 1988).

Just as initial training, usually to an advanced level, is essential for women to prove their ability, so also are they reliant on further training for advancing their careers. Thus it is no accident that those authorities with the greater variety and number of further training courses – ranging from trades-related multi-skilling, management, trades training, health and safety, information technology and EO courses – are also those employing women. Similarly, those authorities employing women scored highest in terms of providing incentives to career development – including career guidance, appraisals, college day release, fee payment and flexibility in choosing courses.

Case study

The success of Leicester City Council's building department

Thirty per cent of apprentices appointed by Leicester City Council's building or DLO between 1985 and 2002 have been women. Today, 1 in 12 of the

480-strong workforce are women, employed in all trades, including as carpenters, electricians, plasterers, painters and decorators, bricklayers, heating and ventilating engineers, gasfitters and metalworkers. Private firms in the area complain that they cannot attract women or even apprentices generally into the industry. So what is the secret of the Leicester DLO's success?

One reason for success is training, with many women coming through the apprenticeship programme, which has over 50 apprentices at any one time and is vastly oversubscribed. Many apprentices are adults and receive a good trainee allowance over their three-year apprenticeship programme. This consists of college-based training, training in the DLO's own centre and work experience up to NVQ Level 3. It proves that where good training is in place there is no lack of applicants.

Another reason for the DLO's success is its careful recruitment and selection procedures. The DLO goes out of its way to attract women, working closely with schools, giving girls work experience and encouragement and running one-week 'taster' courses annually, attended in 2001 by 64 women and involving one day in different trades. Advertising shows female and ethnic minority construction workers from different trades and is targeted to particular audiences, such as women's centres. All new recruits into the skilled workforce have to have served an apprenticeship and worked in their trade and the interviewing panel always involves one women and one person from an ethnic minority. And a final reason for success is the employment provisions in place. These include stable working hours, good maternity leave and a wide range of support groups, such as a tradeswomen's group and a gay, lesbian and bisexual group. There is ample opportunity for further training and promotion and a retrain and re-entry scheme. All tradeswomen are in the trade union and two are shop stewards. (Based on an interview with Leicester DLO by Linda Clarke and Barbara Susman (Housing Forum, 2004 Housing Skills: Approaches to The Current Challenges, Constructing Excellence).)

Employment and working conditions

The first and major obstacle for women, once having been trained, is to obtain employment. Many never achieve this; others may disappear into the alternative economy that flourishes in Britain, particularly for small maintenance work for homeowners, thereby escaping official statistics and perhaps explaining the large gap between the number of women trained in construction and those actually employed.

In response to a question on what tradeswomen in the three London DLOs liked best about working in construction, typical replies were:

> I get immediate satisfaction and gratification from fixing something that's broken.

> It's rewarding – the flats look better after they've been decorated.

They frequently described their jobs positively in comparison with more traditional women's occupations, for example:

> I like the work that we do. I don't like to be sitting down all the time.... I couldn't sit in an office all day and pick up the phone.

They were well aware of the restrictions under which women work 'indoors' and cited the freedom and autonomy of skilled construction work as an extremely positive aspect of their working conditions:

> The freedom and the variety of jobs.

> Freedom – no manager breathing down my neck.

> Out and about – not stuck in one place.

> I plan my own work, I'm independent.

'Earning a man's wage' was also an important incentive for women to enter construction. Nevertheless, there has been a significant widening in earnings differentials nationally between white-collar and manual workers within construction and between construction and other industries. In spite of the relative decline in male manual construction earnings, there remains a large difference between female and male skilled trades (all sectors) workers' earnings: respectively £287.3 and £420.5 per week in 2003 (National Statistics, 2003b). For construction, average hourly pay rates in 2003 were £11.17 per hour compared with £9.61 for women (National Statistics, 2004). Significantly, our research indicated there was usually parity in the wages of the men and women working in the DLOs.

For tradeswomen, the public sector offers more favourable employment conditions than the private sector. Whereas for men the opportunity for self-employment within the private sector is a valid option, it is far less so for women. Not only does the private labour market rely on male networks for the supply of labour, even within the alternative economy, but the private sector's record on EO employment is very poor. The attraction for women of work in male-dominated occupations in the public sector is also found in other research, for example Hansen's study in Scandinavia, which concluded that 'especially attractive for women is the male-dominated part of the public sector, where women may obtain large earnings and there is no punishment for caring responsibilities' (Hansen, 1997).

The majority of tradeswomen interviewed in the three London boroughs lived in or near the borough where they were employed. Women, once in employment, were found to be a particularly stable group in the workforce: 37 per cent had already been working in construction for over ten years and 63 per cent anticipated remaining in construction-related occupations for

another ten years. Another incentive for women seeking employment in the public sector is the regulated hours compared with private sector construction firms. Nationally, most DLOs (73 per cent of the sample) have a working week of 39 hours; 7 per cent had a longer week and these were unlikely to employ women. Indeed, the women working in the DLO cited the fact that the job was local, with regulated hours and a fixed wage (as opposed to piecework or bonus systems), as its main attractions, reducing uneven competition between workers and advantageous for their work/family arrangements. The implication is that stable, localised and time-regulated employment is more conducive to women's inclusion than the extreme flexibility of employment, lack of continuity and long working hours found in much of construction, especially in the private sector.

The importance of good employment and working conditions to women also suggests a potentially significant role for trade unions. There is much evidence that unions are an influential factor in the position of both men and women in the labour market (Lane, 1993; Anker, 1998). A very high proportion, 81 per cent, of tradeswomen interviewed in the three London boroughs were union members; non-union members were mostly all trainees on an adult training scheme. In one borough, the women's representatives were also union representatives and played an important role in workplace policies on health and safety issues.

Case study

Jacky, carpenter

I've been a carpenter working in London for the last 18 years, from the age of 25 to 43. I think my interest in doing something manual or physical started young. I was aware that boys were allowed to do things that girls weren't and that this was unfair, and after the Sex Discrimination Act of 1975 three friends and I took the opportunity to do metalwork at school. I've always liked physical activities and I played a lot of sports at school.

When I left school I went to Liverpool Polytechnic, where I studied social sciences. Then I moved to London. I didn't want to be a social worker or a teacher; I was 22 and it was a relief to get out of full time education. In the 1980s, I found it an exciting time to be in London and I worked for a while in the first women's bookshop in the United Kingdom and at the same time I was going to a carpentry evening class. After some advice from a worker in a Job Centre I went on a ten-week introductory course, 'Women into manual skills', at a Skill Centre. I was very committed and got up at the crack of dawn to get across London to be there at 8 a.m. After the introductory course I did a six-month TOPs course in carpentry and joinery at the Skill Centre. I absolutely loved it; there was a great group of people, both men and women, and I'm still in touch with some of them.

My first job as a carpenter was in Battersea in a small workshop with a man making sash windows. I didn't turn out to be the person he was looking for; I was new to the job and he wanted someone who would have enough experience to run his business in his absence, which at that stage I didn't have.

My next job was with a small builder and I worked there for one and a half years. They mainly did renovations and work for housing associations. I was the only woman and, although they were curious at first about why I was there, I soon made friends. I learned a lot, particularly from a foreman, George, a perfectionist, who was very positive and encouraging about my work. He made sure I knew how to do the work. For instance, when we had a contract to hang new front doors in every flat in a tower block, he said that he'd seen smaller people than me do this work and that there was a knack to lifting heavy doors without straining, and he showed me how. During this time I continued my training at Hackney College, where I got my City and Guilds qualifications and then my advanced City and Guilds and then left to work for Hackney Council as an improver.

Since I started working there 16 years ago, I've seen enormous changes in the type of work we undertake and in the conditions of work. My first job at Hackney was building a new council housing estate. In those days Hackney had a big training programme and I learned a lot from some older men who were happy to share their knowledge, even if it meant the work went more slowly. Today we do only maintenance work and there has been a massive reduction in the workforce from 1,000 directly employed people to 260 operatives and from 50 women to 7, which includes 2 women adult trainees who have just joined.

An important aspect of my work at Hackney has been my involvement in the trade union. In my first job in Battersea I knew I wanted to join the trade union. I became a TGWU (Transport and General Workers' Union) women's representative and, after a couple of years, a shop steward and have been one ever since. I have spent a couple of years in the local Hackney building union office working full time as the deputy convenor. For the past four years I've become more involved with the national union; I'm on the TGWU regional women's committee and on the building and construction trade group.

I now work in the Rapid Response team and the disabled adaptation team. I enjoy the satisfaction of making people's homes more accessible. We are given our job tickets in the morning which specify the jobs and the time allowed for them. Our pay is determined by the so-called 'Fair Pay' scheme, which was brought in about four years ago, whereby basic wages were reduced and a new bonus scheme introduced. Some people have made this work for them, but I'm not one of them. I'm earning less than I was 10 years ago and I now consider myself fairly low paid in relative terms. The amount you earn does vary and some months you can earn a lot of

money, but it depends on the types of jobs you get given. An output-based scheme like this one doesn't work when you are doing small maintenance jobs, as I am, in different venues. If I was fixing handrails all day on a site I could make money. The 'Fair Pay' scheme meant loads of people left, including some of the few remaining women. Quite a lot of the women have gone on to other jobs, such as supervisory work within the department, or have moved into technical jobs such as surveying and clerk of works. One former colleague is teaching bricklaying at Hackney College.

I've chosen to stay. I enjoy working in people's homes and I still get pleasure from the work. Yesterday afternoon one of our jobs was hanging a new gate with an adult trainee; it was a warm November afternoon, we were outside and it was magic. I really like doing the trade union work as well, as fundamentally I want to change conditions for all workers. My ambitions are not about getting ahead. As a woman I feel very confident, particularly now that I'm older, about being a carpenter and in my skills. What I'd like to say to any woman who wants to work in the building industry is to remember that you can do whatever you want and that we are capable of learning anything we choose, we can have everything. (Based on an interview by Barbara Susman.)

Societal context

The majority of women interviewed were aware that they were breaking new ground and many emphasised the important role of families and friendship networks in providing continuous support.

> Both [parents] are over the moon and want me to stick at it. My Dad is really good – he works in the borough.
>
> (apprentice)

> At first I didn't want to tell anyone – now everyone knows and asks me for a job. I would recommend it to other young women – I talk about work with my girl friends – some of them are in offices or not going anywhere in shops.
>
> (painter)

Attributes commonly associated with heavily sex-typed occupations, such as manual dexterity and physical strength, are closely linked to societal notions of 'masculinity'. However, when tradeswomen in the three London boroughs were asked if they considered their size any impediment, an overwhelming 74 per cent replied in the negative, only 9 per cent considered it was an impediment and 17 per cent were of the opinion that it was 'sometimes'. One remarked: 'I am the perfect size for my job'. Similar responses might be anticipated from male colleagues.

A number of studies of women in non-traditional occupations have focused on workplace relationships, in particular harassment and the dynamics of exclusionary group male behaviour (e.g. DEET, 1993; Jones, 1995). Our research showed the majority (96 per cent) to be 'reasonably happy' in the relationships with the men they worked with. Fifty-two per cent reported they had in the past been subject to harassment (a third of which related to the behaviour of tenants, not co-workers); the majority had complained and been satisfied with the outcome. They had reached an equilibrium in their workplace relations and their immediate concerns related to career advancement and worries about redundancies. This echoes the findings of Padavic and Reskin (1990) that relationships with male co-workers are less a barrier to women's interest in 'blue-collar' jobs than is usually presumed.

Despite the general shift in the labour market away from craft and manual occupations, the arguments for women manual workers gaining construction skills now are as strong as they were in the 1970s, especially within the public sector where women make up the majority of all manual workers. As one woman expressed it:

> I'll stay as long as the council has a job for me. It would be hard to keep these wages on the outside. It's about confidence as well – you'd have to face all those blokes again and prove yourself. I'm lucky here with all the policies on equal opportunities.

Conclusions

To change the position of women requires policy regulation. However, the very lack of regulation and abdication to employers' prerogative in Britain helps to perpetuate and reinforce the male-segregated nature of construction. Women's entry depends on the accidental good will of individual employers rather than on any real and concerted social change. Important aspects of the limited success in women entering skilled construction occupations are the financial reward in comparison with female-dominated manual jobs, stable working time and short travelling time. In such strongly sex-typed occupations it is, however, necessary to provide additional leverage to integrate women, particularly proactive recruitment and special support. None of these aspects usually applies in the private sector, so the public sector DLOs are especially accommodating to women; in this sense they represent a special case.

Another critical factor identified in our studies is training. It is no accident that DLOs with a good training record are also those with higher proportions of women. Not only are women totally dependent on training for entry and progression, but authorities with good training are inevitably

those prepared to invest more in their workforce. A question for further research is how far the dependence of women on proving their ability through qualifications implies a different and more explicit notion of skill and recognition of this in the wage structure. Rather than implicit skills associated with the crafts, passed on through 'learning on the job', the skills of the tradeswoman are visible and defined, as required with formal training. In the same way recruitment of tradeswomen relies on regulated and transparent procedures, as opposed to the intangible practices attached to informal networks and apprenticeships.

Our research has concentrated on the socio-economic factors that enable women to be successful as skilled tradespeople. The findings indicate that horizontal occupational segregation is not constant and immovable. Tradeswomen were found where effective overall EO policies in both recruitment and employment were combined with good employment conditions, training schemes, career development and support mechanisms. We conclude, therefore, that the excessive male domination of the construction trades can be changed through a focus on these structural factors; just as high numbers of women have entered in the past, so they can again.

Discussion questions

1   Does apprenticeship act as a barrier to women's entry into the skilled construction trades and, if so, can this be overcome?
2   What constitutes good practice in the inclusion of women in construction at manual level?
3   How would you explain the desperately low proportion of women in construction at operative level?
4   Why do young women not consider a career in the construction industry in favour of other industries?

Acknowledgements

Note

1 SOC2000 category – Skilled construction and building trades.

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'NQOC'[1]: Social Identity and Representation in British Politics

Joanna Liddle and Elisabeth Michielsens

This article develops a critique of the 'economistic' approach to understanding social bias in parliamentary representation. It asks why it is so difficult to reduce social bias and achieve change towards a more demographically representative parliament. It argues that what is needed to understand political representation and social identity is a theory that does not polarise subjectivity and social structure in the way the economistic approach polarises 'supply' and 'demand'. The article proposes that paired concepts of 'habitus' and 'field' provide tools that enable an understanding of the relationship between the 'general social field', structured as it is by divisions of social class, sex/gender and 'race'/ethnicity, and the 'habitus' and 'strategies' of actors competing to enter one of the major fields of power, in this case, the field of politics, recognising that these two levels are mediated in their interconnections by the specific form taken by the British political system. The research is based on extended autobiographical interviews with male and female members of the British parliament. The article focuses on class, the 'difference' that has been sidelined in feminist debates on the politics of difference, and also on sex/gender in the form of masculine identity. The article suggests that remedies are needed at each of the three levels of field, system and habitus if parliamentary politics is to be opened up to a wider demographic base, and in so doing, to move towards political justice.

Keywords: gender; class; social identity; political representation

Introduction

The problem of 'social bias'[2] in parliamentary representation, and how to diversify candidate selection and election to reflect the demographic structure of the population, has remained a topical issue since the Labour party introduced all-women shortlists (AWS) for the 1997 election. No other party has yet adopted positive discrimination strategies on gender, and no party has adopted strategies to deal with other significant social divisions in society.[3] But since the Labour government introduced permissive legislation on positive gender discrimination for the 2005 general election, it is arguably the Conservatives, as the second largest party, that need to deal with the question of social bias if the House of Commons is to become more diverse and representative of the population. The impact of class divisions may be seen as a different kind of social bias, inasmuch as the two major parties have, historically, explicitly represented divergent class interests; but given that both parties have claimed in the last decade or two to be broadening their appeal to a wider class base in line with changes to the class structure of British society, the under-representation of people from working-class origins in parliament in both major parties is also an important part of the problem of social bias.

The Conservative party is ideologically opposed to positive discrimination strategies because of its belief in the virtue of meritocratic individual competition and the ability of selection panels to choose the best candidate (Norris and Lovenduski 1995). But it is apparent that strategies of exhortation or even affirmative action (for example, women-only training), as distinct from positive discrimination (such as quota systems) have failed to produce results. Our aim in this article is not to propose or support a particular strategy for achieving diversity in political representation. It is to attempt to explain why it is so difficult to achieve change. We would like to suggest that the widely-held understanding of the problem of social bias in political representation, particularly the view that a more diverse parliament can be produced solely by institutional measures such as the reform of selection procedures, both misunderstands and significantly underestimates the nature of the problem.

Understanding the Process of Political Selection: Supply and Demand

In 1995 Pippa Norris and Joni Lovenduski published a major study of political recruitment, providing the 'first full account of legislative recruitment in Britain for 25 years' (Norris and Lovenduski 1995, 1). This research constitutes an impressive and detailed examination of the power relations of gender, 'race' and class in the operation of British parliamentary selection and election based on the 1992–97 parliament. The study shows that 'the typical candidate in all parties tends to be a well-educated, professional white male', as a result of which the 'traditional composition of parliament' is 'overwhelmingly middle class, male and white' (ibid., 87).

The authors seek to explain the social bias in the composition of parliament using an economistic model based on the concepts of 'supply' and 'demand'. Supply-side explanations 'suggest that the outcome of the selection process reflects the supply of applicants *wishing* to pursue a political career' whereas demand-side explanations suggest that 'selectors *choose* candidates depending on their perceptions of the applicants' abilities, qualifications and experience' (ibid., 15, 14, emphasis added).

Their analysis shows that the *class* and *education* bias of parliament is the product of supply rather than demand (ibid., 113, 115). *Gender* varies by party: supply is more important for women in the Conservative party, while demand is more important for women in the Labour party (ibid., 116–118). This means, in Norris and Lovenduski's terms, that Conservative women do not 'wish' to pursue a political career and therefore do not stand, whereas Labour women do 'wish' to stand, but fail to be 'chosen' by the selectors.

The three major reasons given by party members for not applying were lack of time and energy, lack of experience and anticipated failure, only the first two of which distinguish marginalised groups from others (ibid., 172). Norris and Lovenduski therefore conclude that marginal groups did not anticipate failure and discrimination; rather 'they saw themselves as *unqualified for the job*' (ibid., 170–171, emphasis added). Overall, and particularly in the case of the Conservative party, they argue that 'on balance, supply-side factors are the most persuasive explanation for ... social bias' (ibid., 247). Although Norris and Lovenduski do acknowledge that

supply and demand factors interact (ibid., 108), they rarely consider this interaction in their analysis. Lovenduski's later study of the 1997 election adopted a less polarised conceptualisation of supply and demand by acknowledging that the lack of positive measures to signal a demand for women in the Conservative party may have adversely affected supply (Lovenduski 1997, 712). It was Sarah Childs, however, who subsequently demonstrated the importance of demand in producing supply in her study of women's representation in the Labour party after the introduction of AWS, arguing that 'the earlier emphasis placed upon supply-side explanations' should be tempered (Childs 2004, 33, 39).

In addition to the effect of demand on supply, however, a polarised conceptualisation of supply and demand fails to recognise that supply also affects demand. The lack of 'non-traditional' candidates and the predominance of 'traditional' candidates may actually contribute to the production of political identity as gendered, classed and 'raced' in particular ways, thus helping to construct political 'entitlement' among social categories constituting the 'traditional MP', and constructing political 'illegitimacy' among social categories constitutive of the 'non-traditional MP'. Childs does address this issue, referring to a woman Labour MP who still does not feel 'legitimate' despite her election to parliament, thus acknowledging the importance of symbolic representation in challenging the 'identification of politics ... with men' (ibid., 59). But she offers no theory to help explain 'the link between the identity of the representative and the representative's attitudes and behaviour', other than recognising 'different women representatives operating in different gendered environments' (ibid., 69, 196). The need for a more socially-based gendered analysis of political representation is now acknowledged (Lovenduski 1998; Mackay 2004; Puwar 2004). We would add that the gendering (and classing and 'racing') of the 'political field' itself—a field that Pierre Bourdieu argues was traditionally reserved for the expression of the masculine '*libido dominandi*' or 'desire to dominate' (Bourdieu 2001, 80) must also be considered (Moi 1999).

We would like to suggest that what is needed to understand political representation and social identity, particularly how and why certain social categories see themselves as 'unqualified', is a theory that does not polarise subjectivity and social structure in the way that 'supply' and 'demand' are polarised in the economistic approach. To this end, we propose to use concepts from the work of Bourdieu (1984, 1990a and 2001).[4] Building on our earlier examination of how entitlements to power are generated in relation to particular political identities (Liddle and Michielsens 2000a and 2000b), and taking as the starting point Norris and Lovenduski's (1995) supply-side explanation that women, working-class and less-educated party members see themselves as 'unqualified' for the job of political representative, the questions we are interested in are: why do certain social categories see themselves as differentially qualified for public office? How do members of different social groups develop a sense of entitlement in themselves and get that entitlement recognised by others as legitimate? In other words, how do they come to see themselves as 'qualified for the job', and how do they convince others that they are qualified? We will look at these questions in relation to masculinity and working-class identity.

Generating Entitlement to Political Power: *Habitus*, Field, Institutions

Bourdieu understands the relationship between subjectivity and society through the concepts of the *habitus* and the field. The *habitus* is a system of dispositions acquired experientially through childhood socialisation and shaped by the social circumstances of its production (Bourdieu 1984, 101 and 1990b, 123). It therefore differs by class, gender and ethnic positioning (Bourdieu 1977, 72–95; Thompson 1980, 12; Moi 1991, 1030; Lovell 2000, 11–32). It is through the dispositions of the *habitus* that people perceive, categorise, understand, evaluate and act upon the social fields to which they belong (Bourdieu 1990a, 61), as well as make decisions about whether and on what terms they wish to enter other fields, or feel themselves to be disqualified from entering. Relational social fields *map the differential distribution* of economic, social, cultural and symbolic capital (Bourdieu 1984, 114). Symbolic capital is the form which different types of capital take when they are recognised as legitimate. The value of the various capitals in the social field is assessed by the extent to which they can be converted into symbolic capital (ibid., 291). As Bourdieu points out, the capitals held by those who are 'unequally armed in the fight to impose their truth' (Bourdieu 1987, 11) are not valued or acknowledged as legitimate (Bourdieu, in Wacquant 1989, 39); for example, the naturalisation of female occupational skills as mere 'nimble fingers' (Elson and Pearson 1981) disallows recognition of women as skilled workers. The 'general social field'[5] refers to a set of positions in social space defined through the social relations of the field, structured by the distribution of capitals and producing relations of power in which we may include those of class, gender and 'race' (Moi 1999, 288). Bourdieu shares a common sociological thesis of differentiation and specialisation of social systems over historical time, with the emergence of relatively autonomous fields—the economic, political, cultural, intellectual and so on. Each specialised field has, Bourdieu claims, its 'price of entry', specific 'rules of the game' or *nomos*, distribution of capital and 'stakes of struggle'.[6]

The specialised field of politics has not been subjected by Bourdieu to in-depth analysis, and his comments on it are sketchy. He characterises it as verbal combat, where politicians 'form and transform their visions of the world and thereby the world itself ... [where] words are actions and the symbolic character of power is at stake' (Thompson 1991, 26–27). Politicians are engaged in 'a labour of representation', seeking to 'construct and impose a particular view of the social world' and mobilising those on whom their power depends; what is at stake is 'the representation of the forces engaged in the struggle and their chances of success' (Bourdieu 1991, 134). Politicians are ' "professionals of representation" in every sense of the term' (ibid., 243). Politics is the field that is least autonomous from economic interests (Lash 1990, 244; Bourdieu 1991, 173), and the verbal combat of politicians is ordered, not by a disinterested search for truth and falsity through argument and refutation, as in the case of the intellectual or scientific fields, but by the logic of 'friend or foe' (Lash 1990, 244, quoting Bourdieu 1986), by 'denunciation and slander, "sloganisation" and falsification of the adversary's thought' (Bourdieu 1988, 9).

People may participate in the political field through the franchise, and may enter or aspire to compete in the field through membership of political parties and through standing for election (Bourdieu 1991; Wacquant 2005). But the political field is increasingly professionalised, and is distinctive in the need for politicians to 'appeal to groups or forces which lie *outside* the field' (unlike the fields of science and art) (Thompson 1991, 28). The stakes of the political game are the 'legitimate division of the social world and, thereby, of the mobilisation of groups', and the 'use of objectified instruments of power' such as the law, police and public finances (Bourdieu 1991, 181). The professionals must be able to manipulate ideas and groups at the same time, 'producing ideas capable of producing groups by manipulating ideas to gain the support of a group' (ibid., 182). This is an uncompromisingly bleak view of the political field. It is also informed by stereotypical understandings of 'masculinity' in which people armed with such a *habitus* would feel most at home and at ease: like 'fish in water'. These may include women as well as men, as Margaret Thatcher among others obliges us to recognise. But whatever their *habitus*, it is not surprising that women confront particular problems when they enter such a field. In terms of the common feminist distinction between sex and gender, it is primarily their sex that makes them legitimate targets of misrecognition or symbolic violence, even though this abuse may be expressed in terms of stereotypes of *gender* so that women MPs are either faulted for being 'not feminine enough', and therefore not 'real women', or 'too feminine' and therefore 'unsuited for politics' (Sreberny-Mohammadi and Ross 1996; McDougall 1998).

Habitus is developed through practice—through learning to do rather than to know, in specific contexts. The basic lineaments of an individual's *habitus* are laid down in early life, therefore, within that specific part of the 'general social field' into which they are born. The 'capitals' that accrue through familiarity—in the family, neighbourhood, at a particular place and time, are then carried forward in the processes of secondary socialisation in the education system, where they may be discounted, devalued or augmented. Some of the capitals accumulated are recognised and honoured in a relatively seamless manner from birth, through education and into careers in specialised fields such as the political field—our concern here. At every stage, individuals who have accumulated capital that carries legitimacy will find themselves able to pay 'the price of entry'. Such individuals may become highly skilled, but without having a great deal of insight into the conditions of their own easy passage onwards and upwards. The 'capital holdings' that eased their passage may remain at the level of 'doxa' (Bourdieu 1984, 471)—taken for granted and misrecognised as natural gifts.

Although Bourdieu has been criticised for determinism (Archer 1983 and 1993; Adkins 2003; Skeggs 2004a and 2004b), and while it is true that structure and agency are sometimes collapsed in his work, his approach has been defended by Lois McNay on the grounds that he also provides a framework for avoiding determinism, through the concept of the *habitus* as 'generative' in its construction of meaning imposed on to the field; through the concepts of strategy, position taking and trajectory where there is rarely only one route through the 'space of possibles' (Bourdieu 1993); and through the concept of *temporality*, producing changes to the *habitus* and field over time and permitting 'dynamism and mutability' (McNay

2000, 38–40). Beverley Skeggs, despite her criticisms, believes Bourdieu's approach offers explanatory power that is not otherwise available in the sense of linking objective structures to subjective experiences and constructing a metaphoric model of social space (Skeggs 2004a, 21). McNay's assessment of his contribution is that 'it is through developing mediating concepts, in this case agency, that the determining force of economic and cultural relations upon daily life can be made visible and, in this way, the issue of identity can be connected to that of social structure' (McNay 2004, 175). Toril Moi's view is that 'the close, concrete relationship between subjectivity, institutions and social field ... constitutes the original and powerful intellectual contribution of Bourdieu's sociology of culture to contemporary thought' (Moi 1999, 310). It is for these reasons that Bourdieu's work, in particular his linking of subjectivity, institutions and field, provides such a valuable framework for analysing the questions in this article.

Using these concepts, we have argued elsewhere (Liddle and Michielsens 2000b) that the entitlement to power is acquired early in political life by 'traditional' political elites, and is both embedded in the *habitus* of those belonging to dominant social categories and imbricated in those categories as constituent aspects in the perceptions of others. In other words, the practice of power generates a sense of entitlement to power, and a recognition of that entitlement by others. Through the conversion of concrete forms of capital into symbolic power, and mediated by the structures of the political field, entitlements are attached to dominant social categories such as masculinity, whiteness, a middle-class position and educationally-qualified status. In contrast, power deficits are attached to femininity, ethnic-minority status, working-class origins and uneducated status. Thus, feeling qualified and being recognised by others as qualified are part of the same process of identity construction through which entitlements are enacted, embodied, institutionalised and legitimated, or alternatively undermined, restricted, delegitimated and withheld. As Bourdieu says, 'Objective limits become a sense of limits, a practical anticipation of objective limits acquired by experience of objective limits, a "sense of one's place" [as limited]' (Bourdieu 1984, 471). So we may posit that 'feeling unqualified' and experiencing doubts about one's right to exercise power within the political field derives from objective limits, a 'sense of one's place' as limited, whereas 'feeling qualified' and experiencing a sense of one's right to exercise political power derives from objective opportunities and entitlements, a 'sense of one's place' as unlimited.

Within this framework, we propose that a person's 'entitlement' to political power can be understood as having two interlinked components. One is the person's belief, embedded in the *habitus*, in their own right to exercise power: we refer to this as a 'sense of right'. The second is recognition by others of a person's legitimacy to exercise power: we use the concept of 'authority' to refer to the recognised, legitimate exercise of power, conferred by the institutions and capitals of the field. We use the concept of 'entitlement' as a general term to cover both one's own sense of right and other people's recognition of the right to exercise power. Thus, the sense of right is transformed into an authority recognised by others through the conversion of economic, social and cultural capitals in the field into symbolic capital or symbolic power.

Excavating Social Identity in British Politics

The analysis in this article is based on quantitative and qualitative data from a study of British MPs in the 1992–97 parliament which we conducted between 1995 and 1997. The survey and interviews were undertaken as part of the Comparative Leadership Study, an international study of gender and public power examining 27 industrialised countries (Vianello and Moore 2000).[7] For the British study we conducted extended interviews with 10 male and 11 female MPs, matched as far as possible for party, position and age, in which we explored their family, class, educational and organisational backgrounds and experiences in relation to how they achieved their positions of power and their strategies for success.

Questions about how and why 'non-traditional' categories of people enter particular fields of power cannot readily be answered through quantitative analysis alone, although statistical comparisons are invaluable in elucidating overall patterns of demographic representation and change. But to understand how and why changes occur, detailed qualitative analysis of the concrete empirical processes affecting the construction of classed and gendered power in specific institutional contexts is vital (Crompton 1993, 128). Biographical narrative accounts as a method of research and analysis can reveal a great deal about both masculine and feminine subjectivities (Stanley and Wise 1983; Stanley and Morgan 1993; Beynon 2002). What the analysis of respondent narratives does is to allow access to aspects of the field of power, the *habitus* and some of the intermediate structures and processes as they impinge upon the strategies and trajectories of the actors within the political system.

We have chosen to focus mainly on a qualitative analysis of interview material because it can illuminate some of the processes and links involved in the production of political entitlement in relation to a specific social category in the context of a particular political system. Interviews represent a way of accessing all three levels of *habitus*, institution and field as they map on to the individual trajectory and experiences of the agent. In this article we attempt to elucidate the entitlement to power of a working-class male MP belonging to the Conservative (then ruling) party. In order to understand how he saw his political career, constructed his right to power and accounted for his political trajectory, we analyse his interview in terms of the capitals and deficits in the field of power, his narratives of entitlement and his strategies for dealing with the opportunities and obstacles in the 'space of possibles'. We will compare this 'non-traditional' MP on key points with a 'traditional' MP. A detailed analysis of the 'traditional' MP's interview has already been published in a sustained gender comparison with a female MP (Liddle and Michielsens 2000b). In what follows, we will first set out some of the main characteristics of the British political system. We will then summarise the main features of the 'traditional' MP's narrative as a counterpoint for the analysis of the working-class male MP, and will insert quotes from the 'traditional' MP for comparative purposes during the analysis of the 'non-traditional' MP. We will then present an analytical comparison of the construction of class and masculinity in the two cases.[8] We shall argue that working-class subjectivities are constituted as power deficits in the field of Conservative parliamentary politics, and will show how a working-class white

male MP constructs his entitlement to power on the basis of specific forms of capital which do convert into respect and recognition. The names of the MPs have been changed.

Class and Masculinity in British Politics

The key features of the national political institutions in the UK are the 'first past the post' (FPTP) rather than proportional electoral system in the lower house (the House of Commons), bicamerality where the upper house (House of Lords) is subordinate to the Commons, a parliamentary system of representation and a mixed system of government whereby government members may be chosen by the prime minister from either house, but in practice are predominantly made up of members of the elected House of Commons rather than the non-elected Lords[9] (see Sansonetti 2000, 278–279 for international comparisons). FPTP tends to favour larger parties and dominant social categories. In the UK, unlike in federal systems such as the USA, there is a 'single ladder' into positions of power in national politics, the first rung of which is to be selected as a parliamentary candidate for a local constituency (Norris and Lovenduski 1995, 2). Approximately three quarters of parliamentary seats are 'safe' with margins of more than 10 per cent. With the system of FPTP, this means that the party 'selectorate' rather than the constituency electorate chooses the majority of MPs and therefore the composition of those who will exercise political power. So a national politician has to compete in relation to three audiences: the constituency party; the electorate; and if successful, the parliamentary party.

The changing allegiances to political parties over the last half century reflect changes in economic growth, declining deferentialism and increasing social mobility in the decades after the Second World War, featuring changes not only in modes of traditional working-class Conservatism, but also more recent manifestations of 'champagne socialism'. This has been matched by an increasing 'populism' in British politics, at least in terms of appeals by 'professional' politicians to the electorate and rank-and-file party workers, in an effort to reduce the distance between them and to counter the erosion of public trust in 'professional' politics. For examples, we may look to how Conservative party leaders from Edward Heath onwards have been able to capitalise on their status as 'men [sic] of the people' (not forgetting Margaret Thatcher), by virtue of their 'ordinary' social backgrounds. The lowly social origins of the last three Conservative prime ministers[10] would traditionally have been counted as deficits, although both Heath and Thatcher were able to acquire the cultural capital of an Oxbridge degree via their success at grammar school. John Major failed even to acquire educational capital, leaving grammar school with 'O' levels. Thus it may be that the cultural and social capitals that win political recognition at national level are changing.

One of the religious metaphors that Bourdieu uses of himself and others who followed a trajectory from obscure class origins to a position of (intellectual) recognition through the educational system is that of the '*oblat miracule*' (Bourdieu 2000, 34). The miraculous 'oblate', originally an apprentice of the monastic life, is here defined as the 'pupil of humble origins who "gives everything" and owes

everything to the educational system' (ibid., n. 35). Bourdieu claims that political parties, like churches, 'often appoint oblates to lead them' (Bourdieu 1991, 195). He develops the metaphor through the idea of the miraculous exceptions who gain entry to the field against the grain of their class *habitus* and who are 'bedazzled' by the institution that gives them entry to a new, more powerful world. In the same context, Bourdieu talks about the 'space of possibles' (2000, 34) which acceptance into the elite educational institutions opens up. In the political field too, educational capital is one of the means by which deficits in family capitals may be compensated. In relation to the British educational system, Margaret Archer draws attention to differences between the centralised structure in France after the reforms of the Napoleonic code, and the decentralised British structure that allows for variability (Archer 1983 and 1993), and therefore creates room for a more open 'space of possibles' and more opportunities for the 'miraculous oblates'.

Despite the variability and potentially greater openness in the British education system, however, Norris and Lovenduski show that in the field of politics 'the typical candidate in all parties tends to be a well-educated, professional white male' and as a result 'the traditional composition of parliament' is still 'overwhelmingly middle-class, male and white' (Norris and Lovenduski 1995, 87). In the 1992–97 parliament, middle-class candidates made up 99 per cent of the Conservative party and 92 per cent of the Labour party. Males constituted 85 per cent of candidates in the Conservatives and 74 per cent in the Labour party. And candidates were 67 per cent graduates in the Conservative party and 72 per cent in the Labour party (ibid., 88). As Moi (1999) points out, the distinctions in entitlement based on gender, class and 'race' become embedded not only as dispositions in the *habitus*, but also become attributes of the field. For example, masculinity is not just an attribute of masculine *habitus* that is taken into the armed forces, but the military is itself a powerful arena in which the embodied cultural capital of masculinity can be invested and legitimated, because it 'fits', and is recognised by, the *nomos* or rules of the field. The military field, like the political field, is gendered masculine as a field of power. Entitlement and legitimacy are embedded in both the *habitus* and the field.[11]

Charles Smythe: The 'Traditional' MP

Charles Smythe is a classic example of a 'traditional' Conservative MP whose social identity represents the gendered, classed and 'raced' demography of the British parliament: white, professional, middle class and educated at public school and Oxbridge. Our previous analysis (Liddle and Michielsens 2000b, 131–136) showed that he saw himself and was seen by others as having a 'natural' entitlement which needed no explanation. Charles Smythe constructed his political career as 'normal', not as 'successful', because it was what the men of his family 'naturally' did. When asked to account for how he got into politics, the important decision points and the major hindrances and facilitators along the way, he was completely unable to do so. He had no insight into the process of his decision-making, he had 'no strategies' and encountered 'no obstacles'. Getting on the approved list of the party 'wasn't difficult'. It was by 'luck' that he was chosen in the first seat to which he applied, a safe seat which was likely to assure him a parliamentary career for as long as he wanted it. It was, in his view, simply a 'natural' and 'normal' career trajectory, not

particularly noteworthy in terms of either personal success or structural power. Charles' effortless and unconscious authority and entitlement to power can be understood as doxic. It is embedded in practice and instantly recognised as legitimate by others through his political *habitus*, but he was quite unable to articulate the process by which his entitlement was constructed or acquired. We concluded from this analysis that the process through which this middle-class professionally-educated white man held entitlements to power was revealed through its absence in the narrative of his political trajectory.

Kevin Briggs MP: 'NQOC'

The acronym 'NQOC' stands for 'not quite our class'. It was told to one of us by a man who had been to a public school where it was in common usage.[12] The acronym has particular resonance for Kevin Briggs in some parts of the political field, although, as we shall see, not all. Mr Briggs is what used to be thought of as a contradiction in terms: a Conservative MP from a working-class background. He is in no sense a 'natural' MP like Charles Smythe, nor did he follow the 'traditional path of attending public school and Oxford or Cambridge' (Norris and Lovenduski 1995, 10). Notwithstanding the phenomenon of working-class Conservatism, working-class representation among Conservative MPs has never been more than 4 per cent, and has never exceeded 1 per cent since the 1951 election (Norris and Lovenduski 1995, 97).

Capital accounting in the field

Kevin began his parliamentary career in 1983 at the age of 31. He retained his seat in two further elections, and reached the level of Parliamentary Private Secretary (PPS). In between gaining his degree and winning his first seat, he worked for 10 years in various professional jobs. His father was a skilled manual worker who reached the level of foreman, while his mother did a range of different jobs before marriage, including dinner lady and dressmaker. His parents were from a 'very, very poor background', they 'didn't have a terribly good education' although they wanted their two children to be educated and the family lived in a council house in a 'rank Labour area'. He was brought up in a practising Catholic family with strong religious values, which he still holds. The family showed no interest in politics, although Kevin himself knew he wanted to be an MP from childhood, taking part in mock school elections and joining his local Conservative association at 16. The contrast with Charles, who attended a major public school, whose father was in the foreign service and whose social milieu constituted the political elite, could not be more marked.

Kevin Briggs inherited little recognised cultural or social capital, and even less economic capital, from his family. Without Charles Smythe's politically active family, cosmopolitan relatives or access to and knowledge of political and international elites, he had no sense of belonging in politically influential networks, and no 'naturally absorbed' understanding of what it meant to exercise political power. He attended a Catholic grammar school followed by a college of technology, which

provided some accredited cultural capital that allowed him to enter professional occupations but without significant convertibility into symbolic value in the political field. Nevertheless, when asked who shaped his ideas and expectations in relation to his political life, he has no doubt that it began with his entry into state schooling:

> I owe everything to my infant school. At the age of five, the teacher called my mother to say 'Do you realise that your son has got severe learning difficulties?' I had a very bad stutter. My sister used to have to interpret for me. For three years I went to speech therapy. That's why I'm not a Cockney, which is really what I should be. So it was 'How now brown cow' and all of that. It had a huge influence on me. I owe those teachers so much, they were very dedicated teachers.

Here we see Kevin's first 'lucky break' in the 'field of possibles', a chance intervention by the educational system that changed his life. This intervention brought about the reconstitution of his 'inherited linguistic competence' (Bourdieu 1984, 65) from one that would have instantly signalled his inferior class position to one which disguised it. He began to develop and delight in his newly acquired communication skills, taking part in school shows, acting, learning to project his voice and develop arguments, and all of this new competence and knowledge supported and encouraged by his parents who had never had the opportunity to acquire it. Kevin acquired the legitimate cultural capital of speaking without an identifiable working-class accent,[13] and began to talk and perform like the middle classes, marking the first step on the road to social mobility. What is visible here is the beginning of the verbal competences of the political *habitus* (Bourdieu 1991, 176), something he held in common with Charles, who identified 'listening and talking' as the key activities for the exercise of political power.

But Kevin Briggs had another sort of cultural capital that was not shared with Charles: a form of capital that did not receive recognition as legitimate among the political elite, but which constituted a specific localised form of knowledge about a class and community that came to have particular purchase in the socially mobile context of post-war Britain and the changing allegiances to political parties that went along with it. 'My mother came from a very, very poor background, one of eleven children, my father's family had no money. ... If you are "hungry" in life, I don't mean literally, and nothing has come easily for you, then you achieve things.' What Kevin achieved was an escape from his 'historical positioning' (Skeggs 1997, 12), along with the desire to change things, to represent the people of his class and community not as a Labour politician, by whom he felt they had been let down, but as a Conservative. This gave him a unique set of credentials and cultural knowledge which was not easily matched by 'traditional' middle-class Conservatives applying to marginal seats in working-class parliamentary constituencies.

In the early stages, being a working-class Conservative in a working-class Labour area, 'it meant that Conservatives were few on the ground, so I quickly rose up through the ranks' of the local party, suggesting that here his background was an asset. Joining the party at 16, he became ward chairman 'in no time at all', stood twice for the local council, once for the county council and was accepted as Conservative parliamentary candidate in 1979, all without electoral success. But he

received much support and encouragement from the local, rather beleaguered Conservative party, who told him when he moved to another area, 'Oh you are marvellous Kevin, don't leave us, if you go away the organisation is going to collapse'. Of course, he says, this did not happen, but 'it's nice to hear people say that actually you can do things', revealing the need of the 'self-made man' for validation of his political abilities, rather than his entitlement to political power constituting a natural and self-evident part of his *habitus* as was the case with Charles.

On moving in 1981 to a nearby 'new town' to which many of his family and neighbours had moved, and which also constituted itself as a socially-mobile working-class community, his electoral success took off. He was elected to the local council 'immediately', became vice-chair of one of the important committees and was selected as the Conservative parliamentary candidate for a nearby Labour constituency in 1982, winning the seat 'unexpectedly' in 1983; he thought it would be 'third time lucky, but it wasn't, it was second time lucky', his second 'lucky break' in the 'space of possibles' of the political field.

How he sees his political career

In order to understand how Kevin sees his political career, we first need to understand why he identified with Conservative rather than Labour policies.

> It's simple. Everything was Labour, the council, the GLC, the government. They were very good at describing the problems, but they had no solutions. I saw the area I loved deteriorating—roads, streets, education, social services. At the age of eleven I couldn't articulate what socialism and capitalism were about, but I wanted to oppose those who were running things. I took them all on. I challenged the sitting Labour MP who had been here for 32 years. I can see him standing there saying '*You, you* come to *my* palace at Westminster?!'.

The roots of Kevin's Conservatism lay in a conservative Catholic upbringing, Labour complacency and the desire for social mobility as part of the newly educated former working class who rejected second-class status and aspired to a middle-class lifestyle. This historically specific upward mobility created both a vision of opportunity and a mistrust of its reality. As a result, Kevin does not see politics in any sense as a 'career' in the way the 'traditional MP' did. In response to a question about how much he felt in control of his career, Charles, for example, explained that 'Politics is as natural to me as going into medicine, which is another sort of family trade'. Kevin, however, challenged the terms of the question:

> I do not believe anyone has a career in politics—here today and gone tomorrow. If anyone sits down and thinks, this is what I'm going to do and eventually I'm going to become a Minister—it is ridiculous. Many good intentions but all sorts of things get in the way. ... I'm one of only 300 or so Conservative Members of Parliament, you've got a tiny, tiny chance of ever getting here.

So his election was far from 'natural', 'normal' or 'ordinary', which is how Charles constituted his political trajectory. Kevin's trajectory 'took an extraordinary turn'. It was 'a dream come true'. And although he is pleased with his rise to PPS, he is still intensely ambitious for more power.

Strategies

Kevin's political progress is conceived, not as a natural progression like Charles Smythe's, but as a conscious decision, strategically planned but within a 'restricted market', and with limited expectation of success. His strategy is punctuated by self-doubt and framed by self-imposed limitations. The first conscious strategy was to get recognition for his political abilities in the local party and in local government. The second was to undertake a national apprenticeship by applying to unwinnable seats, one of the recognised ways of moving up the ladder to a safe or less marginal seat. To get on the approved list 'wasn't easy', he says (in contrast to Charles' experience that it 'wasn't difficult'). In a stark example of Kevin's self-doubt and his unfamiliarity with the 'rules of the game', he was quite unable to assess his own or his competitors' performance.

> You have to be sort of screened by Central Office, they may say 'All right' and then you go away for a weekend, where you are watched and you are broken down into groups of eight and you go through a number of tests. Now I didn't think I had passed my weekend. It turned out I was the only one who had passed the weekend, but I was very surprised because I was with people who I thought were far cleverer than I was, much grander jobs than I had. But I was the one who actually got through that weekend. So whether it is self-deprecation, in which probably I don't indulge so much now, I don't know.

His third strategy was 'communication', building on his long-appreciated acquisition of and pleasure in his verbal skills: 'If you are able to relate to people, communicate your message, then that's a key to success. I think I've been able to do that'. Here we can see the development of a crucial part of the political *habitus*: what Bourdieu refers to as the skills of 'particular language and political rhetoric', including the 'popular orator' for relations with the non-professionals, and the 'debater' for relations with the professionals (Bourdieu 1991, 176). But at this point, despite Kevin's long-standing ambition, he applied only to Labour-held seats in his own region of the country, thus restricting his chances of gaining a seat both geographically and electorally. This was a doxic act, a strategy 'not based on conscious calculation but rather result[ing] from unconscious dispositions towards practice' (Bourdieu 1993, 17–18). Our evidence for this judgement is that Kevin never mentioned limiting himself to local constituencies despite being pressed to identify his success strategies and to explain how he had succeeded in entering parliament. This is one of the few places where Kevin aligns with Charles in doxic practice, except that Charles could not articulate any strategies whatsoever.

The seat that was offered to Kevin and that he accepted in 1983 was not even on the list of marginals. He did not expect to win, and the party was taking no risk in selecting him. Kevin's feeling of entitlement combined with his self-deprecation did

not permit him to take advantage of the accepted Conservative party culture of 'carpet-bagging', but framed his 'sense of place' as limited to working-class constituencies in the London area—a strategy reminiscent of the working-class artists in Bourdieu's (1996) *The Rules of Art* who chose regional rather than cosmopolitan locales and marginal rather than mainstream genres in which to compete.

The local committee had not intended to choose him; they had settled on a 'number one male tennis player'. Kevin's view of why he was chosen is that 'I was young, I was engaged to be married, I think it was the right image for them'. His embodiment of heterosexual respectability and his commitment to marriage and family values helped his candidature, as did his youthful energy and promise to 'take the battle onto the streets'. Although Kevin's class background and image failed to fit the party in the way the tennis player's did, what Kevin did fit was the constituency. He was 'one of us' among the voters. The 'grass roots' were his own roots, in contrast to the social origins of the party hierarchy. Kevin's cultural and social capital had more value and convertibility *in that particular social and regional locality* than that of a 'traditional' Conservative candidate, in that Kevin's capitals of local identity, working-class origins and achieved social mobility were recognised as legitimate by those specific voters in that particular sector of the political field. We suggest that this is why Kevin limited himself to constituencies in which he 'belonged' and felt a strong sense of community connection, a self-imposed limitation based on the restricted cultural and social capitals to which he had access. And we suggest that this cultural and demographic 'match' in social identity between candidate and constituents is what the selection meeting recognised when they changed their minds about their choice of candidate.

Hindrances

When asked about the barriers to his political career, Kevin lists class snobbery, the wrong education and a lack of the right social contacts: a clear reference to the deficits in his economic, cultural and social capitals.

> JL: What do you think were the most important factors that hindered your career in politics?
>
> KB: Well, I'm sure there are some people in the House of Commons who think, 'Oh, fancy someone like that being a Member of Parliament, what is this place coming to?'.
>
> JL: What does 'someone like that' mean?
>
> KB: There is still a little bit of snobbishness. Some people are still a bit patronising. And that may have been a barrier for me to get on.
>
> JL: How do you deal with that?
>
> KB: I try not to let it show [laughs], but it annoys me. You do become very hard actually. As time goes on, you become hardened to all that. ... I think it's extraordinary that really, if I had been clever enough to go to Oxford or Cambridge and then come out with a first class degree and known the right people, then I might be in a different position to the one I'm in today. ... My course might have been a little bit different if I had been to, gone to—(pause)—
>
> JL: In what way?

> KB: Well, if I had been to one of the best universities, I might have met the right sort of people and that might have helped me with the party network here.

This compares with Charles' simple answer when asked what obstacles he had to overcome in his political career:

> CS: I haven't … You don't have to overcome things.
> JL: But how *did* you overcome obstacles?
> CS: I didn't have to.

Despite his Conservative politics, Kevin clearly sees his class background as inhibiting his promotion and acceptance in the parliamentary party. He understands the social and cultural capital deficits he has brought with him into parliament as the root of the symbolic violence enacted against him by his colleagues. He consoles himself for his failure to rise above PPS by constituting himself as an effective constituency MP, for it is only in his local constituency that his particular working-class capitals have symbolic value. 'I have not wasted my time as an MP, we made a difference to the lives of thousands of people. … That's why I've been elected to this constituency on three occasions.'

But Kevin certainly feels he has been hindered from fulfilling his potential. These hindrances are not related to family life, despite his having five children; quite the reverse, he sees his job as MP as 'short-changing' his wife and family. But Kevin's hindrances derive from not being recognised in the party: 'You have to recognise your limitations. I'm not saying what mine are, I'm not that self-deprecating. But there are a number of things I think I could do well, but I haven't been given the opportunity'.

These symbolic forms of violence have had their effect. Although he does not 'indulge in self-deprecation' so much now, his belief in his own political judgement and authority have developed only slowly, and he still feels a sense of betrayal and exclusion. But his exclusion is what has prompted his reflexivity—Bourdieu's 'lucidity of the excluded' (cited in McNay 2000, 69)—allowing him to reflect and make a conscious decision to change his approach: 'You learn with situations really. Over the years I made many mistakes in trusting people whom I never should have trusted, and as you make more and more mistakes, you know, all of that really has an effect on you. It has changed my style'.

Narrative of entitlement: How he sees his right to represent

Kevin's narrative of entitlement is strongly centred on 'being a local'. To 'be a local' in the Labour-held towns in which he lived and stood for election meant being proud of his working-class background and heritage, having experienced the hardships and deprivations associated with it. It meant being in touch with the aspirations of his own community at that particular time, their desire for respectability, their wish to own their own houses. Kevin had a passionate message to communicate to the working-class community from which he had emerged, which was that Labour complacency had resulted in the deterioration of the community infrastructure, but that, like him, the community could improve its conditions if

they abandoned Labour orthodoxy and turned instead to Margaret Thatcher, who 'changed this country and changed the world. I mean it is all there to see. She has changed the other political parties'. He attributes his success to Thatcher, and he compares himself and his background directly with the subsequent prime minister, John Major, compensating for his misrecognition in the parliamentary party by acknowledging the recognition from his party leader:

> I've got no chip on my shoulder about being—I mean the Prime Minister always says he comes from a working-class background, he wants the society to be at ease with themselves. I couldn't care less about the class system. I decided, being working class, living in a little terrace house, that I was every bit as good as the next person.

But where did this sense of right come from, this belief that he was as good as the next person? It rested not only on a class-based, upwardly aspiring local identity, but also on a specific ethnic and national identity in which a working-class Londoner could see himself as having more entitlement than foreigners, even if he had less entitlement than those with a 'natural' right to rule the country. It came from a conscious national identity sustained by a belief in the superiority of British political institutions.

> As a youngster I was attentive to what Enoch Powell seemed to represent. I am not talking about immigration now but in terms of patriotism. He seemed to be a very patriotic figure. I'm thinking about the Common Market which I felt very strongly about because I voted no in the 1975 referendum. I thought that we lost a lot of our sovereignty. ... We are the mother of all parliaments, our democratic process is envied throughout the world. The way our politicians are selected is envied by everyone frankly.

His sense of right also comes from a belief that only women can care for children, while men are biologically and morally incapable of doing so, thus claiming priority, though not exclusivity, for men to engage in the public world of politics:

> Women are totally different to men. I don't believe in the equality of the sexes. I actually think that women are superior to men and that can be demonstrated by the fact that they live longer and that they are able to have babies and they take stress and strain much more easily than men. ... I mean, I'm only saying this as a man: I think it's preferable if women look after their babies. I think we are totally different and men are nowhere near as good as women are with babies. Presumably God made us this way or men would have the babies. I don't quite see how we overcome that, I mean we are physically different and the things that flow from a woman having a baby are different, so that means that the amount of time and the amount of dependence has to be different for women and men. But because women live longer and take the strain better, it really doesn't matter when they get here. I've got no problem if women out-number us in this place as long as they're good.

This 'different but superior' approach presumably helps to resolve the contradiction of his inspiration, Margaret Thatcher, being a woman ('she had to be not only as

good as any man, but so much better'). And despite his man-made view ('I'm only saying this as a man') that 'it's preferable if women look after their babies', when asked why there are so few women in parliament, his answer is not to attribute it to the sexual division of labour but to blame the women in his party: 'It's very easy, on the Conservative side, it's because women predominate on the selection committees and they don't pick women'. Norris and Lovenduski (1995) have shown that this explanation is a myth. And against all the evidence, Kevin claims that 'In the Conservative party at the moment, if you are a woman you've got a far better chance of becoming a Minister than if you are a man'.

When asked if he thinks there is a difference in leadership style between men and women, he is defensive and patronising:

> Mm, I've got to be careful what I say. Oh there is a difference of style. Women I think do use by and large their femininity, all of that guile. I am not saying they burst into tears if they don't get their own way, but I think yes, they do.

But equally, it may be said that Kevin uses a stereotypical form of masculinity to get what he wants. When asked about his own leadership style, it is clear he is directive if not authoritarian:

> I am not a consensus politician. I don't believe in having big committees and everyone droning on endlessly giving their point of view. You need a bossy dominant person to chair the committees and try to pull things together. I'm not talking about dictatorship, but I think you need someone to have some sort of vision and structure to pull things together or you don't get decisions taken at all.

And he admits that his wife finds he has 'become more and more bombastic'. This is no effortless, 'doxic' form of authority such as is held by the 'traditional MP'. Charles' response to the question on leadership and how he gets other people to do what he wants lacks any sense that this might be problematic: 'The simplest way to get anybody to do anything is to ask them', suggesting that he has rarely encountered resistance to his leadership and does not have to engage in manipulation or coercion to get people to follow his lead. But Kevin's approach is a conscious and strategic kind of male dominance behaviour, suggesting that he encounters resistance to his leadership and retreats into authoritarianism to get his way. (And of course Margaret Thatcher, without the doxic authority of masculinity, exhibited all these authoritarian and bombastic qualities.)

This is also the strategy Kevin adopts with the opposition party.

> I give my opposition no platform, no quarter at all. I can give—not as good as I get—but better than I get. That might sound a bit pompous, but that's how it is. So I take them on, I wipe the floor with them. We've been successful as a result of that. If you are cowed by the opposition, then you don't get on.

Here we can indeed see the politician's *habitus*, where debating skills are deployed in verbal combat with the professional foe (Bourdieu 1991, 176, 196; Thompson 1991, 27), not in the interests of 'truth' but according to the logic of 'denunciation'

(Bourdieu 1988, 9). Kevin's bombastic style may be described as stereotypically 'masculine', and yet Charles' is very different while hardly meriting the 'feminine' label. Bourdieu's characterisation of the 'political field' is most clearly recognisable on the floor of the debating chamber, but this is not the only venue of significance in the 'political field'.

Nevertheless, although it is true that 'masculinity is not a single pattern' (Connell 1995, 205), it is also true that 'public politics on almost any definition is men's politics' (ibid., 204), the dominant culture of which has been described as 'macho, adversarial' (Brown 1996, 33), 'aggressive and confrontational' (Childs 2004, 181) and reproducing an 'old boys' club' (ibid., 184). Kevin is not an 'old boy', but he has had no difficulty adopting the combative *habitus* in his approach to politics, scorning the 'feminine' style of negotiation and compromise used in consensus politics. However, 'public' is surely the key term here. 'Foes' in the form of the 'opposition party' may be trounced, but this does not work too well with 'friends' and those whose support has to be won. Kevin clearly recognises his failings in this particular skill of the political field, a skill whose mastery has enabled Charles to forge alliances and generate compliance with his wishes.

Kevin sees being an MP as a position of great power, acknowledging his entry to the political elite, and is still 'bedazzled' (Bourdieu 2000, 34) by his membership in a way Charles could never be. Charles is one of those who say MPs have no power, but Kevin disagrees:

> I've got enormous power as an MP. All my colleagues who say they've got no power at all, it's rubbish! I've got lots of power and I love it. But it's exercising it well. ... There are a limited number of MPs, and MPs make the laws which affect everyone. ... I mean during your lifetime there aren't that many people who are MPs, so of course it must be an elite.

Despite his elite membership, however, the limits of Kevin's reflexivity are delineated by his lack of awareness of the process of political management through strategies such as social construction and normalisation that Charles used to such effect. Where Charles talked about political influence in terms of 'presenting something in an attractive way or trying to make it appear to be natural', Kevin's only conscious strategy of political influence is 'bombast' and 'domination', suggesting that he bears no 'natural authority' in the parliamentary party, and that he is himself excluded from much of the knowledge of how to get people to do what you want that circulates among the political elite. As he says, 'I have seen others getting influenced ... I have been thinking Oh my God, how the hell did they do that? I'd better get in on the act!'.

Kevin's construction of a narrative of entitlement to political power centres on a socially mobile working-class London identity, patriotic white English national identity and dominant heterosexual masculinity, forms of class, gender, sexual, ethnic and regional identities from which he can draw symbolic capital in relation to unspecified 'others', whether they be women, foreigners, homosexuals or indeed 'carpet-baggers'. His sense of being qualified for the job is built upon and bolstered by these 'other' identities. But his narrative presents him with an unseen contradiction. He believes that the British model of parliamentary democracy has allowed

'someone like him' to join the political elite: 'I personally think it's great the way the British way of life enables people to come forward to become Members of Parliament. Anyone can become a Member of Parliament. I am anyone and I am a Member of Parliament'. But despite his doxic practice, Kevin does not recognise that 'someone like him' is unlikely to become a Conservative MP outside the restricted currency market of a working-class constituency in his specific local community, because his economic, cultural and social capitals produce symbolic capital deficits in the party nationally and in parliament as a whole. Kevin's self-limiting practice paid dividends. He played the game with skill, and the *habitus* he developed was well adapted to this particular corner of his chosen field. But he never went 'carpet-bagging' because his capitals were not convertible into symbolic power in other parts of the country, not even in working-class areas. His sense of right to represent others derives from the sites of his subjective respectability, but it is a restricted entitlement that is recognised and legitimated only by his own community. His symbolic capital deficits do not give him the right to represent other communities in terms of social class or geographical region. His self-imposed limits show that, doxically, he knows this. And in case he should attempt to stray outside these limits, the knowledge is enforced by the misrecognition and symbolic violence that he encounters from his parliamentary colleagues.

Kevin's perspective of the improbability and insecurity of a political 'career' is framed by his capital deficits, his consequent 'non-traditional' route into parliament and his application to and acceptance in 'unwinnable' seats. In stark contrast to Charles Smythe, the 'traditional' MP, politics for Kevin is 'extraordinary', not 'normal and natural' because of its absence in Kevin's cultural family history, nor can it be seen as a 'career' because of the unpredictability of standing in seats held by the opposition. Kevin's understanding of his political trajectory as *out of* the ordinary reflects not an inability to account for his entry into national politics, but the uncertainty, ambiguity, peripherality and boundedness of Kevin's position as a contestant in the political field, the contradictions of his *habitus* and the limitations of his doxic political strategy.

Constructing Class and Masculinity

Charles and Kevin both began their political careers in earnest in 1979. But the two MPs' views of the process of political selection could not be more different. Charles encountered no obstacles and is unaware of the privileges conferred by his capitals, whereas Kevin faced innumerable hindrances, and identifies them without hesitation as capital deficits. Charles does not experience being an MP as a position of privileged or unusual power and displays a natural embodied authority and direct, effortless approach to leadership, whereas Kevin is highly conscious that he has entered an 'elite', 'loves' his power and exerts his authority through a bombastic and dominating leadership style. Charles had no strategies, or none he could articulate, but Kevin's strategies entailed explicitly broadening the social boundaries of his political activities through unsuccessful apprenticeships at local and national level, and developing his skills of communication. Charles conveys a feeling of belonging in the political field, but in Kevin's interview there is a sense of both inclusion and exclusion. Charles' narrative never explicitly articulates political

entitlement, it simply assumes it, but Kevin's reveals a struggle between his ideological belief that he has every right to be an MP, and a persistent questioning of this right that gnaws at his legitimacy.

Both Charles' and Kevin's sense of right derives from their *habitus*, but in Charles' case his *habitus* presents an embodied natural authority and a 'doxic' entitlement of which he is completely unconscious and which he cannot articulate. Kevin's *habitus* is ambiguous; he can identify and articulate the sources of his entitlement but he also expresses their contradictory and fluctuating nature. Kevin is conscious of having to construct for others a convincing narrative of his entitlement, whereas Charles carries his legitimacy to hold political power in his 'bearing, accent, attitudes, aptitudes and ways of being' (Wacquant 1993, 31–32). This embodied entitlement is recognised as legitimate by others in local, national and international contexts, among voters, constituency party and parliamentary colleagues, giving Charles unlimited opportunities, a 'sense of his place' as unlimited and an unquestioned and unquestionable *feeling* of entitlement. Charles' symbolic power derives from who he is: a white middle-class man from a privileged background educated in the best institutions in the world.

Kevin Briggs' *habitus* is constituted by the conservative beliefs of his religious upbringing and education, including his views on the family and on the natural God-given roles of male and female, and by his identity as a white working-class Londoner brought up in poor circumstances and inadequate housing. A key process, etched in his memory, in the development of his sense of right to aspire above his 'historical positioning' derives from the recognition and resolution of his early educational needs. This intervention made such a strong impression on his young mind because it reconstituted his *habitus*, enabling him to expand his cultural performance from the confines of the family to the wider location of the school ('my sister used to translate'), and subsequently across the class ('I'm not a Cockney, which is ... what I should be'). It is important because of the complex disposition it produced in relation to his place in society. The 'objective limits' of Kevin's working-class childhood produced his sense of place as 'restricted', but the reconstitution of his cultural competence and the opening up of the 'space of possibles' produced a sense of entitlement to cultural and social mobility. This ambiguity in Kevin's entitlement to power can still be seen in the persistent expression of self-doubt, in conjunction with an unfulfilled ambition. It is reproduced in the political field where he is both 'recognised' and 'misrecognised' in different sites of struggle. Kevin's legitimacy, like Charles', derives from who he is: a patriotic, white Englishman, a socially mobile, working-class Londoner and a masculine, dominating heterosexual. But Kevin's *illegitimacy* also derives from who he is: for he is 'NQOC'. Kevin's symbolic value *changes* depending on the audience, on the field or the particular fraction of the field, on who it is that gives or withholds respect, reproducing and reinforcing within him an ambiguous, contradictory and fluctuating subjectivity and feeling of entitlement.

Conclusion

In the case of the two MPs, Charles and Kevin, we were able to conclude, using Bourdieu's categories, that social identity is constructed through the differential

distribution of capitals in the social fields of its production, mediated by the strategies and trajectory of the agent in relation to the 'space of possibles' within the specific institutions of the political field. Entitlements are imbricated in specific social identities and are embedded in both the general social field and in particular specialised fields of power, including the political field. As Moi points out (1999, 309–310), 'only a field can grant symbolic capital' and 'the field-specific competition generates its own specific habitus in agents competing for field-specific symbolic capital'. The institutions of the political field are gendered and classed as masculine and middle class, providing legitimacy to middle-class male politicians, but this does not mean that all professional politicians are constituted by these dominant social identities, since the 'space of possibles' allows opportunities for non-traditional contenders, including Bourdieu's '*oblats miraculés*', to gain entry to political institutions, particularly through the educational system. But the *habitus* of those with 'traditional' identities and that of politicians of 'miraculous' provenance are differentiated with respect to their sense of entitlement. This is evidenced by the 'fractured' *habitus* of the '*oblat miraculé*' in contrast to the less conflicted, more insouciant *habitus* of the 'traditional' occupant of the field of power. Thus we concur with McNay and Skeggs that Bourdieu's framework lacks a concept of 'multiple subjectivity' (McNay 2000, 56, 72) and that he 'underestimates the ambiguities and dissonances' in how agents occupy positions in the field (McNay 2000, 54), particularly in relation to those 'whose positions are not legitimated by dominant symbolic relations' (Skeggs 2004b, 86).

The field too must be seen as 'fractured' in terms of sensitivity to differential types of *habitus*, as evidenced by the differential symbolic value attached to the oblate's capitals in different sectors of the political field, producing capital deficits in the parliamentary party but symbolic power in the constituency; and the field must be seen as fractured not only in social space but also temporally, where changes are witnessed to the value of symbolic capital in the political field over time, as well as at different stages of a politician's trajectory.

So although outcomes, *pace* Archer, are not predetermined, and the space of possibles allows for changes in fields and in *habitus*, the *oblats miraculés* are still miraculous *exceptions*, and the reproduction of dominant identities in powerful positions is still predominant in political institutions. The example of the 2006 leadership election in the Conservative party reinforces this point. The final stage of the competition was between two candidates, David Cameron and David Davis, who may be seen as examples of the 'traditional' Conservative MP and the 'oblate' respectively. Davis is the son of a single mother, brought up in a council house, who became company director of a large corporation through the educational route of grammar school and a first-rate but not elite university. In his appeals to national party members who would decide the vote, he made no attempt to conceal his 'illegitimate' background; on the contrary, he drew attention to it as a way of signalling his break with the 'traditional' values and policies of the party which were understood to be inimical to the general population, who saw them as old-fashioned and out of date. Davis was initially in the lead in his bid for the highest position in the party, and clearly reckoned on his 'non-traditional' background being read as an asset in the party nationally. Cameron went to Eton and Oxford, was a member of a number of exclusive clubs (including one that excluded

women) and his father was a stockbroker. His claim to 'populism' was based on his relative youth. But Cameron came from behind to win the election. Despite the opportunities available in the field for the miraculous oblate, it appears that the symbolic capital attached to elite educational institutions and wealthy middle-class origins does not yet represent a power deficit in the field of Conservative party membership.

So to answer the questions posed at the start, we would argue that the reason people from different social categories see themselves as differentially qualified for public office is that subjectivity, *habitus* and feelings of entitlement are closely related to the social relations expressed through differential capital holdings within the general social field of society and the specialised social field of politics, as well as the social practices generated by the limits and opportunities—the 'universe of possible options' (Bourdieu 1993, 32)—of the fields. 'Legitimate' contestants carry with them the symbolic power derived from the capitals attached to class, gender (and other) positionings in the general and specialised social fields. The 'image or reputation for competence, respectability and honourability' (Bourdieu 1984, 291) into which those capitals have been converted is deeply imbricated in the *habitus* and the entire 'way of being' (Wacquant 1993, 32). Their sense of entitlement is doxic. 'Oblates' develop a sense of right in themselves in a more fractured way, drawing on the subjective sites of their respectability and taking recognition from specific sectors of the field that produce symbolic power. Their sense of right is recognised by others through the conscious deployment of those capitals which *are* convertible into an image of respectability. Oblates challenge their status as unqualified by focusing the contest on social fields where their capitals are legitimate, although this can mean confining the contest within the boundaries of the restricted capital markets that provide such recognition (Bourdieu 1984, 95). The working-class male drew on his masculinity and ethnicity, and turned his limited class capitals to advantage by restricting his contest to the social and geographical sites of struggle in which his class capitals brought respect.

Thus, we would argue that the process of political recruitment reproduces the social composition and structure of the political field to a significant, though not fully determining extent, because of the fractured nature of the field, the social relations of power within the field of politics, in which differential symbolic values are attached to specific (gender, sexual, class, ethnic, national, regional) social identities. We would suggest, therefore, that Norris and Lovenduski's (1995) 'supply' and 'demand' are better seen as different aspects of the same complex processes through which entitlements to power are generated in the institutions of the political field. Within this framework, 'supply' may be understood as the generation of the 'sense of right' to represent others, while 'demand' may be understood as the authority recognised by others to be a political representative. But both the sense of right and the authority to hold political power are produced by the interconnected practices and processes linking *habitus*, field and institutions together.

In terms of strategy, we would argue that social bias cannot be eliminated from the process of political selection through exhortation, training for 'illegitimate' social groups or the reform of selection procedures alone, because the assessments that are made of a person's 'competence, respectability and honourability' are deeply

imbricated in the very social identity of that person—the social categories to which they belong, their subjectivity and the images portrayed by these social categories. Candidates are not always judged solely on the basis of their individual political skills; they are also judged on the symbolic value of the economic, social and cultural capitals they bring to the political field. These capitals are not distributed randomly across social categories. They reflect the concrete and symbolic power which those social categories hold in the field, and are attached to specific forms of social identity, such as masculinity, whiteness and middle-classness. Social identity *signals* to a considerable though not exclusive extent the distribution of capitals in society.

The Conservative party has reviewed its assessment procedures in relation to gender bias, by bringing in an occupational psychologist to draw up an MP's job description, design practical tests and exercises to reveal candidates' competencies and train selectors to make objective judgements (Childs 2004, 209–210). But as Childs points out, 'the expectation that women will be, as a consequence, selected has not been fulfilled' (ibid., 210). Why not? Why do strategies that require anything less than compulsion fail to produce results?[14] We would suggest that job descriptions and assessor training, while necessary and welcome, will not resolve the problem of social bias, because decisions are taken, not only on the basis of objective competencies, but also on the basis of the symbolic value of gender, class, sexual, ethnic, national and regional identities. The most intractable problem is not the failure of assessors to be objective (although this may also be an issue), but the differential distribution of capitals among specific social identities in the field. And it is only through the social *practice* of more and more non-traditional candidates, including 'oblates', entering the field, challenging the patterns of capital distribution and enacting political authority through recognition by constituencies of people who form a conscious 'social and collective group' (Lovell 2003, 10) that changes in the symbolic value of these political actors can be achieved.

In order to do this we need to ask, not only what interventions may reform and transform the institutional structures and practices of the (fractured) field of political power, such as selection processes, quotas and proportional representation, but also what interventions may be made at the level of cultural representation, such as media representations of male and female, middle and working-class politicians, and what interventions may be made at the various levels at which the (fractured) early *habitus* is acquired, and then consolidated or transformed through the educational and employment systems. Institutional changes are a good place to start, but institution, *habitus* and field must all be addressed.

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Notes

1. 'Not quite our class.'

2. 'Social bias' is the term used by Pippa Norris and Joni Lovenduski (1995). We would prefer the term 'demographic imbalance', but in the context of engaging with their approach to political recruitment, we will deploy their term to avoid confusion.

3. But note that David Cameron has proposed 50 per cent female representation on the national 'approved list' of candidates.

4. It must be acknowledged that Bourdieu too draws heavily on economic metaphors in his sociology of domination. Where Norris and Lovenduski use the language of supply and demand, Bourdieu identifies types of 'capital' which may be 'accumulated', 'traded' and which may have 'profits' etc. This language fuels accusations of economic determinism (Honneth 1986) and has occasioned reservations among some feminists who have engaged with his sociology (Siles 2002; Silva and Edwards 2003; Skeggs 2004c; Hughes and Blaxter, forthcoming). However, our understanding of Bourdieu's concept of capitals is that they are rooted in the social relations of the field, thus providing a more socially rather than economically based theorisation.

5. 'General' social field is Moi's (1999) terminology, taken from Beate Krais (1993), in Moi's critique of Bourdieu's under-theorisation of what he terms the 'whole' social field (Moi 1999, 288–289).

6. Again, the economic metaphor is striking.

7. The Comparative Leadership Study consisted of a survey of men and women in positions of power in business and politics, followed in some countries by interviews. The total sample size consisted of nearly 1,500 respondents. Since positions of top leadership are filled overwhelmingly by men, random sampling is inappropriate for making gender comparisons, and so a purposive sample of respondents was chosen for the survey, selecting women in top leadership positions at four specified levels and matching the male sample to the female (see Vianello and Moore 2000, ch. 2 for details).

8. Norris and Lovenduski (1995) point out that because there were so few ethnic minority MPs in the 1992–97 parliament, it was difficult to draw conclusions about 'race' from the statistical analysis. Although we requested interviews from some of the ethnic minority MPs, none of them agreed to take part in the research. This should not be regarded as unusual, since it was extremely difficult to get research access to any of the female MPs, of whom there were only 60, because their small number meant that they were in constant demand as respondents. However, the concept of ethnicity does not refer exclusively to ethnic minorities (Ware 1992). In the following analysis we refer to ethnicity through the concept of whiteness.

9. The system whereby people gain access to the Lords is currently in transition.

10. Edward Heath's father was a carpenter, his mother a maid. Margaret Thatcher's father was a grocer and alderman. John Major's father was a travelling showman.

11. Once 'masculine' fields are opened up to women, no doubt they are likely to attract women whose *habitus* is not a stereotypical 'feminine' one. But as we have argued, it is their sex rather than a feminine *habitus* that provokes the symbolic violence they encounter (and in the case of the military, this may extend to physical violence). One response that sometimes buys off some of this symbolic violence is to 'become one of the boys', as Julia Wheelwright (1989) describes it in her study of the history of women in the militia. This would be an example of the *nomos* of the field in terms of its preferred *habitus*, bringing those that do not 'fit' into alignment with it. However, the hope of feminists who want to see more women in such fields is that the field itself would be transformed as a result. It may be that a critical number of women are needed if the reverse effect in which *habitus* reforms or transforms the field is to be possible. But the Labour party's change to a quota system through the introduction of AWS in 1993, which doubled the proportion of women Labour MPs at the 1997 election, still left female representation at only 18 per cent.

12. What is significant about the term is its formulation as a private code such that those who do not belong are unaware of their categorisation.

13. None of the 'miraculous' Conservative leaders from less than 'traditional' backgrounds retained this particular marker of class.

14. Of course, strategies that involve compulsion may produce other problems. See *The Guardian* report (8 May 2006, p. 4): 'The Welsh secretary, Peter Hain, apologised to voters in the South Wales seat of Blaenau Gwent yesterday for imposing an all-women shortlist on them in the last general election. The row led to Labour losing its safest Welsh constituency by more than 9,000 votes to an independent, Peter Law, who had split from Labour over the issue'.

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Employee voice regimes and the characteristics of conflict: an analysis of the 2003 survey of employment tribunal applications

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This article investigates the extent to which the characteristics and outcomes of Employment Tribunal Applications (ETAs) differ according to whether (1) unions have a role in workplace voice and whether (2) HR departments have a role in workplace voice. We find that ETAs from workplaces with a union presence are less likely to result in an adverse ruling against the employer. Interpreting the judgement of employment tribunals as an evaluation of the effectiveness of workplace voice regime, this finding suggests that Employment Tribunals (and the employment legislation they consider) provide unions with a framework within which they contribute to workplace performance.

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INTRODUCTION

The translation of Hirschman's exit-voice model (Hirschman, 1970) by Freeman and Medoff (1984) has provided a useful framework in which to consider the existence of union representation and HRM practices as differing ways of providing employee voice in the workplace.[1] As Bryson *et al.* (2003) suggest in their investigation of the possible reasons for variance in voice regimes across British firms, the original literature focused mainly on union representation. However, starting with Addison (1985), subsequent work has also considered the HRM function as a possible way of providing voice to employees (Fiorito, 2001).

Thus regimes of employee voice cover direct participation, such as individual-based appraisal systems or team meetings, as well as more indirect participation channels such as unions and works councils. In a development of the literature, a number of authors have considered whether there is HRM/union substitution or complementarity (Dundon, 2002; Watling and Snook, 2003; Machin and Wood, 2005). In contrast, other approaches to the study of employee voice and conflict (Marchington *et al.*, 2001; CIPD, 2004) have considered a wider variety of voice mechanisms used by companies, with less of a distinction made between HR and union regimes.

In this article we use regression analysis to investigate the extent to which the characteristics and outcomes of Employment Tribunal Applications (ETAs) differ

according to whether (1) unions have a role in workplace voice and whether (2) HR departments have a role in workplace voice. The aim is to consider the contribution of these two voice channels to workplace performance, as measured by the outcomes from employment tribunals (ETs); a ruling against the employer is therefore considered as a negative outcome. Our article follows the multivariate methodological approaches adopted in recent studies (Machin and Wood, 2005) and this should provide a useful complement to existing qualitative evidence (Lloyd, 2001; Rainbird *et al.*, 2003; Dundon *et al.*, 2004; Gollan, 2006).

Specifically in this article we are asking whether, for those employees who have gone down the route of making a formal ETA, the

1. chances of success,
2. the length of time the case lasts,
3. the amount of any award

vary significantly according to whether unions and HR departments have a role in workplace voice regime; we also include terms in the regression equation that control for any effects that might arise from the interaction of the two regimes.

The theoretical approach underlying our study is best described from a historical perspective (Marchington *et al.*, 2001; Ackers *et al.*, 2003; Dundon *et al.*, 2004) which considers three distinct stages for the development of voice since the Second World War. Thus, up to 1979, voice was seen predominantly as a function of unions and debate centred on issues of *social democracy* (and the management of industrial conflict); from 1979 to 1997 successive Conservative governments legislated to reduce the power of unions and the resultant decline was also associated with an increase in systems that encouraged *employee involvement*. This latter trend reflected an increasing desire for managers to utilise employee skills and abilities in problem solving (Marchington *et al.*, 1992).

We would consider the most recent of these historical phases, since 1997, as an attempt to create a 'nexus' of these two aspects, with a social partnership model often being touted not only as a way to bridge any 'representation gaps' (Towers, 1997), but also suggesting that any such systems can contribute to firm performance (through improved employee involvement and the associated commitment and problem solving advantages that this brings).[2] However, even from this simple historical perspective, there is a clear potential for conflict between these competing aims; with unions striving to provide voice that emphasises the defence of employee rights, while those forms of voice associated with the practice of innovative HRM emphasising contributions to the competitiveness of the firm.

In this article we gain some idea of how this 'partnership' model of voice may be operating within the framework provided by the ET process. Thus, we consider the characteristics and outcomes of ETAs contained in the 2003 Survey of ETAs as providing an indication of those conflicts that are 'spilling over' from the workplace into formal ETAs. At its most simple, our approach rests on the assumption that the provision of effective and adequate (from a regulatory perspective) voice in the workplace should lead to fewer adverse rulings against employers in ETAs. Distinguishing between ETAs that emanate from workplaces with or without a recognised union, we are able to gain some idea of whether the existence of a union

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in the workplace is making any significant positive or negative contribution.[3] We are also able to determine whether the workplace has a dedicated HR department, allowing us to identify those workplaces where HR practices are providing an element of voice.

In addition to our analysis of how these effects of either union or HR presence may directly impact on ETA outcomes, we also include terms that capture any effects arising from the interaction of the two regimes. For instance, it is quite possible that an HR department may only contribute to voice when working within a unionised workplace and such an effect is only captured if we include interaction terms. There are of course limitations to any empirical study that must necessarily utilise these proxy indicators of voice, as we are not able to go deeper into the details of the exact interactions.[4] However, this is offset by the opportunity we have to test for any effect emanating from more than 2,000 ET cases.

The outcomes we may expect from this analysis depend very much on how unions and HR departments are operating within the new post-1997 paradigm of employee relations. Thus many commentators (Marchington *et al.*, 1992), in considering the historical perspective, suggest that the ET process can be seen as a challenge to the role of unions in providing voice, as it circumvents the concept of collective representation in grievance procedures. However, it is also the case that ETs (or the threat of such) can be utilised by unions in their attempts to advance the interests of their members; we can think of union representatives raising the prospect of fewer adverse judgements in ETAs in an attempt to obtain compliance on certain issues.

Thus, at its simplest we may expect ETAs from unionised workplaces to have a lower probability of ruling against the employer, if unions are successfully utilising the threat of ETAs to improve workplace voice mechanisms. This view is very much in the 'partnership' model, with unions taking advantage of a framework that allows them to pursue the aim of providing their traditional forms of voice, while making a case that this pursuit will also reduce the employer's potential costs of litigation. In contrast to this partnership model, we may find the opposite, that union presence has no significant impact and only the existence of HR departments reduces the probability that the employer will experience an adverse ruling. By including interaction terms, we also test for the possibility that HR and union voice work best alongside each other.

In developing our methodological framework, we draw on the work by Knight and Latreille (2000) who use the 1998 Workplace Employee Relations Survey to identify the incidence of disciplinary sanctions, dismissals and ETAs. We try to build upon these findings with an analysis of the 2003 Survey of Employment Tribunal Applications (SETA), a study that allows us to identify differences in jurisdiction, outcome, payment and duration of ET cases.

A regression approach allows us to consider how various characteristics, including voice regime, interact to influence the characteristics of conflict that spill over from the workplace. The next section sets out a brief description of the 2003 SETA data set and the following section develops the theoretical model around a discussion of some key characteristics of the data; for instance, we consider any systematic differences in the types (or jurisdictions) of conflict that 'spill over' into ETAs under the different voice regimes. Then we consider issues of methodology

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and sample selection, and this is followed by the results of our various multivariate analyses (the tables of which are in the Appendix). A final section concludes.

DETAILS OF THE 2003 SETA

The 2003 SETA was jointly commissioned by the Advisory, Conciliation and Arbitration Service (ACAS), the Employment Tribunals Service (ETS) and the Department of Trade and Industry (DTI). The survey contains a random sample of 4,517 ET cases made up of two independent sample surveys of 2,236 claimants and 2,281 employers. In contrast to the 1998 SETA, which only sampled across five main jurisdictions, the 2003 survey sampled across all jurisdictions (see Hayward *et al.*, 2004, for more detail).

In addition, the 1998 SETA did not allow us to distinguish between the characteristics and outcomes of ET claims in workplaces where union representation, HRM or a combination of voice regimes were in place. Therefore, the release of the 2003 SETA, which does allow this distinction to be made, presents us with an opportunity to consider how the characteristics and outcome of ETAs differ by employee voice regime. In the next section we use the 2003 SETA data to identify any differences in the characteristics and outcomes of ET claims (ETA) that involve a Trade Union (TU) or Staff Association, an HR department or a combination of the two.

Here we wish to control for the possible 'confounding' effects of the impact of voice regimes according to firm size, and therefore we have produced tables separately for large and small firms.[5] This also accounts for the fact that size of firm is highly correlated with union recognition and the existence of an HRM department, as well as a range of other factors that might explain the incidence and extent of ETAs. For instance, small firms are less likely to have formal disciplinary procedures in place and, if ignored, this might lead us to suggest that non-unionised workplaces were more closely linked to ETA outcomes that find in favour of the employee – a finding that might be purely driven by the size of firm (and accompanying lack of formal procedures), rather than the differing characteristics of conflict in unionised and non-unionised workplaces.

Such problems are inherent in any study that considers only cross-tabulations and is the reason why we would always wish to carry out a multivariate analysis in order to isolate these various effects. However, the aim here is to set the scene in a way that informs the formulation of our framework for the multivariate analysis. In analysing large and small firms separately we are simply removing one of the more trivial explanations for many of the differences identified. Finally, it should be noted that the data used in this study are taken from the employer responses to the SETA[6] and all tables are weighted according to the findings of the 2003 Labour Force Survey.

THEORY AND DATA DESCRIPTION

As suggested in the introduction, we are essentially utilising the existence of a union or HR department in the workplace as indicators of whether workplace voice has an HR or union component. Our suggestion is that the post-1997 policy paradigm is an

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amalgam of previous approaches, with voice seen as a way of working to satisfy employers, employees and unions. It is in many ways simply a take on Ewing (2003), who sets out the situation since the arrival of New Labour. However, as Marchington *et al.* (2001) point out, these are incredibly complicated sets of interactions and, as is necessary in any empirical study, we are forced to adopt a much more simplified framework.

For instance, we are not able to distinguish between voice provided specifically through employee attitude surveys, appraisal systems and other employee involvement schemes. In addition, we cannot distinguish between workplaces where unions and HR practitioners are engaged in joint voice provision, as opposed to situations where the union has been sidelined following the introduction of such schemes. However, this inability to distinguish 'empty shell' approaches (Noon and Hoque, 2004) to voice and employee relations more generally, is offset by the use of representative data whose findings can be more readily extrapolated to all UK firms, representing a complement to case study analysis that can delve further into any findings.

Thus, our consideration of 2003 SETA data in this section is concerned with the identification of general trends. However, before setting out our analysis of SETA, we need to give some consideration to the representativeness of these data; specifically, whether there are any significant differences in the number of cases that are brought to tribunal under differing employee voice regimes. To this end, Hayward *et al.* (2004) suggest that the proportion of claimants who are trade union or staff association members is roughly equal to the proportions seen among employees in the UK as a whole (27 per cent). While it is harder to check whether the proportion of ETA cases from workplaces with an internal HR department (16 per cent) is representative of all UK workplaces, our discussion of selection in the next section suggests that the probability of an ETA being observed does not vary according to whether the workplace is unionised or has an HR department. Therefore, we assume that our SETA study is broadly representative of the relevant proportions of UK employees working under different voice regimes.

Moving on, we first consider whether certain voice regimes are more or less likely to be associated with ETAs under certain jurisdictions.[7] There are five main jurisdictions: unfair dismissal; breach of contract; Wages Act;[8] redundancy payments; and discrimination. According to the 2003 SETA, the largest proportion of claims are for unfair dismissal (45 per cent) – a figure that has risen significantly since 1999 when the ceiling on compensation increased to £52,000. In contrast, the relatively small number of discrimination cases (7 per cent) is likely to have increased since new legislation came into force in December 2003, allowing protection against discrimination on the grounds of sexual orientation and religious belief.

As we can see from Table 1, ETAs emanating from large firms are more likely to be brought on the grounds of unfair dismissal, while the Wages Act is much more likely to be a factor in cases brought against small firms. However, across both small and large firms, it would seem that a larger proportion of ETAs emanating from unionised workplaces are for unfair dismissal or discrimination. In contrast, the presence of an internal HR department[9] is more closely associated with a higher proportion of cases being brought on grounds of breach of contract and the Wages Act.

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TABLE 1 *Main jurisdiction of ETA by employee voice regime*

Small firm (<50)	Employee voice regime				
Main jurisdiction	Union only	HR only	None	Both	Average
Unfair dismissal	44.12	39.43	38.29	44.33	39.13
Breach of contract	10.62	17.23	16.23	14.50	15.72
Wages Act	18.06	32.31	27.33	17.03	26.70
Redundancy payments	1.21	0.00	2.41	0.00	1.98
Any discrimination	12.17	2.64	5.94	13.27	6.38
Other	13.82	8.39	9.80	10.86	10.09
Total frequency	141	145	1038	26	1350
Large Firm (≥50)					
Main jurisdiction	Union	HR	None	Both	Total
Unfair dismissal	51.73	50.57	46.17	45.80	48.73
Breach of contract	7.88	13.55	12.10	12.27	10.78
Wages Act	12.34	19.00	18.20	11.18	15.61
Redundancy payments	0.50	1.96	2.06	2.04	1.49
Any discrimination	7.82	2.78	7.17	14.90	7.46
Other	19.73	12.14	14.29	13.81	15.93
Total frequency	302	111	355	70	838

Source: Survey of Employment Tribunal Applications, Employer Response only, 2003.

There are a range of possible reasons why we may observe the differing characteristics in Table 1. Clearly, from a first standpoint, one must consider the possibility that the characteristics of employees differ in workplaces which operate under the various workplace voice regimes – a factor that we do consider in our discussion of selection in the next section. However, it is also possible that these differing rates of claim by jurisdiction represent an element of game-playing under different voice regimes – any differences of emphasis can be seen as a strategy to protect the interests of either employees or the employers.

This approach is similar to that of Kelly (1996) who suggests that while non-union structures give employees a voice, it is on the employer's terms. For instance, we may possibly expect HRM departments to focus on the provision of voice mechanisms that are designed to avoid cases brought under jurisdictions that maximise the potential payouts to employees. When one considers the data there are some differences that might reflect such game playing. For instance, in both small and large firms, a higher proportion of cases are brought on the grounds of breach of contract in workplaces where there is an HR department (and no union). In contrast, unionised workplaces are more closely associated with cases brought on the grounds of discrimination. This may be seen as fitting with our suggestion that HR departments focus on the provision of voice (and wider employee relations)

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TABLE 2 *SETA outcome by union and/or internal HR presence*

Small firm (<50)	Presence of TU or internal HR			
SETA outcome	**Union**	**HR**	**None**	**Both**	**Total**
Applicant unsuccessful	18.52	9.72	9.35	5.24	10.26
Applicant successful	9.03	8.89	9.27	10.71	9.23
ACAS settled	38.78	44.34	43.66	49.10	43.33
Privately settled	11.85	15.32	18.75	11.19	17.51
Withdrawn	15.91	15.43	13.18	22.09	13.88
Dismissed	5.91	6.29	5.79	1.67	5.78
Total frequency	141	145	1038	26	1350

Large firm (≥50)	Presence of TU or internal HR			
SETA outcome	**Union**	**HR**	**None**	**Both**	**Total**
Applicant unsuccessful	10.12	12.95	9.81	5.76	10.00
Applicant successful	5.23	6.26	9.30	3.52	6.95
ACAS settled	41.28	48.17	46.33	47.34	44.84
Privately settled	18.59	10.91	18.26	16.69	17.27
Withdrawn	20.42	12.01	11.45	21.70	15.62
Dismissed	4.35	9.70	4.84	5.00	5.32
Total frequency	302	111	355	70	838

Source: Survey of Employment Tribunal Applications, Employer Response only, 2003.

mechanisms that attempt to avoid cases being bought under jurisdictions that have the potential for larger payouts.

Moving on to consider relative success rates in ETAs, the rate of claimant success in unionised and non-unionised workplaces (across both small and large firms) is 5.5 per cent and 12.6 per cent, respectively. From Table 2 we can see how this translates into figures for small and large firms. Our initial indication is that the characteristics of conflict differ according to voice regime, but also that any impact may also vary according to the size of the firm (a suggestion that reflects the findings of work by Bryson (1999) and Edwards (1999)).

Thus, when we consider the possible effects of a voice regime that combines an internal HR department with union presence, there is little discernable difference within small firms.[10] In contrast, among large firms, the lowest proportion of successful claims are concentrated in those workplaces where there is both union presence and an internal HR department. There are many factors that could possibly be driving this effect and to fully test any hypotheses we include interaction terms in our multivariate analysis.

From this initial cross-tabular analysis, we have some indication that the presence of an HR department or union (in large firms) increases the chances that employee relations practices have been developed to a standard that allows fewer successful ET cases to spill over – with the most developed practice in workplaces where both

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TABLE 3 *Average duration of tribunal (in days) according to voice regime*

Small firm (<50)	Average durations HR/personnel department		
TU presence	No	Yes	Average
No	123.20	138.38	125.06
Frequency	1045	146	1191
Yes	175.89	164.01	174.01
Frequency	142	27	168
Average	129.49	142.33	131.12
Frequency	1187	173	1359
Large firm (≥50)	Average durations HR/personnel department		
TU presence	No	Yes	Average
No	160.21	157.36	159.53
Frequency	348	109	457
Yes	173.99	197.24	178.34
Frequency	296	68	365
Average	166.55	172.72	167.88
Frequency	644	177	822

Source: Survey of Employment Tribunal Applications, Employer Response only, 2003.

are present. This tends to reflect the findings of Wood and Fenton-O'Creevy (2005) who establish that the 'interplay' between systems is significant. Such an explanation may also go some way in explaining differences in the proportion of cases brought under various jurisdictions for each voice regime – it may simply be that the two regimes are better at limiting certain types of employee conflict and when they are combined they act as complements, rather than substitutes.

In addition to these measures of ET outcome, the 2003 SETA also allows us to investigate possible differences in the duration of the tribunal process and the size of award, according to employee voice regime. From Table 3 it would seem that the presence of unions and HR departments is generally associated with ETAs that have a longer average duration. This is broadly true in both small and large firms, with the set of cases having the longest average duration being those in large firms with both a TU and HR presence. Thus, while the chances of success for an employee are lower in workplaces with this combined voice regime, there would seem to be an increased cost (to the employer) in terms of the time spent on cases.

Moving on to consider the average award, it is important to distinguish between the award averaged over all ETAs, compared with the average award for all ETAs *who received an award*. While the latter obviously has the higher value, the number of observations involved is too small to cite. However, considering the average across all ETAs, Table 4 suggests that the impact of voice regime differs significantly between large and small firms. Thus, we would seem to have some indication that the expected payoff (probability of success multiplied by award) for somebody

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TABLE 4 *Average award across all ETA cases, according to voice regime*

Small firm (<50)	Average award from all cases HR/personnel department		
TU presence	**No**	**Yes**	**Average**
No	£178.21	£130.63	£172.38
Frequency	1045	146	1191
Yes	£161.90	£934.09	£284.10
Frequency	142	27	168
Average	£176.27	£254.52	£186.20
Frequency	1187	173	1359
Large firm (≥50)	**Average award from all cases HR/personnel department**		
TU presence	**No**	**Yes**	**Average**
No	£282.01	£172.97	£255.98
Frequency	348	109	457
Yes	£59.31	£0.00	£48.20
Frequency	296	68	365
Average	£179.55	£106.36	£163.75
Frequency	644	177	822

Source: Survey of Employment Tribunal Applications, Employer Response only, 2003.

bringing an ETA in a large firm, with an HR department and union present, is effectively zero. In contrast, the presence of this combined voice regime in smaller firms is associated with larger expected payoffs.

Before moving on to the next section, we consider additional factors that may influence the outcomes and characteristics of ETAs, other than the presence of a TU or HR department, including the existence of formal mechanisms of dispute resolution. The aim is to shed some light on the validity of two opposing views; some commentators consider that these formal mechanisms have a positive impact on performance (Arthur, 1992, 1994), while others view grievance handling 'as representing a traditional personnel management/industrial relations approach to partnership, rather than an innovative one'[11] (Ramsay *et al.*, 2000).

Tables 5 and 6 suggest that the proportion of cases where claimants are successful is higher in workplaces where there is no written procedure, and this rate of success steadily increases the less the employer is seen to adhere to such procedures – although the latter effect is less pronounced; a finding that would tend to lend support to Arthur (1992).

METHODOLOGY AND THE ISSUE OF SELECTION

In the next section we estimate a number of models, using multinomial logistic regression equations to identify those factors that are most important in

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TABLE 5 *Differences in SETA outcome according to the presence of formal written procedure in the workplace*

SETA outcome	Presence of written procedure			
	Don't know	No	Yes	Average
Applicant unsuccessful	0.00	6.27	10.85	10.21
Applicant successful	9.14	14.03	7.54	8.34
ACAS settled	36.43	41.06	44.33	43.87
Privately settled	8.76	21.09	16.84	17.30
Withdrawn	28.16	10.91	15.05	14.64
Dismissed	17.52	6.64	5.39	5.63
Total frequency	15.96	273.27	1954.77	2244.00

TABLE 6 *Differences in SETA outcome according to whether employer adhered to formal written procedure*

SETA outcome	Was written procedure followed?					
	Don't know	No, not at all	Yes, but don't know the extent	Yes, part of the way	Yes, all the way	Average
Applicant unsuccessful	10.83	7.31	0*	12.7	13.06	11.06
Applicant successful	3.81	8.67	22.93*	7.95	7.09	7.6
ACAS settled	42.7	44.23	58.36*	46.97	43.74	44.28
Privately settled	25.62	18.23	7.64*	16.2	15.15	16.74
Withdrawn	11.96	16.23	5.54*	9.24	15.44	14.75
Dismissed	5.07	5.33	5.54*	6.95	5.52	5.57
Total frequency	115	540	18	179	982	1834

*Cell size is unreliable.

Source: Survey of Employment Tribunal Applications, Employer Response only, 2003.

determining the jurisdiction of an ETA claim. The estimated binomial logistic regression equation models dichotomous outcomes such as whether claimants can be considered as either having won or lost; also we use a tobit approach to determine the extent to which we can identify the most important factors influencing the duration of an ETA.

However, before moving on to consider the results of our multivariate analysis, we need to consider the issue of 'selection'; we are using a study that contains only examples of conflict that have moved beyond workplace resolution and we are able to say little about the relative efficacy of different voice regimes in solving disputes prior to the ETA process. However, this would only be a problem if we were to find, for instance, that the chance of a particular workplace dispute going to the stage of an ETA was much higher or lower in a unionised workplace or, conversely, one with an HR department.

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Work by Knight and Latreille (2000) suggests that the probability of a particular workplace experiencing an ETA is not influenced by the form of employee voice regime – specifically, whether there is a dedicated HR representative or the extent of union recognition/density. Thus, while the authors suggest that the presence of dedicated personnel staff and/or higher union density both exert a negative influence on the rate of formal disciplinary sanctions and dismissals, they find no evidence that voice regime influences whether the workplace experienced an ETA.[12] Similarly, there was no evidence that the implementation of a range of 'high commitment management practices' had any impact on the probability that an ETA case would be brought.

Given this, we may proceed to consideration of the next selection issue; while the probability of an ET claim occurring does not seem to be influenced by voice regime, we cannot rule out the possibility that there are systematic differences in the *validity* of the claims brought by employees (in terms of their probability of success) under the various regimes. In an echo of the literature that attempts to place a value on any union wage premium, our indicator of union voice (and similarly HR presence) may be endogenous.

Thus, it is quite possible that selection into union membership is non-random and that the individuals (and therefore the ETA cases) that we are comparing under the various voice regimes exhibit systematic differences. In the case where any differences are observable we are able to control for them in our model. However, if there is an unobservable characteristic which is, for instance, more closely linked with behaviours that are likely to lead to certain conflicts *and* if this characteristic is particularly associated with individuals working under one particular voice regime, then we may falsely attribute unobserved differences to an effect of employee voice.

In summary, this last point raises the possibility that some of the effect of employee voice regime identified in our regression equations could possibly be driven by unobserved differences in employee characteristics, rather than differences in performance between different voice regimes. However, there is little we can do about the possible endogeneity of our voice indicators in the analysis.[13]

REGRESSION RESULTS

Having discussed a range of possible explanations for the various tables above, we now attempt to shed some light on the various possible explanations for our observations using a range of multivariate techniques. Mirroring the order in which we approached the issues above, we begin with a consideration of whether certain factors are significant in determining the type of jurisdiction under which an ETA is brought.

To give an example, in Table A1 of the Appendix, the negative value associated with our indicator of whether the workplace had a *Written Procedure* (–0.844) in the column representing the jurisdiction *Wages Act*, indicates that ETAs in firms with a written procedure are less likely (than ETAs emanating from firms without such procedures) to be brought under this jurisdiction, when compared with unfair dismissal cases – having taken into account all other factors represented in the output of Table A1; we are only interested in those factors that are found to be

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'significant' in influencing jurisdiction and these are denoted by an asterisk in the final 'probability' (prob) column.

As we can see from Table A1, there are few indicators of employee, employer or voice characteristics that have a significant influence on the jurisdiction under which a claim is brought.[14] There is some indication that *Breach of Contract* ETAs are less likely to be brought by individuals in the skilled trades, while administrative and technical employees are less likely to bring cases under the *Wages Act* or *Other Jurisdictions*.

Considering our indicators of employee voice, we can find no evidence of any game-playing in the instances of jurisdiction – there is no significant evidence that either union or HRM presence impacts on the type of jurisdiction under which an ETA is brought. However, it is interesting to note that those workplaces which report having a written procedure which the employer reports following, are much less likely to be associated with claims under the *Wages Act*, when compared to *Unfair Dismissal*.

Moving on, we now consider the results from a binomial probit regression equation that attempts to predict whether an individual is, or is not, successful in their ETA (Table A2 of the Appendix). To run this regression we have reduced the six different outcomes to two: claimant success or failure. Outcomes certified as unsuccessful, withdrawn or dismissed are all classed as claimant failure; success is classed as such. However, nearly 60 per cent of all outcomes are settlements and therefore we need an indicator of whether the settlement was in favour of the claimant. We are able to do this by utilising a variable which noted if the respondent was satisfied with the outcome. If the respondent was an unsatisfied employer then we counted the claimant as being successful, and vice-versa for a satisfied employer.[15]

From Table A2,[16] even after taking into account a range of additional factors, it is still the case that we find evidence that ETAs emanating from workplaces with a union presence are less likely to be associated with claimant success. This is the only one of our indicators of employee voice that is significant and, while some of our interaction terms are close to the 10 per cent significance threshold, this suggests that there is a union effect above and beyond any impact that might arise from the interaction between the union and HR channels for voice (within both small and large firms).

Finally, before considering the implications of our findings for the literature on employee voice, we attempt to obtain some idea of the possible costs associated with ETA processes under the various voice regimes. We have estimated two tobit regression equations in an attempt to (1) identify the factors that are most significant in determining the duration of an ETA and (2) the factors that influence award. However, Table A3 in the Appendix only presents the results from the former of these equations as it is not possible to model the awards data in a satisfactory manner.[17]

As can be seen from Table A3, we find no impact for our indicators of employee voice on the duration of ETs – interestingly it would seem that the existence of an external (from this point referred to as 'outsourced') HR department reduces the duration of an ETA. Other than these indicators of employee voice it is also interesting to note that larger firms and employers who report that they adhered to

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written procedures are more likely to experience ETs of a longer duration. Similarly, when the claimant is a professional or associate professional, ETs tend to last for a longer period of time.

CONCLUSIONS

In this article we have attempted to add to the literature on employee voice using the 2003 SETA. There are a number of findings that will hopefully be of interest to practitioners, academics and policy makers. For instance, while we are unable to model ETA award, we can model duration of ETA – the assumption being that the longer the process lasts, the more expensive it is to both the employer and employee. Our results suggest that, while internal employee voice structures do not have a significant effect on ET duration, the existence of an outsourced HR department serves to reduce the duration of ETs.

However, the finding that is of greatest interest (and the main focus of our study) is the suggestion that ETAs emanating from workplaces where unions provide some element of voice are less likely to result in an adverse ruling against the employer. Thus, while other researchers have found little indication that the presence of a union deters tribunal claims, we find evidence that, having made a tribunal claim within a unionised workplace, claimants have a lower probability of success. Our interpretation is that the judgement of an ET represents an evaluation of the adequacy and effectiveness of workplace voice regime; in this case we find that voice regimes in workplaces where there is some union presence are more likely to receive a favourable evaluation.

This finding suggests that the ETA process (and, importantly, the extensive employment legislation which they consider) provides unions with a framework within which they can make a positive contribution to the financial performance of the firm (although not in the typical way that is envisaged in the high performance work organisation literature) through the provision of voice mechanisms that emphasise the *social democratic* (rather than *problem solving* or *employee involvement*) aspect. In this respect, one can see the increasingly regulated and prescriptive nature of employee relations in the UK as providing an environment in which unions are able to argue that attempts to provide their traditional mechanisms of employee voice are consonant with the aims and objectives of the firm. This is in contrast to the argument that the ET process undermines the traditional union role, a role that was under threat and in decline well before the regulatory environment had started to bite (see Shackleton, 2005).

Many will view this result in a very positive light and to some extent it provides support for the position of the Trade Union Congress (TUC) (2004) who emphasise unions' role in 'solving more problems in the workplace'. This may also bode well for the changes to ET procedures introduced since October 2004 (under the amended Employment Act 2002 [Dispute Resolution] Regulations 2004) that imply an increased role for unions and HR departments in the resolving of conflicts before the ETA process. However, this ignores the issue of cost (of both the 'service' provided by unions and the creation of an extensive regulatory environment). Thus, we can see that regulation has strengthened the case for union existence – in a way they are

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acting as employee relations consultants (the line has changed from, 'you cannot do that or the union will walk out', to 'you cannot do that or the tribunal costs will be enormous') – but at what cost?

Notes

1. Voice, according to Hirschman (1970) is 'any attempt to change rather than escape from an unsatisfactory situation'.

2. Within this literature, discussion often focuses on the proposition that high performance work organisations, which take on board 'innovative' HRM practices, are linked to higher organisational performance measures (Huselid, 1995; Appelbaum *et al.*, 2000; Sung and Ashton, 2005).

3. In analysing only those workplaces that experience ETs, we do not observe those that have no experience of ETAs; in this there is potential selection bias and we draw on existing research (Knight and Latreille, 2000) to justify our use of the 2003 SETA.

4. These potential limitations are considered in section 3 where we discuss the nature of our 'proxy' *Voice* measures (including a consideration of the literature on *Employee Involvement* processes).

5. Our cut-off point for small and large firms is set at the level of 50 employees; chosen because the correlation between TU/HR presence and size of firm drops sharply under the 50 employee level.

6. The employee response data set does not allow us to distinguish between unionised and non-unionised workplaces.

7. Readers should note that our classification of jurisdiction throughout the article relates to 'main' jurisdiction.

8. These cases (which are now under the Employment Rights Act 1996 Part II) refer to claims for unauthorised deductions from wages, including bonuses, statutory sick pay and maternity pay, and cases relating to stock deficiencies and cash shortages (Shackleton, 2002). Also underpayment of the National Minimum Wage could be brought under this jurisdiction.

9. When looking at the effect of HR, we are only looking at the effect of an internal HR department. We include outsourced HR departments as a separate explanation in our multivariate analysis.

10. However, the smaller sample size does suggest caution in any conclusions we make.

11. High performance work practices cover the areas of employee involvement practices, HR practices and reward and commitment practices.

12. It should be noted that the Knight and Latreille (2000) study focused on unfair dismissal jurisdictions.

13. Ideally we would consider the use of techniques along the lines of those first proposed by Heckman (1979).

14. As we would expect, tenure of the individual at the firm in question is highly significant in determining jurisdiction, but is not commented upon as it is simply included in the regression as a control. Thus, individuals with shorter durations of tenure are more likely to bring cases under *Breach of Contract*, *Wages Act* and *Other Jurisdictions*, rather than *Unfair Dismissal*.

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15. Ninety-one per cent of firms in cases where the applicant lost reported being either 'very' or 'quite' satisfied and 75 per cent reported being 'not very' or 'not at all' satisfied in cases where the applicant won.

16. In this regression we are measuring a binary output and therefore we are able to use either a logit or probit model. After some preliminary testing, probit was shown to be better at modelling this data.

17. There are only 48 values (awards) and therefore the majority of observations are censored to zero.

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APPENDIX

TABLE A1 *Multinomial logistic regression with jurisdictions as dependent categories*

Reference category is unfair dismissal

	Breach of Contract			Wages Act			Other (incl. redund. pay and discrim)		
	Coefficient	S. E.	Probability	Coefficient	S. E.	Probability	Coefficient	S. E.	Probability
Employee characteristics									
Professional occupation	−0.1509717	0.2549	0.554	−0.495693	0.24173	0.04**	−0.3714215	0.2338523	0.112
Associate professional	−0.3355473	0.3088	0.277	−0.4423617	0.27584	0.109	−0.2776994	0.2594761	0.285
Administrative and technical	−0.1741477	0.3273	0.595	−1.050862	0.33327	0.002**	−0.5272096	0.2783593	0.058*
Skilled trade	−0.8928723	0.3438	0.009**	−0.1572692	0.26725	0.556	−0.475245	0.2930158	0.105
Personal services	−0.2655229	0.3343	0.427	0.0814104	0.2784	0.77	−0.3238165	0.286236	0.258
Manual	−0.5512585	0.314	0.079*	−0.1875071	0.26069	0.472	−0.1877469	0.2602708	0.471
Reference is unskilled manual									
Age 16 to 24	−0.3013611	0.2956	0.308	−0.6233402	0.26298	0.018**	−0.3000111	0.2566078	0.242
Age 25 to 34	−0.1786633	0.2302	0.438	−0.1317869	0.20137	0.513	−0.193165	0.1988266	0.331
Age 45 to 54	−0.3826213	0.2475	0.122	−0.3770754	0.22118	0.088*	−0.3848992	0.2123406	0.07*
Age 55 plus	−0.1588011	0.3018	0.599	−0.2236794	0.28018	0.425	−0.0710899	0.2485197	0.775
Age missing	−0.2512736	0.7162	0.726	−0.0348198	0.5563	0.95	−1.136747	0.7152609	0.112
Reference is 35 to 44									
Tenure less than one year	1.607797	0.245	0**	2.175724	0.21186	0**	0.9373287	0.2303896	0**
Tenure 1 to 2 years	0.642605	0.2476	0.009**	0.5330903	0.22429	0.017**	−0.1124389	0.2362131	0.634
Tenure 6 to 10 years	−0.3724975	0.3159	0.238	0.0611677	0.24719	0.805	−0.0197333	0.2183222	0.928
Tenure 11 plus years	0.1203892	0.3129	0.7	−0.8457842	0.38033	0.026**	−0.0307256	0.2453715	0.9
Tenure missing	0.3983131	0.4829	0.409	0.0752975	0.4677	0.872	0.022394	0.4310575	0.959
Reference is tenure 2 to 5 years									
Male	−0.3131567	0.2117	0.139	0.1276943	0.18547	0.491	0.9672478	0.1709198	0**
Full-time employee	−0.2355204	0.2889	0.415	−0.1374069	0.25571	0.591	−0.1229183	0.246773	0.618
Permanent employee	−0.5722905	0.3448	0.097*	−0.4917737	0.31078	0.114	−0.3654823	0.3337808	0.274

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Employee voice

Union presence	0.0238399	0.4008	0.953	0.3021541	0.36483	0.408	0.4949251	0.3428525	0.149
Internal HR dept.	0.1551461	0.4441	0.727	-0.3542356	0.40671	0.384	-0.3144802	0.3929958	0.424
Union and large firm	-0.5567093	0.5035	0.269	-0.5625788	0.45389	0.215	-0.318293	0.3920433	0.425
HR dept. and small firm	-0.2429556	0.513	0.636	0.7322734	0.45837	0.11	-0.0308263	0.4985925	0.951
HR/union large firm	0.4615937	0.69	0.503	0.3233719	0.65213	0.62	0.2282191	0.5447982	0.675
HR/union small firm	0.3693767	0.7964	0.643	-1.145807	0.8322	0.169	-0.9171685	1.008185	0.363
External HR dept.	0.0312491	0.2419	0.897	-0.1537883	0.2043	0.452	0.1100561	0.212173	0.604
Internal legal dept.	-0.0026419	0.2374	0.991	-0.2260923	0.22939	0.324	-0.0671473	0.1990322	0.736

Employer/firm characteristics

Employer previous exp. of ETA	0.0516118	0.1777	0.771	0.1943889	0.15786	0.218	-0.2201348	0.1544414	0.154
Firm size	-0.4059259	0.2475	0.101	-0.2215616	0.21813	0.31	0.2384245	0.2076	0.251
Private firm	-0.1493041	0.2942	0.612	0.1462256	0.28145	0.603	-0.1260652	0.2263929	0.578
Written procedure	0.3574234	0.657	0.586	-0.8441354	0.42647	0.048**	0.0770094	0.5511722	0.889
Accordance to procedure	-0.0719831	0.0634	0.256	-0.2513822	0.05461	0**	-0.0783949	0.0552926	0.156
Intercept	0.1086993	0.9809	0.912	1.116986	0.78195	0.153	-1.334027	0.8509768	0.117

Number of observations: 1535
Log likelihood: -1756.1253
Pseudo R^2: 0.1109
Chi^2: 0.000

* Denotes significance at 10%.
** Denotes significance at 5%.

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TABLE A2 *Bivariate probit with probability of ETA applicant success as dependent category*

	Coefficient	Standard error	Probability
Employee voice			
Internal HR dept.	−0.2829301	0.2016507	0.161
Union presence	−0.3344455	0.1961109	0.088*
Union and large firm	−0.0802575	0.2339323	0.732
HR dept. and small firm	0.3729395	0.234308	0.111
HR/union large firm	0.4541299	0.3154021	0.15
HR/union small firm	−0.6659657	0.4853796	0.17
External HR dept.	−0.1037757	0.1044523	0.32
Internal legal dept.	−0.3031278	0.1170975	0.01**
Employer characteristics			
Firm size	−0.0076363	0.1067659	0.943
Private firm	0.2529582	0.1396631	0.07*
Employer previous exp. of ETA	−0.1215466	0.0805315	0.131
Written procedure	−0.2008854	0.2464367	0.415
Accordance to procedure	0.0015544	0.0286329	0.957
Jurisidction			
Breach of contract	−0.1851295	0.1184647	0.118
Wages Act	−0.2382392	0.1078739	0.027**
Other	−0.1476042	0.1052153	0.161
(Reference is unfair dissmisal)			
Employee characteristics			
Full-time employee	0.1842137	0.1348875	0.172
Permanent employee	−0.0767848	0.1592681	0.63
Professional occupation	0.1054982	0.1227155	0.39
Associate professional	0.1549477	0.1424427	0.277
Administrative and technical	0.1748591	0.1579169	0.268
Skilled trade	0.0382219	0.144464	0.791
Personal services	0.0945911	0.1496972	0.527
Manual	0.093571	0.1371667	0.495
Reference is unskilled manual			
Age 16 to 24	0.034195	0.1318758	0.795
Age 25 to 34	0.0285775	0.1044361	0.784
Age 45 to 54	0.0932542	0.1089574	0.392
Age 55 plus	0.0297918	0.139644	0.831
Age missing	0.1194631	0.3363851	0.722
Reference is 35 to 44			
Tenure less than one year	0.1524982	0.1105754	0.168
Tenure 1 to 2 years	0.0769764	0.1164109	0.508
Tenure 6 to 10 years	−0.1919749	0.122959	0.118
Tenure 11 plus years	0.0699349	0.1443424	0.628
Tenure missing	−0.6335907	0.2815684	0.024**
Reference is tenure 2 to 5 years			
Male	−0.1441912	0.0961811	0.134
Cons	0.0816003	0.4356918	0.851
Number of observations:	1237		
Log likelihood:	−772.94725		
Pseudo R^2:	0.0523		
Chi^2:	0.00		

* Denotes significance at 10%.
** Denotes significance at 5%.
*** Denotes significance at 1%.

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TABLE A3 *OLS estimates for duration (days) of ETA*

	Coefficient	Standard error	Probability
Employee voice structures			
Internal HR dept.	−9.297824	14.3321	0.517
Union presence	16.21491	12.98274	0.212
Union and large firm	−21.44646	15.32561	0.162
HR dept. and small firm	12.58249	16.72361	0.452
HR/union large firm	−5.327384	21.17055	0.801
HR/union small firm	−28.09073	29.33179	0.338
External HR dept.	−12.88446	7.606738	0.091*
Internal legal dept.	4.429657	7.646265	0.562
Employer characteristics			
Firm size	27.54519	7.815113	0**
Private firm	−21.13947	9.129114	0.021**
Employer previous exp. of ETA	2.870371	5.673245	0.613
Written procedure	5.95037	17.23369	0.73
Accordance to procedure	4.361233	2.029308	0.032**
Jurisdiction			
Breach of contract	−4.860571	8.539296	0.569
Wages Act	−33.29687	7.553906	0**
Other	21.26615	7.308711	0.004**
(Reference is unfair dismissal)			
Employee characteristics			
Full-time	14.58372	9.203262	0.113
Permanent	−4.400846	11.07317	0.691
Professional occupation	19.52894	8.572467	0.023**
Associate professional	26.18841	9.81823	0.008**
Administrative and technical	14.62831	10.89366	0.18
Skilled trade	6.953578	10.10641	0.492
Personal services	14.57432	10.4815	0.165
Manual	7.383588	9.586614	0.441
Reference is unskilled manual			
Age 16 to 24	−15.36103	9.466967	0.105
Age 25 to 34	−5.077578	7.353733	0.49
Age 45 to 54	3.36022	7.804649	0.667
Age 55 plus	6.841016	9.594663	0.476
Age missing	4.180441	22.32799	0.852
Reference is 35 to 44			
Tenure less than one year	−20.39509	7.88827	0.01**
Tenure 1 to 2 years	1.226762	8.477152	0.885
Tenure 6 to 10 years	1.262139	8.559916	0.883
Tenure 11 plus years	6.988629	9.926853	0.482
Tenure missing	14.75858	16.2985	0.365
Reference is tenure 2 to 5 years			
Male	5.848038	6.604759	0.376
Cons	138.2748	29.5562	0
Number of observations:	1535		
Log likelihood:	−9337.6419		
Pseudo R^2:	0.0091		
Chi^2:	0.00		

* Denotes significance at 10%.
** Denotes significance at 5%.

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Enabling and disabling labour market sectors:
disability and employment in Britain and the Netherlands in the construction, ICT and health sectors

Final report prepared for the Norwegian Work Research Institute as part of the project:
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Preface

Linda Clarke

This report presents the results of a research project on disability and employment, supported by the Norwegian Work Research Institute under its programme 'Disabled, working life and welfare state' through a contract from the Norwegian Research Council. The overall research involves a comparison of disability in three contrasting sectors – construction, ICT and health – in three countries – Britain, the Netherlands and Norway. This report is intended to outline the characteristics of each sector in Britain and the Netherlands, providing an overview of labour market participation and employment opportunities. The aim is to describe patterns and variations between occupations and to begin to assess the influence of employment and working conditions for excluded and marginalized groups, in particular the disabled, based on existing statistical data, documentary and literature reviews, interviews with key actors and existing research.

This research is a follow-up to research carried out by both the Westminster Business School and AIAS in the area of marginalized groups in European labour markets – especially women and ethnic minorities. Most significant in this respect has been a European Commission project 'Overcoming Marginalisation: structural obstacles and openings to integration in strongly segregated sectors' on which the research design of the Norwegian-sponsored research has been explicitly modelled.

Within the 3 sectors, the focus is on particular occupations: ICT (software engineers), health (nurses) and construction (carpenters). Our objective is to examine the interplay between employment and working conditions and public policy measures under various conditions. We have sought to identify how these influence the decisions of employers and hence employment opportunities for persons with disabilities. The aim is to locate disabling barriers and enabling factors for labour market participation.

Some sectors such as construction have especially poor health and safety records and in this sense can be regarded as disabling. This is also a sector which is markedly exclusive of those from vulnerable groups, such as women and those from ethnic minorities, making little effort to enable their recruitment and employment (Byrne et al 2005). In this sense, it is not an enabling sector. This raises the question of whether the disabilities recorded for those employed in the sector have actually been caused by conditions in the sector. In other sectors, in contrast, it may be the case that those with disabilities are employed because special efforts and policies have been made to train and include the disabled, or, in other words, because the sector is particularly enabling.

Our concern is therefore to disentangle enabling and disabling factors in these especially contrasting sectors in the two countries. This is no easy task, above all in that little information on those with disabilities is available at sectoral level. The approach to disability has instead tended to be either from the point of the individual, to discover what 'reasonable adjustment' needs to be made in order to accommodate someone with a particular disability, or from the point of regulation, to explain why the numbers of those

recorded with disabilities and in receipt of disability benefit are so high or changing. From the sectoral level too the emphasis has been either on accident prevention through for instance occupational health policies or on 'reasonable' accommodation to the individual disabled person rather than on making the sector as a whole more enabling. This contrasts with consideration given to inclusion of women and those from ethnic minority groups in especially segregated sectors which has often focused on structural barriers and equality policies (e.g. Rubery 1995).

The report examines how the gatekeepers into these sectors may exclude the disabled, including education and training requirements, wage and employment systems, and recruitment and selection procedures. It also explores the degree and ease of mobility from each sector, including the nature of employment contracts. The suggestion is that the gatekeepers governing entry into the labour market are distinct from and significantly more stringent for the disabled than those guarding their exit. Once excluded, it is extremely difficult to re-enter. Measures taken by organizations and the social partners to include and integrate the disabled in each sector are also explored, including equal opportunity policies, and the sectoral reports conclude by highlighting those policies and good practices most conducive to inclusion.

It may be that policies for the disabled are simply less advanced than those for women and ethnic minority groups with respect to employment. Our research, following from previous work on structural obstacles and openings to integration of women and ethnic minorities in these same sectors, thus sought to extend consideration to the disabled and to understand how far they constitute a special case (Beck et al 2003). Disability certainly raises particular questions that do not apply to these other groups, not just what 'able-bodied' now means in terms of employment but also how far disability is actually caused by employment in a sector. Many are, after all, not born disabled but become so at particular stages in their lives, perhaps because of particular working conditions they are exposed to.

Our aim in this report is, therefore, to begin to disentangle enabling and disabling conditions in our sectors for each country and to assess how far those with disabilities have these as a result of working in the sector or because of particular working conditions and special measures in place which facilitate their employment. More than this, we seek to show how 'disability' is a concept which is defined in relation to the labour market and to particular sectors, as someone not fully 'able' to be employed. Being 'able-bodied' to work in one sector may be different from another, just as what may be regarded as a 'disability' in relation to employment in one sector, may be insignificant for another.

The statistical part of the paper draws on the research report for this same project of Nigel Meager and Darcy Hill (Meager and Hill 2005).

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Part A: Britain

A 1: Background

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Research and literature on the position of disabled people in the labour market in the UK concentrates on the national, aggregated level. The amendments to the Disability Discrimination Act have, however, prompted much recent research in the area (e.g. Rigg 2006, Kelly et al 2005, Roberts et al 2004, Grewal et al 2002, Molloy et al 2003).to investigate the state of play from the employers and service providers' side and to examine the attitudes and approaches of disabled people towards entry and retention in work.

Theoretically, the debate on disabled people's position in UK society has developed significantly in the recent decades. The 'functional limitations view' or 'capabilities view' which was prevalent especially before the 1980s saw disability as a problem which led to dependency, lower productivity and legitimated exclusion of the disabled person from the labour market. The social model of disability (Finkelstein in Thomas 2004, Oliver 1983, Barnes and Mercer 2005)) which opposed this argument, defined disability as 'something imposed on top of our impairments by the way we are unnecessarily isolated and excluded from full participation in society' (UPIAS 1976 in Thomas 2004) . In other words, people are disabled by society, not by their functional limitations. This social model has been important in politicising disabled people in society and putting disability on the policy agenda.

This social model has been criticized more recently by writers such as Shakespeare and Watson (2001) and Williams (1999 in Thomas 2004) on the grounds that it attempts to separate impairment from disability completely – impairments still play a role in the lives of disabled people according to these authors. Writers such as Thomas (2004) try to find a middle ground between impairment and disability but firmly argue for the importance of the social relations element in disability thinking. Burchardt (2004) comments that the capabilities framework and the social model of disability have been widely misunderstood and have common ground. Nevertheless, the issues core to the social model – that disability cannot be understood or analysed without looking at the role and responsibility of the structures, policies and practices embedded in society as a whole - are useful to examine the role of society in the social exclusion of disabled people in the UK and to build policies and structures to rectify this (Barnes and Mercer 2005). It is within this framework that our research had been conducted.

There have been positive changes in national policies and practices related to disability and exclusion in the last decades, with the introduction of the Disability Discrimination Act in 1995 as a milestone in terms of legislative action. These policies have been made more encompassing over the last decade: from October 2004, it has been unlawful for any employer to discriminate against a disabled person. Employers have a duty to make reasonable adjustments for disabled job applicants or disabled staff when a provision,

criteria or practice applied by the employer, or a physical feature of their premises, puts the disabled person at a substantial disadvantage because of his/her disability (DDA 1995 Part 2 & Code of Practice on Employment & Occupation 2004). Most recently, the 'Disability Discrimination Act 2005' places a duty on public bodies to promote equality of opportunity for disabled people from 2006. Next to this legislative initiative, labour market initiatives such as the New Deal for Disabled People were introduced at the end of the 1990s.

All the same, despite these legislative and labour market initiatives, disabled people in UK still face disadvantages in their labour market opportunities. Exclusion and disadvantage are established when we look at the UK labour market: many studies confirm the disadvantage of disabled people (e.g. Rigg 2006, Kelly et al 2005, Roberts et al 2004, Grewal et al 2002, Molloy et al 2003). UK employers – particularly SMEs - still lack knowledge of disability and disability legislation and provisions and many (one third) consider that recruiting a disabled person is a major risk. Retention of an employee who becomes disabled is also seen as problematic (Roberts et al 2004).

While identifying possible obstacles at the aggregated labour market level, none of the existing research has investigated possible processes and structures of exclusion at sectoral or occupational level. As these vary considerably between sectors or occupations, it is only at these levels that the interplay between training, employment and working conditions and policy measures can be examined with a view to identifying how these influence employment opportunities for persons with disabilities. Our intention is to try to identify disabling barriers and enabling factors for labour market participation, beginning with looking at differences and similarities between the ICT, construction and health sectors in their access and retention of workers with disabilities.

Disability and employment by sector: ICT, Health and Construction sectors

Table 1 shows the overall employment of disabled people within our three sectors, compared with the pattern for employment in all sectors. The representation of long term disabled workers in the construction sector is very similar those in overall employment, at around 13% of workers. In contrast the health sector has a slightly higher than average representation of disabled people, at 15%. The ICT sector, on the other hand, has a lower than average representation of disabled people (with only 11% of the workforce in this sector falling into the long-term disabled category). How far do these differences reflect disablement and enablement in the sectors? For instance, do the numbers for construction reflect those who have become disabled by working in the sector rather than any accommodation to the employment of the disabled? And would numbers be much higher if all those disabled by the sector continued to be employed? Some hint as to how far numbers are a reflection of sectoral conditions is given by the lower proportion of disabled found in ICT, where working conditions are far safer. In contrast, the higher proportion of disabled employed in the health sector may reflect far greater efforts to accommodate the disabled, that is enablement, rather than the unsafe character of employment in this sector.

Table 1: Employment of disabled people in ICT, construction and health (**Meager and Hill 2005**)

	ICT	Construction	Health and Social Work	Total (all sectors)
	%	%	%	%
All long term disabled	10.6	13.1	14.8	12.8
Of which				
Current DDA and work-limiting disabled	4.0	5.5	5.8	5.1
Current DDA disabled only	4.1	4.5	5.9	4.8
Work-limiting disabled only	2.5	3.2	3.1	2.9
Not disabled	89.4	86.9	85.2	87.2
Base (=100%)	1,018,399	2,157,099	3,275,291	27,106,411

Source: LFS Spring 2005 (*People of working age in employment; men 16-64, women 16-59*)

Clues as to the degree to which the proportion of disabled employed reflects the nature of work in the sector are given by the characteristics of the disabled. In terms of age, for instance, compared with the economy as a whole, construction has a very similar age distribution, while ICT and health are more compressed, with a smaller share of workers in both the youngest (16-24) age range, and the oldest (50-59/64). In all three sectors, however, as well as in the economy as a whole, the age distribution of disabled people is heavily skewed towards the upper end. The ICT sector records the biggest difference between the disabled and non-disabled age distributions in this respect and, although this sector (in line with its image as a 'young person's industry') has the lowest share of non-disabled people in the 50+ age range (at 14%), the share of disabled people in this age range is more than twice as high at 33%. It is possible therefore that the relative under-representation of disabled people in ICT is an age effect, and stems from the emphasis on the recruitment of young people in this sector, a bias which tends to disadvantage disabled people who are older on average than non-disabled people.

Another important clue as to the degree to which disability is sector-related is given by differences in the nature of the disabilities found (Table 2). In construction we find a higher proportion of disabled workers than in health and ICT experiencing problems with arms or hands, legs or feet, back or neck, heart or blood pressure/circulation problems than in the other sectors – all disabilities that might well be caused by working in the sector. In contrast, those in ICT are far more likely to experience chest or breathing problems and diabetes, problems related perhaps to more sedentary occupations.

As far as the qualifications profiles of disabled people within the sectors are concerned (Table 3), as in the economy as a whole, higher proportions of disabled than non-disabled people are found in employment at less well-qualified levels. However, there are big differences: construction has a very low representation of higher level qualifications whilst ICT has a high profile. The qualification profile in the health sector is rather similar to that in the economy as a whole, the main difference being the very large representation of people with higher education qualifications below degree level, reflecting the qualifications structure of nursing and some other professions allied to medicine.

Table 2: Nature of disability of all long term disabled by sector: (**Meager and Hill 2005**)

	Construction	Health and Social Work	ICT	Total
Problems with arms or hands	7.7	6.1	*	6.0
Problems with legs or feet	13.6	7.5	9.5	10.7
Problems with back or neck	17.8	15.6	13.6	16.3
Difficulty in seeing (while wearing spectacles or contact lens)	*	*	*	1.6
Difficulty hearing	*	*	*	1.4
A speech impediment	*	*	*	*
Severe disfigurement, skin conditions, allergies	*	2.3	*	1.5
Chest or breathing problems, asthma, bronchitis	14.5	13.4	20.8	11.1
Heart, blood pressure, or blood circulation problems	15.7	11.9	12.2	11.7
Stomach, liver kidney or digestive problems	5.0	6.6	*	5.1
Diabetes	7.5	7.4	10.4	5.7
Mental illness	*	4.3	*	10.4
Epilepsy	*	*	*	2.1
Learning difficulties	*	*	*	2.7
Progressive illness	*	5.7	*	5.0
Other health problems or difficulties	5.5	12.5	*	8.3
	283,189	**483,028**	**107,231**	**6,977,097**

source: LFS 2005

Despite the relative 'under-qualification' of disabled people (compared with their non-disabled counterparts) in all three of the sectors, there are broad similarities in the share of disabled and non-disabled people in professional and other high level occupations, the main exception being the under-representation of disabled people in managerial occupations in the ICT sector. This suggests that the under-qualification tends to occur more within rather than between broad occupational groups, and that disabled people are probably employed, on average, in lower level posts within each of the broad occupations.

In terms of wages and employment conditions, there are also differences between the three sectors. The disabled-non disabled pay gap, for instance, is quite small, at 6-7%, in the health and construction sectors whereas it is three times as large (19%) in the ICT sector, perhaps reflecting the under-representation of disabled people in managerial positions.

Table 3: Employment of disabled people in ICT, construction and health, by occupation (source Meager and Hill 2005)

	Occupational group	All long term disabled	Not disabled	Total
		%	%	%
ICT	Managers and Senior Officials	21.2	27.6	27.0
	Professional occupations	27.2	27.8	27.8
	Associate Professional and Technical	14.0	16.2	16.0
	Administrative and Secretarial	9.8	8.4	8.5
	Skilled Trades Occupations	11.2	9.7	9.9
	Personal Service Occupations	*	*	*
	Sales and Customer Service Occupations	*	5.6	5.7
	Process, Plant and Machine Operatives	*	3.1	3.5
	Elementary Occupations	*	1.5	1.6
	Base (=100%)	107,099	909,539	1,016,638
Construction	Managers and Senior Officials	10.3	12.1	11.8
	Professional occupations	5.2	6.1	6.0
	Associate Professional and Technical	3.6	4.5	4.4
	Administrative and Secretarial	7.0	7.1	7.1
	Skilled Trades Occupations	53.0	52.7	52.7
	Personal Service Occupations	*	*	*
	Sales and Customer Service Occupations	*	0.8	1.0
	Process, Plant and Machine Operatives	9.1	8.0	8.2
	Elementary Occupations	9.6	8.6	8.7
	Base (=100%)	283,189	1,872,391	2,155,580
Health and Social Work	Managers and Senior Officials	9.8	9.3	9.4
	Professional occupations	7.7	12.0	11.3
	Associate Professional and Technical	25.8	27.7	27.4
	Administrative and Secretarial	15.2	12.3	12.7
	Skilled Trades Occupations	*	1.4	1.5
	Personal Service Occupations	31.6	30.9	31.0
	Sales and Customer Service Occupations	*	0.5	0.5
	Process, Plant and Machine Operatives	*	0.8	0.9
	Elementary Occupations	6.2	5.1	5.3
	Base (=100%)	485,385	2,787,881	3,273,266

* = fewer than 10,000 cases in cell

Source: LFS Spring 2005 (All people of working age in employment; men 16-64, women 16-59)

The three sectors also vary considerably in their use of part-time and self-employed workers (Table 4), the health sector having a much higher incidence of part-time employment - almost as high among non-disabled as disabled people - reflecting the higher proportion of women workers. In the male-dominated ICT and construction sectors, however, the average use of part-time workers is much lower, though the incidence of part-time work among disabled people is much higher as compared with non-disabled. The greater incidence of part-time work by disabled people is important, as it indicates that this is an enabling factor, though it also likely to contribute to the relative under-representation of disabled people in higher level jobs.

Table 4: Prevalence of part-time work in ICT, construction and health, by disability status (source Meager and Hill 2005)

		Part-time (%)	Self-employed %
ICT	All long term disabled	12.5	12.9
	Not disabled	7.7	8.8
Construction	All long term disabled	11.6	37.1
	Not disabled	5.9	37.8
Health and Social Work	All long term disabled	38.8	5.7
	Not disabled	35.1	6.7
All sectors	All long term disabled	28.7	13.7
	Not disabled	23.4	12.1

Source: LFS Spring 2005 (All people of working age in employment; men 16-64, women 16-59)

Self-employment rates, whilst slightly higher than average for disabled (at 13.7%) than non-disabled (at 12.1%), are also significantly different in the three sectors (Table 4). Construction is a sector with a very high incidence of self-employment, often termed 'bogus' self-employment as legally those 'self-employed' are employed, though possessing a special tax certificate which classes them as 'self-employed'. Here the self-employment rate of disabled people is slightly lower than among non-disabled people. In ICT in contrast, disabled people have a higher self-employment rate (13%) than their non-disabled counterparts (9%). In the health sector, dominated by large public sector employers and in which employee status is the normal contractual arrangement, both disabled and non-disabled employees are much less likely than average to be self-employed.

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A2: The British Construction Sector

Prepared by Linda Clarke

This section of the report outlines the key features of the British construction sector and seeks to identify structural aspects which may act as obstacles to the entry and retention of disabled persons. Some of these obstacles will be shared by other groups – above all women and those from ethnic minority groups – which are largely excluded from this predominantly white able-bodied male workforce. Where this is the case, then research elaborating on the mechanisms of exclusion is referred to, even though these may not be specific to the disabled.

Structure

The construction industry in Britain is a key sector, employing according to the Labour Force Survey 1.9 million, of whom approximately 1.6 million are covered by the quarterly survey carried out by the Department of Trade and Industry (DTI 2004). This narrower DTI definition will be generally applied in this report. After a sharp decline in activity in the early 1990s, construction output has been steadily increasing since the mid-1990s, from £60 billion to reach £78 billion in 2003, or about 9% of gross domestic product. Repair and maintenance (R&M), including housing improvements, much of which are carried out by small or one-person firms, account for 49% of this. Housing represents 39% of total output and 32% of new work whilst private industrial and commercial output represents 37% of new work and infrastructure 13%. Private industrial production and public new work each represent about 6% of output. The output of the industry is, therefore, very varied, implying also a varied deployment of labour and skills.

The industry includes about 170,000 private contracting companies of which about 40% are private one-person firms and only 11,000 employ more than thirteen people. The largest companies are relatively small in world terms, the highest placed UK contractor being now eleventh in a league of European contractors based on turnover. A high proportion of their output, too, rather than being carried out directly, is subcontracted, estimated at about 65%, or more than double that in other leading European countries (e.g. Clarke and Herrmann 2004a, Gruneberg and Ive 2000). The pervasiveness of small firms in the industry is a key obstacle to integration as these tend to rely on traditional practices and to have neither the capacity nor the will to open up employment to excluded groups. It is on these, including in their role as subcontractors, that the productive capacity of the industry largely rests, yet few are aware of the many initiatives for change, including those related to diversity. Over 93% of firms have fewer than 13 employees though these firms account for only 38% of direct employment and 24% of private contractors' work done (DTI 2004). Firms employing over 600, in contrast, account for 20% of employment and 25% of work done, and have significantly declined in number, as have the medium-sized firms.

More possibility to employ those who are disabled is, however, offered via the client who may be able to set particular contractual conditions on contractors and subcontractors. A key client in this respect is the public sector, whether government, local authority or the

myriad of state-funded 'quangos' such as social housing associations. Public-sector output has been steadily decreasing relative to private, to reach £22 billion (2000 prices) by 2003, representing 36% of private sector output of £61 billion or 22% of total new output and 35% of R& M. This R&M includes the building output of local authorities, carried out directly by their building departments or Direct Labour Organisations (DLOs), which constituted 5.3% of all building R&M in 2003 or 10% of public sector output, down from 27% in the late 1980s.

The DLOs with their directly-employed local authority workforces represent a peculiarity of the British construction industry compared with the rest of Europe – one that is particularly important to our subject because of their exemplary and proactive equal opportunity and diversity policies (Michielsens et al 1997). They played a very significant role in post-war local authority building, but this was gradually reduced, with many of the smaller DLOs disappearing and the total workforce declining from 250,000 in 1970 to 86,000 by the mid-1990s to 55,000 by 2003. Nevertheless, the DLOs have continued to play a prominent and disproportionate role in their contribution to training for the industry and in integrating women, ethnic minorities and disabled persons (Clarke and Wall 1998; Clarke et al 2006).

Employment in the sector

The industry embraces at least 50 different skilled occupations and numerous professional occupations; 75% of the workforce is in manual occupations, 25% in non-manual. Almost half the non-manual workforce is composed of office staff (CITB 2004). The largest group of manual workers (19.8% of the total workforce) is in the wood trades, above all carpentry and joinery with approximately 260,000 employed, to be found in joinery installation, general construction of buildings and civil engineering works and the erection of roof coverings and frames, as well as elsewhere, such as in exhibition work. Carpenters are followed by two other traditional trades, bricklayers (9.4%) and painters and decorators (6.7%), and these together with roofers (4%), floorers (2.8%), and plasterers and dryliners (2.6%) make up 47% of the manual trades. Plant operatives (5.7%) and other civil engineering operatives (6.5%) together constitute a very significant and growing part of the manual workforce (CITB 2004).

A peculiarity of the employment situation in construction in Britain is the very high degree of self-employment. This represents a clear obstacle to the employment of disabled persons as it goes together with casual and insecure employment, the use of 'labour-only' subcontractors working to often tight output targets and prices, and a reliance on informal recruitment methods which can exclude any but white able-bodied males. Though self-employment has fallen in the past few years from a level of 47% in 1996, it still accounts for 36% of total manual employment and remains particularly high in the south-east of the country, in the Eastern Region and in certain trades, in particular plastering (67%), painting and decorating (62%), bricklaying (57%), plumbing (43%) and plastering (58%), the wood trades (54%), and to a lesser extent electrical work (25%) (DTI 2004; CITB 2004). In contrast, fewer than one in ten (8%) non-manual workers are self-employed (CITB 2002). This high percentage of self-employed manual workers is

attributable to tax and insurance incentives offered to contractors to employ in this way through a special certification (CIS – Construction Industry Scheme) unique to the construction sector. It is a system often dubbed 'bogus' self-employment because those self-employed are to all intents and purposes in a legal sense 'employed'. It has also been subjected to considerable criticism due in part to the devastating and long-term impact it has had on training in the industry (Harvey 2002; Clarke and Wall 2000). As a result the government has attempted to make the system less attractive and will bring in a new scheme in April 2007.

A second peculiarity of the British construction industry relative to other European countries is the fact that the employment of administrative, professional, technical and clerical (APTC) staff – representing areas of work that may well be suited to the employment of disabled persons - has remained constant at approximately 17% since 1970. In countries such as Germany and Netherlands the proportion of APTC has risen very considerably with the more abstract and technical nature of construction work (DTI 2004; Clarke and Herrmann 2007a). The implications is that the industry is significantly more labour-intensive than that in other countries, a factor which many also render it less open to those with disabilities, particularly those of a physical nature, and less accommodating to those who become disabled in the course of their employment.

Yet another, and associated, peculiarity is the relatively high proportion of untrained workers in the construction labour force many of whom - echoing the persistence of a craft system - continue to be classed as labourers. Others pick up some of the skills of a trade informally and are gradually taken on and paid as tradespeople or classed as plant operatives following a short plant-specific training course. The Construction Industry Training Board (CITB ConstructionSkills) estimates that only 46% of the workforce has National Vocational Qualification (NVQ) Level 3 or its equivalent, compared with about double this proportion in Germany (CITB 2004; Richter 1998). This is also disadvantageous for disabled workers who are more likely to rely on formal qualifications to gain entry into the construction labour market.

As with construction industries elsewhere in Europe, construction shares the characteristic of very low numbers of part-time workers, again indicating the inflexible nature of its employment structure. As the Census for 2001 shows, the proportion of those working part-time varies with occupation, being still low but far higher with the professions such as architects (10.2%) than with skilled occupations such as carpentry and joinery (4.3%) and even more so labouring and less skilled occupations classified as 'construction operatives' (3.3%).

Another peculiarity of the industry, which it shares with its west European neighbours, is its overwhelmingly white, able-bodied, male workforce. Nationally a target has been set by the CITB to increase the recruitment of women and ethnic minorities by 10% every year. Male workers dominate the industry in both manual occupations, where they constitute 99.7% of the private-sector workforce and females 0.3%, and non-manual, where males constitute 70% and females 30% (CITB 2002 and 2004). There is also a lower proportion of women among the self-employed, 1.5%, compared with 12.7% of

those directly employed (DTI 2004). All in all women constituted 10.1% of the construction workforce in 2004 (LFS 2004). The only occupational group in the private sector of the industry with more females than males is administrative staff (68% female and 32% male), accounting, too, for 78% of the total female workforce (CITB 2002).

Those women who are still employed in construction are concentrated in particular occupations. For manual work the most popular occupation in the private sector is painting and decorating (3% of all painters are women), followed by floorers and wall tilers (1.4%), and carpentry and joinery (1%) (Census 2001). The main construction trade union, UCATT (Union of Construction and Allied Technical Trades) considers that particular occupations are more suited to women, such as plant operating, painting and decorating and the manufacture of components, and that it is on these that any targeting should concentrate. For professional occupations town planners (29%) and architects (16%) constitute those with the highest proportion of women according to the 2001 Census. On site, though, proportions of non-manual are similar to those for manual occupations, with only 0.7% of site supervisors and 0.4% of site managers female, although the proportion of site supervisors is slightly higher (2.5%) (CITB 2002).

In terms of ethnicity the composition has, according to Labour Force Survey figures, seen little change, although, unlike gender, non-white employment has risen from 1.5% in 1992 to 1.9% by 1998 and 2.4% in 2004 (LFS 2004; Byrne et al 2005). 8% of the working population are from ethnic minority groups, so their participation in construction is significantly less than for the overall economy. However, of the 96,000 additional people recorded as employed in the industry since 1998, 8.3% are ethnic minority, accounting for the percentage rise in their presence.

Unfortunately little information on numbers with a disability is available, though the CITB aims to provide the support services, equipment and physical adaptations which will help remove barriers and obstacles for disabled apprentices. What are available are statistics from the 2001 Census on those in employment with a limiting long term illness. These show clearly that the proportion of those with a limiting long term illness is lower for those employed in professional occupations such as architects (5.2%), than for those in skilled construction and building trade occupations (6.7%), and even more so than for labourers in building and woodworking (10.1%). The same phenomenon is evident for men and women, though the proportion of female construction professionals with a limiting long term illness is consistently lower than male (e.g. 4% for female architects, town planners and surveyors compared with 5.1% for males), whilst the proportion of female skilled construction and building trade workers with a limiting long term illness is consistently higher than for males (7.8% compared with 6.7%). For those few employed part time, proportions with a limiting long term illness are very much higher than for full-time, especially in the manual occupations - standing at 11.7% of part-time architects, town planners and surveyors (compared with 4.6% of full-time workers) and 15.5% of part-time workers in the skilled construction and building trades (compared with 6.2% of full-time workers in these areas).

This indicates that the industry may be relatively closed to those with a limiting long term illness, especially as the rate of part-time employment is so low. The indications are also that the more manual and less skilled the occupation, the greater the likelihood of incurring a disability in the first place resulting in a limiting long-term illness. These figures do nevertheless indicate the relatively high proportion of those with a disability of some kind in the industry, a figure which would no doubt be very much higher if all construction workers, past and present, with a limiting long-term illness continued to be employed in the sector. Nevertheless the proportion of those in skilled construction and building trade occupations with a limiting long-term illness, at 6.7%, is identical to the proportion for the workforce in the economy as a whole. After the war there was a 3% quota on firms to employ people with disabilities and employers were required to keep a disabled register. This was repealed in 1995 with the introduction of the DDA. It was however never properly enforced and the construction industry employers could claim exemption. Nevertheless, from our interviews it appeared to have had some impact in terms of firms – albeit those with high levels of direct employment – being more likely to find employment for those becoming disabled.

High levels of disability in construction are attributable in large part to the considerable health and safety problems in the industry, not improved by the CIS system of self-employment. 1 in 10 bricklayers are, for instance, invalided out and 750 die per year from asbestos. It is estimated that about 50% of accidents in the industry go unreported, so there are no really reliable statistics. When an accident occurs there are ways to deal with this, but for health problems, which may only appear thirty to forty years later, people usually just leave.

Sectoral changes

Construction output is expected to increase for the next four years at an annual growth rate of between 2% and 3%. To meet this, it is estimated – based on the skill implications of anticipated technological and organisational change in the industry – that over 80,000 new recruits will be required each year, including nearly over 16,000 managerial and office staff, 12,000 in the wood trades, over 6,000 plumbers and nearly 6,000 bricklayers (CITB 2004). The vast majority of new recruits will be needed to replace the existing workforce and the remainder to meet the expected increase in construction employment.

Alongside this anticipated growth, unemployment in construction is low and in all regions the number of claimants with a last occupation in construction and seeking work in a construction occupation has decreased. According to Labour Force Survey statistics, unemployment is however regionally very different and, where it is highest, self-employment tends to be lowest, as in the North-East. At the same time, the number of vacancies has dramatically increased in most regions, doubling in Britain as a whole between 2000 and 2004. (DTI 2004)

Everywhere skill shortages are reported for the industry. According to the CITB *Survey of Firms* 34% reported difficulties in recruiting carpenters, 27% bricklayers and 15% plasterers and professionals (CITB 2002). Skill shortages are especially acute in the

housebuilding sector where our own survey has shown up to 50% of firms are experiencing difficulties in recruiting these same occupations (Clarke & Herrmann 2007b). The widespread concern about the skills capacity of the industry opens up the possibility of a concerted policy to employ disabled workers.

Considerable effort is being expended on attempting to transform the industry, particularly given its relatively low productivity and the low level of building investment per inhabitant compared with other European countries (63% of the level in the Netherlands) (Clarke and Herrmann 2004b; Die Deutsche Bauindustrie 2005). This began with the Latham Report of 1996, 'Constructing the Team', which gave rise to a series of working groups and was followed by the Egan Report, 'Rethinking Construction', of 1998. The government responded to both reports by launching a movement for industrial reform, the Movement for Innovation (M4I), together with a Construction Best Practice Programme (CBPP) and the Strategic Forum for Construction. Part of the initiative 'Rethinking Construction' has been a 'Respect for People' campaign, involving clients, government and industry working to improve construction in such areas as: equality and diversity in the workplace, the working environment, health and safety, training, work in occupied premises and workforce satisfaction (Rethinking Construction 2002).

Improving female and ethnic minority participation is very much part of this agenda though this has yet to extend to disabled persons. The Construction Industry Training Board (CITB) has, for instance, introduced a 'positive images' campaign, utilising images of young female and male black, South Asian and white people, and a new initiative to promote the construction industry to ethnic minority community leaders and education specialists. The employers' confederation, the Construction Confederation (CC), also seeks via the CITB's Curriculum Centre Initiatives to attract women into the construction industry at an earlier age, including through visits to schools, work placements, creating links with teachers and presenting a 'business case' for equality. The Young Presenters team, for instance, includes women and those from ethnic minorities employed in the industry as role models working mainly with member companies of the Major Contractors' Group. Such initiatives could well be extended to include the disabled.

The main initiatives in construction with respect to disability stressed by all interviewees are concerned with avoiding people becoming disabled in the first place. The Department of Work and Pensions currently has a health promotion push including in construction. There has also been a change in emphasis in this respect by construction employers concerning health and safety, away from a concentration on technical solutions, for instance to lifting. The approach now of the CC, for instance, is to identify and highlight risks and explain the methods and means to avoid these, in particular the management tasks involved. This has gone together with is a change in procedures, including from the Health and Safety Executive (HSE) which has a new emphasis on occupational health. As a result the degree and nature of disability in the workforce is increasingly being identified.

Exemplifying this is the Constructing Better Health (CBH) Campaign, for 'revitalising' health and safety in construction. This began with the 2001 Construction Summit called by Deputy Prime Minister John Prescott, which set targets for reducing accidents, ill health and working days lost. The campaign took 3 years to establish at the end of 2004 and now has funds of £1.3m from a range of different organizations: HSE; Association of British Insurers, Department of Work and Pensions (DWP); DTI; Union of Construction and Allied Technical Trades (UCATT); Transport and General Workers Union (TGWU); and the CC. On its Board are also employer and trade union representatives. The aims of CBH are:

- A healthy and productive workforce
- To manage occupational health and retain people, which would mean lower premiums and less claims.

The way seen by CBH to succeed in meeting these is to communicate to those doing the job. The campaign revolves around a three stage process of intervention:

- Managing health guide
- Intervention (tool box talk etc)
- Occupational health screening

The first activity of CBH is a talk on sites, with an approximately 40 minute presentation covering occupational health issues, using photos of disabilities caused by work in construction. At this talk it is also explained that a mobile unit will be coming around and those interested can make a half-hour appointment to have various checks (blood pressure, eyes/sight, urine, lung function, body mass, skin checks). This is very successful and has resulted in all those screened volunteering for checks. CBH has been running an occupational health pilot in the Leicestershire area. By May 2006 13,000 health checks had been carried out on construction workers, one-third of who had to be referred to their GP or optician, with 30% found to have noise-induced hearing loss and 3% hand/arm vibration; surprisingly few had muscular skeletal problems. These levels are similar to those reported by an occupational screening initiative of one large contractor in which 38% of the workforce was found to have a disability, including work-limiting. CBH is working with 400 construction employers and intends to identify a national scheme by early 2007.

The main initiative is therefore in relation to occupational health, including the prominent employers' Main Contractors Group working with occupational health professionals to set standards and improve knowledge. CBH is currently the main initiative in the industry. There is also 'Workplace Health' Connect, an HSE initiative which has £20m funding for all industries but only targets firms with over five employees and under 250 and has limited objectives. One problem is that there are a range of organizations in the industry with different approaches but little coordination concerning how to treat and rehabilitate people with disabilities. 80% of employers have less than five people and the main need is seen to be how to prevent people becoming disabled in the first place, putting pressure on government to introduce measures aimed at prevention.

HSE is the main body concerned with preventing people becoming ill. Its emphasis till now has been on health/injury prevention (e.g. hand/arm vibration, muscular-skeletal,

dermatitis, noise-induced, stress), managing the risks not the symptoms. Since 2005 it has however had a separate occupational health section for construction and has been seeking to raise the profile of occupational health and to take health issues seriously, though resources are in short supply and health and safety advisors are often not given occupational health training. HSE has a project plan and a mission statement to reduce ill health in construction by 2008. Ill health targets are sector specific and construction is seen as a lead sector, with massive underreporting.

HSE has about 6-7 field inspectors in each area, with the Luton office north of London driving initiatives and supporting the field inspectors. One initiative is the development of an occupational health model, intended to help identify health hazards. HSE is planning to create a web-based tool, including case studies and good practice, intended to demystify and show companies what can be done and how to identify what risks there are. This would facilitate, for instance, heavy blocks being designed out, more mechanization being used and risks being assessed and managed, including through health surveillance. The model will be available on the web and serve as a tool of good practice, to encourage managers and designers to look at occupational health also in relation to the CDM (Construction (Design and Management)) Regulations of 1994, stemming from the implementation of the European Temporary and Mobile Construction Sites Directive. A small building company, for instance, will be able to assess the dangers of muscular-skeletal problems and dermatitis.

Another initiative is the backs campaign run by the HSE since 2005, which includes mechanical handling (e.g. of kerbs), which HSE can insist on, for instance for road maintenance. The aim is to phase in mechanical handling wherever 'reasonably practical' with respect to heavy blocks. This is also to be achieved through targeting, for instance, motorways and conventional kerbs where gangs are still used. Otherwise there are not many initiatives, though the CC has been working with insurance companies in a limited way in relation to rehabilitation. The larger firms have also been trying to organize 'back to work schemes' and to assess sickness absence. Such measures may have limited impact with respect to the manual workforce, where such firms do not employ many directly, self-employment is high and no link has been established with the Building and Civil Engineering (B&CE) Benefits Scheme.

Unchecked, certain disabilities can be a safety risk. For instance one interviewee cited the case of a 58 year old crane driver who had never had an eye test and had lack of depth of vision. Self-assessment questionnaires are often misleading, for instance in terms of deafness. In the rail industry card test is required and revalidation every 2 years, but not currently in construction.

Under COSH (Control of Substances Hazardous to Health) regulations employers have a statutory duty to ensure a safe and healthy work place. They may also employ a health and safety person or use occupational health services, though the skills required for health surveillance to recognize problems are in short supply. Traditionally managing risk was just left to the small subcontractor to sort out, with understanding of occupational health issues left as an individual responsibility. The onus is now more on the main contracting

firm, in particular with the change in CDM regulations from July 2007. There is a growing expectation that firms should be managing risks and measures are stronger if firms are doing something themselves.

Social partnership

One aspect of the industry that presents a significant obstacle to realising the inclusive programme of improvement envisaged is the lack of industrial democracy. The lack of involvement of the workforce itself in improving 'Respect for People' is attributable in part to low levels of employee representation. The trade unions represent a declining proportion of employees, with trade union density estimated at 17%, having decline from 26% in 1995 (DTI 2005). The trade unions too are fragmented and relatively weak, there being four main unions with members in construction: UCATT with an estimated membership of 110,000, many employed in local authorities; TGWU; GMB, with about 20,000, many in building materials companies; and AMICUS which represents some of the more skilled workers including – traditionally – electricians and plumbers and which is shortly to merge with TGWU.

AMICUS, for example, has is a national officer responsible for disability and within the union structure are core groups subdivided in terms of equality and covering: gender, LGTG (lesbian, gay and transsexual workers), disability, and black and ethnic minorities. Each region has a regional council, meeting every 2 years at national conference when policies are set for each group. The driving force currently for the union to facilitate the employment of disabled is economic, because of skill shortages.

There is no longer any clear difference between the unions as to which occupations each recruits and they therefore compete with each other for membership and have little formal cooperation, apart from through such organisations as the European Federation of Building and Wood Workers (EFBWW) and the International Federation of Building and Wood Workers. UCATT, TGWU and GMB each have representatives on the Construction Industry Joint Council responsible for the Working Rule Agreement, the collective agreement for the industry, which covers 20% of employees (CIJC 2005; DTI 2005). Their involvement in the numerous initiatives for improvement is however minimal and often not encouraged, given the employer-led nature of decision-making in the industry.

The employers on their part are represented through the Construction Confederation, which acts as an umbrella body ensuring that government, the media and other important opinion-formers hear the voice of the industry. Formed in 1997 but with a history stretching back more than a hundred years, the CC comprises seven member federations: the British Woodworking Federation (BWF), the Civil Engineering Contractors' Association (CECA), the House Builders' Federation (HBF), the Major Contractors' Group (MCG), National Contractors' Federation (NCF), the National Federation of Builders (NFB) and Scottish Building. These in turn have more than 5,000 member companies, accounting for over 75% of industry turnover

(www.constructionconfederation.co.uk). In addition to the CC, there is also the Federation of Master Builders representing many of the small builders.

Just as with the unions, which represent only a small part of the workforce, so the employers associations too tend to represent the larger firms rather than the myriad of small firms in the industry. In these, attempts are being made to improve the under-representation of women and ethnic minorities on various internal committees and at decision-making level though little action has been taken with respect to the disabled.

Education and training

Very much to the fore in the Egan agenda 'Rethinking Construction' was the improvement of skills in the industry through education and training, in particular: at top management level to provide greater technical knowledge; at project management level in terms of skills needed for integrating projects and leading performance improvement; at supervisor level; for designers, to give them a more practical understanding of the industry; and for workers, to undertake a wider range of functions and tasks and to upgrade and retrain at professional and operative levels (Egan 1998). Alongside this thrust to improve skill levels is the policy actively to challenge discrimination of the Learning and Skills Council (LSC) - the government quango responsible for organising and assessing training, and for the state-run vocational training or Further Education (FE) colleges. In this respect some colleges are more proactive than others. The Adult Learning Inspectorate monitors colleges' equal opportunities and highlights good practices. The amount of employer-based training provided is generally entirely demand governed, that is dependent on employers offering apprentice places; there is no recruitment above vacancies, and employers send trainees to colleges, not the other way around.

The education and training structure

The key organisations responsible for construction training are the CITB, which is a Sector Skills Council (SSC), and the FE colleges. The CITB is one of only two remaining statutory training boards, set up in 1964, as a tripartite body, but now with an overwhelmingly employer-dominated Board, with just two trade union representatives. It has a broad variety of roles, including: the delivery of products and programmes through regional offices and in partnership with local colleges, regional development agencies, the Learning and Skills Council, etc; providing information and policy advice to other business areas; accrediting occupational standards; and developing and maintaining the National Vocational Qualifications (NVQ) framework involving the recognition and development of new skill areas. The CITB also itself has an obligation to promote fairness and training for disabled people to achieve positive outcomes, though its disability policies are very much apprentice-focused.

The CITB also manages the collection of the levy from all but the smaller construction firms and regional officers encourage them to register trainees with the CITB and make training places available. For the Modern Apprenticeship the employer, the trainee and

the CITB sign a standard Learning and Skills Council contract involving a minimum of two years for NVQ level 2 and three years for NVQ level 3. The CITB also offers short courses through the National Construction College, although it has little responsibility for direct training. The levy is low by European standards and often passed down to labour-only subcontractors who in turn may pass it to their self-employed workforce. Levy income amounts to about two-thirds of the CITB budget, the remaining third coming from the state.

In terms of disability, the CITB officer responsible for diversity is responsible for drawing up the disability policy, informing people, and managing its implementation, including by the National Construction College (NCC). The regional offices, managing agents, CILN (Construction Industry Learning Network) and 'Learn Direct' (anyone working for CITB with a learner and now under NCC) must comply with the policy, which is approved by the Chief Executive of CITB. The CITB has 12 regional offices and each has an Equal Opportunities (EO) adviser. These advisors may for instance, speak with regional groups. Targets have been set for women and ethnic minorities but not for disabled, and a Positive Action programme established for work trials with employers. The CITB has an obligation to promote fairness and the training of disabled to achieve positive outcomes. CITB disability policies are apprentice-focussed but the organisation was unable to give exact numbers of disabled training, partly because people with disabilities often do not formally admit they are. If a learner is at a Further Education (FE) college and treated unfairly, then the CITB will help sort out an outcome, for instance accompanying the person to the college. The same would apply with 'reasonable adjustment'. Making 'reasonable adjustment' is regarded as a retention issue with respect to trainees, one which can be interpreted very broadly and does not just relate to physical disability (e.g. dyslexia). An employer might contact CITB for advice on this. The CITB diversity officer also has also has direct links with Disability Rights Commission (DRC), the EOC, and the Commission for Racial Equality (CRE). The CITB attempts to be anticipatory, not reactionary, though the case for EO which it makes to employers is limited to the 'business case'.

FE colleges, the other key organisation with respect to construction skills training, are outside the CITB remit. They are responsible for courses on a day or block release basis for those on the employer-based route, usually under a Modern Apprenticeship agreement, and for courses run on a full-time (16 hours per week) basis serving those who are unemployed. The time spent on practical work, theory, and key skills development and which students have for tutorials and to work alone on specially designed resources will vary significantly according to whether they are on a full- or part-time craft or technician course (FEFC 2001). Those on a part-time course will spend approximately half the time that a full-time student does in each of those areas. Many FE colleges make considerable effort to integrate women, ethnic minorities and other vulnerable groups, including the disabled into their construction training courses.

The construction professions are educated in institutions of higher education and, following completion of courses, graduates may be recruited by firms and given further training. Some courses may also be sponsored by the larger companies.

Labour supply in the sector

There are two main ways of obtaining training in the industry:

- *full time in FE colleges*, the route for the majority (62%) of those undertaking National Vocational Qualifications (NVQ) in construction, usually over two years for 16 hours a week, the maximum time allowed in order to obtain benefit as an unemployed person;
- *as an apprentice in a firm*, the route taken by approximately 38% of trainees and usually involving day release (sometimes block release) once a week to college.

The decline in the second route to training, based on employer goodwill, has been described as the 'employers' retreat' and has gone together with a change from block to day release to college (Keep 2002). It has also occurred as large firms have abdicated responsibility for direct employment and hence for training and the proportion of small firms has increased, so that most trainees are dependent on these to offer training places. Taken together, first-year entrants into these two routes have shown an increase since 1997, particularly for carpenters and joiners and bricklayers, whilst painting & decorating has witnessed a slight drop in numbers (CITB 2003a). Numbers of first years for 2003/4 stood at 48,744 of who one third were serving some form of apprenticeship with a firm, although the figure was much higher in the North-East, Scotland and the South-West. Ethnic minority trainees in 2002/3 accounted for 4% of total first-year trainees, a decline from 2000/1, when there were 5%. A similar decline also occurred in the number of female first-year trainees, from 4% of trainees in 2000/1 to 3% of trainees in 2002/3 (CITB 2004).

There are a number of points to note about these figures pertinent to our study. In the first place, most of those undertaking training, especially on the college-based route, are adults over 18 and their numbers have been rapidly increasing, from 21,350 in 2000/1 to 27,596 in 2003/4, to account for 56% of the whole intake (DTI 2004). A second factor is the high drop-out rate from college courses of about 40% of those in the main building trades (CITB 2004). One reason is that many students are unable to cope with the demands of NVQ level 2 because they may lack basic numeracy and literacy skills and struggle with the theoretical aspects (FEFC 2001). A third factor is that carpentry and joinery represents by far the most important trainee occupation, with nearly 30% of all first-year entrants in 2003/4 (DTI 2004). Finally and for our purposes the most significant aspect is that those from more vulnerable groups, in particular women and ethnic minorities, are more likely to enter the college-based route than the employer-based route. Those from ethnic minorities represented only 1% of CITB employer-based trainees in 2000 but were 5.2% of those on the college-based route, closer to the percentage of ethnic minorities in society. The same phenomenon is to be observed with female trainees, who constitute 7% of college trainees. The indication is that women and ethnic minorities find it either easier or preferable to access college-based than employer-based training. The implication is that the same would apply to those who are disabled. The difficulty with the college-based route is, however, to find employment subsequently and obtain the necessary work experience, a factor that clearly contributes to high drop-

out rates. Indeed, those whose training is just confined to the FE College are awarded an Intermediate Construction Certificate (ICC) and can only obtain the relevant NVQ once they have obtained the necessary work experience. Overall the proportion of women and ethnic minorities in training at craft and technician levels is higher than the proportions in employment, indicating that many who do train in construction are not subsequently able to enter and work in the industry.

In higher education, the main route into professional and technical occupations, female and ethnic minority participation is much higher in all areas. This contrasts strongly with ethnic minority recruitment into the industry and especially representation at middle and senior management levels which is low.

The overall proportion of construction trainees, although it has risen, also remains very low compared with numbers in other leading European countries. Trainees represent an estimated 4% of the total manual construction workforce in Britain, whereas in Germany the rate is about 7% (CITB 2004; Die Deutsche Bauindustrie 2005). Most significant of all has been the serious decline in technician training, contrasting strongly with the rise in employment and training in these areas in other leading European countries.

As well as a relatively low level of training provision in Britain, what does exist is restricted to certain occupations. 63% of employees work in the main building trades (wood trades, bricklaying, plastering, roofing, painting, and flooring), whilst 71% of trainees are concentrated in these areas. Plant operators, scaffolders, maintenance workers and many in the civil engineering sector, although they represent 16% of the workforce, receive virtually no training, with trainees representing only 6% of employees in these areas and these likely to be mainly on short courses (CITB 2004). The concentration of trainees in traditional trades has long been a characteristic of the industry and denotes its very traditional character.

Qualification and skill requirements

The amount of formal training that construction trainees receive is generally much lower proportionally than in other European countries, which have what Marsden has termed a 'training approach' (1999). Transferable and general skills not tied to the specific needs of a firm are narrowly task-determined and generally require most institutional intervention and investment and hence social recognition and formal training. The implication is that those who attend college on a more full-time basis acquire more transferable skills, although they may be deficient in specific, work-based skills. The fact that women and those from other vulnerable groups who do train in construction are more likely to be on a college-based route does therefore mean that they will be equipped with more transferable skills although lacking work-based skills. Conversely, those undertaking a Modern Apprenticeship, and hence more likely to be white able-bodied males, whilst acquiring task- and firm-specific skills will be lacking in the more abstract and theoretical skills. A general lack of underpinning knowledge of British construction trainees compared with other countries is confirmed in research showing the general deficiency in mathematical knowledge built into the NVQ system (Steedman 1992).

NVQs have involved breaking down occupations into competencies to be undertaken, often narrowly prescribing tasks, a loss of general and theoretical knowledge in the curricula and deterioration in the transferability of skills. This failing will be even more the case for those occupations for which limited or no formal training is available – including plant operation, groundwork and concreting – and which therefore rely on job-specific skills

Construction employers generally appear to lack confidence in NVQs. Small firms and subcontractors, which anyway have a narrower skills base, have been shown to be more dismissive of formal qualifications than the larger firms, whilst those in larger and medium-sized firms value more abstract skills and technical knowledge (Beck et al 2003). Team skills are sought by all employers, as well as the ability to read drawings and specifications. Operatives are also required to have flexible skills and to have a sufficiently wide skill base to undertake a range of tasks. They need organising ability to set out the work and organise materials and to have a high standard of work and a good attitude in order to deal with customers.

Skill demands, therefore, are in general relatively high, corresponding with changes in the construction process, whereby greater precision is required in, for instance, installing prefabricated components, more abstract skills for planning, setting out and reading drawings, and greater technical knowledge in order, for instance, to overcome new health and safety problems on sites. There is therefore a mismatch between skills required and the actual qualification of the workforce. The main problem with the system is therefore the lack of relationship between college and work and the difficult bridge or transition from education to employment.

Transition from college to employment

A solution on the college side to bridging the transition from education to work is organised site experience, a means used by many colleges. On the work side of the college-employment divide, however, the problem is more intractable, as the lack of qualification of the existing workforce has the effect of maintaining a generally low level of skill expectation and discouraging new entrants equipped with a wider range of potential skills, as yet unrealised.

One drive to improve this situation has been through the CITB's programme of On-site Assessment (OSA) to certify the skills of those working in the industry, whether acquired formally or informally. The Construction Skills Certification Scheme (CSCS), as it is known, involves OSA by accredited NVQ assessors and is intended as a 'fast track route', a 'quick and easy" way to obtaining NVQ level 2 without a time-consuming college course and more effective than focusing on new entrants. The eventual aim is to provide clear qualifications-based hierarchies through which individuals can progress and that this should facilitate the progress of women and ethnic minorities. Through such means it is now estimated by CITB that nearly 70% of the workforce has at least the equivalent of NVQ2 (CITB 2004). As well as running the OSA scheme the CITB acts as the main interface between the education system and industry. The CITB encourages

individuals to look for employers themselves but can also place trainees with employers who have been vetted and then book them into the appropriate course, with CITB staff to monitor their progress. The CITB new entrant training officers have had diversity training to support trainees and firms. If there are patterns of rejection by a company then it is reviewed and the CITB might stop sending trainees.

The current emphasis is, however, on accrediting existing skills rather than expanding initial and further education and training provision, upgrading skill levels and attempting to make up for current abstract and technical knowledge deficiencies. This is an impediment to those from more vulnerable groups seeking to enter. The current depleted levels of skills on site in themselves too act as a barrier to entry, involving, for instance, newcomers integrating themselves into a process which may be relatively indifferent to their qualifications, especially when fellow workers and employers may themselves have no experience of formal training. And, once in employment, opportunities for development are often severely limited and those from more vulnerable groups may find it harder than white able-bodied males to obtain further training (Clarke et al 2006).

Summary

From the evidence, it would appear that vulnerable groups, including the disabled, are more dependent on qualifications to prove their ability, but experience greater difficulty in gaining access to the education and training necessary. As far as the college-based route to obtaining training is concerned, although there are problems associated with high drop-out rates, obtaining access is far less difficult than the employer-based training route. The result is that women and those from ethnic minority groups are likely to have more formal qualifications than their white male counterparts. The same is likely to be case for those entering the industry with disabilities. However, the main obstacle following training is then to obtain the necessary work and site experience in an industry that, whilst increasingly recognising the need for more abstract and social skills and technical knowledge, still remains trapped in a low skills equilibrium and relatively indifferent to formal qualifications.

Employment Conditions

There are huge labour demands on the sector, including Thames Gateway, Crossrail, the renewal of the energy sector and new power stations, in addition to the Olympic developments. It is unclear though what the government will do to meet these demands and the fear of the trade unions is that the cheaper option will simply be to adopt a short-term policy towards employment

The main collective agreement, the Working Rule Agreement (WRA) for the Construction Industry, is signed on the employers' side by the Construction Confederation, the National Federation of Roofing Contractors and the National Association of Shopfitters and, on the trade union side, by UCATT, the TGWU and GMB. This constitutes what is known as the Construction Industry Joint Council (CIJC), which also annually negotiates pay agreements. A similar board exists in the electrical

industry. Negotiated pay rates for manual workers have improved relatively, and by 2004 stood at 822p per hour for the craft rate, a little below the average earnings per hour of 876p, excluding overtime (CIJC 2005; DTI 2004). On major projects, such as Heathrow Terminal 5, there are special agreements, including that everyone will be directly employed, not self-employed. It is envisaged that the major projects agreements established on this project will carry through to the Olympic Developments.

Terms and conditions for the construction sector are critical and specific, given the peculiarities of the sector compared with others. First of all, the production unit is mobile, without a fixed workplace, with workers constantly moving from one site to another. Hence the agreement contains provisions to compensate for travelling time and expenses, as well as accommodation at distant places, etc. Second, work is often site-based and therefore of a temporary nature, and may be interrupted by the weather, non-delivery of materials, etc. To compensate for such insecurity, the agreement stipulates a guaranteed minimum wage. The WRA, however, contains other peculiarities in particular for civil engineering work which continues to be structured around the core person of the labourer, with 'plus rates' awarded for different skills deployed. This denotes a narrow understanding of skill, and accords with the low or non-existent levels of training to be found in civil engineering occupations. It also fails to recognise the wide range of skilled activities undertaken by labourer or general construction operative, including concrete work, plant operation, drain laying, and steel fixing - activities falling within the remit of skilled construction occupations in other leading European countries. In so far as vulnerable groups seeking to enter the industry depend far more on their training and qualifications, the continued anachronism of civil engineering work represents a serious obstacle.

The same relative indifference to qualifications and training is apparent throughout the industry and nowhere more transparent than in the wage structure, in its reward for performance rather than the potential ability and skills acquired through training. In this respect, the widespread requirement for CSCS cards, as a means to register and recognise the skills of the workforce, may serve to encourage a more qualification-based than output-based wage structure, particularly if wage grades are linked to NVQ levels. Piece rates, bonus systems and price work however denote the current preoccupation with rewarding output and performance rather than time and quality. This in itself can be discriminatory, as cited in the Royal Holloway Report with respect to ethnic minorities:

> I noticed that my pay was going down and other people doing exactly the same as me were getting more. I was doing the same hours … If they were receiving an equal amount of money then there was an assumption that they would have to do more physically, or do the least desirable jobs to earn it. … If somebody's on a price, the white person usually gets a better job to earn his price.

A similar complaint concerning bonus and target systems was made by women interviewed in London DLOs (Wall and Clarke 1996).

Wages in firms with greater female and ethnic minority participation have also been found to be in general less performance based (Beck et al 2003). Wage rates themselves

vary from contract to contract and also vary considerably according to type of firm and region. In the south-east they are generally high, for instance for carpenters and joiners. The increasing use of east-European labour in the construction industry represents an attempt to reduce wages and at the same time to avoid a greater commitment to training (e.g. Building magazine 21.3.2003).

Often high wage rates may also go together with long hours of work, including often Saturday and Sunday overtime working. Average weekly hours for construction workers in 2002 were 45.7, including an average 5 hours of overtime (DTI 2004). Long hours often go together with the extensive use of self-employment, casual labour, labour-only subcontracting and agency work. Such long hours represent an obstacle to the employment of disabled workers as well as women. Outside London such casual employment is less extensive and self-employment declining.

Those directly employed generally but not always have permanent contracts, though for operatives these are on a different and more insecure basis from those for staff, most being weekly rather than monthly paid. In firms relying on the self-employed holding CIS certificates, employment though casual can be regular and even long term. As for dismissal, the industry often continues to operate on a 'hire and fire' basis. This is particularly so for new recruits and for the self-employed, who are simply tried out for a day or two and then only retained if required. In general, the better and more regulated the employment and working conditions the more successful the integration of those from excluded groups has been found to be, particularly where there is a trade union presence (e.g. Beck et al. 2003). One problem however is that unless these groups are represented officially in the unions their problems are unlikely to be taken up. For instance, the Union of Construction and Allied Technical Trades (UCATT), the largest construction union, employs 60 national officers across the country, all of whom are able-bodied white males.

Summary

The indications are that the more the wage structure is graded and related to the potential (skills) of the workforce rather than related to output, the more inclusive it becomes. Conversely, the more firms' wages are based on performance and output and totally indifferent to qualifications, the more exclusive the nature of the workforce appears to be. The construction wage structure remains strongly craft-based, that is, based on the output of labour rather than the potential of labour as reflected in qualifications and training. It is still divided, despite attempts at regrading, between labourers (General Operatives), skilled operatives and craft operatives. These aspects are reinforced through extensive use of self-employment, which results in extreme variation in wage rates and little regulation. In the absence of regulation, firms that train are vulnerable to having their skilled labour poached and social dumping is encouraged through the use of east European labour. Nevertheless, notable exceptions to this pattern do exist, particularly in the public sector.

Working conditions

The construction industry is characterised by particular working conditions, which may pose an obstacle to the recruitment of disabled workers. It is not only exposed to the vicissitudes of the weather and seasons, making for insecurity and fluctuations in earnings, but to a varied working environment, whether working at height or depth, moving heavy components or handling dangerous materials. It can be one of the most hazardous and unhealthy workplaces, with a high accident and fatality rate and incidence of occupational diseases. The fatal and major injury rate is three times higher for construction than for all industries and the rate of reported injuries twice as high. Given that the injuries incurred by those who are self-employed may well not be reported, the real rate is likely to be much higher still. Enforcement notices issued by the HSE have also dramatically increased since the mid 1990s, indicating widespread abuse of safety regulations, though these are now likely to decrease with the HSE's new emphasis on self-enforcement by firms. The most common causes of injury are from: being struck by a moving object; handling, lifting or carrying; slipping, tripping or falling from the same level or from a height (DTI 2004).

It is over 30 years since the 1974 Health and Safety Act imposed a duty to comply and employers are therefore conscious of this. There are however different approaches to enforcement, which is seen by the HSE as having a supportive role. Enforcement has until now anyway tended to be seen in terms of safety not health. Manual handling, noise at work and hand/arm vibration can all be enforced. HSE claims not to be moving away from enforcement as such, but relying more on 'persuasion' and on occupational health measures, for instance insisting that certain power tools should not be used for certain jobs.

The problem with disability is 'what is it'? As with the health sector, when examined in detail it is apparent that disability is not necessarily innate to a person, but relative to the work carried out. As a result, the emphasis should be not on disqualifying but qualifying those with particular disabilities for particular work through, for instance, making reasonable adjustments. In our interviews, for instance, the case was cited of a wheelchair user who drove heavy plant equipment and had had a special hoist constructed to access this. Another example might be an electrician with dermatitis who could be taken away from working with dust or cement though retained in larger companies. Age closely relates to disability and adjustment also needs to be made for this.

The industry has attractions in not involving routine work and in being creative, though the requirement to work autonomously and take responsibility can also become an obstacle to greater integration. Research has indicated that women and those from vulnerable groups may be given less responsibility than their white able-bodied peers, ranging from not being given the opportunity to work on a project independently to being expected to act as the office hand (e.g. Royal Holloway 2002; Wall and Clarke 1996). Similarly, whilst the need for close cooperation and teamwork is an attraction, it can at the same time act as an obstacle to integration. For instance, lack of cooperation from

colleagues and lack of access to materials has been found to be a particular concern among ethnic minority tradespeople (Royal Holloway 2002).

How far it is possible for those disabled to work in construction depends on the job and the degree of mobility demanded. There are 'safety critical' jobs, such as slinger banksman or steel erector, which can preclude those with disabilities, especially if these entail heart or balance problems. For some jobs, therefore, there is screening and a case was cited of a steel erector screened for one large project who had to go. For general work it is not so critical. However to work in a confined space you have to have good hearing in order to hear the alarm. This therefore requires a hearing test. The first time on site there may be a general screening. Crane operators too have an annual medical. The HSE 'fitness to work' criteria are necessary for some safety critical processes (e.g. heavy goods driving), though these are not intended to be 'excluding'. A HGV driver, for instance, must be able to see and not be at risk of seizures. Different standards apply to different workplaces. The notion of 'fitness to work' combines the functional requirements for the job with the ability of the candidate to do the job, but reasonable adjustments can be made. It is not necessarily possible or feasible however to make adjustments for certain disabilities on site. It is a statutory requirement however to have health surveillance for particular jobs and whatever information is given is confidential. Defining 'safety critical' workers such as cranedrivers is based on risk assessment. Significantly, for firms with less than 5 people it is not necessary to have a written assessment. Many medical conditions (e.g. dermatitis, fungal infections) are not necessarily noticed and/or declared because the sufferers do not perform safety critical work. Often these conditions are aggravated by the aggressive work environment and heat.

Case Study Firm: Skanska

A disabled wheel-chair bound former roofer interviewed is employed as a safety trainer by the large contractor Skanska in its education department, training for instance, supervisors and those working for 'trade partners' (subcontractors). He explained that he can have difficulties accessing sites, especially if there is mud, but he finds that if he gets stuck there are always people rushing to push him. On a lot of jobs now 2-3 storey office cabins will be built with a lift. Under the Disability Discrimination Act (DDA) too sites should be accessible; Skanska also has its own learning centre where he can be based. He is involved in organising 'working well together days', half-day sessions to which all are invited, covering noise, vibration, asbestos, occupational health, manual handling, risk assessment etc. The aim of these days is to attract small 'white van' builders and to drive subcontractors to raise standards; on the last one about 300 turned up. This wheel-chair bound employee had become disabled following an accident in the early 1990s, after which he had become increasingly qualified as a health and safety expert. He had been responsible for the training for about 100 'working well together days' in the past few years, travelling even as far as the Shetland Islands, and coming across many with disabilities, including limps and bad arms, who continue to work. He presents an induction video and makes efforts to raise awareness, relying on a lot on visual evidence, such as cartoons.

The director of quality and assurance of this large contractor believed that the industry disables people because it can be so closed and does not take enough advantage of the wealth of knowledge available. The firm has 'voice representatives' on some sites, as a way for workers' views to be expressed and heard. This involves a forum every fortnight for an hour or two to discuss problems on sites. There are also convenors on all jobs and union (UCATT) representatives. In the morning workers on site are giving a 'start card', a five-minute briefing about what is going on on the job. This is aimed at manual workers and is presented by the supervisor. For every 12 men, there is one supervisor. There are also 'near misses' reporting cards which are handed into the site office, for instance if a handrail is missing or there is a dangerous fence; there have been 2,300 cards handed in over 18 months. The firm is also looking to implementation of the Information and Consultation Directive.

In our interviews with this firm, it was generally considered that the larger sites were getting safer. For instance there are safety nets today; our disabled, former industrial roofer interviewee explained that he would not be in a wheelchair today if these had been in place then. All the procedures are in place, but individuals need to be safety aware. Risks include working on scaffolds, electrical wiring, slips and trips, and eyes. Eye protection, gloves, hard hats and boots all need to be provided as a minimum. Skanska also provides fleeces, T-shirts, gloves and socks to its directly employed, is trying to get overalls supplied, and writes into agreements with subcontractors that they have to provide protective wear. There is also surveillance of those exposed or at risk and the company runs awareness campaigns, for instance in relation to manual handling and back injuries. If there is a high level of risk then the firm tries to mitigate everything to avoid the risk. Anyone coming onto its sites too has to have a CSCS card, to demonstrate competency. The number of safety officers employed by the firm has been increased - there can be 3 full-time on a site – and the number of people sent on health and safety (IOSH) courses. Safety is seen as the responsibility of all and subcontractors are visited before a project to explain what the project is about and an induction takes place before the project begins. Safety has to be especially well managed towards the end of a job when management and supervision is reduced, clients put pressure on for completion and targets and milestones are threatened with being put back. Occupational health screening can also be carried out on some sites, with employees, though not subcontractors, required to disclose any health problems. Occupation health nurses are also employed on some PFI (private finance initiative) projects and an occupational health service is offered to all. Altogether 4-5 occupational health people are employed by the firm.

The firm is taking particular measures to reduce health and safety risks. Ladders are being replaced by stairs, scaffold platforms and hoists so that mobility problems are less. All tools are now lifted up on to the place where they will be used and kerbs and flags mechanically laid - areas also targeted for SMEs by the HSE. As a result, the firm's accidents statistics have been dramatically reduced and the nature of accidents changed. Nowadays there are far fewer 3 day reportable accidents; they have become much shorter. In 2001 there were 28 reportable (over 3 days) accidents per 1,000 employees; in 2005 this was reduced to 7. For the 3 months preceding the interview, there had been no

reportable incident. This dramatic reduction was attributed to the system in place, to the improvement of processes and the education strategy. Accidents are simply not accepted; if there is an incident then a team is sent to investigate and learn from it. Far more control is exerted over working practices and key performance indicators (KPIs) are established for sites.

Case Study project: Heathrow Terminal 5

An occupational health unit has been set up on Heathrow Terminal 5 has and has already screened thousands and picked up many problems, including diabetes, with the potential to cause accidents. These employees have been referred to firms. Everyone who comes to the site is assessed and the occupational health programme specifies the types of services available to workers. There are no paper records; everything is computerised. There is always an induction, which is specific to the site. For non-'safety critical' workers, there is only a paper health questionnaire to fill in (health declaration). The nature of the work people perform determines whether it is 'safety critical' – for instance, where high voltage is involved, or crane driving. For such occupations, a face-to-face assessment is used together with a pre-employment medical examination. So far, only 4 to 6 people have been excluded.

About 25% of the workers in safety critical occupations have been found to have a medical problem, usually hypertension. From around 7,000 workers in these occupations, about 2,000 are with problems, usually related to their lifestyle. Many are itinerant construction workers who frequently travel long distances, work long hours, and are not registered with a general practitioner (GP). Drinking and unhealthy diets add to the problem, as well as in many cases the lack of established roots and a family support structure. These problems are found in labour intensive work which requires little or no training. When 'marching up' through the socioeconomic groups, less problems are found where greater skills sets are required and better social backgrounds exist.

Accidents and especially disabling accidents are not frequent on the site, given the stringent enforcement of health and safety. Up until mid 2006, only one fatality had occurred, with a temporary worker, though there have been 2-3 bone fractures throughout the length of the project. Eye and hand injuries are particularly frequent with steel fixers. Some accidents are related to height (e.g. falls, muscular-skeletal problems), and where people mix with machines.

The occupational health scheme means a different approach to health and safety, striving to change people's behaviours and attitudes towards health issues. The team raises awareness of risk-taking behaviour and destructive lifestyles. The objective is to move to a 'behaviour safety' model as opposed to 'management safety' model. Dealing with stress problems is considered important: in the construction industry, there is often a mismatch between what people want and what they can get; there is no 'one size fits all'. There is also a mental health policy which is meant to provide guidance and addresses 'troubled groups'.

The occupational health team trains responsible members of the gangs, not necessarily managers or appointed leaders, but 'natural' leaders, to spot health problems and hazards: hand/eye injuries, noise, etc. There is a 'glove policy' – BAA supplies gloves to avoid injuries. Tools are safety checked in real conditions. Successful experience has been registered in redesigning ways of doing particular tasks, in order to avoid exposure to hazards and tool usage (e.g. drilling), to eliminate the problem or to substitute it for a smaller one. For instance, pre-painted steel has been used at T5 to avoid the poisonous effects of the paint. There is 'red list' of substances, whose use needs to be appropriately justified. The objective is to reach 1 million man hours work on the project without reportable accidents.

Safety representatives are appointed by the trade unions and deal mostly with drug and alcohol-related issues. There are health and safety briefings of 20 minutes to half an hour, though language can be a barrier with these, given the large number of migrants on site, and, even if someone translates, no guarantee can be given for a full understanding of the issues by the workers.

In general, the need for occupational health is less perceived in Britain than in some other countries, contractors do not invest in it and have little chance to be controlled, as projects are usually short, and there is a reluctance to legislate, unlike for safety. Nevertheless, it is very rare for the occupational health services generally to be contacted. There are about 36 providers nationally, 5 of which are large and 24 SMEs. Therefore health and safety inspectors come to T5 to learn about the provision.

'*Reasonable adjustment*'

As well as implementing new environmental CDM regulations, contractors must now meet DDA requirements by considering reasonable adjustments at the design stage and carrying out audits to see that the site/building will be OK. If firms do not make reasonable adjustments, they can for instance be faced with employment tribunal cases. For instance, a forklift truck driver with one large housebuilding firm who had angina and claimed he could not lift was sacked and subsequently went to a tribunal. One place suggested to accommodate disabled people such as these was the stores, especially as the workers concerned are familiar with the industry. The Construction Confederation too used to have a tribunal representation service but dropped this because there were too many cases. On the more positive side, Newton and Ormerod (2005: 1079) cite the HR Director of a national housebuilding firm explaining why adjustments had been made:

> People become disabled through the work so we have to be able to support them; very difficult to recruit to this industry [road laying] so if a person becomes injured, we need to be able to find a way to continue supporting them.

Summary

There has been a clear shift in emphasis in the industry, away from just managing health and safety risks through enforcement, towards attempting to eliminate these and at the same time to identify and treat the symptoms of unsatisfactory working conditions

through occupational health schemes. This has meant a new focus on those with disabilities, the reasons for these and the extent to which the industry is responsible. The notion of 'fitness to practise' is in this way being introduced into the construction industry, with greater awareness of the risks associated with employing those with certain disabilities in 'safety critical' areas of activity, such as crane driving or working in confined spaces. The implication is that disability is relative to the activity performed; someone who is colour-blind would be regarded as 'disabled' for electrical work, but not concreting. Occupational health screening for the construction industry does not seek to identify dyslexia, though it would for the health sector.

Another key finding to emerge from our case studies is the extent to which construction workers may be identified with disabilities associated with lifestyles which are incompatible with today's working conditions. For instance, an itinerant construction worker in groundworks today may share the characteristics of his nineteenth century counterpart – working long hours, living away from family, perhaps in a caravan, eating fat-laden foods and drinking beer in the evening – and yet have very different working conditions. The work is no longer so physically-demanding; indeed, as a machine operator the occupation may be largely sedentary. The lifestyle as a result matches that of the traditional itinerant worker but is out of tune with today's conditions, resulting perhaps in obesity, diabetes or heart problems. To tackle these involves not only a change in lifestyle but also in working conditions, such as moving away from long hours and casual employment.

Recruitment and promotion

Recruitment

It is usual for firms to attribute the low participation rates of women and those from ethnic minorities to the fact that these just did not apply and have no interest, perhaps due to the image of the industry given by the media. The same attribution is likely to be given to those with disabilities. The employers' confederation considers that employers do not intentionally discriminate but just did not have the need to take on people from these groups and that misconceptions need to be changed (Beck et al 2003). Despite this, it is clear that discrimination is a key reason for non-recruitment.

Conversely, reasons for recruitment may be more complex, with some knowledge of the industry, whether through family or friends, playing a critical role (e.g. Royal Holloway 2002, Wall and Clarke 1996). Reluctance to recruit those from vulnerable groups - whether women, ethnic minorities or disabled - into the British construction sector is ironic given the widespread skill shortages that exist. In the CITB Employee Skill Needs Survey of 2003, for instance, 30% of firms claimed they had to refuse contracts because of the skill shortages (CITB 2003b). In addition, 50% of employers reported problems with the skills of new recruits and 20% had skill problems with the existing workforce. From other surveys conducted by the CC and the Federation of Master Builders (FMB), it is apparent that the situation may be even worse than evident from the CITB survey

(FMB 2003). The FMB State of Trades Survey of 2002, for example, found that the proportion of building firms reporting difficulties hiring subcontractors (41%) had risen.

Such shortages have already had an impact on the reluctance to recruit ethnic minorities and may provide a positive inducement to the inclusion of other groups such as disabled workers and women. Indeed the Royal Holloway survey reported positive responses from ethnic minorities concerning the attitude of employers towards them, personally and professionally. For instance:

> … an employer who finds someone good will grab him and give him a job irrespective of the work situation at that moment and could not care less whether he is ethnic minority or not. It is an employee's market; it is difficult to recruit and good staff are poached regularly. (Royal Holloway 2002)

One reason why skill shortages are not simply resolved by the CITB increasing recruitment into training is that it is a reactive organisation, driven by industry's expression of its needs. The CITB therefore relies on employers' willingness to take on trainees and though it may focus on employers who are committed to this and set targets, including for the recruitment of those from vulnerable groups, no compulsion is placed on firms. The CITB does try to influence the situation, for instance through its positive image campaign, for which local area offices do the marketing. Guidelines and training on recruitment and selection procedures and EO are given to the area officers. A person with a disability can also contact the regional office. The CC, too, facilitates group meetings with member companies and guidance on recruitment, retention, equal opportunities and training and development, but does not take any direct responsibility for trainee recruitment. Actual recruitment is entirely down to individual firms.

Recruitment and selection criteria and procedures

Research has indicated that the more open, casual and informal the forms of recruitment, the more social networks came into play as a powerful social form of exclusion (Clarke and Herrmann 2007b; Beck et al 2003, Royal Holloway 2002). Many private firms, large and small, rely largely on informal channels, particularly word of mouth, or people ringing in or 'ringing around' using lists that have been built up. Many still even recruit people turning up on site, though others appeared to increasingly shun this method and it is a method that does not to work well for those from vulnerable groups. Common, too, is advertising in the local press. Some local authority DLOs work closely with schools, encouraging excluded groups to come in for work experience and running 'taster' courses. Stuart (2002) too found that larger employers tended to have more structured and formalised recruitment and selection procedures.

There is a realisation that using the same channels of recruitment for white able-bodied males and those from the excluded groups simply does not work (Beck et al 2003, Clarke and Herrmann 2007b). Nor, given the reports of skill shortages in all areas, do those channels anyway appear to be especially effective; agencies in particular invariably send white males as do the job centres. In general, the more firms rely on 'word of mouth' for recruitment the less integrated and exclusively white male and able-bodied their

workforces. Going together with this, at operative level are informal recruitment procedures, especially simply 'trying recruits out' rather than conducting formal interviews. The public sector DLOs usually set up formal equal opportunity interviewing panels with representatives of different groups. In terms of selection itself, therefore, formal and proactive methods appear more favourable to the integration of those from vulnerable groups.

Just as informal procedures appear to favour the recruitment of white able-bodied males, so too does the main criterion for recruitment, 'experience', which is usually put before qualifications. Firms also rank criteria such as 'pride in work' and may check out applicants' tool kits for their value and how well they are looked after. Skills sought by firms vary, but increasingly in addition to technical ability consideration is given to social skills, such as the ability to work in teams, as well as to task flexibility. For trainees, the ability to attend to and follow instructions has also been found to be highly valued (Beck et al 2003; Clarke and Herrmann 2007b).

Promotion

As far as possible firms attempt to promote internally, whether vertically from, for instance, tradesperson to assistant foreman to site manager to contracts/project manager, or sideways, for instance to the design department. Promotion does not necessarily depend on firm size and structure, though is less likely with small firms. Sometimes trainees and labourers may be promoted to the trades. Formal appraisals of which skills a firm may be short of are, however, only carried out by some firms.

The career route possible for construction tradespeople in Britain is anyway restricted, in particular following the introduction of NVQs. In the past a tradesperson such as a carpenter might progress to tradesforeperson and then even to site manager. This would often be achieved through evening or weekend courses to obtain a Higher National Certificate (HNC) or Diploma (HND). Having qualified in this way, it is then possible to take a Chartered Institute of Building professional examination to facilitate promotion to project manager and then further to contracts manager. Typically those progressing in this way in Britain began as carpenters. With the advent of NVQs, however, with their paucity of underpinning knowledge, it has become increasingly difficult to progress in this way (Steedman 1992).

Summary

There is much evidence to support the suggestion that the more firms rely on informal methods of recruitment, in particular 'word of mouth', the less likely they were to employ or consider employing those from excluded groups. Informal procedures such as recruiting those turning up on site and trying recruits out also tend to favour white able-bodied males, as do the use of agencies. More formal, targeted and proactive selection procedures, including interviews, appear more favourable to integration.

Social benefits and support

Social protection in the construction industry is limited. There is a holidays-with-pay Scheme, encompassing a holiday fund, entitlement to accident and death benefits, and a pension scheme But, though legally entitled, many working in the industry do not receive the holiday pay laid down under the terms of the Working Time Directive, as evident from employment tribunal cases. Only the public sector DLOs have a comprehensive range of benefits including those targeted to facilitate diversity such as maternity and paternity leave, allowances for praying time, and retention and re-entry schemes. DLOs may also have a range of support groups, including for gay, lesbian, and bisexual employees, for the disabled and for women (Michielsens et al 1997).

The more firms are proactive in terms of providing support measures the better appears to be their ability to integrate and retain the workforce (e.g. Michielsens et al 1997; Byrne et al 2005). Most firms have equal opportunities policies but, again, only the public sector DLOs tend to have clear targets and procedures to back these up and to encourage the entry and integration of excluded groups. In relation to disability itself, however, in a survey of construction employers, Newton and Ormerod (20005) found that only 27% had any formal policy and little evidence of companies tackling staff becoming disabled during employment. At industry level there are other concerted attempts at integration, by, for instance, the Strategic Forum for Construction and through various projects such as the CITB diversity pilot, linking with the Commission for Racial Equality, the Disability Rights Commission and the Equal Opportunities Commission. Through the Strategic Forum, the 'Respect for People' initiative launched by government together with industry has amongst other activities developed a 'diversity' toolkit.

Active labour market policy

One initiative that is being taken and is intended to bring excluded groups into the industry is the CITB's strategy of Local Collaborative Partnership (LCP). This began in 2001 and involves the social partners, clients, community organisations and groups, training centres, colleges and schools. There are approximately 15 LCPs built on the basis of regeneration projects and with the aim of building bridges between training institutions and full-time employment. The CITB's role is to set up LCPs and to support them by, for instance, giving information on local industry needs and facilitating awareness training. Their work is carried out by the regional offices of the CITB, each of which has an equal opportunities officer and many of which have a dedicated LCP worker to manage projects. The CITB also has an equal opportunities working group which has business support and looks at careers and education.

Most construction firms are not significantly involved in any active labour market schemes, including the government's New Deal 'Ambition Construction' programme whereby trainees stay six months in the firm to gain work experience in the trades and then go for 12 months to another employer, enrolled at the same time on an NVQ course. Some firms make some use of the New Deal for short term, relatively unskilled work and attempt to employ local labour but this has had little significance for the integration of

excluded groups. Indeed few firms invest in labour market schemes and for those that do the quality of schemes is open to question, in particular the training given, and particular groups are not targeted.

Conclusion

The British construction sector therefore exhibits quite distinct obstacles to the entry of any other than white able-bodied males. The key moment of exclusion comes when those from marginalised groups – whether women, those from ethnic minorities or those with disabilities - try to enter the labour market, whether for training, work experience or a job. Informal methods of recruitment and selection and the reliance on established white male social networks encourage the recruitment of 'likes' and the exclusion of others. And, once in, output and performance-based wage structures can themselves act as a deterrent to retention and promotion and a means of segregation. Other features of the industry too may act not only as forces of exclusion but as in themselves disabling, including its relatively low status, casual employment practices, hard working conditions, and long working hours. And, even for those who do succeed in entering, the persistence of a 'macho' work culture, discrimination and harassment, and lack of equal opportunity policies act also as serious obstacles to retention.

It is the failure to overcome such obstacles that explains the weakness of training schemes and labour market policies aimed at inclusion. Equal opportunity policies have been shown to play an important role in developing productive systems, as have the commitment of trade unions in promoting inclusive practices and improving employment, wage and working conditions (Rubery et al 2003; Clarke et al. 2005). Yet currently, with the exception of exemplary occupational health schemes being put in place, there is a reluctance to confront exclusive practices in a proactive way by both government and the social partners in construction. The reasons for doing so are not just social but also economic as severe skill shortages highlight the need to make effective use of groups currently excluded from full and equitable participation in the industry, including those who are disabled.

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A2: The British Information Technology and Communications (ICT) sector

Prepared by Elisabeth Michielsens

Structure of sector and labour force participation

In the past decade the ICT sector in the UK has been going through drastic change, characterised by rapid growth in economic output and employment in the 1990s and a vast expansion of ICT services and integration into almost all other sectors in the labour market. ICT–services in the main drove this growth, whilst hardware and manufacturing employment actually declined. Towards the end of the 1990s market demand fell, largely because of the downturn in technology shares and the "dot.com" market collapse and, as a result, UK ICT sectoral employment rates dropped considerably. The situation is now improving but signs of downsizing/depression are still there: the percentage of firms anticipating growth in ICT professional employment over the next quarter in 2005 is 13%, far worse than the overall average in UK (37%).

In 2005 just under one million staff were employed in ICT industries, the majority working in Software consultancy (342,000) ; Telecommunication services (277,000) and IT services (106,000) (e-skills 2005). These numbers are increasing at the moment. One third of ICT professionals work in London and the South East. Northern Ireland, Wales, Scotland and other regions of England each account for five to eight percent (e-skills 2002). Vacancies for permanent ICT staff advertised on the internet/press were down in the last quarter, but the demand for contract staff is rising, as well as agency demand for computing and IT staff (e-skills 2005). The unemployment rate for ICT has recuperated: currently standing at 2.7% for ICT staff and 3.7% for all working in ICT industries (including administrative staff etc), lower than the overall UK unemployment rate (e-skills 2005).

The evolution of the UK ICT sector has to be set in a global framework: the UK market is working under increased global competition. The trends to ICT outsourcing and off shoring influence investment and employment in ICT in the United Kingdom (some evidence of in-sourcing is available as well). Millar's study found outsourcing of software development and support work to the Czech Republic and Poland, whilst creative services were sent to in Southern European regions (OECD 2004). India, as an important centre outside Europe, accounts for eighty percent of the low cost ICT offshore market and produces 300,000 IT engineering students a year (The Economist 11/13/2004). India might soon be passed by China in the ICT outsourcing market, as China has already more graduates than India. Also the Philippines and Russia are increasing their position in the global ICT market.

At £33 billion in 2003 the software and computing services sector in UK is the largest in Europe (Amicus, 2006). It has a strong private sector character, with mainly small and medium sized firms, usually micro-size: the majority of ICT software firms have none (self-employed) to four employees. About thirty percent of the turnover is generated in

these micro sized firms; which focus on the creative part of the sector (such as web design). The multinational companies nevertheless dominate the sector in terms of supply (the top 20 providers have more than half of the market) and the small companies are highly influenced by the large companies. Only four UK companies are amongst the leaders (Amicus 2006)

Skill shortages

While it is considered an 'employers' market' for lower level ICT skills (repairing PCs etc); the market for more advanced ICT skills is in short supply and is characterised by skill shortages: nine percent of establishments reported gaps in the skills of their ICT professionals and seven percent anticipate difficulties recruiting the staff necessary. These shortages are attributed to the rapid change in the ICT market where products and services develop quickly (e-skills 2005). The change in the sector leads to a demand for different skills: technical skills most in demand at the moment are SQL Server, Office, Java, Unix, and Oracle. Also, because of the high level of specialisation and advanced skills necessary, ICT professionals cannot retrain quickly depending on demand and usually remain within their specific specialisation. Unix is amongst the five most common technical skills demanded from contractors (e-skills 2005). But skills in such areas as project management, problem solving, inter-personal communications have also been found to be important. To be recruited, a software professional ideally has a combination of technical and interpersonal skills. E-skills confirms the necessity of 'soft skills' such as: the ability to communicate with clients especially over technological divides; customer-related skills; the ability to work with continuous change and be an initiator of change; creativity, lateral thinking, and teamwork.

Linked to skills shortages, the ICT industry in the UK is characterised by its attraction to workers from abroad: the highest growth in work permits for instance given in the year 2000 was in Computer Services, together with Health Services, both up six-fold in five years. Overall these sectors account for over 40% of work permits granted. The majority of people employed in Computing Services with work permits are male (81%), under 35 years and graduates and come from India/Pakistan (34%), followed by Australia/Canada/ New Zealand and South Africa. The United Kingdom is seen as an ICT centre of excellence in these countries, and a place to build up experience (DTI 2002). ICT occupations were removed from the shortage list in 2002, but approved work permits have changed little OECD (2004). Whilst mobility can be seen as a solution, it can also create negative consequences such as a 'brain drain' from countries in the process of development. There is a suggestion that skills are not sufficiently developed because of an inadequate match between ICT curricula and industry skill requirements, reluctance amongst firms to train and re-train staff because of the cost and time involved, and reliance on a restricted recruitment base (e-skills 2002, Uni-Europa 2002).

Employment in ICT: women, ethnic minorities, disability and age

Women's employment in the sector has been declining since 1995 and the trend is for more severe segregation: in 2005 21% of workers in the technology industries were

female; in 1997 this was 27% (BBC 2005). 18% of software professionals and one in five ICT managers are female, the latter being perhaps slightly higher than the former because they may enter via business/ICT area educational subject areas - generally more 'female' than computer science degrees. The picture is different in terms of ethnic minorities: this group is not underrepresented at a general sectoral level, making up nearly 9% of employment in ICT (Software) and nearly 10% of ICT professional occupations, with those from the male Asian community especially strongly represented. Most ICT software workers are employees (85%), being self-employed (overall 14%) is slightly less prevalent amongst female workers (12%) and slightly more in the group of ethnic minorities (15%) (ONS 2001).

The age structure of those employed in the ICT sector in the UK is changing. There is an increase in the recruitment of mature workers, but the industry is still comparably 'young' with only one in three ICT professionals older than forty compared with nearly 50% in the labour market as a whole. However, companies are increasingly recruiting older people from other sectors to bring in expertise, project management skills, and business experience. But this is still not happening as quickly as the industry demands. The number of those under 30 years old employed in ICT has fallen by 17% over the past 10 years. Less than 26% of ICT professionals are now under thirty, compared to 43% ten years ago (Fielding 2001).

Disability census information does not provide the same definition of disability as the Disability Discrimination Act: the only disability-related information available for the 2001 census relates to 'limiting long term illness' (LLI). Table 1 shows that ICT occupations have fewer people with a LLI illness work than overall (4.6% compared to 6.7%). The percentage is slightly higher in occupations lower down the ICT occupational ladder (IT Service Delivery Occupations). There is no significant difference between men and women regarding these percentages.

Table 1: Employment (employees and self employed) in ICT related occupations (ICT managers, ICT professionals and IT Service Delivery Occupations) in GB in 2001

	Total	**with LLTI**	**% with LLTI***
All occupations	25889029	1733373	6.7
ICT combination*	709019	32933	4.6
ICT managers	*189103*	*7930*	*4.2*
ICT Professionals	*371017*	*16338*	*4.4*
of which Software professionals**	*254437*	*11126*	*4.4*
IT Service Delivery	*148899*	*8665*	*5.8*

Source: ONS 2001 Census; Crown Copyright 2004
*combination of ICT managers, ICT professionals and ICT Service Delivery Occupations)
** Subcategory of ICT professionals

One reason for the lower representation of persons with a LLI in ICT may lie in working hours and the requirement for increased working hours if necessary (project based). On the other hand, flexible working arrangements (to aid work life balance) are not common

either: whilst overall 75% of all employees work full time, in ICT professions this is 95%. But the percentage of people with LLI working full time is lower than the average: 68%. In addition, ICT professionals' normal working conditions ask for a routine flexibility in terms of travel and place of work; which might be problematic for ICT professionals with a disability. The ICT occupations lower down the occupational ladder demand less flexibility in terms of hours and travel availability, which could explain the higher percentage of LLI workers lower down the ICT hierarchy. Another reason for the lower overall representation of persons with a LLI in ICT compared with other sectors might be the younger age structure of the sector or characteristics of the data itself: according to e-skills, the statistics may be skewed because of a difference in disability monitoring between sectors. Disability will be more monitored in companies where employers and employees can receive disability allowances. Most ICT service companies in the UK are part of US multinationals who do not apply for these allowances; therefore they see no need to monitor disability (e-skills interview)

Entry in the software profession: Education and training

ICT jobs and ICT skills are not completely clear and defined, certainly compared to sectors such as construction or health. There is only a 'fluid' notion of the characteristics of the software engineering occupation for instance, and overlaps between the actual activities of people and job titles exist (e.g. software engineer - computer programmers - software developer - systems developer). This fluidity is hard to dispense with: the continuous evolution of the ICT services market leads to continuous changes in skills needs. E-skills confirms this, reporting that, while there has been a decrease in ICT students since 2000, the ICT market has started to pick up again and highlighting a mismatch of skills. While the industry, as well as its skills needs, is changing constantly, ICT specialists do not change their specific ICT fields that much (e-skills interview and Beck et al 2003).

Education and industry need may not always be in tune with ever-changing market needs, the downturn in the market has had an impact on the importance of having appropriate skills to access the sector. Relevant higher education ICT qualifications may be important for new entrants to the sector; the recruitment of experienced ICT professionals will mostly be based on their ability to prove their project expertise in their specialised ICT fields (e-skills interview).
'Soft' skills such as communication (most important in the translation of technological information to clients), customer management skills and team working are highly valued.

The ICT industry has a spectrum of occupations from customer-facing roles and non-technical management roles to highly technical roles such as software engineering, programmers, systems designers and analysts. These are mostly accessible at different levels, with graduate and non-graduate qualifications. The workforce is better qualified than average, and graduates form the main pool of recruits: higher education is thus the main route into the ICT services sector.

Qualifications of people working in ICT

Over 50% of people employed in ICT (Software) have a first or higher degree. In terms of gender and ethnicity, 56% of men and 57.5% of ethnic minorities working in ICT Software have a higher degree, but only 38.8% of women. The lower female percentage can be partly explained by the higher presence of women in administrative and secretarial occupations in the sector. Further education qualifications such as HNC, HND feature highly as well, but less so for women and ethnic minorities (respectively 13% men, 6% of women and 8% of ethnic minorities) as well as A-level (ONS 2001). Information on the specific skills and qualifications (and length of study) needed for ICT Software is however ambiguous. The ideal standard appears to be work experience together with an ICT-specific higher education degree, especially in the current recruitment climate (Beck et al 2003). But this does not square well with the employment data for all ICT software workers which shows that, while the majority has a first or higher degree, the subject area of this is not solely computing-related. In Millar and Jagger's study (2001), 46% of males and 45% of females in computing jobs (defined as the group of computer systems manager, software engineer, computer analyst/programmer and computer engineer) were graduates in 2000 but only 40% of these had ITEC degrees (41% of men, 35% of women). Graduate computer analysts/programmers and computer system managers (where women tend to be concentrated) have the greatest variation of graduate subject qualification, followed by software engineers (Millar and Jagger 2001).

In summary, while data on the necessity of certain qualifications are unclear, studying an ICT-relevant subject at higher education level is at least a major advantage - even a necessity – for access. Once the opportunity to enter higher education is missed, few others present themselves that allow individuals to develop an ICT career. "Missing out on Higher Education effectively closes the door on any potential career in ICT." (Miller and Petrie 2002). Diversity in education is therefore important for diversity in employment in the sector. So what is the situation for women, ethnic minorities and disabled students studying an ICT related degree in higher education?

In higher education, a distinction has to be made between: ICT-specific degrees, such as engineering, technology or computer science courses (which include, for instance, electrical and electronic engineering, computer engineering, interactive/multimedia engineering, software engineering, computer science); science degrees such as mathematics, physicals sciences, combined or/and applied sciences; ICT/business-related degrees; and other degrees. The first two groups of degrees in particular are seen as ideal as entry requirements to the ICT software sector.

Specific groups: women; ethnic minorities and disabled students on ICT related courses

Women are generally underrepresented among graduates in ICT-related subjects, especially in engineering and technology (electrical engineering, 9% female; electronic engineering, 10 %), which in total have greater numbers graduating than computer

science or mathematics. The gender imbalance is becoming more pronounced: by 2005/6 only 17% of students starting a computer sciences degree were women, the majority of these from overseas (BBC 2005)**.**

The under representation of women in ICT degrees is linked to choices/actions at stages before higher education: figures for ICT-related subjects at secondary level reveal a similar trend to those in higher education (Beck et al 2003). People form attitudes towards ICT at an early age, through experiences at home and at school. In school, particularly by the time students reach secondary level, computing is seen as a 'male preserve'. This has a negative impact on girls' psychological access to ICT technology and on their attitudes towards computers and information technology (Miller and Petri 2002).

In terms of ethnicity, the information available is for entrants to higher education courses, not qualifications. UCAS figures on the number of entrants to selected degrees reveal the high proportion of Asian students on courses such as Mathematics and Informatics or Engineering and Technology. Ethnic minorities, especially those of Asian background are highly represented in exactly those subjects where women are underrepresented (UCAS 2004).

Specific groups: disabled students in higher education
HESA (Higher Education Statistics Agency) data for 2004/05 shows that overall, 4.87% of all higher education students have a disability. The most common disabilities reported are dyslexia (by far the most common), followed by 'unseen disabilities' (such as diabetes, HIV, asthma, and epilepsy). A potential student cannot be refused access from a higher education course for reasons of disability. In case of disability issues that might impact on a student's ability to continue with a higher education course, the student will be referred to a 'needs assessment centre' to determine the personalised support necessary.

Looking only at ICT-related higher education [1]courses, the following observations can be made:

- ICT-related subjects with the highest number of students have average or slightly above average levels of disability;

- Some ICT-related areas such as 'artificial intelligence' have higher disability levels (but low numbers of overall students). Interviewees suggested that dyslexic students might be attracted to these subjects (just as to Architecture). The high disability levels for 'programmes with math sciences' could not be explained; but might be skewed because of the very low number of students;

- Dyslexia is the most common disability in ICT-related subjects. Unseen disabilities, such as diabetes, are second in significance. This is the same as with other higher education subjects.

[1] The following subject areas are subsumed under the ICT umbrella: mathematics; operational research; statistics; computer science; information systems; software engineering; and artificial intelligence

Graph 1: Disabled students in ICT related subjects in Higher Education (2004/05)
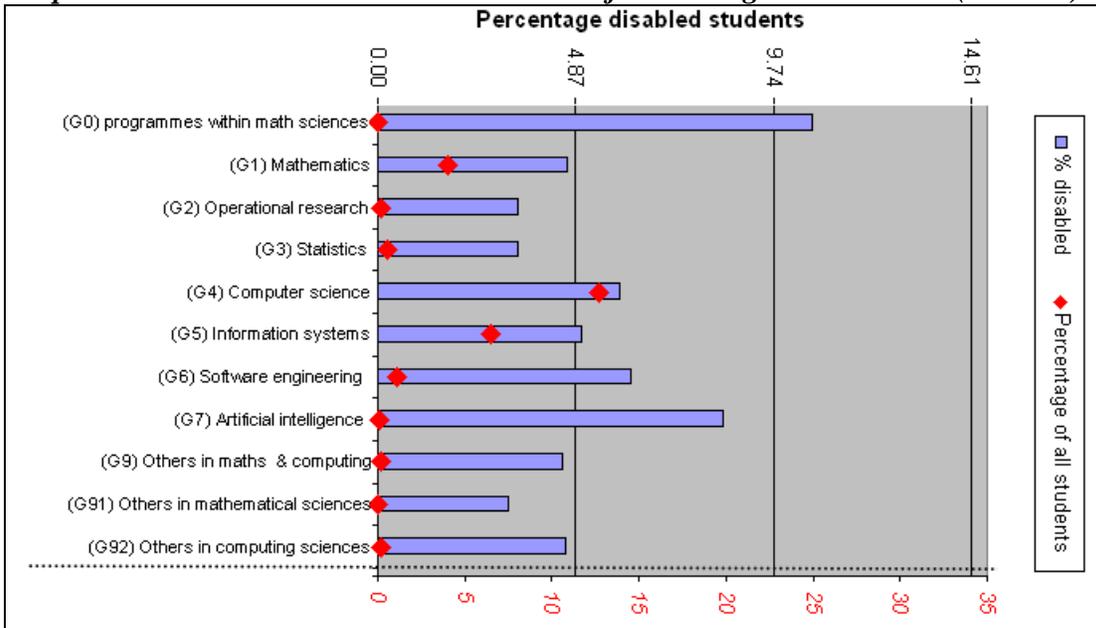
Source: HESA data 2004/2005 (own calculations)

Graph 2: Type of disability in ICT related subjects in Higher Education (2004/05)
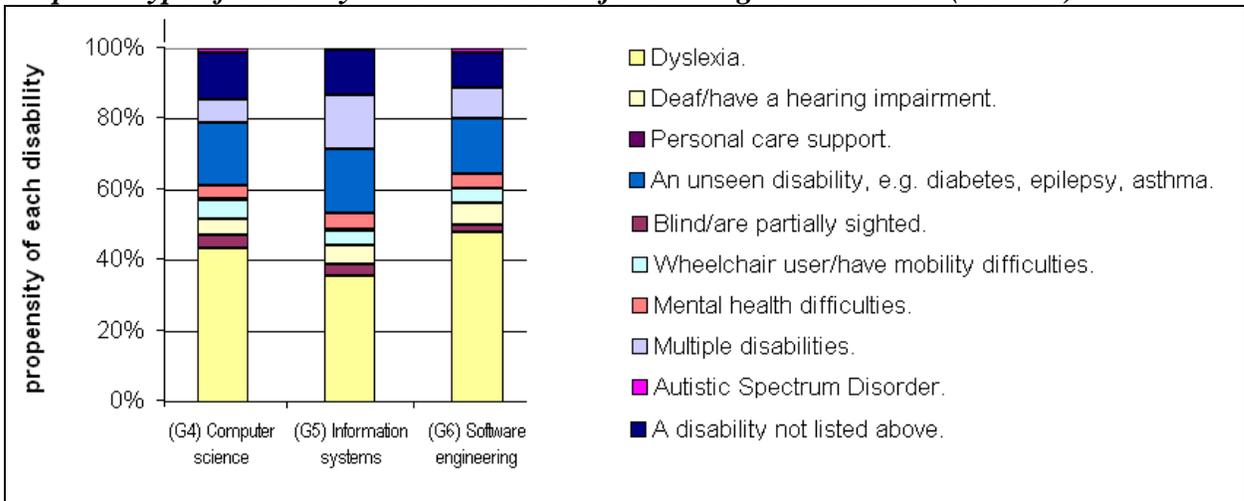
Source: HESA data 2004/2005 (own calculations)

As dyslexic students have a variety of specific learning difficulties, the National Network of Assessment Centres prefers to refer to 'dyslexias' as no two dyslexic student have the same characteristics and needs. Overall, the majority of students with dyslexia have problems with poor short term memory, reading, comprehension and processing speed. These students are more attracted by the creative media and arts-related subject areas and not by computing-related areas as these involve the accurate recognition of mathematical symbols.

Particular support for disabled students in higher education
In order to facilitate the access and retention of students with a disability in higher education, support (financial, assistive technology, specialised learning strategies, and medical and non-medical personal help and care) is available, funded by the Department for Education and Skills. The financial support available amounts to: £4500 per course for technological help; £4500 per year for non medical help , and £1500 per year for general help issues. Additional travel costs are also refunded (unlimited amount). The National Network of Assessment Centres assesses students' need for disability support ('needs assessment'). The support is only available for UK students undertaking an undergraduate or postgraduate course and, in practice, most support is offered to undergraduate students. The amounts mentioned above are considered large enough for most students but the London Assessment Centre does acknowledge that these might not be sufficient for students with a visual or learning impairment who may require expensive technological support.

Technological support varies from specific PC equipment to graphical-enlarging devices for visually impaired students, amplified stethoscopes for hearing impaired medical students etc. Dyslexic students are supported by 'text to speech' ICT packages; and scanners for books, which allow students to use colours when revising. It is interesting to note that ICT solutions are used as the main support for a wide variety of disabilities: the ability to use a PC at home is considered a great assistance for students with mental impairments such as schizophrenia, depression, phobias, anorexia or illnesses such as HIV/Aids or diabetes. This creates a learning environment where students can study at their own pace and at times which are convenient to them. The most widespread support presented by the assessment centres is to dyslexic students in the form of a PC, together with text-to-speech software, a recorder and study skills support (a non-medical helper). The main aim of this support package is again to create a more independent learning environment.

Further training

Many companies – large and small - report further training opportunities, seen as necessary for promotion and as a competitive strategy for survival to keep skills and knowledge levels up-to-date given the sector's constantly changing nature (Beck et al 2003). Larger companies have more formalised structures: development plans with a variety of internal and external training are produced, linked to employee appraisals. The ONS 2005 Labour Force Survey suggests 28% of workers in ICT industries had received job-related education over the past 13 weeks, higher than for telecom industry workers (35%) (e-skills 2005). Firms rarely however appear to have training programmes for specific groups of workers such as women, disabled workers or ethnic minorities (Beck et al 2003). The OECD graph below confirms the importance of training (manuals, practice and training at work, training off the job, help from colleagues) at work in order to maintain ICT-related skills, especially at advanced level (OECD 2004).

Graph 3: Relative Importance of various means of acquiring computing skills in the UK by complexity of computing skills (2001) %

Note: Respondents could give more than one answer.
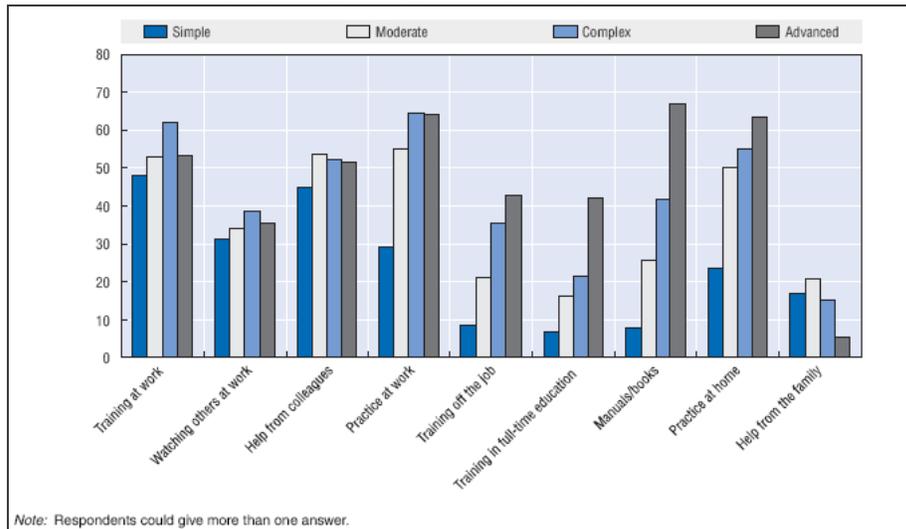
Source OECD 2004

Recruitment, promotion and retention

Informal recruitment methods are popular in the ICT sector, such as word-of-mouth recommendations by peers and friends and direct approaches to (spontaneously sending CVs) or from employers. Many firms (especially the smaller ones) rely on network or word-of-mouth recruitment for access and promotion to the sector (Beck et al 2003). This includes those from educational institutions, as employers use work placements to 'try out' students who become potential graduate recruits, a practice which has advantages for the mainstream software science students - who do not have difficulties in finding a work placement - but could disadvantage non-mainstream recruits. SET-Fair for instance reports that work placement for girls can be off-putting (Greenfield Report 2002). This may be similar for disabled students, though no data is available.

ICT employers see informal recruitment as an 'efficient' method to find suitable staff that will 'fit in' and have correct qualifications. It is nevertheless acknowledged that this may have a negative impact on equality as informal procedures will favour 'insiders' over 'outsiders'. The existence of strong social networks can also create 'self-exclusion' from the sector as no obvious incentive or role model is present and potential applicants might not want to work as 'outsider'.

But even if informality is widespread, formal procedures, such as advertising in the press and other mass media (including recent developments in terms of internet advertisements and application forms), the use of public employment services and private employment agencies also exists. Most large and many smaller ICT companies advertise vacancies on their own websites and have online application forms. Sometimes the information required is weighted to draw consideration to certain characteristics of the applicant (for instance certain qualifications); gender, ethnicity and disability are not however part of the weighting factors of the companies we focused on (Beck et al 2003). Such online

recruitment can pose a disadvantage for disabled people. The Disability Rights Commission's investigation of web sites in Great Britain concluded that 81% of 1000 websites tested "failed to reach the minimum accessibility standards" (New Media Age 2004).

Internet recruitment companies form another important formal recruitment route for ICT-related jobs (e.g. computerweekly.com; ash-associates.com; computingcareers.co.uk; contractorumbrella.com; (the public) jobcentreplus.gov.uk with 9% of the market share; jobsite.co.uk; and fish4.co.uk/jobs) (OECD 2004). Increasingly internet recruitment is used to enhance not formal but informal recruitment processes: 'social network' recruitment[2] is becoming more popular in all industries (especially through companies such as jobster.com; Visible Path Corp; tribe.net and LinkedIn). While no figures exist on the uptake of these informal recruitment technologies in the UK for ICT alone, it can be assumed that this ICT recruitment method will be popular in ICT technology industries.

Recruitment in ICT is not widely monitored; neither is promotion. Apart from British Telecom, no known ICT company monitors recruitment in terms of ethnicity or disability as there is no drive from above to do so and no legal restraint (Beck et al 2003). With the oncoming age discrimination legislation in the UK, a debate on the recruitment of older workers has begun. The ICT workforce is young, with 70% of computer practitioners between the ages of 25 and 44. Few ICT employers have introduced practices "to harness the skills and experience of older staff" as is increasingly common in other sectors (Platman 2004).

In large ICT multinational companies, some recruitment gender monitoring takes place, as gender diversity is placed on their agenda and they prefer a balanced workforce. An American influence is present here, as many larger companies are US-owned, with more established diversity policies and monitoring and used to putting measures in place such as recruitment brochures featuring predominantly women, work-life balance surveys, flexible hours and childcare facilities. SMEs on the other hand are less likely to find diversity in recruitment important.

Retention is an area of concern in ICT, as recruitment and training costs are high. Richard Lowther of Oracle UK, for instance, has estimated that the cost of replacing an experienced consultant is £50,000 (Women in IT Conference 2003). Though software professionals normally do not stay long in the same role (only 18 months according to one survey), the larger companies have a vibrant internal market to accommodate new roles (Beck et al 2003). Women tend not to stay as long as men (approximately 5, instead of 7, years) in a company. Larger companies noted the retention problem of women after maternity breaks and when in their forties. It is assumed to be linked to lack of promotional chances, pay structures, work/life balance issues and the male dominant ICT culture. It is however not only women who leave in their forties but also men. Fielding (2001) suggests that one of the reasons or this is the lack of a universal set of career paths in ICT, increasing the risk of losing staff through de-motivation, despite the efforts of

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[2] 'Social networking technology' refers to software and web-based services that enable users to leverage their personal relationships for networking, hiring, employee referrals and references (Berkshire J. 2005).

institutions such as e-skills. There are initiatives to improve female retention rates, for instance by increasing network possibilities for women and reducing their invisibility (e.g. through role models) in the male-dominated ICT sector (Beck et al 2003). These initiatives are all above company level and vary from e-groups to campaign groups or membership organisations. Some have been initiated by women working in ICT, others are government initiatives, for instance *Equalitec Forum* and *Girl Geek Group*. No initiatives exist to improve recruitment and retention of disabled workers though.

Good practice example: British Telecom

British Telecom (about 100,000 employed) can be singled out as one of the only ICT good practice examples concerning disability issues with respect to recruitment; promotion and retention. "BT is committed to proactively developing and sustaining positive measures that will encourage the recruitment, development and retention of disabled people." (Employers' Forum on Disability 2006). The measures are built on: a diversity commitment concerning job interviews; consultation; retaining employees if they become disabled; and improving knowledge, checking progress and planning ahead. The initiatives include (BT interview and BT webpage 2006a):

- At BT, anyone declaring a disability when applying is guaranteed an interview. (Twenty five (0.3%) of new BT recruits are reported to have a disability as defined by the UK Disability Discrimination Act – including 4% of new graduates and 3.8% of modern apprentices – compared with 2% of BT's total workforce (a conservative figure; this is likely to be 5% based on an anonymous CARE survey 2006));

- BT works with 'Scope' [http://www.scope.org.uk/work] to offer the Leadership Recruitment Scheme (formerly known as Fast-Track), a graduate work-based development programme for disabled people. People recruited to the programme are employed by Scope for 12 months, during which they assess their career aims and development needs and offer work placements with major employers;

- BT works with 'Remploy' though whom 50 disabled people were employed in the last eighteen months. Remploy works in partnership with Jobcentre Plus and employers, offering a range of services to develop disabled jobseekers' skills, including pre-employment training and recruitment programmes;

- The 'Able to Work' project aims to increase the number of people with disabilities employed within the company's customer call centres. Due to the success of implementation across all call centres, Able to Work is being implemented across the finance and business management sections. BT's Able to Work initiative was the winner of the 'national company' category in the Remploy Leading the Way Awards 2005;

- Able2 is an employee network for BT people with disabilities. This employee network with 200 members provides support and advice on issues surrounding disability.

Employee representation & disability agenda

Unionisation and collective bargaining in the ICT sector follow traditional patterns in the

hardware/manufacturing areas, but are quite different for ICT software/services: its young, growing, prosperous (in parts) and 'independent professional' character, the prevalence of many small firms (often more similar to partnerships than traditional, hierarchical organisations) and strong US influence have consequences for employee relations. Unionisation and the prevalence of collective agreements are low – the former estimated at below 6% (the service industry average) (EIRO 2001). There is no sectoral bargaining and little company bargaining, though there is some in hardware firms and plant/unit bargaining in companies.

Who are the players? *E-skills* and the *Engineering Employers' Federation (EEF)* are the main platforms on the employers' side. *E-skills* is the Sector Skills Council for ICT, Telecoms and Contact Centres, an industry-driven organisation responsible for developing the quality and quantity of professional skills in these areas, as well as having a remit to improve general skills in ICT (for ICT professionals and the estimated 23 million IT users) The British Computer Society (BCS), the only Chartered Professional Institution in the field of information systems engineering with 38,000 members worldwide, provides recognised qualifications (Professional Examination) and manages and promotes the ECDL (European Computer Driving Licence) in the UK on behalf of the ECDL Foundation.

E-skills has not (yet) developed a disability agenda. According to the organisation, most employers, because of the non-problematic employment climate, do not consider diversity an issue, though gender diversity has become important in large companies. Although ICT products are inthe forefront in facilitating the integration of disabled person, at sectoral or company level the integration of disabled professionals is not discussed. Equal rights policies in the sector have focused in recent years on the recruitment and retention of women and, more recently, on the rights of older workers and age discrimination. Ethnic discrimination is not on the ICT agenda in the UK, as ethnic minorities, and especially Asian men are well represented at most levels.

There are several unions operating in the ICT sector. For software professionals the most appropriate is The *Communication Workers Union* (CWU), the biggest union for the communication sector (250,000 members), and especially significant for British Telecom workers. This union has a Disability and Special Needs Advisory Committee to raise awareness of disabled workers in the communications sector. Its newsletter "Disability in Focus" is available from the website (although the latest newsletter is 2004). *Connect* (previously, before 2000, know as Society of Telecoms Executives) is a trade union representing managers and professionals working in the communications sector and was originally also closely linked to BT, now representing 20,000 members in 600 companies. *Prospect* is another union operating in ICT, with 102,000 members the largest union representing professional engineers. The ICT part of the union falls within the union's SET Group (Science, engineering and technology). As with the majority of unions, equal opportunities are part of its agenda, but in the information provided only the policies and initiatives of the larger TUC are referred to. However, the union has set up a 'Civil Servants' Dyslexia Contact Group' which meets every month in London.

Amicus (created by a merger of the Amalgamated Union of Engineering Workers and MSF - Manufacturing, Science, Finance) is the largest union in manufacturing, with more than 1 million members. It is about to merge with the general union TGWU (Transport and General Workers Union). Its "Information Technology Professional organisation" (ITPA) has 12,000 members. Concerning disability issues, it set up a 'Disability Champions at Work project' in 2003 which has trained over 150 Amicus Disability Champions in their workplace to encourage better employment opportunities and fairer treatment for disabled employees [see http://www.daveparr.co.uk/dc/frames.htm]. The projects and case studies are more related to manufacturing than to services. In addition, Amicus hosted a Disabled Members Conference in November 2006.

Employment and working conditions

Employment and working conditions for ICT professionals in the UK ICT sector are considered above average in terms of wages; but demand high employee flexibility and commitment in terms of working hours and travel. Work/life balance issues are problematic and flexible working opportunities in terms of time and space are not always available. This is seen as an obstacle for the retention of female and workers with a disability. British Telecom is an example to the contrary, but is certainly not representative of the whole ICT sector.

Wages
Hourly wages in ICT, at £16.74 for employees in 'computing and related activities', are higher than the £9.58 median gross hourly wage for all employees (£9.35 for service sector employees) (ONS 2005). In yearly terms the gross median wage for ICT is £33.290 compared to £19.092 for all employees – approximately 70% more. ICT staff based in London earn most: £747 per week compared to the UK average of £623 (e-skills 2005). A computer sciences graduate's average first job gross salary in 2001 was between £30,000 and £35,000, higher than for social science or mathematics graduates but lower than for those with an engineering and technology degree (Roberts 2002). According to the new Annual Survey of Hours and Earnings, a software professional's median wage was £33,248 in 2005, 70% more than the median wage for all UK employees (£19,092) (ONS 2005). Overall, scarcity of skill (its 'market value'), the qualifications of applicants (those with a university degree being rewarded highest), performance (linked to seniority) and work experience are important in establishing the wage in ICT (Beck et al 2003). Wage information for specific groups is very difficult to find though research and interview data do suggest gender and status differences (Millar and Jagger 2001). There is no data available on the effects of disability on the wage in this sector.

Full time Contract
The boom in ICT in the last decade in terms of employment and services had as a consequence that the sector has sought 'high commitment' from its employees in terms of working hours and coping with change. In terms of the employment conditions offered, this means that permanent and full-time contracts are more prevalent in ICT than other sectors. Permanent contracts also link to the specific nature of the sector with Intellectual Property Rights and the necessity for continuity in client contact (five year client

contracts, so that five years retention is necessary) critical. While permanent contracts account for the majority of all ICT contracts, men are slightly more likely than women to be employed on these (93.6% of women and 95.1% of men on a permanent contract).

Working hours
ICT is, as mentioned, characterised by a long working hours' image, the result of interrelated factors, including the imbalance between demand and supply, the wage system, the weak position of trade unions and the specific nature of the product (Plantenga and Remery 2002). ICT services vary significantly in terms of output, ranging from ICT training to ICT applications. Each client has unique requirements and services which cannot be specified fully in advance, so projects cannot be totally planned, including the number of hours involved (Yakura 2001) There is a trend towards increasingly flexible hours schemes in ICT, whereby a full-time working day is no longer described in terms of start and finishing times. While flexibility overall tends to be seen as positive from an economic and a business point of view, lack of differentiation can reduce the benefits for employees as work commitment no longer has a demarcated time.

Most companies still offer contractual 'standard' working conditions in terms of hours 37.5-40 hours and holiday allowances (25 – 30 days holiday). Shift working is not common, except for people on product support helpdesks etc. Overtime is normal, and is not paid extra. Performance-related bonuses are normally team-based, increasing the social pressure to work overtime if necessary. These standard hours do not reflect the real time commitment that is asked for though; sudden bursts of (extremely) long hours commonly occur when projects need to be finished and deadlines to be met (Beck et al 2003). National statistical data confirm this long hours culture: the 2005 survey of hours worked in UK shows that the median total hours worked for all employees in the UK is 36.8 (for service industries 36) whilst in computing and related activities it is 37.4 (ONS 2005). It is difficult to achieve a balance between work and life because of this culture of long hours, which has been identified as one of the factors negatively influencing the employment of women in the sector (Beck et al 2003). A DTI survey, for instance, showed that 93% of women and 81% of men wanted more flexible work practices in ICT, though 75% of ICT professionals believed that working part time or flexible working would harm their career prospects (Goodwin 2004). While no statistical data is available to validate this, all the interviewees confirmed that long working hours, led by project and not employee needs, also have a negative impact on the recruitment and retention of disabled software professionals. British Telecom is an example to the contrary, having made flexible working opportunities available for all staff at all levels, based on employee needs.

Place of work and transport

Because of the degree of specialisation in ICT software services, a high number of ICT software professionals and ICT managers tend to travel within the UK (or abroad) as a routine part of their job: they go where there specific skills are needed. "The more specialised the ICT skills; the more travel is required. Your skills will only need to be called upon once in a while by clients, but will be in different geographies" (e-skills

interview). This might be problematic for disabled workers: travel is routinely required across the country to places that are not readily accessible by public transport and a lot of companies are, for instance, based on industrial estates. It is therefore considered a 'normal' requirement to be able to drive a company car and to travel routinely. Workers in ICT hardware have different working conditions; employment is more routinely based in the same place (e-skills interview).

Social benefits and support: equal opportunity policies

Larger ICT companies provide more social and/or family benefits than SMEs, especially flexible working time arrangements and child-care facilities. This is one of the main reasons (next to the wider variety of career options) why more women are recruited and employed by larger as opposed to smaller ICT firms. Some provide specific benefits to improve retention, such as leave schemes, sabbaticals, private health insurance, concierge services, pension schemes and sports and leisure facilities (e.g. subsidised holiday homes).

With regard to equal opportunity (EO) policies in the ICT sector, the debate in the UK refers mostly to gender issues and in the second place to 'older worker' age discrimination issues. Disability, religion and ethnicity are not on the EO agenda at ICT sectoral or company levels – with odd exceptions such as British Telecom. For all diversity issues, there is a discrepancy between the policies and debate at national level and the (lack of) policies at sectoral ICT level and, even more poignantly, the actions and debate at company level. In the UK at national level a significant debate and policies exist regarding gender, ethnicity, age and disability equal opportunities. The gender imbalance debate in education and employment has been taken on board by ICT sectoral organisations, such as e-skills or the trade unions. For instance, policies and debate on gender-based equal opportunities have become part of the ICT skill shortage debate, as have those on educational choice and work/life balance. The possible impact of age discrimination legislation on ICT firms is also part – albeit minor - of the sectoral debate. Reference to *disability diversity* is, however, very specific and does not refer to ICT employment and education: the only references to disability in the sectoral debate concern ICT products and services and their potential to improve the integration of disabled people into the labour market in general; no debate about the integration of disabled workers into the ICT sector is taking place at national or sectoral levels.

At company level, there is little evidence that ICT companies take on board a proactive approach to equal opportunity policies. Equal opportunity policies stop short in many companies at mandatory (national) issues such as maternity leave or working time regulations, especially the small firms that dominate the ICT sector. Many companies consider that equal opportunities are not their concern, as they perceive the main actions that need to be taken are prior to employment (i.e. in education). The small employers do not want to take risks in recruitment; and, as long as they have no problem finding employees, do not see the necessity to address diversity issues. The issue is different for the large companies, where gender diversity issues in particular are more linked to questions of cost and retention and are beginning to be placed on the agenda. Signs of a

more proactive approach in gender and work life balance issues are visible and the influence of diversity management in the US headquarters of multinational companies is a factor. Some good practice examples of gender diversity initiatives are: *Equalitec,* which provides global best practice information on the recruitment and retention of women in ICT and Electronics; *SET* which promotes Science, Engineering and Technology for women; and *Women's Engineering Society* (WES) promoting education, training and engineering practice amongst women.

Good practice: British Telecom

In the ICT industry, British Telecom (BT) is the main good practice example for the inclusion of workers with a disability. No other ICT company has such a proactive approach to diversity in general, including disability. BT is a large company, with a public sector background, and one motivation for the extent of its proactive approach could lie in the clear 'business case' the company makes for disability and equal opportunities. Its products focus on the development of communication hardware and services, aiming to provide new and alternative communication arrangements – arrangements closely linked to a large number of available 'reasonable adjustments' for disabled workers (BT 2006b). New communication products will also be able to aid flexible working (for instance, broadband and teleworking), the combination of work and carer responsibilities etc., etc.

Next to BT recruitment and retention initiatives (Scope leadership Recruitment Scheme; Two Ticks Scheme; Remploy; Able to Work), other initiatives and organisational structures demonstrate the proactive nature of the company's diversity commitment, including disability diversity (BT interview and BT 2006a and 2006b):

- exhaustive monitoring data from recruitment to exit with attention to diversity variables (for instance, an annual anonymous CARE survey to establish the number of workers with disability at BT);

- no contractual changes for those changing employment to flexible working;

- all training and development material accessible to everyone, online or face–to-face;

- the establishment of the 'Global Equality and Diversity Forum' at senior management level to ensure diversity issues are part of overall mainstream policies and decision-making;

- a network of Diversity Champions and coaches to ensure key employees (such as line managers) develop an awareness of disability so that diversity commitment is evident in everything they do;

- 'AccessAbility Roadshows' to allow employees with disabilities and their managers to be updated on the latest initiatives;

- The BT Able2 Network, an employee network providing support and advice to anyone in BT interested in issues surrounding disability (200 members);

- Partnership with AbilityNet, a charitable organisation providing advice to disabled people (BT employees and customers) on how to access mainstream computing technology.

Active labour market policy

For disabled persons looking for access to jobs or work employment training; several government policies have been developed at national level (such as New Deal for Disabled People; Disability Employment Advisors in Jobcentre Plus; Disability Symbol to be used by employers; Work Trial; Job Introduction Scheme; WorkPathProgrammes such as Access to Work, Work Preparation and WORKSTEP or financial incentive such as Working Tax Credit or Disability Living Allowance).

Their uptake in the ICT sector is very rare and normally only found in larger companies in the UK (such as British Telecom). Their lack of use is a result of their focus on the long-term unemployed and economically disadvantaged and on skills in which ICT employers have little interest. As most occupations within the sector are considered to be skilled occupations and the pool of potential candidates is high, there is little incentive for companies to spend the necessary time and training on unskilled and/or inexperienced people. Some active labour market policies concerning disabled workers can be found in the lower skills areas off the sector, such as call-centre workers.

One example is British Telecom which works with the public employment agency 'Jobcentre Plus' on its 'Two Tick Scheme (disability symbol)' to encourage the recruitment of disabled persons (Jobcentre Plus 2006a). Their corporation with 'Remploy' to develop disabled jobseekers skills also is linked to the public employment agency (Jobcentre Plus 2006a). Its 'Able to Work' project, focusing on the employment of disabled people in contact centres, is not, however, linked to any active labour market policy.

Conclusion

We can conclude that for the ICT sector education, the necessity to travel, and long working hours are critical to explaining the employment participation of female, disabled and ethnic minority workers, especially as regards ICT software professionals. ICT-relevant education translates clearly into participation patterns in the sector and this explains to an extent the under-representation of women and, at the same time, the over–representation of ethnic minorities, especially Asian men.

It would, however, be dangerous to conclude that changes in the educational profiles of disadvantaged groups, such as women and those with disabilities, will automatically lead to their integration in the ICT profession. The situation is more complex as, next to qualifications or experience, software professionals are required to demonstrate commitment and complete client focus in terms of long working hours and flexibility of working time (dictated by deadlines). The more specialised the area of expertise, the more likely it is that travel within the UK or globally forms a routine part of the job. In

addition, continuous training and development - again time-consuming - are necessary for software professionals in the changing ICT sector. The commitment expected has an influence on the wage and especially on promotion possibilities. The long term integration of any group in this sector is only feasible if education and training, hours and travel availability are in line with sectoral expectations.

Disabled workers are disadvantaged by the sectoral expectation of extreme client-focused flexibility regarding working hours (more than-than-full time) and travel, just as are women with care responsibilities who have difficulty combining a career as a software professional with family obligations. Both groups are more likely to be restricted in terms of the time and the place where they work. There is little evidence to suggest that these conditions are changing on the part of the ICT sector, although with respect to the retention of women some alternative work/life balance benefits are being made available. Apart from the good practice example of British Telecom, there is no evidence that initiatives facilitating the access and retention of ICT professionals with a disability are being implemented across the sector.

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A3: The British Health Sector

Prepared by Cecilie Bingham and Sue Miller

Structure of sector and labour force composition

The health sector in the UK employs 6.5% of the working population. It is predominantly a matter of public concern, with a public to private ratio of 84:16 and with 1.3 million people employed in the public health sector, the National Health Service, in September 2004 (Department of Health 2004) There has, however, been an increase in private health care and the government is keen to encourage the involvement of the private sector in the National Health Service (NHS) as part of its policy to give people more choice and control over their health and care. To achieve this policy aim, the government has set out a programme which includes a range of reforms - among them, the provision of more diverse providers and money following the patients, together with changes in the management and regulation of the healthcare system. The raft of changes, which will be enacted by 2010, will have significant implications for employment in the health sector, although the majority of staff will continue to work in large publicly-funded units.

In the National Health Service, a range of different staff groups can be identified - broadly categorised as professionally qualified clinical staff (49.7%), support to clinical staff (34.4%), and NHS infrastructure support staff (13.1%) - with an additional 2.8% employed as managers and senior managers. These staff work in a variety of NHS organisations including primary care trusts and general practice, NHS trusts (largely hospitals) and Strategic Health Authorities. Amongst the professionally qualified clinical staff are doctors, qualified nurses, health professionals and ambulance staff, while nursing and health care assistants are among the staff groups which provide support to clinical staff. There has been an annual increase in the number of clinical staff in all categories since 1997, leading to a total of 86,996 doctors (including dentists) and 58,959 qualified allied health professionals. The largest group of professionally-qualified clinical staff, however, are nurses, with a total of 375,371, and the report focuses on nurses in the NHS since it is a core occupation within the sector (DoH 2004a).

The increase in staff numbers in the Health Service - a growth of 23% in the NHS nursing workforce in England since 1997 - reflects the Government's programme for a rapid expansion of the NHS workforce, set out in the Priorities and Planning Framework (PPF). Within nursing, however, there has been significant variation in the level of growth, with only a limited increase in the number of midwives and health visitors, and reductions in district nurses (Buchan 2005). The growth in the workforce has been achieved not only by increasing the number of nurses being trained, but by encouraging nurses to return to the profession, improving nurse retention and recruiting internationally.

In terms of workforce composition, the health sector as a whole shows an over-representation of women, who make up 78.6% of workers in human health activities

compared to their overall labour market representation of 44.2% (LFS data). Among the nursing professions this is even more marked, with women making up 87.7% of staff, rising to 88.5% if taking account only of qualified workers (DoH 2004b). In terms of ethnicity, nursing is 91.7% white, (slightly under-represented), 3.2% Black or Black British (over-represented) and 2.7% Asian or Asian British (underrepresented). Taking together all minority groups, the average percentage of ethnic minority nurses in the NHS is 13.8% (Shields and Wheatley Price 2002).

The increase in NHS jobs across all categories has seen a faster rate of growth amongst disabled people than non-disabled. For women, the percentage increase in disabled employment levels was 26.8% between 1998 and 2003, rising to an overall 31% increase between 1998 and 2004, while for men the corresponding percentage increase rose from 22.6% for the period 1998 to 2003 to 35% for 1998 to 2004 (Hirst and Thornton 2005). Despite the higher rate of growth of disabled than non-disabled employment from 1998 to 2004 proportionally fewer disabled than non-disabled people are employed in the public sector overall: in the health service, 59% extra employees would have been found in the health service if they were employed in the same proportion as non-disabled people - i.e. an additional 113,000 employees as opposed to the increase of 45,000. As it is, the total number of disabled employees in the NHS is 192,000, with 152,000 women and 40,000 men.

The 2001 Census data reveals some interesting patterns in the structure of disabled employment amongst health care workers. Of those with a long term limiting illness, significantly higher proportions (relative to the total employed in that occupation) are recorded among nursing auxiliaries and assistants (7.0%) than among nurses and midwives – 5.9% and 4.8% respectively. The proportion for medical practitioners is relatively low too – 4.2%. The figures across the occupations suggest that those jobs involving higher level qualifications and clinical practice are less likely to be inhabited by those with long term limiting illnesses. Of those with long term limiting illness who are employed, more are working part-time than full-time in all occupations, while the percentage of females with limiting illness is proportional to the total number of those employed with limiting illnesses in all categories, with the exception of paramedics. Amongst paramedics 5.1% have limiting illnesses, but only 3.9% of female paramedics, 10.2% of who work part time. Interestingly, unlike most of the healthcare occupations (with the exception of medical practitioners), women are under-represented amongst paramedics, with only 19.6% females employed.

As with disabled employment in general, however, it is difficult to obtain detailed and meaningful data for the sector, and for specific occupations within it. Disability is often not declared and some NHS Trusts are only now beginning to be more systematic in their data collection. For example, King's College hospital has recently introduced a new recruitment information system which will enable more effective monitoring. In relation to nurses, the Royal College of Nursing (RCN) acknowledges the paucity of data in relation to recruitment, retention and re-entry for nurses generally and that there is a lack of UK-wide information about the composition of the nursing population in terms of both ethnicity and disability.

There is some evidence that the public sector overall is more likely than the private to employ and recruit disabled staff, and is more likely to make, or have made, adjustments to the workplace in order to facilitate the employment of the disabled (Hirst et al 2004). Roberts et al (2004) found that three quarters of public sector employers had arrangements for flexible working or varied hours to assist disabled workers. Further, the risk of leaving employment after becoming disabled is lower for the public sector than the private (Burchardt 2003). Unlike those with mobility problems, people with diabetes, dermatological, or breathing difficulties are more likely to be employed within the public sector. Further, most disabled public sector employees are over the age of 40 reflecting the fact that the incidence of disability increases with age. It is significant that nurses are among occupational groups in the health service with an ageing workforce – 25% of the most experienced nurses are expected to retire over the next five years (Oxford Prospect 2006), and increases in retirement rates are expected to have significant impact over the next ten years (Buchan 2005). Issues around health and late onset disability may be relevant.

Health policy

The NHS, along with other public services in the UK, is the subject of the government's modernisation agenda and is thus experiencing ongoing and far-reaching reform, which means a high degree of turbulence for the sector. The programme of reform - which began with the NHS Plan in July 2000 and the Wanless Report in 2002 and continues with the recent publication of a Public Health White Paper – is resulting in dramatic change across the National Health Service and has impacted on the range of human resource policies and practices, including terms and conditions of employment, reward, progression and development. It is recognised that the proposed reforms will require significant change in the workforce in terms of role redesign, increased professional competence, and a growth in staff numbers. On the other hand, recent redundancies in large NHS Trust hospitals are linked to the impact of budget deficits which, in turn, reflect changes in the funding system, with an explicit link between funding and performance. The reforms have repercussions at a local level which are unpredictable and which are not always in line with the national trends. Further, one of the Department of Health's (DoH) key objectives is to devolve activity and accountability to the front line which means that there will be variation in application, negating generalisations about the sector. Added to this, the nature of the impact of the various programmes and initiatives is difficult to trace or anticipate.

The most significant policy development in the sector for disability comes with the amendment of the Disability Discrimination Act - the new public sector duty (known as the 'General Duty') to promote disability equality, which requires each public sector organisation to develop a disability equality scheme (DES). Explicit in the Act are the duties to: implement the DES; put into effect a three-year action plan; and regularly measure progress. There is also a requirement for organisations to involve disabled people in developing the DES. Again, the impact of the General Duty is yet to be seen, but the medical model of disability which has arguably underpinned policy in the past

may see a shift to a social model approach which recognises opportunities rather than focusing on limitations. The duty has given a new impetus to attempts to address issues around disability, both in relation to employment and patient care. There is also a sense that there should be a more integrated approach with both strands being considered together. King's College hospital, for example, has adopted such an approach and is already reviewing the impact of all its policies and procedures, and involving disabled people, both employees and patients, in the process. This joint approach is evident in the guidance document which will be issued to NHS organisations before the public duty takes effect in December 2006. The document 'Creating a Disability Equality Scheme: A Practical Guide for the NHS' is the result of a joint commission involving the DoH and NHS Employers – i.e. respectively, the key organisations overseeing service provision and employment in the NHS.

Entry into the nursing profession

Throughout the health sector there are well-defined requirements for entry into the different professions which are strictly applied. For nurses, the main qualification is the diploma, which is halfway towards a degree, and is the key access route, although an increasing number take degrees in nursing or midwifery. While the curriculum has been standardised, the exact content of each training programme for qualifying (pre-registration) nurses is dependent on the HE institution concerned. It involves a combination of classroom learning and practical experience, via clinical placements at local health trusts and hospitals. Diploma and degree-level programmes begin with a Common Foundation Programme (CFP), which provides a general introduction to nursing. After completing the CFP, students specialise in one branch of nursing - adult, children, learning disability, or mental health. For midwifery, there is a separate pre-registration programme. Project 2000 instigated a move towards a more academic model, but there is still a substantial amount of work-based learning with at least 50% of the total programme consisting of practical nursing experience gained through placements in hospitals and in the community. A national body – NMAS (the Nursing and Midwifery Admissions Service) – processes applications to the various nurse training programmes run by Higher Education (HE) institutions while the Nursing and Midwifery Council (NMC) sets standards for education and registers nurses once they have qualified. Nurses are required to renew their registration every year by completing a portfolio which provides proof of development and of having undertaken at least five study days a year.

The NMC sets broad principles for entry to nursing/midwifery courses, requiring evidence of numeracy and literacy, while the different HE institutions set their own specific educational requirements. Completion of NVQ (National Vocational Qualification) Level 3 by nursing cadets gives them access to nursing courses at universities while other routes are available to the allied health professionals. There is some accreditation of prior learning.

The Nursing and Midwifery Admissions Service collects statistics on applications and acceptances by disability for the diploma. Over the last three years, 'unseen disabilities' and 'learning difficulties' constitute the most common categories both in terms of

applications and acceptances. There are few applications from those with blindness/ partial sightedness or with hearing impairments, and even fewer from those with mobility problems (NMAS Statistics 2005.)

Whilst the proportion of those applicants with a learning difficulty who are accepted on to a Diploma course is similar to that for those with no disabilities, there is some suggestion that HE institutions may sometimes obstruct entry into the profession on these grounds. The Disability Rights Commission (DRC) is currently funding the case of a student with dyslexia who successfully completed an access to nursing course at her local college, but was refused a place on a degree course on the grounds that she was dyslexic despite occupational health advice that she would be able, with reasonable adjustments, to undertake the course. The DRC took on the case not only because the institution was making general assumptions about a disability and not considering the individual and making adjustments accordingly, but also because there was seen to be an attempt to hide behind professional standards. In a similar vein, the Commission is also supporting a case on behalf of a medical student (a wheelchair user) who has been offered a place by a university medical faculty but is not able to take it up because the General Medical Council argue that the adjustments which the University were proposing to make would so diminish the quality of the course that it could not be validated for qualification purposes.

Allowances are available to all disabled students on degree courses – up to £2,500 a year for specialist equipment to help them to study, together with transport costs for unlimited mileage. Access to the scheme was widened in 2002, however, which meant that not only nursing and midwifery students on degree courses but also diploma students were able to access financial support. 1,300 more students with a disability were thus able to receive an allowance. The majority of students who claim this has dyslexia and needs special IT equipment and software to help them study. The allowance is also often used to help to pay for sign language interpreters, and Braille paper or books and tapes.

There is some concern that those disabled students who receive support when training have difficulty once they have qualified because they are expected to 'stand alone' and the level of support is no longer there. The Adult Learning Inspectorate highlights this as an issue generally for those with disabilities and suggests that inadequate training and support is preventing people from achieving their potential in the workplace (Adult Learning Inspectorate 2006).

As part of the application process, all students must make a declaration that they are in good health - referred to as 'fitness to practise' - but the NMC specifically states that 'significant health impairments or disabilities do not, of themselves, preclude people from practice.' An occupational health adviser will consider the implications of any health problem or disability and give applicants an assessment. There is some concern, however, that the requirement for 'fitness' may be potentially discriminatory: the DRC has recently launched a general formal investigation focussing on teaching, nursing and social work, and looking particularly at 'fitness' issues because there is a concern that there may be potentially discriminatory practice within these professional occupations. A

cursory glance at case files would suggest that there are still fears about people with HIV or epilepsy training as nurses, for example, and it would seem that health and safety is used as a justification for excluding the disabled from employment, and sometimes from professional training. The case of a student with Aspergers syndrome, excluded from a nursing course despite being assessed as able to undertake it by a clinical psychologist, illustrates this point. The university determined that he was not able to undertake a placement and therefore not fit to practice as a nurse even though there was no medical evidence to support the decision. A review by the DRC on the use of health and safety requirements concluded that 'stereotyped views, wrong decisions and excessively cautious risk assessments may all act as unnecessary, lawful barriers.' (DRC 2003)

There are, however, undoubtedly issues around the need for adjustments for disabled nurse students when on clinical placements and there is evidence to suggest that some student nurses face difficulties in the transition from classroom to the clinical environment. One University tutor cited the limitations imposed by a student's ME – her condition was aggravated by working on night shifts so adjustments had to be made. Similarly, a student with epilepsy was affected by the lighting on the wards. It would seem that such issues often only emerge when students are leaving the classroom environment. Successful placements depend on liaison and communication between the course tutor and the workplace.

Widening access to the health professions generally has been on the agenda, and various changes were made in relation to nursing as a result of the report by the UKCC Commission for Nursing and Midwifery Education in 1999 but, in practice, most nurses are graduates with a diploma in higher education. 'Return to practise' courses are available for those who have taken a break of five years or more from nursing or midwifery. For all nurses, finding employment once qualified involves using the specialist press and associated websites – the Nursing Standard, Nursing Times, RCN Bulletin and the RCM Midwives Journal. The NHS also advertises job vacancies through its website.

The last decade has seen a decline in the number of white women and men applying for training in the health sector, with an increase in the involvement of ethnic minorities. A shortage of nurses is reported, especially intensive care nurses, despite sufficient training places. This has resulted in the recruitment of nurses from abroad: foreign nurses, according to the Royal College of Nursing, make up a third of all registered nurses, even though there are some concerns about their language abilities in some cases. Skill shortages are providing an impetus to a reconsideration of entry routes to the nursing profession and of the movement between different occupational groups within the health sector, and may motivate a new openness to other non-traditional sources of labour, including the disabled.

Further training

Induction programmes are used routinely throughout the health sector. The length and areas covered vary, although training in handling and moving is mandatory. Similarly,

whilst all health care providers have training policies, they vary in their content. The implementation of the Knowledge and Skills Framework (December 2004) - which identifies the competencies or 'dimensions' associated with different job roles and levels – is, however, assisting in the identification of development needs for all staff. This approach is supported by the encouragement to staff to renew and extend their skills and knowledge continually and national initiatives are in place to encourage lifelong learning within the sector. Learning and development, therefore, have become key features of the DoH's strategy and of the new NHS pay system 'Agenda for Change', introduced in December 2004. For nurses, the requirement to undertake statutory training to maintain their registration means that further training is an explicit part of their job description, and, for them, much training is offered within hospitals, while the profession's established links with Universities mean that conferences and Masters courses are also available to them.

The NHSU (the National Health Service University) was set up in 2003 with the aim of promoting and contributing to this 'learning culture.' The ultimate objective was that, by offering learning opportunities to staff at all levels, there would be an improvement in patient care. To this end, during 2004/5 the NHSU delivered 30 learning programmes, services and initiatives to 103,845 people, among them a small number of people with disabilities who were helped to find jobs in the health and social care sector through an initiative called 'Health Learning Works.'

The NHSU was dissolved in July 2005 after two years of operation, following a review by the Department of Health: the NHS Institute for Innovation and Improvement has taken its place. This body provides strategic advice and direction but local organisations will now be delivering those programmes which have proved successful, a reflection of the policy across the NHS to devolve as much activity as possible to the front line.

The centrality of training and continuing professional development for nurses, both for maintaining registered status and for progression within the profession, has implications for those disabled staff who work part-time in junior clinical roles. While flexible and part-time working has become more accepted within the health sector and is even promoted by various recent initiatives (such as Improving Working Lives – see below), there is some evidence that the system still favours those with more standard contracts who can exceed the minimum training requirements. Those who are unable to make themselves available to undertake additional training and those who do not have access to it may be seen as less committed to professional development, so damaging their career prospects.

Recruitment and retention

Whilst the government is tackling shortages within the NHS through its Priorities and Planning Framework (PPF), and has met its targets in a number of areas, skills shortages are still reported and there are ethical questions and tensions around the fact that a significant number of these nurse registrations are from developing countries which themselves face nursing shortages. (Deeming, 2004) The retention of UK nurses is a key

problem with a significant number of qualified staff not now working in the profession. The need to attract people back into the sector is a particular challenge, as is the fact of an ageing nursing workforce (Buchan 2005). That retention is an issue was recognised by the Agenda for Change White Paper – the RCN Council accepted the package and recommended it to their members because it was felt that it would bring 'the right rewards to recruit, retain and operate' (RCN 2005). There is also provision under Agenda for Change to make additional payments to an individual post or specific groups of posts where market pressures would otherwise prevent the employer from being able to recruit and retain staff.

The National Midwifery, Recruitment, Retention and Return to Practise Project, started in June 2003 with the express aim of tackling the problems of recruiting and retaining midwives, has developed a six point action plan. One of these revolves around 'Improving Working Lives', a set of standards launched by the DoH in 2000 for implementation across the NHS, and which aims to embed good HR practices to ensure that staff are supported and developed in the workplace. The intention is to overcome the low morale reported by various studies over the last decade of radical and continuous change (Walker, 2000), and to increase loyalty and career satisfaction (Skinner et al 2004).

Some health authorities are making a specific effort to ensure that disabled applicants to the profession are not being discouraged prior to, during and following the recruitment stage. Mersey Care NHS Trust, for example: "encourages opportunities for particular groups in areas where they are under-represented. Where appropriate positive action initiatives will be developed for the employment, training and development of people from under-represented groups at all levels of the workforce in order that they may achieve equality of opportunity for selection and further promotional opportunities" (2004). The authority recognises that there are barriers that prevent disabled people from achieving their full potential and importantly that each individual will have a different set of needs depending on their disability.

Similarly Guy's and St Thomas's Trust in London recruit using a poster that features a hand on a wheelchair and invites application from all sections of the disabled community.

Employee Representation

There is a large number of employee representative bodies operating within the health sector; most are unions, some are professional organisations, some are both. Those which are recognised for collective bargaining purposes within the NHS, and that are party to the recent agreement, known as the 'Agenda for Change' (this stipulates nationally laid down terms and conditions) are: the Royal College of Nursing (RCN), the Royal College of Midwives (RCM), UNISON, Amicus, the general and Municipal and Boilermakers Union (GMB), the Transport and General Workers Union (TGWU), the Chartered Society of Physiotherapy (CSP), the Community and District Nursing Association (CDNA), the Society of Radiographers (SoR), the Federation of Clinical Scientists (FCS), the British Association of Occupational Therapists (BAOT), the British Orthoptic

Society (BOS), the Society of Chiropodists and Podiatrists (SoCP), the British Dietetic Association (BDA), the Union of Shop, Allied and Distribution Workers (USDAW), and the Union of Construction Allied Trades and Technicians (UCATT). Doctors are represented by the British Medical Association and in some circumstances by Amicus. Nurses are represented by a number of different unions, the Royal College of Midwives, Amicus, UNISON and the Royal College of Midwives (RCN). The RCN is the largest professional organisation for nurses, with over 380,000 members.

Prior to the agreement set out in the Agenda for Change, staff had their pay and conditions fixed by a variety of different mechanism. Some pay agreements were negotiated by Whitley Councils, others were set by Pay Review Bodies: some were locally negotiated, while yet other arrangements were implemented without any collective form of representation/negotiation at all. This was confusing and, importantly, led to inequalities, employees being paid at different levels of remuneration for doing the same work (or work of equal value). The new system based on job evaluation is perceived to be much more equitable. Although not all staff in the health sector are employed by the NHS, many outside it receive pay that mirrors the NHS system.

Remuneration and progression

Central to Agenda for Change is a new pay structure, introduced throughout the NHS across the UK in 2004, based around a job evaluation system which aims to deliver equal pay for work of equal value, and which looks at a number of areas not considered under the previous system of Clinical Grading. Under the previous system, there were different pay systems for different groups of staff, and over 600 different grades.

Nine pay bands have been established, and staff can expect to progress until they reach the top pay point in their band. There will, however, be two points in each pay band called 'gateways'. At these points, an individual's knowledge and skills will be assessed using the Knowledge and Skills Framework. Thus, continuing professional development is rewarded. The new salary structure also results in more competitive salaries which it is hoped will aid recruitment and retention (DoH 1999), although there is some evidence that wages may not be effective as an instrument for increasing the nursing workforce (Skatun et al 2005).

Annual development reviews and personal development plans will be used to support development, while the Knowledge and Skills Framework will be a reference point in the identification of the skills and knowledge for career progression. It is too early to see the impact of this new system in terms of recruitment, retention and performance but a number of new roles based on individuals' competence has been created as a result. For nurses, these include the role of nurse consultant (470 have been appointed), extended nurse prescriber (2,000 are in post), and modern matron, of whom over 2,000 have already been appointed.

It is significant that, while Agenda for Change has been heralded as a positive development for NHS employees, and has been embraced by unions such as the RCN, no

impact assessment was carried out prior to its implementation. Under the General Duty to be introduced in December 2006, the impact of all policies will need to be reviewed to determine whether they will have adverse impact on disabled people. There is some uncertainty surrounding the implications of 'Agenda for Change' in this respect.

Employment and working conditions

The health professions have traditionally been associated with stress-inducing employment and stressful conditions: a recent study of 200,000 NHS staff, carried out by the Commission for Health Improvement and involving the range of occupational groups, reported that 39% had suffered from work-related stress in the previous year (Occupational Health 2004). It is significant, too, that nursing was chosen as one of the occupations on which the International Labour Office commissioned a manual on stress prevention. The manual suggests that such stress may be the cause of some forms of physical illness, among them, musculoskeletal problems, which, of course, have implications for the ability to perform the job and may be disabling (ILO 2006).

Traditionally, too, there have been different hours and annual leave arrangements for different staff groups. Agenda for Change has harmonised terms and conditions of employment for all NHS staff, although doctors and dentists retain some unique conditions. Whilst, along with the standardisation of annual leave entitlements, a standard week of 37.5 hours has recently been established, shift patterns vary across the sector and there are a number of different possible variations, with unsocial hours being a feature of the jobs of many and many nurses reporting working beyond their hours. The NHS has an established unsocial hours payment system, and a new system is yet to be agreed. The long hours' culture as well as shift work and lack of childcare are particular concerns of women, although the provision of free nursery places has been a recent policy initiative.

Work-life balance has been one of the areas addressed by the 'Improving Working Lives' initiative with the aim of giving staff greater flexibility and control over their time. The Improving Working Lives Standard sets benchmarks for measurement of the extent to which organisations have created flexible working environments that enhance staff welfare and development. Various initiatives are suggested such as self-rostering shifts, annualised hours arrangements, reduced hours options, career breaks and flexible retirement. All this is in recognition of the fact that the health sector has been commonly associated with environments that have not been conducive to the promotion of welfare and development. This new flexibility may be helpful to people with disabilities for whom the prevailing shift systems and long hours culture may not be conducive. Whilst the improving working lives policy (IWL) makes public promises about work-life balance, however, there is some question about whether these have been delivered (Skinner et al 2004).

Jobs in the Health Service continue to impact adversely on employees' health, and not only in terms of work-related stress: 'nearly a quarter of NHS staff have reported an injury or illness in the past year from moving or handling patients, needlestick or sharp injuries, trips or falls, or from being exposed to dangerous substances' (Occupational

Health 2004). There are those that argue that the health service is one of the unhealthiest places to work in Great Britain (Silcox 2004). While nursing has traditionally been associated with back problems, new regulations on handling supported by mandatory training, together with new equipment such as hoists, have reduced the incidence of injury. Nevertheless there are Work-Injured Nurses' Groups across the UK, facilitated by the RCN.

The NMC, meanwhile, follows stringent guidelines in monitoring nurses' 'fitness to practise', and nurses may have to terminate their employment as a result of ill-health or the onset of disability. The DRC, for example, reported in 2003 of a hospital's failure to accommodate the limitations placed upon a nurse by the development of arthritis (DRC 2003). That various demanding physical tasks are deemed essential functions of a nurse's job influences decisions about disabled applicants' access to the profession but also, once qualified, constrains the ability to make adjustments with the onset of a disability - sometimes a disability which has developed as a result of the job itself. Those nurses with disabilities who do work in the profession would seem to face not only physical challenges but also attitudinal barriers (Coates 2002), and it is suggested that there is a perception that disabled people should be 'on the receiving end of the healthcare professionals, rather than being involved in delivering and promoting healthcare.'(Skill 2005). There is evidence, too, of a limited awareness of disability and its effects among colleagues. The Skill booklet does, however, provide examples of nurses who have overcome these obstacles (Skill, 2005) and another celebrated case is that of Nikki Heazell who has qualified as a nurse despite having had her left arm amputated below the elbow (DRC 2002).

There are attempts, through publicity, workshops and workbooks by the RCN and other bodies, to promote good practice in rehabilitation and in helping injured, ill or disabled nurses to return to work. Sometimes alternative careers are provided for, as reported in The Nursing Times, 2000, where it was claimed that 'NHS Direct is making good its promises to disabled nurses', highlighting the fact that NHS Direct is now a source of employment for nurses who have become disabled during employment, and one of the explicit drivers in its creation. The article also comments, however, that there has been a failure to track the numbers employed (Agnew 2000). There is also a considerable amount of anecdotal evidence which suggests that a significant number of nurses, once having become disabled, leave the profession because they find themselves re-deployed into administrative roles in which they cannot use their professional skills. They may then seek alternative roles outside the sector where their skills are valued – counselling, clergy, providing specialist advice etc. The outcome for individual employees with new onset disability is, to some extent, determined by the attitude of individual managers and the extent to which these are willing to be creative in their employment decisions. The pre-existing relationship between the manager and the employee may determine the extent to which there are positive attempts to make adjustments and ensure that the nurse can continue in a professional role. It would also seem that, when the disability involves a mental health problem, there may be less enthusiasm to see how employees' needs are to be accommodated. It is also the case that there are particular difficulties for nurses with disabilities who work in the community where the working environment is not

predictable, cannot be controlled, and is not amenable to adjustments. This may limit the extent to which nurses with particular disabilities can work in such environments and, with the onset of disability, jeopardise their continued employment in a community role. Further, the closure of community hospitals and acute-based services will mean, in the future, that an increasing number of nurses will be required to work in the community, so closing off opportunities for some nurses whose disability makes it necessary for them to be able to manage their environment.

Whilst the new public duty has given an impetus to be proactive in relation to the employment of disabled people and to consider adjustments for those with a disability, there are other forces at work which, arguably, militate against positive outcomes. Issues around the declaration of disability have always been a problem in monitoring progress in relation to disabled employment but there is a concern that the recent climate of redundancies in the NHS as a result of budget deficits may lead to heightened feelings of insecurity amongst disabled employees and to non-declaration, hindering planning and assessment. From the perspective of the employer, the concern about risk, particularly in connection with conditions like diabetes and epilepsy, and learning disabilities such as dyslexia and dyscalculia, is a key inhibitor. Perceptions about risk to patients and potential liability, and question marks about the extent to which individual staff can keep up with the pace of work, may not be based on sound assessments, but they may inhibit a positive stance on employing nurses with disabilities. This concern, combined with lack of understanding, may lead to an unreasonable and unreasoned approach. One interviewee tells of a nurse with mobility problems whose ability to do the job was questioned on the basis that she might have difficulty in getting to the office on another floor where replacement batteries for her bleep were to be issued. She also can recall a wheelchair user being set an obstacle course as part of a selection process – to ensure that she would be able to negotiate the space! An over-riding concern with competitiveness and efficiency may similarly have a negative impact. It would seem that, traditionally, informal arrangements have existed within work teams to ensure that the range of tasks are successfully completed, the needs of different staff being accommodated without explicit and formal intervention. Such informal arrangements may increasingly be undermined by the designation of staff as individual units of resource who must each be able to complete the range of tasks independently and to act flexibly. This is, arguably, a corollary of increased regulation, monitoring and measurement.

Equality and diversity policy and practice

The Improving Working Lives standard makes promises about harassment, equality and the valuing of staff and the Department of Health states that equality and diversity 'are at the heart of the NHS strategy'. 'The Vital Connection: working together for quality and equality', launched in 2000, provided an equal opportunities framework for the NHS, and this was taken further in 2003 when the Department of Health launched an Equalities and Diversity Strategy and Delivery Plan. Meanwhile, the 'Positively Diverse' initiative provides a means by which organisations can assess how well they are ensuring staff are treated equitably and fairly, and 'Practice Plus' is awarded to those organisations which show a thorough understanding of equality and diversity. An NHS employers' equality

and diversity team, meanwhile, offers advice in developing a strategic approach to equality and diversity, in promoting good practice and in interpreting anti-discrimination legislation.

Whilst the Improving Working Lives standard, 'the vital connection' and various other initiatives have put equality and diversity issues on the agenda, staff continue to suffer from discrimination, and harassment and bullying. The CIH study referred to above (Occupational Health 2004) reported that 37% of those surveyed claimed to have suffered harassment, bullying or abuse. Of those, 28% said that the abuse had come from patients or their relatives, 7% from managers of supervisors, and 11% from colleagues, and there are a number of reports about the racism and threats faced by foreign nurses in the UK, and the limitations placed on their career progression (People Management 2004).

Among the guidance available specifically to help tackle disability discrimination in the NHS is 'Looking Beyond Labels' (DoH 2000) which aims to widen the employment opportunities for disabled people in the sector. This was published as part of a government led initiative in 2000 to encourage employers within the health sector to recruit more people with a disability, to develop flexible working practices to accommodate disabled workers and to promote a better and wider understanding of disabled people within the workplace. Among a considerable number of specific measures suggested to employers are arranging special leave to allow disabled employees to undergo treatment, providing an interpreter or reader if necessary, providing application forms in usable formats such as Braille or on tape. The suggestion about special leave is supported by the union Unison, which covers a significant number of health sector employees: Unison promotes the use of a disability leave policy. The use of such a policy means that those disabled people who have to take time off work due to their disability do not have this recorded as sick leave and, should days' sickness subsequently be used as a criterion in redundancy, disabled employees will not be disadvantaged.

1   All NHS organisations must now qualify to use the 'two ticks' disability symbol - which guarantees an interview to qualified disabled applicants. The symbol, administered by the government's Department of Work and Pensions, is awarded to institutions that can show that they have fulfilled five specific criteria. To gain accreditation organisations need to demonstrate that they:
    ❑ Interview, and consider on merit, all job applicants with a disability who meet the minimum criteria for a job vacancy
    ❑ Ensure that each disabled person is consulted at least annually about their requirements in order that they may work effectively
    ❑ Endeavour to retain in employment those employees who have become disabled
    ❑ Review, annually, these standards, investigate how their implementation can be improved and to inform the workforce about levels of progress
    ❑ Maintain levels of disability awareness and training throughout the organisation to ensure that these criteria are kept

Accredited organisations are permitted to display the two ticks symbol 'positive about disabled people', and indeed many use it on their recruitment literature to indicate their commitment to ensuring fairer treatment for disabled prospective and existing employees.

Amongst other national initiatives supporting disabled people are the 'New Deal' and the 'Access to work' scheme. The Department of Health in its guidance to NHS employers specifically encourages the use of the 'New Deal' which aims to help particularly disadvantaged groups back into employment and which offers employers a streamlined system for filling vacancies and a financial subsidy for each employee under the scheme. The scheme reflects the Government's overall policy framework and programme for reform of the welfare state. Research would suggest, however, that the public sector generally is under-represented in the destinations of those who have entered employment under the scheme (Hirst et al 2004). The Access to Work scheme, meanwhile, is designed for people who meet the definition of disability as defined by the Disability Discrimination Act, and provides extra support, including physical and environmental aids and adaptations, fares for travel to work and assistance on the job or in getting to work. This scheme tends to be used by existing employees, and, as such, is a scheme which aids retention rather than providing initial access to employment. Whilst it is used widely by the public sector as a whole, it used less in health authorities and NHS Trusts than in central and local government (Hirst at al 2004).

The launch of the Department of Health's first Equalities and Diversity Strategy and Delivery Plan in 2003 was accompanied by wide consultation recognising the variation in practice between different professions and different organisations and the need to develop specific programmes of work for different parts of the sector. One of the outcomes of consultation was the report 'Sharing the challenge, sharing the benefits – Equality and Diversity in the Medical Workforce' (Deemer 2004) which, while focusing on doctors and dentists, provides some insights into issues around disability in the health sector as a whole. That disability presents particular challenges for the sector is acknowledged in the foreward to the report, when discussing the different equalities target groups: 'most complex of all for a profession dedicated to curing people, are questions of how the profession deals with disability and illness – whether it be in relation to students wishing to enter medical school, or the experience of doctors suffering from stress and mental health problems'. It is perhaps significant that while the report provides data relating to the age, ethnicity and gender of the medical workforce, it does not do so in relation to disability. There is the suggestion that disabled students might be meeting barriers to medical and dental school admissions, with a wide variation in practice in terms of how the needs of people with disabilities are reflected in the admissions information provided. It is argued that 'the general lack of clarity and consistency in the information medical schools are offering potential students with disabilities and illnesses have been two of the major obstacles for those wanting to start training as a doctor.' (Dr Rhona MacDonald, member of the Medical Workforce [Equality and Diversity] Reference Group). One of the problems too, would seem to be a reluctance to define disability, and to be explicit about the qualities and competencies actually required to be a successful doctor or dentist, although the increasing use of competencies throughout the health service should help in providing a clearer definition and more objectivity in assessing suitability. A

similar lack of openness seems to exist in relation to nursing: neither NMAS nor the NMC provide advice about specific disabilities and their implications for practice but again, the use of competencies, as established via the 'Knowledge and Skills Framework' (KSF) should begin to militate against a reliance on assumptions and stereotypes. It is perhaps significant, however, that this initiative is viewed somewhat ambivalently by disabled nurses: whilst some feel that it may provide helpful transparency and clarity, there are those who feel that the ability to prove competence to cross the 'gateways' to higher levels of pay may become a health rather than a capability issue. As noted earlier, Agenda for Change, of which the KSF is a key part, was not subjected to an impact assessment to determine its potential effect on those employees with disabilities.

An interesting case study is 'Partners in Practice', a disability equality course run at Bristol School of Medicine. Whilst its prime purpose is to educate health care professionals to work more effectively with disabled patients, it has spin-offs in terms of workforce disability. It is suggested that the identification of champions for disabled people within trusts, deaneries, medical schools and the Royal College could also further the cause of disability equality in employment.

Positive action initiatives across the equalities targets groups are also being encouraged, and NHS Employers have undertaken some research, in association with the University of Bradford, on what initiatives are already in place. The report identifies a range of initiatives and much good practice, although it asserts that 'there is little co-ordination of these activities nationally.' (NHS Employers 2005). Of the good practice cited which is aimed at disabled staff is the setting up of a disability sub-group to advise on issues such as support for disabled staff and which involved consultation with a range of representative voluntary organisations. Among the initiatives which have resulted are working with local colleges and Remploy to support work placements for disabled people, supporting staff with training opportunities, and raising awareness about disability. Staff training and awareness, specifically specialist management training in recruiting and retraining disabled people, is also mentioned in connection with other initiatives aimed at reinforcing commitment to supporting disabled people both inside and outside the workforce.

A number of NHS Trusts have set up disability groups – commonly known as disability action review groups - to consider issues such as support for disabled staff and staff requiring adjustments to working practices. The new public sector duty has given a new impetus to such attempts to address issues around disability, both in relation to employment and patient care. This integrated approach, with both strands being considered together, reviews the impact of all policies and procedures on all stakeholders with disabilities, and involves disabled people in doing so.

Disability awareness training is, similarly, commonly adopted by organisations, particularly for managers involved in recruitment and selection. Diversity awareness training and diversity awareness workshops, meanwhile, are also being widely used, although not focusing specifically on disability, and more often being aimed at issues to

do with race and culture.

There is evidence of positive patient care as a result of some of the widening access initiatives. Deaf nurses, for example following training at Salford and Sheffield, have been able to positively enhance the care of deaf patients, improving levels of communication and hence diagnosis and treatment; this is particularly marked where deaf staff deal with patients who are both deaf and mentally ill. As Scullion (2000) suggests, 'employing more disabled people may directly and indirectly promote more equitable services for disabled clients.' In South West London and St George's Mental Health Services NHS Trust, a User Employment Programme ensures that 15% of those recruited by the Trust have their own personal experience of mental health difficulties (Scullion 2000; Disability Rights Task Force 1999). A study looking at the experiences of those who worked in mental health services and who had used psychiatric and mental health services themselves found that the employees felt strongly that they were able to help their clients and were a useful resource for their fellow workers. There were some negative experiences in terms of their colleagues' reactions, however (Rooke-Matthews and Lindow 1998). Perhaps, significantly, mental health problems and mental illness are often mentioned as areas where there is less understanding and less willingness to make adjustments by employers – physical disabilities, and particularly visible disabilities, would seem to invite a more positive response. This tendency is evident within the NHS.

The future of disabled employment in the health sector

The marked increase in the number of disabled employees in the health sector in the three years between 2001 and 2003 is significant in that it predates the publication of the draft of the new Disability Discrimination Bill in December 2003 and the subsequent public consultation in 2004. The new statutory duty on public sector employers to promote equality of opportunity between disabled and non-disabled people as a result of the 2005 Disability Discrimination Act may further narrow the gap between disabled and non-disabled people in public sector employment (Hirst and Thornton 2005).

Whilst the public sector duty is a very significant policy change and may spell a positive future for the employment of disabled people within the sector, there are other developments which may not be as encouraging. The increasingly competitive nature of the environment, the drive for efficiency and the accompanying increase in regulation and performance measurement may contribute to a less positive approach. There have long existed issues in the sector around what effective performance means and what is required for safe professional practice, with a concern about the impact of particular disabilities on performance. There would seem, too, to be a disjuncture between pre-registration and employment, with some disabilities, such as dyslexia and mental health problems, taking on a new significance following training and registration, when employment in the clinical environment is seen to involve potential risk to patients. Meanwhile, the attitudes of individual managers have significant impact on employment decisions, and, whilst a range of NHS Trusts are making inroads through awareness training, there would seem to be some way to go, particularly in relation to perceptions around mental health problems. The widespread tendency, too, somehow to equate

disability with illness leads to particular tensions in a sector dedicated to health and healing.

There are, however, encouraging developments, with a range of initiatives, both at national and local levels, which specifically address the needs of disabled applicants and employees. The plethora of initiatives may, in itself, present a problem to those involved – certainly employees are reported as being confused – and there is an argument for a more consistent and coordinated approach across the sector which brings the different strands together. There is a potential for partnerships both within the sector and with organisations outside and a place for champions with vision and influence. A particular need, however, is to collect information about the numbers employed, and about those who become disabled in the course of employment, and to record the initiatives, programmes and actions being taken and monitor and evaluate their impact.

There are many individuals who impact on disabled employment in the sector – among them, those in the higher education institutions who enrol student nurses and other health professionals, the employees who work alongside disabled colleagues, the line managers who make selection decisions and those who determine the continued employment of those with new onset disability – but it is public policy decisions, together with the processes within the regulatory bodies which control access to employment in the health professions, that will ultimately determine how far the health sector is one which can be described as enabling rather than disabling.

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Part B: The Netherlands

B 1. The Dutch Construction Sector

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Introduction

Construction work is famous for its risks. Employees in the sector are vulnerable to health and safety problems, unemployment and disability. In response to such problems, the labour market and the product market in the construction industry in the Netherlands are highly regulated. Firms are organised in local associations that are affiliated to the national umbrella organizations and with a high membership density. The industry consists of different branches of activity with their own forms of regulation. More than 20 sectoral collective agreements are applied and generally extended to all firms so that the coverage rate is 100% including those firms not associated with an employers' association.

Employers' and trade associations on the one hand, and trade union organisations on the other influence government regulation to the extent that regulation in the construction industry often anticipates national policy programmes. Collective agreements include many more issues than just job classifications, wage tables and working hours, such as personnel policy, trade union rights, labour conditions, health and safety. Notwithstanding this, disability and sickness risks are considerable. Until 1993 the social partners at national level were considered to be jointly guilty of substantial misuse of disability schemes. Since then, self responsibility has gradually been introduced into the management of these social security bodies, halting the growth of sickness leave. More recently, the industry has signed three "gentlemen's agreements" with the government to reduce the use of organic volatile compounds, to control work-related stress, and to improve the re-integration of disabled persons.

This paper includes an overview of the regulation of the construction sector, the composition and size of firms, and labour market issues, followed by a discussion of the collective agreement and associated collective funds, and health and safety issues.

Product market regulation

The construction industry is important to the Dutch economy in terms of production and employment. The industry covers different branches of activity. Normally a distinction is made between the production, maintenance and repair of houses, dwellings, offices and utilities (*Bouw- en utiliteitsbouw*) and the civil engineering of earth, roads, and water infrastructure (*Grond, weg- en waterbouw*). In addition, there are related branches, such as the finishing industry, the installation industry, the supply industry, and architects and

advisory consultants. Each branch has its own interest association and forms of specific regulation.

Construction firms in the Netherlands vary in size and activity. Despite the existence of a few very large construction companies operating internationally, it is the small and medium-sized firms that are responsible for the largest share of employment and output in the country. The basic regulation is the Act on the Establishment of Firms (*Vestigingswet Bedrijven),* introduced in 1937 with the aim of channelling competition based only on cost in the direction of competition based on quality and innovation. The Act, which is not restricted to the construction industry, did this by requiring technical and managerial competencies to enter the market (van Waarden 1989). After lengthy discussions between the government and representatives from the industry, the product market was deregulated in 1996 and 2001. In contrast, however, technological requirements and prescriptions on the relationships between contractors and customers are sharply regulated by the government in the Construction Agreement of 1992 (*Bouwbesluit*). This includes strictly defined standards for the selection and use of materials, quality standards for output, and rules in case of defects in the execution and supervision of the building process by contracting firms.

Furthermore, the employers' associations in the industry itself have also established a Foundation for Promotion of General Construction Interests (*Stichting Behartiging Algemene Bouwbelangen*, or SBAB) for controlling lawful entrepreneurship and tracking down illegal moonlighting, i.e. working without paying taxes and social security contributions. In addition, in 1982 the Chain Responsibility Act (*Wet Ketenaansprakelijkheid*) was passed in the Dutch parliament to reduce illegal work. According to the Dutch model of reducing hazards in the production chain, the principal contractor is responsible for the payment of social and tax contributions in the case of negligence by the subcontractor. This enlists the help of the principal contractor in averting unreliable entrepreneurship. To protect the main contractor from misuse by subcontractors, a so-called "reserved account" (*G-Rekening*) was created, where tax and social contribution payments are saved during the construction process. Evaluation studies of this Act by the Dutch Social Security Council showed that fraud on tax payment declined and social security contributions were paid sooner, resulting in more peaceful market relations.

Polarization of companies

The number of companies in the construction industry as a whole has risen from 41,880 in 1994 to 62,090 in 1999. Approximately 99% of firms have fewer than 100 employees, with most (54,185) having fewer than 10. Of these, 28,925 - or 47% of firms - are self-employed workers, a fast-growing category. There are 7,490 medium-sized companies with 10–100 employees and only 415 companies with more than 100 employees (AVBB 2000).

In contrast to the smaller firms, larger firms offer a total product by taking responsibility for all aspects of the architecture, design, planning, management, structural work, and

finishing activities. Increasingly, the larger contractors have also taken on a more coordinating role within the building process, handling negotiations with clients, architects, and government agencies, while contracting out the actual work to contracting partners and subcontractors. The 400-odd larger firms are striving to diversify their activities to reduce the risks associated with a one-sided portfolio. Through mergers, cooperative agreements, strategic partnerships, and other economies of scale, they integrate technical know-how and economic resources. Some key examples of such larger companies are Volker-Wessels-Stevin, BAM-NBM, and Dura-Vermeer. Due to the rising complexity of the building process, new integrated organisational forms are being introduced such as public private partnerships; design and construct production, and turn-key production, where the mutual relationships between the principal of the project, the architect and project design, the contractor and subcontractors varies (EIB, 2005). Often mergers are set up to achieve economies of scale and to increase shareholder value, while in practice the formerly independent companies keep their own customers and manage their own projects at the local level.

The more narrowly-defined construction industry in the Netherlands is dominated by small and medium sized firms. In 1995 there were almost 19,000 firms, 85% of which had less than 20 employees, though those with more than 50 employees have 40% of the labour force on the payroll. Almost 12,000 firms in the industry are active in building and construction, 2,500 in civil engineering, and 3,500 specialised in painting. In this paper we focus on building and construction firms. These may work as main contractor, subcontractor, or both (EIB 1997a, b). As a general rule main contractors predominantly employ carpenters, whilst bricklaying work is contracted out to subcontractors.

In 2002 a parliamentary inquiry took place on cartels of construction firms for public sector tenders (Tweede Kamer 2002). It emerged that contractors had been setting prices via a system of information exchange before conclusion of the tender, forbidden under European law. Due to the extended negative publicity, the already low image of the industry was further damaged.

The labour market

In the building and construction sections of the overall construction industry in the Netherlands, 153,000 persons are employed. Construction work is known to be labour-intensive though the introduction of new technologies has increased labour productivity and unskilled work has largely disappeared; in recruitment procedures firms specify skilled workers. Communication skills and craftsmanship are also perceived to be crucial. The workforce is an ageing one with an average age of about 38.5 years. In the period 1995-2002, skilled workers were in demand, from 2002-2004 economic activity in the industry declined and in 2005-2006 is growing again. Yet, given the ageing of the workforce, there is still demand for qualified tradespersons. Younger people do enter the sector, but many leave after only a short working period. The tenure of construction workers is moreover longer than one would expect given the flexible nature of the labour process in the industry. Some people work on a temporary basis; others have a long work record in one firm. The requirements for staff are substantial and firms do not seek to hire

anyone below skilled level in their internal labour market. Firms work with an inner core of employees and respond to fluctuations in demand by hiring employees from other firms for a number of days (collegial hiring) or by making use of self-employed persons (EIB 1998a).

The number of ethnic migrants (2%) and women (9%) in the sector is very low compared with Dutch standards. Women rarely work on site but are confined to administrative jobs. In 2001 there were 17,984 women employed in the industry, of whom 16,456 were in administrative positions and 1,068 in technical and supervision positions, whilst 460 were tradeswomen. Women constitute 9% of the active working population in construction, but only 0.2% of tradespersons though their numbers have increased slightly over the years. Among tradeswomen, the largest group works as carpenters and some women have worked in the industry for a long period of time (source: Bouwradius).

Few from ethnic minority groups are employed in construction. Despite their increase in the labour force at large and attempts to increase their presence, the share of those from ethnic minorities has not progressed in the last ten years. In 2001 15% of main contractors in public construction and the utilities of main contractors were employing ethnic minorities, up from 13% in 1996 and 9% in 1993 (data EIB). However, only 1.1% of those employed by these main contractors were from ethnic minorities, far less than the share of ethnic minorities in the total labour force of almost 9%. Ethnic minorities are thus strongly underrepresented in construction and their position is not improving and even worsening: in 1993 the EIB estimated their share in construction at 1.3% and in 1996 this was still 1.3% though their share in the national labour force rose.

Employees with a Turkish background make up the largest group, followed by Moroccans, whilst Antillians and Arubans are the smallest. The remaining category consists of employees from different countries, either in or outside Europe. This differs from the composition of the national labour force, where Surinamese form the largest group followed by Turks and Moroccans. In construction the Surinamese are only the third largest group and are therefore underrepresented. The composition of the ethnic minority population in construction is also relatively stable and has not really changed over the past ten years. In 2001 4% of main contractors employed more ethnic minorities than the year before and 4% less ethnic minorities than the year before, but a notable proportion still employed ethnic minorities and on balance the number of main contractors employing ethnic minorities has grown.

Education and training: a truly infrastructure in the making

Construction work in the Netherlands is skilled work and with technological change the construction process has become more demanding. Those lacking the required qualifications are condemned to work with subcontracting firms in cleaning construction sites and demolition work and only in exceptional cases make it into carpentry training (van der Meer 2003). To become a carpenter workers need at least the secondary level of the vocational education and training scheme to obtain a regular job. These skills can be acquired via the sectoral training institutions, organized by employers and employees

since 1946 (van der Meer 1998). From 1982 vocational training at local level has been organized by 50 cooperative associations of construction firms, equally spread over the country and financially supported by the national sectoral training fund. The social partners have been strong players in the development of the curriculum since the late 1940s, financing part of the training programme via the sector-specific social fund for education and development built up from a levy on wages. Trainees have the status of 'pupil-employee', and are juridically covered by the collective agreement. Participating firms have signed an agreement that they will hire apprentices solely from the cooperative association.

In principle, the different qualification levels are seamlessly connected to each other and at each level separate certificates can be acquired for theory and practice (see also Lourens, 2001). To enter the scheme, trainees sometimes need to participate in a 3-6 month preparatory trajectory, which includes instruction on language, work attitude and orientation to the particular trade. The standard route of entrance into an occupation in the industry is via the public lower vocational training schools (VMBO) for a period of four years, followed by the sectoral vocational training institutions (two to four years), leading up to level two (skilled work), three (experienced skilled work) and four (specialized skilled work). All qualification levels can be achieved through either a vocational training pathway (BOL), which is school-based, but includes a work-based (so-called internship) component of at least 20% or an apprenticeship-training pathway (BBL) that includes a work-based component of 60% or more. In construction the apprenticeship training route is the most important. In the sectoral training institutes, students work four days in an enterprise and go to school for one day a week (apprenticeship). The courses take two years for the first level of craftsmanship (level two, the required minimal level to obtain a job), and another two years for the level of 'adult' craftsmanship (level three, '*vakvolwassenheid*' in Dutch - comparable to the Master level in Germany). The government insist on the 'assistant level' (level 1) of the qualification structure to create opportunities for target groups to obtain work in the industry though the social partners are strongly opposed to this on the grounds that at this level no real job perspective can be offered.

There is much concern about the quality of new entrants into the sectoral training programme. In earlier days, the lower general vocational training (VMBO in Dutch) was the main source of supply to the sectoral training institutions but nowadays the schools are overcrowded with unskilled ethnic minorities of very different cultural backgrounds. For example at the Montessori College in Amsterdam, 95% of all pupils are from ethnic backgrounds and the educational level is very low. On an annual basis the eight VMBO-schools in Amsterdam with a specialization in 'construction' are only able to offer 8 pupils who can be directly accepted into sectoral vocational training. The large majority of pupils have problems in being accepted, as their entrance level is extremely moderate. The VMBO-schools have been labelled 'garbage cans' in the press due to an accumulation of problems (*Het Parool* 2003). In order to keep the inflow into the training schools up to scratch pupils are also allowed in with a background in other secondary vocational education specializations (e.g. technical studies) and from lower general education (e.g. HAVO). Most participants in the vocational training programme are

carpenters at different qualification levels, followed by bricklayers and assistant supervisors. The acquirement of the final certificate is a guarantee, an access for work.

The structure of vocational training is constantly debated and revised. There have been complaints by employers that the quality is too low and that students are insufficiently prepared to work in the sector. Moreover, the ethnic minority drop-out rate is high. The trade unions and the employers associations regularly criticise the development of the training institutions, especially on the grounds that since the 1995 change in legislation craftsmanship has largely disappeared whilst too much attention is paid to 'general skills' not directly useful in the labour process. In recent years the trade union FNV Bouw has published a number of proposals for improving vocational training, including the establishment of *Bouwschool* (literally: construction school) in an attempt to stop scale enlargement in vocational training, to protect the juridical status of trainees' labour contract, to improve the guidance of trainees, and to stimulate life long learning (FNV 1999). The proposal for a construction school has subsequently been developed into constructive education programmes '*constructieve beroepsopleidingen*' (FNV 2000).

In 2006 the social partners in the sector reached a breakthrough with the introduction of a truly lifelong learning career programme in the industry, called '*loopbaantraject bouw en infra*'. From July 2006, once in five years all construction workers can receive career advice and train themselves for free during working hours in one of the 28 regional training institutes for a position inside or outside the sector. In a pilot-study in three trainings institutes in Northern Holland, 573 out of 635 participants (90%) were retrained successfully. The new proposed infrastructure is unique in Europe.

The new structure needs to take into account three major drawbacks in past training provision. First, the number of qualified crafts persons often remained restricted and needed to grow. Second, many construction workers were unable to participate in training after work in evening hours. Third, many construction workers for physical reasons do not make it in their job until the end of their careers and need a mid-career change to keep working.

The new training provision expects to help 4,000-5,000 employees per year, according to the education consultancy CINOP which organises the project. On the basis of the pilot study, they expect to help two categories of clients: construction labourers who want to make a career but lack the necessary qualifications; construction workers looking for a job outside their current working environment. According to the project coordinator, this new system is extremely attractive for employers, given the changes in their own responsibilities with respect to disability regulation (see below): 'With the austerity of the sickness and health regulation, an ill employee will stay with his employer for 2.5 years before being declared disabled. An employer can now save this money. Accordingly, we have kept 54 employees on track'.[3]

The new initiative is paid by the trade unions and employers associations, who have invested 52 million euros from the sector training fund. Employees have lifted two days

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[3] Interview with Zjev van Dun, at www.loopbaantrajectbouw.nl, July 25, 2006.

of labour time reduction to save for the career trajectory, whereas employers contribute 1% of labour costs premium for the new system. The system is organised without direct interference or financial support of the government.

Women and ethnic minorities in training

Though women are found in technical, professional and administrative construction jobs, there are almost no female students in the vocational training institutions and only singular exceptions succeed in obtaining a job in a firm, these being carefully supported by, for example, giving them a female instructor or supervisor. For instance, women constituted only 1.7% of those training to become a carpenter, though they were 31% of those studying architecture in universities (source: Bouwradius newsletter). Unlike those from ethnic minorities, women do not receive policy support within the sectoral vocational school SSP and it is 'difficult for girls to get training and work in an entirely male world' (van der Meer and Roosblad 2003).

Ethnic minorities have been improving their position in the workforce in the sense that they are to be found in most companies, though there are also large main contractors with departments in the 'Randstad' area without ethnic minorities on the payroll (van der Meer and Roosblad 2003). Labour market opportunities may arise for ethnic minorities, if only for demographic reasons given that the construction workforce is ageing and that ethnic minorities form an increasing proportion of those in vocational training schools. Those from ethnic minorities do, however, face substantial problems in acquiring the necessary qualifications, as apparent from the restricted numbers leaving VMBO-education and their low level. In the larger metropolitan areas of the country in particular, ethnic minorities occupy the lower general vocational education schools or what used to be the traditional source of inflow into the sectoral training institutions. Here many problems appear to accumulate: financial, social, criminal, psychological, etc. (Byrne et al 2005).

In the Dutch construction industry, further training is well developed. All employees have the right to two days per year training, paid from sectoral funds accumulated via the levy, as stipulated in the collective agreement for the construction industry. Most large companies have extended training programmes, organized by the sectoral organization 'Bouwradius'. Small and medium sized companies can also make use of the training facilities, but they can hardly afford missing their employees for a a day or two. As a general rule, the larger companies offer a range of training opportunities for employees. People are trained both in trade skills and communication. The main components of the training include health and safety and specialized courses in the particular trade. In principle, all courses for further training are open to women and ethnic minorities. Courses on health and safety are obligatory. Only in exceptional cases are ethnic minorities invited to develop themselves on the job (van der Meer and Roosblad 2003).

Training is a crucial institution for understanding employee entrance into the Dutch construction industry. Companies demand trained employees and the training provides a network of contacts. The training structure itself is complex and pupils may drop-out. Several barriers are presented to more vulnerable groups gaining access to the training

needed, including language, attitudes, direct and indirect forms of discrimination. Problems accumulate due to the particular nature of the work process, including its temporary nature and enforced mobility. The Dutch government requires vocational training institutions in the industry to train people to assistant level though no work is available at this level so that it offers no career perspective.

Recruitment

Larger companies increasingly take on a more managerial position, subcontracting the actual construction work out to subcontractors and the self-employed. Carpenters work in principle on permanent contracts with a company, being placed on different projects for a number of days or weeks until completion, and then continuing on another project. There is thus no daily recruitment of personnel. When companies need employees, this will not increase their staffing as they make use of different forms of labour supply - whether self-employed persons, inter-collegial hiring of employees, or temporary work agencies. Moreover, part of the work will be outsourced to subcontracting companies. Despite the flexible nature of the work process in the industry, employees have thus considerable length of service in one firm. 43% of main contractor employees have more than 10 years tenure, whereas only 14% have been less than 12 months with the same firm (EIB 2000). For subcontractors the proportions are only slightly higher (31% more than ten years, 20% less than one year)

When vacancies occur, firms use different methods of recruitment, usually through informal recommendation and job distribution. Having good contacts is crucial in the industry. Sometimes advertisements are placed in newspapers and on the building site. Most of the time, people are recruited through informal circuits, those taken on being known from the neighbourhood or place of origin of the construction workers. Since many construction workers are commuters, travelling on a daily basis from the countryside into the larger cities where most building work is located, ethnic minorities, who above all live in the cities, have problems of becoming known. On the other hand, those who are self-employed and working in temporary work agencies can make it to a permanent contract once they have proved their worth. For employers, the preferred way of recruiting younger and new employees is however via the training institutes. Former apprentices are hired following good performance during their apprenticeship. New entrants thus best enter into the industry via the training programmes. Main contractors take part in the organization of the apprenticeship scheme and have therefore good contacts with apprentices and their instructors.

According to a study of 1993, firms use different channels for the recruitment of ethnic minorities and native workers (EIB 1993). For the indigenous workforce, they use the public employment service (48%), advertisements (40%), and informal recruitment via employee contacts (37%). Job seekers may also approach firms themselves (18%). Ethnic minorities on the other hand more often approach firms themselves (33% for main contractors, 30% for subcontractors), as well as making use of the public employment service (19% for main contractors, 30% for subcontractors) and the networks of schools and training institutions (29% for main contractors, 13% for subcontractors). Personal

contacts (12% for main contractors, 16% for subcontractors) and advertisements (5% for main contractors, 7% for main contractors) are applied to a far lesser extent.

Over ten years later, the construction industry still has a shortage of personnel but the public employment service is no longer mentioned as a source for recruitment. Informal recruitment networks are prevalent in construction, favouring the selection of especially male workers along with their relatives and families from mostly rural areas, commuting every day to workplaces in the cities (van der Meer and Roosblad 2003). Ethnic minorities are not part of these networks and therefore take part in the production process to a lesser extent. When they enter the workforce via the training institutions (the third most popular way of recruiting, especially for main contractors), they are guaranteed strong ties and contacts. It seems however that they face difficulties in being accepted as productive labourers and face indirect forms of discrimination, tempering the chances of their establishing a long employment record.

Employment contracts

In the 1970s and 1980s operative construction workers were often hired on a temporary basis for the duration of a building project. Nowadays, long-term relationships between enterprises and employees are more typical, in spite of the fluctuating economic climate and the greater number of small companies. The majority of workers in the industry today are working full-time with permanent contracts. In 1997, 83% of the workforce in construction had a permanent contract; only 1 per cent, a temporary contract; 16% were self-employed (CBS 1999). This compared positively with the national labor market. This stability for construction workers is possible because the system of regulation reduces the risks for individual employers associated with providing steady employment. For example, wages are partially guaranteed through a spell of bad weather by means of the collectively financed bad-weather allowance. Moreover, when lay-offs do happen, they are more easily accepted by trade unions because of the extended unemployment compensation provided to laid-off workers.

As a general rule, employees serve a probationary period of between one week and a month, though for some it may even be a year, before obtaining a permanent contract. In 1997, when the ban on temporary agencies was lifted, 6% of all firms hired at least some temporary workers through such agencies and approximately 40% considered this option to be positive (EIB 1998b). Agency workers have an advantage in terms of wage costs, since the collectively agreed rates for these categories are lower and the agreements do not oblige firms to pay contributions to the social funds. The social partners now require agency workers to respect the construction agreement in full (including the contributions to the social funds) once they have completed vocational training or have twelve months work experience in the industry. However, agency work, though used hestitantly in the years immediately following the lifting of the ban, increasingly became accepted by the industry by the beginning of the new millennium. Nevertheless its market share in construction is still only about 0.5%, low in comparison with the 4% share in the Dutch labour market as a whole. Many of those hired by temporary agencies are from ethnic

minorities, with low (e.g. concrete restoration) or no qualifications and unable to work autonomously.

Since the second half of the 1990s, the number of self-employed persons has risen considerably to reach 35,000 in 2001 or about 17% of the workforce. As a general rule, self-employment occurs among carpenters, bricklayers, plasterers and painters (EIB 1998a). The rise in self-employment has worried both the trade unions and those employers' associations representing small and medium-sized firms. Compared to ordinary wage earners, the status of the self-employed is unclear: on the one hand, they are not employees, since they have no labour contracts, do not adhere to collective agreements, and do not contribute to the collective funds; on the other hand, neither are they employers, since they work under subcontracting conditions and have little control over the pace or substance of the work. In violation of the standards set by the collective agreements, the self-employed often work more than 40 hours per week (in 2001 50% worked more than 50 hours per week). Moreover, they are insured only on a voluntary basis and their levels of insurance against the risks of accidents, disability, and sickness are far less than that for wage earners who participate in the obligatory collective funds (EIB 1998a). In other words, the self-employed take individual risks by offering flexibility, lower prices (without social security costs), and longer working hours than employees covered by the collective agreement. They earn 60% of their income through private clients and 40% through working for main contractors. Payment may be precarious and competition hard and the hourly wage rate is 16% below that of regular employees (EIB 2001). Many of those from ethnic minorities work as self-employed.

Illegal contracting has always been a problem in the construction industry. Often a distinction is made between illegal contracting, which is not allowed, and moonlighting, which is often considered as being acceptable. Illegal contracting is being controlled by the Chain Responsibility Act, which came into force in 1982 and prescribes that the main contractor is responsible for the tax payment of all subcontractors in the chain. However control is often difficult, documentation may be false, and many may work without permits or outside the control of the tax institutions on, for instance, repair and maintenance. The black and grey markets are roughly estimated to be up to 10% of output. There are also the so-called 'illegal contractors' (*koppelbazen*), a type of temporary agency which allocates to employers self-employed workers who not on their payroll and who are themselves responsible for paying their own taxes and social security contributions (Report parliamentary enquiry directed by Mr. Buurmeijer)**.** Another form of abuse is through social security number frauds. In a survey from 2001, it was found that more than 50% of construction workers investigated turned out to earn an additional income through illegal working (SFB 2002). Since 2002 a special 'Construction intervention team' has existed, engaged in moonlighting and other forms of fraud.

Different employment contract types therefore compete with each other. Ordinary employees have permanent employment contracts, whilst employers introduce flexibility in the labour market by making use of subcontracting, self-employment, collegial hiring and agency work, each with different costs, rights and obligations. Collegial hiring, which has no large cost differential, is no more than a temporary solution to match

demand and supply. As a general rule, unqualified ethnic minority workers are found offering their labour power as self-employed or agency workers; those who are qualified will work as wage-earners.

Employment protection is not strictly speaking a reason for a division between incumbent workers on the one hand and job seekers or new entrants on the other. The collective agreement for the construction industry stipulates that firms can reduce their workforce when no order is in their portfolio. There is no evidence that employment protection acts as a mechanism of exclusion.

Promotion

Carpentry work is highly valued by firms or to put it simply: 'good carpenters earn money for the enterprises, especially when they do not make many errors' (van de Meer and Roosblad 2003). The job ladder for carpenters in the industry is however restricted and there are few possibilities to make a career. Workers can only change status from 'starting tradesperson' to 'adult tradesperson', to 'supervisor or foreperson' up to 'executive manager'. All steps relate to higher qualifications. Almost nobody makes it up to executive manager, since in most cases additional training is demanded (MBO-level and particular courses at level four of the qualification scheme). In addition, the ability of carpenters is rewarded in various ways: in terms of their skills and qualifications, the status of the difficulties in the work someone is performing, and the autonomous and independent way of organizing the work; and in terms of the different forms of compensation and performance-related pay they receive. Skilled workers have therefore informal differences in status among themselves.

Almost no women enter the carpentry trade; they are simply not trained into this occupation. When there is a woman she will be working not in the main work places, but in more individual restoration work and with housing corporations. Managers are also wary of hiring women since they fear that they will be treated badly by the male workforce: 'When women enter the work floor and join the lunch in the shed, something changes, men distract from their ordinary work and behave themselves in an aberrant way' (van der Meer and Roosblad 2003). Managers also argue that the working conditions are hard, and many women are not prepared to carry and lift heavy material. Women in general are not treated as high potential in recruiting to the ranks of manager or director.

Ethnic minorities face difficulties in gaining access to the higher skilled levels and are rarely promoted. The reasons given by personnel managers for this vary from claims that ethnic minorities: 'have no interest in getting higher up the ladder', 'have to show their productivity more than natives, have to prove themselves twice', 'are the first to be fired' (van der Meer and Roosblad 2003). The work culture can be particularly tough for those from ethnic minorities and they are subjected to more informal pressure than indigenous workers.

Some cannot stand the tough humour between workers and the direct or indirect discrimination. There is also a division of work between main contractors and subcontractors, with the latter employing more ethnic minorities - especially when the work is less qualified. In these subcontracting companies (that is, not in qualified carpenter's work) ethnic minorities may hold a supervisory position, for instance as foreperson, but only with authority over other ethnic minorities and not to supervise indigenous workers. There are too few employers from ethnic minorities. Some may start their own enterprises, but this is seldom successful in construction; there are too many risks involved, Dutch regulation can be difficult and sometime clients are negative.

Wage-setting

All construction workers on site are covered by the 'collective agreement for the construction industry' (*Bouw-CAO*), signed by the employers' association *Bouwend Nederland* and by three trade unions *FNV*, *CNV* and *Het Zwarte Corps*, and covering about 180,000 employees both in construction, the utilities and civil engineering. There is a separate agreement for administrative, technical and executive management covering 45,000 employees. There are also about 20 separate collective agreements for roofing, tiling, the housing corporations, the wood sector etc.

For the construction industry, the collective agreement distinguishes five functional groups based on education, experience, health and safety, physical work load, executive tasks and the autonomy in work. There are 117 different job profiles. Lower skilled work for helpers, porters, cleaners is classified at function level A. A starting 'second class' carpenter (*timmerman II*), who has finished the two-year primary vocational training programme is ranked at function level B and is able, 'on the basis of technical drawings and instructions of supervisors, to measure and produce generally applied boxes and to measure and execute technically not complicated operations' (source: Bouw-CAO several years). A first class carpenter (*timmerman I*), classified in function level D, is able 'on the basis of technical drawings to autonomously measure and make all forms of boxes and to independently measure and execute all occurring operations both in new housing, maintenance and renovation'. Such a first class carpenter will have two to three years' experience and will have finished the specialization course (level 4 in the qualification structure).

In the collective agreement there is the possibility to pay bonus rates, as a fixed part of the weekly wage, and in practice most companies apply these. All employees are ranked according to their age, experience and education. New entrants are in wage scale B and adult tradespersons with more qualifications and work experience are in scale D. The best skilled workers are paid according to scale D but receive in addition a permanent bonus from 10% to - in exceptional cases - 25% of the rate. The wage structure is relatively flat. Forepersons, instructors and teachers are also paid an additional fee (column D, E). Shift-work may be compensated with a 10% (two shifts) or 15% plus (three shifts) payment.

There is a separate wage structure for younger workers, who have an employment contract as soon as they take part in the sectoral vocational structure. Their weekly wage

is determined on the basis of a 25 hour week. For these younger people, wages rise with age. As they complete part of their qualifications or work more hours per week, their wage levels will rise by a certain percentage so that they arrive at the adult rate by the age of 22. When they are married they are ranked three additional years in tenure.

For people entering the industry who are inexperienced there is a special 'entry-wage level', created in order to bridge the 35% difference between the legal minimum wage and function level A, a difference generally held to be too large and a hindrance to those with lower productivity finding a job at about the minimum wage level. The entry wage level, created for this reason in the late 1990s, is equal to the minimum wage in the first half year, plus 25% of the difference between the minimum wage level and function level A. In the second half year, the entry wage is the legal minimum wage plus 50% of the difference so that, after one year, people should at least be calculated according to function level A.

Trade unions have strongly argued that agency workers, legally banned between 1982 and 1997, should be covered by the collective agreement in order to safeguard the sectoral funds. Agency workers are now covered by the particular stipulations of the collective agreement for the construction industry when they: are qualified as adult skilled workers; take part in the sectoral vocational training; and have more than twelve months of experience in the industry over the course of the past two years. Only in the case of inexperienced and unqualified work over a period of less than 12 months is the separate collective agreement for agency workers with its low wage levels valid; during that period no contribution need be paid to the sectoral funds for training, unemployment, bad weather, pensions, etc.

Working hours have collectively been reduced from 40 hours per week in 1982 to 36 in 1992. In actual practice, employees work 40 hours per week, but the entire industry closes down in December for two weeks and in the summer for three. In addition, employees enjoy a substantial number of free holidays and days off due to labour time reduction. Overtime occurs, especially at times of peak activity, and is compensated with an addition to the salary. All kinds of secondary benefits are also laid down in the collective agreement. Social security is arranged at the sector level and all employees in the industry receive additional benefits in case of unemployment, sickness and disability. Employers also pay travel pay. In the collective agreement for the construction industry in 1998, stipulations were included to enable older workers to opt for a four-day working week from 55 years of age; in 1999 early retirement was introduced for part-time employees. These are important conditions for disabled workers.

Most main contractor employers are positive about the wage system in contrast to some five years ago, when they were often negative. The wage system is an inclusive system, with substantial social benefits that create a positive work attitude among employees, whereby qualified work is rewarded and the flexible allocation of labour is still possible. Smaller companies are more negative about the relatively high wage, all the premiums for the sectoral funds, social contributions, and own risk clauses for disability and sickness. It is as a result argued that the wage costs in the industry are too high. The level

of rewards in the construction industry has increased by 50% over the last twenty years and 16% of employees earn an additional payment above the rates laid down in the collective agreement.

Active labour market policies

The collective agreement for the construction industry contains many clauses on social benefits, including on nurseries and part-time work, to be implemented at firm level. However few companies appear to apply such clauses or other policies to improve the position of women, ethnic minorities or other vulnerable groups in the workforce. The requirement for *Wet Samen*, the legal need (until 2004) to register the share of ethnic minorities, has generally been regarded as an administrative burden rather than a goal in itself and firms do not set targets for the recruitment of excluded groups (van der Meer 2003). The construction industry is also an exception to the rule of part-time work in the Netherlands, as this is not widely accepted in the industry. The industry appears therefore to be populated by a rather traditional, male labour force; those who may have children have insufficient time to care for them, given the hours of work and the early start to the working day. And women cannot work in the industry as flexible or part-time working hours are not widely accepted given the nature of time-management and planning in the production process. Social benefits therefore play no significant role in the status of, for instance, carpenters, whether male or female, indigenous or ethnic.

In the collective agreement for the construction industry there is a specific annex intended to serves as a protocol for improving the employment situation of vulnerable groups. The social partners argue that the entry of particular target groups (such as the long term unemployed, women, ethnic minorities and school leavers unemployed for more than six weeks) into vocational training programmes should be encouraged. The proposal is for a 10% inflow from these target groups into vocational training, to be evaluated annually; those vocational training associations that meet the target receive a premium whilst those that fail to meet the target are sanctioned financially.

There is a long history in the construction industry of attempts to make public employment policies more active and useful. The industry was a forerunner of the Dutch model of active labour market policy in the 1990s (Van der Meer 1999). Several initiatives were taken, especially when unemployment was high, in 1984-1985. The most important instruments applied included: updating the files of the public employment service; provision of training and work experience; attempts to improve the matching of demand and supply. These were regulated through the sector-wide Construction-Tradework Institute (*Bouw-vak-werk*), an organization that was quite successful in the industry at national and regional levels from 1989-1999. In 1999, this sectoral employment programme was however dismantled, and the remaining tasks (especially applying for subsidies) were placed with the sectoral training institute '*Bouwradius*'. Apart from the widely supported sectoral training initiatives, few main contractors now appear to make use of active labour market policies – whether subsidized work programmes or extensive possibilities for reducing labour taxes and social premiums/

training and the sectoral training institute. This is because they prefer to hire qualified people (van der Meer 2003).

For ethnic minorities, one of the most interesting forms of active labour market policy is through 'contract compliance', including laying down in the tender clauses for public construction work the obligation for firms to implement the target that 10% of the workforce employed on a project should be of ethnic origin. This obligation, which has existed since the mid 1990s, still plays a role in certain cities.

Social funds

Similar sector-wide regulations have been created for social security, disability coverage, bad-weather allowances, industry pensions, voluntary early retirement, research and development including vocational education and training, and health and safety. These funds are financed by firms and workers themselves, with the total balance amounting to 224 million euro in 2000 (SFB 2000). Many of these funds are organized at the level of particular areas of activity of the industry (e.g. building, plastering, painting, concreting, and roofing). The social security systems were for many years implemented by an industrial insurance board, *Sociaal Fonds Bouwnijverheid* or SFB. The employers' associations and labour unions were shareholders of this private organization. In 2000, the social security tasks were transferred to public control, in the aftermath of a parliamentary inquiry on social security in 1993 (Hertogh and Peet 1999; Jansen et al 2001).

Regarding working conditions, in addition to the provisions of the Working Conditions Act of 1998, the representatives of the industry have concluded several initiatives regarding health and safety, including the bi-partite fund *Arbouw*. Arbouw is jointly directed by representatives of employers and employees. Within Arbouw, research and development takes place regarding the improvement of labour conditions, working methods, the nature and severeness of employment risks, professional illness and accidents. The sectoral support department is responsible for information supply to firms and employees about labour conditions. The health care department of Arbouw coordinates periodic consultation and inspection of the individual health condition of employees by labour conditions service organizations (*Arbo-diensten*). This department can also initiate research on related issues.

Sickness and disability

The current positive labour market situation obscures the employment difficulties of a decade ago when about half the construction workforce was not working. At that time, trade union advisor Kees Korevaar (1990) typified the construction industry as 'extremely ill'. The number of inactive construction workers of working age was as high as the number of actively employed workers. With a heavy reliance on the extended use of unemployment, disability, and early retirement benefits, the construction industry had begun to resemble the "welfare without work" setup of the corporatist welfare state (Esping Andersen 1996).

In the 1980s and early 1990s sickness leave was an exit-pipe form the labour market, not only in the event of illness, but also in periods of low activity and bad weather. Access to the disability scheme was a wonderful way out for older workers who were tired of working and were interested in gaining substantial social benefit. In 1993, a parliamentary inquiry into social security in the Netherlands called the social partners 'jointly guilty' of misusing of collective social funds, which provided an exit mechanism from the labour market (Buurmeijer 1993).

Within the Dutch welfare state, many social security provisions are being reconsidered. In 1993 access to provisions under the Disability Act was restricted and in 1994 "own risk" clauses were introduced for firms, placing the risk of employee disability payments with the employer. In 1996, the Sickness Act was privatized, making the risk of sickness an individual hazard; sick leave became an individual risk for enterprises, which could no longer use sickness regulation as an exit from the labour market. In March 1996 the Act on the extension of the obligation of wage payment in case of illness (*Wet uitbreiding loondoorbetaling bij ziekte*, WULBZ), was introduced, whereby employers are responsible for paying at least 70% of the wage during the first year of absenteeism due to illness. Since then the sectoral insurance association for the construction industry (SFB) no longer has the obligation to register all sickness absenteeism. The Act does however oblige companies to notify absenteeism with an official service organization for labour conditions (*Arbo-dienst* in Dutch). These service organisations, which are in mutual competition with each other in a quasi-market setting, control the nature of the illness and report about the results.

After this regime change, sick leave in the industry decreased by half during the 1990s, from 10% on average in the early 1990s to approximately 5.1% in 1995, 4.8% in 1996 and 4.5% in 1997. Since then it has varied, rising gradually again to 6.1 % in 2002, but dropping considerably to 4.8% in 2004. On average substantially lower sickness leave figures are evident for administrative and managerial staff than for the manual workforce. The frequency of sickness leave is also lower for the former group (EIB 2004: 23).

The inflows into the ranks of the disabled have not, however, seriously abated in spite of the individual-risk clauses introduced in 1994. The total disability population is influenced by the inflow into and outflow from the disability scheme. In 2000 the total number of disabled construction workers stood at 74,000 but has fallen every year since as the outflow into pensions exceeds the inflow of new disabled persons. Over the course of twenty-five years, the inflow in numbers into disability reached a peak in 1981, when 10,000 employees became disabled; in 1984 the highest relative percentage of workers was registered, with 3.2% of the construction workforce becoming permanently disabled. These percentages have gradually declined, particularly following the 1993 parliamentary inquiry, from 2.3% in 1993 to 1.8% in 1994, reaching the lowest level of 1.3% in 1997. Since 1997, inflow into the disability scheme has increased somewhat to 1.6% in 2000 (De Jong et al 2002: 49). More recent data are not yet available.

The most recent information on disability inflow shows that, of the hazards for employees assembling scaffolding, bar and steel bending, demolition, rail maintenance, grouting (putting cement between tiles and bricks, *voegen)* and roofing (*dakdekker)* are the most dangerous. There is a low hazard rate for electricians, machine drivers, working managers and administrative staff. This means that less skilled employees and those with a physically burdensome and dangerous job face the most substantial risk of being declared disabled. Such employees also have higher sickness absenteeism than average (EIB 2001).

The elevated figures on disability are above all a consequence of the elevated number of accidents in construction. In 1998 for example, 13,750 accidents occurred on site due to falls, heavy loads, stumbling, or sliding. In 73% of cases, one day of sick leave proved necessary (EIB 2000). The relatively high number of accidents has resulted in additional safety measures for scaffolding workers, road workers, and painters. In addition, new environmental measures are being taken.

In 1998 the Pemba-Act introduced premium differentiation and market functioning into disability insurance and variations in companies' insurance premiums. Previously, the employer and the employee shared the disability premium equally. With the Pemba Act the entire premium was with the employer, the level being differentiated depending upon the number of disabled persons per company. This led to a joint re-insurance regulation for construction companies to reduce the risk for individual companies.

In 1998 the Reintegration of Handicapped Persons Act was also renewed, the principle idea being to encourage companies to hire partially-handicapped persons with the help of subsidies and provisions. Collective provision was introduced to compensate an employer in the case of illness of a handicapped person. Moreover the basic disability premium is remitted for those companies with more than 5% of disabled persons on the payroll.

In 2003, the Improvement Gatekeeper (*Wet Verbetering Poortwachter*) Act was introduced, aiming to stimulate faster reintegration of ill employees back into the labour process, with the help of particular premiums and provisions for successful and sanctions for less successful companies. In 2006, the old Disability Act (WAO), which caused a national political drama in terms of the extended inflow into the scheme, was substituted by a new Act (WIA), which puts (partial) ability to work and not disability in centre stage.

Covenants on working conditions (2001-2005)

In line with the national policy approach on labour conditions, particular covenants have been developed in the construction industry for infrastructure, building and specialised construction. On October 2nd. 2001, two covenants were signed between the Ministry of Social Affairs and Employment and industry representatives - the employers' association *Bouwend Nederland* and the trade unions *FNV Bouw* and *Hout- en Bouwbond CNV*. One covenant focused on health and safety information provision; the other on risks related to the use of quartz minerals, lifting and bending, stress at work, and OPS (Organic psycho-

syndrome, which results frompainting with poisonous or toxic materials). Both covenants are labelled 'Workgood' (*Werkgoed*). The aim is to improve working conditions and to reduce risks at work, sickness leave and accidents.

The covenants have resulted in concrete results. One example is the policy approach to the practice of 'lifting materials'. The trade unions in the construction industry have always been relatively active concerning labour conditions (Van der Meer 1998a). Their strategy was to convince employers' associations to agree on the need to define particular norms on health and safety norms adjusted to the collective agreement. Such norms were called 'A-Pages' (*A-bladen*), which originally lacked juridical status, but were defined and implemented under the condition of good employer behaviour. Due to the covenant approach, the previous 'norm on lifting materials' has now been accorded a national policy rule, whose subsequent implementation will be monitored by the national labour inspectorate.

Other results of the covenants include the development of technical equipment to reduce quartz; the introduction of a trowel which reduces the physical strain on the wrist and arm while laying bricks; intensive public information on the use of aids and new methods for improving the organization of the work process and accordingly reducing stress at work. In addition twenty disabled construction workers have been deployed to provide information to 12,500 construction sites. In a period of four years, over 100,000 construction labourers have as a result been informed. Several brochures and folders have also been published with examples of intelligent or enhanced work organisation (e.g. *Werkgoed* 2005). The covenant ended in October 2005, though some projects will be continued by the Arbouw Foundation.

One remaining concern is working managers (*uitvoerders*), one in three of whom faces a health problem related to stress at work. The labour inspectorate has proposed the mutual adjustment and fine tuning of tasks and lightening the burden of responsibilities for this group (see also the case study below).

For the future, the government aims to reduce regulation and to strengthen self-responsibility in the industry. Trade unions have expressed their concern for the deregulation of health and safety issues, given the elevated accident and sickness leave rates. In addition, FNV is afraid of inequality before the law when employees in a particular sector are covered by a health and safety regime other than applies to employees in another sector.[4]

Actual indications or application of health and safety regulation at the shop floor

Labour conditions in the industry remain demanding. In 2005, the national labour inspectorate concluded that accidents take place 3.6 times more often in construction than in industry generally, above all in small and medium sized repair and maintenance projects where many coalitions between contractors and subcontractors occur on an *ad*

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[4] See for example several speeches by FNV Bouw president Dick van Haaster, *Toespraak arboconvenant bouw* November 24th 2005, and *bondsraadtoespraak* January 30st 2006.

hoc basis (*Arbeidsinspectie* 2005: 28). The inspectorate issued pecuniary penalties in relation to more than half of workplace visits. In 2,250 out of 4,500 visits (62%), labour conditions were harmful and employers were fined. Employees are also sometimes careless and inadvertent with respect to their labour conditions. In 150 cases the national labour inspectorate fined employees. It argues that the construction sector is not sufficiently preventative in terms of anticipating issues, such as falls.

In addition, the number of fines due to illegal work has increased substantially (*Arbeidsinspectie* 2005: 34). In 2005, the labour inspectorate visited 1,100 projects, about 50% under private domestic clients. In 205 cases pecuniary penalties were issued, including to private persons having their homes repaired. Most illegal workers originate from new EU member states such as Estonia, Latvia, Lithuania, Poland, Slovenia, Slovakia, and the Czech Republic. The labour inspectorate argues that in only in 3% of all cases after a fine for abuse of health and safety regulation is subsequent preventive action taken (*Arbeidsinspectie* 2005: 62).

According to the National survey on Labour Conditions of the Netherlands Bureau for Statistics and TNO, 9 out of 10 construction workers (88.1%) do not want to continue to work in the industry until the age of 65 (TNS/CBS 2005). Only 28.7% of construction workers estimate to be able to keep working until the age of 65. They are of the opinion that the job is too demanding and many quit the industry at an earlier age. Of the respondents, 41.6% of the construction workforce was willing to keep working until retirement should working conditions be less demanding.

Case study[5]

J.J.S. is a small, but growing construction company originating fin the 1930s, specialised in bricklaying and carpentry, where employment has grown from 20 to 60 full-time equivalent (FTE) over the last decade. The workforce is still relatively young, though ageing. The company succeeded in reducing sickness leave from 6.3% in 2001 to 4.3% in 2005 (i.e. below the average sector level of 4.8%). Every 0.5% decrease in absenteeism leave is equivalent to an expenditure reduction of 12,000 euros.

According to the company management, a healthy policy for labour conditions is the joint responsibility of both employer and employee. The company prides itself on applying the most recent health and safety regulations, where this joint responsibility is included. The company director holds the VCA-safety certificate for constructors. However, the company faces several difficulties due to the growth in its activities and the need for professionalisation of employment relations. In each of its three departments - maintenance, projects and private clients - sickness leave is about similar, though risks are different. In the maintenance department, small repair work is undertaken implying much staircase walking, turning, kneeling, lugging, and carrying, leading to injury to knees and backs. The solution was found in the introduction of better equipment, including elevators, and in outsourcing the most dangerous work. In the projects

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[5] Based on Langman et al (2006). Note that one of the authors is a specialist in occupational health, another is a trade union leader in construction.

department, larger scale operations went with repetition of tasks leading to bursitis, above all among tilers. Here task rotation has been introduced, resulting in reduced vulnerability. In the projects department, middle managers above all suffered from stress, amongst them estimators, planners, project and site managers (*uitvoerder*). The latter group is the key occupation on site and will be protected where necessary in anticipation of physical exhaustion.

According to the researchers, the company could invest more in health and safety, where good communication of the joint responsibilities of employer and employees appears to matter above all. They suggest nominating employees with responsibility for hazard prevention, including physical loads, psychological stress, and coping with dangerous materials. The authors also propose that the official labour conditions service (*Arbodienst*) be given a more transparent task and responsibility, in order to explain the mutual responsibilities of medical doctors and advisors, on the one hand, and company management and employees on the other. Finally, they hint at the responsibility of the company management to develop an enterprise culture into an approach that is able to cope with differences in individual capabilities at work.

Conclusion: factors that influence social risk management

In the Dutch construction industry working conditions are still hard, accidents are not an exception and construction work is often seen as dirty, giving the industry a low image. As a response to such problems, associations of both employers and employees have initiated particular regulation, to be developed with the help of the government. Collective bargaining and wage-setting are generally extended to all firms, covering all employees sector-wide without differentiating between groups. Those who have the qualification and productivity level will be ranked and paid accordingly. Social benefits are also widely developed in the collective agreement and can be used according to need and bargaining position of employees. The collective agreement for the construction industry covers collective risks such as unemployment, sickness and disability. In addition, a number of funds have been established for training and labour conditions. The most recent innovation was the establishment of the life long learning initiative, whereby construction workers can retrain for upward mobility to a position with more responsibility in the job ladder or for a job outside the sector.

These institutions of self-governance have resulted in several collective benefits: they produce a qualified labour force with relatively high productivity; they improve working conditions; they promote industrial peace within the work process since wage-setting takes place outside the firm; and they enable information exchange between interest organizations and the government about external developments (van der Meer 2003).

The efficiency and effectiveness of collective regulation in the construction sector has been put to the test both at firm and policy levels. At firm level, new technologies have resulted in prefabrication, new products, faster production processes, and specialized cooperation between firms. Larger contractors increasingly take a coordinating role in the production of infrastructure and housing, leading to temporary coalitions of those firms

that are strong enough to develop a set of labour regulations independent of the industrial wage policy, while contracting out work to partners and subcontractors. Technology changes the skill level of the workforce and leads to a need for more general management and computer competencies. The consequence is a process of de-sectorization, with less clearly defined boundaries between industries and the risk of crowding out a relatively expensive construction labour in favour of cheaper collective agreements for wage earners or self-employment.

In the past the collective regulation system facilitated the misuse of the social security system. Now, in the area of social security self-responsibility has increasingly been introduced, and the government takes a less interventionist position. Subsequently the division of risks is unequal over the different employment contract forms that compete with each other, whether direct employment, self-employment or agency. More in-depth research can bring the importance of labour contracts and employment hazards to the surface.

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B2: The Dutch IT Sector

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Introduction: the ICT sector

The IT-sector (in Dutch ICT- information communication and technology[6]) can be defined in several ways, either in a broader or a narrower sense. ICT is only partially an independent sector; it is for the most part interwoven with and embedded in all other sectors. In 1999, the Dutch Ministry of Economic Affairs initiated a Taskforce ('*Werken aan ICT*') to study the problems in the sector. In its report, an insightful panorama is drawn, distinguishing between five categories of firms: users, services, standard software, embedded software, and telecommunication - each with their own characteristics and dynamic. ICT jobs show an enormous diversity.

The analysis here is restricted to service companies, whose primary function is to produce, sell and/or offer consultancy work related to software. We therefore exclude wholesale firms, hardware producers, hardware consultancy companies and companies that offer maintenance and repair of ICT products and will focus especially on the occupational groups of software engineers and software programmers.

In different reports and statistics there is no consensus about the number of people employed in the Dutch IT sector. They range from 240,000 to 270,000, depending on the definition in use (CBS 2004; Forrester 2004; ICT Marktmonitor 2005-2006; Indic@tor 2005). The majority of Dutch ICT employees work as consultants or advisors, followed by system /network /database controllers and application /system programmers. The problem is that ICT-specialists not only work in software companies, but also in larger organizations such as larger companies, banks, government agencies, research institutions etc. Table 1 shows the number of ICT employees in the industry from 1997-2006, according to different definitions and levels of analysis (ICT Marktmonitor 2005-2006).

For all categories there was a strong rise in the number of jobs in the period 1997-2000; after 2000 employment decreased, whereas from 2004 this number is again rising. The growth in ICT productivity was extraordinarily strong in the period 1996-2001, with production rising by 12% per year and the number of employees by 14% (Hermanussen 2002). The demand for ICT services increased considerably in the late 1990s, with favorable economic growth stimulating the demand for information technology. Here, increasing internationalization and transnational mergers, together with the rise of electronic trading, the internet, the conversion of the euro and the millenium drew a lot of employees into the ICT workforce. These employees entered the ICT sector also from other sectors, following retraining. In the course of the last ten years, employed persons with a degree in higher professional education or an academic degree, have been retrained and switched their careers from their original specialisation into IT. Many software engineers in IT have a background in various forms of education, before they

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[6] In the following chapter, the words IT and ICT will be used interchangeably.

enrolled in private courses on IT and entered the industry. From the early 1980s, when unemployment rose, many unemployed were given training in ICT-skills. The PION-foundation started to train unemployed at higher vocational training and academic levels in 1985, delivering its 5,000[th] graduate in 1998, and claiming that 97% of these have found a good job (van Lieshout and van Liempt 2001: 46). Other small private initiatives have also been set up to train and second people from other sectors, offering training courses in computer and information skills. Those involved are employed for a year, being instructed for four to six months, and then given a project to acquire work experience in a certain company which pays their training and salary; after successful training they are given a permanent job.

Table 1. The labour market for IT-specialists (1997-2004)

(1)	(2) IT-employees in IT-sector *	(3) ICT employees in the ICT sector	(4) Total number of employees in ICT sector	(5) Vacancies in IT sector	(6) Vacancies ICT-employees in total	(7) Outflow	(8) Job growth	(9) Shortage in ICT-sector
1997	47,250	98,000	173,500	3,550	6,922	800	6,000	8,850
1998	53,000	104,400	185,000	4,700	9,165	900	5,750	9,850
1999	64,400	110,400	195,600	5,000	9,750	1,090	11,400	15,990
2000	66,880	122,700	217,300	4,280	8,336	1,140	2,480	6,400
2001	65,880	120,700	233,000	1,930	3,749	1,120	-1,000	800
2002	62,000	114,800	236,500	670	1,328	1,550	-3,880	-4,850
2003	58,670	116,000	232,100	990	2,340	1,470	-3,330	-4,540
2004	61,840	120,200	237,000	1,300		1,670	864	-860
2005	75,660	125,800	248,000	1,880		2,040	2,856	190
2006	81,320	131,700	259,800	2,030		2,200	3,792	810

* Only high educated IT-employees

Source: ICT Marktmonitor 2005-2006; column (6): Marktmonitor survey among members, data available until 2003; Source column (9) = outflow+ vacancies + job growth – inflow.

This inflow of people, marking the Internet height days or 'Internet boom', came to a halt in the beginning of 2000. In this year the Internet economy appeared to be based on air, also characterized with the metaphor of the 'explosion of the Internet Bubble'. From that moment, ICT companies needed to slim down the organization, dismissing the 'superfluous' people hired during the Internet boom. This led to the situation where many highly educated IT employees became 'highly educated banksitters' (as paraphrased in an interview with the FNV-ICT representative).

Consequently, after 2000, the number of vacancies for ICT-specialists (both in the ICT-sector and in the economy at large) has also decreased (columns (5) and (6) of table 1).

The shortage of IT-specialists (column (9)) was particularly acute in 1999, at the height of the boom period, but has since then reduced. Another extreme can be found in 2003 at the depth of the economic depression, when 4,540 highly trained ICT specialist were unemployed. Using the definitions of the Dutch Centre for Work and Income (CWI) including employees at lower educational levels, this total number of unemployed employees is significantly higher, with a total of 14,000 ICT employees unemployed in 2003 (ter Beek et al 2005).

However, the years of depression seem to have ended, with a surprisingly good performance in the ICT sector in 2005 (5.5% expansion growth of the ICT sector in 2005, more than the average for the Dutch economy). 2005 is therefore seen as a turning point; for the first time since the depression started, the number unemployed has decreased. Table 1 shows a clear growth from 2004 to 2005 in the number of vacancies in the ICT sector (from 1,300 to nearly 1,900 vacancies see column (5)) and in the number of jobs, which was nearly three times as much in 2005 as in 2004 (from 864 to 2,856 jobs (see column (8)). The expectations for 2006 are positive as well, with an expected growth in the IT sector of 3.4%. As a result, in 2006 the shortage of highly educated IT specialists will pass 1,000, forcing ICT companies to advertise more and compete with other ICT companies in the recruitment of new employees (ICT Marktmonitor 2005-2006). Here, the nuance should be made that this shortage comprises a certain profile of employees, searched by the companies. First of all, there is a shortage of experienced consultants with up to date knowledge of recent technological developments. Second, there is a need for highly educated, young, very flexible graduates with an IT or science (computerization) background, who are willing to work hard. But, there is a large group of 'older' ICT specialists who were dismissed with the explosion of the IT bubble, that are still unemployed. This has led to the situation in which ICT companies are hiring in young employees, whilst in the middle of or just completing reorganization processes involving the outplacement of older IT specialists (ICT Marktmonitor 2005-2006).

This situation of mutual hiring and firing has led to a certain cautiousness regarding the recruitment of new employees:

> We know now that ICT is very sensitive to economic fluctuations, which should be a warning in the upcoming shortage of employees. The challenge is to strive for a balance. We must never again find ourselves in the situation where our tariff falls faster than our labour costs. (Vice President HRM of large ICT company)

Due to the economic crisis, actors in the field state that the mentality in the IT sector has changed significantly. Where employers used to be welcomed with champagne and caviar and the sky seemed to be the only limit, nowadays you must be extremely ´happy´ and ´grateful´ as an employee to have (and hold) a job. Hence the crisis has led to a mentality change, where the employee is more and more seen as a ´burden´ or a ´cost´ for the organization, ´incapable of competing with the labour costs offered in low wage countries´ (as paraphrased in an interview with the FNV advisor working conditions).

A recent trend is the offshoring and/ or outsourcing of labour activities to other companies and/or low wage countries A broad range of Dutch IT companies has done so already (from IT specialist like LogicaCMG and ATOS to big companies like KLM, Philips, Heineken and Shell). The general expectation is that offshoring will increase significantly, especially in the development of software and ICT solutions, followed by helpdesks and call centres, web design and maintenance/support of ICT (ICT Barometer Ernst & Young 2006). This might lead to job losses, especially at the lower levels. According to recent studies however, up till now the effects of offshoring ICT activities on overall employment in the ICT sector in the Netherlands has been small. The number of ICT professional jobs actually disappearing from the Netherlands because of offshoring is not higher than 2,000, that is less than 1% of total employment in the ICT sector. Forecasts on expected employment impacts are very speculative, differing from a lot of jobs (50,000) in the coming years according to research by GPI Consultancy) to negligible numbers (9,200 predicted by Forester). Remarkably compared to other European countries, the Netherlands is second place in the percentage of ICT jobs that have already been transferred through offshoring (25.2%), right after Sweden. This can be explained by the fact that the ICT sector is relatively big. It is mainly jobs related to the development of software that have been replaced (ter Beek 2005).

With this process of offshoring of labour to low wage countries, employees who are an intermediate between the client and the product developer in offshore countries are needed (see also below) (ter Beek 2005). This has led to a qualitative shift in the nature of the work. Employers prefer employees who possess more competencies; in addition to IT skills, social and commercial skills are essential. The future ideal IT profiles are employees who posses on the one hand up-to-date knowledge of complex business processes taking place, but on the other hand, understand how they can communicate or translate these processes to others (managers, clients etc.), both in the Netherlands and in the offshore countries.

The problem is, however, that for a long time now growth in the supply of qualified employees has been lagging behind and a shortage of highly qualified ICT staff is looming. Outsourcing of IT activities has led to a considerable rise in the demand for skilled workers, especially in the fields of technology, communication and business administration. The power of the Dutch IT sector lies in solving clients' problems by means of technical application (ICT Marktmonitor 2005-2006: 52). Hence, highly-educated staff is needed. On the basis of ROA-data, Hermanussen has provided an overview of the skill levels for the four different groups of IT-specialists. Three out of four occupations are trained at higher professional or university level. Information scientists and technical system analysts require university degrees, whilst system analysts are mainly trained at HBO-level. Programmers are an exception to the rule, with the majority, 80%, of employees trained at MBO-level (Hermanussen 2002: 17-19). Therefore, various ICT companies are already complaining about the rising shortage of well-trained ICT professionals. These types of matching problems between education and the ICT arena are nothing new (ICT Marktmonitor 2005-2006: 51).

The main reason for this shortage lies in the insufficient number of students graduating from studies in computerization. Already in secondary school, students are not choosing science subjects. Despite the continuing disappointing economy over the past few years, labour market perspectives for graduates in the ICTsector has remained relatively stable and even good since mid 2004. Only a small percentage of HBO and WO graduates in computer science have been unemployed since their graduation (HBO 2005). For the next years too, the labour market outlook for this group at HBO and WO level is good. However, the IT sector does not always have a good image. It is often perceived as too technical and only for 'real nerds' (see below). Students often prefer different and what they perceive as 'less difficult' education. Therefore, more promotion of the sector is needed, showing that the work of ICT professionals is more than technology, programming and figures, and concerns client contacts, communication and creativity. Here, much work needs to be done (ICT Marktmonitor 2005-2006: 54; interview with an FNV advisor on working conditions).

The composition of the workforce

The demographic profile of ICT professionals in Dutch ICT can be described as predominantly male, high qualified, white and aged 25-40 (Indic@tor 2005; van Liempt 2006). Here, The Netherlands is not unique, since the international Indic@tor study on the employability management of ICT professionals across Europe finds a common pattern across all countries: in all countries the group is more likely to be male (approximately 70% across the seven countries under study) aged between 25 and 40 (again 70%, although software engineers tend to be even younger) and better qualified than the workforce as a whole (i.e. more likely to be university graduates, particularly in computer science). In this Indic@tor study, the highest share of highly skilled ICT workers was found in the Netherlands (3.2%), and the lowest was in Greece (0.6%).

Just as with the exact share of employees, the share of women depends on the definition applied. According to reports published by *Opportunity in bedrijf* (1998) and van den Brekel et al (1999), only 11% of all employees in ICT occupations in 1998 were female. This percentage is also used by Hermanussen (2002), on the basis of the occupational categorization of the Central Bureaus for Statistics (EBB - enquete beroepsbevolking). Plantenga and Remery (2001) arrive at a different conclusion on the basis of the CBS labour force data, NACE 72, finding the share of women in IT to be 19% for 1997, compared to almost 39% for the total labour force. The Labour Force Survey shows that for IT-specialists (including also sales persons and managers in IT) at medium (category 514), higher (category 714) and university levels (category 914) the share of women for the year 2000 was 12%, that is almost half that derived from NACE 72.2. It is this occupational figure that is used in most scientific reports. Hermanussen (2002) has published a further differentiation among different occupational categories, showing that the proportion of women among programmers is 11%, among technical system analysts 13%, among system analysts 12%, and among informatics 12%.

One reason for the moderate entry of women into the IT-sector is their low participation in higher professional and university education; they have not been trained in information sciences and rarely apply for a job. Several studies point to the reasons why girls do not

choose an education specialisation in IT: IT is seen as synonymous with 'technique', as a world of 'nerds', 'fast boys with high performance, long working days, and poor work-life balance' (Hermanussen 2002: 33). In 2000-2001 only 7% of all students in IT were female, the share of girls in MBO-education being 45%, just larger than the share of 38% in HBO-education, and 18% in university education (Hermanussen 2002: 34). On average, girls participate at a slightly higher level than boys in IT-education.

In MBO-education, the most attractive specialisation programmes for girls are: general IT-employee (43%), multi media design (17%), system analyst (10%) and office automation (10%). In specialist and technical informatics courses at MBO-level, the participation of girls is extremely low. At HBO-education level, most girls opt for a specialisation in economic and administrative applications of IT (11% girls in 2001), and not in the technical IT specialisations (6% girls in 2001). At university level the share of girls is moderate, although most opt for a specialisation in natural science, more than in technical science or economic information science (Hermanussen 2002; van der Meer and Roosblad 2003)

The share of ethnic minorities in IT is estimated to be very low (Table 2). Taskforce ICT, for example puts this at 2% for 1998 (1999: 52). In a more recent report, however, based on occupational CBS labour force data and applying a broad definition of ethnic minorities (referring to the persons of whom one of their parents is born outside the Netherlands), it is suggested that the proportion of ethnic minorities is rising, from 9% in 1997, 10% in 1998, 10% in 1999 to 11% in 2000 (Hermanussen, 2002: 20). The report concludes that the share of ethnic minorities in the IT industry is substantial and that they are relatively well integrated in the industry, with participation higher than the national average of 8%.

Table 2. Share of ethnic employment in Dutch IT

Source	Percentage
Taskforce ICT (1999: 52)	2% (strict definition)
Hermanussen (2002: 20)	11% (broad definition)

The number of ethnic minorities in IT-related vocational training and academic education is rising substantially, though concrete data are lacking. Personnel managers argue that when ethnic minority students complete their education, they can enter a company without any problem; ethnicity is not a criterion for selection and may even be seen as an advantage.

In our investigation of a school for computation science at the level of higher professional education in Amsterdam we found the number of women in the education programme to be extremely moderate though more than 30% of the students were of ethnic minority background, from both Turkey and Morocco, as well as Iran, Iraq and China (van der Meer and Roosblad 2003). These students were obtaining quite good results, especially when they were guided by the teachers and mentors. Data provided by the HBO-Raad (the council for higher profession education) show that the share of ethnic minorities that

enrolled in higher education with a specialization in IT has more than doubled over the last decade from less than 4% in 1993 to almost 9% in 2002.

Furthermore, there is a reluctant attitude towards 'older' (over the age of 40) employees. After the explosion of the Internet Bubble, the dismissal of certain employees comprised, according to the Vice President Human Resources of a large ICT company, mainly ´under-qualified employees´, hired too rapidly during the Internet boom. However, the trade union sees this differently, claiming that it was mainly part-time employees (e.g. women) and older people who were forced to leave the company. This opinion is shared by different temp agencies specialized in the reintegration of IT-specialist (ICT@work, Reoplus). They state that companies merged in order to cope with the economic downturn, and used this fusion to legitimize placing employees aged 40 to 50 on so-called 'outplacement trajectories'. These trajectories were officially meant to replace people somewhere else, but actually implied an 'inescapable exit', combined in most cases with redundancy pay (Based on interviews with FNV-ICT representative and the director of reintegration office ICT@work).

Industrial relations

The Dutch ICT-sector is a relatively young industry and industrial relations in ICT are less institutionalized than in other sectors (Schilstra 1998; Van Liempt 2006). Unlike traditional sectors (such as construction and health discussed elsewhere in this report), collective bargaining practices are limited in depth and coverage, and no broad set of joint institutions of labour market governance exists in the industry. Trade union density is low, approximately 8-12% in the larger companies. However, we have seen a recent rise in the union due to the process of labour shedding during the economic downturn (Table 3).

Table 3. Relative size of unions and union density in the Dutch IT industry*

	1987	1998	2003
FNV	41%	44%	67%
CNV	11%	10%	17%
Unie	27%	33%	15%
Other Unions	21%	13%	2%
Union Density	8 to 9 %	N.A.	12%

Source: van Liempt 2006
* Remark. Figures are based on three totally different sources, and give at most an indication of actual relative sizes. The 1987 and 1998 data were based on interviews and a survey amongst union activists. Unions, however, seem to highly value these figures, which stem from union activists' estimates.

Van Liempt (2006) provides several arguments for the weak union position. First, the trade unions have been incapable of developing an adequate response to the rapid expansion of IT companies from 1970 onwards. Second, from 1970-1980 companies like IBM advocated an anti-union policy and sometimes forbade their employees to even speak with union representatives. Third, the dominant mentality in the Dutch IT sector is entrepreneurial and management practices are generally taken over from the (Anglo-Saxon) countries of origin. Fourth, union membership is not seen as an asset among

Dutch IT professionals who are generally higher educated, self-confident, with sufficient faith in the future to consider themselves capable of negotiating their own salary and fringe benefits, and trusting in their employers with regard to pensions and collective goods.

In an interview, the spokesperson of the largest trade union in the sector, 'FNV Bondgenoten', argued that it is very hard for it to 'get a foot in the door'. According to the FNV, Dutch ICT companies make a lot of effort to keep them as far away from the negotiating table as possible. In this way the trade unions are excluded as partners in the negotiations on collective agreements. Moreover, problems the unions have tried to put on the company agenda, such as workload, RSI, and the effects of outsourcing and off-shoring for employees, have been ignored by the companies. According to the trade unions, this 'anti FNV' attitude of the ICT companies can be ascribed to the relative youngness of the sector, because of which there are no historically-grown bonds between the sector and the union as in other, more traditional sectors in the Netherlands. The ICT sector is therefore described by both the FNV and de Unie (the union for high qualified employees) as a very closed, conservative sector where companies are very reluctant to make any change in their labour market policy that might affect their autonomy and competitiveness. Only when trade unions are needed for their expertise on certain issues, are they welcome, but everything discussed in these meetings is written down and made official (Based on interviews with a FNV advisor on working conditions and an interview with a FNV-ICT representative)

In spite of the low trade union membership, 80% of employees in IT now work under an arrangement whereby the terms of employment are laid down. This can be a collective agreement (23%), a company specific arrangement (46%) or an individual arrangement (8%). The works council is in 39% of cases responsible for the arrangements concerning the terms of employment; in 33% of cases the employer shapes the terms of employment in a unilateral way; in 19%, the trade union play an important role (Tijdens 2000: 8-9). In the software part of the IT-sector most companies have no collective agreement, and those which do have one often use the works council instead of the trade union as their negotiating partner (Schilstra 1998, van Liempt 2006). About ten larger companies such as EDS, Getronics, Pink Roccade and Atos-Origin have negotiated a company agreement with the trade unions and works councils. Some companies, such as IBM, apply the collective agreement of the hardware part of the industry. This is a multi-employer or sector agreement for 'ICK-bedrijven' (literally: information, communication and offices) that is signed between the employers' association, ICT-Nederland, and the trade unions. This is the only sectoral arrangement in the IT sector.

The company culture is the most important factor to determine whether a company agrees on a collective agreement or not. According to van Liempt (2006), companies that grow autonomously and stay small adhere to the old, agreed collective agreement. However, companies that are expanding and grow by in-sourcing (takeover), search for an agreement (individual or collective) that leads to strategic advantages. Hence we can conclude that in the Dutch IT sector, trade unions, collective agreements and works councils are instruments for the companies to keep their labour costs as low as possible.

A new field of interest for the trade unions is recent developments in off shoring and outsourcing in the ICT sector. Trade unions and works councils see both as risks though, rather than seeking to prevent them, regard them as inevitable. They do try to be continuously involved in these processes, in order to look after the interests of the personnel concerned as well as possible (ter Beek et al 2005).

Recruitment, job ladders and promotion

With the continuous technological development and change in product market combination, and the tendency towards off shoring and outsourcing activities to low wage countries, renewing skills is of utmost importance for the IT specialist. There are extended opportunities for further training. Larger companies have their own on-line electronic academia or universities. Companies claimed to invest up to 10-15% of the wage bill on training during the boom period. This investment is said to have diminished to almost zero percent in some companies with the downturn in the economy. However, further training is seen by all as necessary to keep qualification levels up-to-date.

For employers in the ICT sector, this necessity - of keeping the skills up-to-date and having the ambition to do so - is the prime responsibility of the individual employee. As claimed by the vice HR president of a large ICT company 'stagnation means decline.' Here, learning should be a challenge and companies offer their employees a broad range of learning services, such as an e-learning platform with over 4,000 courses to be accessed and used over the internet 24 hours a day. It is the task of the employer to facilitate the learning process and to encourage employees with career development plans to develop their specialities and hence enlarge their career possibilities.

However, keeping skills up-to-date is not as easy as might be promoted by the employers. The training market for IT lacks transparency. There are many suppliers, but there is no general, standardized certification standard or quality control. Many different standards coexist at the same time, and the larger companies such as Microsoft and Unysis have developed their own 'universities'. In this climate of technological development and change in product market combination, new skills are needed. Some companies are in need of employees with TopNet specialities, some are looking for employees that know to work with SAP, while others are in need of an employee with knowledge of ORACLE.

Aside from this technical knowledge, the future IT employee should have social and communication skills, in order to compete with low wage countries. According to the FNV, proper education or training for this profile is lacking. The government, universities and companies fail to outline a university degree combining those qualifications. Hence, employees are forced to keep their skills up-to-date themselves, but are expected to do so after working time. In order to cope with the shortage of employees with both types of skills, the FNV would like to see cooperation between companies and the government to harmonize the education routes of ICT employees. But, according to the FNV, employees should also be given time to follow this education during work time. Moreover, some say that good promotion of this unique combination of skills will make IT more attractive as a workforce for women (ter Beek 2005:63).

Once out of the workforce, it is almost impossible to meet the demands of up-to-date skills. Here it proves to be crucial to translate skills into certifications. Unemployment in the IT workforce is therefore more and more a problem of education and training. This is particularly the problem of the large group of employees (aged over 40) who were sent home during the economic recession. With or without any supplementary arrangement, after three years out of the IT workforce it is almost impossible for these employees to find a new a job in IT. The Dutch Centre for Work and Income (CWI), responsible for reintegration and education of the unemployed, does not know enough about the skills needed to replace/ find adequate jobs for these highly educated IT employees (Computable 2004, and the director of reintegration office ICT@work).

In the Dutch ICT sector, software houses are the dominant form of employment. Firms make use of different recruitment channels and the use of the internet and intranet to announce vacancies is not uncommon. Sometimes announcements appear in general and specialist newspapers and IT-journals. Some jobseekers send their curriculum vitae. In larger companies up to100 CVs are received per month. Informal forms of recruitment also take place; some managers hire relatives or bring people from other projects or companies where they have been working. The public employment service is rarely used as a means of recruitment but the public employment offices have retrained many persons from unemployment to IT-positions. Trade unions or works councils do not play a role in matching demand and supply.

Although the attention given to diversity management in ICT companies has always been limited, in some larger IT companies in the Netherlands (such as IBM) there is a trend to create informal network groups across the organization to facilitate the career entrance and advancement of minorities (women, disabled, ethnic minority and older workers) (www.opportunityinbedrijf.nl). These diversity policies are informal, which means that participation is on a voluntary basis and occurs after working hours. On the one hand, this informal approach offers its advantages; thanks to the informal and several contacts, these policies have a network-like function. On the other hand, the existence of informal policies depends on the commitment of members. In a company like IBM, there is a certain feedback loop to the board of directors of these companies, through the so-called 'score cards' and set targets, concerning for example the number of women entering the company in a certain quarter. Not complying with these internationally-set targets means loss of face to European partners, and finally to the 'big boss' in the United States. Furthermore, a variable part of the salary of the Vice President depends on the achievement of these targets.

Recruitment has above all an informal character. Often, informal contacts play a role. People get known to each other via training courses, work experience (posting), or career and job changes. In one company, at least five years' work experience was demanded for new entrants (van der Meer and Roosblad 2003). For the many foreigners and travellers working in IT, criteria such as control of the English language, the '*Weltanschauung*' (work view, philosophy of life) and 'fitting in the team' are important. There is no government or trade union control. In the period of high economic growth and labour

market scarcity, there was extensive competition between companies to hire people making for rising starting salaries comprising extended on the-job-benefits. As referred to above, nowadays the recruitment climate is still recovering from the shock of the economic downturn. However, after a long period of hiring freeze, recruitment is back as a priority for many companies, at the same time as many are still making cuts to their current staff.

Once inside a company, there are two possible job ladders. For the first job ladder of helpdesk employee to software engineer, qualification requirements have been drafted from medium to higher professional education to academic level. Some helpdesk employees are hired with medium professional education, but this is exceptional. In such cases, persons involved will have extended experience in the application of software packages. Software engineers will have higher professional education and mostly an academic background in information science. In actual practice, the persons in this job ladder are mostly indigenous males as the number of ethnic minorities is fairly restricted. In the first job ladder for software specialists, slightly more ethnic minorities are to be found than in the second job ladder for consultancy work.

For the entry of employees into the second job ladder of consultants, a variety of educational backgrounds is possible. Often people will have a background in information technology, but also students in psychology, communication sciences, economics, organization studies or other forms of social sciences will be considered. Persons without a degree in information sciences will be trained in specialist courses before they start working or will be trained on the job. In actual practice, the persons in this part of the job ladder are males, though here more women are found than in the aforementioned job ladder for helpdesk employees and software engineers. The number of ethnic minorities here is lower than in the job ladder for helpdesk employees and software engineers.

If we look at promotion possibilities, as a general rule people start working at entry positions. After evaluation of their performance, employees are promoted to higher positions when they perform well and acquire new specialist qualifications. In the past labour market situation with many vacancies 'the sky was the limit'. After the economic downturn, however, promotion is less regular whether for software engineers or for consultants. For software engineers, experience with software packages and the capability to manipulate and develop new software gives access to higher positions. For consultants, work experience, control of software packages and management capabilities are required. Often people are promoted after a positive evaluation of their performance. Additional courses and training are demanded, but can be provided also after promotion to a higher position has been granted.

Women and ethnic minorities not only have marginal access to most IT companies, and especially as software engineers, they are also promoted to a far lesser extent. Top management in many large companies is exclusively male dominated. Differences in participation in further training between men and women are unclear though some managers have suggested that women fail to specialise in certain tasks and therefore have no added value and cannot survive in the company in the longer run (van der Meer and

Roosblad 2003). The exit-rate of women is substantial, especially those of birth-giving age, and in many cases women do not make it to top-positions. In some companies there is a clear glass-ceiling and, especially in the larger companies, women complain that there is insufficient critical mass to change the male dominated working culture. As reported in interviews conducted as part of our research:

> Women going higher to the top are often hindered by abusive language, games, tricks, bad jokes and manipulation. You need to be supported by a higher manager, but often they fight together to reach the same position. (ibid)

However, ICT companies in the Netherlands are aware of this problem. Therefore, more ICT companies are becoming part of the 'ambassadors' network' in order to show other companies in the field some good examples of the efforts being made to achieve more diversity in the workforce, including at the higher levels of the organisation (Ambassadeursnetwerk 2003).

Since outsourcing activities are expected to grow from 1% in 2003 to 9% in 2007 (Marktonderzoek ICD), the effect of offshoring and outsourcing of labour on the current functional structure of IT jobs needs to be examined. The jobs that will stay in the Netherlands are highly qualified, for example consultancy and enterprise resource planning, significantly different from those in traditional hard ICT. Therefore, a new type of employee will be needed who has a different kind of educational background, capable of combining both alfa/gamma (communication) and beta qualifications (Computable 2005). The expectation is that functions now fulfilled by employees with a higher professional education (HBO) must in the nearby future be fulfilled by employees with a lower professional education (MBO). For this, enhancing the employability of ICT professionals and new education demands are necessary. Again, the danger exists that certain employees (mainly 'older) will find difficulty in responding to these new educational demands and will be directed to an outplacement trajectory. Also, people with a lower education level might loose their jobs. From the employers' point of view, the development of a new functional structure that supports the changes in the labour market is of utmost importance.

Wage setting, contract type and employment conditions

As reiterated above, work in the IT field is becoming more and more complex. The provision of IT-services is an activity in which information technology is applied and adapted to a working environment in a particular firm or office. As a result, employees are quite often seconded to the firm 'on location'. Often services are sold by the hour (according to the slogan: '*uurtje factuurtje*') and the cost calculation takes place on a project basis. The exact duration of the work is difficult to plan in advance and the work pressure to meet deadlines can be demanding, both in times of economic recession and in economic boom. In a period of economic boom, the imbalance between demand and supply often results in long working hours. In a period of economic crisis, working hours are also long as there are very few people to meet project deadlines and, in order to keep their jobs, people have to work hard to prove their necessity to the company.

For a long time, wage-setting in the Dutch ICT sector was unregulated (Bijlsma 1999; Tijdens 2000; van Liempt and van Uffelen 2000; Gründemann and van Dalen 2000). This is not surprising, given that industrial relations in ICT are less institutionalized than in other sectors. However, the last decade represented a break with this tradition as companies have been willing to discuss issues concerning terms of employment with employee representatives. The liberalization of the telecommunication market in Europe, which took place in the first half of the 1990s, changed a lot of traditional state-owned companies, such as PTT Telecom, into privately owned companies. This transition was accompanied by the entry of new companies into this liberalized and lucrative market. This has had enormous consequences for the manner in which these companies and their employees think about arrangements concerning terms of employment.

Wage setting may be an individual matter between employer and employee, but wage schemes also exist in companies with divisions into wage scales varying by function (van der Meer and Roosblad 2003). In the entire sector, both in companies with and without a collective agreement, individual performance schemes are relevant. No enterprise appears to have a guaranteed collective wage increase. In 2002-2003 some firms reduced wage levels by 10%, or at least fringe benefits (laptops, company lease cars). Skill levels are indirectly relevant: those with a higher professional education may have a lower starting salary than those with a university academic training. In addition, particular work experience will be compensated. Seniority payments are only the result of a good evaluation of performance. Such evaluation takes place on a monthly, six monthly or annual basis, varying per enterprise. Several indicators are applied such as: core attitudes towards clients and colleagues, company competence, competency on the job, IT-product development, and knowledge of the industry.

Different studies show that the average yearly salary of IT employees is approximately 35% to 40% higher than the gross average yearly wage of all employees. In addition, fringe benefits such as company cars are quite common in IT (Computable 1999; Automatisering Gids 2000). At the same time, however, particular wage systems not only compensate but also encourage long working hours. More than one third of all employees in IT have a partly variable wage, related to performance (Tijdens 2000: 18). Tijdens has shown that half of IT employees have a substantial gross monthly income of between 2400 and 3500 euros. For 27% of IT employees part of the salary is contingent; for 33% this contingent part makes up 5% to 9% of the gross salary; for 20%, 25% of the gross salary. This research also shows that employees earning more money more often have a contingent part. Next to this primary compensation, most IT-employees also have fringe benefits elements such as a lease-car, profit-sharing, bonuses and a thirteenth month salary (Tijdens 2000).

A vast majority (84%) of staff in IT has a 40 hour working week (Table 4). A small group works 38 hours a week. Research shows that in periods of high conjuncture this official number of hours is often overrun. Half of employees claim to work overtime. Working days of 10 hours or more are the rule rather than the exception, making overtime an important characteristic of the sector. A third of employees work more hours

every week than stated in their contract; a quarter claims to work overtime every month; only 18% can perform their work in the weekly agreed number of hours. It is expected of employees that they finish their work and that enough output is delivered. Half of employees working extra hours receive compensation for this (Tijdens, 2000: 14-17).

Table 4. Contract hours per week in computer service bureaus by gender.

Year	Men 12-19 hours	Men 20-34 hours	Men >35 hours	Women 12-19 hours	Women 20-34 hours	Women>35 hours
1998	Na.	Na.	94.7%	Na.	31.8%	Na.
2000	1.7%	5.1%	93.2%	4.2%	20.8%	75.0%
2001	0.9%	6.8%	92.3%	Na.	Na.	Na.

Source: calculated from CBS-statonline.

With regard to the organization of work and working time in ICT, Plantenga and Remery (2001) see a tendency to 'de-standardization' of working hours, given the extended working day and the increase in overwork. They argue that long working hours are a result of the shortage in the supply of qualified labour, the specific nature of the product with its specialised and tailor-made application of information technologies to a business environment, the wage system with its focus on individual reward and performance-related pay structure, and the weak position of trade unions. According to these authors, employees are accepting such conditions, given the 'autonomy' in their work and the possibility to manage their workload and exact working hours. 'A lot of employees seem intrigued by the complex nature of the problems on their desk and the intrinsic motivation is high' (Plantenga and Remery 2001: 45).

Trade unions and works councils are not strong enough to change such working conditions. Union membership is low and the rank and file are mostly male, young in age (50% is younger than 36), and often without children (Schilstra 1998; Plantenga and Remery 2001). Notwithstanding, most companies do have a full-time working week of 40 hours and many collective agreements do contain stipulations on working time (van den Brekel et al 1999). The reduction in the working week negotiated by the unions in many sectors in the Dutch economy did not occur in the IT sector.

Opportunities for men and women to achieve a good status position in IT are similar, as long as they are willing and able to work full-time (de Olde, 1990). Van den Brekel et al (1999) argue that 'in real life' however it is much harder for most women to work about 45 hours a week than it is for men, especially those with children who cannot rely on their partner for a substantial part of the housekeeping and the daily care of children. This is supported by earlier studies, for instance by the trade union federation MHP, showing that working part-time can have negative effects on a career; company culture and the attitudes of executive management are barriers for part timers (Vakcentrale MHP 1999). The study argued that in the IT companies DEC and Origin, which where part of the sample, part-time work hardly existed (van den Brekel et al, 1999: 7). This is confirmed in our own research (van der Meer and Roosblad 2003). Personnel managers admitted differences for men and women, especially when women have children: the working culture in IT companies includes a high commitment to work on which people are also

evaluated. Overtime work and long working hours are generally expected, especially for IT projects with deadlines. Some managers argue that women also suffer from work stress and travel hours are seen as problematic, since most of those employed by software houses are placed to work in other companies. All personnel managers argued that the wage system and the practice of long working hours do not make a direct difference to the performance of natives and non-indigenous persons; gender is a more important issue than ethnicity.

In the Netherlands, many IT-companies work as software houses that hire employees on a permanent basis and send them temporarily to other business enterprises. This employment system is called 'posting' or 'secondment' (*detachering*). Employees do not work on their own account and risk, but have the status of employee. When a company A places people to work in another company B, this person is still an employee of company A (but works for company B). Because such persons do not work on a freelance base, the posting company takes all the risk, is liable for the worker and has to pay the salary in the case of sickness etc. This situation is exceptional in Europe. In most other countries (especially the UK and the US), people will work either on their own account or as an employee of the company they are really employed at.

The Dutch legal system has drafted different criteria for the rights and accountability of employees. The legal system protects the employee against the employer on the following grounds:
- There are strict terms of notice;
- The employer is liable for his/her employee;
- In case of sickness, the employer has to pay a sick employee for 2 years at least 70% of his/her salary;
- After 3 contracts for a period of time with the same employer, the 4th contract will be automatically for a permanent period (The "Flexlaw").

New entrants in a company have a probationary period, varying between one week and one month. Some employees start with a contract of six months or one year. Normally, they will be given a permanent contract after one year. The Flexibility and Security Act (1999) prescribes that after three temporary contracts a permanent contract needs to be offered by the employer.

Finally, in terms of employment protection, many larger IT companies have US headquarters and American and Dutch labour regulation differs systematically. US companies in the Netherlands with their informal American culture (no unions, performance evaluation etc.) have to apply Dutch labour regulation. In the field of employment protection, some managers in IT companies (with extended tenure and *de facto* life-long employment) consider that Dutch employment regulation is too strict and should be relaxed and flexibilised. In the past economically-downward conjuncture, many IT projects went flat. Employees were waiting workless at their desks (the so-called 'banksitters' in Dutch). Software houses are not allowed to reorganise the company without informing their works councils and often social plans were drafted with the trade unions to formally ask permission to lay off of more than ten persons.

In many companies fringe benefits exist. As a general rule, people receive monthly salaries with 8% holiday allowance. In most of the larger companies there are financial resources for nurseries, care for children, additional leisure, etc. Some companies support flexible labour hours by facilitating laptops and on-line connections between work and home. Part-time work is however traditionally only allowed in a restricted number of companies. In former Dutch state companies, such as Pink Roccade, part-time work has been allowed for more than ten years now and there the overall number of women is, at 21%, higher than the industry average.

Occupational health

Workload and work stress are the main features of work in IT, impacting on health, absenteeism and disability. As the Indic@tor study on the employability of ICT professionals across European SMEs (2005) reveals, most ICT professionals in Europe consider that they are not in an optimal condition of health. According to the Dutch labour inspectorate, there are three main problems in Dutch IT: RSI, work pressure, and irregular working time. These problems are registered using the RIE criteria (Risk Inventory and Evaluation). In 54% of companies investigated by the labour inspectorate, there was a violation with respect to one of these; in 15% for both RSI and work pressure (Arbeidsinspectie 2004).

RSI is the primary and most problematic occupational risk faced by IT employees (Table 5) (Lavell 2002). One in three employees in the IT sector in the Netherlands has physical problems which can be related to RSI (Arbeidsinspectie 2004; de Zwart et al 2002; FNV 2005). This is not surprising as the IT sector has the highest average number of hours per day per employee (6.8) (Arbobalans 2003) Furthermore, the main stream of the disability inflow is caused by RSI. The results of different studies can be summarized as:

- 10% of all sickness reports and 17 % of all days of absence in the IT sector are caused by RSI
- 12% of the total inflow into disability insurance (WAO) in the IT sector is caused by RSI (compared to a national average of 6%).
- Each year there are 105,000 days of absence in the IT sector caused by RSI.
- Each year 120 employees end up on disability insurance with RSI problems.
- At least 43% of these disabled RSI employees are younger than 35 years of age.
- RSI occurs 2.5 times more in IT than other companies
- There are a lot of posted employees in the IT sector (working more than 90% of their working time in another company). These employees face more RSI problems than employees who work in their home organisations.
- Employees that work in large IT companies have a larger chance of becoming disabled due to RSI than employees in small IT companies.

The factors that could play a role in the high disability and sickness rates related to RSI in the IT sector can be divided into either physical, ergonomic conditions of the workplace itself or psychosocial factors.

Poor ergonomic facilities include issues such as working behind laptops, work posture, repetition of tasks and recovery time (Table 6). Repetitiveness of the work is relevant in 90% of IT companies (Convenantenmonitor 1999).

Table 5. Percentage of people disabled because of RSI

	2002	2001	2000	1999
Number of people in disability insurance because of RSI	5,228	6,217	5,274	4,272
% of total disability rate	5.7%	6%	5.3%	4.7%
% of RSI disability in IT sector		12%		

Source: www.cbs.nl, www.arbobondgenoten.nl

Table 6. Physical conditions that cause RSI in the IT sector

49 % of the IT population work behind a computer display screen for seven hours or more a day.
38% of the IT population has a wrong posture during work
13% of the IT population does repetitive work with very few variety of work activities
58% of the IT population has little possibilities for full recovery

Source: de Zwart et al (2002)

Psychosocial factors affect the physical well-being of IT employees, as evident from RSI complaints, including: high pressure of work caused by the need to work to deadlines, high demands of work, high workload and stress levels experienced, lack of autonomy and support of managers or colleagues. Furthermore, the work attitude of IT-ers themselves is sometimes over-ambitious (de Zwart et al 2002).

Most importantly perhaps in the IT sector is a significant lack of advice by employers with regard to preventative measures against RSI. Prevention of RSI in the IT sector has become a concern for the Dutch Ministry of Social and Labour Affaires, the several trade union organizations in the IT sector (FNV Bondgenoten, Dienstenbond CNV, De Unie) and the employers' organization (ICT-Office). This led to the 'Declaration of Intention' in 2001, affirmed by those three parties, and directing attention to the prevention of RSI in the IT sector and the reintegration of disabled employees due to RSI in the sector. However, a collective labour agreement between the social partners on RSI prevention, as intended in the declaration, has never been achieved (Arbo intentieverklaring 2001; De Zwart et al 2002).

The labour inspectorate has begun inspecting IT companies in order to stimulate the social partners to keep the prevention of RSI as top priority (Arbeidsinspectie 2004). As is apparent from the declaration of intent, all parties (employers, employees and the government) agree on the fact that active prevention measures concerning RSI are needed. Nevertheless, the most recent research of the national labour inspectorate shows that in 28% of IT companies in the Netherlands insufficient advice about RSI is given and in 1 out of 7 companies there is a lack of preventative measures against RSI at the workplace, especially with regard to posted employees (Arbeidsinspectie 2004).

However, RSI is no longer a 'fashionable' problem in the ICT sector (as reported in an interview with the compensation and benefits manager of a large ICT company). Both employers and employees are by now aware of the problem and know what they can do about it (with regard to organisation of the workplace, work ergonomics, position of car chair etc.).[7] Therefore, as the research of the national Labour Inspectorate reveals (Arbeidsinspectie 2004) a second, and perhaps more important health problem in the IT sector relates to the pressure of work and the number of working hours. Despite the fact that the research was conducted in a period (2003-2004) of admittedly low economic activity and resulting overcapacity in many IT companies, 1 in 5 employees in the IT sector still faced a higher risk regarding pressure of work (Arbeidsinspectie 2004: 4). In their sample of 553 employees (n=533) work pressure was mainly caused by the amount of work that needed to be done. Besides this, the effort required and the pace of work were also important. Table 7 summarises the different sources of workload mentioned by employees. Of the 533 employees, 100 mentioned three or more sources of workload (Table 7); they therefore face a high risk of becoming sick and perhaps disabled (Arbeidsinspectie 2004: 11).

Table 7: Sources of heavy work load

Source of work pressure	Number of employees	Percentage
Amount of work	201	38%
Required effort	121	23%
Work tempo	101	19%
Contain of work	88	17%
Overtime work	64	12%
Contact with others	58	11%
Deviant work times	58	11%
Emotional occurrences	42	8%
Break and days of absence	33	6%

Source: Arbeidsinspectie (2004)

Other research by TNO Arbeid (2003) shows that work pressure is highest in companies that produce and distribute software. In this area, software engineers work a lot on a project basis and are posted to host companies. This leads to irregularity of working time. Furthermore, there is a lot of stress among software engineers due to the fact that very small errors in a programme can have fatal financial consequences for the client. Finally, paying according to merit also causes stress.

According to the labour inspectorate, the third occupational risk in the IT sector is the time pressure employees struggle with. This is especially relevant for the IT sector because of the overtime created by traffic jams and congestion on Dutch highways (given the secondment of employees), the necessity for continuous development of skills through training and education, and the need to participate in social events. A vast majority (84%) of employees in the IT sector work 40 hours a week or more. The average working week is longer than the average working week in the Netherlands. Working

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[7] This is confirmed in an interview with a representative of FNV-Bondgenoten.

overtime is regarded as normal, producing output and meeting deadlines are more important than the exact working hours. In addition to all this, the time needed to travel in order to work for customers all over the Netherlands is longer than the average travelling time. Traffic jams and the repetitive movements made during driving have also lead to complaints of RSI and disabilities. The combination of these factors leads to hazardous labour conditions.

New risks have appeared with the offshoring and outsourcing of labour activities (see page 3) with regard to which trade unions try hard to get 'a foot in the door' in ICT companies (see p. 10). High productivity of ICT employees and a good price/quality ratio in the ICT services provided are seen as the best job guarantees in the face of increasing outsourcing or offshoring transactions. For the personnel involved, the consequences can be severe and they do not seem to have any possibility to resist. On the one hand, such transactions generate opportunities for employees who can, for instance, work again for a company that considers IT as a core function. On the other hand, cultural differences and different achievement standards of outsourcing bureaus can cause problems for employees. This process of offshoring and outsourcing demands a new type of education and skills (see p. 12). The ICT professional of the future will be a commissioning agent between the customer in the Netherlands and the product developer in the offshore-countries. This might be a difficult demand for older or less qualified employees.

Exit and reintegration

In case of long-term sickness and industrial disability, Dutch ICT companies are forced by law to proceed in certain ways, following the WIA law of 2006 (Work and Income according to Labour Capacity Act). The leading imperative has become to keep people inside the workforce. This means that in case of sickness (or unemployment), it is the main responsibility of employers and employees to find an appropriate solution. Therefore, the main emphasis of policy is on activating the capacity to work (instead of providing an income so someone can still have a decent living). The system includes income provision for the fully (more than 80%) and permanently (35%-80%) disabled and those who are fully but not permanently disabled. People with less than 35% disability are obliged to work. Therefore in 2004 all people under the age of 50 with an occupational disability had to be re-examined, under stricter conditions. These re-assessments were to be carried out by an external public institute.

For ICT companies this revision of the law has resulted in a change in attitudes. It can happen that an employee, who was at first 45-55% disabled, has now been re-examined at 0-35%. The company has to find an appropriate solution/workplace for this employee. In the larger companies, this is not so complicated given the wider range of possibilities. For smaller companies, however, it might be more difficult. Furthermore, companies are forced by the new legislation to put more effort into preventing staff sickness. Some companies have, for instance, developed so called 'Health Management Plans', with measurements aimed at preventing sickness and disabilities:

> The thing is we have to live with the fact that somebody is our responsibility, sick or not. With the new legislation, we keep employees longer in our company. But, on the other hand, not much has changed, aside from the fact that people are longer employed through the punishment of two years continual pay. (Compensation and Benefits Manager of large ICT company).

However, there is a trend for companies to act as though they were risk averse, striving to recruit employees willing to work hard and offering much flexibility in time and place. This results in a run on recently graduated, young professionals, with companies avoiding taking risks by offering fixed contracts.

In terms of reintegration and employment conditions, there is hardly any cooperation with other companies; ICT companies are '*eigenheimers*' (literally 'independent souls'). However, they are also very well aware of developments and initiatives by other companies and vice versa. In the end, all companies follow the same trends indicated by changes in legislation and seek similar solutions (as put by the Vice-President Human Resources of a large ICT company).

Conclusions

In the Dutch software sector there is no tradition of institutionalised cooperation between employers and trade unions. On the contrary, individual employment relations prevail and only in some cases do collective agreements exist, and then usually only at firm level. The system of secondment allows many employees to enjoy a permanent employment relation with their employer.

A critical condition of inflow into the sector is additional guidance to new entrants. In this male-dominated industry too working conditions, with their emphasis on performance, appear to be less favourable for women than for men. At first sight, when the ICT sector is compared to other segregated sectors, IT employees are relatively young and highly educated. In the 1990s, when the sector quickly expanded and industrial relations reached some maturity, societal norms about working attitudes and performance were in line with the individual responsibility and personal effort stressed in many companies (SCP 1999). It appears that the conditions for working in IT differ substantially for both men and women. In older companies, many originally stemming from manufacturing, 'bureaucratic and hierarchical' internal organizations are to be found in which HRM policies are being developed with the help of information technology. For example, extended personnel information systems, recruitment and selection take place with the help of the internet and individual choices with respect to certain employment conditions can be made with the help of integrated computer programmes. Within such companies the introduction of a form of diversity management oriented to balancing the composition of the workforce could be integrated into standard working procedures.

In most IT companies, flexible working hours and heavy workloads lead to occupational risks, above all RSI, work pressure and working over hours. The Labour Inspectorate has

concluded that structural attention to overall working conditions in the IT sector is needed. In 1 out of 4 ICT companies such attention is lacking. Due to media attention, there has in the past few years been a call for preventive measures against RSI (good advice, good ergonomic conditions) in the IT sector. Nevertheless, the research of the Labour Inspectorate has shown that in 1 out of 7 companies there are insufficient measures in place.

There will therefore be employees needed with a different kind of education, a combination of both alpha and beta qualifications (Computable 2005). The expectation is that, due to processes such as off shoring and outsourcing, functions now fulfilled by employees with a HBO education must in the near future be fulfilled by employees with a MBO education. In this respect, enlarging the employability of ICT professionals is necessary. Again, the danger exists that certain employees (mainly ' older' and less qualified employees) will experience difficulties in responding to these new educational demands and will be directed to an outplacement trajectory.

If we look at the general trend in the prevention of sickness and the reintegration of employees, ICT employers follow the direction indicated by recent changes made by the Dutch government through legislation. However, some time is needed to evaluate these changes more profoundly.

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B 3: The Dutch Health Care Sector

Prepared by Marc van der Meer and Marieke van Essen

Introduction[8]

In the Netherlands, health care is a universal right for all citizens and the sector has an international reputation. The Dutch health care sector is one of the larger, and it is growing in terms of employment and GDP. Currently, its governance is politically debated and major health care reforms have been put forward concerning its financial structure and internal organisation.

In hospitals, the organisation of work processes is strongly institutionalised according to Dutch regulation and collective agreements. Work processes are strictly planned and scheduled in order to fine-tune between the needs of the organisation and the availability of employees. The overall ambition of the system is to provide integrated care of high quality.

Employment conditions of employees, and nurses in particular, are quite good, especially seen from an international perspective, but wage increases in the public sector have been less favourable than in the private. Moreover working conditions are more demanding than in the economy as a whole, and the vulnerability to stress at work and disability. The usual approach of the government, employers' associations and trade unions to sign common health and safety covenants has brought only partial results.

Changing governance structures

Hospitals in the Netherlands are private institutions, except for the eight public academic hospitals, which are connected to universities. The general hospitals originate from voluntary, charitable organisations, which were often founded on a religious basis. In larger cities the heritage of Protestant, Roman Catholic, Jewish or Humanistic principles in health care institutions is still to be found. As we will show, increasingly hospitals are open to common market processes and the need for financial accountability.
The government licenses the production and capacity of all hospitals through the Hospital Provision Act (*Wet ziekenhuisvoorzieningen*, WZV, 1971). Since January 2002, the planning and expansion of hospital activities has been regulated under the Special Medical Procedures Act (*Wet bijzondere medische procedures ziekenhuizen*, WBMZ).

For three decades now, the governance system in Dutch health care has been intensively debated from the perspective of cost-control, given that the costs of healthcare are

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[8] This chapter was written whilst we were conducting six case studies on low wage employment in hospitals and two case studies in care homes, commissioned by the Russell Sage Foundation in New York. We are grateful to Judith Roosblad for her joint work on gender and ethnicity in Dutch hospitals (see references), on which this chapter draws.

constantly rising, not only due to technological supply factors but also to rising demand owing especially to the growth (from 16.1 million in 2005 to 17.7 million in 2040) and ageing of the population (Den Exter et al 2004; Van der Grinten and Vos 2004). The cost implications of increasing demand (9.1% of GDP in 2002, and in absolute terms triple the costs of 1980) have resulted in a political debate regarding the governance of the health sector and the role therein of institutional intermediary assurance organisations and individual taxpayers.

In 2006 the health insurance regime changed. The previous regime, which combined both a private and compulsory insurance, has been changed into an insurance system with one common standard. The idea is to introduce one common 'market' for health insurance associations, where competition takes place between them and where hospitals will have to compete with each other on the basis of price and quality. The current government holds that the health care sector will as a result be more cost-conscious in organising its care services.

Related to these demographic and political concerns is a process of scale enlargement in the sector. The currently just over 100 hospitals will further decrease in number due to a process of mergers, which aims to achieve economics of scale. In striving for cost control, health care institutions increasingly apply benchmarking techniques. There are sector-wide research activities which evaluate organizational costs, costs of production, manpower etc.

Another important catalyst for a different organization of the health care sector is technical development. Medical treatment has become an infinite process. Due to better prevention, medication and treatment and the possibility of extending the life expectancy of citizens, the formally separated circuits of health cure, health care and health prevention, are increasingly becoming coordinated. The provision of health care is becoming less and less tied to one single location. Due to technological advancement, the sector is becoming more flexible in terms of nature, place and time. An important example of change is the reduction in the length of hospital duration. Given the revision of the care process, patients are kept in hospital only when they need direct treatment and supervision. When they have only to be nursed, they move to a care home. Due to widespread technological developments and increasing welfare in society, citizens are becoming more critical consumers and express more specific wishes with respect to the nature and quality of the care provided. The standard of education is rising, as a result of which the average citizen is becoming better informed and more assertive. Through the internet and other sources, information about treatment is becoming more readily accessible and patients can respond more critically to doctors (Ministry of Health, Wefare and Sport 2002). As a result of this, care institutions are adjusting their strategy, focusing more on patients by providing more tailor-made care (specialized care, more product differentiation).

Interestingly, in 2003, the government initiated the project 'faster-better' (*sneller-beter*) in order to enhance the transparency, effectiveness, quality, and innovation in curative health. Private companies like the Dutch postal company TPG were invited to study the

internal logistics within hospitals, KPN studied ICT in hospitals, whilst Royal Dutch Shell has written an advisory report on the improvement of safety conditions to reduce costly incidents in Dutch hospitals (TNT 2004; Shell 2004; KPN 2006).

Quality of care

In 1996 the Health Care Quality Law for Healthcare Institutions came into force. This Act stipulates four general criteria rather than detailed norms about the quality of care:

1. Responsible care; care should be efficient, effective and focused on the patient;
2. Policy aimed at quality, which means a good organisation of the institution; good internal communication, sufficient and capable personnel. The tasks and responsibilities of the employees should be clear.
3. Quality systems; care institutions should develop a quality system. Central in this system should be the norms that the institution should meet. This quality system should be regularly evaluated.
4. Annual report; care institutions have to deliver an annual report in which they have to account for the quality policy followed and the quality of the care delivered. They have to send the annual report to the Healthcare Inspectorate, the Minister of Health and the regional patient forum.

The Health Care Inspectorate supervises compliance with the Act, in the light also of European regulation and tendering procedures, whereas the Minister of Health Care, Welfare and Sports holds final responsibility. Individual professionals working in health care are not covered by the Quality Law, but by the Individual Health Care Provisions Act (*Wet op de beroepen in de individuele gezondheidszorg*, Wet BIG). This law certifies and registers medical activity and gives full scope in principle to medical action; the law only mentions some 'reserved medical actions', which can be conducted only by qualified professionals. The law also includes a penalty clause: inflicting harm on someone's health is punishable.

Labour market

In 2000, 964,000 workers were employed in health care as a whole, 11.9% of the Dutch labour force. In terms of full-time equivalent, the share of the workforce employed in health care is considerably lower (10.4%) due to the large number of part-timers.

Three sub-sectors dominate the health care sector, notably hospitals, nursing homes and domiciliary care. In 2001, the 112 general category and academic hospitals (*algemene ziekenhuizen*) employed 155,000 workers. In the same year, the 485 organizations for domiciliary care (*thuiszorg*) employed 118,500 persons. In addition, there were 333 nursing homes (*verpleeghuizen*) with 115,000 workers and 1,346 elderly homes (*verzorgingshuizen*) with 95,000 workers. The majority of health care workers are employed in the nursing profession (67%); 11% in the medical profession, 14% in paramedical roles, and 8% as assistants. The number of nursing and caring personnel in the health care sector is 425,000 employees, most working in domiciliary care (Table 1).

Table 1: Characteristics of caring and nursing personnel in the health care sector 1996-2001

	1996	1999	2000	2001
Hospitals	70,709	75,164	74,970	77,037
Mental health Care	22,322	26,161	25,561	24,964
Handicapped Care	23,225	27,948	43,472	42,936
Domiciliary Care	99,263	107,141	109,826	118,297
Nursing and Elderly Homes	131,059	136,600	139,075	142,130
Other	3,497	3,450	3,559	3,701
Total	370,296	391,627	411,764	424,418

Source: Prismant (2005)

Employment in the health care sector is female dominated (87%). It is growing at a higher speed than the economy at large, partly due to the growing demand for health care services as a result of an ageing population, partly to the working time reduction from 38 to 36 hours implemented in 1997 and 1998. The workforce is itself ageing, the average age increasing from 34.1 in 1995 to 37.9 in 2002. About 70% of the workforce in the health care sector works part-time (Table 2).

Table 2. Characteristics of nursing and caring personnel 1995-2002

	1995	2000	2001	2002
Share of women %	89.6	89.5	89.8	88.3
Average age	34.1	37.0	37.4	37.9
Share of part time work %		68	69	70

Source : Windt et al. (2004); Prismant (2005)

Qualification levels in hospitals are on average higher than those in domiciliary care, with nursing homes and elderly homes in between. The number of workers from ethnic minorities is relatively low in comparison with the national average and ethnic minorities are distributed unevenly in the sector. In nursing homes and homes for the elderly the share of ethnic minority workers is significantly higher (5.5%) than in hospitals (3.3%) and in domiciliary care (2.7%). Ethnic minorities are more likely than indigenous workers to be employed in an assistant or auxiliary job, and they are also less likely to have a permanent contract and may more often occupy a subsidized job for the long-term unemployed (so-called I/D jobs) (van der Meer and Roosblad, 2004).

Education

The vocational and training system in the Netherlands is historically linked with the system of collective bargaining and pays particular attention to the upgrading and improvement of skill levels. Health care is qualified work and the larger training hospitals can be considered as schools. There are different levels of vocational training for nurses in the Netherlands. Fully qualified nurses in hospitals are trained at levels 4 and 5 of the qualification structure. Level 4 and 5 nurses have to be registered to be able to practice their profession. To work at level 3 or lower, it is not necessary to be registered:

- Level 1: helper (assistance in the daily care of the patients): very low to unskilled work. Length of vocational training: 1 year. Preparatory training: not required.
- Level 2: Qualified helper (sort of assistant nurse): one-year assistant nurse training at primary vocational training level (nurses who assist with washing patients, feeding, etc.)
- Level 3: assistant nurse: secondary vocational level.
- Level 4: nurse: secondary vocational level, specialised nursing training.
- Level 5: nurse: nursing vocational training at higher vocational training level.

For each of the levels there are two education routes (den Boer et al 2004):
- A school-work system or vocational training schemes (*Beroepsopleidende leerweg,* BOL). In this structure, 70% of the training is theory (within the training institute) and 30% practical experience in the hospital.
- A work-school system or vocational 'apprenticeship' training schemes *(Beroepsbegeleidende leerweg*, BBL): 30% theory and 70% practical experience. Students are given an employment contract, but first have to apply at a training hospital.

Table 3 gives an overview for each of the five vocational training levels in terms of job content, job level, duration of the training period, required entry levels and salary levels according to the wage scales in the collective agreement. Most nurses are trained at levels 3, 4 and 5. Hospitals only recruit nurses with a qualification at levels 4 and 5, while assistant nurses with a qualification at levels 1, 2, 3 will be employed in care homes and homes for the elderly. Table 4 shows the number of students following nursing training at different levels, revealing that most are being trained at levels three and four. Most students participate in the work-school training (BBL), and a smaller share in primarily classroom education (BOL).

Recruitment methods

The number of vacancies in the health sector is considerable, due to a growing workforce and high staff turnover rates. All sub-sectors compete for the same categories of low-skilled, largely female and sometimes ethnic minority labour supply. The inflow of nurses from the vocational training institutions into the industry is insufficient to meet rising demand. Personnel shortages are largest in the western *Randstad*' conurbation. Employers' organizations, unions in the sector and the government jointly develop initiatives to retain the current workforce and to attract new entrants in order to diminish the backlogs in the health service and to put an end to the waiting lists for patients which increased considerably in the late 1990s. Wage levels increased substantially in 2002 and 2003 and in many hospitals it is not currently difficult to fill job openings. However, many hospitals have experienced financial problems in recent years and have tried to work more efficiently. This has sometimes resulted in reductions in vacancies.

Table 3. Vocational training and education in health

Vocational training level	Job content	Job level	Duration of the training	Required preparatory training	Pay, excl. holiday/ New Year
Level 1	Assistance in the daily care of patients	Very low to unskilled work	1 year	Non required	1280-1960
Level 2	Assistance in the daily care of patients	Low skilled work	1 year	Non required	1280-2095
Level 3	Daily care, simple medical action, reporting on patients	Skilled work	3 years	Level 2 diploma, pre-vocational secondary training diploma	1450-2425
Level 4	Medical action, reporting on/ monitoring patients, etc	Skilled work	4 years	Level 3/ Pre-vocational secondary training diploma	1560-2655
Level 5	Medical action, coordination of total patient care, managing lower nursing staff,	Highly skilled	4 years	Secondary vocational training, pre-university education diploma, senior general secondary education	1560-2935

Source: based on the hospitals' collective agreement

Table 4. Total number of persons in nursing training 1999-2003

	1999	2000	2001	2002	2003
Inflow (Level)					
Hbo-V, nurse (5)	3,708	3,161	2,982	3,259	3,576
Mbo-V, nurse (4)	5,976	4,869	5,989	5,720	6,416
Assistant nurse (3)	8,391	8,106	10,115	9,894	9,068
Qualified helper (2)	3,397	3,179	3,995	4,418	4,676
Helper (1)	-	1,370	2,063	3,018	3,217
Total	21,472	20,685	25,144	26,309	26,953
Annual growth (%)	12%	-4%	22%	5%	2%
Inflow (Education Routes)					
BBL	10,248	10,173	14,555	14,560	13,958
BOL	10,395	9,341	9,354	10,336	11,980
Annual growth BBL (%)	41%	-1%	43%	0%	-4%
Annual growth BOL (%)	-6%	-10%	0%	10%	16%

Source: HBO-raad (2004); Van der Windt and Arnold (2004)

Promotion within the sector

Many new entrants accept a job via the vocational training system, which serves as the main access route. Nurses seldom climb the occupational job ladder from level 1 to 2 to 3 to 4 to 5. New entrants will possess a qualification at level 4 and find a job at that level. In the occupational labour market for nurses not many vertical career opportunities exist and only a few make it to managerial positions. Many nurses will however increase their specializations and change from one department to another after several years of experience and, accordingly, have a horizontal career path. Nurses move from care homes and domiciliary care to hospitals, but usually not the other way around.

Wage system

Collective bargaining is the core institution for establishing wage levels, both at industry and individual levels. First, collective bargaining defines the annual wage increase, number of working hours and social benefits for the workforce covered by the terms of agreement. Second, the collective agreement stipulates the procedures for the establishment of wage levels for individual employees. In an annex to the collective agreement a job classification system has been developed. Accordingly, jobs are graded according to functional levels that are connected to one out of seventeen wage scales. Each wage scale consists of, on average, nine or ten years of tenure. In addition, particular wage scales exist for younger persons, for new entrants in the labour market and for participants in the vocational and training system. The wage level of individual employees is specified by a digital system of job classification (*Functiewaardering Gezondheidszorg*, FWG), consisting of 17 function groups (5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80) from low to high pay levels. This system should not be considered as a fixed job specification system but as a guideline which only provides reference points and which needs to be implemented through individual negotiation between management and employee. Reference points for the wage-determination of individual employees are knowledge, social skills, risks, responsibilities and influence, the ability to express, the ability to move, attention, other functional demands and hard work (physical, psychological). The employer takes this into account in classifying the job function.

The system makes use of a specification for each job. For example, a departmental assistant is in 3 groups which all belong to food delivery: one function only includes easy, fixed tasks (linked to wage scale 10 within the FWG); one includes fixed tasks in which also own initiative is rewarded (linked to wage scale 15 within the FWG); and one food delivery that also includes the responsibility to compose diets (linked to wage scale 15 in the FWG). Nurses are normally in wage group 40, 45 or 50 (Table 5).

 In addition, the collective agreement stipulates that employees are entitled to an end of the year payment (5% of annual salary) and holiday pay (8% of annual salary).

Table 5. Function groups and corresponding monthly and hour wage-levels

Function group	Monthly gross wage (euro)	Hourly gross wage (euro)
1	1212-1462	7.74-9.34
5	1265-1542	8.08-9.85
10	1315-1639	8.40-10.47
15	1363-1750	8.71-11.18
20	1390-1859	8.88-11.88
25	1426-1962	9.11-12.54
30	1462-2068	9.34-13.21
35	1542-2121	9.85-13.55
40	1639-2282	10.47-14.58
45	1859-2507	11.88-16.02
50	2121-2848	13.55-18.20

Source: own calculation from the collective agreement

In 1985-2002 the increase in hourly wages in the health care sector was lower than the average increase in the Dutch economy (19.7% against 20.5%). In 1997-2002 the increase in hourly wages in hospitals was on average 1% higher than the average increase in the market sector. Hourly wages in this period increased 5.1% faster than hourly wages in the market sector. A reason for this is the introduction of the new job rating system (FWG system), which resulted especially in an improvement in the rating of nurses.

Employment conditions

Working hours

Employment conditions in the health care sector are regulated in several collective agreements. The collective agreement for the hospitals sector has full coverage. Full-time standard employment is 1878 hours a year (an average of 36 working hours in a week). It is possible to work 40 hours in a week when this is agreed. Annual working hours are based on employment duration (gross), including holiday hours, days off and public holidays. Working time is preferably between 07.00 and 20.00 weekdays and between 8.00 and 12.00 on Saturdays. Deviations are possible when agreed with the works council. At most, 5 successive night shifts are allowed. When agreed, 7 night shifts are possible but with a maximum of 35 in 13 weeks. Nightshifts are between 23.00 and 07.00 and are only available to employees over 18 years old.

In 2003 the OSA conducted a survey on working conditions in the health care sector (Bekker et al 2004). In 2003, 76% of employees in health care were satisfied with their current working hours, 18% wanted to work fewer and 19% more hours. 71% of respondents claimed to have an influence on their work schedule and 80% to adequately combine working hours with their responsibilities at home (Table 6).

In our own questionnaire in six hospitals, the employees interviewed working in low-paid jobs referred to the demanding pace of work, hard physical work and lack of training

opportunities, though they still valued their jobs with an average 7.5 rating on a grading of 0-10.

Table 6. Share of employees experiencing certain working conditions in 2003, in %

	total care sector	Total economy
physical hard work	66	29
emotional hard work	35	13
Aggression	26	-
Demanding pace of work	31	36
feeling of insufficient time	60	42
enough time for personal attention	43	-
enough time for giving good care	49	-
sufficient influence on work content	74	75
possibility to plan tasks	62	64
possibility to determine the pace of work	42	64
enough career opportunities	44	47
possibility for development and growth in work	54	65
enough appreciation from management	74	79
enough support from management	64	70
pleasant work atmosphere	85	84
(very) satisfied with job	77	-

Source: Bekker et al 2004

In the health care sector physical hard work is no exception and the share of employees experiencing emotional hard work (35%) is significantly higher than that in the economy as a whole (13%). 42% of employees, as against 64% in the whole economy, consider he or she can determine the pace of work. However, 85% of employees think they are working in a pleasant work environment and 77% are (very) satisfied with their current job.

Labour turnover

Gross labour turnover increased from 10.2% in 1995 to 14.1% in 2002 and net turnover decreased from 4.6 to 3.7% (Table 7).

Table 7: Gross and net labour turnover of nursing and caring employees in the care sector 1996-2002

	1996	1999	2000	2001	2002
Gross turnover in % (persons who leave the workplace)	10.4	14.7	16.3	15.9	14.1
Net turnover in % (persons who leave the sector)	4.2	4.7	5.4	4.3	3.7

There are three categories of people leaving their job: those who switch jobs within the care sector, those who move to a job outside the care sector, and those who stop working. The three different categories have different motives for leaving their job. For the first and second categories, lack of career prospects and job satisfaction play important roles; for the second, mental and physical considerations; and for the third, personal motives.

Although the sickness rate in the care sector is decreasing, the sector is still characterized by a high rate and a high disability inflow compared to the average. The constantly increasing sickness rate (from 6.6% in 1994 to 9.1% in 2000) began to decrease in 2001 and in 2002 dropped to 8% (excluding pregnancy). The average national sickness rate in 2002 was 5.3%, which is substantially lower than in the health care sector (Table 8).

Table 8: sickness rate of nursing and caring personnel 1994-2002

	1994	**1997**	**2000**	**2001**	**2002**
sickness rate in %	6.6	7.7	9.1	9.0	8.0

Source: Vernet (various), CBS (various)

In 2002 69% of absences in the care sector were due to sickness and 33% were for more than 6 days (Table 9). The reason for sickness leave is, in 91% of cases, related to physical problems, 5% to mental problems, and 4 % to a combination of both. Of the 69% who were sick in 2002, 32% indicated that the sickness absenteeism was work-related. For nurses, 68% of absence was due to sickness, 22% of this work-related, and 27% for more than 6 days.

Table 9. Sickness absenteeism of employees in caring and nursing jobs in the care sector (%)

	0 days	1-5 days	> 6 days	because of physical reasons	because of mental reasons	because of both mental and physical reasons
Care sector	30	37	33	90	6	4
nurses	32	42	27	94	4	2

Source: Bekker et.al 2004: 176.

Long term sickness leave

21% of employees working in the care sector were sick for a period of 2 weeks or more, though this was significantly less for nurses, at 14% (Table 10). Of the 21% of care sector employees, 45% of this was work-related. Physical complaints were the most common cause (53%), followed by a demanding pace of work (20%); other reasons given were reorganisation (2%), conflict with colleagues or management (8%) and contact with clients (4%).

Table 10. long term sickness absenteeism of employees in caring and nursing jobs in the care sector, in %

	ill for more than 2 weeks	because of:		
		physical problems	mental problems	both physical and mental problems
care sector	21	69	13	18
Nurses	14	74	14	13

Source: Bekker et al 2004: 176.

In the Netherlands to be disabled a person must be at least 15% occupationally incapacitated after a waiting period of 2 years. The disability inflow into the care sector is - like the sickness rate - also higher than the average (Table 11).

Table 11. Disability Inflow into the Care sector

	2000	**2001**	**2002**
Domiciliary care	2.4	2.0	1.8
Caring and nursing homes	2.0	1.8	1.5
Mentally Retarded	1.6	1.6	1.4
GGZ	1.4	1.3	1.1
Hospitals	1.4	1.4	1.1
Total	1.7	1.6	1.4

Source: Vernet (various)

After retail, the health care sector generates the highest share of disability inflow (CBS-statistics). The inflow of 17.8% is larger than the annual outflow. Factors that could play a role in the disability and sickness rates are partly personal characteristics, given that women, younger people, older people, the chronically ill and the low paid have higher sickness and disability rates. There are also organisation-related factors: larger companies and companies in the urban areas, the *Randstad*, have a higher sickness rate. Economic reasons may play a role as well, as in an economic recession when sickness rates drop. Finally, there are work-related factors that matter, such as labour conditions and remuneration.

For the health care sector, a particular explanation for the personal factors contributing to the high sickness rate could be the high share of women in the sector, and the relatively younger and more chronically ill labour force. Lack of intrinsic rewards and working in shifts could also be explanatory factors. Other health risks that are significant in the care sector are physical and mental hard work and a demanding pace of work. However (surprisingly!), an analysis by the CBS in 2001 showed that there is no significant link between these factors and a higher disability risk (Reijenga et al 2004).

Various forms of health and safety provisions and sickness regulation

As became clear in the previous chapters, the government has established a legal framework whereby employers and employees are expected to fulfil their responsibilities concerning health and safety. Moreover, the government has introduced several financial incentives to reduce absence from work due to illness and to prevent people becoming disabled.

Health and safety are regulated through various legal provisions, among which the Working Conditions Act (*Arbeidsomstandighedenwet,* 1998), the Sickness Benefit Act (*Ziektewet*, 1930) and its successors, and the Gatekeeper Improvement Act (*Wet Verbetering Poortwachter,* 2002) are the most important. Furthermore, in the collective agreements for hospitals some additional stipulations have been negotiated, for example regarding working hours, team shifts and occupational illnesses.

The Dutch Working Conditions Act of 1998 requires employers to implement a working conditions policy in order to prevent absenteeism due to sickness and occupational disability and illnesses. Employers and employees are jointly responsible for the systematic improvement of working conditions. The Working Conditions Act mainly contains general stipulations regarding the guiding principles for occupational safety and health policy, the risk inventory and assessment system *(Risico-Inventarisatie en - Evaluatie, RIE)*, support from expert services, cooperation and employee representation, improving working conditions as a cyclical process and in-house emergency and first-aid assistance. The clauses of the Act are specified in the Working Conditions Decree and Working Conditions Regulation. The Labour Inspectorate monitors compliance with the legislation. A number of financial measures have been implemented to reward good conduct and to penalise bad practice. The Ministry encourages executives and workers to cooperate and play an active role in drawing up sector-based Health & Safety Covenants (see below).

The government introduced several laws to promote equal opportunities for the sick and disabled. The Equal Treatment (Disabled and Chronically Ill Persons) Act of 1 December 2003 prohibits direct and indirect discrimination on the basis of disability or chronic illness. Indirect discrimination may be permitted under certain circumstances, for example if there is a risk to the health and safety of the person in question or to others.

To stimulate both reintegration and the employer preventing sickness absenteeism, the government introduced specific rules in the Sickness Benefits Act (*Ziektewet*, 1930) and the Gatekeeper Improvement Act (*Wet verbetering poortwachter,* 2002). The Sickness Benefit Act, which originates from 1930, stipulates that if an employee becomes ill, the employer must continue to pay his or her wage. In January 1994 the nature of this Act was revised to compel an employer to reduce absence from work due to illness. At that time, an obligation on the employer was introduced to continue paying sick persons' wages over a 2–6 week waiting period. In January 1996 the Act was abolished as a public provision. From then onwards, the legislation tried to encourage employers to reduce illness by obliging them to continue paying wages for one full year. That period was

extended to two years in 2004. Only after this period expires should those still unable to work qualify for disability insurance (see below).

The Act on the Reintegration of Labour Handicapped Persons (REA) has been in force since 1 July 1998. The REA contains measures for occupationally handicapped and chronically ill employees who need help in (re)-entering the labour market into a regular job. The aim of the REA is, on the one hand, to stimulate employers to prevent long-term work incapacity and, on the other, to retain or hire persons receiving full or partial disability benefits. The measures vary from adjustments to workstations to wage supplements. Research has shown that the healthcare sector makes less use of subsidies given by the REA Act compared to others sectors, though the reasons for this are unclear (Vuuren et al 2001).

Since April 2002, employers and employees have also themselves been responsible for reintegration. The Gatekeeper Improvement Act sets out the steps the employer and employee must take to retain the employment relationship and to get the sick employee back to work as soon as possible. Employers should consider the adaptation of work places in order to prevent long term absence from work and employees becoming disabled.

From January 2006, the government has also changed the Disability Insurance Act (*Wet op de arbeidsongeschiktheid*, WAO) into the Labour Capacity Act (*Wet inpassing arbeidsvermogen*, WIA) in order to reduce the large number of disabled persons. In contrast with the past, the emphasis of the new Act is no longer on the financial compensation of incapacities to work, but to actively attempt to enlarge the capabilities to work. The system remains to include a social benefit for permanent disabled persons. For partially disabled persons, a new activation scheme has been introduced. When they are more than 35% handicapped, partially disabled persons should be working part-time. Persons with less than a 35% handicap, remain employed with the current employer.

The new system will lead to a medical test of all disabled persons, and hospitals will – as will all employers - have to create job opportunities for partially disabled employees. A further evaluation of the impact and success of the recent legal reform on the disability provisions and Gatekeeper Act, is not yet available, though below we will summarise some first results.

Health and safety covenants in the health care sector

Health and Safety Covenants are agreements between employers' organisations, trade unions and the government. In the period 1999-2002, their primary goal was to prevent sick leave and occupational disability; currently they are also increasingly used as instruments to help people return to work after a period of illness. In 1999 health and safety covenants were agreed for domiciliary care and in 2001 for the care of those with learning disabilities, mental healthcare and hospital sectors. In care and elderly homes such covenants do not exist, but health and safety arrangements are laid down in the collective agreement 'Labour and Health'. The covenants emphasize risks such as pace of

work, physical and mental hard work, aggression and dangerous substances. On the basis of the covenants, care institutions have to take institution-specific measures. Per institution, the highest risks and the most effective measures must be considered. To accompany this process, in each care sector a guidance committee (*branchebegeleidingscommissie*, BBC) has been established. The covenants are monitored by several research agencies. Below we summarise the outline and main impact of the various covenants signed.

Care for the handicapped (2001-2004)

The covenant in the handicapped care sectors has defined various goals and contains agreements about improving working conditions and decreasing the (long term) sickness rate. From the evaluation study it appeared that 80% of institutions have taken specific measures, mainly focussing on physical strain and aggression and less on pace of work and mental strain. Overall, the goal of decreasing the difference in the sickness rate with the private sector by 50% was achieved, the difference decreasing from 3.2% in 2000 to 1.7% in 2003. The occupational disability inflow decreased by almost 50%. Two thirds of institutions have their own specific sickness absenteeism objectives but reintegration policy lags behind. No progression has been made in lessening the pace of work and mental strain. In the last covenant year, steps were taken to structurally protect employees from aggression. Measures are, however, too recent to observe a significant effect. An important (financial) effort was made to decrease physical strain by 30%. This goal was not achieved; there was a decrease of almost 20%. However, because of the delaying effect of preventive measures, the expectation is that in the years to come this rate will drop more (Bureau Bartels 2005).

Mental Care (2001-2004)

This covenant focuses on the reduction of sickness absenteeism, disability inflow, physical and mental strain, pace of work and aggression and insecurity. 81% of mental care institutions have made their own specific plan and the sickness rate dropped from 7.1% in 2000 to 5.3% in 2003. The goal of a 50% reduction in the difference in sickness rate with the private sector was achieved through a reduction of 69%. The disability inflow decreased by 38%. The least change was observable in the policy regarding physical strain. Aggression is a big problem in the sector. Though much progress has been made in 2003, half the employees experienced physical violence or threats. Measures such as trauma care and training for dealing with aggression are in place in almost all institutions (Kemp et al 2004).

Hospitals (2001-2004)

In 2001 the covenant only contained agreements about sickness absenteeism and occupational disability inflow. In 2003 agreements on physical strain, aggression and pace of work were added. 60% of hospitals made their own specific action plan, less than the 75% target. The difference in sickness rate between the hospital and private sectors was only 0.2% in 2002. The goal of a 50% reduction in the difference was achieved. The

difference compared with the national average for disability decreased from 0.11% to – 0.15%, the goal of a 50% reduction thus being achieved.

Another goal of the covenant was to reduce physical strain in 2004 by 20% compared to 2002; moreover 70% of institutions should compose a structural plan concerning this issue. This goal has not yet been achieved. Until now no significant change is visible, the only exception being the use of floating sails. Goals concerning a demanding pace of work (good detection of pace of work problems by managers, care after traumas) have not been achieved. 21.9% of employees experienced aggression or violence in 2004. The goal, 21.2%, was almost achieved. Half of the hospitals have a procedure to prevent aggression. However, 52% of employees state that they never heard about this. In 50% of hospitals a proportion of the personnel could follow training in how to deal with aggression. The final evaluation showed that the goals concerning reduction in sickness absenteeism and disability inflow were achieved, though the other goals of the covenant have not been realized (Vree et al, 2005).

Domiciliary Care (1999-2003)

Goals of the covenant were to diminish the sickness and occupational disability rates (to lessen the difference with the private sector by 50%) and to further the integration of the occupationally disabled by 500 persons. To achieve these goals, measures concerning physical strain, pace of work and reintegration were laid down in the covenant. 90% of institutions have implemented the measures. The share of employees experiencing physical strain dropped from 36% in 1999 to 31% in 2002. The difference in sickness absenteeism with the private sector dropped by 41%, though the aim of 50% was not achieved. The aim of integrating 500 occupationally disabled persons was achieved: 678 persons were integrated. The probability of a disability inflow dropped by 31%, though the target to lessen the difference with commerce by 50% was not achieved. The proportion of employees experiencing a high pace of work decreased by 32% (Rij and van Doorn 2005).

Nursing and Elderly care

As a result of the collective agreement 'Labour and Health', the nursing and elderly homes received a checklist with which they could map their policy concerning physical strain. Almost all institutions have a preventive policy on this, 97% of elderly homes (84% in 2000-1) and 99% of nursing homes (92% in 2000-1). A significantly higher share also monitors its own policy. The proportion of institutions using guidelines that conform with the collective agreement 'Labour and Health' has also risen significantly. Measures to restrain the physical burden are important and more than three thirds of institutions indicate that they check annually if these are sufficient; for nursing homes there is an increase in training to use these.

Conclusions

The Dutch health sector is a highly regulated sector that is growing fast in terms of GDP and employment. Hospitals are complex work organisations that need to work in a political environment that stresses attention to cost control and transparent accountability systems. Industrial relations are highly institutionalised in terms of legal provision and the application of the collective agreement, which includes a detailed job classification scheme, wage scales, working hour procedures and attention to working conditions and health and safety issues.

Notwithstanding, employees in the health care sector on average have harder working conditions (high pace of work, physical and emotional hard work, aggression) than the economy as a whole. The sector is characterised by a high sickness rate and disability inflow, compared to the national average. Within the subsectors, the nature of working conditions differs. In mental care and care for the handicapped, the occurrence of aggression is the highest. The pace of work is most substantial in hospitals and nursing and elderly care. Physical strain is greatest in domiciliary care and nursing and elderly care. Emotional strain is especially severe in mental care, followed by hospitals (Bekker et al 2004).

The Dutch government has tried to reduce the sickness and disability rate in the health sector in various ways. The legal provisions regarding the disability of employees have been revised over the last decade, with emphasis placed on the individual responsibility of employers and employees to reduce risks at work. Since 1999, the government has agreed to introduce sector-specific health and safety covenants with trade unions and employers' organisations. The covenants contain goals to reduce sickness and disability rates, the pace of work, physical and mental strain and aggression. In all subsectors of the health sector, the sickness and disability rates have dropped (here almost all ambitions have been achieved). This is partly attributable to the covenants, but also to external factors such as the change in social security regulation (e.g. the Gatekeeper Improvement Act); the economic recession has also played a role here. However, the other goals of the covenant, such as lessening the pace of work, aggression and physical and mental strain have not been met in the covenant periods. In addition, despite the covenants, an analysis by 'Marketconcern' showed that employers in the care sector invest on average less in health and safety measures than the private sector (Financiële Dagblad 2003).

We therefore conclude that more active measures have to be taken to significantly improve the specific working conditions of the sector - the pace of work, high physical and mental strain and the existence of aggression. For the years to come, the employers' association NVZ has stressed in interviews their opinion that primary labour conditions should be laid down in the collective agreement, and secondary labour conditions should be decentralised and implemented at the workplace to give hospitals room to introduce tailor-made employment conditions.[9] In contrast, trade unions want to settle as many issues as possible in the collective agreement.[10] Although some hospitals perform less

[9] Interview NVZ, February 14th. 2006.
[10] Interview Abvakabo, March 15th. 2006.

well on working conditions, the NVZ believes that forcing rules on organisations will lead to resistance. Therefore, the NVZ suggests involving the works councils to monitor implementation of labour conditions. The unions in their turn emphasize that works councils are over-committed and more central regulation is necessary.

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B 4: Disabled, working life and welfare state in the Netherlands: Conclusions on the basis of three sector studies

Marc van der Meer

In the debate concerning disability, working life and the welfare state in the Netherlands, two categories of persons predominate: on the one hand, disabled persons (*arbeidsongeschikten* in Dutch); on the other, persons who are handicapped with regard to the labour process (*arbeidsgehandicapten* in Dutch). When insured, a disabled person is granted a right to disability benefit, which used to apply to the categories of wage-earner, younger person and the self-employed. Disability insurance was altered on January 1st 2006 to underpin the remaining capacity to work and earn an income.

The disability problem has been called a national drama, or 'Dutch disease' in the international literature, since, after the introduction of the Disability Act (*Wet op de arbeidsongeschiktheid*, 1967) and the subsequent General Disability Insurance Act (*Algemene Arbeidsongeschiktheidsverzekering*, 1976), the number of disabled persons increased to a substantial and far higher percentage of the labour force than was ever anticipated. In the mid 1980s, the then prime-minister Ruud Lubbers argued that during his term in office he would not see the number of disability claimants increase to 1 million (out of an active labour force of then only 6 million). This was substantially higher than the coverage of 200,000 persons, envisaged as a maximum in the design of this provision at the very beginning. The increase in disability claimants reached its peak in December 2002 when there were 993,000 on disability benefit. Since then the inflow into the disability scheme has been lower than the outflow, and the average stock of disabled persons has declined.

In distinguishing the concept of 'disability claimant', we define 'labour process handicapped persons' as those who cannot obtain or fulfil a job to full capacity due to illness or other impediment. One important contrast for the purposes of disability insurance is handicapped persons who already have an impediment before they enter the labour market. Moreover, seriously disabled persons can still have the capacity to earn an income, for instance an injured construction worker might be able to conduct administrative work. Of the total population of 10.5 million persons in the Netherlands between the ages of 16 and 65 years, 1.8 million persons (about 16%) are fully or partially handicapped with regard to the labour process due to long-term illness or physical or psychological impairment. Most of these have a low education, 46% are male and 54% female (SZW 2005).

Of these 1.8 million fully or partially handicapped persons, 701,000 are actively working and 86,000 are unemployed (data statline, 2005). The relative share of disabled persons in the active labour force is 10.6% (data for 2004). The percentage of disabled persons actively working in the health care sector is 11.5%, just above that for construction (11.1%), and much higher than in business services, including IT (8.9%) (SZW 2005: 57).

Disability in the welfare state: a 'wicked' political issue

When evaluating the development of disability in the Netherlands, the issue appears at first sight to be above all of a political rather than an economic or social nature. Until 1993, the disability issue was an outstanding example of the internationally famous Dutch Disease, exhibiting the 'welfare without work' nature of the corporatist, conservative welfare state in the Netherlands (Esping Andersen 1996). The number of disabled persons was extremely high, and partially disabled persons hardly returned to work. For only 90,000 handicapped persons was state provision created in sheltered work organizations (*Wet sociale werkvoorziening*, WSW).

In that period, attempts by various government coalitions to reform the Disability Act were doomed to failure through the 'joint decision trap' (Scharpf 1993), and Dutch corporatism appeared to be immobile on the issue (Visser and Hemerijck 1997). Political conflicts over its sensitivity, the complicated juridical criteria for social benefit eligibility, the lack of transparency and overlap between unemployment and disability insurance, disciplinary conflicts between medical professionals assessing disabled persons on the one hand and the entrepreneurial needs on the other, the inclusion of both *risque social* and *risque professional* within one provision, made the issue a 'wicked' problem, that was not at all easy to solve (Van der Veen 2005).

In the late 1980s, the first political attempts were initiated to revise the rights and obligations of benefit claimants (Aarts et al 2002). Later, in the first half of the 1990s, the focus was displaced from passive benefits to active reintegration. This shift in the nature of the welfare state was legitimised by a number of scientific reports stressing the need to reduce the financial burden of the welfare state by increasing active labour market participation (WRR 1987, 1990).

A parliamentary investigation in 1993 on the operation of the Dutch social security system then concluded that disability regulation had served as an easy exit-route from the labour market. Parliament held the employers' associations and trade unions 'jointly guilty' of the misuse of the system. The conclusions of the report stressed the importance of privatising the execution of the entire social security system, which was still organised sectorally with interest associations responsible for the implementation of social policy. The organization of the social security institutions was subsequently revised in 1995 and 1997. In 1999 however, full privatisation of social security was blocked in Parliament. The main argument was that private companies under market forces could not alone bear the responsibility for the medical assessment of disabled persons; state monitoring of these assessments were deemed necessary.

Activation of the welfare system was organised via the introduction of a set of financial incentives and sanctions for employers (the so-called *bonus-malus* system, from 1992). In 1996, the Sickness Act was virtually abolished and increasingly employers were made responsible for prevention and for reducing the vulnerability to sickness and absence from work via the introduction of an obligation to continue wage payments in the period

of absence from work on health grounds. This then led to an 'experience rating' system with differentiations in the premium contributions for employers (*Wet premiedifferentiatie en marktwerking bij arbeidsongeschiktheidsverzekeringen*, Pemba, 1997). At the same time, the duration of disability benefit was reduced, and the definition of acceptable work made stricter. Subsequently, reintegration into work of persons with disabilities became a general objective in a new Act on Reintegration (*Wet op de reintegratie arbeidsgehandicapten*, REA, 1998), which combined a number of past and new operational instruments. The Act also defines the responsibilities of individual employers, social security agencies and municipalities in enabling the integration of handicapped persons.

Due to this regime change, the role and position of the social partners has been changed. They are no longer responsible for the implementation of social security at sector level. Previous public social security institutions at sector level, responsible for the intake and payment of social benefit claimants, were dismantled and replaced by one public institution for the implementation of employee' insurance (*Uitvoeringsorganisatie werknemersverzekeringen*, UWV). In 2002, active labour market policy and social security regulation at national level were integrated. Intake into the social security system is now in the hands of the former public labour office (called: Center for Work and Income, CWI). The provision of social benefits is in the hands of the UWV. Finally, the municipal council for the provision of general assistance is also involved in this new structure. All three institutions collaborate to reintegrate partly disabled persons back into the labour market under the motto: 'work before income'.

Finally, in 2001 a government committee chaired by P.H. Donner proposed to abolish insurance for partial disability. This was unacceptable to the trade unions which convinced employers associations and independent crown members in the Social and Economic Council to amend the proposal. Finally, this was accepted by government which introduced a new Work and Income according to Labour Capacity Act (*Wet Werk en inkomen naar Arbeidsvermogen*, 2006), focussing on the remaining capabilities of partially handicapped persons to work and to generate an income. Central in the Act is not impairment but remaining earning capacity. The WIA no longer distinguishes between various degrees (*klassen*) of disability, but discerns partial and full incapacity to earn an income. Income assurance is granted to employees who are permanently more than 80% disabled. Employees who are partially disabled (35-80%) can apply to the insurance regulation in order to resume work (*Regeling werkhervatting gedeeltelijk arbeidsongeschikten*, WGA). Persons with less than 35% loss of earning capacity remain obliged to work. Independent medical doctors are responsible for the assessment of the remaining earning capacity. The new Act stresses the causal relationship between the 'direct and objective medical assessment' of impairment and remaining earning capacity. The effects of the introduction of the WIA to the development of the disability stock cannot yet be established.

In an authoritative overview of all these policy changes, the Rotterdam Professor of Social Policy, Romke van der Veen, argues that the reforms are the product of a transition from a social-democratic policy orientation, focusing on the rights and

obligations of predominantly passive citizens, to a neo-liberal orientation focused on active citizens, whose behaviour is guided by financial incentives and disincentives.[11] However Van der Veen then argues that neither the political nature of Dutch corporatism nor the past role of the social partners is fundamental to understanding the nature and development of the disability issue. Rather, 'it is much more a combination of work-related and personal (or social) problems which currently (in 2005) lead to disability, than the outflow of older, less productive employees out of the production process via the disability scheme, as was the case before' (Van der Veen 2005: 55).

In other words, the causes of disability in the 1980s, due to malfunctioning of the labour market, are entirely different from those in the 2000s, where a combination of problems occurs between private and working life. Van der Veen refers to the nature of post-industrial labour markets, with flexible employment relations and their related social and financial insecurity, increased female labour market participation and related problems of combining work and care, and, finally, the stress on the social and intellectual capabilities of employees (Van der Veen 2005: 55, cf. Esping Andersen, 1993). In his view, not employers, but the demands of the larger society should be held responsible for the nature of the problem. This is what we turn to in the next section.

Working life and occupational risks in construction, IT and health

The overview of the Dutch construction, IT and health sectors has highlighted various hazards in working conditions and the possibilities to address these through public policy. In these conclusions we will attempt to single out to what extent occupational risks are related to the job or occupation, to the industry or to the welfare state at large, and what role individual enterprises, interest associations and the national government can play in reducing these.

There is no doubt that the content of the work processes in the three industries under analysis differs. Carpentry, software engineering and nursing are all skilled occupations which apply various techniques, instruments and materials in their working environments that are hardly stable and are often subject to change and alteration. In the construction, IT and health sectors, employees work with colleagues and other stakeholders and planning and time management are crucial to making progress to achieve a given output. The working rhythm is often conditional on what contractors in construction, commissioned companies in IT or doctors in health care demand and expect. Work stress and an increased pace of work then easily occurs.

In each of the sectors, task autonomy increases when people, such as the self-employed in construction or IT, work on their own account, notwithstanding deadlines and project horizons. In the health care sector, task autonomy is perhaps greatest in domiciliary care, where nursing personnel are responsible for patient visits. In hospitals and care institutions, many nurses work in teams and have to conform to the work organization of the department.

[11] Van der Veen argues that such a regime change is not unique to the Netherlands; he even refers to the work of Legrand (2003) on the United Kingdom who arrives at a similar conclusion.

In this report we have discussed the kind of injuries and occupational hazards that occur. In the 1980s and early 1990s, the construction industry was an example *par excellence* of the 'welfare without work' logic of Dutch corporatism, when employment in the industry continued to grow. Yet, not all occupations are as dangerous to the same degree and impairments vary in degree and length. Empirical studies have shown that assembling scaffolding, bar and steel bending, demolition work, rail maintenance, grouting, and roofing are more dangerous than, for example, electrical jobs, machine driving, management and administration. In construction, employees with more qualifications thus tend to face less occupational risks. We should add though that site-managers often face problems of work stress and accumulating responsibilities that are more demanding than they can deal with.

In health care and IT, the relationship between education and risks at work is less one-dimensional, and often higher skilled employees face more risks. In health care, which is growing fast and being put under a new financial regime, it is necessary to compare the employment conditions for staff in several institutions: hospitals, homes for the elderly, and health clinics all report slightly different conditions. In spite of all technological progress and attention to working conditions, back problems still occur due to lifting patients, whereas problems of work stress and pace of work are related to the internal organization and management of the institution. Nurses however, report substantial satisfaction in their work, despite the sometimes demanding labour conditions.

In IT we found a conjunctural employment pattern. In the industry, three main sources of specific work-related impairment occur that are not found in the other sectors: RSI, work stress, and irregular working hours. Here problems accumulate in the combination of work and care for men and women with family responsibilities. Compared with the construction and health sectors, the evidence in the health sector strongly supports the hypotheses of Romke van der Veen concerning the importance of post-industrial working conditions.

Health and safety policies: from hard to soft approaches?

We have seen that in the Netherlands, the legislator has dismantled the social security institutions at sector level in exchange for a national system revolving around financial incentives to employers to reduce health and safety risks. The gradual retrenchment of the system in terms of restricted access to full disability benefit and the focus on remaining earning capacity has been justified with both financial and political arguments regarding the future of an active welfare state. From 2007 onwards notwithstanding, the level of disability benefit for full benefit claimants will probably be increased from 70% to 75% of the last wage earned.

At the same time, the regulation of health and safety is changing in nature, from 'hard' to 'soft' regulation. The first Working Conditions Act of 1980 stressed the importance of well-being and humanization at work, demanding health protection and optimal safety conditions for employees on the shop-floor. In the late 1980s, the underlying legal

philosophy changed from prescriptive to goal-setting standards, and in 1998 the promotion of well-being at work was elevated (Popma 2003). In 1994, the revised Working Conditions Act introduced an obligation on employers to prepare a risk analysis and evaluation, for which employers also need to contract with a certified working-conditions bureau (*Arbo-dienst* in Dutch). In 1996, the Working Hours Act was also revised, allowing local management and employee representatives to negotiate opening hours and shift working hours themselves (within the limits of the national bandwidth).

From the late 1990s, the government has tried to convince the social partners at sector level to negotiate covenants on labour conditions to address priorities in reducing occupational hazards. The development of the covenants on labour conditions in the various industries perfectly fits with the European idea of the development of 'soft-law' via self-regulation and decentralisation of responsibilities on working conditions to work organizations. In addition, these covenants enrich and focus the public discourse on employment conditions.

The degrees of differences between 'hard' health and safety legislation and the 'soft' labour conditions covenants can be analysed in terms of their obligations, precision and delegation (Abbott and Snidal 2000). Obligations refer to what the agreements demand from employers and employees. Precision defines how detailed the prescriptions and stipulations are and to what extent these allow for detailed interpretation. Delegation refers to the procedures of implementation and monitoring.

In both the construction and health care sectors, the trade unions are strong enough to request better employment conditions and to press for preventive measures in 'hard' regulation, with concrete numbers and precise stipulations. In the construction industry, the unions have initiated several health and safety campaigns in an industry that is itself famous for its dangerous working conditions and health and safety risks, for example to reduce the burden of lifting stones and materials. The sector has also established its own foundation on the improvement of employment conditions (*Stichting Arbouw*) and the various collective agreements contain several stipulations and annexes to improve labour conditions.[12] Moreover, as we have seen in the construction chapter, the industry is a forerunner in the development of sectoral labour market and training policies. The covenant on labour conditions in the construction industry contains several concrete, substantive issues, though the trade unions have expressed their worries that 'hard' legislative rules should not be replaced by 'soft' regulations, gentlemen agreements and covenants.

In the health care sector, a similar pattern is visible, though compared with the health care sector trade unions are more divided and several sub-sectors have their own interests. Here the Ministry of Health, not the social partners, is by far the most important regulatory actor. In the health chapter it has been shown that all sub-sectors have negotiated their own stipulations in the collective agreement. As a general rule, all agreements contain stipulations underlying the importance of 'good employment conditions in order to reduce absence from work due to sickness and to increase labour

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[12] The collective agreement for the construction industry is oftenthe trendsetter or wage-leader.

productivity and employee morale'. The various covenants on labour conditions concluded in the health sector have different targets and goals, exhibiting different degrees of obligation, precision, and delegation. It is not surprising that many of its ambitions have not been met, given the lack of serious monitoring controls and countervailing pressures.

In IT the situation is entirely different due to the non-existence of inclusive interest associations. Both trade unions and employers' associations are extremely weak and no meaningful social dialogue occurs at the sector-level. This hardly allows the sectoral problems of RSI, work stress and travelling hours to be addressed. Even when companies do not want to keep unions out, employers and also individual employees are hesitant to accept them as their spokespersons. Companies are however still changing their attitudes to respond to the financial incentives set by the government in the disability and sickness regulation. They anticipate risk and outsource part of the most dangerous employment with vulnerable working conditions.

In the near future, it is to be expected that the government will alter the current legislation on working conditions to be more in line with the European Framework Directives for Health and Safety at Work. In advice requested from the Social and Economic Council (2005), it was argued that in future the roles of the state and the market should be defined accordingly. The state is seen as responsible for defining a minimum level of regulation, to monitor employment practices and to sanction non-implementation. Social partners should develop tailor-made rules and strengthen the roles of individual employers and employees. It is very likely that the social partners at both national and industry levels will be invited to develop particular *working conditions catalogues,* to be used as a basis for risk assessment and prevention. In addition, the Social and Economic Council has pleaded for a so-called *chain approach*, bringing together the concepts of occupational hazard, partial disability, work adaptation, working conditions, and reintegration after sickness leave. The application of such an approach in practice will then highlight the various and particular working conditions in the workplace.

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Part C: Overall Conclusions

Linda Clarke

Marked similarities emerge between the two countries, Britain and the Netherlands, with respect to both the nature of each sector and the barriers posed in terms of education and training, employment and working conditions and recruitment and selection. Nevertheless, the approach taken to disability is markedly different. The Netherlands is more closely associated with a social model of disability, which conceives disability as socially constructed by the social, economic and environmental barriers erected to full participation in employment and which holds the state responsible for overcoming these barriers (Thornton and Lunt 1995; Burchardt 2004). Britain in contrast has over the past fifty years moved away from social obligation on the part of government for ensuring employment for disabled people to individual self-reliance. This approach is identified with the 'capabilities framework' which emphasises the disadvantages experienced by individuals and their capability to do a range of things.

Though therefore coming from contrasting positions, the report also show the ways in which a certain convergence between the approaches in the two countries is occurring in terms of policies towards disability. The Dutch state has been recently moving away from taking full responsibility for those with disabilities and placing more responsibility on the employer. This is evidenced in the close monitoring of inflows and outflows of those with disabilities for each sector and in the new policy which obliges employers to continue to employ those who become disabled for at least two years. In Britain too, following the DDA, there has been a greater concern with employer than individual obligation. A clear onus is laid on employers not to discriminate against those with disabilities, whether in terms of recruitment, selection or employment and to make 'reasonable adjustments' for those with disabilities.

The result is that we see in both countries more emphasis being placed on the sectoral level. And, when we look at this level as we have done in this report, what emerges is that the notion of disability is relative to the occupation and the work undertaken. This is apparent in Britain in attempts – however clumsy and misplaced – to define 'fitness to practise' and in the Netherlands to define the degree of disability in relation the kind of work performed. The danger with both a social model of disability and the capabilities framework is that disability is conceived in absolute terms. As a relative term, defined in relation to a specific labour market, occupation or activity, disability becomes not an attribute of the individual but, like a qualification, defined in relation to - and even attributable to - the activity undertaken.

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Enabling and disabling: disability in the British and Dutch construction sectors

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Though the British and Dutch approaches to disability in the construction sector exhibit common features, Britain tends towards a capabilities model compared with the Netherlands which is closer to a social model. The construction sector is considerably more regulated in the Netherlands but is in both countries highly disabling and exclusive. Sector-specific disabling and enabling factors and policy measures were investigated in the two countries with a view to identifying which policies might facilitate labour market participation. The investigation was based on interviews using similar questionnaires with key stakeholders, firms and disabled employees and a focus group. Policy in each country addresses the nature of exclusion in different ways. The conclusion drawn is that a sector-specific approach is needed if disability policy in Britain is to be more in tune with the social model—as apparent from the comparison with the Netherlands.

Keywords: Disability, health and safety, UK, Netherlands, discrimination, policy.

Introduction

In both Britain and the Netherlands government policy towards disability has been directed at reducing the numbers of those on disability benefit, focused in particular on the individual and his/her integration in the labour market, including through 'reasonable adjustment' measures. Until recently this policy followed what is known as the 'capabilities' model, propagated originally by Sen (1980), which conceptualizes the disadvantage experienced by individuals in society and addresses the social, economic and environmental barriers to equality (Burchardt, 2004). In Britain this approach has tended to ignore the sectoral level, in contrast to policy in the Netherlands where additional concerns have been with the extent to which disability is attributable to the workings or malfunctioning of the labour market. In these concerns, the Dutch model reflects a social model, which in its pure form, as argued by Finkelstein regards disability as 'the outcome of an oppressive relationship between people

with impairments and the rest of society' (Finkelstein, 1980, p. 47).

In the Netherlands the social partners—employers and trade unions—in the construction sector have discussed the effects of employment and working conditions on disability and sickness absence and drawn up sector-specific risk aversion measures, based on inflows and outflows of those with disability. In Britain, with its voluntarist tradition, there are various initiatives stemming from employers and trade unions, but there is no dialogue as such, no systematic regulation and no monitoring of inflows into and outflows from the industry of those with impairments. The emphasis has been either on accident prevention, through for instance occupational health policies, or on 'reasonable' accommodation to the individual disabled person, rather than on making the sector as a whole more enabling. In this respect, the approach has been closer to a capabilities model.

The distinction between the social and capability models is by no means clear cut. The 'functional limitations view', prevalent especially before the 1980s, legitimated exclusion from the labour market of disabled people by regarding disability as a problem

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leading to dependency and lower productivity. In opposition to this view, the social model defined disability as 'something imposed on top of our impairments by the way we are unnecessarily isolated and excluded from full participation in society' (UPIAS, 1976, p. 14; see also Oliver, 1983; Barnes and Mercer, 2005). According to Finkelstein's social relational approach, society disables people, not their functional limitations (Finkelstein, 1980). A distinction is even made between 'impairment', as an attribute of the individual, and 'disability', limiting equality of opportunity in the labour market (Burchardt, 2004). Thomas (2004), for instance, associates 'disability' with social exclusion, with socially imposed restrictions on activity, as distinct from 'impairment', a distinction which has been criticized because it completely separates impairment from disability though the former is still important for disabled people (Williams, 1999; Shakespeare and Watson, 2001). Nevertheless, the social model has been critical to the involvement of disabled people and has helped place disability firmly on the policy agenda.

The danger with both the traditional social model of disability—though not with its Finkelstein variant—and the capabilities framework is that disability tends to be conceived in absolute terms. As a relative term, defined in relation to a specific labour market, occupation or activity, disability becomes not an attribute of the individual but, like a qualification, defined in relation to—and even attributable to—the activity undertaken. Our contention is that dependence on broad, aggregate definitions of disability may even serve to 'disable' or deter persons with disabilities from working in particular sectors and occupations though they have the capacity or ability to do so. In other words, it is important to evaluate relative abilities in terms of the particular occupation or job to be undertaken. As Mabbett (2005, p. 228) argues: 'different workers should be treated differently to the extent that this is necessary to ensure that they have equal access to employment rights'. The implication is that what is a disability for one occupation may not necessarily be disabling for another. 'Disability' and its converse 'able-bodied' are therefore concepts that need to be defined in relation to the labour market and to particular occupations and sectors.

The paper draws on research carried out for the Norwegian Work Research Institute and is based on statistical data, documentary and literature reviews, interviews with key actors and related research (University of Westminster, 2007a). Owing to the exploratory nature of the project objectives, intended to develop a deeper understanding of issues and processes, our methodology is qualitative and comparative, based on a case study approach. Similar questionnaires were developed for each country, consisting of separate 'topic' guides for key stakeholders, including: construction employers' associations; construction trade unions; firms; disability organizations (Disability Rights Commission in Britain); construction (Constructing Better Health), training (ConstructionSkills) and Health and Safety organizations (the Health and Safety Executive (HSE) and a site-based occupational health centre in Britain and the joint bi-partite sectoral institutions in the Netherlands); and workers with disabilities. The topics covered included recruitment, training, employment and working conditions, and equal opportunity and disability policies and interviews were conducted face-to-face, each averaging about an hour and a half. A draft report was then presented for comment to a British focus group attended by 30 people, consisting of representatives of different interest groups (employers, trade unions, Sector Skills Councils, disability organizations, health trusts and government), companies and organizations participating in the research, disabled persons, academics, and the research partners (University of Westminster, 2007b).

Disability in the British and Dutch construction sectors

The representation of long-term disabled workers in the UK construction sector is very similar to that in overall employment, at around 13% of workers (Table 1). In construction a higher proportion of disabled workers than the average for all sectors experience problems with arms or hands, legs or feet, back or neck, heart or blood pressure/circulation problems—all disabilities that might well be caused by working in the sector, providing an important indication of the degree to which disability is sector-related (Table 2). Construction is a sector with a very high incidence of self-employment (47%), often termed 'bogus' self-employment as legally those 'self-employed' are employed, though possessing a special

Table 1 Employment of disabled people in construction in Britain (Meager and Hill, 2006, derived from LFS, 2005)

	Construction	Total (all sectors)
All long-term disabled	13.1%	12.8%
Of which:		
Current DDA and work-limiting disabled	5.5%	5.1%
Current DDA disabled only	4.5%	4.8%
Work-limiting disabled only	3.2%	2.9%
Not disabled	86.9%	87.2%
Base (=100%)	2157099	27106411

Note: People of working age in employment: men 16–64, women 16–59.

Table 2 Nature of disability of all long-term disabled in the British construction sector (Meager and Hill, 2006 derived from LFS, 2005)

	Construction	All sectors
Problems with arms or hands	7.7%	6.0%
Problems with legs or feet	13.6%	10.7%
Problems with back or neck	17.8%	16.3%
Chest or breathing problems, asthma, bronchitis	14.5%	11.1%
Heart, blood pressure, or blood circulation problems	15.7%	11.7%
Stomach, liver, kidney or digestive problems	5.0%	5.1%
Diabetes	7.5%	5.7%
Other health problems or difficulties	5.5%	8.3%
Total	283 189	6 977 097

tax certificate which classes them as 'self-employed' (BERR, 2007a). The self-employment rate of disabled people in construction in 2004 (37.1%) was slightly lower than among non-disabled people (37.8%), in contrast to the overall picture for all sectors where self-employment rates are slightly higher than average for disabled (at 13.7%) than non-disabled (at 12.1%) (Meager and Hill, 2006). Construction also has a very low representation of higher level qualifications. Statistics from the 2001 Census on those in employment with a limiting long-term illness indicate that the lower the skill level at which people are employed, the higher the level of disability. The proportion of those with a limiting long-term illness is lower for those employed in professional occupations such as architects (5.2%) than for those in skilled construction and building trade occupations (6.7%), and even more so than for labourers in building and woodworking (10.1%).

Similar tendencies are evident in the Netherlands where the total disabled population is influenced by the inflow into and outflow from the disability scheme. By 2006, out of the overall active labour force of 7 million, 842 000 were defined as fully or partially disabled owing to long-term illness or physical or psychological impairment (UWV, 2007, p. 76). In 2000 the total number of disabled construction workers stood at 74 000 but has fallen every year since as the outflow into pensions exceeds the inflow of new disabled persons. The current labour market situation obscures the employment difficulties of almost two decade ago when about half the construction workforce was not working. Then the trade union adviser Kees Korevaar (1990) typified the industry as 'extremely ill', given the extended use of unemployment, disability and early retirement benefits. In the 1980s and early 1990s sickness leave was an exit route from the labour market,

not only in the event of illness, but also in periods of low activity. Access to the disability scheme was a way out for companies and provided at the same time a substantial social benefit. Over the course of the past 25 years, the highest relative percentage of workers was registered in 1984, with 3.2% of the construction workforce becoming permanently disabled; since then the rate has gradually declined, to 1.8% in 1994 and 1.6% in 2000 (De Jong *et al.*, 2002, p. 49).

The most recent information on disability inflow in the Netherlands shows that, of the hazards for employees, assembling scaffolding, bar and steel bending, demolition, rail maintenance, grouting (putting cement between tiles and bricks) and roofing are the most dangerous, whereas those such as site managers faced with accumulating responsibilities suffer problems of work stress. There is a low hazard rate for electricians, machine drivers, working managers and administrative staff. This means that, just as in Britain, less skilled employees and those with a physically burdensome and dangerous job face the most substantial risk of being declared disabled and have higher sickness absenteeism than average (EIB, 2001).

An exclusive sector

The construction industry is a key sector, employing in Britain 1.9 million (according to the Labour Force Survey) and with a varied output, including private industrial and commercial and infrastructure. The industry includes about 186 000 private contracting companies of which 93% employ fewer than 13 people; firms employing over 600 account for 18% of employment and have significantly declined in number, as have the medium-sized firms (BERR, 2007a). To meet increases in construction output, it has been estimated that over 88 390 new recruits will be required each year, though these numbers are now being revised significantly downwards (ConstructionSkills, 2008). Everywhere skill shortages are reported for the industry, especially of carpenters, bricklayers, plasterers and professionals (CITB, 2002; Clarke and Herrmann, 2007a). The widespread concern about the skills capacity of the industry opens up the possibility of a concerted policy to employ disabled workers, especially through a client such as the public sector, able to set particular contractual conditions on contractors and subcontractors.

As in Britain, the Dutch construction industry is dominated by small and medium sized companies; of 6400 companies, about 220 have more than 100 employees (overall 54 000) and up to 4000 fewer than 10 or altogether 44 000 employees. Until recently the economic forecast was positive. The construction

industry only employs about 225 000 people, about one-tenth the size of the British construction work-force, and each year about 15% of the workforce leaves the sector and another 10% enters, resulting in a structural decline in numbers. The median age, currently 39.4 years, is slightly increasing each year. The number of self-employed persons has been rapidly expanding by about 10% per year. In 2006, sickness days stood at 10 118, representing 5.2% of the capacity (EIB, 2008a).

This is a sector that is renowned for its traditionalism and its exclusivity. Though part-time employment and regular hours are generally conducive to the integration of disabled persons, they are rare in construction, which has very low numbers of part-time workers and often long hours—average weekly hours in Britain being 46 per week compared with 44 for all industries (BERR, 2007a; Jones, 2007). Another peculiarity, posing a severe employment barrier to those from vulnerable groups and indicative of the exclusivity which it shares with its west European neighbours, is its overwhelmingly white, able-bodied, male workforce. White male workers dominate: females in Britain, for instance, represent 0.3% of the operative workforce and those from ethnic minority groups 2.4% (CITB, 2002, 2004; LFS, 2005; Byrne *et al.*, 2005).

As well as employment conditions restrictive for those with disabilities, the construction industry is character-ized by particular working conditions. It is exposed not only to the vicissitudes of the weather and seasons, making for insecurity and fluctuations in earnings, but also to a varied working environment, whether working at height or depth, moving heavy components or handling dangerous materials. Construction is a dis-abling industry, with one of the most hazardous and unhealthy workplaces, a fatal and major injury rate in Britain three times higher than for all industries and the rate of reported injuries twice as high. In 2005 there were 7509 over three-day injuries, with London having the highest rate (608 per 100 000 workers), and 3814 fatal and major injuries, of which London accounted for 50% of fatal and nearly 20% of major injuries (London Assembly, 2005). The most common causes of injury are from: being struck by a moving object; handling, lifting or carrying; and slipping, tripping or falling from the same level or from a height (HSE, 2008a).

Many of these injuries then translate into permanent disabilities. Musculoskeletal disorders in Britain, for instance, account for 8% of major injuries, 34% of three-day injuries and 26% of accidents reported under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995. Construction workers suffer very high rates of mesothelioma through exposure to asbestos and other toxins, with the annual number of deaths from this in Britain estimated at over 2000. As in

the Netherlands, stress is increasingly recognized as a cause for concern: 23% or 401 of respondents to an HSE survey reported they had experienced ill health caused by or made worse by work and of these over 25%, or approximately 5% of the total, described their illness as stress-related (HSE, 2008b). The latest British survey of self-reported work-related illness carried out in 2006/7 shows that about 90 000 people whose current or most recent job in the last year was in construction suffered from an illness which was caused or made worse by this work (HSE, 2008a). It is estimated that about 50% of accidents go unreported, so there are no really reliable statistics (Strategic Forum, 2006). When an accident occurs there are ways to deal with this, but for health problems, which may only appear 30 to 40 years later, people usually just leave. This is a critical consideration with regard to the numbers recorded as disabled in official statistics (Table 1), which would be very sig-nificantly higher were those disabled by the industry to remain in employment in the sector.

The high disability rates in the Dutch construction sector are similarly above all a consequence of the high number of accidents in construction and unhealthy working conditions. For example in 1998, 13 750 accidents occurred on site as a result of falls, heavy loads, stumbling, or sliding; in 73% of cases, one day's sick leave proved necessary (EIB, 2000). The relatively high number of accidents has resulted in additional safety measures for scaffolding workers, road workers and painters, and has also prompted new environ-mental measures. In 2005 accidents occurred 3.6 times more often in construction than in industry overall, above all on small and medium sized repair and maintenance projects. The labour inspectorate found that 62% of the workplaces visited had harmful labour conditions and employers were fined (Arbeidsinspectie, 2005, pp. 28, 34). Nine out of 10 construction workers (88%) surveyed in 2005 did not want to continue to work in the industry until the age of 65 and only 29% considered they would be able to keep working until the age of 65, given the demanding nature of the job; many quit the industry at an earlier age (TNO/CBS, 2005). In these respects the industries in the two countries are remarkably similar.

Barriers to inclusion

There are also degrees of difference between the two national construction sectors. One aspect of the British construction industry that contrasts strongly with the Netherlands and presents a significant obstacle to realizing the inclusive programme of improvement envisaged is the lack of industrial democracy. The lack

of workforce involvement is attributable in part to low levels of employee representation. Trade unions represent a declining proportion of employees, with union density estimated at 17%, and the employers' associations tend to represent the larger firms rather than the myriad of small firms in the industry (BERR, 2007b). Both are signatories to the Working Rule Agreement for the industry, though this is only voluntary.

By comparison, in the Netherlands there is a strong history of industrial governance in the sector, with inclusive trade unions and employers' associations, which predisposes it towards a social model. Trade union density is over 40% and the collective agreement is generally binding also on those companies that are not affiliated with an employers' association (Jansen, 2009). Social benefits are also widely developed in the collective agreement and can be claimed according to the need and bargaining position of employees. The collective agreement for the construction industry covers collective risks such as unemployment, sickness and disability. Additionally, a number of sectoral funds have been established for training and labour conditions. Construction workers in the Netherlands are generally qualified with appropriate education and training; those with the qualification and productivity level will be ranked and paid accordingly. A recent innovation was the establishment of the life-long learning initiative, whereby construction workers can retrain for upward mobility to a position with more responsibility or for a job outside the sector.

In contrast, a marked feature of the construction industry in Britain is the relatively high proportion of untrained workers in the construction labour force many of whom—echoing the persistence of a craft system—continue to be classed as labourers. The less formal qualification requirement is especially disadvantageous for disabled workers who are more likely to rely on formal qualifications to gain entry into the construction labour market. The Construction Industry Sector Skills Council, ConstructionSkills, estimates that only 46% of the workforce has the equivalent of National Vocational Qualification (NVQ) Level 3, denoting a fully skilled worker, compared with about double this proportion in Germany (Richter, 1998; CITB, 2004). However, no compulsion to train is placed on the firms themselves. Indeed, in terms of disability, ConstructionSkills' responsibilities are confined to drawing up a disability policy, informing people, managing its implementation, including by the National Construction College, and requiring colleges and employers to make 'reasonable adjustment' for a broad range of disabilities (e.g. dyslexia).

Further Education (FE) colleges, the other key organizations providing construction skills training in Britain, are responsible for courses on a day or block release basis for those (38% of construction trainees) on the employer-based route, usually under an apprenticeship agreement, and for courses run on a full-time basis (62% of construction trainees) (CITB, 2006). Many FE colleges make considerable effort to integrate vulnerable groups, including the disabled, into their construction training courses. The difficulty with the college-based route is for students to obtain the necessary work experience and find employment subsequently, factors that contribute to high dropout rates.

There are significant labour demands on the sector in Britain, including the Olympic developments. However, many private firms, large and small, rely for recruitment on informal channels, particularly word of mouth or 'ringing around' using lists that have been built up, and many still recruit those turning up on site. The more open, casual and informal the forms of recruitment, the more social networks came into play as a powerful force of exclusion of any but white able-bodied males (Royal Holloway, 2002; Beck *et al.*, 2003; Clarke and Herrmann, 2007a). More formal, targeted and proactive selection procedures, including interviews, appear more favourable to integration.

Another obstacle to the employment of disabled persons in construction, significantly more marked in Britain than in the Netherlands, is the very high degree of self-employment, together with casual and insecure employment and the use of 'labour-only' subcontractors working to often tight output targets and prices (BERR, 2007a; Clarke and Herrmann, 2007b). Piece rates, bonus systems and price work, which predominate in the industry, reward output and performance rather than time and quality. In general, the more firms' wages are based on performance and output and are totally indifferent to qualifications, the more exclusive the nature of the workforce appears to be. Often high wage rates go together with long working hours, especially in the London area, regularly including weekend working, with overtime averaging five hours per week (BERR, 2007a). Those directly employed generally, but not always, have permanent contracts, but the industry often continues to operate on a 'hire and fire' basis, particularly with respect to new recruits and the self-employed who are simply tried out for a day or two and then only retained if required. In general, the better and more regulated the employment and working conditions the more successful the integration of those from excluded groups has been found to be (e.g. Beck *et al.*, 2003).

A key finding to emerge from our study is the extent to which construction workers may be identified with disabilities associated with lifestyles that are incompatible with today's working conditions. For instance, an itinerant construction worker in groundworks today may share the characteristics of his nineteenth-century

counterpart—working long hours, living away from family, perhaps in a caravan, eating fat-laden foods and drinking beer in the evening—and yet have very different working conditions. The work is no longer so physically demanding; indeed, operating a machine may be largely sedentary. The lifestyle as a result matches that of the traditional itinerant worker but is out of tune with today's conditions, resulting perhaps in obesity, diabetes or heart problems. To tackle these involves a change not only in lifestyle but also in working conditions, such as moving away from long hours and casual employment.

The construction sector therefore exhibits quite distinct obstacles to the entry of any other than white able-bodied males. The key moment of exclusion comes when those with disabilities try to enter the labour market, whether for training, work experience or a job. Informal methods of recruitment and selection and the reliance on established social networks encourage the recruitment of 'likes' and the exclusion of others. And, once in, output and performance-based wage structures attuned to the able-bodied can themselves act as a deterrent to retention and promotion and a means of segregation. Other features of the industry too may act not only as forces of exclusion but as in themselves disabling, including its relatively low status, casual employment practices, hard working conditions and long working hours.

Enabling measures in Britain

In Britain the emphasis of the HSE has been on health/injury prevention (e.g. hand/arm vibration, muscular-skeletal, dermatitis, noise-induced, stress): that is, managing the risks not the symptoms. One important means to do this has been through the European Temporary and Mobility Sites Directive, first introduced in 1994 and known as the CDM (Construction Design and Management) Regulations, which place health and safety duties with respect to management arrangements and practical measures on clients, designers and contractors. In addition to implementing the new environmental CDM Regulations, introduced in 2007, contractors must now meet Disability Discrimination Act (DDA) requirements by considering reasonable adjustments at the design stage and carrying out site audits.

Since 2005 the HSE has however also sought to raise the profile of occupational health and to take health issues more seriously. One initiative is the development of an occupational health model, intended to help identify and demystify health hazards, such as muscular-skeletal problems and dermatitis, and show companies what can be done, for instance, designing out heavy blocks and more mechanization. Another is the Backs

Campaign run since 2005, which includes mechanical handling of, for instance, kerbs and, wherever 'reasonably practical', heavy blocks. The larger construction firms have also been trying to organize 'back to work schemes' and to assess sickness absence. Under COSHH (Control of Substances Hazardous to Health) regulations employers have a statutory duty to ensure a safe and healthy workplace. Traditionally managing risk was just left to the small subcontractor to sort out, with understanding of occupational health issues left as an individual responsibility; the onus is now more on the main contracting firm.

Disability in construction is relative to the work carried out. In our interviews, for instance, the case was cited of a wheelchair user who drove heavy plant equipment and had had a special hoist constructed to access this. An electrician with dermatitis could be taken away from working with dust or cement though retained in larger companies. How far it is possible for those who are disabled to work in construction depends on the job and the degree of mobility demanded. There are 'safety critical' jobs, such as slinger banksman or steel erector, which can preclude those with impairments, especially if these entail heart or balance problems. Defining 'safety critical' workers such as crane drivers is based on risk assessment and crane operators have an annual medical. For some jobs too there is screening; for instance those working in a confined space have to have good hearing in order to hear the alarm and therefore require a hearing test. The HSE 'fitness to work' criteria are necessary for some safety critical processes (e.g. heavy goods driving), though these are not intended to be 'excluding'. A HGV (heavy goods vehicle) driver, for instance, must have good vision and not be at risk of seizures. Different standards apply to different workplaces. The notion of 'fitness to work' combines the functional requirements for the job with the ability of the candidate to do it, but reasonable adjustments can be made. It is not necessarily possible or feasible however to make adjustments for certain disabilities on site. In addition, many medical conditions (e.g. dermatitis, fungal infections) are not necessarily noticed and/or declared because the sufferers do not perform safety critical work.

Considerable effort has been expended by government on attempting to transform the industry in Britain, in particular in light of its relatively low productivity compared with other European countries (Clarke and Herrmann, 2004). The government launched an initiative for industrial reform, part of which, a 'Respect for People' campaign, involved clients, government and industry working to improve construction in such areas as equality and diversity in the workplace, the working environment, health and safety, training (Rethinking Construction, 2002). The more firms are proactive in terms of providing equal

opportunity (EO) support measures, the better appears to be their ability to integrate and retain the workforce (e.g. Michielsens *et al.*, 1997; Byrne *et al.*, 2005). Some firms have EO policies but only the local authority building departments tend to have clear targets and procedures to back these up and to encourage the entry and integration of excluded groups. In relation to disability, however, in a survey of construction employers, Newton and Ormerod (2005) found that only 27% had any formal policy and little evidence of companies tackling staff becoming disabled during employment.

The main initiatives in construction in Britain with respect to disability stressed by all interviewees are concerned with avoiding people becoming disabled in the first place. There has been a change in emphasis by construction employers concerning health and safety, away from a concentration on technical solutions, to identifying and highlighting risks and explaining the methods and means to avoid these, in particular the management tasks involved. This has gone together with a change in procedures, including from HSE, with its new emphasis on occupational health. The prominent employers' Main Contractors Group is also working with occupational health professionals to set standards and improve knowledge. As a result the degree and nature of disability in the workforce is increasingly being identified.

Exemplifying this is the Constructing Better Health (CBH) campaign, for 'revitalizing' health and safety in construction, which aims to produce a healthy and productive workforce by managing occupational health and improving retention (HSE, 2005). CBH ran an occupational health pilot in the Leicestershire area in 2006, involving 1300 health checks on construction workers: one-third had to be referred to their GP or optician; 30% were found to have noise-induced hearing loss; 3% hand/arm vibration; and a few had muscular-skeletal problems. These levels are similar to those reported by an occupational screening initiative of one large contractor interviewed, in which 38% of the workforce was found to have a disability (including work-limiting), and to those found by the occupational health team on Heathrow's Terminal 5. Here, at its peak, over 1000 occupational health assessments were carried out per month in 2005 and about 400 inductions per week. Altogether 7000 people were screened in safety critical occupations and about 25% of these were found to have medical problems, especially hypertension, and 2000 lifestyle-related problems (Clarke and Gribling, 2008).

Initiatives for change in the Netherlands

While working conditions and the health and safety record in the Dutch construction industry are rather

similar to the UK, the response to these problems has been very different. This is evident from two case study firms. As apparent from Figure 1, the British emphasis is very much on safety measures to prevent disability in the first place and to reduce accident levels, with the involvement of the workforce focused on awareness-raising. By contrast, in the Dutch case shown in Figure 2 concern is with health and safety and is focused on reducing and preventing sickness absenteeism with mutual responsibilities of both employers and employees. In the Netherlands, legislation has encouraged reintegration into the workplace of disabled persons with the capacity to earn an income, for instance an injured construction worker filling an administrative function. Dutch disability policy, though premised on the highly corporatist nature of the state, has had a more direct impact on the construction sector, offering important lessons for UK policy.

Until 1993, disability regulation and related benefits were considered the exclusive responsibility of social partner organizations, with relatively adverse consequences as even those regarded as only 'partially disabled' rarely returned to work. The issue was seen as an outstanding example of the 'welfare without work' paradigm of the Dutch welfare state. A parliamentary investigation of 1993 concluded that disability regulation had served as an easy exit-route from the labour market and that the employers' associations and trade unions were 'jointly guilty' of misusing the system (Buurmeijer, 1993; Esping Andersen, 1996; Visser and Hemerijck, 1997; Van der Veen, 2005). The construction industry was highlighted as especially blameworthy in this respect. Since then, policy changes have been implemented in order to reduce the welfare budget, redirecting policy from passive benefits to active reintegration into the labour market (WRR, 1990; Aarts *et al.*, 2002).

An Act was introduced in 1993 to reduce 'Entrance to Disability Regulation', resulting in lower public expenditure on benefits and stricter access criteria for partial disability. From 1994, companies were required to monitor and evaluate health and safety risks at work; 'own risk' clauses were introduced for firms, placing the risk of employee disability payments with the employer. In March 1996, the provision under the Sickness Benefit Act was privatized, sick leave became an individual risk for enterprises, and employers were obliged to continue sickness pay for a year and were responsible for at least 70% of the wage. Since then the sectoral insurance association for the construction industry no longer has the obligation to register all sickness absenteeism, though companies are obliged to notify absenteeism with an official independent agency responsible for working conditions. These concerns are evident from the Dutch case study firm (Figure 2). After this regime change, sick leave in the industry

This large contractor employs a disabled wheelchair user, a former roofer, as a safety trainer in its education department, training for instance supervisors and those working for subcontractors. The employee had become disabled following an accident in the early 1990s, after which he had qualified as a health and safety expert. He described the difficulties accessing sites, especially if there is mud, but found that there are always people rushing to help him; on a lot of jobs too two- to three-storey office cabins are built with a lift. Under the DDA, sites should be accessible. The education officer organizes 'working well together days', half-day sessions to raise awareness to which all are invited, covering noise, vibration, asbestos, occupational health, manual handling, risk assessment, etc. He has been responsible for the training for about 100 of these days in the past few years, travelling far and coming across many with disabilities who continue to work. The aim is to attract small builders and to drive subcontractors to raise standards; on the last one about 300 attended.

The director of quality and assurance of this large contractor considered that the industry disables people because it does not take enough advantage of the wealth of knowledge available. The firm has 'voice representatives' on some sites, as a way for workers' views to be expressed and heard. This involves a forum every fortnight for an hour or two to discuss problems on sites. There are also convenors on all jobs and union representatives. Cards reporting 'near misses' are handed into the site office, for instance if a handrail is missing or there is a dangerous fence; there have been 2300 cards handed in over 18 months. The firm is also looking for implementation of the Information and Consultation Directive.

In our interviews with this firm, it was generally considered that the larger sites were getting safer; for instance there are safety nets. Risks include working on scaffolds, electrical wiring, slips and trips, and eyes. Eye protection, gloves, hard hats and boots all need to be provided as a minimum. The firm also provides fleeces, T-shirts, gloves and socks to those directly employed, is trying to get overalls supplied, and writes into agreements with subcontractors that they have to provide protective wear. There is also surveillance of those exposed or at risk and the company runs awareness campaigns, for instance in relation to manual handling and back injuries. If there is a high level of risk, then the firm tries to mitigate everything to avoid the risk. Anyone coming on to its sites has to have a Construction Skills Certification Scheme (CSCS) card, to demonstrate competency. The number of safety officers employed by the firm has been increased, as has the number of people attending health and safety courses. Safety is seen as the responsibility of all and subcontractors are visited before a project to explain what it is about; an induction takes place before the project begins. Safety has to be especially well managed towards the end of a job when management and supervision is reduced, clients put pressure on for completion and targets and milestones are threatened with being put back. Occupational health screening is also carried out on some sites with employees—though not subcontractors—required to disclose any health problems. Occupational health nurses are employed on some projects and an occupational health service is offered to all.

The firm is taking particular measures to reduce health and safety risks. Ladders are being replaced by stairs, scaffold platforms and hoists so that mobility problems are less. All tools are now lifted up on to the place where they will be used and kerbs and flags mechanically laid. As a result, the firm's accidents statistics have been dramatically reduced and the nature of accidents changed. Nowadays there are far fewer three-day reportable accidents; in 2001 there were 28 reportable (over three days) accidents per 1000 employees but by 2005 this was reduced to seven. For the three months preceding the interview, there was no reportable incident. This dramatic reduction was attributed to the system in place, to the improvement of processes and the education strategy. Accidents are simply not accepted; if there is an incident then a team is sent to investigate and learn from it. Far more control is exerted over working practices and key performance indicators are established for sites.

Figure 1 The approach of a British firm

Employment in Company A—a small, but growing construction company originating in the 1930s and specializing in bricklaying and carpentry—has grown from 20 to 60 full-time equivalent (FTE) workers over the last decade. The workforce is still relatively young, though ageing. The firm has succeeded in reducing sickness leave from 6.3% in 2001 to 4.3% in 2005 (i.e. below the average sector level). Every 0.5% decrease in absenteeism leave is equivalent to an expenditure reduction of €12 000. According to the company management, a sound policy for healthy working conditions is one based on the joint responsibility of both employer and employee. The company prides itself on applying the most recent health and safety regulations. The company director holds a safety certificate for contractors but faces a number of difficulties due to the growth in its activities and the need to professionalize employment relations. In each of its three departments—maintenance, projects and private clients—sickness leave is similar, though risks are different. In the maintenance department, small repair work is undertaken implying much staircase walking, turning, kneeling, lugging and carrying, leading to injury to knees and backs. The solution was found in the introduction of better equipment, including elevators, and in outsourcing the most dangerous work. In the projects department, larger-scale operations went with repetition of tasks leading to bursitis, above all among tilers. Here task rotation has been introduced, resulting in reduced vulnerability. In the projects department, middle managers—including estimators, planners, project and site managers—suffered above all from stress. The latter group is the key occupation on site and will be protected where necessary in anticipation of physical exhaustion.

According to our respondents, the company could invest more in health and safety, especially in improving communication of the joint responsibilities of employer and employees, for instance by nominating employees with responsibility for hazard prevention, including physical loads, psychological stress and coping with dangerous materials. The official working conditions agency could be given a more transparent task and duty to explain the mutual responsibilities of medical doctors and advisers, on the one hand, and company management and employees on the other. Finally, the company management could develop an approach that is able to cope with differences in individual capabilities at work.

Figure 2 The approach of a Dutch firm

decreased by half, from 10% on average in the early 1990s to 5.3% in 2007 (EIB, 2008b, p. 17). Despite the individual-risk clauses introduced in 1994, inflows into the disability scheme have not seriously abated. In July 1998, the Act on the Reintegration of Labour Disabled People, came into force, containing measures to assist occupationally disabled and chronically ill employees, varying from adjustments to work stations to wage supplements, in (re)-entering a regular job. As a result, employers were made increasingly responsible for prevention and for reducing vulnerability to sickness and absence from work.

Divergence between the UK and the Netherlands arises in relation to sectoral and employer responsibility for disability. Whereas previously in the Netherlands the employer and the employee shared the disability premium equally, with the Pemba Act of 1998 the entire premium became the responsibility of the employer, the level being differentiated depending upon the number of disabled persons per company.

This led to a joint reinsurance regulation for construction companies to reduce the risk for individual companies. The Improvement Gatekeeper Act of 2003 was introduced to stimulate faster reintegration of sick employees back into work, with the help of particular premiums and provisions for successful and sanctions for less successful companies. In 2006, with the replacement of the old Disability Act by a Labour Capacity Act, (partial) ability to work rather than disability was central. The Act seeks to enlarge the capability to work, introducing a new activation scheme for partially disabled people. Partially disabled persons (less than 35%) are expected to remain employed on a part-time basis, whereas those with more than 80% impairment have access to a full benefit. The new system requires a medical test of all disabled people and for all employers to create job opportunities for partially disabled employees.

Health and safety legislation in the Netherlands also differs from that in the UK and is changing, from 'hard'

to 'soft' regulation. The first Working Conditions Act of 1980 stressed the importance of well-being and humanization at work, demanding health protection and optimal safety conditions for employees on the shop-floor. With the introduction of new health and safety regulation in 2005, all construction firms are required to seek support from a 'prevention professional' to assist the company in the preparation of the obligatory risk inventory and evaluation and to provide advice to the works council and employee representatives. According to research, firms consider the input of the prevention professional 'very useful' for 'truly' improving working conditions and safety at the workplace (EIB, 2008c).

Since the late 1990s, the government has also tried to convince the social partners at sector level to negotiate particular 'covenants' on working conditions to address priorities in reducing occupational hazards, in conformity with the European idea of 'soft law' via self-regulation and decentralization of responsibilities on working conditions to work organizations (Abbott and Snidal, 2000). In the period 2001–2005, the government and the construction social partners have negotiated particular covenants. In 2001, one focused on health and safety information provision and another on risks related to the use of quartz minerals, lifting and bending, stress at work, and organic psycho-syndrome (caused by painting work with poisonous or toxic materials). Both covenants aim to improve working conditions and reduce risks at work, sickness leave and accidents and have had concrete results. For example, the previous 'norm on lifting materials' is now a national policy rule monitored by the national labour inspectorate. Technical equipment has been developed to reduce quartz; a trowel has been introduced to reduce the physical strain on the wrist and arm while laying bricks; and there has been intensive public information on the use of aids and new methods for improving the organization of the work process and reducing stress at work. Twenty disabled construction workers have also been deployed to provide information to 12 500 construction sites. One remaining concern is site managers, one in three of whom faces stress-linked health problems; the labour inspectorate has proposed modification of their tasks and lightening of their responsibilities.

The decentralization of policy making to company level is backed up by the trade unions and employers' associations at sector level. The social partners no longer define access into the system, as was the case until 1993, but are responsible for establishing sound working conditions. The covenants on labour conditions in the construction industry, for example, contain a number of concrete, substantive issues, expressing trade union concern that 'hard' legislative rules should not be replaced by 'soft' regulations and gentlemen's agreements. The sector has also established its own Foundation on the improvement of working conditions and the various collective agreements contain clauses to improve working conditions. Moreover, the industry is a forerunner in the development of sectoral labour market and training policies, striving continuously to improve qualifications and at the same time labour standards.

Conclusions and discussion

There are marked similarities between Britain and the Netherlands in the nature of the construction sector, in the degree to which it is disabling, and in the barriers posed to the inclusion of those with disabilities. However, there are also differences. There is a much higher requirement for qualifications as a means of entry into the Dutch sector, placing greater responsibility than in the British case to accommodate those with disabilities on the vocational education system, as the main source of recruitment into the industry (Byrne *et al.*, 2005). In the Netherlands too the 'bogus' self-employment found in Britain, which puts the onus for sickness and disability on employees themselves, does not exist to the same degree. Indeed casual employment and informal recruitment practices, though they exist, are less typical of the sector, which is as a result potentially more inclusive of those with disabilities. Overall, the Dutch sector is more highly regulated through collective agreements, which cover healthy and safety at work, and has much greater trade union involvement and works councils to help ensure that regulations are put in place and that both social partners have mutual responsibilities.

European governments are now being required to alter current legislation on working conditions to be more in line with the European Framework Directives for Health and Safety at Work. This will mean adoption of a chain approach, one which brings together the concepts of occupational hazard, partial disability, work adaptation, working conditions, and reintegration after sickness leave. As apparent from this paper, the Dutch system is further advanced than the British in adopting this approach and Dutch policy more closely associated with a social model of disability, which perceives disability as socially constructed by the social, economic and environmental barriers erected to full participation in employment (Thornton and Lunt, 1995; Burchardt, 2004). The Dutch state has moved away from taking full responsibility for those with disabilities and now places greater responsibility on the employer. To support this, inflows and outflows of those with disabilities for each sector are closely monitored and

employers are obliged to continue employing those who become disabled for at least two years.

In contrast, policy in Britain has tended to move away from social obligation on the part of government for ensuring employment for disabled people to individual self-reliance. There is also a concern with employer as opposed to individual obligation through the onus laid on employers not to discriminate against those with disabilities—whether in terms of recruitment, selection or employment—and to make 'reasonable adjustments' for those with disabilities. However, as we have seen in our case study, the emphasis on construction sites is focused on safety, with policies emanating from the top down, rather than based on social partnership. In the highly disabling construction sector, the 'capabilities' approach tends to predominate, emphasizing the disadvantages experienced by individuals and their capability to do a range of things.

The attention given to monitoring at sectoral level also indicates that disability is relative to the occupation and the work undertaken. Dyslexia is, for instance, not regarded as problematic for most building workers where occupational health screening would not seek to identify it; colour blindness is a disability with respect to electricians, but not for concrete workers. Disability is in this respect relative, defined as the converse to 'able-bodied' with respect to particular labour market sectors and occupations. This relativity is apparent in attempts in Britain by HSE to define 'fitness to practise' for the construction sector and in the Netherlands to define the degree of disability in relation to the kind of work performed.

In showing how the nature of discrimination, the disabling factors and the enabling measures required are specific to the construction sector, our analysis underpins the need for a sector-specific approach to disability policy, one more in tune with the social model. This would become even more transparent for Britain if the monitoring which occurs in the Netherlands were applied to establish the degree to which the sector excludes those who become disabled and, at the same time, includes or enables the entry of disabled people. The result would be greater social responsibility being placed on the construction sector to include those with disabilities.

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Towards a social model approach?

British and Dutch disability policies in the health sector compared

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Abstract

Purpose – Based on the nursing occupation within the UK and The Netherlands' health sectors, which are both highly regulated with policies to increase inclusiveness, the purpose of this paper is to investigate the interplay between employment conditions and policy measures at sectoral level, in order to identify how these both facilitate and limit employment participation for disabled workers.

Design/methodology/approach – The research was exploratory in character using qualitative and comparative methods within a case study approach. It draws on statistical data, document analysis, focus group discussion and interviews with key actors in the health sectors in both countries.

Findings – Whether the social or medical model predominates, their combined use encourages the employment of disabled persons in the health sector. Arguably the social model, focusing on structural changes, can be seen as more enabling. The Dutch comparison shows that encouraging a sector-specific approach, with increased social partnership dialogue, facilitates the implementation of the social model, resulting in sectorally-appropriate enabling measures.

Practical implications – This research highlights the need for a sector-specific approach to disability policy, with development of sectoral monitoring data and evaluation of impact by the social partners.

Originality/value – While previous academic research focused on the aggregated (national) level only, this research investigates the interplay between training, employment, working conditions and policy measures at sectoral and occupational levels, with a view to identifying their influence on employment opportunities for persons with disabilities.

Keywords Disabilities, Employment, United Kingdom, The Netherlands, Health services sector, Social model, Social dialogue

Paper type Research paper

Introduction

The aims of this paper are to examine the interplay between employment conditions and governmental policy measures, in order to identify how these both facilitate and limit labour market participation of workers with disabilities within the health sectors of Britain and The Netherlands, and to evaluate changes in the disability policy framework in both countries. Education and training requirements, employment systems, and recruitment and selection procedures can act as gatekeepers, limiting or assisting the participation of those with disabilities. Our concern is therefore to disentangle enabling and disabling factors in the health sector in the two countries.

This is no easy task, partly because little information is available at sectoral level on those with disabilities.

While academic literature and governmental reports (Woodhams and Danieli, 2000; Jolly, 2000; Grewal *et al.*, 2002; DoH and DRC, 2004; DRC (Disability Rights Commission), 2004; Rigg, 2005; Barnes and Mercer, 2005; Jones, 2005; Jones *et al.*, 2006; Danieli, 2006; Woodhams and Corby, 2007; Berthoud, 2008; Wilson-Kovacs *et al.*, 2008; Pagan-Rodriguez and Sanchez-Sanchez, 2011) have focused on the situation and integration of workers with a disability at the aggregated labour market level, there is limited research investigating the processes and structures of exclusion/inclusion at sectoral and occupational levels (Stevens, 2002; Duff *et al.*, 2007; Morris and Turnbull, 2007). The approach to disability has instead tended to be either from the perspective of the individual, to discover what "reasonable adjustment" needs to be made in order to accommodate someone with a particular disability, or from the point of regulation, to explain why the number of those recorded with disabilities and in receipt of disability benefit are so high or changing. Sectoral focus is however important to identify differences and similarities. Some sectoral research, often linked to international comparisons and trends of collective representation (for example Locke *et al.*, 1995a; Katz, 1997; Katz and Darbishire, 1999; Royle and Towers, 2002; Jimenez-Martin *et al.*, 2006), has highlighted similarities that are found within specific sectoral groups (fast food, telecoms, automobile and steel industries, banking and agriculture). Within the health sector a number of studies have shown that employer attitudes and the nature and level of the job are all important sectoral influences on employability for the disabled (Alamgir and Su, 2008; Franche *et al.*, 2010, Tullar *et al.*, 2010; Wood and Marshall, 2010; Kaye *et al.*, 2011).

This paper first discusses different theoretical models of disability, followed by an examination of policies in Britain and The Netherlands in the light of these. It continues with an analysis and comparison of both the UK and Dutch health sectors and their specific applications of disability policies based on our exploratory research, with a specific focus on the nursing occupation, and in response to the question: which policies are most "enabling"?

Different models of disability

Government disability agendas in both countries are concerned with reducing the increasing numbers on disability benefit, often focusing on how individuals might be integrated into the labour market, including through "reasonable adjustment" measures – evidenced, for instance, by the UK's current coalition government's stringent Work Capability Assessment (DWP (Department of Work and Pensions), 2011). These social policies are underpinned by philosophies or "models" about disability that are classified by the extent to which they focus on either the individual or the environment. Two main models exist: the medical "functional limitations" and the "social model", though the distinction between the two is by no means clear cut. Burchardt (2004), for example, argues that the capabilities framework provides a general theoretical framework in which to locate the social model of disability and Mitra (2006) advocates that no single model can totally explain disability. The World Health Organisation (WHO) (2011, p. 4) promotes a "workable compromise between medical and social models" through a joint "bio-psycho-social model", with the conceptual framework for its International Classification of Functioning, Disability

and Health (ICF) that "understands functioning and disability as a dynamic interaction between health conditions and contextual factors, both personal and environmental".

The medical model focuses on the individual, whereby disability is seen to have a negative influence on the position of disabled person in the labour market, leading to dependency, lower productivity and legitimated exclusion. This approach, while now considered to be marginalised, pathologises disability, portraying it as a medical condition, similar to ill-health, requiring the disabled individual to adapt in order to "function" within the labour market (Gabel and Peters, 2004; Thomas, 2004). As Burchardt (2004, p. 736) explains: "The emphasis in this model tends to be on curative or rehabilitative strategies – changing the individual to fit society". The workplace is seen as neutral – something to which the individual has to adapt (Pfeiffer, 2001; Mitra, 2006; Mont, 2007). Before 2005, disability policies, especially in the UK, followed a model similar to the medical model but focusing on functioning and exploring possibilities rather than limitations, the linked "capabilities" model as defined by Sen (1980). Here the individual remains at the centre of the action and any constraints on participation are seen to be determined by the capabilities required and the associated environment (Baylies, 2002; Burchardt, 2004; Mitra, 2006).

Also linked to the medical model is the functional limitations approach epitomised by the work of Nagi (1965, 1991). This model regards disability as the final stage in a three stage consecutive process – pathology, impairment and disability. The initial stage, pathology, depicts the presence of a physical or mental condition as disrupting normal functions. Impairment, which follows this, limits a person's capacity to function but does not yet imply a disability; this occurs only when the impairment limits one or more "life activities", for instance employment (Burkhauser *et al.*, 2002; Mitra, 2006).

In contrast, the social model of disability (Oliver, 1983; Barnes and Mercer, 2005) which grew in importance in the 1970 s and 1980 s, argues that people are disabled by society, not by their functional limitation, and that disability is "something imposed on top of our impairments by the way we are unnecessarily isolated and excluded from full participation in society" (UPIAS, 1976; Thomas, 2004). A distinction is even made between "impairment", as an attribute of the individual, and "disability", limiting equality of opportunity in the labour market (Burchardt, 2004). In the social model, disability is associated with social oppression and, as such, becomes a political issue: "disability as a social construct [. . .] not the attribute of the individual; instead, it is created by the social environment and requires social change" (Mitra, 2006:237). Actions to integrate disabled workers need therefore to focus on, for instance, social partner dialogue.

This model has been criticised by writers such as Shakespeare and Watson (2001) and Williams (1999) on the grounds that it attempts to separate impairment from disability completely, though impairments still affect the lives of disabled people. Burchardt (2004) too comments that the capabilities framework and the social model of disability have been widely misunderstood and have common ground. Nevertheless, the issues core to the social model – that disability cannot be understood or analysed without looking at the role structures, policies and practices embedded in society as a whole – are useful in order to examine the role of society in excluding disabled people (Barnes and Mercer, 2005).

While the medical model requires "treatment" for improvement, the social model requires "political action" (Hughes and Patterson, 1997; WHO (World Health

Organisation), 2002). Indeed, Oldman (2002) sees the social model as the basis for collective action, wanting to transfer this approach to improve the position of older people. Such political action is epitomised by the parliamentary lobbying of interest groups (e.g. Royal National Institute of Blind People – RNIB) and trade unions. In the UK, the silencing of these groups due to lack of funding (Hurst, 2005) and reduction in union density and consequently strength has limited their powers to affect social change. This echoes the trend of diminished collective representation and disenfranchisement discussed by Royle and Towers (2002) and Locke *et al.* (1995a, b).

As a relative term, defined in relation to a specific labour market occupation or activity, disability becomes not an attribute of the individual but defined in relation to – and even attributable to – the activity undertaken (Russo and Jonsen, 1988; Mont, 2007), implying that a different work context will lead to different meanings of disability. Dependence on broad, aggregate definitions of disability may even serve to 'disable' or deter persons with disabilities from working in particular sectors and occupations, though they have the capacity or ability to do so. It is therefore important to evaluate relative abilities in terms of the particular occupation or job to be undertaken. As Mabbett (2005, p. 228) argues: "different workers should be treated differently to the extent that this is necessary to ensure that they have equal access to employment rights". The implication is that a disability for one occupation or sector may not necessarily be disabling for another. "Disability", and its converse "able-bodied", are therefore concepts that need to be understood in relation to the labour market and to particular occupations and sectors.

Methods

The paper draws on international research carried out in 2006-2008, funded by the Norwegian Work Research Institute under its programme "Disabled, working life and welfare state" that involved a comparison of disability in three contrasting sectors – construction, ICT and health – in three countries – Britain, The Netherlands and Norway, aiming to describe patterns and variations between occupations and to assess the influence of employment for excluded and marginalized groups, in particular for the disabled. Our concern was to disentangle enabling and disabling factors. This paper focuses on the health sector findings, which were collected via desktop research, primary qualitative data collection (mainly through interviews) and a full-day seminar discussion/expert focus group.

The health sector enables meaningful comparisons because it is one of the largest employers and a key public service provider in both the UK and The Netherlands, with similar structures and occupations. The research was exploratory in character using qualitative and comparative methods within a case study approach. In both countries desktop research and primary research was conducted, the latter through semi-structured interviews with key national and sectoral stakeholders, using comparable topic guides covering the following themes: recruitment, training, employment and working conditions, social dialogue processes and equal opportunity and disability policies as well as an interactive focus group. In order to have one common focal point in this exploratory phase only disability policies for the occupational group of nurses was taken into account, as they constitute the largest profession in the sector in terms of numbers employed in both countries.

Interviews were almost entirely conducted face-to-face (interviews by telephone in two cases as this was the only possibility), 21 in total, averaging one to 1.5 hours each, with key people (such as HR directors, disability advisors, education/ training experts) in: national disability organisations (such as Disability Rights Commission in Britain); employers' associations such as NHS employers and the Dutch "Nederlandse Vereniging van Ziekenhuizen-NVZ" (National Organisation of Hospitals); nursing labour organisations, such as UNISON and the Royal College of Nursing (RCN) in the UK and Abvakabo FNV (largest public sector union) in The Netherlands, as well as health trusts/hospitals. For the UK, interviews were conducted with key persons in two trusts, both located in the south-east: a National Health primary care trust covering four hospitals with a catchment area of 200,000 people and a NHS teaching hospital with a catchment area of 700,000. In The Netherlands, six general hospitals and two large nursing homes were visited, located in and around the Randstad conurbation. Table I provides an overview of the organisations, whose names are not mentioned to protect the confidentiality of participants.

As part of the desktop element of the research, statistical data from government sources (Departments of Health, NHS, "Federatie Nederlandse Vakbeweging – FNV (Federation Dutch Labour Movement)" and "Centraal Bureau voor de Statistiek – CBS" (Central Statistics Service) and organisations interviewed were analysed. In addition, the web sites, publications and published reports of these organisations were explored in terms of disability policies. Interviewees and additional contacts with these organisations and hospitals provided us with disability policy-related internal reports, policy documents, sectoral disability-related publications and organisational data and figures on disabled workers which were analysed from a qualitative perspective.

An important part of the research process was the organisation of a one day group discussion/focus group in London where our interim report on the inhibitors of labour market integration for disabled workers in the three sectors of health, ICT and

	Interviews in 2006/2008
The UK	
Royal College of Nursing	One interview
Disability Rights Commission	Two interviews
NHS employers	One interview
UNISON	One interview
CLASS Central London Assessment Services (for assessment and guidance on disability in higher education)	One interview
NHS Trust A primary care trust covering four hospitals	Two interviews
NHS Trust B teaching hospital	One interview
Anonymous	One interview
The Netherlands	
FNV *Federatie Nederlandse Vakbeweging* (*Federation* Dutch *Labour Movement*)	One interview
NVZ Nederlandse Vereniging van Ziekenhuizen (National Organization of Hospitals)	One interview
Abvakabo FNV (*Federatie Nederlandse Vakbeweging –*	One interview
Six general hospitals	One interview each
Two nursing homes	One interview in each

Table I.
Interviews taken place at following institutions

construction was discussed. The focus group "day" was attended by 30 experts – 24 related to the health sector research, consisting of representatives of the different stakeholders (employers, trade unions, Sector Skills Councils, disability organisations, health trusts and government), companies and organisations participating in the research, disabled workers, academics, and the research partners. As it was held in London, most sector-related practitioner participants were UK based, limiting practitioner-focused international comparisons although research experts from the three countries were present. Themes discussed included employment and disability enablers and disablers in each of the sectors across the two countries. Table II provides an overview of the participants to this focus group. Members of the UK research team used notes of the discussions to produce a focus group report that was distributed to the participants for confirmation and comments. This report was then used to inform the final research report.

The British health sector and disability policies

The health sector in the UK employs 7.3 per cent of the working population. It is predominantly a matter of public concern, with 72 per cent employed in the public health sector, the National Health Service, in 2008 (ONS (Office of National Statistics), 2009). The biggest occupational group are nurses. The British health sector has a slightly higher than average representation of disabled people, at 15 per cent, heavily skewed towards the older age groups (Meager and Hill, 2005). As in the economy as a whole and as in The Netherlands, higher proportions of disabled than non-disabled people are found in employment at less well-qualified levels (Pagan-Rodriguez and Sanchez-Sanchez, 2011) The sector is characterised by: a high incidence of part-time employment – almost as high among non-disabled as disabled people; a high proportion of women workers; and an ageing workforce especially in nursing (Oxford Prospect, 2006; Buchan, 2007).

Since 1997 the number of qualified nurses working in the public sector has increased on average by over 10,000 a year to reach 410,000 by 2010 (NHS Information Centre, 2011). The growth in the nursing workforce has been achieved by increasing the number being trained and by encouraging a return to the profession, improving retention and recruiting internationally. The total number of disabled employees in the NHS in 2004 was 192,000, 152,000 women and 40,000 men (Hirst and Thornton, 2005).

Organisation	Number of participants
NHS Trust 1	One
NHS Trust 2	Two
NHS Employers	Four
Disability Rights Commission	Two
Department of Work and Pensions	Two
Trades Union Congress	One
University of Westminster	Four: observers/facilitators and discussants
Norwegian Work Research Institute	Four: three observer/facilitator and one discussant
Dutch research team	One discussant
Anonymous: three organisations	Three
Experts related to other sectors included in the research (ICT, construction)	Six

Table II.
Participants of expert focus group "Disability and Employment" May 2006

Overall, the public sector is more likely than the private to be enabling for the disabled in terms of employment, recruitment and making adjustments to the workplace to facilitate employment (Hirst and Thornton, 2005). Roberts *et al.* (2004), found that three-quarters of public sector employers had arrangements for flexible working to assist disabled workers.

Health sector union membership is concentrated within the Trade Union Congress (TUC) affiliated unions, Unison and GMB, as well as the professional RCN and the British Medical Association (BMA). While union density in the UK health and social care sector is high in comparison to the average overall (43 per cent to 28 per cent in 2006), national and sectoral level collective bargaining has eroded as part of a larger social trend, placing greater onus on individual rights and responsibilities, with a subsequently more prominent role for the employer (Locke *et al.*, 1995b; Cunningham *et al.*, 2004). There is no systematic regulated sectoral social dialogue, and in particular no regulation and monitoring of sectoral inflows and outflows of disabled workers. At sectoral level, the emphasis of social dialogue is on accident prevention, through for instance occupational health policies (such as "fitness to practise" in the health sector), or on specific "reasonable" accommodation to the individual disabled person rather than on making the sector as a whole more "enabling", suggesting a medical model. This contrasts with consideration given to the inclusion of women and those from ethnic minority groups in especially segregated sectors which has often focused on structural barriers and equality policies (e.g. Rubery and Fagan, 1995).

Nationally within the health sector there exists the infrastructure for promoting and implementing enabling policies through the Social Partnership Forum between the 16 different unions, the NHS employers, the Department of Health (DoH) and relevant government ministers. This has been in existence since 2002, although largely ineffective and not particularly inclusive – reports produced, such as "Commissioning a Patient Led NHS" (DoH, 2005, 2007), have been devoid of union and staff input. In 2007 the then Health Minister attempted to rectify this and a new partnership agreement was drawn up which operated at national level, with additional partnerships encouraged – but not universally set up – at local level. At the national level the Forum and partnership agreement has not explicitly concerned itself with issues of disability; indeed, the 2008 "Involvement and Partnership Association (IPA) review" of the Forum Partnership made no mention of disability, indicating just how far below the radar disability provision for staff and service users appears within the social partnership (IPA, 2008). Individual unions do, of course, lobby on disability issues, as our Unison interviewee illuminated. Indeed, Unison, along with the Trade Union Disability Alliance, argues for disability leave policies to be in place alongside sick leave ones – thus ensuring that the "sickness records" of those with disability are not disproportionately disadvantaged (UNISON interviewee).

The UK's Equality Act 2010 defines disability in terms of impairment and its impact on functioning: "a person has a disability if they have a physical or mental impairment and the impairment has a substantial and long-term adverse effect on their ability to perform normal day-to-day activities" (ODI, 2010, p. 6). Recent UK disability policy affecting the health sector shows signs of a slight movement towards the "social model" thereby shifting towards the Dutch approach. In particular the introduction of the Disability Equality Duty in 2006 (now part of the Equality Act 2010) for the UK public sector, including the health sector, indicates a clear movement in this direction,

although recent changes have watered down the requirements (Government Equalities Office, 2011; Fredman, 2011; Hepple, 2011; Lawson, 2011). The UK policy framework has switched focus from disabled individuals and their capabilities to a stronger responsibility on public bodies to alter their practices to ensure opportunities for the disabled. This switch implies that disability policies are more closely related to other diversity and inclusion-related policies (echoing Oldman (2002)), which have tended to focus on the removal of social and structural barriers to introducing equality policies in order to help ensure the inclusion of women and those from ethnic minority groups in sectors and occupations where they are underrepresented (e.g. Rubery and Fagan, 1995). UK disability policy, which arguably was formerly solely underpinned by medical model perspectives through the assessment of impairments and capabilities, has thus shifted, under recent legislative requirements, to absorb elements of the social model approach, so opening up opportunities via structural changes not focussed just on functional limitations.

Inclusion in the public health sector has been helped by adjustment from individual to environmental factors in the regulatory UK framework over the last decade: The UN convention on the Rights of Persons with Disabilities (ratified by the UK in 2009) aimed to take "appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment" (UN, 2007, p. 9). For the UK in particular, the Disability Discrimination Act, required public sector bodies to comply with Disability Equality Duty provisions of 2006 (now under the Equality Act 2010) by adjusting the workplace, so enabling inclusion. In practice, the duty required the formation of Disability Equality Schemes (DES), three-year action plans, and progress measurements, as well as the involvement of disabled people in developing these. Limitations on employment activity for the disabled in the health sector have thereby become less oppressive with this shift from defining individuals as disabled (and making workplace adjustments specifically for those individuals) to creating a working environment promoting equality for disadvantaged groups via policy and approach (Fredman, 2001; Woodhams and Corby, 2003).

Our interviews at the two NHS trusts showed how the new "duty" has given impetus at policy level to addressing issues around disability, both in relation to employment and patient care: NHS Trust A, for example, was reviewing the impact of all its policies and procedures and involving disabled people, both employees and patients, in the process. NHS employers too have increased occupational health provisions and placed greater weight on targets for reducing staff ill-health, especially stress levels, and on rehabilitation (interview with NHS employers). This is in line with an Ipsos Mori audit (2007) confirming that 92 per cent of 118 Primary Care Trusts (PCTs) had produced a Disability Equality Scheme (DES), with the majority involving disabled people, above all staff, in drawing this up.

Through the DES, trusts have specifically sought to introduce the social model into their organisation's employment practices (DoH (Department of Health), 2006). For instance, NHS Norfolk (2008) explicitly rejected the medical model and adopted the social model for its 2009-2012 equality policies (p. 8). In Hereford Hospitals NHS', 2009-2012 equality scheme "the Social Model of Disability is adopted as we recognise that disability is caused by the way in which society fails to meet an individual's needs" (Hereford Hospitals NHS, 2009, p. 3). Whipps' Cross University Hospital (2010),

states its "responses towards promoting disability equality are informed by the Social model of disability" in its DES 2010-2013 (p. 2).

There is, however, a manifest difference between the integrative intentions of the Equality Duty and its implementation into institutional policies and procedures for the NHS or specific Trusts (Hamilton, 2003). Our interviews and analysis of equality policy documents and briefings found no substantial evidence of positive changes in disabled employment, suggesting that, though the national regulatory framework might influence policy, it is insufficient for enabling action at sectoral and occupational levels. Interviews (Trust A and B, UNISON, RCN) highlighted the following limitations: the implementation of this Duty was not seen as a priority – the need and form of integrative policies for disabled workers was not identified at sectoral or at root level through workplace dialogue, but was "pushed" downwards from the national level, giving a reactive approach; the lack of focus on employment of disabled persons as the DES focused foremost on the "service" duty, targeting the inclusion of disabled patients and visitors rather than disabled employees or potential employees – so that nurses remained "unprotected"; the pledge to a social model approach, although explicitly referenced in DES, is not really understood or "owned" and has only been incorporated by using a generic DoH template, confirming the reactive approach.

While the new public duty has given an impetus to consider adjustments for those with a disability, recent changes to the Equality Act (Specific Duties) Regulations 2011 may, arguably, militate against this by restricting the duty. The provision to provide a plan of action and show how it has been achieved is no longer incorporated and the Trust has instead to provide evidence of compliance and indicate which objectives it thinks it ought to accomplish (Hepple, 2011; Lawson, 2011, Fredman, 2011). Consequently the tentative positive actions initiated by the duty may stall, with trusts just paying lip-service to equality provisions. Severe limitations on the policies in practice are evidenced too by access to occupations, education and recruitment.

Access to the occupation
The main qualification for nurses at the time of our research was the diploma, although an increasing number take degrees in nursing or midwifery and this will become mandatory. In addition to classroom learning, each training programme for qualifying (pre-registration) nurses consists of at least 50 per cent practical experience, via clinical placements at local health trusts and hospitals. Interviewees (NHS employers) referred to good practice initiatives, such as working with local colleges and local employers to support work placements for disabled people. Statistics on applications and acceptances by disability for the diploma show that "unseen disabilities" and "learning difficulties" constituted the most common categories; there were few applications from those with blindness/partial sightedness or with hearing impairments, and even fewer from those with mobility problems (NMAS (Nursing and Midwifery Admissions Service), 2005).

Key interviewees (Central London Assessment Services (CLASS), Disability Rights Commission[1] (DRC)) agreed that one of the more enabling aspects of training provision for nurses is the additional monetary allowance (available to disabled students on degree and diploma courses) for specialist study equipment and transport costs. While the majority claim this for dyslexia, requiring special IT equipment and software, it can also help to pay for sign-language interpreters and Braille paper. As

part of the application process, all students must declare they are in good health – referred to as "fitness to practise" – but the Nursing and Midwifery Council (NMC) states that "a registrant may have a disability, such as impaired hearing, or a health condition, such as depression, epilepsy, diabetes or heart disease, and yet be perfectly capable of safe and effective practice" (NMAS (Nursing and Midwifery Admissions Service), 2008). Yet the disabled trainee will encounter obstacles: a NHS Trust B interviewee illustrated this with the examples of one student's Myalgic Encephalopathy (ME), which was aggravated by working night-shifts, and an epileptic trainee affected by ward-lighting. The system was still seen to favour those on standard contracts who can exceed the minimum training requirements; those on non-standard contracts – more likely when disabled –who are unable to undertake additional training, may be regarded as less committed to professional development, so damaging their career prospects.

The requirement for "fitness" impacts on disabled inclusion and may be potentially discriminatory. An interviewee (anonymous) confirmed that there are still fears about people with HIV or epilepsy training as nurses. Health and safety is used as a justification for excluding the disabled from employment, confirming the DRC and HSE's review (2003, p. 1) that "stereotyped views, wrong decisions and excessively cautious risk assessments may all act as unnecessary, lawful barriers". This supports Wood and Marshall's study (2010) of the impact of nurse managers' attitudes on the accommodation of nurses' disabilities.

Skill shortages provide an impetus to widening access to the health professions. As recognised by the Agenda for Change White Paper, the retention of UK nurses is a key problem with a significant number of qualified staff not continuing to work in the profession. Attracting experienced people back is a particular challenge, as is the fact of an ageing nursing workforce (RCN (Royal College of Nursing), 2005; Buchan, 2005). "Return to practise" courses are available for those who have taken a break of five or more years, prompting a new openness to non-traditional sources of labour, including the disabled. The National Midwifery, Recruitment, Retention and Return to Practise Project specifically aims at tackling the problems of recruiting and retaining midwives by building on "Improving Working Lives", a set of standards launched by the DoH in 2000 for implementation across the NHS (Skinner *et al.*, 2004; Walker, 2000).

Some health authorities have made specific efforts to ensure that disabled applicants are not discouraged in the recruitment stage. For example Mersey Care NHS Trust (2004) developed appropriate positive-action initiatives, recognising barriers exist preventing disabled people from achieving their full potential and that each individual will have a different set of needs depending on the disability (p. 12). Interviews in Trust A and B confirmed the "Back-in-Work" campaign, launched in 2002 and addressing NHS employees, is also an enabling measure, seeking to prevent musculosketal problems and ensure less-disabling workplaces. Similarly one interviewee confirmed (NHS Trust B) that for recruitment purposes a poster is used featuring a hand on a wheelchair, inviting applications from all sections of the disabled community.

Overall, interviewees (UNISON, RCN, Trust A and B) confirmed that signs of a steady improvement in the integration of disabled nurses in the health sector are not there (yet) for the following reasons:

(1) *The harshness of the workplace*: the health service is considered one of the unhealthiest places to work This is, confirmed by the reports of Silcox (2004) and Occupational Health (2004), that nearly a quarter of NHS staff reported an injury or illness in the preceding year from moving or handling patients, needlestick or sharp injuries, trips or falls, or from being exposed to dangerous substances. The high psychological demands of such an active profession as nursing are also linked to higher levels of long term illness (Lidwall and Marklund, 2006). Evidence from our interviews (NHS Trust A and B) showed a lack of coherence in response within trusts as well as between trusts. For example, policies linked to encouraging those with back injuries back to work confirmed by interviewees in both trusts were not necessarily followed in practice. One interviewee (Trust A) discussed the expediency of "letting go" such members of staff. The heavy demands of the profession are also indicated by the fact that the 41 per cent of nurses have been found to be subject to some kind of violence and working hours are not as inclusive as they seem: although part-time work is prevalent, over half of NHS staff usually work more (unpaid) hours than in their contract (IDS (Incomes Data Services), 2007).

(2) *The stringent guidelines in monitoring nurses' "fitness to practise" (NMC)*. Interviewees (NHS Trust B) confirmed that nurses might have to terminate their employment as a result of ill-health or the onset of disability. One suggested that decisions about disabled applicants' access to the profession are influenced by consideration of the demanding physical tasks deemed essential. In addition, once qualified, there are constraints on the ability to make adjustments with the onset of a disability – perhaps a disability that has developed as a result of the job itself. Those nurses with disabilities who do work in the profession would seem to face not only physical challenges but also attitudinal barriers. Interviews (NHS Trust A and B) confirmed the limited awareness of disability and its effects among colleagues, echoing Skill (2005) and Wood and Marshall (2010). There is a perception that disabled people should be on the receiving end of healthcare professionals, rather than being involved in delivering and promoting healthcare. The outcome for individual employees with new-onset disability is, to some extent, determined by the attitude of individual managers and the extent to which they are willing to be creative in their employment decisions.

The RCN interviewee pointed out that these awareness problems are being tackled through publicity, workshops and workbooks, promoting good practice in rehabilitation and return to work. The NHS Trust A interviewee, on the other hand, suggested that the over-riding concern with competitiveness and efficiency may have a negative impact on disabled workers' integration. Informal arrangements exist within work teams to ensure that the range of tasks is successfully completed and the needs of different staff accommodated without explicit and formal intervention. Such informal arrangements may increasingly be undermined by the designation of staff as individual units of resource who must each be able to complete the range of tasks independently and to act flexibly.

(3) *Concern about risk*, particularly in connection with conditions like diabetes and epilepsy and learning disabilities such as dyslexia and dyscalculia, is a key

inhibitor. Perceptions about risk to patients and potential liability and uncertainty about the extent to which individual staff can keep up with the pace of work may not be based on sound assessments, but they may inhibit a positive stance on employing nurses with disabilities. This concern, combined with lack of understanding, may lead to an unreasonable and unreasoned approach. Interviews (UNISON, Trust A and B) highlighted such examples, for instance the ability of a nurse with mobility problems' to do the job was questioned on the basis that she might have difficulty in getting to the office on another floor where replacement batteries for her bleep were to be issued. And an employee wheelchair user was set an obstacle course as part of a selection process – to ensure that she would be able to negotiate the space.

In summary, governmental legislation such as the equality duty imposed on the health service has resulted in policies that promote inclusion and are more closely aligned to the social model of disability, though evidence of a difference in practice is scarce. Aspects of the sector, arguably, militate against positive outcomes, including demanding working conditions, perceptions of increased risk and strict judgements about health and safety can still form significant obstacles for inclusion, especially under the "fit to practise" policy based on impairment assessment – part of the medical as opposed to social model approach.

The concerns can only be resolved through debate between stakeholders. But sectoral social dialogue is not as prominent and important in the UK as The Netherlands. Public policy decisions, together with the processes within the regulatory bodies that control access to employment in the health professions, determine how far the sector is one that can be described as enabling rather than disabling. There is a difference between the disability equality rhetoric, initiated primarily at national governmental level and steeped in both medical and social model philosophy, and the reality at sectoral and trust level where specific elements of the harsh environment and assessment of capability and risk make implementation difficult. There is no evidence from our exploration that dialogue between the parties involved (social partners and government) is sought to close or even discuss this gap. No real environmental changes can be agreed or implemented without social dialogue, and without this any measure to improve participation will still need to be championed by the individual disabled worker.

The proposed and current levels of cuts within the NHS together with the Equality Act 2010 and its associated changes linked to disability are likely to have further implications. The progress made is tenuous and it may be that implementation will deteriorate as constraints and employment within the sector become tighter.

The Dutch health sector and disability policies

The history of disability policy in The Netherlands sharply contrasts with that in the UK, the main difference lying in the existence of the "Dutch disease" and the importance of the social partner debate at sectoral level. Additionally, Dutch legislation does not distinguish between a "professional" and a "social" risk of disability, suggesting that impairments do not necessarily originate from the labour process. Disability due to birth or a sports injury outside work is dealt with in a similar way to work-related accidents. Moreover Dutch regulation acknowledges partial disability,

the degree of disability being based on earnings capacity rather than capacity to work (Donner Commissie, 2001).

The changes to disability legislation and policies in The Netherlands over the last 20 years were mostly enacted to address the "Dutch Disease", exhibiting the "welfare without work" nature of the corporatist, conservative welfare state in The Netherlands (Aarts *et al.*, 2002; Esping-Andersen, 1996; Muysken and Rutten, 2002; Van der Veen, 2005; Visser and Hemerijck, 1997). From the 1970 s, disability rates rose higher than unemployment rates, reaching peak levels of almost 993,000 in 2002 (in comparison with an active labour force of 7 million). Overall, this led to policies to control access to and the costs of the disability system, placing a larger responsibility and accountability on the employer. It has also stimulated debate within the sector. To reduce extended long-term inactivity and associated financial burdens on the welfare state, a change of policy was introduced in the 1990 s, which represented a move from passive benefits to active reintegration into the labour market (Van Gestel *et al.*, 2009; WRR Dutch Scientific Council for Government Policy, 1990). This change was triggered by a parliamentary investigation in 1993, concluding that sickness and disability regulation determined through sectoral bodies had served as an easy exit-route from the labour market and that the employers' associations and trade unions were "jointly guilty" of misuse of the disability system (Buurmeijer Committee, 1993). As a response, various reform programmes were introduced to control access and expenditure on the disability system.

In 1993, an Act was introduced to reduce Access to the Disability Regulation (Wet TBA, *Wet Terugdringing Beroep op Arbeidsongeschiktheidsregelingen*), stipulating that, if an employee becomes ill, the employer must continue to pay his or her wage for two years and those still unable to work only qualify for disability insurance after this period. This resulted in lower public expenditure on benefits. In 1996, provisions under the Sickness Benefit Act were privatised. The Act, the Reintegration of Labour Disabled people (REA), in force since 1 July 1998, contains measures for occupationally-disabled and chronically-ill employees who need help in (re)-entering a regular job. The Act made employers responsible for prevention and for reducing vulnerability to sickness and absence from work via the introduction of obligatory wage payments for those absent from work on health grounds. The financial incentive system built into this so-called Pemba Act encourages employers to improve health and safety conditions in their organisation, in order to reduce the risk of employees becoming ill long-term, especially since employers' contributions rise when more people apply under the regulation (Pemba, *Wet premiedifferentiatie en marktwerking bij arbeidsongeschiktheidsregelingen,* 1998).

These regulations gave the impetus to an improved sectoral dialogue with the trade unions. After lengthy debates, the government introduced a Labour Capacity Act (WIA) focussing not on impairment but on the capabilities of partially disabled people to work and generate an income.[2] The Act seeks to enlarge the capability to work, introducing a new activation scheme for partially disabled people: those more than 35 per cent disabled should be working part-time and those with less than a 35 per cent disability remain employed, preferably with the current employer. The new system requires a medical test of all disabled people and for all employers to create job opportunities for partially disabled employees. As a result, the inflow of those coming under disability regulation decreased from 118,000 in 2001 to 25,000 in 2006. Given the

constant outflow, above all due to retirement but also to reintegration into the work process, the stock of disabled persons in 2006 fell to 842,000 (UWV, 2007, p. 76). The regulation of health and safety in The Netherlands is also finding a new equilibrium between "soft" and "hard". The first Working Conditions Act of 1980 stressed the importance of well-being and humanisation at work, demanding health protection and optimal safety conditions for employees on the shop-floor. From the late 1990 s, the government tried to convince the social partners at sector level to negotiate covenants on labour conditions to address priorities for reducing occupational hazards (Abbott and Snidal, 2000). At the same time, provisions under the Sickness Act were privatised and various regulations define a "carrot and stick" approach with respect to integrating disabled persons.

Specific disability policies for the Dutch health sector
As in the UK, the health sector in The Netherlands is highly regulated, complex and under considerable political pressure in terms of cost-control and transparent accountability. Employee relations are institutionalised through legal provision, discussions in works council and the application of collective agreements (Van der Meer, 2008). In 2005, just over one million workers were employed in health care as a whole, 16 per cent of the Dutch labour force (compared to 6.5 per cent in UK), though many are part-time (CBS, 2005). Three sub-sectors dominate – hospitals, nursing homes and domiciliary care – and the majority of health care workers are employed in the nursing profession (67 per cent). While the Dutch and UK health sectors may share similar characteristics in terms of gender composition and part-time work, they contrast in terms of disability policies, measures and definitions. One focus of the Dutch system is, for instance, the rate of disability inflow and outflow, a measure not used in UK, though this provides an indicator of the extent to which a sector is enabling or disabling. Another contrast is the degree to which incapacity is critical to employment in a sector.

As in the UK, employees in the Dutch health care sector on average have harder working conditions (a high pace of work, physical and emotionally demanding work, aggression, etc.) than in the economy as a whole. In 2003, a sector-wide survey on working conditions in the health care sector showed that 66 per cent of those employed experienced physically hard work, more than double the proportion for the economy as a whole (29 per cent), while the share of employees experiencing emotionally hard work (35 per cent) is also significantly higher (13 per cent) (Bekker *et al.*, 2004).

The relative share of disabled people in the active labour force in The Netherlands in 2004 was 10.6 per cent and 11.5 per cent in the health care sector (Van Rij and van Doorn, 2005, p. 57). After retail, the health care sector generates the highest share of disability inflow, 17.8 per cent, which is larger than the annual outflow (CBS, 2005). It is interesting to note that, although the sectors and the policies in the UK and The Netherlands vary, statistics show a surprisingly similar percentage of disabled workers in both countries in the health sector (14.8 per cent in UK, 12.8 per cent in the overall labour force, with more recent disability figures suggesting an increase – 18 per cent of the working population being categorised as disabled in 2010 (Riddell *et al.*, 2010))

Sectoral statistics for The Netherlands show that, for nurses, 68 per cent of absence was due to sickness, 22 per cent of this work-related and 27 per cent for more than six

days – a high proportion being work-related, including physical complaints, the demanding pace of work, reorganisation, conflict with colleagues or management and contact with clients (Bekker *et al.*, 2004: 176). In all hospital interviews, HR managers argued that attention to individual wellbeing of employees at work and during illness reduced the length of absenteeism and thus sickness rates. It was also argued that employers cannot influence all factors that determine the risk of health problems. In small teams, severe illness of individual members raises the absenteeism rate, though it is often outside the span of control of management (Van der Meer, 2008).

The role of the social partners
In The Netherlands, unions active in hospitals are affiliated to three national confederations, the FNV *(*Federatie Nederlandse Vakbeweging/Federation Dutch Labour Movement), CNV (Christelijk Nationaal Vakverbond/The National Federation of Christian Trade Unions in The Netherlands) and MHP (Vakcentrale voor Middengroepen en Hoger Personeel/Trade Union Federation for Middle and Higher level Employees), with two independent unions (Nu'91 and FBZ – Federatie van Beroepsorganisaties in de Zorg/Federation of Professional Organisations in Healthcare). While The Netherlands has been subject to some similar social pressures as in the UK – including reduced collective bargaining and an increased focus on the individual, the social partners (employers through the employers' association NVZ (Nederlandse Vereniging van Ziekenhuizen – Dutch Association of Hospitals) and trade unions) at sector level have remained proactively involved in dialogue. This has addressed the effects of disability on employment and on sectorally-specific risk-aversion measures, drawing on data about inflows and outflows of those with disability (Yerkes and Tijdens, 2010). The active involvement of the Dutch social partners in effecting change to the sectoral labour market reflects the philosophy of the social model because the environment, not the disabled worker, is expected to adapt. The positive role of a collective and centralised approach towards inclusion of disadvantaged groups is confirmed by gender equality research suggesting that, in welfare models where the collective and centralised approach is absent – such as the liberal model found in the UK, it is more difficult to enforce social rights such as equality of opportunity (Michielsens *et al.*, 2001).

Since 1993 there has been continuous political reflection about the role of social partner organisations in social security in The Netherlands. Crucial in this respect is the social partner agreement which states that the medical test of disability is a public responsibility (Van Gestel *et al.*, 2009). The Act on Reintegration in 1998 and the Gatekeeper Improvement Act (2002) require the employer and employee to continue with the employment relationship, facilitating a return to work as soon as possible. Employers must consider workplace adaptations in order to prevent both long-term absence from work and employees becoming disabled. FNV interviewees confirmed that, as a general rule, the trade unions in the health care sector are strong enough to negotiate better employment conditions and to press for preventive measures in "hard" regulation. All collective agreements in the sector stipulate the underlying importance of good employment conditions to reducing sickness absence and to increasing labour productivity and employee morale.

Since 2002, several sector-specific Health and Safety covenants have been negotiated based on agreements between employers' organisations, trade unions and

the government in various subsectors of the health care sector. Each of these has different targets and goals, exhibiting different degrees of obligation, precision, and delegation (though many have not been met given the lack of monitoring controls). The covenants emphasise risks, such as pace of work, physical and mental hard work, aggression and dangerous substances, and institutions must consider the highest risks and the most effective combative measures. A distinct feature of these covenants is the responsibility placed on the sectoral grass roots level: the measures are not imposed top-down through regulations, but grow from the bottom-up as sectoral social partners and government groups develop and implement them (OECD, 2010). In 2003, agreements on physical strain, aggression and pace of work were added to the hospital covenant related to sickness absenteeism and occupational disability inflow, with 60 per cent of hospitals drawing up their own specific action plan. Goals set out in 2004 included: a 20 per cent reduction in physical strain, better managerial detection of pace of work problems; care after traumas; reduced levels of aggression or violence experienced by employees. "Second phase" covenants (2003-2007), as supplementary measures, have focused specifically on the return to work after illness or disability.

In all sub-sectors of the Dutch health sector, the sickness and disability rates have dropped, partly attributable to the covenants, but also to external factors such as the change in social security regulation (e.g. the Reintegration Act, Pemba, the Gatekeeper Improvement Act). In academic hospitals, for instance, sickness rates reduced from 6.8 per cent in 2000 to 4.4 per cent in 2005 (OECD, 2010). However, the other goals of the covenants, such as reduction in the pace of work, aggression and physical and mental strain have not been met (Van Vree and Bolhuis, 2005).

The policies show us that the Dutch health system contrasts with the UK, especially in the importance given to collective discussion and agreements on work and disability issues at sectoral level, from a bottom-up perspective. Through the convenants social partners play an important role in developing tailored health and safety policy at sectoral level and are given responsibility to reduce disability at work, applying in this respect "social model" values. The collective nature of the responsibility is reinforced through the existence of works councils, where representatives of employees and employers meet, which are present in most hospitals – 94 per cent in 2004 (Van Vree and van Petersen, 2005). These hold an institutional position, formally meeting hospital boards every two months, and have information, consultation and advisory rights in order to represent employees' interests and safeguard the organisation's future. This situation contrasts with the UK, where our research has shown that, though the disability equality duty has been implemented, it has not been particularly effective or tailored, being driven by national government. There is no evidence that it is owned or accepted at grass roots sectoral level.

While the long term impact of social dialogue and actions forming part of the covenants on the integration of workers with disabilities remains to be seen, the data available suggest a positive trend (Van Vree and van Petersen, 2005; OECD, 2010). They definitely support recent research concerning disability welfare provision, which confirms the positive part social partners play at industry and company level: "occupational welfare, in the form of collective bargaining, is an important component of welfare provision that is often overlooked in the current welfare state literature" (Yerkes and Tijdens, 2010, p. 370).

Discussion and conclusions

The Dutch and UK health sectors have marked similarities with respect to the proportion of disabled workers, the nature of the health sector and the barriers posed in terms of education and training, employment and working conditions and recruitment and selection. In both countries, working conditions for employees in the health care sector are harsher than the national average in terms of high pace of work, physically and emotionally hard work, and stress, and are characterised by high absenteeism and illness (Alamgir and Su, 2008; Franche *et al.*, 2010; Tullar *et al.*, 2010). Nevertheless, the approach taken in each country to enable the employment rather than the exclusion of disabled workers differs in terms of policies, measures and definitions. Overall, The Netherlands is more closely associated with a social model of disability – conceiving disability as socially constructed through social, economic and environmental barriers to employment (Thornton and Lunt, 1995; Burchardt, 2004). This is evident in the close monitoring of inflows and outflows of those with disabilities, providing an indicator of the extent that the sector is enabling or disabling, and from the new policy which obliges employers to continue to employ those who become disabled for at least two years. The established system of social dialogue at sectoral level enables the implementation of social model values in The Netherlands, as responsibility for integration and related implementation measures is given to representatives of society (social partners) and not left to the disabled themselves.

The prominent bottom-top role of social partners is an important catalyst for positive change. Research indicates that sector-specific agreements with trade unions and employers' organisations (introduced to achieve better working conditions and so reduce sickness and disability rates) have led to some improvements (OECD, 2010). In principle, the sectoral social dialogue is an efficient mechanism for organising an enabling workplace through discussion of sector-specific ways to improve health and safety, relative concepts of disability and disabled inclusion practices – echoing Michielsens' *et al.* (2001) findings on female inclusion.

Britain in contrast has, over the past 50 years, moved away from the post-war social obligation on the part of government, ensuring employment for disabled people, to individual self-reliance, though in the health sector, as part of the public sector, we see a recognition of, and some movement towards, a social model approach. The medical model is, however, still important, though there is evidence that the NHS is becoming more "enabling": the NHS employers group has increased occupational health provision and greater weight is placed on targets for reducing staff ill-health, especially stress levels, and on rehabilitation. The introduction of the Equality Act 2010 (incorporating the Disability Discrimination Act), and the requirement for public sector bodies to comply with the disability equality duty, has facilitated this shift in focus.

While the disability equality duty may indicate a move towards an enabling social model approach within the sector, there are other developments that inhibit the employment of disabled people. First, the "due regard" criterion tempers the requirements of the duty, by placing the focus on consideration rather than achievement (Hepple, 2011; Lawson, 2011; Fredman, 2011). Secondly, the increasingly competitive nature of the environment, the drive for efficiency and the accompanying increase in regulation and performance measurement contribute to a less positive approach. There have long existed issues in the sector around what "effective performance" means and what is required for safe professional practice, with a concern

about the impact of particular disabilities on performance. There would seem, too, to be a disjuncture between pre-registration and employment, with some disabilities, such as dyslexia and mental health problems, taking on a new significance post training and registration, when employment in the clinical environment is seen to involve potential risk to patients.

The attitudes of individual managers in the UK also have a significant impact on employment decisions (see Wood and Marshall (2010), Kaye *et al.* (2011), Cunningham *et al.* (2004)). Though a range of NHS Trusts are making inroads through disability awareness training, there is some way to go. The widespread tendency somehow to equate disability with illness leads to particular tensions in a sector dedicated to health and healing. However, the specific lack of social dialogue around issues of disability at trust and sectoral level (IPA, 2008) is a major obstacle in the development of sectoral enabling factors. Data gathering, monitoring and discussion could help to resolve practical integration problems, but the sectoral preoccupation with "fitness-to-practise" (linked to the medical model) remains a barrier to inclusion. The Dutch case shows that social dialogue is essential for translating national rhetoric into a sectoral and occupational reality, which can be adapted and allow for progression, step by step.

In conclusion, our research has highlighted the need for sector-specific approaches to conceptual frameworks and policies. Evidence from both countries shows that, whether the social or medical model predominates, used together, both encourage the employment of disabled persons. Arguably the social model, focusing on structural changes, is more enabling. Social dialogue, present in The Netherlands, but lacking in the UK, facilitates the translation of social model initiatives into sector-specific measures. We propose that sectoral monitoring data should be developed in the UK to establish the degree to which each sector excludes those who become disabled and, at the same time, includes or enables the entry of disabled, as occurs in The Netherlands. In addition, initiatives, programmes and actions taken should be monitored to evaluate their impact and discussed by social partners. In this way greater social responsibility would be placed on the sectoral level to include those with disabilities.

Notes

1. Now Commission for Equality and Human Rights (CEHR).

2. For an in-depth analysis of the political alternatives for disability regulation see the Donner report (2001), which was almost fully implemented in 2006. The political deliberation of the report and related policy reforms are dealt with in Van der Meer and Visser (2005) and Van Gestel *et al.* (2009).

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London First

Implementing Diversity Employment Policies
Examples from large London companies

Westminster Business School:

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April 2008

Contents

Foreword – London First

Huge changes to the demographics of the UK population are now being regularly reported and this subject is seizing the political and economic agenda.

A number of observations have been made. There are more jobs now being taken up by foreign born workers than by those born in the UK. There is a clear need for a larger working population to help pay for future pension costs and care for the elderly and infirm. There are more rules and regulations dealing with equality and human rights adding to the compliance burden faced by employers.

The response of government and business will be critical to the growth of the UK economy. It is a particular imperative for employers to understand how their business may be affected by these changes and then to prepare strategies for sustaining their business performance.

By late 2005 it had become abundantly clear to London First, as a result of representations from its members, that many companies were struggling to understand the best way to implement an effective and comprehensive diversity strategy. There was an appreciation of the fact that many firms' work-forces did not reflect the growing diversity of London's population, and that this could handicap competitiveness and the achievement of business objectives. The need to confront this issue (encompassing all aspects of diversity – gender, ethnicity, disability, religion, sexual orientation and age) was reinforced by government legislation. At the same time of course it had become widely recognised that London's diversity – in the arts, entertainment and food for example – had made it increasingly attractive to visitors and residents alike, as well as offering great opportunities to companies and employees.

It was therefore decided that, after consultation with Westminster Business School, a thorough piece of research should be undertaken into the diversity practices embraced by a number of large leading companies, to learn how they achieved success in this area as well as the problems they had encountered. This report, produced by Westminster Business School after extensive interviewing, is the result. Many of the experiences of business leaders, line managers and staff have been captured and are largely provided through italicised quotes throughout; it does not set out to be definitive or quantitative, but impressionistic. The situation it describes is one that has been reached after years of struggle ("pushing water uphill" one senior participating manager called it); there are certainly no pat or easy solutions proffered.

The follow-up to this report will require discussions between firms facing similar problems, the promulgation of good practice, and working with business partners to effect change. Some of the businesses involved in the survey have set out the value they attach to their participation at the conclusion to the report.

If you, the reader, have not considered some of the issues below for your organisation, you will, we hope, find what follows helpful in your deliberations:

- Have you prepared a five or ten year plan for your organisation?

- As part of this plan, what do you expect your employee profile to be in five or ten years?

- Does that profile fit with projected changes to the labour market, and if not, how will your organisation still meet its expectations?

- What is your total annual recruitment budget?

- How much of that budget addresses issues around diversity of the individual?

- How does the diversity recruitment budget (if any) compare to the budget for managing the diversity of existing staff (if any)?

- What is your organisation's strategy for diversity?

- How well is it defined, endorsed, resourced and communicated?

- How are you working with business partners to support the realisation of your diversity goals?

We very much hope you find the report stimulating and of value in facing the challenges of diversity. To discuss any of the issues raised please do not hesitate to contact either Elisabeth Michielsens of Westminster Business School (michiee@westminster.ac.uk) or John Paine of London First (jpaine@london-first.co.uk). The research was carried out in the nine months from September 2006 and some of the employers involved have made significant progress since then.

Finally we should like to thank the companies who participated in the research, their staff, for giving so much time in the interviews, and of course Westminster Business School and their team who conducted the interviews and wrote this report.

Executive Summary

This research aims to shed more light on the arguments for diversity from a business point of view, and to look more closely at the implementation of diversity policies, in order to identify which elements enable the development of diversity as well as what obstacles may arise.

This report is based on research in four large London-based companies that can be regarded as illustrations of various 'stages' in the implementation of diversity policies and practices: the Telecommunications Company has an established diversity strategy and implementation; the Property Services Company only relatively recently began the journey to increasing diversity. The Financial Services and the Professional Services Companies have – as they all do – their successes and their areas in need of attention.

'Workplace diversity' is defined in a variety of ways; every company featured has developed its own 'version', depending on the maturity of the ideas and implementation, the business strategy, sector and market. Some companies stress the international dimension of diversity, others the equal opportunity dimension.

The drive towards diversity has both moral and business dimensions. ***The business case for diversity rests on optimising talent resources, enhancing the business's attraction to its clients, the reduction of costs and the stimulation of innovation.***

Diversity is linked to 'inclusion' in all the companies; but at the same time, "valuing the difference" is considered important in order to attract and keep the best possible talent, especially where recruitment is tight. ***Diversity in recruitment and retention lies therefore at the core of the diversity strategy*** and is at the centre of its moral and business case argument: ***there must be recognition that talent comes in many forms.***

For the successful implementation of a company's diversity policies senior management endorsement – and communication – is critically important. Also highly important are the communication and accountability for diversity objectives at all levels, the embedding of diversity values into functional business goals, and the establishing of information and feedback mechanisms through monitoring.

Processes and special initiatives have been developed to increase diversity in recruitment and retention, both of graduates and experienced hires. ***The following areas remain challenging: diversity in experienced hires; the retention of experienced female workers; changing the 'traditional' perception of the company or profession externally; companies' adjustment to different needs and requirements, especially in terms of disability.***

It is acknowledged that flexible work arrangements are not effortlessly organized. Organisational characteristics and business appropriateness can lead to real obstacles in their development. Overall, a variety of arrangements is, and needs to be, offered.

Flexibility arrangements are influenced by each of the different corporate cultures. Some companies stress the promotion of the 'remote' dimension of flexibility, i.e. where it is possible for work to be done outside the office. Flexibility in that sense is associated with being "productive and creative and innovative without sitting at your desk." But flexible arrangements which accommodate periods of 'unavailability' can be problematic and are not always easily accommodated for business reasons. While prevalent in several companies' support divisions, they are challenging - especially in client facing and senior level positions as this in effect jeopardizes the customary 24/7 level of client service.

Line managers have a pivotal role in making flexibility happen, in terms of its communication, promotion and the impact on performance management. Where there is apprehension towards flexible working, either from the point of view of the supervisor or the employee (in terms of supervision or career implications), the obstacles in the implementation of a flexible work policy become apparent.

Firms differ as to how and to whom diversity training is provided. ***All employees do – and should - receive a form of diversity awareness training;*** managers responsible for recruitment are normally targeted specifically with relevant training, but awareness training for other line managers is not always evident. Some examples (Telecommunications, Professional Services) nevertheless show the increasing consciousness of companies that awareness raising of all line management should be seen as a priority.

In summary, a number of organisational characteristics were identified that played an important role in enabling the strategy and practices towards greater diversity (some were disabling if they were not present). Enablers include: senior management endorsement and action; embedding of diversity values in functional business language and objectives; monitoring procedures of diversity related data; tight recruitment and scarcity in talent pool; work arrangements which are routine or capable of being planned; absence of long hours culture; functional, temporal and contractual flexibility; raising the awareness of the whole workforce, with specific attention to key groups; a close link between the diversity of the workforce and product development and contract procurement and compliance.

The Telecommunications Company can be seen as a successful example of the implementation of diversity policies because of a number of 'enabling' factors which are linked to its specific diversity implementation, and certain company and work characteristics. ***The prevalent characteristic of its diversity policy is its complete absorption within both the core business strategy and day-to-day work organisation; it is in evidence in every division and level of the company. The organisation is supported by a network of relevant diversity strategy decisions, clear top-down communication of values as well as practices and extensive monitoring.***
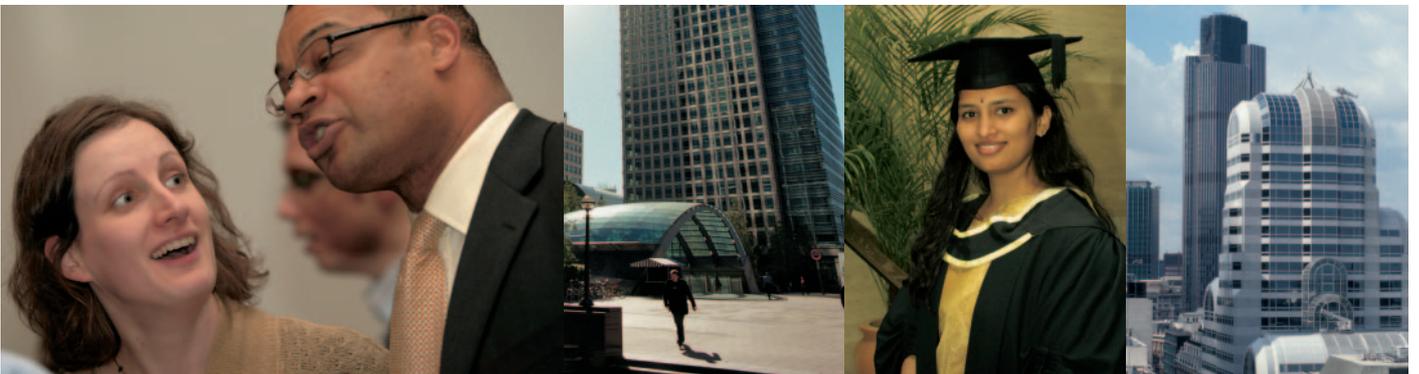
Introduction and context

Among UK businesses, there has been a growing awareness since the early 1990's that, in order to compete for the best talent, they must attract applicants from a wide variety of cultural, religious and ethnic backgrounds. Practices to promote a work-life balance have been introduced in occupations that have traditionally been less accommodating of those who wish to combine work with caring.

The awareness that demographic projections herald a significant increase in the average age of the population has led to a focus on how workforce recruitment, career progression and retention will be managed as age diversity increases. The message is that, if ever there was such a thing as the average worker – and, for that matter, an average way of working – there is no longer. This has naturally led to a realisation that the average client or consumer counterpart of the average worker has also been consigned to history. Adding further weight to the argument for diversity, therefore, is the attraction of a workforce that is better attuned to the needs and opportunities of markets characterised by this diversity. Even if we ascribe the drive to promote diversity as a reaction to tight labour market conditions over the last decade, it is unlikely that interest will fade, given these longer-term changes to society. Companies are aware they must attract employees from a wide range of cultural, ethnic and religious backgrounds to be competitive and serve an increasingly diverse customer and client base. They still need to learn how best to embed the competitive advantage that diversity can bring.

While the business and policy communities seem to agree on the ends, there is less clarity on the means. Nevertheless, many firms are drawing on the same arguments to justify the business case for diversity. The aim of this research is to shed more light on the arguments for diversity from a business point of view, and to look at the implementation of diversity values and policies in organisations more closely, in order to identify which elements and practices have been positive in improving actual diversity as well as what obstacles might arise. Most of the analysis centres on gender, ethnic and religious diversity; age and disability issues are referred to less often.

We focused this research on four large London based companies, active in the services sector, employing more than 250,000 employees worldwide. Operating in a capital with a very diverse population and customer/client base, these companies are positive about diversity in the workplace, and are keen to develop ways to improve the diversity of their workforce and client/customer base further. Whilst all are service sector companies, these firms are operating in different environments which impact on their development of diversity policies. The firms can therefore be seen as illustrations of various 'stages' in the implementation of diversity policies and practices: the Telecommunications Company has an established diversity strategy and implementation; the Property Services Company only relatively recently began the journey to increasing diversity. The Financial Services and the Professional Services Companies have - as they all do - their successes and their areas in need of attention. An overview of the characteristics of the four companies is available below.

London First

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Telecommunications Company

The Telecommunications Company is a large UK public company with a workforce of 92,000 and a turnover of around £20 billion. It is divided into four main lines of business focusing on different activities and customers: wholesale, retail, infrastructure /maintenance and global services. While it operates globally in around 170 countries, the main share of its activities is in the UK, where revenue is largely generated from corporate customers and wholesale. The company operates in a fast changing environment, with significantly more competition and consumer demand focus than previously. Engineering can be seen as one of the core company employee profiles (mostly within the infrastructure/maintenance division) next to customer service advisors (in the retail division). Outside contractors are used for some of the work, but most is done through direct labour.

In terms of qualifications and training, some engineering activities are extremely specialised and require lengthy training. Other core activities require less training, for instance customer advisors receive on average six weeks. Levels of training, therefore, have an impact on recruitment and retention policies across the units and on the workforce profile (for instance in terms of age).

Overall, 22 percent of the employees are female; nine percent come from an ethnic minority background and two percent have declared a disability. But these proportions vary significantly within the company because of the different areas of activities. For instance, within retail 32 percent are women (also at higher levels) while in infrastructure, with engineering as the core activity, both the female and the ethnic mix is much lower (6.7 and 6.6 percent respectively). This is consistent with, though still more positive than, the national trend: women form only 5.4 percent of all engineering professionals in the UK1.

Concerning the implementation of diversity practices, this company is considered a well known good practice example in the UK ICT sector. Its previous public monopoly position has instilled a sense of responsibility in ensuring that services are provided equally to all in the UK, as well as the provision of equal opportunities internally within the organisation. Diversity is treated as crucial in moral terms, and also as a business case in terms of 'brand reputation':

> "We recognise that we are stronger because we are diverse. (…) We have placed equality and opportunity at the heart of our business because we believe that to be successful in business or as a society we must make full use of the talent of all members of that society".

Professional Services Company

The Professional Services Company is a global organisation operating in nearly 150 countries, providing professional services in the growing market of auditing, tax and risk advice to clients, mostly divided between consumer and industrial markets, infrastructure, government and financial services.

The core professional group in this sector are accountants, a profession which still has a 'pale and male' image especially amongst the multinational service providers. A recent survey of the UK's top 50 accountancy firms shows more women than men enter the profession, but only one in three qualified staff and one in ten partners are female. Ethnic minorities are also under-represented, with six percent at partner level, an average that is much lower in large firms2. Reasons cited for the under-representation include the long and unscheduled hours culture, narrow elite recruitment channels and informal white male networks of influence.

The sector has a critical need for (especially experienced) talent as a result of the expansion of services, but a tight pool of available candidates and skills has resulted in people management strategies across the sector which aim to improve recruitment and retention of talent. Diversity related initiatives are part of this, and seen by several firms in this sector as important in establishing a competitive advantage.

The firm is one of the big players in this market, employing more than 100,000 professionals globally, with more than 10,000 employees and over 500 partners in the UK. About 60 percent of UK staff is male and most (93 percent) work full time. With an average age of 30 the organisation is young. At junior levels there is gender balance but at senior levels far fewer women are employed, partly explained by the retention issue: only 10 to 15 percent of partners are female (one becomes a partner typically at 35-40 years old). At senior management level improvements are noticeable; the average percentage of women managers has increased from 26 to 34 percent in one year, which is very favourable in comparison to the sector average. The gender diversity of teams varies significantly across departments: in Restructuring and Corporate Finance the figure is not high (20 percent), while Audit & Tax - and especially Government - have a more balanced profile at all levels. Here working hours, flexible arrangements and team diversity reflect public sector clients' standards. Ethnic minorities represent 14 percent of the company's UK workforce, but this also varies vertically and horizontally; some departments have only two to three percent, with only three percent of partners coming from minority ethnic backgrounds. Disability figures are too low to give a realistic picture, but several executive managers have declared a disability.

Financial Services Company

The Financial Services Company is a global financial services organisation whose activities include investment banking, equity and fixed income sales, research and trading and investment management. The worldwide headquarters are based in the USA, with regional headquarters in Europe (London) and Asia, employing over 25,000 employees in 50 offices in over 20 countries. It is typical of a City company. Individuals working in trading floor roles can work relatively long hours, from 7.00 to 19.00, to coincide with when the markets are open. The diversity of its workforce has increased in recent years although the rate of change does vary from division to division:

"Research tends to be much more diverse, from a gender standpoint, and sales also tends to be a little bit more diverse, but trading, traditional trading roles, we struggle. I think we're culturally very diverse, especially in London."

"The split between men and women is definitely more balanced now. We're certainly moving in the right direction."

The firm has been relatively stable – no recent actions have led to major company restructuring. It has a tradition of long tenures amongst senior management and this, coupled with a high percentage of employee shareholders, is said to contribute to a teamwork environment where all work towards the same goal. This approach has been core to the strong corporate culture for two decades. Diversity and inclusion are seen as a fundamental part of this, and the emphasis here has materially increased over the last five to six years:

"What we try to do in everything that we do is pull everyone together to do the right thing for the firm, and that's the culture. (…) There's a real inclusive environment within the firm, and diversity is sort of deeply embedded within the culture of the firm."(…) You can't feel included and that we are one firm if you feel that you can't be who you really are at home at work."

Property Services Company

The Property Services Company is a UK headquartered professional services company. A global company, with a strong position in Europe, Asia, Middle East, Africa and North America, its turnover was more than £200 million in 2006; most of its profits are linked to operations in the UK and Ireland. The company employs more than 11, 000 people in 200 offices in 45 countries.

Today, the company employs a wide variety of professional staff which creates a different dynamic from the recent past. Nationally, the company's main service offering is traditionally considered a white, male dominated area with an ageing population, where the focus on diversity is not traditional. The company's professional body has found that, of the 95,000 qualified professionals working worldwide, only 10% are female and in some specialist areas this figure is even lower. Ethnic minorities represent only 0.5 percent of professional membership so the Property Services Company's workforce can be seen as a reflection of this.

Overall, 45 percent of employees are women, of whom 20 percent work part time. But this is mostly in areas of 'support' (HR, IT, administration). At senior levels there is under-representation, with only seven percent of directors female while women make up only five percent of the 100 best fee earners in the company. No figures are available for ethnicity and disability. Compared to the large group of support staff, 'fee earners' overall have a more prominent position in the company in terms of representation at board level and remuneration. International mobility, with employees going on international assignment for extended periods of time, is encouraged to develop future leaders, enhance creativity and global team working. But extensive travel is not part of the majority of the jobs in the UK. Age is not considered an issue; the age of employees is quite diverse, most being between 22 and 59 years old, but people can also work beyond the statutory retirement age (65).

The sector is highly competitive, which has led to a company culture where the sharing of information, for instance on good practice, externally or internally, is not encouraged. This has created an atmosphere of confidentiality, discretion and individuality.

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Diversity enablers and disablers

The companies reveal differences in their arguments for diversity, in strategy and in the implementation of their diversity policies, which in part can be explained by the environment in which they operate. Nevertheless, we have identified a number of common organisational factors which in each company has played an important role in enabling (or disabling if absent) the strategy and practices towards greater diversity. Enablers include:

• Senior management endorsement and action;

• Embedding of diversity values in functional business language and objectives;

• Monitoring procedures of diversity related data;

• Tight recruitment and scarcity in talent pool;

• Work arrangements which are routine or capable of being planned;

• Absence of long hours culture;

• Functional, temporal and contractual flexibility;

• Raising the awareness of the whole workforce, with specific attention to key groups;

• A close link between the diversity of the workforce and product development and contract procurement and compliance.

These issues are discussed in the following pages: in section three, the different arguments and ways the companies define diversity are described. In section four, a number of 'building blocks' for a diverse workplace are identified, based on the enabling organisational factors listed above.

Methodology

For this research, the participation and cooperation of the four major London companies was secured through London First. To gain an overview of policies and data concerning their diversity policies, we reviewed written material supplied by participants on their diversity practices and a questionnaire was sent to each of the organisations' main contacts in 2006. The questionnaire explored a broad range of information including workforce numbers; company objectives; diverse groups; diversity policies, diversity decision making and indicators; staff recruitment, selection and promotion; procurement policies; business and diversity performance indicators; training and development and work/life balance.

After the questionnaires were returned, a number of key staff members in each company were interviewed individually, face-to-face, on company premises3 (between three and six interviews per company). These included Human Resource and /or Diversity managers, senior managers and other line managers, some of whom were selected on the basis that their role had a specific link to diversity policies in their company (for instance as team leaders of diversity units; diversity champions). In one company an employee with a disability was also interviewed. The interviews were conducted by members of the Westminster Business School research team and London First, normally in pairs, in the first part of 2007. Each interview took on average between 60 and 90 minutes for which a list of unstructured trigger questions were used.

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Diversity in the workplace – diverse reasons and focus

It is clear that 'workplace diversity' can be defined in a variety of ways. Every company featured has developed its own 'version', depending on the maturity of the ideas and implementation, the business strategy, sector and market. Some companies stress the international dimension of diversity, others the equal opportunity dimension. Despite differences, diversity is firmly linked to the concepts of 'inclusion' in all of the companies:

"What the Financial Services Company tries to do in everything that it does is pull everyone together to do the right thing for the firm, and that's the culture. (…) There's a real inclusive environment within the firm, and diversity is sort of deeply embedded within the culture of the firm" (…) you can't feel included and that we are one firm if you feel that you can't be who you really are at home at work." (Financial Services Company)

(The company's vision is to create an environment) "in which people can be themselves", but at the same time "be an inclusive workplace where talented individuals are treated with respect, have choices in their working patterns and in their development". (Professional Services Company)

"We continue to work to create an inclusive working environment in which employees can thrive regardless of their race, sex, religion/beliefs, disability, marital or civil partnership status, age, sexual orientation, gender identity, gender expression or caring responsibilities". (Telecommunications Company)

Inclusion is also considered important for participation in diversity initiatives. For instance, while the Financial Services Company's diversity initiatives may focus on specific groups, they are always designed to be inclusive rather than exclusive, open to all who want to participate.

The drive towards diversity has both a moral and a business element. The companies featured all judge their position as enhanced by being diverse: "We recognise that we are stronger because we are diverse" (Telecommunications Company). But these moral elements are linked to clear business case arguments: increasing diversity is seen as important for the long term success of the company as "it helps competitiveness, otherwise business will be lost"; this business case is seen as the only route to convince those managers (a minority) who might consider diversity 'a waste of time'. (Professional Services Company). The importance given to the business case argument is particularly clear in relation to recruitment of talent and clients.

"Valuing the difference" is considered important in order to attract and keep the best possible talent, especially in sectors with tight recruitment. A diverse global workforce is considered as necessary for a global company; it offers more creative ideas that will help the business to succeed and will give more choice in a tight recruitment market:

"I think that only by having different types of people do you come up with the most creative, world class solutions". (Property Services Company)

"We have placed equality and opportunity at the heart of our business because we believe that to be successful in business or as a society we must make full use of the talent of all members of that society". (Telecommunications Company)

"Global diversity at (Financial Services Company) is about attracting, developing and retaining the best talent, engaging the workforce, fostering education, and establishing accountability. We're a global firm. We have a global footprint, and we are touching many different cultures, and certainly, surely it must make sense for us to have a workforce that reflects that." (Financial Services Company)

"This is about having the right talent pool to be successful in our business in 10 years' time, because in 10 years' time our business, and the business community we are dealing with, will have moved on and it will not look like it does today, and if we don't move on, in diversity terms, then we're just not going to be competitive". (…) For us as a whole, (…) I think you always have to take it to a business base. If you try and deal with it at a sort of moral/ethical level, then you may or may not get buy-in, you know, it depends on a person's particular view. The minute you bring it to a business issue, which is we won't be able to attract clients and we won't be able to attract the best staff, then it's a no-brainer." (Professional Services Company)

The business arguments focus not only on optimising talent resources, but also on optimising client attraction, reducing costs and stimulating innovation. The increasing global importance of diversity in the tendering process makes it a crucial element in gaining contracts. Through feedback via their Client Service Board, the Professional Services Company "aims to understand the positive impact that diversity may have on wins and relationship building with clients."

"We're aware that the board that we're looking at in the public sector will be much more diverse, and the management team is more diverse, than it would be, say, in a traditional mid-market manufacturing company. (…) We will get questions about diversity, and the mix of our teams, from that audience, more than you will from a company that's just gone bust in the middle of Birmingham, who doesn't care who comes in just to sort it out." (Professional Services Company)

"In an organisation that is all about profit, all about clients, that is the motivational hook to persuade most fee earners, and for me, this is not an HR issue. If the business doesn't own it, we might as well forget it. So how we've gone about it is, first and foremost, to get the fee earners to understand the client side. Some of our clients, probably completely unwittingly, have helped us tremendously with this. So the global clients tend to ask us in their tender process, "What are your policies around diversity inclusion? But more importantly, prove it to us!" "So it's that requirement to prove that has got the fee earners' attention"(Property Services Company)

"Our clients are global and very modern and I think they expect us to be able to show them a diverse workforce." (Property Services Company).

"With Government in its widest sense, you know, foundation trust hospitals and things like that – we've had feedback to say, "Well, you know, you turned up with four middle aged guys, and actually we don't like that." (Professional Services Company)

"If we want to deliver long-term value for our shareholders, we need a business which actually reflects our client base, and given that we have come, in a short period of time, from being a very UK-centric company to, you know, laying down our global footprint, that actually brings a lot of people into contact with other cultures (…) and given that our business has tended to be a very male-dominated, white business, I think actually taking on this wider global footprint made people actually then realise internally, actually, we have to be a different business." (Property Services Company)

Depending on the development of the diversity strategy in the company, different focuses emerge: the Property Services Company, which is at the start of this process, defined its priorities as 'those actions that would have the greatest impact and be a sure catalyst for further development':

"The most obvious one, given the nature of the business originally, was the number of females actually working within the business, and given that 50% of the population is female, that…one of the easiest things – not saying the easiest, but one of the easiest things, to change and take on a challenge and say you can actually get success has to be in that area. So that's been, you know, quite a focus." (Property Services Company)

On the other hand, the practical focus of the diversity agenda in the Financial Services Company, where diversity has been on the business agenda longer, has been to 'move the needle', that is to be more reflective of the world in which one is operating especially concerning ethnicity and gender (without using quotas), as well as to increase middle management awareness and representation at senior levels. But initiatives have been created across a wider field including sexual orientation, disability and work/life balance.

Building blocks for a diverse workplace

1. Infrastructure for successful implementation

For the successful implementation of a company's diversity commitment the following elements are identified as indispensable by the various stakeholders:

• Involvement and endorsement by Senior Management which is communicated to all levels

• Communication and accountability for diversity objectives at all levels

• Embedding diversity values into functional business goals

• Information and Feedback mechanisms through monitoring

For the diversity strategy to be successful, clear and noticeable senior management endorsement of the aims and policies is essential. Without this, the commitment to diversity at lower levels in the company will be compromised, as the Property Services Company example below indicates. Several of the companies featured have structures in place for their diversity strategy to be discussed and approved at senior management level, and communicated to other levels in the organisation. The 'cascading down' of diversity values and objectives takes the form of structures of Networks, Forums and Champions, as well as being communicated and monitored at times via performance indicators. Some (but not all) of the companies have developed systems of accountability for diversity implementation, which are organized in parallel with, or are fully integrated into, other functional business goals. Implementation is seen to be supported when diversity values are embedded in each business unit in a way that is rational from a business perspective. When senior management endorsement and the communication and monitoring infrastructure are not yet visibly developed, there is evidence that the implementation of diversity values remains unsatisfactory, as the Property Services Company example demonstrates. The limitations of implementation in the Professional Services Company indicate the importance of cultivating the business unit and conventional business language as the main driving forces for successful diversity implementation.

Telecommunications Company

Diversity strategy is part of the discussion at the highest corporate level especially through the Global Diversity Forum which cascades down through a number of Diversity Steering Groups, Diversity Forums and networks across the company (Ethnic minority, Asian, Kaleidoscope, Disabled, Women, Women Executives, Muslim, Christians) to allow for discussion, monitoring and feedback at all levels. Both the top-down and down-up communication approach via a network of diversity specific fora and roles link naturally with the company's operational organisation and responsibilities. Diversity Steering Groups, which organise and monitor unit specific diversity action plans in each of the main business units, are chaired by its top manager to ease their implementation, and have a member of HR to ensure they link to a central programme. The steering group plans are implemented with the help of 'diversity champions' who have teams of 'diversity ambassadors' promoting on the one hand the diversity agenda, by providing guidance to the workforce when necessary, and, on the other, company values externally. Diversity is part of the company's individual and unit performance indicators. Every employee's performance is logged. This includes (according to set procedures) any incidents and positive developments or actions (for instance being a diversity ambassador), which are used for appraisal and internal promotion purposes at all levels. Through this arrangement the setting of the diversity agenda, its implementation and monitoring, are not separate from the company's core communication service activities, enabling their natural integration. Further communication of the diversity values and agenda is very comprehensive and ensures it is never far away from the employees' attention; this awareness-building takes place internally through diversity-related publications on the company's website, an intranet news site, news desks or employee opinion, telephone news service, issues in bi-weekly newspapers and briefing materials especially for managers to communicate this further.

Financial Services Company

The Financial Services Company's diversity strategy is reviewed on an annual basis at global level, translated into regional actions by senior management, including active involvement from the CEO for Europe residing with the European Director of Diversity and Inclusion. This shows the clear support of senior management. A European Diversity Steering Committee which includes representatives of each business division holds regular meetings to oversee the implementation of the detailed regional strategy through divisional diversity plans and firm-wide initiatives. The diversity agenda is incorporated into the core business structure (i.e. it is driven by the business units); in the principal business units diversity councils are formed to drive initiatives such as mentoring employees, or coaching middle managers to raise awareness. The divisions and their managers are held accountable for their progress. There are bi-annual diversity review meetings chaired by the CEO where the most senior staff make presentations:

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"(The CEO) absolutely takes them to task in the same way that he will challenge their financial performance."

Employee networks work alongside the initiatives executed by the divisions. The employee networks include: a Disability Network; a Network focused on Families; a Gay & Lesbian Network; a Network focused on Ethnic Minorities and a Women's Network. Suppliers are also included in the diversity strategy through targeted initiatives and relationship building:

"When diversity doesn't work is when you just say, there you go HR, go off and do it! If you want it to have credibility, you have to make the most senior people accountable to the Chief Exec for it, for them to be held to account for it,… and that's how you get the trickle down. And then you've got people in the trenches doing great work, who've got a lot of enthusiasm for it, and you reward them at year-end for what they're doing."

New people to the firm are routinely attracted "to run initiatives for two to three years and then bring in, you know, new blood, to kind of spread the message more easily". The proactive approach of senior management cannot be underestimated in stimulating the communication of the diversity values:

"To set up the Network focused on ethnic minorities (…) it didn't naturally spring as something that I really wanted to do initially. (…)But for me, I've become passionate because I've seen that there's senior buy-in. (…) One thing that invigorated me, inspired me, was the fact that here I had the CEO basically saying to me, "(…) what I feel we are in danger of, as an organisation, is being very narrow in our focus. (…) And we're going to end up with a firm, a one-dimensional firm, in terms of thought process." (…) and what he really wanted to see is that the firm is actually widening its net, and we are getting different people, from different backgrounds, with different life experiences, which ultimately, you know, makes a strong business case for the firm, because, at the end of the day, no single race – whether it be gender, whether it be sexual orientation – has a monopoly on talent."

The divisions fund their own diversity plans. There is a separate European Diversity and Inclusion budget administered by the European Director who finances firm-wide initiatives such as those executed by the employee networks. There is also an incentive mechanism in place to reward those individuals who make a positive contribution to drive the diversity and inclusion agenda for the firm. A bonus pool is set aside by the firm for this purpose:

"We go through a rigorous process to determine who actually gets that money, so it's the people who actually do things."

Professional Services Company

The Professional Services Company's diversity strategy in the UK, which is part of the main business plan, is determined at corporate level by the Board Sub-Group on Diversity, which comprises seven Board members. In recent years the Board has markedly stood by its commitment to diversity, for instance by increasing the diversity budget ten fold in three years. A Director of Diversity, who reports to the Board, works with the various stakeholders across the organisation on diversity related programmes, but has mainly an internal advisory role.

The diversity strategy is only to a limited extent reflected in functional business plans. Overall, line managers' performance is not judged on diversity-related indicators. Front line managers with a people management role are accountable in terms of diversity on a number of criteria which are mainly gender based and focus on headcount, turnover, retention (such as return from maternity leave), and promotion with particular focus on exceptional performers. This information is monitored regularly and commented on by the Director of Diversity, but it is not used in individual performance reviews. Some targets have been introduced recently: the company aims to have twenty percent female partners within three years and to increase the numbers of female employees (in particular women returnees) and promotions.

The ownership of the diversity agenda remains limited to the Board and the diversity team. The diversity strategy is clear to managers and Board members but "there are many other future target groups in the firm who may not be aware of the strategy at present". The diversity buy-in is not shared by all in the company's team: "a proportion continues to 'play safe', and unconsciously tends to favour people in their own image, while there is denial on the client agenda". One of the reasons may be that staff do not feel confident as to how to translate the company's diversity strategy set at board level into their normal business activities:

"It is not clear if an appraiser or appraisee would have a proper understanding of what including diversity in this process would mean."

"There is a one line statement in the diversity policy about it being the individual's responsibility to apply it. There is little information or evidence of how an individual would

Building blocks for a diverse workplace
(continued)

be supported in doing that. Any discussions on the policy are generally done once a year, in an away day setting, and are not part of daily life."

Recent strategic diversity priorities therefore aim to extend the ownership of diversity within the firm through awareness training and other stakeholder-led strategies such as workshops and conferences, the promotion of diversity related roles (i.e. diversity champions) and communication in company newsletters and emails etc. Funding is given to staff networks that promote diversity and inclusion, raise awareness of different cultures/religions or backgrounds and assist the company's drive to be "Employer of Choice". A number of employee networks work around disability, faith and sexual orientation, organising events and operating as sounding boards for the whole company. This is developed as part of a larger people management agenda, which is seen as crucial for it to be successful:

"Part of the reason that diversity has made a difference is because it's been done within the context of other stuff on organisational change: like a lot of work has been put into, over the same period of time, the skills of our people managers. Those are skills around listening, (…) giving feedback, (…) action to retain people."

Property Services Company

The Property Services Company's diversity strategy is being channelled by Human Resources with the help of senior managers, but no company wide strategy or statement on diversity has been discussed at Board level. It is the company's Positive Action Group in particular (see below) which seeks to demonstrate the greater business benefits of diversity so that it will be embraced by everyone in the company. This has not yet been fully achieved, especially at lower levels where there are entrenched views, a lack of experience of diversity management, and a need to develop people to incorporate the diversity strategy - particularly with respect to issues related to the flexibility agenda (ethnicity, disability).

"I think in relation to the employment of females within the organisation, that's fairly much…you know, at most levels, people understand that. I think as you start to go away from that, there's less understanding, and so therefore the minority, the disability – (…) I'd say that what you're getting these days is more understanding at a senior level and then the responsibility is for senior management to drive that down through the organisation. The closer you get to – at the moment I would say the closer you get to the shop floor, shall we say, the less understanding

would be there, because people tend to be day-to-day focused on their jobs and what they're actually doing, and our challenge is to drive that down through the different levels of management."

Part of the difficulty is the internal culture of discretion that is demonstrated by a tendency at executive level not to communicate the company's diversity policies pro-actively. This has resulted in a message that is too subtle to be effective:

- Diversity policies and benefits are not clear, known and understood throughout the company, with employees having different experiences and knowledge of initiatives depending on the work networks they are part of. This leads to employees being unaware of possibilities;

- A perception that senior executive management does not fully endorse the diversity agenda; this inhibits other levels of staff from adopting diversity policies.

"Where the challenge is - I don't think the main board are convinced enough that they live it and that by living it, they are ramping up everyone's attention on it."

The lack of experience complicates the development of the diversity agenda:

"Probably the biggest obstacle is the fact that we're young at this, and therefore we don't have the country of people with that experience and that…our base of people, that we need to actually develop people at a management level – at all levels through, but more people at senior and middle management that have experience of this. (…) As part of that global network, we are a young company, and people learning from the diversity now that we've actually gotten the overall portfolio of countries, in terms of working together."

But there is change: the company has developed a diversity policy, which is now communicated through the intranet and its global staff handbook. The company has clearly started to use a business case argument to develop its diversity policies by acknowledging the importance of diversity in securing recent project tenders. Effort was taken to develop written diversity policies for that goal and communicate this well to the potential client. This proved to be the motivation to start a 'Positive Action Group' to improve both as employer and preferred client:

"I think we felt as a business we could generate more business (…) if we actually considered diversity and inclusion as a business issue, to improve as an employee

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as well as a supplier to clients. The reason why we were thinking about that at that time is one of our business tenders through 'P' was targeted primarily towards what diversity and inclusion practice we had. We decided that if that was going to be integral to us winning a tender such as 'P', which we eventually did win, we needed to make sure we were prepared for other similar tenders that came through. So it was an opportunity to set up the Positive Action Group, and at the time we set up, there were about four of us, and then it grew and grew."

A 'Positive Action Group' which has members from all areas of the company, has been established and meets once a month. It is chaired by a Managing Director who champions diversity. The remit of the group is to develop the diversity strategy, and implement initiatives that will enhance this.

"As the Positive Action Group, we're a diverse group of people around the table. I sent a note to about 50 or 60 people earlier this week saying that a member of the Positive Action Group was going to be in touch with them to talk about different issues. We want feedback as to what people feel about us as an employer and what are the issues. (…) so we can get to better understand that there may be things that we're doing and ways we're doing that we just simply need to adapt and change slightly and that'll actually make things much more appealing."

The group accepts that it will take time to change entrenched opinions on the acceptance of difference in the UK workforce: "We try to change that by making people work with each other: international teams and encouraging trust, respect, communication."

The group's achievements include:

- an increase in diversity awareness through training for management;

- the introduction of flexible work policies;

- improved communication (such as the development of a global mobility site on the intranet) to promote job mobility enabling employees to connect with the company from anywhere;

- a diversity and inclusion awareness event;

- a diversity and inclusion brochure which was prepared as part of the tendering process;

- promotion of international assignments and working in international teams encourage diversity

- a workforce survey to understand staff opinion concerning diversity

- other initiatives to make staff aware of the company's people values: "There were a couple of Fortnum & Mason hampers on offer as prizes if you read the core policy and answered these questions, which I did. I thought that was quite a good encouragement to get the staff to read it."

Essential elements of successful implementation - monitoring and feedback

Monitoring the workforce in terms of diversity is necessary to evaluate a company's performance and success in those areas.

All companies featured have some diversity monitoring processes set up. The extent to which this is done varies. At the Property Services Company, where the focus on diversity has only been introduced relatively recently as part of the strategy, reward and diversity parameters have been collected since 2005, including an equal pay review. In order to gain knowledge of the make-up of the workforce across all the businesses, a special voluntary survey has now been initiated by the diversity team which provides information on gender, ethnicity and disability (not faith). This initiative will be repeated globally, though global monitoring is difficult due to infrastructure. In addition, data are collected through the appraisal process, related to bonuses in terms of: performance, setting objectives, business development, team working, client management, finance and budgetary control; and communication.

The monitoring of workforce parameters normally starts when joining the company and on a self declaration basis. But with statistics such as ethnicity and disability, there are significant numbers of individuals who choose not to provide personal information: the Professional Services Company has a 100 percent overview of the gender profile of its staff, ethnicity information on three quarters of its workforce but only very limited data on disability. Information on sexual orientation or religion has been gathered since 2006:

"I think our focus though has been very much on the gender balance actually, on women, and I think because it's easier for us – I mean, I think because it's easier to measure, we have the statistics around the gender issue, whereas I think on religion, on race, on sexual orientation, and all those things, we don't have a clear view, and we don't force people to actually tell us. We can look around and estimate some of those things, but not all of them." (Professional Services Company)

In addition, some human resources issues are monitored regularly with regards to diversity, sometimes as part of a performance review; at the Financial Services Company, most divisions include a metric on promoting diversity and inclusion. At the divisional level, there are diversity reviews, with a focus on accountability to senior management and a reward structure. In addition, external benchmarking exercises take place, and the company has carried out a stand alone data monitoring exercise on ethnicity and disability. Headcount, turnover, retention and promotion of its staff in terms of ethnicity, gender and working hours are monitored quarterly at the Professional Services Company. Flexible work applications are monitored by grade and gender. Equal pay (including bonus rounds) is reviewed by gender and ethnicity. Promotion is monitored by gender, ethnicity and part-time status:

> "During each promotion round, the promotion of under-represented groups is monitored by HR business partners, Heads and the core executive. In the last two years the CEO has personally reviewed and recommended actual promotions by gender."

Staff surveys are conducted in most companies, and are analysed by all aspects of diversity. Client service reviews probe clients' views on diversity, team composition, and the importance of diversity as a business issue. At the Financial Services Company an annual global staff survey includes questions in the diversity sphere and the latest survey included questions on sexual orientation and disability. At the Telecommunications Company an annual staff satisfaction survey, which includes focus groups with employees, is carried out. In the last survey 80 percent of employees considered their managers' actions showed value and respect for diversity, indicating that company values have translated into managerial behaviour.

Specific research is conducted to raise awareness amongst the decision makers in order to progress specific parts of the diversity strategy. For instance, a survey amongst managers at the Professional Services Company was conducted on the barriers to career progression for women and a conference held. This formed the basis of a specific company programme to address the retention of women. Focus groups and consultations with black ethnic minority staff were held to understand the barriers around diversity and promotion. Conclusions included the lack of role models, lack of access to mentoring, and exclusion from informal networks.

Monitoring and data gathering is part of the culture at the Telecommunications Company; all stakeholders and levels are included in the monitoring exercise. Monitoring is a major

element of its diversity policy success as policies, practices and targets can build on a comprehensive picture instead of guesstimates. The company gathers employee data on gender, age, ethnicity and disability across job roles, departments and contract statuses. Faith and sexual orientation is not (yet) included. This monitoring is basic at entry to the company, but remains continuous, with a 96 percent declaration rate on diversity issues. In addition, internal monitoring of gender equality/diversity on equal pay, promotion, the appraisal process, recruitment and selection, workforce demographics, training participation, and take-up of flexible working takes place.

Individual employee performance and developments are centrally logged (such as, for instance, uptake of training initiatives, performance indicators, promotion, incidents and initiatives) according to strict procedures. This log is used for individual monitoring, but also for aggregate periodic reviews:

> "We've got what we call a Contact Log. It's stored on the intranet. Anything that's – an incident, or recognition, or could be absolutely anything that an advisor's done, it's all logged on the Contact Log, and the same with managers. So that any company employee, if you want to say, "Well, this person's not done this right," so with the recognition, the positives and negatives, they're all put on that thing." (Telecommunications Company)

2. Recruitment and Retention

Diversity in recruitment and retention lies at the core of the diversity strategy of the companies featured. It is the centre of the moral and business case argument: a real recognition that talent comes in many forms and that no single group, whether defined by gender, ethnicity, sexual orientation or disability has a monopoly on talent. Looking far and wide for talent is perceived as increasing competitiveness:

> "Our share price performance has outstripped competitors through the provision of innovative, smarter solutions for clients. You encourage 'thinking outside of the box' by hiring people who have different perspectives." (Financial Services Company)

None of the companies sets targets for recruitment as this might create a backlash: in the recruitment process, the suitability of the candidate for a given post is the most important aspect, not diversity considerations. Companies opt to stress just the importance of diversity to relevant parties, without imposing numbers: "We insist on seeing diverse candidates on slates, and by having that perspective, we go out and find some outstanding people, but who are not

necessarily in the industry today." (Financial Services Company)

Several of the companies featured have developed processes and special initiatives to increase diversity in recruitment and retention, both of graduates and experienced hires. Nevertheless, some areas still remain a challenge.

Processes enabling more diverse recruitment: Good practice in Telecommunications

To increase diversity in recruitment and promotion, the Telecommunications Company combines clear communication of equal opportunities with a set of procedures; monitoring, research and special activities. A 'competencies only' recruitment and promotion policy is communicated extensively to all relevant channels, including outside recruitment agencies, and implemented via set procedures such as a selection process using competency based computer tests and set requirements for selection interviews to assure diversity and equality of opportunity. Internal promotions are open to all staff to apply for, short-listing being based on the performance log which includes appraisals, and afterwards interviews take place:

"People, internally as well, feel that – they don't feel frightened to go and apply for jobs, because they know that these procedures are in place for equal opportunities for everyone ". (…) "[When], there's a manager's job available, everyone is available to apply. The only thing that they ask for, they do look at your appraisal, so they'll ask for your annual performance review, and then when that comes through, that's all they'll look at. So it's not a case of sending your CV in, and "Oh, let's look at his gender or age," and things. It's only – what they do is they look at the appraisal – "He's done that really well." It's all on competencies." (Telecommunications Company)

Recruitment is monitored and the external recruitment pool analysed through demographic modelling to ensure better representation - the target graduate recruitment list has, for instance, been rationalised against the proportion of women and ethnic minority students. In 2007 17 percent of new graduates and apprentices were from an ethnic minority background and 30 percent of graduates were women, improving the gender and ethnic mix of the company's workforce. In addition, special recruitment activities and training are organized at group level and for specific units (e.g. engineering) to attract under-represented groups. For instance, interviewers for engineering jobs receive refresher

diversity training before a major recruitment drive. Recruitment agencies are asked to adopt specific marketing strategies and contact specialist organisations for under-represented groups; this is regularly monitored. A recruitment programme aimed at people with disabilities generated over 200 applications and 75 job offers. The Telecommunications Company has also adopted the 'two ticks' scheme, interviewing all potential recruits with disability who meet the minimum criteria for a job vacancy.

Diverse graduate recruitment

Most of the companies featured have developed special and successful initiatives to encourage more diversity at graduate recruit level, especially relating to gender and ethnicity. The suitability of the initiatives and their success is linked to the sectors the companies are operating in and to the extent of diversity at educational level.

At graduate level, no specific degree subject is needed for the Financial Services Company, but it is essential to have a 'good degree'. While the company normally focuses on a number of 'prime' universities, network initiatives try to ensure greater diversity by targeting specific universities which have high numbers of historically under-represented groups. In addition, the Financial Services Company runs internship and scholarship schemes for women and ethnic minorities.

The environment of the Property Services Company featured is much more heavily male dominated than finance or professional services; while graduate recruits have become more diverse (30 percent were female), there is still a lack of diversity on university courses - the main recruitment channel into the profession. The Property Services Company is contemplating broadening the number of universities targeted to allow for greater quantity and potential diversity, but this is not supported by all. It is clear that a breakthrough in this area cannot be achieved by one company. The occupational trend away from diversity starts at secondary school level and is reinforced by the criteria set by the sector's main professional body governing the company's business initiatives. For instance promoting the profession - with the help of companies such as the Property Services Company - to a diverse school population in order to help diverse recruitment onto university courses will begin to make a difference that will filter through. Another possibility is to develop recruitment channels outside the graduate market, but this has also to be endorsed:

"One of the difficulties we actually have is that we have to dip below the university level, because we need to help the universities recruit into the university courses, we're not getting out of the courses the necessary diversity

that I would actually like to see. While we have made progress, shall we say, on the female side, we haven't made that progress, much progress, in relation to minorities. I think the minority issue you can actually only address at secondary school level. (…) The critique I have of the universities is that the universities in themselves don't necessarily have the structures which are attracting the minorities, and we actually have to work with the universities in terms of illustrating at secondary level as to why it's a good idea to get involved in the [our] business."(Property Services Company)

To actively encourage a more diverse graduate intake the Professional Services Company has developed specific initiatives which have led to success; the graduate intake was 50 percent female; and 34 percent minority ethnic in 2005. Programmes include:

• women-only and minority ethnic graduate events,

• ensuring the company's female staff feature in graduate and experienced hire recruitment campaigns,

• supporting external campaigns such as "Where women want to work",

• encouraging international hires (i.e. China and India) and secondments,

• London local community educational development.

To encourage more graduates from ethnic minority backgrounds to apply, the Telecommunications Company targeted both potential recruits and their families as they are an important voice in career choice:

"The [MELA 06] event in Birmingham, which is a massive fashion event within the Asian community, (…) and they do this massive organisation where you've got lots and lots of fashion icons in the Asian community now. (…) The Midlands diversity lead decided to take the modern apprentice team in there (…), saying "climbing is not just for the boys". Interestingly enough, you'd think it would be easier to recruit from an ethnic base like Birmingham, but there are massive issues in Birmingham in terms of the social infrastructure in the Asian community, where mums and dads, you know, see that their children should be maybe following in their footsteps rather than other footsteps." (Telecommunications Company)

Challenges: Diversity in experienced hires

The recruitment of experienced qualified professionals on the other hand is more difficult; the Property Services Company for instance has currently about 300 vacancies. Broadening

the recruitment field without lowering standards is seen as a key business case argument which can work for increased diversity. To boost experienced hires, one of the Property Services Company initiatives is to build links through networks of alumni by communicating more with former employees who left after maternity leave. The Professional Services Company has developed international recruitment measures, such as in Dubai, Singapore and Malaysia for instance, which have had a positive impact on the ethnic diversity of the workforce in the UK, as well as increasing awareness of different working styles and commitment. However, it is no guarantee of increased diversity. The shortage of experienced skills means that the skills required - in short supply - are the main focus, and asking to see diverse slates is not consistently demanded:

"To be honest, it's what's available. The advert will go in or they'll contact the agencies. I don't think they actually – we probably only focus on what the skill sets are. (…), that's the extent of any planning, is actually to get the skills mix right, not whoever the person is that comes with those skills, which in a sense is an irrelevancy." (Professional Services Company)

Challenges: retaining talented women?

The companies featured agree that the recruitment and retention of women in certain roles remains a challenge. Special attention is needed to remedy this. The Financial Services Company's women's network helps drive the recruitment and career development of women at the Financial Services Company, as well as sponsoring client and philanthropic events:

"Why can't women make good traders? There's absolutely no reason for that. There's nothing in terms of, you know, an educational process. What we find is actually a lot of women have excluded themselves from even considering a career in Trading because of the perception of what it means to be a commodities or a fixed income trader, etc. So that's something which we're trying to approach, and we're trying to encourage people – we're encouraging women to really consider a career in Trading." (Financial Services Company)

The Professional Services Company has a high turnover of women at management level, several of whom were leaving after maternity leave (typically at 28-31 years of age). The challenging work environment, style of business and meetings, and lack of compatibility with care responsibilities are considered reasons for the high turnover. The Professional Services Company is trying to alter this trend through the

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targeted programme and senior managers try to resolve potential problems on an informal basis by discussing adjustments to work arrangements with female returnees. The potential in terms of gaining experienced skills is an incentive to make it work, but nevertheless is still seen as a challenge to manage this sensitively:

"I've had three or four people on maternity leave – and it's quite difficult to know, from my perspective, do I phone this person up every month and say "How's it going and let's keep in touch"? There's a fear of doing that, because actually are you putting pressure on that person to come back? (…) and yet probably, you know, someone's sitting at home thinking, "Well, no one's spoken to me. No one really cares. Do they really want me to come back?" Again, it's quite a simple thing, but I don't think we've really cracked that." (Professional Services Company)

Challenges: Breaking down stereotypes externally

One challenge in encouraging greater diversity in recruitment is to change the perception of those external to the company. Career advisors, for instance can be restrictive when they perceive a sector as unsuitable for certain groups:

"Over lunch, chatting with various people, particularly careers advisors, it was clear that they just wouldn't think – their perception of the Restructuring market was that it was male-dominated, aggressive, heavy boozing, etc. Now, it's not like that – I mean, there's an element of that still, but we've moved on, and yet, if that's what's in the minds of university careers advisors, then we're not going to get people or suggesting that you join the business. So we have to look at those barriers and understand what they might be and break them down." (Professional Services Company)

Challenges: companies' adjustment to different needs and requirements

Diversity in terms of disability can be problematic, even if a company is fully committed to including people with different capabilities. Suitable information and advice needs to be delivered to all relevant parties, and company processes and practices need to be adjusted to accommodate diverse needs. This can be problematic. The Professional Services Company for instance is aware of disability and recruitment issues, but its monitoring of disability has not been able to provide a realistic picture of its situation, and therefore disability-related advice might not reach all relevant parties. Some examples show it is at times seen as a real challenge to make it work:

"We had someone who was partially blind, and that was disastrous actually. She joined my group about four years ago now, and we were not geared up for that at all. (…) Well, through the recruitment process, it's fine, and then she goes to do exams with all the others – we outsource the examination training, and she turns up and of course she can't read the blackboard, she can't read the papers… And then, when she went to the clients, you know, she's auditing the numbers or she's looking on the screen, and then she couldn't see what was on the screen properly, so we had to have all sorts of assessments done (…). And then you've got to talk to the client and say well, is it okay, but you know, we need everything blown up for this lady to be able to audit it properly. It was quite difficult. At times, I thought we were getting there, and then she left, and I think it just didn't work for her or us really."(Professional Services Company)

3. Flexibility

All of the case study companies acknowledged that flexible work arrangements are not effortlessly organized, and depending on organisational characteristics and business appropriateness this might lead to real obstacles in diversity development.

"Flexible working, (…) that's actually a big challenge for us." (Financial Services Company)

ACAS (2005) points out that for a policy to be effective it should identify the business needs, have senior management endorsement and be fair and consistent as well as legally compliant. Strategically therefore a debate about whether flexibility is designed for the organisation, for its employees, or for both is desirable, yet this is not always the case. Despite this, flexible work arrangements are available at all the companies, and are seen as a prime tool in enhancing diversity and retaining the best talent, for instance after maternity leave. It is clear 'flexibility' in these companies is not solely linked to the retention of female workers with childcare responsibilities. All companies have made some flexible work available to everyone, and a number are clear to stress that the policies go beyond offering work/life balance opportunities; in the Professional Services Company increasingly men apply to work flexibly (25-30 percent of flexible work applications came from men in the last year).

"We've been very careful to present the real situation, which is flexible working is not about working mums. It's about anybody who wants to work and then do something different. So, we've got a very senior male

director who continues to work maybe two or three days a week, but in fact is preparing for his retirement. That is not what the business would naturally think flexible working was all about. They would think, "Oh, this is about women. It's about women with kids as well!" So we are doing a lot to support flexible working, whether that's with technology – the Blackberry – whether that's with how we market it." (Property Services Company)

Overall, a variety of arrangements is offered and in some companies this is very extensive. The Professional Services Company offers part-time work (to mostly female staff), additional holiday purchase (which is popular with male staff), a glide-time system, flexible hours, career breaks, job-sharing, and home-working (with free broadband supplied). At the Financial Services Company arrangements other than full-time five day working weeks are a possibility (such as 4-day week, compressing the working week, job sharing). And at the Property Services Company, where flexible work opportunities are more recent, a variety of arrangements is now possible: for example, job share, home working, career breaks, term-time contracts (particularly in consultancy and research), and part-time working for women who have children.

The impact of retirement change and its link with flexible work, especially in relation to capabilities and manual work, is still unexplored. For companies providing non-manual professional services, this type of flexible work over and beyond retirement age is already a reality and does not pose a problem. The Telecommunications Company, which has a large group of engineers as part of its employee base, has developed a 'Managing Change in Capabilities' programme allowing for functional flexibility, especially relevant in terms of accommodating those with a disability. In cases of a change in capabilities, workers will be assessed as to whether it is possible for them to continue their work activities with 'reasonable adjustments'. In one example, a personal room with bed was provided for a member of staff who needed to lie down regularly due to a disability. If this is not an option, redeployment in other areas of the company is discussed; for instance, workers who could not continue their physical outdoor technical work were redeployed elsewhere. In some isolated cases it has, however, proved impossible to accommodate changes in capability.

Flexibility and its dimensions

There is a broad and diverse range of flexible work patterns reflecting the nature of the occupations present in the organisations studied. Flexibility arrangements in each participating organisation are influenced by the respective corporate cultures. Some companies stress the promotion of the 'remote' dimension of flexibility, i.e. where it is possible for work to be done outside the office. Flexibility in that sense is associated with being "productive and creative and innovative without sitting at your desk." (Financial Services Company). Remote working has an immediate impact on the office space needed and its associated cost, making initiatives such as 'hotdesking' very attractive to the Property Services Company. Organisational flexibility in the sense of 'remote working' is seen as natural by such companies, especially at senior level:

"I would say this across the board, there is no rule that you need to be here between this time and this time. As long as you get the work done, they really don't mind. (…)We have mobiles, we have Blackberries, if we need to be contacted. Because it's not an office environment whereby we're all sitting at the same desk all the time, we're always out at clients, always at meetings anyway, (…). So partners, for example, wouldn't formally probably be on flexible working, but if they needed a day a week, you know, to do something, they would be easily able to manage that without a problem. I know I would be able to manage that without a problem, if I needed to do that." (Professional Services Company)

"With managerial, you're a lot more flexible. (…) The timings of a manager's job are a lot more flexible than an advisor's job. Advisors, when they come in, they have to clock in, so the time is – this is your shift, this is the thing – and they're judged on that as then one of their targets is making sure they're on time. Whereas a manager, if he walks in 5, 10 minutes late, even an hour late, it's not logged anywhere to say right, look – because they're not there to answer customer calls". (Telecommunications Company)

Another dimension of flexibility relates to 'unavailability' on the employees' part – the possibility for employees to work differently from their mainstream colleagues on a full-time working week. Sometimes these non traditional working patterns accommodate time off at long or short notice (for care leave, part time work, for instance). Where work arrangements are routine and can be planned, this flexibility can be offered without problems. For instance, call centre workers' attendance patterns at the Telecommunications Company are negotiated and then 'set', so that employees know their working pattern throughout the year. Swaps and other special leave procedures are in place for urgent time off. Specific flexible work patterns can only be accommodated if business requirements allow; for instance, a customer service helpdesk has to be manned all the time

by sufficient numbers of staff and infrastructure and maintenance programmes need to be serviced within specific time frames by engineers with the appropriate knowledge. But, as most of the Telecommunications Company's work activities are not subject to constant and surprise changes, judgements about flexible attendance patterns can be made by central command centres that monitor work volumes. While not all requests can be accommodated, negotiation is possible and often creative practical solutions are organised. For instance, a prayer room has been installed as the work schedule does not allow for all relevant employees to take time off for religious commitments on Friday afternoon in the customer service centre.

But flexible arrangements which accommodate periods of 'unavailability' can be problematic and are not always easily accommodated for business reasons. While prevalent in several companies' support divisions, it is challenging especially in client facing and senior level positions as this in effect jeopardizes the customary 24/7 level of client service. It also is acknowledged by some of the participants that willingness to accommodate such requests, for instance to not work on Fridays in an environment in which it is not yet common practice, will be linked to the value placed on the worker requesting this.

At the Professional Services Company, the possibility of being 'unavailable' for part of normal full-time working hours/days (averaging around 40-50 hours with peaks of 70-80 hours for many staff) depends on one's seniority, the type of work/team that one is part of, and the client, and might be one of the reasons for the lower than expected demand for flexible work:

"The more senior the person, the more difficult the degree of flexibility may be. Often work is won by the speed of response. In a client facing position this can be an issue. Even if it takes 24 hours before getting back to a client on a prospective piece of work, the contract might be lost." (Professional Services Company)

"Our challenge is actually with the ones who are in the sort of mainstream transactional end of the business (…) where, at short notice, you can be required to work all hours, weekends, working away, etc (…), and that's where we're having to put a real effort into trying to make it work, both on the part of the individual and on the part of ourselves in making it work. It's very easy to say "I can't cope with somebody on my team who is only available three or four days a week or is very inflexible", and that's an issue we have to deal with." (Professional Services Company)

This is also reflected at the Financial Services Company where flexible arrangements at all levels are not taken up as much as diversity initiators would like. In senior roles especially it remains a 'challenge', although there is improvement. The extreme (long hours) nature of the business is one explanation why take-up of flexible working does vary; in support divisions it is very prevalent (around 50 percent), also in Corporate and Infrastructure areas, while in roles tied to the capital markets it is markedly less common:

"I think a firm like [ours], and investment banks in general, are challenged in this regard, because, you know, we're also known for having some quite extreme jobs, and that creates a lot of pressure and a lot of stress for individuals." (Financial Services Company)

Pivotal role of line managers

Line managers have a pivotal role in making flexibility happen, concerning its communication, promotion and the impact on performance management. Where there is apprehension about flexible working, either from the point of view of the supervisor or the employee (in terms of supervision or career implications), or where communication has broken down, the obstacles to the implementation of a flexible work policy become apparent:

"I think some of the challenge and some of the nervousness from the professional point of view is actually line managing those people, and what they're doing when they're at home, and can they be available for clients, and the perception of people. So I think it's very much at the early stages as to what we could do in the future, because there's a relatively small proportion of people who work part-time or flexibly in this way, but it is growing." (Property Services Company)

The knowledge of flexible work options is not always sufficiently widespread and individuals - especially junior employees - may not believe these are a real possibility that will not affect their career development, particularly if there is a lack of role models or if line managers are not actively promoting this. A challenge is the impact of flexible working on career management, as output and client service is an important part of performance reviews:

"You would want 100 percent of the people filling out an employee attitudes survey to say (…) "I'm not afraid to ask my manager for Thursday afternoon off because I'm having a couch delivered or I need to go to the dentist or something. (…) We asked a question of that type in a

survey two years ago and the response was not as positive as I would have liked." (Financial Services Company)

[On a male member of staff working part time] "Coming back to working on the big clients, well, some of the big clients, the demanding clients, this chap really is not going to be able to cut the mustard with those because…sorry, you know, you can't say "I'm not in on Wednesday." That, I think – and I had a very open discussion with him about that's going to slow his progress down. I don't see how it can't." (…) "Where I see the issue is how you compare that person to the person that's working five days a week and 16 hours a day, and then, you know, you do get in a position where, okay, well, who are you going to promote (…) Are we saying to our people who are working flexibly, "Well, that's fine, but actually you won't get promoted very quickly." We're not explicitly saying that. I don't think we're actually addressing it really at all." (Professional Services Company)

Line managers' issues can be addressed; return after maternity leave is an area where the Financial Services Company, for instance, has improved, mostly through improving communication by "giving (…) managers tools to actually have the right level of discussion up-front, which we hope then encourages people to know (…) you don't have to come back and do exactly the same looking job, you know, that we can do different things" (Financial Services Company), and aided by initiatives such as an internal children's play group.

Better practices

The Financial and Professional Services Companies have been recognised externally for their flexibility policies. The Telecommunications Company especially can be seen as a good practice example, as flexibility is seen as core to its diversity values and its implementation is extensive and successful. It includes, for instance, a wide variety of working patterns (although all contracts are at least 20 hours a week all year long), flexible start times, shorter working weeks (e.g. contracts between 20 and 36 hours, four-day weeks, no weekends, but 14 days over three weeks, and nine-day fortnights, four-day weeks including Saturday, working nine to four for carers) and job share at all levels. The concept of the 'occasional home worker' has also been introduced. The company actively promotes work/life balance which, next to childcare issues, pays specific attention to carers. The figures are high: 75,000 work flexibly and 11,000 are home workers; 99 percent of women return to work after maternity leave.

Nevertheless, even here where flexible working patterns are fully supported, examples showed that especially in roles where flexible working is not common (for instance a manager who does not work every weekday), it can be a daunting experience for the employee involved to decide to stick with agreed working hours, for instance when asked by superiors or clients to attend meetings at times when he or she is normally not available for work. On these occasions, company support for unavailability is important. While there are business constraints, the possibility to allow extensive flexibility has been aided by a number of factors, i.e. the size of the company, the availability of different activity areas which can accommodate it, the possibility to plan the majority of work activities, the extensive monitoring of work activity, and the nature of customer demand and the business activity of the company, which directly link to the development of communication technology. For instance, the use of broadband and laptops linked to a central work despatch centre that records work time and issues daily work programmes makes it possible for engineers to travel to customers from home without coming into a central work point.

4. Awareness-raising through training and external promotion

"How you actually get the awareness of what diversity is about to people at the front line is fundamentally crucial in a world that is changing." (Telecommunications Company)

In order to effectively promote an environment of diversity both internally and externally, awareness creation through day to day communication is complemented with targeted diversity awareness training and promotion. Firms differ as to how and for whom diversity training is provided; all employees receive a form of diversity awareness training, which is sometimes part of the induction process and in several instances is developed only online. Managers responsible for recruitment are normally targeted specifically with relevant training, but awareness training for other line managers is not always evident. Some examples (Telecommunications, Professional Services) show nevertheless the increasing consciousness of companies that awareness raising of all line management should be seen a priority, as it helps to make diversity an issue that is not only occasionally raised via Human Resources, but continuously part of the business agenda of every team; it is communicated to all levels via a trickle down effect to become part of the common culture.

Awareness training for all

At the Financial Services Company, diversity awareness training has been organised globally since 2004 for the thirteen thousand employees; a diversity web cast is also part of induction training. Company Networks and divisions can organise their own diversity training events as part of their plans. For these, a variety of diversity specialists are invited. Some choose to organize alternative awareness experiences such as brainstorming:

"We find (brainstorming) has basically helped us get to the issues a lot quicker, rather than, you know, putting people through a programme (…), and then having them fill out a questionnaire at the end." (Financial Services Company)

At the Professional Services Company, mandatory on-line diversity training is being developed to extend ownership of the diversity agenda. At the Property Services Company, diversity training is available to employees at all levels, including graduates. But overall, it proves to be a challenge to involve people in 'non-fee' issue events; some material aimed at increasing awareness is also available online. At the Telecommunications Company, diversity awareness campaigns purposely never focus on a single, particular, under-represented group as it is thought different projects might lead to potential conflict. Special events such as 'taking your daughters to work day' or 'Diversity Week' - where diversity awareness is tackled through seminars, training, web chats, quizzes, seminars and debates - are organized and a new Diversity Awareness programme was implemented for all employees. This training programme covers issues concerning age, ethnicity, sexuality and gender. Developed over several months and with the help of an external organisation, the Telecommunications Company allowed for feedback from relevant employees (including diversity champions) before implementation. The programme was carefully designed to stimulate the right environment for contemplation and discussion, quite different from a 'ticking of the box' exercise. Using multimedia, realistic company-specific diversity-related scenarios are acted out in the company's work environment. This filmed role-playing (for instance, situations of bullying and harassment) is then followed by questions and possible solutions. In total this tool is three to four hours long. All employees are part of this awareness training and can choose to complete it individually (at home, for instance) or in a group:

"Now, you can't go to a guy on the front line in a van or somebody working in an exchange and say, "Right, I'm now going to talk to you about the business case for

diversity," because they'll just look at you blankly and think what on earth are you talking about (…). So, if we're going to get diversity into the bloodstream of the business, and understanding what diversity means, and I don't mean political correctness – I mean about what it actually means, about valuing uniqueness that individuals bring, about the talent that they bring, about how you foster and engender a society in your business that is representative of the area in which you operate – then it starts with people being aware, and understanding, you know, what is good and what is not good about understanding diversity, and that's an awareness exercise." (Telecommunications Company)

Awareness training targeted at management

Specific diversity training is normally organized for recruitment managers. At the Telecommunications Company, all managers involved in recruitment receive mandatory training that includes equality and diversity aspects and refresher courses. The company has also introduced new training which aims at minimising any bias in performance assessment. The importance of line management encouraging communication on the diversity agenda with their staff is seen as key to raising awareness:

"Half of my career I was an engineer, so I understand the value of relationships between front line people and first line supervisors. (…) If we're going to do major change in the way we operate, it doesn't help me sending out big briefing documents or going to a big ra-ra session. It starts with the level one manager. Who do you turn to if you want to know what's going on? "What's this diversity about then, gov'nor?" (Telecommunications Company)

Similar, albeit less extensive, diversity training is available for managing staff at the Property Services Company; line managers are given guidelines on good recruitment practice and a basic guide to discrimination; increased awareness is built on a 'cascade effect' whereby senior managers inform the managers under their responsibility. At the Professional Services Company, the whole recruitment team receives diversity training but for other line managers involved in the recruitment process there is only limited reference to diversity issues in their training. Nonetheless, diversity workshops are organised for partners, aimed at making partners aware of diversity issues, language, acceptable behaviour and relevant legislation. Practical diversity awareness is starting to be communicated to people management leaders, via workshops, and through advice from senior managers and champions:

"You would have had maybe 50 or 60 people who are responsible for managing people in Audit, in a room, discussing diversity dilemmas, if you like. So we had different scenarios that we had people in (…). You know, we had a sort of client saying, "Let's all go off to a lap dancing club now we've done the deal," and a female on the team, and how you deal with that and that kind of thing. Those are the sort of things that we worked through. (…) So then you'd have a time out saying, you know, "What did I – was that the right way to approach that?" (Professional Services Company)

"But for example, with the [Management] group, one of the things I said to them was, "Well, let's just go through where all your teambuilding events are held or whatever they end up," and of course they're all based round pubs. So I said, "Well, if you're a married mother with two children, and it's Friday night, five o'clock, do you want to go to the pub with your team or do you need to get home and see to your kids," type thing.(…) Or if you're a Muslim, yes. (…) So then people start sending you emails saying "You'll be pleased to know I've organised an event which is, you know, at lunchtime and not in the pub," etc". So when they start joking about it, then that's when you get some buy-in." (Professional Services Company)

External promotion of internal values

Internal promotion of inclusive values goes hand in hand with the promotion of brand awareness of the diversity values externally. With the aim of 'leading through example', several of the firms are promoting their values through their websites, fact sheets and broader literature. There are also sponsoring events and projects such as SEO (Sponsors for Educational Opportunity), the UK Career Academy and working with Rare Recruitment. Partnerships with organisations promoting diversity help to make these values known and several of the companies are (founding) members of organisations such as Opportunity Now, Race for Opportunity, Employers' Forum on Age, Employers' Forum on Disability, Employers' Forum on Belief, Employers for Fathers, Business in the Community, Scope, Prospects and Stonewall, Black Business Network and Working Families. A 'Professional Services Diversity' network has been set up with other City firms and meets every two months to share good practice in this area.

Conclusion

Conclusion

Our investigation has shown that the companies featured show a real commitment to the implementation of diversity policies, although each is at a different stage of its development. The Telecommunications Company, where the implementation is most advanced, can be regarded as a good practice example.

All the firms have developed individual interpretations of what being a diverse company is about, linked to their environment, business aims, sector and market. Nevertheless, they articulate both moral and business arguments in their explanations as to why diversity is important to them. The business arguments, while difficult to quantify, focus on optimising talent resources and client attraction, as well as on reducing costs and stimulating innovation. Diversity is linked to "inclusion", but at the same time "valuing the difference" is considered important in order to attract and keep the best possible talent, especially where recruitment is tight. Diversity in recruitment and retention lies therefore at the core of the diversity strategy and is at the centre of the moral and business case argument.

It is also acknowledged that the implementation of diversity, even when there is an obvious commitment, can face real problems. For instance it is apparent that flexible work arrangements are not effortlessly organized and that line managers have a pivotal role in making them happen, whether in terms of their communication, promotion or its impact on performance management.

A number of organisational characteristics have been identified that played an important role in enabling the strategy and practices towards greater diversity (some are disabling when absent). Enablers include: senior management endorsement and action, the embedding of diversity values in functional business language and objectives, monitoring procedures with respect to diversity related data, tight recruitment and scarcity in the talent pool, work arrangements which are routine or easy to plan, the absence of a long hours culture, functional, temporal and contractual flexibility, raising the awareness of the whole workforce with specific attention to key groups, and a close link between the diversity of the workforce and product development and contract procurement and compliance.

These findings reveal the complexity of the implementation of diversity policies and the crucial interplay of the various stakeholders in order for companies to become more diverse. We hope that this initial research will form the basis of further investigations to unravel these necessary enablers, as well as act as a guide for companies in their journey towards increased diversity.

The companies which participated in the research were invited to comment on the value they gained from their involvement. One wrote:

> "It is always useful to reflect on how well we have implemented our diversity plans. What has been particularly interesting is to hear the comments from our people made directly to the researchers which shows that we are getting things right across the business. Some of the value, I believe, will also lie in talking, in depth, to the other participating organisations who have made gains in areas in which we feel we should be making greater progress."

From our own observations we would suggest the following actions be considered by senior management:

• Define what diversity means to your organisation and what benefits it brings.

• If diversity is considered important, prepare a strategy in which:

  – realistic targets are set

  – budgets and resources are allocated

  – formal endorsement is obtained

  – senior management are made personally accountable for its delivery

  – the strategy is communicated throughout the organisation and discussed with business partners

  – the business is incentivised to deliver the strategy

  – consideration is given as to what your organisation should do to support the needs of staff and to make the most from the diversity of their ideas and experiences

  – progress is monitored and regular feedback obtained from staff and

  – the use of experts is considered to help with specific projects, workshops and training.

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Managing diversity through flexible work arrangements: management perspectives

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Abstract

Purpose – The purpose of this paper is to evaluate the role flexible work arrangements (FWA) play in diversity policies, and the reasons for/barriers to their implementation.

Design/methodology/approach – Based on qualitative case study research in four large multinational service companies. Primary data were collected through senior and line-manager interviews and questionnaires.

Findings – The research shows FWA are an integral part of diversity implementation but organisational imperatives, particularly management concerns about client interaction, constrain the acceptance of FWA and therefore restrict their impact as a means to greater diversity. As FWA have different effects (being available "remotely" vs not being available) their acceptability is not inclusive, but dependent on job character and level.

Research limitations/implications – Further research is needed on the difficulties of implementing FWA and, particularly, its impact on career progression. The prioritisation of business imperatives over social arguments, such as client needs and staff availability, with its impact on the acceptability of FWA and hence ultimate enhancement of diversity deserves more attention.

Practical implications – This paper shows that company discourse with its unambiguous business focus highlights the shortcomings of relying upon FWA to bring about a changed climate for diversity.

Originality/value – Importantly issues are explored which have not featured significantly in the literature to date, especially the role of clients/customers and differences in the effect of FWA as elements in managerial perspectives on the acceptability of FWA, which can act as constraints to its use for diversity enhancement.

Keywords Presenteeism, Diversity, Business case, Manager, Flexible work arrangements, Client

Paper type Research paper

Introduction

This paper explores how far the implementation of flexible work arrangements (FWA) augments workplace diversity enhancement in four high-profile companies operating in the UK service industry. These companies are publically recognised (as well as being recommended by their peers) as "good practice examples" in terms of diversity and flexibility. FWA are often referred to in relation to achieving greater diversity within organisations, while their absence is assumed to inhibit the development of a diverse workforce (Ely and Meyerson, 2000). In a recent survey for the CIPD (Bernard Hodes Group, 2012), 72 per cent of companies acknowledged that flexible work initiatives were used as part of their diversity strategy, although the first findings from the WERS 2011 survey show that very few workplaces have specific policies in place to promote the employment of disadvantaged groups (van Wanrooy *et al.*, 2013). Our aim is to evaluate the role FWA play in diversity policies, and the reasons for – and barriers to – their implementation. Our focus in seeking to understand the impetus, constraints and pressures for diversity delivery from FWA is on the senior managers and their supporting colleagues amongst human resource (HR) and line-managers. The research shows that FWA are an integral part of diversity implementation but that, however,

diversity is defined, organisational imperatives, in particular the importance of management concerns about client interaction, constrain the acceptance of FWA and therefore restrict their impact as a means to greater diversity.

FWA are widespread (OECD, 2010) and seen as central to the business case for (gender) diversity (Glover and Kirton, 2006). While the focus in the literature has been on improving gender diversity (Doherty, 2004; Kossek *et al.*, 2010), Özbilgin *et al.* (2011) highlight the failure to acknowledge increasing labour market heterogeneity in discussion about broader diversity issues connected to work-life balance (WLB) and FWA. Though researchers acknowledge that decisions about flexible work should be taken at a strategic level (Thompson, 2008), there is also considerable underutilisation of flexible work policies, particularly at managerial level (Wise and Bond, 2003; Bittman *et al.*, 2004) due to elements of work-life culture, including "management support, organisational time expectations, career consequences, gendered perceptions of policy use and co-worker support" (McDonald *et al.*, 2007, p. 603). Our research seeks to address these issues.

Access to our research companies was initiated in 2007 by "London First", an employer-based company membership organisation that invited us to conduct research around diversity implementation in some of their key member companies. As all four companies were acknowledged as positive role models in their industries, one purpose of the research was to establish examples and implementation "scripts" identifying barriers and positive initiatives that could be used by other member organisations. The London First connection gave us unique access to senior management, HR management and line-management (but did not enable communication more widely within the companies). In-depth interviews and a background survey were conducted on the themes of workplace diversity, talent management and FWA, providing information from both company and management perspectives. Our findings highlight that FWA play an important role in facilitating diversity enabling strategies and practices in all companies, particularly in a tight labour market, but that the impact in terms of change is inhibited because business imperatives are prioritised over the social argument for diversity.

Our companies show different understandings of both flexibility and diversity, leading to different interpretations, policies and implementation. However, flexibility was defined, and in the myriad of operational ways in which it was manifest, FWA clearly set out to enhance and encourage the employability of a more diverse pool of labour, especially in terms of gender and ethnic minority participation but also related to religion, age and disability, echoing Warhurst *et al.* (2008). Despite this, and even in an "encouraging" atmosphere, the translation of flexible work policies into practices is seen by all four companies as "a challenge". Business pressures, particularly the prioritisation of clients' needs and expectations, created cultures of availability, long working hours and presenteeism that, to differing degrees, militated against FWA and inclusion. This is corroborated by the 2011 WERS survey which found that 41 per cent of employees considered it necessary to work long hours in order to progress (van Wanrooy *et al.*, 2013).

Where flexible work patterns impact on availability, for example in the form of part-time work, they are acceptable only if they do not impact on the client. For FWA uptake to be successful, senior management endorsement is imperative in facilitating cultural change, although line-managers also play a crucial role. The continuity of this endorsement can be questioned – our findings show that diversity is regarded as a valuable business tool, but one that is to be adhered to only when it can deliver a competitive advantage. A changing business context, for instance easier

recruitment, might lead to a reduced focus on diversity, and hence fewer instances of FWA implementation.

FWA and diversity: the context

Research suggests that diversity enhances organisational flexibility, recruitment, retention and financial sustainability (Allen *et al.*, 2007). A diverse workforce is one that may provide competitive advantage and enhance organisational adaptability to changing marketplaces (Zanoni *et al.*, 2010; Ely and Thomas, 2001; Kochan *et al.*, 2003). Such advantages might therefore be encouraged by creating optimum conditions for a diverse workforce, including the provision of FWA. Yet the many meanings and manifestations of FWA impede attempts to generalise their focus, impact and contribution to diversity management. The term is opaque, though some clarity is provided by characterising flexibility according to its prime beneficiary – as for example, in the distinction between "chosen" and "constrained" part-time working (Gash, 2008) and between "customisation" (benefiting the employee) and "flexibility" (to benefit the employer) (Roberts, 2008).

The debate around FWA has evolved in the last decades from a social critique on the negative characteristics of the work practices associated with the "flexible firm" to a debate that focuses on positive aspects within a HRs framework. The focus of discussion has in this way shifted from operational and numerical flexibility (where employer needs are paramount) towards spatial, and, particularly, temporal flexibility (fractional working, reduced hours, etc.) with benefits for employees (Musson and Tietze, 2009) and, concomitantly, for employers – attracting and retaining valued employees linked to turnover intentions and WLB. This shift represents a growing realisation that flexibility offers a means of creating a culture that values diversity while improving financial sustainability. Links between diversity management, or at least gender diversity, and flexibility have as a result become more explicit where FWA are associated with WLB – with some references to "work-family balance" (Lewis *et al.*, 2007) and associated "family-friendly" programmes.

Compliance with legislation is one justification for FWA. Decision takers may also endorse FWA because of organisational benefits under the "business case" argument that individuals from different backgrounds add value to an organisation in terms of performance and competitive advantage (Kossek *et al.*, 2011). Flexible work practices are deemed to encourage equity and social inclusion; consequently, in order to benefit from a diverse workforce, organisations develop HR policies that support and value diversity by addressing WLB (Ryan and Kossek, 2008; Barbosa and Cabral-Cardoso, 2010). Evidence supporting the FWA business case argument remains nevertheless tenuous. Studies have focused on enhanced business performance linked to recruitment and retention (Drago and Hyatt, 2003) and on employee improvement issues around attendance and engagement (Glynn *et al.*, 2002; Ollier-Mallatere, 2010; Atkinson and Hall, 2011). FWA are also seen to reduce poor performance and stress at work (Parris *et al.*, 2008; Grady and McCarthy, 2008). But others have found no real business case evidence (Heiland and MacPherson, 2005; Wood and de Menezes, 2007).

The diversity literature around FWA and WLB is associated mainly with gender equity and its impact on the gendered order (Ryan and Kossek, 2008; Lewis and Humbert, 2010). Although empirical data from Kamenou (2008) indicate that many women struggle more than men in achieving a WLB, there is also an ethnic dimension: ethnic minority women often have to deal with additional cultural, community or religious demands, necessitating a flexible approach from employers (Kamenou, 2008). However, not all of the diversity literature is concerned with gender: Özbilgin *et al.* (2011)

conclude that FWA should be universally applicable; Woodhams and Corby (2007) investigated the positive impact of employers' practices in respect of disability; and Clarke *et al.* (2009) found the inflexible nature of work had a negative impact on the employability of disabled workers. Research on FWA for young professionals confirms they are targeted with "flexible spending accounts" enabling tailored working hours (Sturges, 2008). Kossek *et al.* (2010) go further in claiming that "more individuals want to work in different ways across generations, lifestyle and family configurations" (p. 63).

Diversity and FWA sit uneasily with the concept of the "ideal worker", where work commitment is promoted as though employees have no other outside work obligations (Haas and Hwang, 2007; Holt and Lewis, 2011). Where, for example employers utilise high-involvement, high-performance work practices, flexibility is about "control", about the opportunity for "self-determination" (Kelly and Moen, 2007), acting rather as an inhibitor than a means to enhance diversity. Indeed, it has been argued that FWA rarely lead to changes in organisational equity and a negative effect can marginalise those not fitting the model (Lewis, 1997; Kossek *et al.*, 2010). Rapoport *et al.* (2002) show a link between practices that create gender inequalities and organisational effectiveness and have created a dual action approach for systematic changes in which organisational context is very important. Their work emphasises the importance of further understanding variability in context and practice, a theme central to our research and supported by our findings.

Implementation of FWA
FWA are often insufficiently utilised, perhaps due to inhibiting cultural and structural barriers such as perceptions around career development and the impact of managerial control (Fleetwood, 2007; Lewis *et al.*, 2009; Brown, 2010; Holt and Lewis, 2011). Even when flexibility policies are available, cultural factors may enhance or militate against their take-up (Glynn *et al.*, 2002; Callan, 2007; Limoncuoglu, 2008; Kossek and Hammer, 2008). Organisational support, cultural awareness and workplace practices are essential for successful policy delivery and take-up (Gregory and Milner, 2009; Sippola, 2007; Myers and Dreachslin, 2007; Leveson *et al.*, 2009). Also broader societal norms, for instance perceptions of "normal" gendered work patterns, influence the take-up of FWA (Smithson and Stokoe, 2005; Mcdonald *et al.*, 2007; Kamenou, 2008; Emslie and Hunt, 2009).

The value accorded to "time" is important (often resulting in the perception that FWA impact negatively on "availability"); managers may be reluctant to facilitate working patterns that lead to employee inaccessibility. Therefore FWA for the employee are considered problematic for career development, and this may be one of the main reasons why flexible work is underutilised (Kirby and Krone, 2002; McDonald *et al.*, 2007). Being "available" is seen as crucial for business, although "in reality managers are often not available to clients and employees as they attend meetings, travel […]. However, the myth of constant availability […] appears to be widespread" (McDonald *et al.*, 2007, p. 614). Elements of time and commitment are strongly linked to the endorsement and utilisation of FWA (Thompson *et al.*, 1999). Research indicates the prevalence of long hours to show commitment as a pre-requisite for promotion. Changing technology now makes it possible to be connected to work 24/7 and has resulted in the blurring of work/non-work boundaries (Lewis *et al.*, 2009; Kossek *et al.*, 2010), which can increase availability but militate against WLB (Russell *et al.*, 2009). The occupational level is important here: the occurrence of flexible spatial and temporal "availability" is much higher amongst managers and professionals

(Bergman and Gardiner, 2007). Abendroth and den Dulk (2011) confirm that control over working time has a direct impact on WLB and by extension is also important in attracting and retaining a diverse workforce. There is also some evidence indicating that unfavourable views of the commitment of those opting to work part-time negatively impact on promotion (Den Dulk and de Ruijter, 2008; Brown, 2010). Kirby and Krone (2002) confirmed the incompatibility of part-time work and promotion; this is also borne out by Crompton and Lyonette (2011) for female accountants.

Research furthermore demonstrates the importance of managerial commitment for the successful implementation of family-friendly policies (Thompson *et al.*, 2004; Maxwell, 2005; Lapierre *et al.*, 2008). Policies alone, however, well designed, do not promote a work environment that encourages diversity. They may even be undermined by unsupportive managers preventing, or discouraging, their subordinates from working in this way (Cunningham and Hyman, 1995; Renwick, 2003; Parris *et al.*, 2008; Lewis and Humbert, 2010; McCarthy *et al.*, 2010). Purcell and Hutchinson (2007) amongst others confirm the impact of line-managers in implementing HR policy – leaving room for different understandings, standards and practices depending on the line-managers, even in supportive organisations (Wise, 2005; Ryan and Kossek, 2008). Atkinson and Hall (2009, 2011; Hall and Atkinson, 2006) also highlight the restrictive role of formal FWA and argue for more informality.

Requests for flexible hours may lead to tension as line-managers are asked to ensure that organisational performance improves while simultaneously accommodating flexible work and a decreased workforce in terms of time commitment (Glynn *et al.*, 2002; Hales, 2006). This is in line with the Industrial Society which found that 31 per cent of managers considered managing the large variety of FWA a problem (Bingham, 2001). To help improve this situation, supervisors of remote workers need, according to Lautsch and Kossek (2011, p. 15), "to develop new approaches attuned to the needs of workers in new flexible arrangements (i.e. increased information sharing and assistance in boundary management)". For successful FWA, the demands of the organisation, manager and employee need to be aligned as, where managers are supportive, take-up will be higher (Allen, 2001). The supervisor/employee relationship and work group relationships are therefore key factors in the success or otherwise of FWA.

The availability and implementation of flexible work patterns are affected by the organisation's policies, culture and norms, and crucially by the behaviours and dispositions of individual managers and supervisors in the workplace (Ryan and Kossek, 2008). Den Dulk and de Ruijter (2008) found, for instance, that the values and attitudes of individual managers and supervisors have a significant impact: individual managers tended to perceive WLB policies as disruptive, though responding favourably when aware of individual circumstances and when personal mitigating factors are involved. Smithson and Stokoe (2005) and Kamenou (2008) suggest that the FWA requests from potential recipients are influenced by social norms, limiting the extent to which there is uptake across the range of social groups and the degree to which WLB can be achieved: there is still a perception, for example, that men "don't normally do flexible working", while part-time working patterns do not fit with male managerial beliefs of what constitutes "normal" working arrangements.

In summary, the literature on FWA and diversity is disproportionately associated with gender. The successful implementation of FWA depends, in part, on aligning long-term employee benefits, such as career development, with societal, individual and organisational values and management support. Structural and cultural barriers within the workplace, even in supportive environments, impact on FWA and hence on

diversity, just as – as our work shows – do the role of organisational imperatives such as financial sustainability. While the literature acknowledges the aspect of "unavailability" as an important barrier to implementation, it does not differentiate between the inaccessibility of employees and those who are accessible but working remotely, which our research found to be a crucial indication of whether or not FWA, and hence diversity, were supported by line-managers.

Methodology

Our primary data were collected as part of wider research into diversity practices within four large multinational London-based leading service companies at a time of a tight labour market (2007-2009). The companies are well known and established as good practice employers, in part because of their FWA and diversity policies. They are not all at the same level: TelCo is generally regarded as a diversity and FWA innovator, but PropCo (indicative of its sector) had only relatively recently embarked on the journey to increase diversity.

A project team, consisting of representatives of each company, London First and the research team, met monthly to discuss and agree on key issues, including broad interview themes, selection/negotiation of interviewees per company, data analysis and results, and the focus and verbatim quotes to be used in the research report. The data capture in each company was uniform, and largely open-ended. To gain an overview of policies and data concerning diversity, FWA and any links to external diversity bodies, company web sites were reviewed and uniform open-ended questionnaires sent to the organisations' HR contacts. The responses to the questionnaires gave a picture of each workforce, diversity strategy and implementation, recruitment, training and link to suppliers and the organisation's approach to flexible working arrangements and the type of support that is offered. Information on FWA and WLB was provided by the respondents in response to a number of questions concerning diversity strategy and recruitment. It is important to our findings that the theme of FWA was linked to diversity by the respondents themselves, and not initiated by the interviewers. Not all questions were, however, answered; for instance, FinCo declined to make public any figures on workforce diversity.

After the questionnaires were returned, 19 individual interviews were conducted. These interviews, with four to six interviewees from each company, were organised via London First. Table I provides an overview of the interviews and the roles of the interviewees (as specifically as possible in order to maintain confidentiality). In-depth face-to-face individual interviews took place on company premises in 2007/2008. Except for the one telephone interview, interviews were conducted mostly by two interviewers, sometimes three – in which case the third interviewer remained in the background. To keep the interview experience consistent, all interviews in a particular company were conducted by the same interviewers. Interviewers also listened to interview recordings from those interviews that they did not attend in order to maintain consistency.

All interviews were at management level, with at least three respondents for each company (for triangulation of data and incorporation of differences in management perspectives); in every company, the person in charge of diversity was interviewed (HR and/or specific diversity manager), senior managers such as the CEO and other line-managers with specific link to diversity policies in the company (for instance as diversity champions). The interviewees selected were negotiated with the respective company contacts via London First and we were made aware from the outset that only a very limited number per company was achievable. Each interview was recorded and

PropCo	Managing Director EMEA
	HR Director 1
	HR Director 2
	Two Line managers
	One employee
ProfCo	Partner and Diversity champion
	Chief Operating Officer, Division A
	Diversity manager
	Head of Division B
	Senior manager overseeing Divisions A and B
FinCo	European Director of Diversity
	Head, Division A
	Manager in Division B
	Chair of the company's multicultural network
TelCo	HR Director
	Team leader, Division A
	Diversity champion and manager
	Line manager in Division A

Table I.
Overview of interviewees
and roles

took on average between 60 and 90 minutes for which an open-ended topic list was used, not a set list of structured questions. The broad topics in the interview mirrored the questionnaire sent to each company beforehand and explored: the workforce; company objectives; diversity policies, diversity decision making and indicators; promotion; procurement policies; business and diversity performance indicators; work organisation and employment conditions. As our concern was, according to the qualitative tradition, to discover how interviewees "filled in" these issues, it was important to introduce the topics to interviewees only in a broad way, so that respondents would then themselves define the focus. For instance, broad questions asked were "Maybe we could start by asking what workplace diversity means to you in your role?" or "Do you have any strategic goals at the moment in terms of diversity?" "Do you know of any specific initiatives that are focused on specific diversity issues that have happened here?"

Prompts for more explanation were given throughout the interviews. Therefore interviews – while building around the same themes – tended to go in slightly different directions, guided by the focus indicated by the interviewee. FWA and WLB themes were not part of the topic list that was introduced by the interviewer and all interviewees introduced these themselves as part of their answers to broad diversity questions. Once introduced by the interviewee, the interviewers would follow up with some additional FWA questions for purpose of clarification, different in each interview, depending on the context.

Transcripts were subsequently sent to the interviewees for approval as a true account of the interview. Anonymised company summaries were presented to the project team in the spirit of validating our qualitative findings (Johnson *et al.*, 2006).

The verbatim interview transcripts were analysed by the two researchers who, because they had been present at most interviews, were more familiar with the interview data. Manual coding was preferred to the use of software, given the constraints on accessing the data imposed by London First and that the number of (19) transcripts was still manageably small.

Through an iterative process of coding, mostly inductive, a thematic analysis was developed. As consistency in coding was paramount, the team worked closely together,

with regular deliberations on the thematic analysis which was discussed for validation with the broader interview team. It was then presented to the whole project team for agreement prior to the final research report. This stage was crucial as the companies (and London First) insisted that the data was treated with extreme confidentiality.

For the purpose of this paper we have focused only on those parts of the thematic analysis linked to the FWA and WLB themes (values of; initiatives, barriers). The verbatim quotes used in this paper were approved as part of the original report.

Implementing FWA: case study findings

Our investigation revealed a solid link – apparent in all management interviews and in all case study companies – between, on the one hand, diversity policies and, on the other, the use of FWA to establish these, at least in part, confirming similar conclusions in the recent CIPD survey (Bernard Hodes Group, 2012). Important to note is that the theme of FWA was introduced without fail, and without prompt in interviews, as part of the early examples given when elaborating on diversity strategies, initiatives and goals and as part of the means given to improve "problems" of diversity.

The strategic approaches to FWA were discussed as an integral part of the companies' overall diversity strategies by the interviewees. Diversity in the four companies is implemented as a result of business necessity: "it helps competitiveness, otherwise business will be lost". FWA are seen a one of the major instruments towards improving diversity. The chief impetus for flexibility in the narratives of the interviewees was its business benefits in terms of the need to be "a diversity employer of choice", to be able to optimise talent resources, but also to optimise client attraction, reduce costs and stimulate innovation (e.g. Drago and Hyatt, 2003), hence clearly linking diverse aspirations with flexibility. Diversity in this sense is not discussed as a core value that companies adhere to at all times, but a tool used in terms of creating a competitive advantage, as/when it is necessary. Such was the strength of the business imperative that social arguments for diversity were not considered by the managers interviewed (this contrasts with the argument put forward by Tatli (2011), who argues that disregarding the social model impedes effective organisational change):

> I think you always have to take it to a business base. If you try and deal with it at a sort of moral/ethical level, then you may or may not get buy-in, you know, it depends on a person's particular view. The minute you bring it to a business issue, which is we won't be able to attract clients and we won't be able to attract the best staff, then it's a no-brainer (Professional Services Company).

As diversity and FWA are promoted for business imperatives (only), the interviewees' definition and priorities of diversity depended on the different business needs. While linked to the concept of "inclusion" in all case studies, the interviews clearly showed that each company developed its own "version", depending on the maturity of the ideas and implementation, the business strategy, sector and market. We provide a summary of the different companies' business contexts below with specific reference to contextual factors such as sector of activity, workforce, main professions and its diversity.

TelCo is a large UK public telecommunications company with a workforce of 92,000 and a turnover of around £20 billion. Operating globally in around 170 countries, the main share of its activities is in the UK, where revenue is largely generated from corporate customers and wholesale. Engineering is one of the core employee profiles (mostly within the infrastructure/maintenance division) next to customer service advisors (in the retail division). Overall, at the time of this research, 22 per cent of

employees were female, 9 per cent had an ethnic minority background and 2 per cent declared a disability. These proportions vary significantly within the company depending on activity. For instance, within retail, 32 per cent were women (also at higher levels), while in infrastructure, with engineering as the core activity, both the female and ethnic minority mixes were much lower (nearly 7 per cent). TelCo has the most established diversity strategies of the four case study companies. Diversity strategy is part of the discussion at the highest corporate level especially through the Global Diversity Forum which cascades down through a number of Diversity Steering Groups, Diversity Forums and networks across the company. Diversity is part of the company's individual and unit performance indicators. Diversity has been on their agenda a long time, and their former public status helps to explain the more prominent focus on equal opportunities.

ProfCo operates globally in nearly 150 countries, providing professional services in the growing market of auditing, tax and risk advice. The core professional group in this sector comprises accountants. Reasons given in the literature for the under-representation of women and black and Asian minority ethnic (BAME) groups in this sector included the long and unscheduled hours culture, narrow elite recruitment channels and informal, influential, white male networks (Fielding, 2007). The firm employs more than 100,000 professionals globally, with more than 10,000 employees and over 500 partners in the UK. About 60 per cent of UK staff is male and most (93 per cent) work full time. The average age of employees is 30. At junior levels, there is gender balance, but far fewer women are employed at senior levels, partially explained by a retention problem: only 10-15 per cent of partners are female (one becomes a partner typically at 35-40 years old). Gender diversity within teams varies significantly across departments, depending on client profiles: in Restructuring and Corporate Finance the figure is just 20 per cent, while audit and tax – and especially government – has a more balanced profile at all levels: here working hours, FWA and team diversity reflect public sector clients' standards. Ethnic minorities represent 14 per cent of the company's UK workforce, but this percentage varies vertically and horizontally. In its field, ProfCo is seen as a leader in terms of diversity implementations. A director of diversity, who reports to the board, works with the various stakeholders across the organisation on diversity-related programmes. As ProfCo is working in a globally market, with global clients, they stress the international dimension of diversity and the necessity to have a diverse global workforce.

FinCo is a global financial services organisation whose activities includes investment banking, equity and fixed income sales, research and investment management. At the time of the study, the company employed over 25,000 employees in 50 offices in over 20 countries. Individuals working in trading floor roles can work long hours, reflecting market opening times. The diversity of its workforce has increased in recent years, although this varies from division to division, with the trading department the least female inclusive. The company did not provide further specific diversity and flexible work-related employee statistics, but acknowledged that, despite recent increases in the diversity of its workforce, certain departments remain diversity challenged. The banking and trading divisions are considered the most "male-orientated" departments. Their diversity programme is seen as good practice in their sector: the business agenda is incorporated into the core business structure (i.e. it is driven by the business units). The divisions and their managers are held accountable for their progress.

PropCo is a global property development company: its turnover was more than £200 million in 2007, mostly linked to business in UK and Ireland. It employs more

than 11,000 people in 200 offices in 45 countries. Overall, 45 per cent of employees are women, of whom 20 per cent work part time. This is mostly in "support areas" (HR, IT, administration). At senior level, there is female under-representation, with 7 per cent of directors female, while women comprise just 5 per cent of the 100 best fee earners in the company. The age of employees is quite diverse (22-59) but people also work beyond 65. The company culture discourages internal and external knowledge sharing, even of good practice, creating an atmosphere of confidentiality, discretion and individuality. The diversity strategy is being channelled by HRs with the help of senior managers, but no company-wide strategy or statement on diversity has been discussed at board level. It has no established diversity strategy, but as it expands globally and faces problems with recruitment, new priorities are opening up avenues for increased diversity measures.

Diversity implementation via FWA has a variety of manifestations in the case study companies. But, in general, the companies implemented FWA mostly to retain and recruit talent by offering increased levels of control (over where and when work is undertaken) and improved WLB in the light of care responsibilities.

An important distinction is found between FWA that result in being unavailable for work (such as part-time work) and FWA that result in working remotely but regarded as contactable (such as home-working). All case studies offer options in both categories. ProfCo offers part-time work (mostly to female staff), additional holiday purchase (popular with male staff), flexible hours, career-breaks, job-sharing and home-working. At FinCo, arrangements other than full-time five-day working weeks are a possibility (such as a four-day week, compressed working weeks and job-sharing), while at PropCo, where flexible work opportunities are more recent, job-share, home-working, career-breaks, term-time-contracts (particularly in consultancy and research) and part-time working for women who have children, are possible.

The FWA cited above involve time or space-related flexibility, reflecting shifts identified in the literature, where operational and functional flexibility have received less attention (Musson and Tietze, 2009). TelCo mentioned functional flexibility with reference to accommodating capability changes related to disability or to older workers – the company has a formal programme facilitating this. Such an approach was not mentioned by the other organisations, possibly reflecting the nature of TelCo's business, with a significant number of engineers undertaking the type of physical work that becomes more challenging with advancing age.

Companies were often unconcerned when and where the work was undertaken, although corporate cultures and contexts did influence the types of FWA on offer. Significantly, all four companies viewed FWA in term of their impact on employee accessibility: FWA leading to "remote-working" vs FWA leading to "unavailability" of employees.

FWA as a means to recruit and retain a diverse talent pool
FWA are regarded as an employee benefit and as such as a way to be "employer of choice" and to recruit and retain the best talent as more employees value flexibility of time and space in work (Sullivan and Lewis, 2001; CIPD, 2011). That FWA facilitate "personal commitments" is explicitly acknowledged, and interviewees provide examples of both men and women who have used FWA to pursue outside interests. As one interviewee (FinCo) commented, "everyone has a lifestyle" and flexibility is about "how I can do this job, how I can fit it in with my lifestyle".

The shift in the language around flexibility towards control and the opportunity for "self-determination" identified in the literature (Abendroth and den Dulk, 2011) was

also visible in the companies. Examples included senior staff managing their own diaries and combining personal and work commitments by working "non-standard" patterns; provided that the communication link to work remained open:

> If you're working flexibly, you're being productive, […] people still perceive […] arrangements as "Okay, so that means you need some time-off." No, it doesn't. It means that there are […] different ways you can be productive, creative and innovative without sitting at your desk (FinCo).

This self-determined type of flexibility reflects the requirement for high commitment and intensive working, as discussed by Callan (2007). How far "self-determination" enables a positive relationship between work and life or actually constrains WLB is subject to individual interpretation and experience. Indeed, one interviewee reported in relation to remote working that: "[…] it doesn't appeal to people with young children and small houses" (PropCo), implying that "interference" (see Kamenou, 2008) can be a less positive outcome of spatial flexibility. There is recognition too that the perception that FWA allow a choice between work and "life-balance" is misleading, confirming Russell *et al.* (2009).

Occasionally the "win-win situation", mentioned by those advocating flexibility but identified as potentially problematic (e.g. Lewis *et al.*, 2007; Dick, 2009), is clearly achieved and celebrated: for example, PropCo reported that the policy of remote working, combined with hot-desking, impacts on the working environment with different teams mixing and with employees considering that the office had become more energised.

FWA as a means to diversity through focus on care responsibilities
The interviews revealed that in practice most FWA revolve around the organisation of work and care responsibilities of employees. As care for family still falls more upon women, there is a stronger emphasis on gender diversity policies and practices than other diversity strategies (Kamenou, 2008; Lewis and Humbert, 2010; Ryan and Kossek, 2008). But company managers did not freely acknowledge this in interviews, although, when elaborating on company FWA, the gender diversity focus was much more prevalent than others: women returning from maternity leave were often cited as the likely (and actual) recipients of FWA, in line with, for instance, Lewis and Humbert (2010) – "we do have quite a lot of people […]. It's mainly women" (ProfCo) – even though it was stressed that the arrangements were for others too.

Managers of all companies were keen to show a drive to widen understanding, availability and take-up of FWA beyond women, despite the ambiguity concerning its universality. The following quote of PropCo is typical of all interviews, acknowledging the importance of publicising and opening-up FWA:

> Flexible-working is not about working mums. It's about anybody who wants to work and then do something different. So, we've got a very senior male director who continues to work maybe 2 or 3 days a week, but in fact is preparing for his retirement (PropCo).

But while all companies have in theory made some FWA available to everyone and several interviewees stressed that policies go beyond offering WLB opportunities, each failed to substantiate this through examples. It is interesting to note though that in ProfCo men increasingly apply to work flexibly (25-30 per cent of men applied last year).

Diversity via implementing flexible working: barriers
All the interviewees acknowledged that FWA are not organised effortlessly and, depending on the organisational characteristics and business appropriateness, might

lead to real obstacles in diversity development. A particular issue was the extent to which flexibility matched business needs – with some roles and levels deemed less amenable to certain flexible arrangements: flexibility is not inclusive in the sense that it is not conveniently available, or acceptable, for everyone. The types of job together with levels of seniority are critical, all of the interviewees differentiated between FWA leading to the inaccessibility of employees and that leading to remote working.

Acceptance of FWA: influence of job characteristics
Where flexibility is seen to result in the "unavailability" of employees – those working differently from mainstream full-time colleagues, (e.g. time off for care-leave, dialysis, study etc.), it was strongly linked to perceptions of customer requirements and levels of seniority. The possibility for employees being unavailable for part of the normal working week is unproblematic where work arrangements are routine and can be planned. Anything outside this context is regarded as undesirable and especially challenging from the employers' perspective. For instance, call centre workers' attendance patterns at TelCo are negotiated and then "set", so that employees know their working pattern throughout the year. Swaps and other special leave procedures are in place for urgent time off. While such FWA are prevalent in all the support divisions of the companies investigated, they are seen as challenging, especially in client facing and senior level positions, as in effect jeopardising the customary 24/7 level of client service.

> With managerial, you're a lot more flexible […] than an advisor's job. Advisors, when they come in, they have to clock in, so the time is – this is your shift, this is the thing – and they're judged on that (TelCo).

Organisational context was therefore found to be relevant in terms of the culture, norms and the nature of the business, clients, customers and professional groups involved. Professional and organisational norms, such as presenteeism, long working hours and client expectations, are some of the inhibitors constraining FWA and therefore diversity.

In our companies, interviewees – in line with Bergman and Gardiner (2007) – saw the promotion of the "remote" dimension of flexibility (i.e. telework) as easier to accommodate than employees being partially available (i.e. working fewer hours), especially for senior staff, although contexts remained important. Reluctance to allow partial availability at senior levels can be seen as career inhibiting and hence inhibiting the degree of diversity at senior levels. Interviewees in all companies except PropCo confirmed the promotion of "remote" working, seen as unproblematic in its implementation, especially at senior level:

> As you get the work done, they really don't mind. […] We have mobiles; we have Blackberries, if we need to be contacted […]. So partners, for example, wouldn't formally probably be on flexible-working (ProfCo).

Clients and the culture of availability and long hours
FWA may result in key people being unavailable when required:

> 10 years ago, a partner would go off on holiday and say "Right, I'm off […] any problems, you can talk to this other partner because I've just given him a bit of info." It's just very different now. I think people expect more availability (ProfCo).

According to the interviewees, the interface between the company and clients is the chief obstacle to the extension of flexible working. The unavailability of employees is difficult to accommodate when they are required to respond directly to customers and

have distinct and particular knowledge or skills. For instance, at ProfCo, the possibility of being "unavailable" for some of the normal working week (averaging around 40-50 hours with peaks of 70-80 hours for many staff) depends on seniority, the type of work/team and the client, perhaps explaining the lower than expected demand for flexible work:

> The more senior the person, the more difficult the degree of flexibility may be. Often work is won by the speed of response. In a client facing position this can be an issue. Even if it takes 24 hours before getting back to a client on a prospective piece of work, the contract might be lost (ProfCo).

This situation is echoed by FinCo where FWA are not utilised across the board; in senior roles especially flexibility remains a "challenge". The long hours nature of the business is one reason why take-up varies; in support divisions, it is around 50 per cent, while in roles tied to capital markets it is less common. However, "remote" FWA seem to be tolerated provided availability to one's team and clients is not jeopardised:

> At 7 o'clock in the morning, I'm logged on from home, I'm going through my emails, I'm watching markets, I'm calling people […] Little things like that […] but those tend to be the only circumstances (I work from home). You know – I guess having been with the firm a long time (FinCo).

Such FWA are non-standard, implying that organisational culture has not fully embraced flexibility for senior staff, regarding it as a reciprocal "gift" for proven commitment, echoing Wood and de Menezes (2010).

These quotes highlight the importance of client focus and its impact on FWA uptake and hence on diversity, confirming Lewis' (2007) findings on accountants' client service and work/family time. Companies are tentatively open to more inclusivity but apprehension, due to the fear of disturbing the client relationships, remains high.

A positive influence on adopting FWA is the presence of clients who are "diverse", as in the public sector: "There is more diversity in those groups, the public sector groups, particularly outside London. […] More women working on a part-time basis and more flexible-working, and it seems to be more accepted" (ProfCo). Similarly, tenders with diversity conditions encourage FWA: "It's a matter of "Do we want to lose this tender on the back of this? Yes or no?" […] A lot of our tenders will have questions in about diversity options" (PropCo). For TelCo, FWA help promote product diversity and sales, for instance of remote working hardware.

Cultural norms such as presenteeism still remain a barrier; for example, the expectation that "you need to be in the office […]. a cultural thing" was expressed even though the organisation concerned may operate globally with remote clients: "if we're talking to [Asia] […]. frankly whether I'm at home, in the office, or in one of our other offices, it really doesn't matter". Some of the fear, however, is about how to manage a remote team: "actually line-managing those people, and what they're doing when they are at home" (PropCo).

Career development, FWA and diversity
Employees, regardless of gender, are sometimes thought to be reluctant to take advantage of FWA because of perceived negative impacts on career progression – a theme uncovered by research (Gatrell, 2007; den Dulk and de Ruijter, 2008; Brown, 2010) and confirmed in the interviews. In FinCo, men raised concerns about the effects on their "year-end" bonus:

> Coming back to working on the big clients, well […] demanding clients, this chap really is not going to cut the mustard with those because you can't say 'I'm not in on Wednesday'. I had a very open discussion with him about how that's *(working part-time)* going to slow his

progress down […] how *(can)* you compare that person to the person that's working 5 days a week and 16 hours a day, […] who are you going to promote […]. Are we saying to our people who are working flexibly, "Well, that's fine, but actually you won't get promoted very quickly" (ProfCo).

While business concerns, together with organisational cultures and management behaviours, may impede the spread of FWA, there is evidence of a will to overcome some of the obstacles and to separate out managerial assumptions and cultural norms from the real limitations:

> We're having to put a real effort into trying to make it work, […]. It's very easy to say "I can't cope with somebody on my team who is only available three of four days a week or is very inflexible," and that's an issue we have to deal with (ProfCo).

There may be benefits in articulating such issues rather than hiding them (see Lautsch and Kossek, 2011) or, as one interviewee put it: "I think the more we deny that, the less credible the conversation around flexible-working will be […] I want us to have realistic conversations" (ProfCo).

Control mechanisms and the role of managers

All interviewees acknowledge that line-managers are crucial in making flexibility happen, particularly concerning its communication, promotion and the impact on performance management. Apprehension remains about FWA, particularly about supervisors' interactions with employees. Where communication breaks down, the obstacles to implementing FWA become apparent:

> […] the nervousness is *(about)* line-managing those people, and what they're doing when they're at home, and can they be available for clients, and the perception of people" (PropCo).

Knowledge about specific flexible work options is not always widespread and individuals – especially junior employees – may believe these will disadvantage their career, particularly if line-managers are not active proponents. This is particularly challenging because productivity and client service are important parts of performance reviews.

The interviews revealed managers wary of work-styles (and their consequent impact on relationships) associated with flexible working confirming Bingham (2001) and Lautsch and Kossek (2011, p. 15): PropCo, for example, has FWA but has restricted their promotion for fear that it may not be able to accommodate the volume of requests – suggesting the absence of holistic approaches and an underlying tension between business and employee needs which has yet to be exorcised. Line-managers' concerns can be addressed; for instance, return after maternity leave is an area that FinCo has improved, mostly through improving communication by "giving […] managers tools to actually have the right level of discussion up-front, which we hope then encourages people to know […] you don't have to come back and do exactly the same looking job, that we can do different things".

Discussion and conclusion

Our findings show that using FWA as a means to promote and enhance organisational diversity is problematic where management regard FWA as secondary to business imperatives.

Our interviewees made explicit references to the importance of FWA for diversity management (because such arrangements enhance inclusivity for all employees, via

the key imperatives of recruitment and retention of talent in tight labour markets); FWA are therefore seen as an integral part of promoting such inclusivity, although a gendered uptake is still evident. The companies, as good practice leaders in their sectors, provided strong evidence that they had moved beyond just creating diversity goals, but had established the necessary "tangible tools" through FWA, (as seen by Allen *et al.*, 2008) to achieve diversity.

The interviews uncovered the limitations and barriers affecting diversity enhancement via FWA, and provided new insights. Our findings confirm the importance of organisational and societal values and norms and establishing a "fit" between policies and norms. The interviews exposed these issues in terms of the primacy of business pressures and, more particularly, the perceived priority of clients' needs and expectations, highlighting cultures of obligatory availability, long working hours and presenteeism. These values constrain the take up of FWA, restrict inclusion and therefore limit diversity enhancement.

Senior and line-management are crucial for publicising and restricting or facilitating FWA: they need to be informed FWA "champions" and prepared to challenge unhelpful preconceptions; something our interviews show does not always happen because management prioritise those business pressures on which their performances are judged. In PropCo for instance the take-up and awareness of the flexible working scheme suffered from a culture of deliberate "discretion" because of a fear of their popularity and loss of line-manager "control".

Our respondents gave a variety of definitions for flexibility and diversity, all based on the impact they felt it has on their own workplaces. It was apparent that FWA are not wholly inclusive, offering only a partial or "bounded" sense of diversity: acceptable only when they do not impact on existing work values, such as availability to clients, long working hours and presenteeism.

The successful implementing of FWA therefore depends on their integration into the company's (or job) context and culture and should be evaluated on a case-by-case basis. Our research shows the importance of differentiating the implementation of FWA, and their acceptability, both by job role and by their impact on work, as is evidenced by the dichotomy between remote working and unavailability for work. Our interviews show the latter regarded by management as unacceptable in non-routine work arrangements because such unavailability is incompatible with the long working hours and 24/7 client focus. As managerial work tends not to be routine, we infer promotion and other problems for those workers who take up FWA such as part-time work. Remote working FWA are not considered problematic at managerial level, but might be for "lower-level" jobs, because of line-management views about control and work organisation.

Indeed, there was clear evidence that career development may be especially disadvantaged by FWA, particularly for those undertaking fewer working hours (due mainly to reduced experience and output in comparison to others) and those "unavailable" at senior levels. It shows context is important: working as a full-time professional invariably meant working more than the 40 hours/week, confirming the culture of long working hours and its implicit role in promotion and development. Management in the researched companies have yet to address this.

Overall, we argue for a clearer understanding of the business imperatives restricting diversity implementation. Our paper shows that company discourse, with its unambiguous business focus, highlights the shortcomings of relying upon FWA to bring about a changed climate for diversity. Further research is needed on the

difficulties and issues involved in offering flexibility and, particularly, its potential impact on career progression. Company contexts, of winning new business and retaining key clients, have been under-recognised as constraints and deserve more attention; as do the differing repercussions of working remotely, as opposed to being unavailable, with the consequent impact on the acceptability of FWA and hence the ultimate enhancement of diversity in different job contexts.

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WESTMINSTER BUSINESS SCHOOL

Diversity in STEMM: establishing a business case

Report of research by the University of Westminster for the Royal Society's diversity programme
'Leading the way: increasing diversity in the scientific workforce'
JUNE 2014

UNIVERSITY OF WESTMINSTER⌗

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EXECUTIVE SUMMARY

Background

This report sets out the results of research commissioned by the Royal Society as part of their BIS-funded programme entitled 'Leading the way: increasing diversity in the scientific workforce'. The research explored whether there is a business case for diversity in STEMM occupations (scientific, technical, engineering, mathematical and medical roles) and whether diverse teams are more likely to do 'good' science. The research focused on three of the nine protected characteristics in the Equality Act 2010: gender, ethnicity and disability.

The research was conducted in late 2013 and included:

- A review of existing empirical data on diversity
- Examination of quantitative data regarding the diversity of the UK and STEMM workforces
- Focus groups discussion with individuals in STEMM occupations
- Interviews with organisational representatives of employers with substantial STEMM workforces

The definition of the scientific workforce used in this research is taken from the Royal Society's diversity programme: 'For the purposes of the project, the 'scientific workforce' is taken to comprise all those for whom scientific knowledge, training, and skills are necessary for the work that they do'. This research used the Royal Society's diversity programme classification of STEMM occupations using Standard Occupational Classification (SOC) codes. These were then added to the Royal Society's 'possibly STEMM' category to create a broader one called 'STEMM+' which has been used for the purposes of this research.

The research explores what diversity means to people in the sector, examines the fundamentals of the business case, describes diversity policies and initiatives used by organisations, and considers the issues and difficulties of measuring diversity and performance. The conclusions summarise what we know, what is new, what we have learnt and what is missing from research regarding the business case for diversity.

Findings

As expected the business case is complicated, subtle and highly contextual. However, the research presents some interesting insights into the potential business case for diversity in

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the scientific workforce along with some useful recommendations on how to increase and promote diversity in STEMM.

Interviews and focus groups revealed that the discourse on 'diversity' has moved away from 'equal opportunities', and is now associated with inclusiveness, with recognising, valuing and respecting differences. The global nature and reach of science provides a specific context within which diversity has distinct meanings for those in STEMM occupations: for the participants in this research, 'diversity' is a broad and complex concept, with a strong 'international dimension'.

In STEMM diversity initiatives tend to focus on gender equality and there is a general lack of visibility of ethnicity. Ethnicity is seen in global, nationality terms rather than in UK-based minority ethnic terms. Disability issues also have little visibility in the sector, outside of the health service.

Fundamentals of the Business Case

- Research participants were unanimous in their acknowledgement of a moral and social case for diversity, arguing that the moral case is part of the business case. The business case derives from recruitment and retention of talent and the range of perspectives arising from diverse, as opposed to homogeneous teams.
- Potential business benefits of diversity can be classified as 'external' and 'internal'. 'External' benefits include reduced costs, improved resourcing of talented personnel, better products and services, and enhanced corporate image; 'internal' benefits are where a greater range of perspectives leads to increased creativity, innovation and problem-solving.
- Defining and measuring diversity in a consistent way across organisations, and measuring meaningful business outcomes that demonstrate a business case, is difficult.
- Research indicates that diversity within teams could lead to business improvements, however, effective team collaboration not only depends on the diversity of team members but on how well they understand and communicate with one another and, crucially, on how the team is organised and led.
- The potential benefits of diversity are highly contextual and it is unlikely that there is a uniformly relevant business case for all organisations. This means that simple copying of diversity strategies utilised by other employers will not guarantee success.
- Effective leadership and the role of men are paramount to changing culture with respect to diversity.

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- There are problems of definition in what constitutes 'good science' and 'good performance' that need to be overcome to build a convincing measurable business case for diversity and many employers do not systematically collect, or use, reliable diversity or performance data. In the absence of definitions and measurements, it will be difficult for STEMM employers to calculate a business case for diversity, or to definitively state that diverse teams do better science. However, inability to conceptualise and measure does not equate to the absence of a business case for diversity, merely the absence of quantitative data.

The UK STEMM Workforce

- Compared with the EU and the USA the UK STEMM workforce is less diverse. 'Vertical' and 'horizontal' segregation is evident in the STEMM sector in terms of gender, ethnicity and disability, where these under-represented groups cluster in particular occupations and lower levels in organisations.

- The health sector is much more diverse than other parts of the STEMM workforce with regards to the employment of women, minority ethnic groups and people with disabilities. This sector also has more policies and practices that encourage diversity, for example, encouraging female staff to return from maternity leave and minority ethnic and disabled applicants to apply for jobs. Some NHS employers measure and benchmark diversity and use the idea of 'inclusion' to signify a strategic intention to build a workforce representative of the community served.

Individual and Organisational Perspectives of Diversity

- For focus group participants, barriers to entering STEMM careers operated from childhood and continued through education with a dearth of relevant role models for girls, the tendency for employers to recruit graduates from specific ('high class') universities, and the stereotypically male associations with certain occupations and work environments (e.g. engineering and surveying) that made professions appear unattractive or unobtainable.

- Barriers to progression included the absence of part-time roles and flexible working arrangements, the disproportionate use of fixed term contracts for women and minority ethnic academics, opaque promotion processes, long-hours' cultures, operation of the 'old boys' networks', the difficulty in balancing parenthood with a career, inadequate provision for individuals requiring physical adjustments to the work environment, organisational cultures and expectations unattractive to members of minorities, and the

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absence of effective networking, mentoring and 'sponsorship' between, and of, individuals.

- Diversity initiatives, although positive, are often just gender-related, with fewer focused on ethnicity and, outside the health sector, on disability.

- Focus group participants were often critical of these organisational diversity policies, highlighting a range of organisational factors getting in the way of increased diversity in STEMM, including senior management and employee involvement, and problems integrating diversity values into organisational cultures.

- Diversity needs to be integrated strategically into business, however this is context specific and not a simple process; whilst some private sector organisations view diversity as a strategic means to successfully deliver carefully targeted products and services to customers, in the public sector there are broader social or community diversity objectives. In all sectors the diversity mindset of the (mainly) white male leaders of organisations is crucial to successful change.

Moving Diversity Forward

- Overall, the findings support a business case for diversity, though one founded more on conviction than organisational evidence, with potential 'external' and 'internal' benefits recognised but difficult to measure.

- The research indicates that 'external' benefits related to skills and clients/users and customers have relevance in STEMM. While diverse teams and collaborations are valued in positive terms, for the potential creativity and innovation they bring, the dynamics of communication and leadership of teams are recognised as either constraints or enablers of positive outcomes.

- There is some evidence that the STEMM sector (outside of the health service) is taking fewer actions to improve diversity, via diversity polices and processes, than organisations outside STEMM. More flexible employment practices, including shorter working hours, greater employment security (implying less use of fixed term contracts which have an adverse diversity impact) and attention to child care responsibilities can help to redress these.

- While integration of diversity issues with the organisation's business strategy is seen as important to success in some contexts, it is not the only essential factor; cultural and leadership factors and management systems inhibit progress to diversity.

- Many of the key change agents in organisations, in the STEMM sector and in society as a whole, are white able-bodied men. Without their commitment to change organisational

cultures, strategies and practices, and their desire to lead the change process, the STEMM workforce will remain largely as it is.

Leaders with a diversity mindset can break away from traditional patterns and model inclusive thinking and behaviour; doing this, they are instrumental in modifying norms, values and expectations embodied in organisational cultures. Training interventions for organisational leaders are therefore considered an essential part of the journey to increased diversity.

Recommendations

- More strategic central co-ordination of both initiatives and information on diversity in STEMM is required.

- A consistent and comparative benchmarking framework needs to be developed that is relevant for different sectors across the STEMM community.

- Increased monitoring of information on employment practices and career progression such as the use of fixed-term contracts, flexible working arrangements and requests, and the progression of different groups through the organisation.

- Creation and encouragement of social networks accessible to people working or aspiring to work in careers in STEMM, as well as sponsorship and mentoring opportunities, will facilitate entry and progression in STEMM careers.

- Increased development and use of retention policies such as making reasonable adjustments in the workplace to account for disabilities, enhancing flexible working opportunities to achieve better work-life balance, encouragement for women to return after maternity leave, and offering better development and networking opportunities.

- Encouragement to employers to foster (or make visible) employment opportunities to potential recruits studying at universities not routinely targeted by employers.

- Monitor and evaluate training programmes and share across the sector when training interventions are effective, this would be particularly helpful to SMEs.

- Increased co-operation and coherence of diversity initiatives between professional bodies operating in STEMM professions to increase communication and awareness of diversity issues.

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1   **INTRODUCTION**

This report sets out the results of research commissioned by the Royal Society as part of their programme entitled 'Leading the way: increasing diversity in the scientific workforce'. This research explored whether there is a business case for diversity in STEMM occupations (scientific, technical, engineering, mathematical and medical roles) and whether diverse teams do 'better' science; it focussed on three of the nine protected categories in the Equality Act 2010: gender, ethnicity and disability.

The research was conducted in late 2013 in a three phase programme by a multi-disciplinary team from the University of Westminster using a mixed method approach. Although research on the business case for diversity in both Human Resources (HR) practitioner and academic literature is not new, the research conducted for this project offered a novel perspective on the topic as it included: a review of existing empirical research on diversity; examination of quantitative data regarding the diversity of the UK and STEMM workforces; focus group discussions with individuals in STEMM occupations; and interviews with organisational representatives of employers with substantial STEMM workforces.

A 'Phase 1: Interim Report' was submitted to the Royal Society in October 2013 which established the context for this research project by exploring pre-existing diversity literature in relation to STEMM occupations in different countries and organisational contexts. It also identified themes arising from preliminary research interviews conducted with managers in the STEMM sector with particular regard to the implementation of measures of diversity and team performance. The interim report identified that the research was likely to encounter two key issues when trying to establish a business case for diversity and to discover whether diverse teams are more effective:

- The absence of benchmarking mechanisms to facilitate the measurement and comparison of work outcomes with diversity, both within and between organisations, and that account for the complexity of different STEMM workplaces.
- The nature of work carried out in STEMM occupations implies that 'internal' business benefits of diversity (improved creativity and problem-solving) are of particular relevance and interest to STEMM employers.

On the basis of phase 1 research, these and other key themes identified were subject to detailed investigation during Phases 2 and 3 of the research programme.

The 'Phase 2: Focus Group Findings' report was submitted to the Royal Society in November 2013. This summarised the major themes arising from focus group discussions

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with individuals working, or aspiring to work, in STEMM occupations. Analysis of the focus group transcripts indicated that our participants had raised issues that could be grouped into twelve major themes:

- the meaning of diversity for individuals;

- perceived barriers to diversity including discrimination;

- early career choices and opportunities;

- career transitions and progression;

- the importance of networks and networking;

- social class;

- enabling the achievement of greater diversity;

- organisational context and diversity policy;

- good practice examples;

- teamwork and collaboration;

- good and bad science;

- the business case and performance measurement.

A further report was submitted to the Royal Society for review in January 2014; this integrated the analysis of quantitative data from the Quarterly Labour Force Survey (LFS), January-March, 2013, and the 2011 Workplace Employment Relations Survey (WERS) with themes derived from literature on diversity.

This final report builds on these interim reports; it draws on the qualitative and quantitative data collected and sets out the key findings and analysis from the whole research process. A first draft of this paper was submitted to the Royal Society in February 2014 and was discussed with the Royal Society Policy study working group before amendment to this current form.

The sections that follow this introduction provide contextual information regarding diversity in the STEMM sector, explore definitions of 'diversity', and outline the quantitative reality of the UK STEMM workforce. An overview of the research methodology precedes discussion of data collected (both qualitative and quantitative) in relation to existing empirical work identified in the literature review. The discussion explores what diversity means to people in the sector, examines the fundamentals of the business case, describes diversity policies and initiatives used by organisations, and considers the issues and difficulties of measuring diversity and performance. The conclusions summarise what we know, what is new, what we have learnt, and what is missing from research regarding the business case for diversity.

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Recommendations propose that the Royal Society progress the 'Leading the way: increasing diversity in the scientific workforce' programme and that a central, strategic approach is adopted by key stakeholders that addresses the difficulties identified by this research.

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2 DIVERSITY: CONCEPTS AND DATA

2.1 Definition of diversity

The scope of diversity covered in this report encompasses three of the nine protected categories in the Equality Act 2010. Though the concern of the legislation is to outlaw discrimination rather than to actively promote diversity, the categories chosen by the Royal Society provide a useful starting point as gender, ethnicity and disability are clearly defined under the law. The concept of diversity itself can be regarded as having a more positive intent than that enshrined in more narrowly defined legal definitions of discrimination. The basic concept of managing diversity as defined by Kandola and Fullerton (1998: 7)

> '…accepts that the workforce consists of a diverse population of people. The diversity consists of visible and non-visible differences which will include factors such as sex, age, background, race, disability, personality and work style. It is founded on the premise that harnessing these differences will create a productive environment in which everyone feels valued, where their talents are fully utilised and in which organisational goals are met'.

Within the literature, especially the practitioner literature, there has been a distinction between diversity and equal opportunities; a difference expressed in a number of ways. Some writers (e.g. Armstrong et al*., 2010) suggest that equality and diversity are at opposite ends of the same continuum, and see diversity as a progression in developing equality in organisations (McDougall, 1998); others (e.g. Malvin and Girling; 2000) argue that such a distinction is not useful. They contend that diversity is a 'repackaged' version of the same set of policies and practices and that this is not useful to practitioners because it could create confusion and lessen potential for strategic impact. Subeliani and Tsogas (2005: 832) contend that diversity:

> 'positively values difference and thus provides a radically new approach to the question of difference at work (…) Managing diversity seems to be a proactive strategy [with] the aim of maximizing the utilization of employees' potential'.

In contrast, Monks (2007) argues that it is legislation that shapes the way in which diversity is managed, while Ozbilgin and Tatli (2011) suggest that diversity has been offered as an alternative to equal opportunities and reflects significant moves towards liberalisation and deregulation in both the United States of America (USA) and the United Kingdom (UK).

In practice, the distinction between equal opportunities and diversity tends to be more one of emphasis than of substance, with diversity in step with a more individualised way of

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managing people in the workplace. As Ozbilgin and Tatli (2011) suggest, diversity management rather than equal opportunities might be more appropriate for the private sector, because of the emphasis on financial performance, but there is little evidence to support this contention. Public sector organisations tend to focus on social responsibility (and indeed have obligations under the Equality Act 2010 to promote equality and tackle social exclusion), although their increased use of the language of diversity might be associated with an emphasis on value for money phrased in business terms. While equal opportunities focus on protected disadvantaged groups that are demographically different, diversity tends to focus on valuing all people and hence encompasses a broader definition of difference.

Diversity can also be conceptually linked with 'intersectionality' (Browne and Misra, 2003), a concept that has origins in political science (see Collins; 1999) and which recognises that people may not fit neatly and exclusively into one of the 'protected' categories. There is considerable emphasis in the current academic diversity literature on intersectionality, which tends to focus on the distinctive experience of individuals who fit into more than one category, for example, black women.

2.2   Definition of STEMM

For the purposes of this research on diversity within STEMM, the STEMM workforce has been defined by drawing on the Royal Society's own definition, as applied in its BIS funded diversity programme "Leading the way: Increasing diversity in the scientific workforce":

> '… the 'scientific workforce' is taken to comprise all those for whom their scientific knowledge, training, and skills are necessary for the work that they do. This includes scientists, technologists, engineers and medical practitioners...' (The Royal Society, http://royalsociety.org/policy/projects/leading-way-diversity/).

Such occupations represent the core STEMM workforce. There are other occupations included in the Royal Society's full definition of the scientific workforce, which are referred to as 'possibly STEMM'. In the quantitative analysis of this research, the term 'STEMM+' is used to denote STEMM and 'possibly STEMM', thus STEMM+ comprises STEMM and:

> '…school teachers, nurses, surveyors, actuaries, economists, programmers, statisticians, technical sales staff, pilots, divers, scientific administrators, journalists and others.' (The Royal Society, http://royalsociety.org/policy/projects/leading-way-diversity/)

Details of the particular occupations, as described by their Standard Occupation Classification codes, covered by these definitions are set out in Appendix 1.

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Participants in this research were all engaged in STEMM roles or oversaw STEMM employees; most of the organisations interviewed (for details see Table 2 in Appendix 2) are substantial employers of STEMM occupations. The exception was the participant organisation labelled 'Surveying' which employs people principally in STEMM+ roles.

2.3   Quantitative analysis of diversity in STEMM

This section of the report compares and contrasts the diversity of STEMM workforces in different parts of the world using data derived from quantitative surveys. Unlike in countries such as the USA which publishes data every two years (see National Science Foundation, 2013), there are no regular statistical series in the UK that cover numbers employed and patterns of employment within STEMM by gender, ethnicity and disability. Hence a range of statistical sources are presented to give a picture of the STEMM workforce. The Standard Occupation Classification (SOC 2010) system is used to classify workers into STEMM and Non-STEMM groups; the categories used are listed in Appendix 1, along with a further category of 'possibly STEMM' that includes, for example, teachers in secondary, further and higher education.

2.3.1 The gender dimension in STEMM

Largely because of variation in those occupations included in definitions of STEMM, there are different estimates of the proportion of women employed in the UK STEMM workforce, at around 13% (eg Botcherby & Buckner; 2012). The number of women studying STEMM subjects in the UK has increased (see for example Botcherby & Buckner; 2012), but this has been slow to translate into improved employment participation, a picture largely echoed across the EU.

Earlier comparative data indicate that the UK has a lower proportion of women in STEMM careers than in many other European Union (EU) countries. Engineering UK (2011) and the Association of German Engineers (2010) reported that, while a few East European countries have around 20% women in STEMM, the West European percentage is lower (17%) and the UK (9%) is close to the bottom of the league table. Using a different definition of STEMM, Kirkup et al. for the UKRC (2010:74) reported that: '…only 5.3 % of all working women were employed in any SET occupation, compared with 31.3% of all working men'. While there are differences between the estimates it can nevertheless be concluded that there are significantly fewer women in STEMM than men and that, in this respect, the UK compares unfavourably with other European countries.

The EU publishes indicators on women in Science and Innovation on a three yearly basis using a "restricted" definition of the scientific workforce. Their most recent publication based on 27 countries in 2010 (European Commission, 2013: 15) reported that:

- Just 38% of that subgroup of UK "Scientists and Engineers" were female.

- Female PhDs equalled or outnumbered men in all broad fields of study in the EU, except in the two fields with the highest overall number of PhD graduates, these being 'science, mathematics and computing' where 40% of PhDs were female and 'engineering, manufacturing and construction' where 26% of PhDs were female. In the UK, the proportions of female PhDs in these fields were slightly lower than these EU averages, at 38% and 22% respectively (European Commission, 2013:5).

Data from the Labour Force Survey (LFS) offer more detail on gender diversity (see Appendix 2 for information about the LFS). Chart 1 (overleaf) presents an overview of gender diversity for those working in the UK as a whole, and within STEMM occupations. In the UK as a whole ('All')[1], employment is split almost equally between men (53%) and women (47%); in contrast only 16% of those employed in STEMM occupations are women, rising to 26% if the definition of STEMM is expanded to include the teaching professions (STEMM+).

Charts 2 and 3 (overleaf) provide further detail by separating out those individuals working in the health sector from other sectors of the UK economy. Using the same STEMM and STEMM+ categories, Chart 2 focuses solely on the UK health sector. Here women predominate, constituting 79% of those employed overall, though only 53% of them are working in STEMM subjects and 54% in STEMM+; nevertheless this is closer to a 50/50 split between men and women.

In contrast to the higher levels of representation of women in the health sector identified in Chart 2, Chart 3 shows that outside of the health sector the proportion of women drops to 42% across all non-health sectors of the economy, with only 12% of individuals working in STEMM, and 24% in STEMM+ occupations.

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[1] More specifically, the category of 'all' in LFS charts represents all those self-employed and employees working in UK companies, whatever the occupation they are working in. The second 'STEMM' column in the charts only includes individuals employed in occupations that are considered by the Royal Society as being 'STEMM'. All LFS figures are weighted to the population as a whole, so these are actual proportions representative of the working population as whole.

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Chart 1: Gender diversity of individuals employed in UK STEMM and NON-STEMM occupations
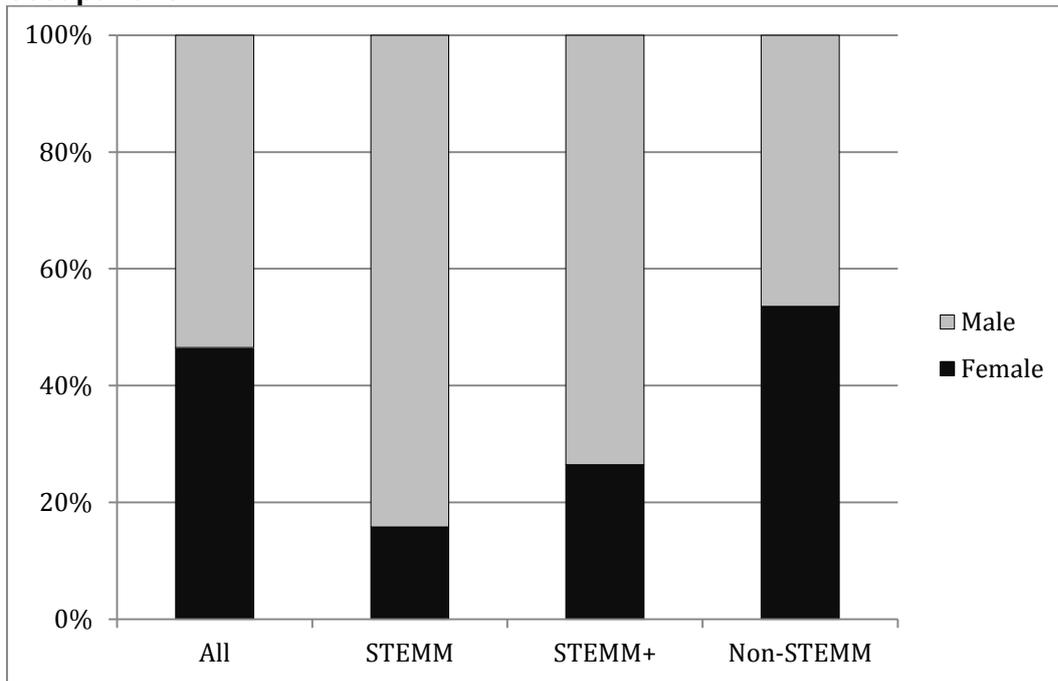
Source: *Quarterly Labour Force Survey, January-March, 2013*

Chart 2: Gender diversity in UK STEMM and NON-STEMM occupations: health sector

Source: *Quarterly Labour Force Survey, January-March, 2013*

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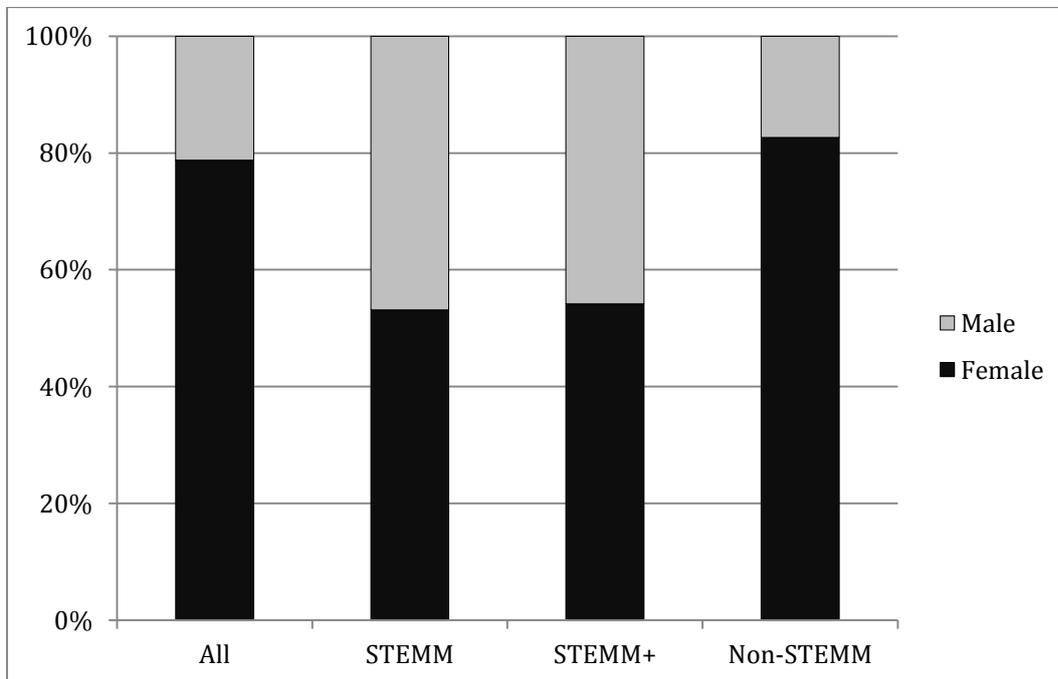
Chart 3: Gender diversity in UK STEMM and NON-STEMM occupations: non-health sectors
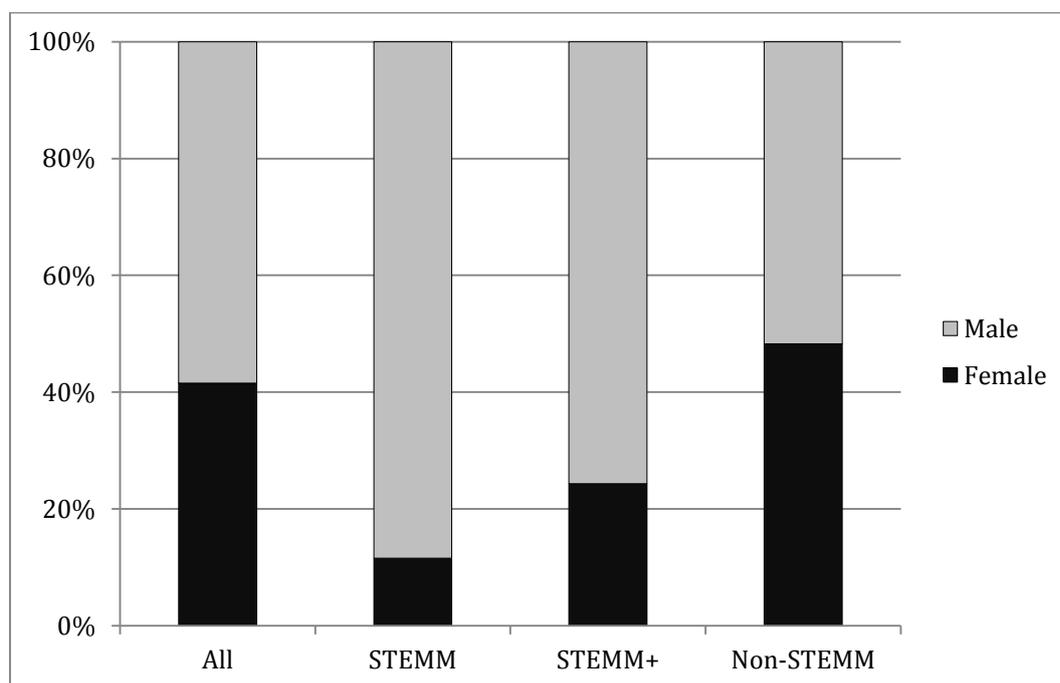
Source: *Quarterly Labour Force Survey, January-March, 2013*

In sum, it can be clearly seen that the health sector employs a much higher proportion of women compared to other sectors of the economy, and a higher proportion of women in STEMM occupations.

2.3.1.1 **Gender: vertical and horizontal segregation**

It is important to consider whether women work in all occupations (horizontal segregation) and at all levels of seniority in organisations as there may be a higher degree of diversity at junior levels and in some types of jobs that is not translated into greater representation at higher levels and all occupational roles (Urwin et. al., 2013). Vertical segregation (where women are clustered in the lower grades or lowest-paid occupations) is strong in academic careers, especially in science and engineering. For example, EU data show that only 11 % of grade A academics (the highest grade at which research is performed) in these fields are female compared with 20% of grade A academic staff across all academic disciplines. In the UK, the proportion of women in grade A science fields is lower than the EU average lying at: 9% in the natural sciences; 7% in engineering and technology; and 12.4% in agricultural sciences. The medical sciences have bucked this trend, 23.2% of these UK grade A academics are women (European Commission, 2013: 93).

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2.3.1.2 **Career progression and retention of women in STEMM**

Hart and Roberts' (2011) research on losses in female employment indicates that the UK science and engineering sectors 'lose' (i.e. leavers from the workforce) their female workforce at a much higher rate than other sectors. They suggest that a major contributing factor to this loss is the lack of part-time work opportunities, which is at its most extreme in the engineering sector and less extreme in medical and related professions because of the flexible work arrangements offered in the National Health Service (NHS). In 2010, only 12% of female engineering professionals worked part-time and 25% of general science professionals compared with 42% of all UK female employees. Hart and Roberts (2011) tracked a sample of women scientists as they entered the labour market between 1975 - 1990 and followed their career progress until 2001. Examination of this panel data show that, of 95 full-time female scientists at the start of the sample, just over one-third 'survived' as full-time scientists (i.e. these women in their panel remained in employment); Hart and Roberts contrast this with the 261 full-time females who entered medical and related professional occupations, of whom 57% were still in full-time employment in 2001 (Hart and Roberts, 2011: 6).

The lack of work-life balance opportunities as a key element in explaining female retention problems has also been highlighted by the EU (European Commission, 2013), which refers to not only the 'glass ceiling' (a concept that describes gender inequality in senior management; see Barreto, Ryan & Schmitt, 2009) but also the 'maternal wall' (barriers faced by mothers at work or seeking work, see Swiss & Walker, 1993) hindering women's progression in science. That such barriers exist is not always corroborated: conflicting evidence emerges from studies conducted in the USA. A limited scope study by the USA's National Science Foundation/National Center for Science and Engineering Statistics (2013) of biology, chemistry, civil engineering, electrical engineering, mathematics, and physics disciplines within major research universities concludes:

> 'For the most part, men and women in the faculty of science, engineering, and mathematics have enjoyed comparable opportunities within the university, and gender does not appear to have been a factor in a number of important career transitions and outcomes.' (p.7)

Such a finding in the USA contrasts with the earlier work by the National Research Council (2010) in the UK which concluded that 'women who are interested in science and engineering careers are lost at every educational transition' and that 'evaluation criteria contain arbitrary and subjective components that disadvantage women'. (p.6)

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There is anecdotal evidence (Lako and Daher, 2009) that the combination of factors concerning both work-life balance and the stage of a woman's career could inhibit her progression in science. Lako and Daher's interview with a prominent woman scientist is indicative (p. 763):

> '...I think there's really no right time to have kids. I was lucky that I already had tenure when I had kids, and I had a reasonable sized lab by that stage, so I had more control over my time. I suspect it's really difficult to have kids while you're setting up your lab. And the other strategy, of having children while you're a post doc or Ph.D. student, has pros and cons as well.'

Embedded assumptions about the nature of organisations and careers have been shown (for example, Wajcman, 1998) to affect the patterns of gender diversity observed in employment. Hence, it has been argued that traditional career patterns and trajectories may contain gendered assumptions, for example, penalising non-full-time work patterns, or the taking of career breaks, when promotion decisions are being made.

2.3.1.3 Social exclusion and gender

While not specifically focused on STEMM environments, it is useful to consider the work of Singh and Vinnicombe (2004) and Sealey and Vinnicombe (2012) on the paucity of women directors in the UK. They eschew some possible explanations put forward for the phenomenally low number of women on boards of directors, such as women's lack of ambition, lack of experience and lack of commitment; instead they contend that social exclusion may provide an insight into this phenomenon.

Research on 'elites', those people involved in decision-making on important issues in UK business and political contexts (such as politicians and board directors) has shown that women who reach influential positions in public life are of a higher class background than comparable men (Liddle & Michielsens, 2000). This suggests that social class could also play a part in the career progression of women in STEMM, particularly concerning progression to most senior levels where jobs have both a corporate and public role.

2.3.2 Ethnicity in STEMM

One of the challenges faced when considering ethnic diversity is that in many surveys the number of individuals from minority ethnic backgrounds can be low. In 2005 Jones and Elias suggested that there can be a very mixed pattern of participation in the UK STEMM workforce. While the 'Indian' and 'Chinese' ethnic categories are, for example, 'over-represented' compared with the 'White UK' category, the 'Bangladeshi' group is under-

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represented with Bangladeshi women and Black Caribbean men particularly under-represented in UK science.

In this research the LFS was used to update the earlier findings of Jones and Elias (2005) but because of sample sizes, it was has been necessary to adopt broad groupings of 'Black', 'Asian' and 'Other'. Yet analysis of the labour market by Crawford et al (2008) suggests that individuals grouped in the same ethnicity category (for example, those of Pakistani background, combined with those of Indian or Chinese background) can have very different experiences. Chart 4 provides an overview of ethnic diversity for those working in the UK as a whole, and within STEMM occupations.

Chart 4: Ethnic diversity of employees in UK STEMM and NON-STEMM occupations
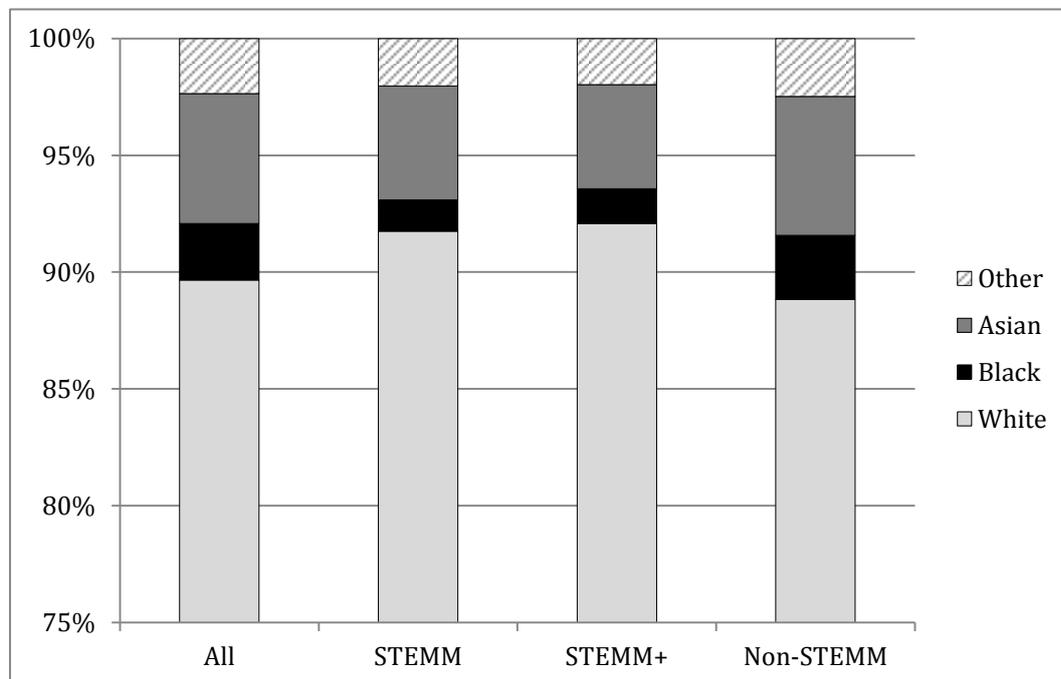
Source: *Quarterly Labour Force Survey, January-March, 2013*
To aid exposition the vertical axis has been truncated to 75%.

The chart shows that in the UK as a whole ('All'), just over 10% of individuals in employment are from an minority ethnic background, of this group 6% are Asian, 2% are Black and 2% are in the 'Other' group (which includes individuals of mixed race and those who categorise themselves outside of Census categories). The chart also reveals less ethnic diversity in both the STEMM and STEMM+ occupational groups, with only 8% of individuals in these groups from an minority ethnic background.

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Charts 5 and 6 demonstrate how the overall STEMM/Non-STEMM comparison changes when individuals working in different sectors are considered. In the health sector as a whole a greater proportion of individuals from an minority ethnic background are employed (14%) and is substantially higher in occupations categorised as STEMM (21%) and STEMM+ (20%). However, whilst there is a particularly high representation of 'Black' individuals across the health sector as a whole (5% in the 'All' column), this is not the case in the STEMM and STEMM+ occupations where fewer individuals are 'Black' (3% and 2% respectively). In contrast, the relatively high level of minority ethnic representation in health sector STEMM occupations reflects that 14% of those included in the STEMM category of occupations are from an Asian background.

Chart 5: Ethnic diversity in UK STEMM and NON-STEMM occupations: health sector
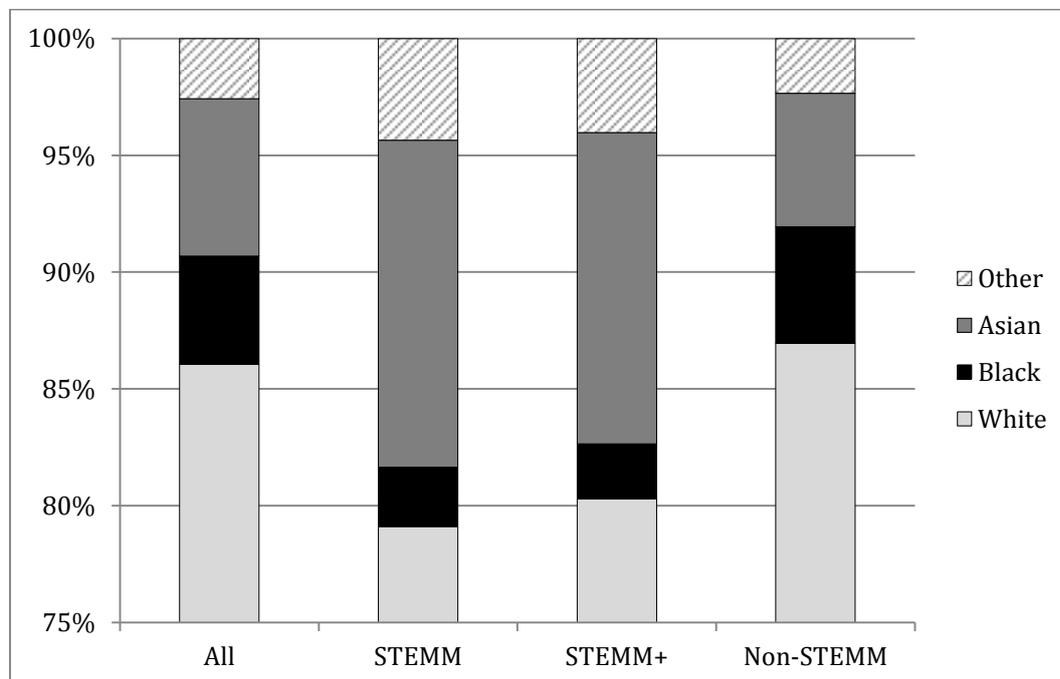
Source: *Quarterly Labour Force Survey, January-March, 2013*
To aid exposition the vertical axis has been truncated to 75%.

In conclusion, Chart 4 suggests that, in the labour market as a whole, there is less ethnic diversity across STEMM occupations. However, chart 5 shows that when only the health sector is considered, the proportion of individuals from an minority ethnic background is higher. Furthermore, STEMM occupations within the health sector include a higher proportion of some minority ethnic groups (particularly those from an Asian background) than is the average for the health sector as a whole. In contrast, chart 6 shows that in the non-health sectors of the economy there are the lowest levels of ethnic diversity (just under

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10% of individuals employed in the sectors) with even fewer minority ethnic employees working in STEMM and STEMM+ occupations (just 7% in each category).

Chart 6: Ethnic diversity in UK STEMM and NON-STEMM: non-health sectors
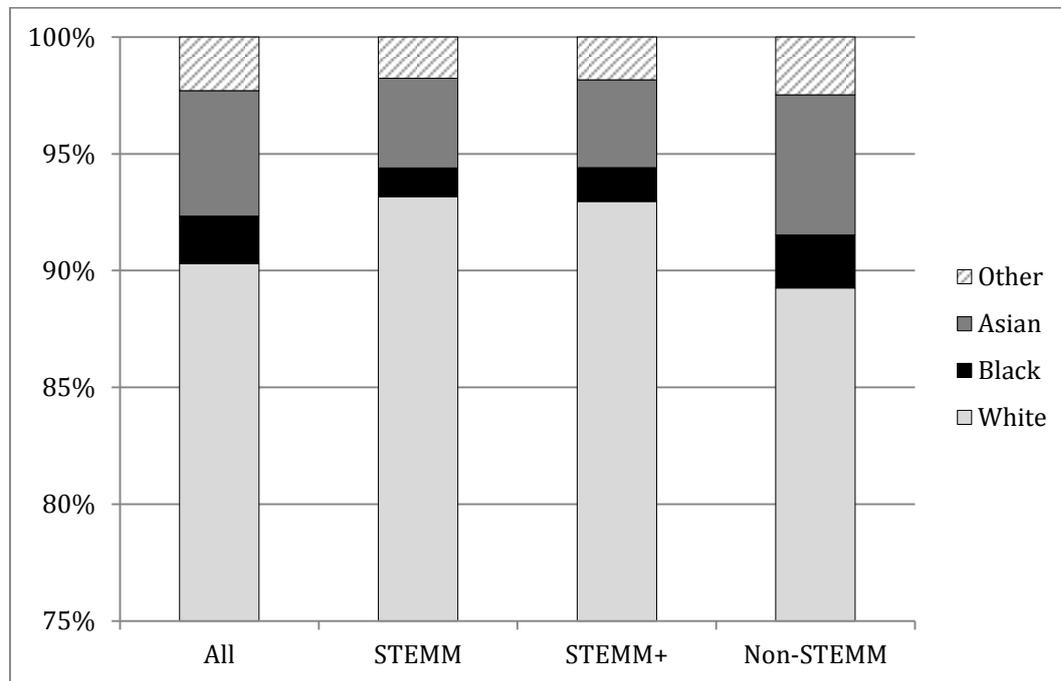
Source: *Quarterly Labour Force Survey, January-March, 2013*

To aid exposition the vertical axis has been truncated to 75%.

2.3.3 Disability in STEMM

As was the case with ethnicity, the number of individuals reporting some form of work-limiting or DDA disability in surveys can be low and this also creates challenges when considering statistics regarding disability. However, Labour Force Survey (2013) estimates show that 13% of individuals in employment in the UK report having some form of disability that falls within the Equality Act 2010 definition. Chart 7 (overleaf) sets out the LFS overview of disability for those working in the UK; it shows the proportion of disabled workers in the whole UK workforce ('All') at 13% and indicates that there is less disability diversity in both STEMM and STEMM+ occupational groups (11% and 10% of individuals respectively).

Chart 7: Disability diversity of UK STEMM and NON-STEMM occupations
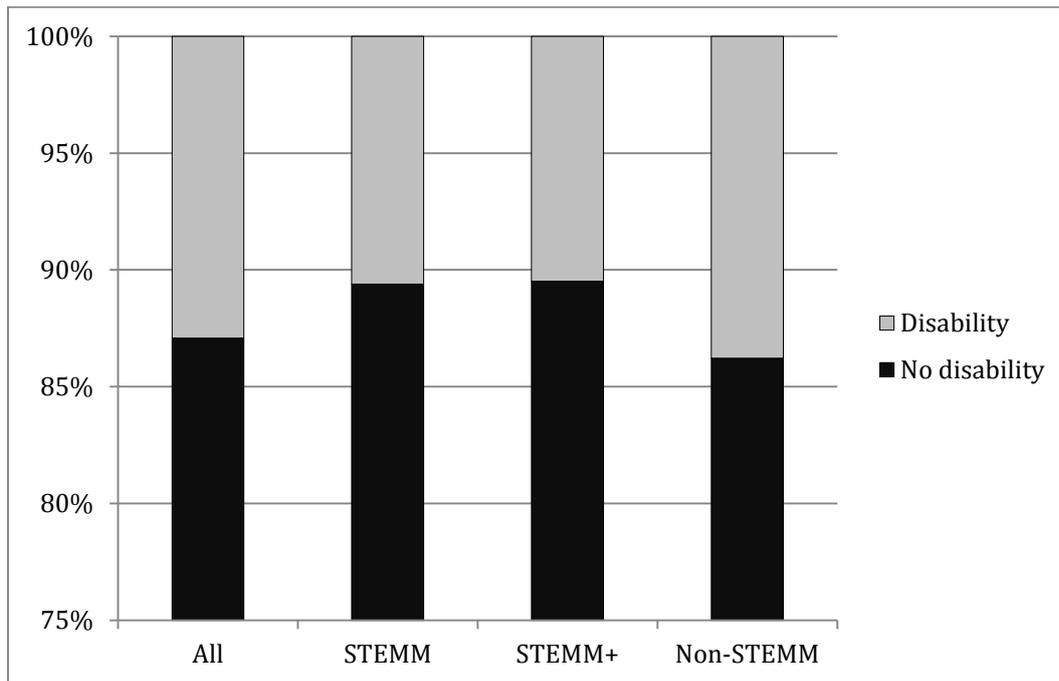

Source: *Quarterly Labour Force Survey, January-March, 2013*

To aid exposition the vertical axis has been truncated to 75%.

Chart 8 shows how this overall STEMM/Non-STEMM comparison changes when we consider individuals working in different sectors. The health sector as a whole contains a higher proportion of individuals reporting some form of disability (up by 2% to 15%), compared to the picture in Chart 7 of all UK employment sectors. However, the opposite is true for those working in STEMM and STEMM+ occupations in the health sector, where the proportion of disabled individuals is one to two percent lower at only 9% in both occupational categories.

Outside of the health sector, the proportion of individuals in STEMM and STEMM+ occupations reporting some form of disability, whilst lower at 11%, is closer to the average for those employed in the UK as a whole (12%).

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**Chart: 8 Disability diversity in UK STEMM and NON-STEMM occupations: health sector**
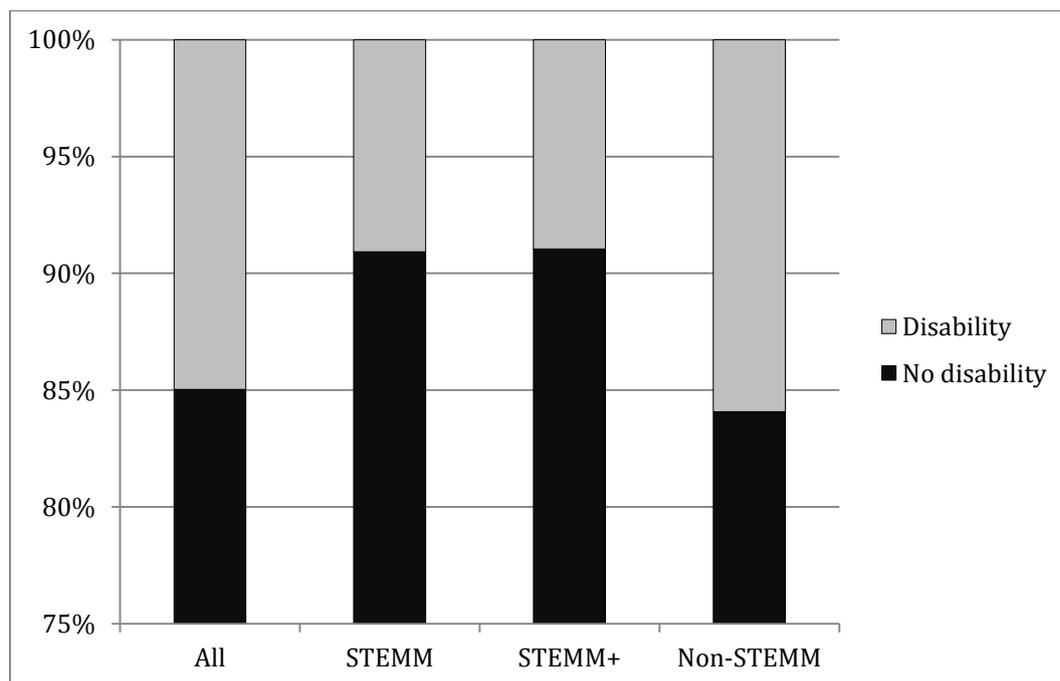
Source: *Quarterly Labour Force Survey, January-March, 2013*

To aid exposition the vertical axis has been truncated to 75%.

2.4 Conclusions from quantitative analysis of diversity in STEMM

This section of the report has drawn on sources from the EU and the USA to compare and contrast with the UK STEMM occupations. In the UK, there is no one clear, specific and regular survey of workforce diversity focussing on STEMM occupations in different employment sectors. Hence, this research has drawn on an analysis of data from the Labour Force Survey which, whilst not perfectly matching the needs of the Royal Society, represents a reasonable estimation of diversity in the UK workforce.

The analysis presented suggests that STEMM and STEMM+ occupations are less diverse than the whole UK working population, and that the UK STEMM workforce is less diverse than that in the EU. The evidence from pre-existing empirical work and LFS data indicates that there is both vertical and horizontal segregation in the STEMM sector with respect to gender, ethnicity and disability and that there are notable sectoral differences in levels of diversity. The health sector is more diverse than the non-health sector in terms of gender, ethnicity and disability; once the health sector is removed from the analysis a less diverse picture of the UK STEMM workforce emerges. Explanations for these sectoral differences are not given by pre-existing research and are explored in the qualitative research in this project. Later sections of this report also explore ways in which diversity enabling policies

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and procedures of different employers have facilitated entry and progression within STEMM careers for under-represented groups.

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3 RESEARCH METHODOLOGY OVERVIEW

The project began with two research questions:

1. What evidence is there that establishes the business case for diversity in the scientific workforce?
2. Are diverse teams more likely to do good science?

The research design for this study addressed these questions in three phases which are summarised in this section of the report. The project team for this research was multi-disciplinary and multi-ethnic and team members worked together to design and deliver a comprehensive and in-depth study drawing on research and techniques from their respective disciplines as scientists, social scientists, economists and human resource management specialists. This enabled the team to create and deliver a mixed-method research methodology comprising strong qualitative methods combined with quantitative analysis. Further information about the research methodology is set out in Appendix 2, where details of the research team, interviewees, focus group participants, interview and focus group topic guides, key themes in qualitative data collection, and an overview of quantitative variables are provided.

3.1 Phase one

This phase was carried out in August - September 2013. It included summarising the existing evidence on the diversity business case. Semi-structured interviews with four diversity and science managers in organisations employing significant STEMM workforces were conducted. These interviews with key stakeholders aimed to identify appropriate measures of diversity and the performance output of scientists working within the contexts of academia, industry, and the voluntary sector.

3.2 Phase two

Phase 2 was conducted in October - November 2013 and involved collecting qualitative multi-level primary data from people working (including PhD students) in STEMM fields through:

1. *Focus groups.* Five focus groups were held with STEMM scientists, two focussed on the gender issues experienced by women, one on disability issues, another on ethnicity, and the men-only focus group discussed diversity in relation to gender and other diversity strands. The topic of social class was discussed in each focus group. A total of eighteen participants took part. The data from the focus group

transcripts were analysed using key themes identified in the literature review and the pilot organisational interviews from Phase 1.

2. *In-depth interviews*. Interviews were held with organisational representatives including HR managers who have a diversity role, and/or science line managers; one to two interviews were held within each participant organisation. The interviewees were accessed via the Royal Society and the research team's STEMM networks and were chosen to represent the broad variety of the STEMM sector: academia; industry; voluntary organisations; public and private organisations, health and non-health sectors. In total seventeen interviews were conducted (in some cases science line managers, and/or HR/Diversity Managers and/or the strategic level interviewee were present for the same interview).

Interviews were held face-to-face or by telephone and each lasted between sixty and ninety minutes; the majority were recorded and transcribed. The data captured in each interview were based on a set uniform topic list, though the interviews themselves were largely open-ended.

Verbatim focus group and interview transcripts were analysed by the research team. Manual coding of the qualitative data was considered preferable to using software due to time constraints and because the number of transcripts was manageable. Through an iterative process of coding, mostly inductive, a thematic analysis was developed.

3.3   Phase three

This last phase was conducted during November - December 2013 and included five strategic level interviews and a descriptive quantitative analysis of diversity related issues in the STEMM sectors, using the Labour Force Survey, Q2 2013 and The Workplace Employment Relations Survey, 2011.

4   THE BUSINESS CASE AND MEANING OF DIVERSITY

4.1   Fundamentals of the business case for diversity in STEMM

The research questions of this study imply that the lack of diversity within STEMM might be ameliorated through finding and disseminating tangible evidence that supports a business case for increased diversity in the STEMM workforce. The suggestion of a business, as distinct from a moral, legal or social case, for increasing equality in organisations was first put forward in the early 1990s (Ross and Schneider, 1992; Kandola and Fullerton, 1998). Since then, despite arguments that the 'business case' is beset with both conceptual and practical weaknesses, a number of studies have sought to show the link between diversity and performance (Noon, 2007; Dickens, 1999). Dickens (1999), for example, argues that, for greater equality to be fully realised, a combination of measures should be used, including more effective legal regulation, action by the social partners (trade unions and employers) and voluntary use of the business case by employers. In relation to ethnic diversity, Noon (2007) highlights the fundamental weaknesses of a business case built on the needs of the labour market, since these are susceptible to recessionary effects.

A study of diversity measures implemented in large London-based service companies highlighted that, while performance evidence might be minor, managers believed in the positive impact of diversity on performance and productivity (Michielsens et al*., 2008). Despite the conflicting evidence that has been collected in previous research, a business case for diversity has been made in various sectors and contexts. In January 2013, the Department for Business Innovation and Skills and the Government Equalities Office (BIS/GEO) published a systematic review of the academic literature on the business case for equality and diversity (Urwin et al., 2013). This identified quantitative studies giving evidence of the possible productivity and performance impacts of diversity, particularly in quasi-experimental studies carried out in team settings (see for instance, Stahl et al. 2009, for a meta-analysis of such studies). However, in some settings diversity is shown to impact negatively on performance, perhaps arising from problems with communication and co-operation (Homan et al., 2007).

An earlier study based on a review of the literature (Cox and Blake, 1991) proposed six main business benefits of a diverse workforce:
1. *Cost*: the cost of doing a poor job in integrating workers is increasing, so those who manage diversity will gain a cost advantage.

2. *Resource-acquisition*: adopting a diversity–management approach will develop favourable reputations for the organisation as prospective employers for women and ethnic minorities, so these organisations will attract the best personnel.

3. *Marketing*: multi-national corporations (MNCs) will obtain insight and cultural sensitivity from having members with roots in other countries, and this will improve marketing.

4. *Creativity*: the presence of diverse perspectives, and less emphasis on conformity to past norms, should improve creativity.

5. *Problem-solv*ing: heterogeneity in groups potentially produces better decisions and problem-solving through a wider range of perspectives.

6. *System flexibility*: the system becomes less standardised, and therefore more fluid, which creates greater flexibility to react to environmental changes.

At face value, there are some benefits to organisations in the STEMM sector from promoting greater equality, both in terms of increased access to a scientific or technical career, and in improved progression once women and people from minority ethnic groups have entered STEMM occupations. The classification of business benefits into either 'External' or 'Internal' given in the recent BIS/GEO report (Urwin et al., 2013) provides a useful starting point. 'External' benefits (p. 9) are expressed through the following arguments:

- As demographic diversity increases, the costs associated with poor worker integration rises.

- Firms can only ensure that they attract the best personnel by selecting from the widest pool. Adopting a diversity management approach will attract more talented women and those from minority ethnic and other groups, than would otherwise be the case.

- There are potential marketing gains to be derived from improved insight and cultural sensitivity arising from employing staff with roots in other countries. Consumers are becoming more diverse and firms need to reflect this or they will lose out on important markets.

- When firms and workers comply with equality legislation, there are savings to be made from fewer employment tribunals and reductions in other workplace costs.

In contrast, 'internal' business benefits are identified as resulting from improved operations within the firm; the suggestion is that diverse teams embrace a greater range of perspectives and that this can improve creativity and problem-solving, leading to improved business outcome.

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Overall, evidence on diversity's positive impact on performance remains mixed, possibly because it is context specific (Ozbilgin and Tatli, 2011; Kochan et al., 2003). With notable exceptions (e.g. Herring, 2009), much of the evidence on workplace diversity and business performance is qualitative and/or of case-study in nature (Monks, 2007; Shen et al., 2009). The context-specific nature of the linkages between diversity and performance shown by these workplace studies therefore provides conflicting evidence of the systematic business impacts of diversity (Kochan et al., 2003). This existing evidence-base was reviewed and summarised in the recent BIS/GEO report (Urwin et al., 2013) and concludes that the effectiveness of the business case in tackling inequality may be highly contextualised and is moderated by organisational culture and management processes.

Thus, the literature is not clear how a business case for diversity can be translated at the level of the firm, let alone those specifically within the STEMM sector. Two surveys on diversity carried out by the Chartered Institute of Personnel and Development (CIPD) (2006, 2007) show that 'legal pressures' followed by labour market considerations ('recruitment and retention' and/or 'being an employer of choice') were the important aspects of the business case for diversity made by organisations in the surveys. Legal issues could be at the fore due to the potentially negative impact of bad publicity if the circumstances of a discrimination case are reported in the press, and hence the corporate image and brand damaged. 'Improving products' and 'creativity and innovation' were comparatively low down the list of benefits cited by respondents. However, the samples in these CIPD studies were largely derived from service organisations and the voluntary sector, not from industry, nor specifically from the STEMM sector.

As has been shown, the contextual nature of the business case for diversity means that any consideration of diversity and performance across firms and workers in STEMM areas needs to include both the 'internal' and 'external' business benefits hypothesised, and focus on benefits that are most relevant to workers and firms in the STEMM area.

Cox and Blake (1991) and Dickens (1999) imply that 'external' benefits related to new market opportunities and innovation are most likely to form a business case within industry rather than in the service sector. Despite this paucity of systematic evidence, if diversity within STEMM occupations has the capacity to add demonstrable value within the respective organisation then a business case is more readily made. Indeed, the findings of Hamdani and Buckley (2011) suggest that the success of firms might lead to diversity, rather than vice versa, since, as they grow in size, increasing workforce diversity is seen as a way of gaining 'legitimacy'. Conceptually, this could be defined as a form of 'isomorphism', a term which

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recognises that firms often behave in similar ways despite their differences. Powell and DiMaggio (1983) argue there are three types of institutional isomorphic change: 'coercive', resulting from political influence; 'mimetic', stemming from standard responses to uncertainty; and 'normative' linked to managers wishing to be seen as professional. It is this latter type of isomorphism that could be important to interpreting trends in and the meaning of diversity within organisations.

4.2 The meaning of 'diversity' within STEMM

Recognising that the business case for diversity may be context specific (Ozbilgin and Tatli, 2011), it is important to explore the nature of the relationship between diversity and performance in STEMM. In both the focus groups and organisational interviews conducted as part of this research, participants were questioned on this relationship and on their understanding of the meaning of diversity, both at an individual and an organisational level. The data collected from the research participants indicated clearly that 'workplace diversity' can be defined in a variety of ways within the sector. The global nature and reach of science provide a specific context within which diversity has perhaps distinct meanings for those in STEMM occupations. Our research participants indicated that diversity is a broad and complex concept, with every organisation and individual developing their own notion of it depending on their role, the extent to which diversity management has been implemented; and on the business strategy, sector, and market. Some participants stressed the 'international dimension' of diversity, whilst others focussed on the 'representation of society' dimension, or the link between a diverse workforce and diverse products or ideas. Despite differences, diversity was firmly linked in most interviews and focus groups to the concepts of 'respect', 'valuing of differences' and 'inclusion'; it was less linked to 'equal opportunities'. Those interviewed as representatives of their organisation considered their organisation's position to be enhanced by being diverse and indicated inter-linked moral and business components in the drive towards diversity. These themes and ideas are illustrated in this next section using quotations from research participants (for an explanation of who made specific comments see Appendix 2 for details).

4.2.1 **Valuing differences: links to recruiting and retaining the 'best talent'**
The importance given to the business case for diversity was particularly clear in relation to the recruitment and valuing of talent: 'valuing the difference' was considered important in order to attract and keep the best possible talent, especially in sectors with tight recruitment (such as the oil and gas industry). Through valuing and respecting differences, employees would feel more 'included' and therefore stay. 'Representation' (of society and/or client/customer base), 'recognition of differences', 'inclusion' and 'respect' were referred to in

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a number of interviews as important to achieving diversity. The following comments and quotes from the focus groups and interviews demonstrate this.

Representation:

'.....in banking ...the people are mainly rich and wealthy... (diversity is)… having many groups of people from different backgrounds...For me, it's clear representation of different kinds of people.' (FG1femBW)

'Diversity refers to different types of groups and making sure they are represented. When I used to work for the bank, they were keen that in different areas, the people they employed matched the ethnic diversity of the area they were employing from.' (FG5malBW)

'My perspective is that you get representation from all the under-represented groups, ideally at the level...in society. You don't have equal numbers from any one group. You have to incorporate all forms of under-representation.' (FG1femCW)

'It means having a workforce that reflects the broader population.' (Consultancy A)

Recognition:

'…recognise differences between individuals such as nationality, gender, disability and class ... covers categories related to gender, people with disabilities, different age groups and nationalities… class - more in the UK but not in Norway and the Netherlands. Diversity is directly related to one of the three core values of the company which is respect.' (Oil and Gas)

'It's more about overcoming our unconscious bias.' (ConsProductCo)

'Diversity means difference and this means difference in ethnicity, belief, gender, disability, but also education, socio-economic status, background, learning styles, communication styles etc.' (Health 1)

Inclusion:

'You need to have trust and integrity and respect for everyone and the uniqueness they bring in order to release that diverse talent for the challenges we have and the problems we have to solve. Otherwise, talent will come in and then leave again because those individuals don't feel like they belong, so inclusion is critical.' (ConsProductCo)

'It's about everyone coming to work and feeling they are diverse and valued for the unique skills they bring. We want to be in a position where we attract and retain the best talent, they feel at home here and welcomed and don't feel that they need to leave because there are obstacles to their progression. In my personal view, we talk about diversity and inclusion because you can have one and not the other. So I suppose that diversity inclusion is about having the right blend and mix for people for the type of work that we do.' (Consultancy 2)

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4.2.2 The focus of diversity

Most of the discussions in focus groups and interviews on what diversity means to individuals and organisations did not refer to specific groups but, if they did, the focus was generally on gender (women). This focus was apparent too when diversity strategies were detailed.

> 'Workplace diversity means trying to move us to an organisation that has greater gender balance, that has more women in senior positions and where women have a chance to fulfil their potential.' (Consultancy 1)

> 'We are doing a massive piece on maternity.' (Surveyors)

> 'Our [corporate] values are clearly stated as passion for women, integrity, leadership, ownership and trust and everything is underpinned by respect for the individual.' (ConsProductCo)

4.2.3 Transition of 'equal opportunities' concept

The discourse on diversity seems to have moved away from 'equal opportunities', a concept that may be considered passé, or too narrowly focused on the law:

> '[The Project] had an EO policy from 1996 but in 2011 the new CEO and HR/Diversity specialists extended this to be a diversity strategy that moved from the 'more legalistic' EO policy ...which aimed to create a 'level field' to make project 'optimally diverse.' (Physics)

4.3 Organisational perspectives on the business case

Data collected in the research interviews for this project implied acceptance of a business case for diversity in the context of the STEMM sector. As in the earlier study by Urwin et al (2013), both 'external' and 'internal' benefits of diversity were identified by organisations in this study. External benefits were mentioned in relation to ameliorating the rising cost of poor integration of workers, resulting in higher turnover:

> 'We are not measuring a lot of this but things like 'regretted' leavers, the cost of someone leaving the firm at different levels, the loss of skills, recruiting someone new etc., if we can prevent one person leaving, for reasons related to diversity and inclusion, then that in itself is a massive benefit.' (Consultancy 2)

Attracting and retaining employees with the relevant skills and selecting from the widest pool of potential candidates, were identified as priorities in some private sector organisations:

> 'If we can fix that gender imbalance...that would mean that there would be a much bigger take-up in engineering and science subjects and that would allow us to solve our skills crisis.' (Consultancy 1)

Optimising talent resources was not the only business benefit mentioned; diversity was seen to play a crucial role in optimising client attraction, especially when it was taken into account in a tendering process and influenced the winning of contracts:

> 'We have to be as diverse as our clients and talent comes in all sorts of forms.' (Surveyors)

Consumers and service users are becoming more diverse and the organisations appreciated that they need to reflect this if they want to maintain a competitive edge:

> '… in [company name], the business case is the clients. If the Board wants to know why this affects their business, which is all they want to know, it's because the clients are asking for it. To better service our clients, they want to see more women in these positions, they want to see us as a firm that better helps and supports this… So people have now accepted that a more diverse team is more appealing to a client.' (Consultancy 2)

Relating the diversity of staff to the diversity of service users was seen as a particular priority in the public sector:

> 'We have a diverse staffing group and diverse groups of people and services and if we don't understand the various differences and capture this and amplify our understanding of the various needs that people have, then we're not going to deliver responsibly as a health care organisation.' (Health 1)

The potential for marketing gains, derived from improved insight and the cultural sensitivity arising from employing staff with roots in other countries, was clearly recognised in the private sector:

> 'When we think about designing products, packages and services for consumers around the world, it is self-evident that we will do better at that if we have a more diverse organisation… we are using our African ancestry groups that said that you are not meeting our needs through the products you make…' (ConsProductCo)

Regarding the 'internal' benefits identified as resulting from improved operations within the organization, interviewees were in accord with Urwin et al (2013) that diverse teams include a greater range of perspectives, which can improve creativity and problem-solving and lead to improved business outcomes. For example:

> 'How likely is it that a monoculture is going to make better decisions? It's pretty unlikely. Wisdom comes from looking at issues from different angles. If you are looking at problems through one lens, then you're not going to make better decisions.' (Consultancy 1)

> 'The evidence is overwhelming that diversity out-performs and out-innovates homogenous teams.' (ConsProductCo)

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4.3.1 Creativity, innovation and 'diversity of ideas'

Increasing diversity was seen as important for the long-term success of an organisation because a diverse workforce could be instrumental in creating an environment that fosters creativity and innovation. This diversity was not restricted to association with certain demographic categories but was taken in its widest sense, as evidenced by the following quotes:

> '(We are) optimally diverse' to tap into the 'creativity that comes from bringing people together'. This new policy aims to create a 'work environment' that is conducive to collaboration... The current [CEO] believes in the value of diversity ...fostering collaboration and creativity (and the) 'the meta-value' of diversity in achieving 'excellence' by fostering collaboration.' (Physics)

> 'If you have to work with people, and a lot of the things delivered through organisations lies in collaborating with people, you need a bit of diversity so that people aren't blind-sided to run straight into the same issues and problems because they see things in the same way.' (Health 1)

> '… (diversity is) not necessarily where the person is from. They might be of the same gender but have different perspectives.' (FG2femANW)

> 'Diversity is not about all these different categories but ... the way people approach work and life.' (FG3femAWDD)

> 'In relation to the workplace, I feel that, despite whatever capacity a person is active in, the only measures for being there is that they have the experience and skills required for the job.' (FG3femBNWDD)

4.3.2 Strategic level perspectives on diversity

Five senior STEMM managers interviewed from both the public and private sectors showed they were well aware of the challenges posed by the lack of diversity; they also revealed different approaches to increasing diversity in STEMM organisations and the sector. In the existing literature on the business case (for example, Kandola and Fullerton,1998) the concept of diversity and the business case are fundamentally bound up with the business strategy. The notion of the 'diversity mindset' of an organisation is used to describe whether its senior executives view diversity as integrated into the business strategy or not. In some of the private sector organisations interviewed in this research, there was evidence of executives integrating diversity into the strategic plans. For example, the representative of a consultancy organisation posed the question:

> 'Does the way we do business and are our policies and processes in line with what we want to achieve?' (Consultancy 2).

The picture in the public sector is more complex. Representatives of the large NHS Trusts

participating in the research saw the Trusts' role in relation to diversity as spanning both inside of the organisation, in relation to employees and service users, and into the 'wider community' (Health 1) as well, an approach they called 'Inclusion'.

Such differences in approach imply both broad and narrowly-focused strategies designed to achieve more diversity, with the need to: 'tackle this problem as an industry and society' (Consultancy 2). The broadest strategies aimed to attract and recruit a diverse workforce and entailed changing peoples' perception of STEMM roles to make them more attractive to young people, and using 'softer' language in recruitment advertisements to make them more appealing to women. This approach included replacing the word 'engineering' with an alternative that has fewer stereotypical and potentially off-putting connotations. More fundamentally, the tactic in some of the organisations participating in this research was on changing the brand image of STEMM roles to attract a more diverse workforce.

In contrast, there was also an argument made for a 'focus and simplicity' (CMO) in the STEMM sector. The Chief Medical Officer (CMO) interviewed proposed that a good starting point for increasing diversity is to address the problem of poor levels of female progression, because this has a significant economic impact and there is a clear economic argument for doing so:

> 'How can we afford to waste half our best brains? This is not right for the country.' (CMO)

At the strategic level in the health sector, there was recognition of a fragmentation of responsibilities in terms of access to STEMM occupations, with '…..employers, universities and professional organisations' (Health1) all having a part to play in this. Such fragmentation is linked to the nature and content of diversity policies in the sector, as are debates about strategic coherence. For instance, employers may seek to influence entry to STEMM professions but they have limited control, and while they may have diversity policies which seek to encourage school-age children from diverse backgrounds, hoping they will aspire to these occupations (see also section 5.4 'Increasing Diversity and Inclusion – Access to STEMM Careers'), employers have no control over whether children actually make these choices.

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4.4 Conclusions on the business case and meaning of diversity

A review of the literature on diversity identifies conflicting evidence on whether there is a business case to support its positive contribution to organisational success. At a conceptual level, it is possible to identify potential benefits accruing from a diverse workforce; these can be grouped into 'external' benefits of reduced costs, improved resourcing of talented personnel, better products and services, and enhanced corporate image; whilst 'internal' benefits can be envisaged where plurality of perspectives leads to increased creativity, innovation and problem-solving (Unwin et al, 2013). Whether these potential benefits can be achieved, and which ones would be valued most by an organisation, also appears to be a relevant consideration (CIPD, 2006, 2007); the evidence suggests that there is no one uniformly relevant business case and that contextual difference is a significant factor in determining this. Thus organisational tendencies to follow the crowd and adopt strategies employed by other employers (isomorphism) will not guarantee success in increasing diversity or demonstrating a convincing business case for it.

Our research participants associated a range of meanings to 'diversity', informed by features such as the global nature of STEMM, their personal experiences and their organisation's responses and approaches to diversity. However, diversity was described as being a bigger concept than 'equal opportunities' and was imbued with wider values such as respect, inclusion and 'valuing difference'.

Organisational representatives in the research implied acceptance of the case for benefits of diversity, mentioning both 'external' and 'internal' benefits. Some private sector STEMM organisations had built diversity into their strategic plans in recognition that it would make them better able to achieve strategic goals. An NHS Trust identified how diversity was encapsulated in the idea of 'inclusion', which spanned the boundary between organisation and service users. The Chief Medical Officer interviewed promotes practical and focused action, where there is plenty of scope for change so preventing the undeniably significant loss of women from the STEMM workforce. Yet the range of parties (employers, universities and professional organisations) that might influence recruitment, loss or retention, are fragmented in their approach to diversity. Arguably, until a coherent and integrated approach is developed and adopted, the problem will not be alleviated effectively and systematically.

Whilst these debates and approaches operate at a strategic level, organisations also described practical initiatives, such as taking care over the words used in recruitment campaigns to increase the likelihood that under-represented groups apply.

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This report now turns to the policies and practices in use; these could be considered when planning or evaluating diversity interventions.

5 DIVERSITY STRATEGIES AND POLICIES

This section of the report combines analysis of Workplace Employee Relations Survey (WERS, 2011) data with comments made by the participants in this research regarding the strategies and policies used in organisations. WERS has been used to examine UK employment policies that may impact diversity; charts display results to relevant WERS questions consistent with the Royal Society's focus on STEMM.

5.1 Diversity policies within the STEMM sector

WERS provides evidence that fewer STEMM workplaces have formal diversity policies than in the some other parts of the economy, although it is important to acknowledge that policy statements do not necessarily reflect practice (they could be 'empty shells' as shown by Hoque & Noon; 2004). Chart 9 (overleaf) shows that, while 91% of 'STEMM Health' workplaces have a specific written policy addressing gender, only 76% of 'STEMM, Not-Health' workplaces do[2].

The literature review indicates that organisational policies addressing issues of diversity range from equality policies designed to ensure legal compliance, to those positively encouraging diversity through proactive policies aimed at recruiting and retaining a more diverse workforce (Armstrong, et al., 2010; McDougall, 1998). Organisational diversity policies designed to encourage diversity were discussed both in the focus groups and with representatives of the participating organisations. These policies varied in terms of which 'protected categories' were covered, gender being the one most frequently mentioned.

The long-hours' cultures was considered by the focus groups, and in particular the women's focus groups, to adversely impact on diversity, including through personal accounts of how careers had had to change. A computer scientist who had worked in investment banking for fourteen years recounted how she gave up her job to escape from a long-hours' culture:

> 'I have two young children. I am attempting to be self-employed as a computer programmer' (FG1femBW).

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[2] When analysing WERS data, workplaces were selected according to whether they are considered to be STEMM or otherwise (see methodology in Appendix 2 for more detail). For instance, in Chart 9 the first column relates to all firms that can be considered as working primarily in STEMM areas; the suggestion is that amongst these firms 91% have a formal written policy. The second column relates to all firms that are not STEMM, but are engaged in the Health sector; the suggestion is that only 88% of these firms have such a policy. The figures for WERS have been weighted to account for possible response bias.

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Chart 9: Does the workplace have a formal written policy on diversity/equal opportunities, on the grounds of gender?
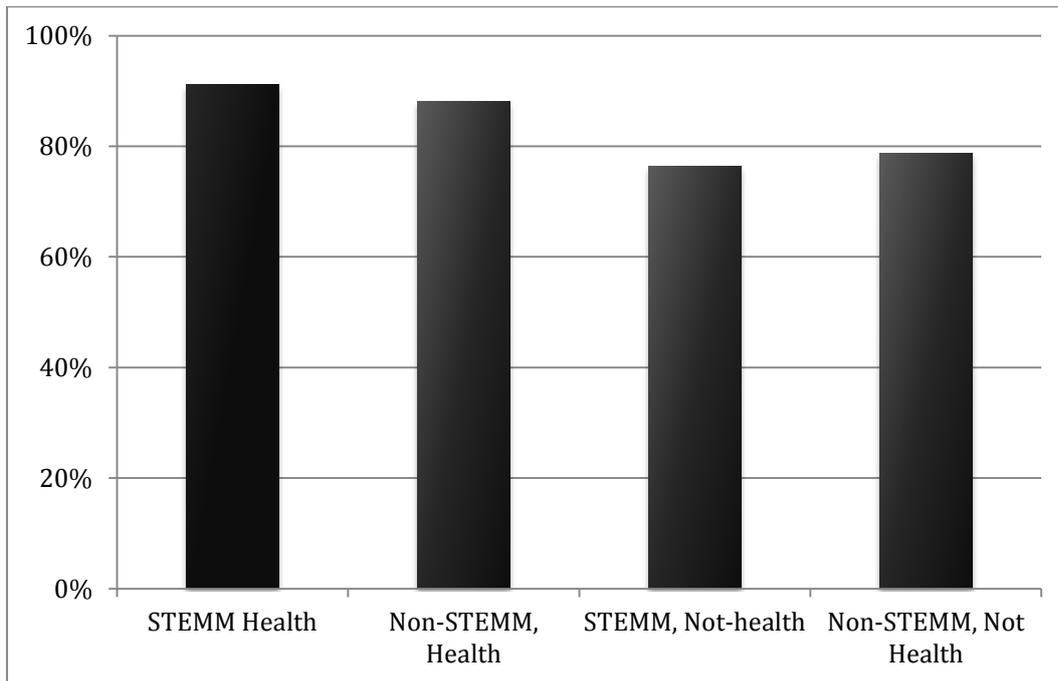
Source: *Workplace Employment Relations Survey 2011*

5.1.1 Career progression for women

Career progression was also discussed in the focus groups and gender barriers were noted. An engineer reflected on career challenges for women with children and other participants echoed her views:

> 'Earlier in my career it seemed quite easy but as you get promoted, you go up in the organisation. The barrier for me was having children. I had them and took time off and when you get back in the hierarchy, you are at the bottom and everybody else has been promoted. You are then catching up.' (FG2femEW)

Organisational representatives concurred that there were 'challenges' for employers when, and after, women took maternity leave, and that women returners' careers tend to plateau or change as a consequence:

> '...we tend to see a drop off in gender diversity ...when employees have been in the company for 10 years … After 10 years, women are typically starting families or having children.' (ConsProductCo)

The WERS data, shown in Chart 10, confirm this difficulty, indicating that the majority of employers do not have policies and practices designed to encourage women to return after maternity leave. The health service is ahead of most other employers in this regard: 17% of

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'STEMM Health' workplaces reported procedures in place to encourage applications from women returners, compared to 13% of 'Non-STEMM Health' workplaces; this falls to a low of 8% for the 'STEMM, Not-Health' category.

Chart 10: Do you have procedures to encourage job applications from women returners?
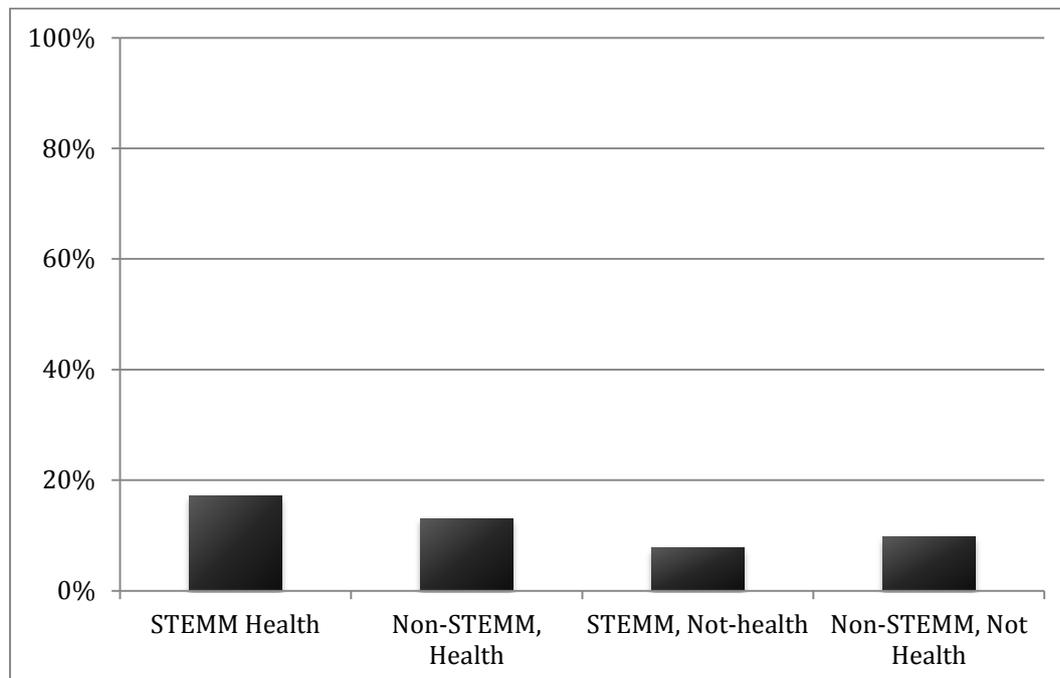
Source: *Workplace Employment Relations Survey 2011*

Lack of clarity and transparency about the criteria for promotion and progression were also cited as inhibitors to diversity by those individuals taking part in the gender, disability and ethnicity focus groups.

Policies aimed at addressing some of the issues raised in the focus groups were described in the organisational interviews. Whilst some of the organisations taking part in the research are currently non-diverse (in terms of gender, disability, class and ethnicity), such as 'Contractors' and 'Surveyors', others have seen some success in achieving diversity, albeit mainly in terms of gender ('Consultancies 1 & 2', 'Physics', 'Health 1', 'ConsProductCo'). There were policies to address the long hours' culture, including more possibilities for part-time working, flexible working, home working, compressed hours, or having 'location-free' jobs; but, as the 'Oil & Gas' recruitment manager pointed out: 'people tend to work many more hours than they are paid for.'

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In the very male dominated environment of surveying there was also recognition that failure to tackle the 'traditional' long hours' culture is an impediment to the progression of women:

> 'The industry is very traditional and old school ...and we have this whole culture where it's about face time.' (Surveying)

5.1.2 Fixed-term contracts

The evidence from organisations classed as 'Research', 'Physics' and 'University' is that scientific research is populated by:

> '…quite a transient population of post-doctoral research fellows ...recycled every three to four years. I think in the university system they can stay on longer….Our graduate students stay usually for four years and then leave.' (Research)

Employment for such 'post-docs' typically comprises fixed-term contracts to begin with, offering poor job security to researchers. Participants in the gender and minority ethnic focus groups reported a prevalence of the use of fixed-term contracts for 'women of childbearing age' (FG1femCW) and minority ethnic staff in the university sector. The law[3] prevents renewal of fixed term contracts beyond four years, unless there is a legitimate and genuine business objective. Concerns were expressed in the focus groups that fixed-term contracts could potentially be used effectively to limit maternity leave rights, particularly if employers enforced breaks in service between fixed-term contract periods..

A university in the study, with a large proportion of academics in the STEMM area, published data on its use of different contract types by gender, ethnicity and disability. This data indicated that, while the use of fixed-term contracts was roughly equal between men and women (27% of women, compared with 29.1% of men), fewer women academic staff held established posts than men (81% compared with 92.8%), demonstrating that women are more likely to be in posts without tenure. This same data also showed that a higher proportion of academics of a BME ethnic background are on fixed-term contracts than white academics (40% against approximately 20% respectively). In addition, while just 2.9% of academics disclosed a disability, 15% of these disabled staff were on fixed-term contracts.

Overall, the data collected in this research project indicate a picture of lower job security for women, minority ethnic and disabled staff, associated with the use of fixed-term contracts and other less permanent contracts. This is the case in the university and science research areas of the STEMM sector, but there was less evidence from other sectors.

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[3] The Fixed-term Employees (Prevention of Less Favourable Treatment) Regulations 2002 (SI 2002/2034) which implement the provisions of the Fixed-term Work Directive (1999/70/EC) into UK law and The Fixed-term Employees (Prevention of Less Favourable Treatment) (Amendment) Regulations 2008 (SI 2008/2776

5.1.3 Diversity policy effectiveness

The focus group participants were generally critical of the effectiveness of organisational diversity policies, though they reported some sectoral differences:

> 'I think in business we are lagging behind the university and research sector. You may have a policy but business comes first.' (FG2femBW)

> 'I think it differs from one sector to the other. People in the computer games sector are notorious for doing a lot of overtime and you don't have as many women working there. The women that do are usually younger. Whether that's essential to the nature of the industry or that's just the culture and there's not enough pressure to change it, I don't know. A lot of that work can be done at home. It might be partly because it's still a relatively immature industry that hasn't been around that long and it's dominated by men.' (FG2femEW)

In contrast to this picture, some of the organisations in the research operated more developed and holistic employment 'strategies' that took a diversity perspective and were implemented to improve recruitment, retention and workplace relations:

> 'We took the approach of tackling the diversity challenge from a systems perspective…[…]…We have a communications strategy internally, aimed at increasing people's awareness about diversity and encourage people to talk about it, and externally to position and market ourselves.' (Consultancy 2)

In other organisations, the initiatives reported were more fragmented; some activities targeted leadership, others recruitment or retention.

5.1.4 Leadership and development

Good leadership, good management skills, and the presence of a diverse management were identified as important factors, both by the focus group participants and some organisational representatives interviewed. Leadership team behaviours can be strategic because of their contribution to a 'diversity mindset' (Hopkins et al, 2008) which is central to increasing diversity.

Managers of STEMM staff were considered crucial to staff retention because they can influence retention levels through the creation (or not) of a positive work environment. Consequently, several of the organisations taking part in this research (in the medical field, health service, surveying and consultancy) emphasised the importance of developing their line managers. For these organisations leadership development programmes, in which diversity features centrally, have become a priority:

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> '…ensuring our leaders have the right skills and they are leading in a way that nurtures and creates more diverse teams'. (Consultancy 2)

The consumer product company participant ConsProductCo reported that a half-day of the annual year-end two-day meeting of the executives is spent on 'Diversity and Inclusion' activities. This session includes information collected through consumer surveys on products, ideas on creating inclusive environments and research-based evidence on diversity and performance.

'Surveying' represents a sub-sector of STEMM+ that lacks diversity; a high proportion of chartered surveyors are male, white and middle class. One of the few women at a senior level in this field commented that a factor inhibiting diversity was unconstrained 'big personalities' amongst top managers:

> '…here we are so personality-driven and dominated by alpha males.' (Surveying)

5.2 Training about diversity

Diversity training is an important part of diversity strategy for the organisations interviewed; 'unconscious bias' and 'diversity and inclusion' are at the core of much of this training which is delivered both online and face-to-face. In recent literature, especially that derived from the USA, discrimination in STEMM employment and recruitment is being linked with the concept of 'unconscious bias' (for instance see Raymond, 2013; Mervis 2012). The term originates from social psychology and seeks to describe the impact of subconscious presumptions about people's characteristics (such as being female, non-white, disabled) on recruitment and performance management. Awareness of one's own biases can help with recognition and the potential reduction of the impact of this implicit bias (see for example, Devine et al, 2012). An increasing number of employers use 'unconscious bias' awareness training as a tool to increase diversity and inclusion because of its capacity to raise self-awareness and allow self-correction in thinking patterns and decision-making. UKRC WISE (Women in Science and Engineering), for example, organises training 'which addresses the relationship between the implicit associations, stereotypes and individual attitudes towards apprentice recruitment' (see http://www.ukces.org.uk/news/Articles/2012/Oct/cogent-technical-apprenticeship). 'Consultancy 1' commented how and why the organisation use this concept and terminology:

> 'We have now called it unconscious bias. If you run something called diversity awareness, everyone glazes over but when you call it unconscious bias it makes a big difference. We've given unconscious bias awareness training to our senior leadership teams. We have a big

company with a UK Board and eight businesses but we still go through this training with all the senior people so that they get it. That's now threaded through all our line manager programmes and any general programme of development that we provide has unconscious bias training in it, from senior management development programmes to line manager training.'

As increasing numbers of STEMM employers organise this type of awareness training and, the diversity discourse in organisations has become homogenised. This is encouraged by the common practice of 'benchmarking', a human resource management activity which inclines organisations towards "isomorphism" (Farashahi et al., 2005, DiMaggio and Powell, 1983).

Over and above training for organisational leaders and managers who shape and oversee strategy development and policy implementation, some organisations provide particular development training opportunities to certain 'protected characteristics' groups. 'Consultancy 1' noted the positive impact of such programmes on the retention and progression of women in the organisation, intended to ensure 'their experience is positive'.

> 'Within that we have our diversity networks and particular training for certain groups…' (Consultancy 1)

5.3   Recruitment

Some organisations reported the recent introduction of more proactive policies aimed at attracting and recruiting more diverse staff members. In the international 'Physics' organisation, a new CEO and HR/Diversity specialist had developed a policy designed to create a 'work environment' conducive to collaboration, and hence to translate into improved and more diverse recruitment. The organisation has also established a Talent Acquisition Group within its Human Resources department, tasked with improving the distribution of under-represented nationalities. Similar efforts were underway to achieve greater gender distribution in recruitment for all professional roles. Another tactic used by organisations seeking to increase diversity through the recruitment of diverse new staff was to make diversity policies visible to potential applicants.

'Consultancy 1' gave an example of how a policy had changed and how this had been made visible in recruitment advertising:

> 'We've enhanced our policy on flexible working and from last week you can search our website for flexible jobs. You don't have to look for the job and then find out if it's flexible, you just look for flexible jobs. The last count, there were over 100 jobs like that.' (Consultancy 1)

Fewer initiatives specifically targeted at recruiting minority ethnic candidates were mentioned, a finding consistent with WERS (2011), though there were exceptions, such as:

> 'We make sure that, when we're using online and physical materials, that we have both genders and a variety of visual characteristics where you can see people are from different parts of the world, different ethnicities etc.' (ConsProductCo)

Chart 11 (below) shows that outside the health sector only a few workplaces have arrangements in place to encourage applications from minority ethnic candidates.

Chart 11: Do you have procedures to encourage job applications from minority ethnic candidates?
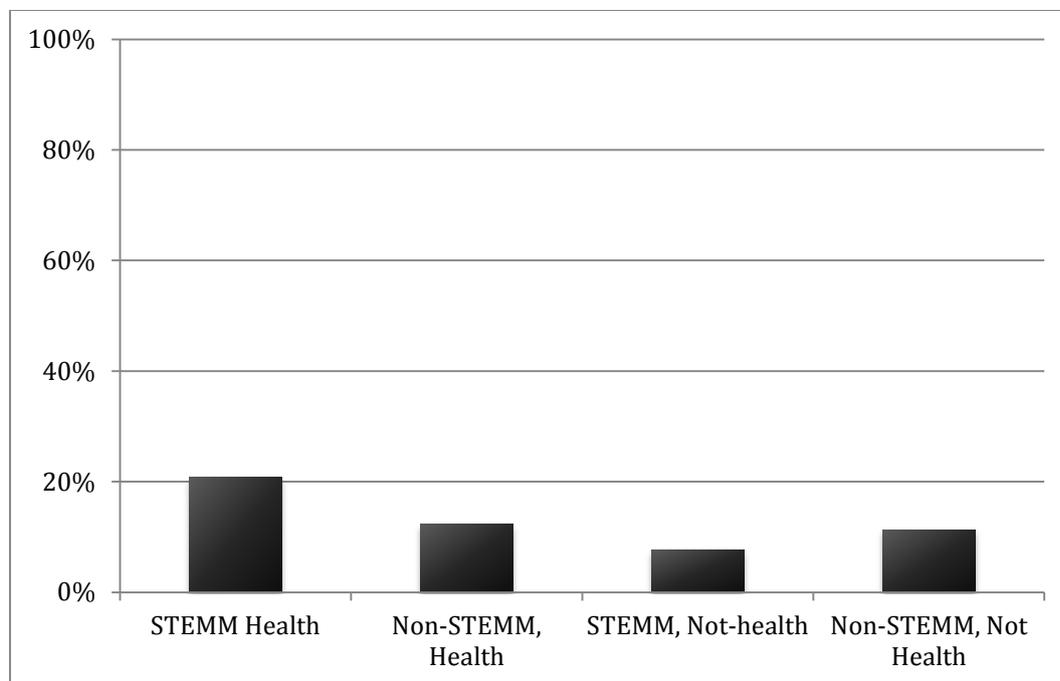
Source: *Workplace Employment Relations Survey 2011*

In contrast to data on procedures in place to attract applications from minority ethnic candidates, WERS (2011) suggests that a higher proportion of workplaces have procedures in place to attract disabled candidates. There are a substantially higher proportion (58%) of workplaces taking such measures in the 'STEMM Health' category compared with the 'STEMM, not-Health' category (only 11%). Making the interview process more accessible to disabled candidates was also considered a priority.

Similarly, Chart 12 (below) indicates that only a small minority of organisations in STEMM and STEMM+ outside the health sector actively encourage disabled job applicants.

Chart 12: Do you have procedures to encourage job applications from disabled candidates?
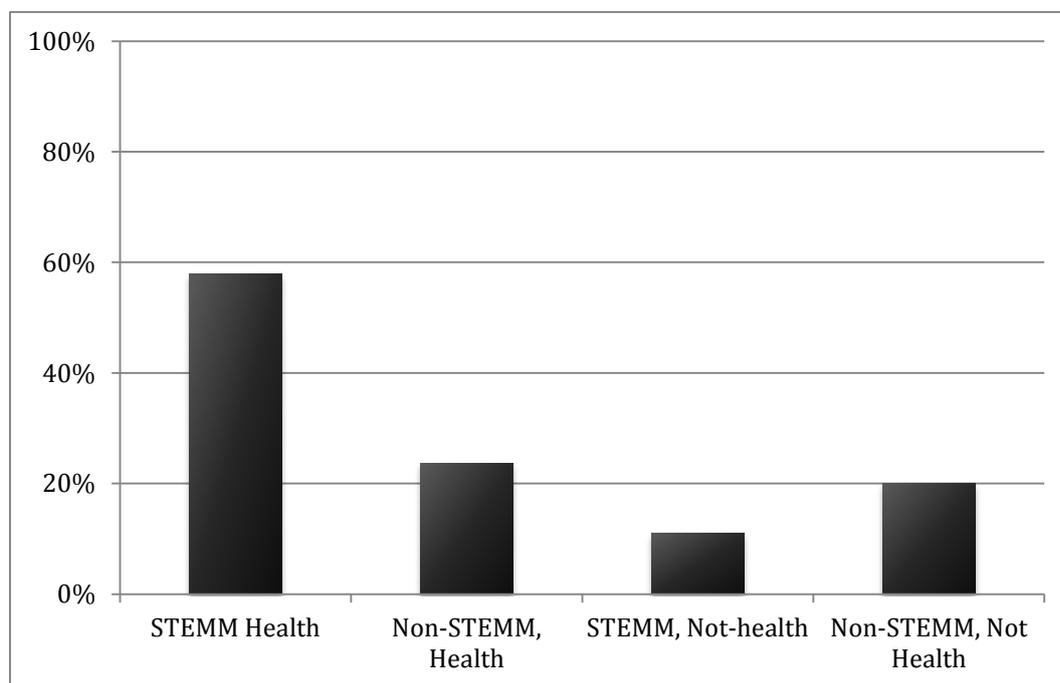
Source: *Workplace Employment Relations Survey 2011*

5.4 Increasing diversity and inclusion – access to STEMM careers

All participants in this research highlighted the importance of early career choices and opportunities. Crucial career-related decisions are made by girls at a young age and the female focus groups participants regarded the lack of encouragement, and absence of role models available for young girls considering science or mathematics, were key factors in the under-representation of women in STEMM occupations. They considered that early career choices are affected by a range of influences, including: lack of good career advice; appropriate role models; media depiction of science; lack of toys and play materials available to girls; and the barriers faced by those from working class backgrounds without the access to options and possibilities available to those from more privileged backgrounds:

> 'Part of it is career guidance particularly for children who come from the not so wealthy end of the spectrum. Children that come from middle class families will know scientists, or their parents will. Therefore, they will know what is available. However, a child who doesn't have access to those networks, unless they have good career guidance, they are not going to choose those careers.' (FG2femEW)

> 'The role model is very important but we still have a very male image of scientists. The Big Bang Theory has been great to promote science and physicists but it's still male characters. People like Brian Cox have been good at getting students into physics but he's still a male role model. So

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> it's about getting more female role models out there and they don't have to look like the typical scientist because everybody is normal. Getting that at a young age is important.' (FG2femCW)

Some of the organisations taking part recognised the importance of these early career choices and of recruiting from a larger talent pool and were working with a larger range of schools and universities than had been the case in the past. Many such initiatives, some long-standing, were aimed at attracting girls and women into STEMM occupations traditionally seen as male domains:

> '[Our organisation] used to run activities where we go to graduate camps and present activities to children, between the ages of 12 and 13, before they did their GCSEs and the idea is to get them so interested in maths, physics and other science related subjects. They run the events at big places like [name] football grounds and they get hundreds of schools in and ask them at the beginning of the day how interested they are in science. At the beginning it's about 10% but by the end of the day it goes up to 70%. We have the [name] Fair which is aimed at attracting girls into STEMM subjects. [...] Last year they got 55,000 young people attending it. It cost us about £50,000 because we have to invent something for the kids to do.' (Consultancy 1)

The links between social class and ethnicity were discussed in the focus groups. The participants agreed that 'class matters' and referred to the importance of social structures, such as the 'class' of particular universities. In both 'Surveying' and the electrical contracting industry there are attempts to develop apprentice programmes as a way of attracting a more diverse range of young people to these industries. The surveying apprenticeship initiative is linked to widening out the universities from which it recruits graduates to train as professional surveyors; the organisation identified that the narrowness of its recruitment of trainees from a small number of 'middle class' institutions could be a barrier to achieving increased diversity.

While these initiatives are still at an early stage in surveying, some limited success in increasing class and ethnicity diversity has been reported in electrical contracting.

5.4.1 External links or outreach

External links referred to by the survey participants included work with research bodies, professional associations, student associations, schools and universities. Campaigns and outreach activities were informed by market research and were cited as examples designed to 'generate interest'. For example:

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'We're looking to work with 85% of schools to bring health science careers to their doorstep and have created an e-mentoring programme where professionals in the trust are mentoring people in local schools. In December we had a fair with 130 young kids between the ages of 15 and 17 and mentors that came to 20 different career stalls. Those mentors are matched with young people.' (Health 1)

5.4.2 Women into science and engineering (WISE)

The initiatives of WISE were discussed by the research participants in relation to its work promoting to girls the idea of careers in STEMM. A representative of WISE was interviewed, her comments about what WISE aims to achieve, and how it does this, are presented in the pages that follow.

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Women into Science and Engineering (WISE)

WISE was established in 1984 following the Finniston Report on the future of engineering in the UK, which emphasised the need for a broad talent pool of scientists and engineers; thirty years on WISE has also incorporated the UK Resource Centre of Women in Science (UKRC).

Since its inception, WISE has contributed to campaigns to raise the profile of women and girls in STEM. WISE's mission is to achieve greater gender balance in the UK's STEM workforce by increasing the number of female employees from 13% to 30% by 2020, and WISE's services are designed to build and sustain the pipeline of female talent in STEM, from classroom to boardroom (WISE, 2014). A member of the WISE team was interviewed to discuss the services provided by WISE and associated challenges; her comments are reported below.

WISE intends to reach the goal of 30% women in STEM in 2020 using a 'three-pronged approach':
1.   To get 'the' message across to girls and employers.
2.   To increase the recruitment or build a pipeline.
3.   To look at the workplace culture.

The first approach, changing attitudes amongst girls, entails running events in schools where role models can meet girls to share the opportunities that are available to them and change their perception of science and engineering; employers can be there too. WISE recognises the important role that is played by parents:

> "Parents can be a key influence, because they actually put girls off, dissuade them from choosing these subjects even if they are interested in them. The workshops that we've had, we invite parents to come as well. They are very interested, because it opens their eyes. Teachers as well and science teachers don't realise the range of opportunities there are."

The second approach concerns supporting companies in their recruitment:

> "We launched membership last year and companies, universities and women who want to be role models can sign up to be members of WISE. And then we will work with them… supporting people really to access female talents. Whether they are putting adverts through the WISE website or whether we've put on events for careers and to meet role models. We organise meetings where they can share good practices with each other."

SME companies represent a particular challenge:

> "The first thing is to get that message across more broadly, why it's important. They may have benefits in terms of having a more diverse team and making better decisions and being closer to their customers and the retention maybe better as well. The issues, if you talk to people

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and drill down as to why, it's the cost. One usually tends to go beyond that. The benefits outweigh the cost. It's what we would argue."

The third area is looking at the workplace culture, which will address the retention and progression of women:

"If you have more women, there is a more senior role in science, then it would be more attractive to girls as a proposition to work. So how we would look at the retention and progression is by giving guidance to employers about what good practice looks like. Helping them to identify, diagnose what the issues are within that company, which might be through transcripts or surveys, and then looking at support networks for the women, mentoring or other networking opportunities. Because often they will be isolated. That's why we go to the membership. We can join up what people are doing and share what works. Organised events might be in a region where different ones can come together. The girls share good practice with their peers. People don't have to reinvent the wheel or work alone on issues."

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5.5 Retention

Staff retention policies listed by focus group interviewees included: making reasonable adjustments in the workplace to take account of disabilities, enhancing flexible working opportunities to achieve better work-life balance, and offering better development and networking opportunities. Pro-active positive action to address issues associated with disability was also referred to by the organisations:

> 'In all of our buildings we think through issues of access. There's currently an issue around IT facilities for visually impaired people. We're pretty sensitive to those things when we are aware of them. What worries me is that I don't think we have as many disabled people among our work population. We haven't looked at that in any detail.' (Consultancy 1)

A representative from an NHS Trust commented on the potential impact of people working until they are older than the current norm. Employees will be more likely to develop disabilities and employers will need to find ways to retain these individuals in the workforce:

> '…that does have a bearing on the cost of reasonable adjustments but what's reasonable and what does the business deliver?' (Health 1)

The NHS Trust was therefore undertaking a piece of work called 'Referral Access to Work' that:

> '…looks to get people back into work. So if you have a disability and you are off work, they will provide reasonable adjustments for you to get back into work. We don't utilise that as best as we could as an organisation. [...] So we are doing a big communications campaign. However, there's still a fair way to go with regards to what is reasonable adjustment and in general, what's reasonable.'(Health 1)

Employee turnover rates monitored by some organisations vary according to gender or ethnicity, as evidenced by 'Consultancy 1':

> 'Overall, our company staff turnover is 10% and in Energy it's more than 14%. That's because it's a hot area at the moment. So the skills we want are in demand. Therefore, there's a high turnover. We measure the difference in turnover rates for men and women and it's slightly better for women.'

Increased 'churn', created by employees leaving their employer, represents a substantial employment cost. If differences in retention rates could be demonstrated systematically in STEMM, this would contribute to the business case for diversity built on the basis of reducing employment costs.

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5.6 Networks and mentoring

Both organisational interviewees and focus group participants discussed the role of networks in either promoting or constraining diversity. Focus group participants stressed the importance of networks and noted the continuing prevalence of the 'old boys' network' in limiting diversity:

> 'It is all about networks - the old boy's network works – and how do you break into that?' (FG4maleANW)

A senior female chartered surveyor indicated how the prevalence of the 'old boys' networks' in her industry excluded women and people of lower socio-economic status:

> 'I was told years ago that I was doing well although I don't play golf. I couldn't believe it. Therefore, the girls are not going to be promoted to a certain level and get the big deals because they're not going to be on the golf course.' (Surveyors)

Professional/diversity networks, for example women's or LGBT (lesbian, gay bi- and trans-sexual) networks, were recognised as having a positive value by organisations that took part in this research:

> 'We have seven corporately recognised and funded groups….In our women's network, there are more than 60 groups and that's just the ones I know of. We know there are many more.' (ConsProductCo)

> 'I think the networks have been really successful. We had anecdotal feedbacks about people who considered leaving but they found a network that helped them to see that they were not alone. There were other LGBT staff members that were struggling but they're making progress and we're fine.' (Consultancy 2)

An NHS Trust had experience of using both BME and disability networks:

> '… for their insights into policy on different organisational issues and consultations... (there have been) some challenging issues which networks have helped to unpack.' (Health 2)

A focus group participant (a physicist) talked in positive terms about an informal network comprising 'women researcher lunches' set up at her university:

> 'If I experienced anything like that [negative attitudes], I could go to them and say that this has happened, could you give me some advice. The woman that leads it is very approachable and enthusiastic and she used to be head of the school, so she has experience managing the politics of the department.' (FG2femCW)

While there was evidence of STEMM organisations using networks positively to promote diversity, these networks tended to be composed of similar people using the network for mutual support and, as in the case of 'Health 2', as a form of pressure group. Ibarra (1995) noted that social networks can aid advancement of the (ethnic) 'minority managers', but she identified that networks spanning across ethnic and social boundaries, and including white people, were shown to be more effective in facilitating advancement of minority ethnic managers. This research investigation for the Royal Society did not find evidence that organisations were actively promoting heterogeneous networks.

5.6.1 Mentoring and sponsorship

Mentoring relationships can develop when people network with each other and mentoring was evident in organisations seeking to improve diversity at the entry level of STEMM work. However, there was little evidence of mentoring or sponsorship to aid progression through organisations once women and those from ethnic minorities have entered STEMM occupations. While mentoring has been shown to be effective at entry levels, it is 'sponsorship' that is most effective in facilitating progression (Ibarra et al, 2010). Classical models of mentoring combine 'psychosocial support' with career help, but in order to progress in organisations, women and those from minority ethnic groups need senior manager 'sponsors' who will give 'their 'protégés exposure to other executives who may help their careers' (p.85). Sponsors can also:

> 'Make sure their people are considered for promising opportunities and challenging assignments….protect their protégés from negative publicity or damaging contact with senior executives…(and) fight to get their people promoted' (p.85).

5.7 Diversity initiatives – successes and failures

The benefits and desirability of achieving a diverse workforce were well recognised by the individual and organisational research participants who took part in this project. As this report has set out, a range of strategies were described, such as targeted recruitment, measures to improve access to STEMM careers, encouragement of awareness and belonging amongst staff, mentoring programmes, establishing networks, and flexible working hours. Most of these focused on increasing gender diversity, although some of our organisations did have ethnicity and disability initiatives, especially those employers with a broader clientele base. Even so, despite drives over recent years to increase the representation of women in STEMM, the effectiveness of such initiatives must be questioned because statistics indicate that there are still too few women working in STEMM occupations.

The role of award schemes such as Athena SWAN and the Juno Award in universities was also discussed by in both focus groups and in organisational interviews. Some women scientists in the focus groups had direct experience of the schemes and considered that they were effective in promoting change:

> 'When they (Universities) get it, it makes a difference because it gives the woman the permission to comment if the situation wasn't good before. It gives us permission to come out of the woodwork and for us to say that we don't agree to this. There is credibility and legitimacy. It is important that departments buy into it because otherwise, they are paying lip service.' (FG1femCW)

Another female scientist with experience of Juno also commented favourably:

> 'I've seen in my university the Juno Award for the physical sciences and they were awarded for the policy they had and the flexibility they have with different genders and working hours. So they got this award that said that they are a good place to work.' (FG2femCW)

There were concerns that such schemes might be:

> '…A 'tick level' thing where high level people are signing up but it's not filtering down.' (FG2femANW)

However, our research did indicate the effectiveness of the statement made by the Chief Medical Officer (CMO) in 2011, that an Athena SWAN award should be a factor included in the decision-making process of the Medical Research Council when determining future funding of research in NHS/universities:

> '…We do not expect to shortlist any NHS/ University partnership where the academic partner has not achieved at least the Silver Award of the Athena SWAN Charter for Women in Science.' (CMO)

Indications that currently a third of the applicants for the Athena SWAN award are failing 'because they just want the badge' (FG1femCW) suggest that the scheme could achieve some change in universities because:

> '….Poor employment practices particularly disadvantage women but good employment practices benefit everyone….. You will find that the undergraduate courses will get better applications from women and universities will actually improve their undergraduate pool…(without it) the mathematicians wouldn't have done anything.' (FG2femCW)

There are no similar schemes that promote diversity in terms of ethnicity and disability, contributing perhaps to a lack of visibility and attention paid to increasing diversity in relation to these other minority groups.

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Athena SWAN Charter

The Athena SWAN Charter evolved from work between the Athena Project, a forum collecting data on resources in the workplace, and the Scientific Women's Academic Network (SWAN). It was launched in 2005 to advance the representation of women in STEMM and membership is open to higher education institutions active in STEMM. Six principles represent the cornerstone of Athena SWAN; these recognise the unequal representation of women in STEMM and seek to address the consequent personal and organisational obstacles and implications. The Charter works on the basis that a department must have institutional support and underpinning institutional good practice, policies and processes in place in order to achieve and sustain an award. An institution must have achieved an Athena SWAN Bronze award before departments can obtain an individual award (Athena SWAN, 2012). University departments can apply for a Bronze, Silver or Gold award, depending on their progress and achievement in promoting gender equality; they apply to renew their award every three years on the basis of evidence of progress. There are currently 259 Bronze, Silver or Gold award-holding institutions and departments, including four institutions awarded Gold. A member of the Athena SWAN Steering Committee was interviewed to discuss the Award process and associated challenges; her comments are reported below.

Leadership and commitment

Although addressing gender inequalities requires commitment from everyone (Athena SWAN, 2012), in practice, leadership is of paramount importance:

> 'One of the key things is the head of department. They are absolutely key'… 'There has to be somebody championing at the highest level. If it's just seen as women's problems, then the other half or two thirds of the population won't take it seriously'… 'what's interesting is, if the head of department or the champion is male, that has even more impact'... 'what you can't do is make it work across a unit where there is no sense of belonging.'

Radical culture change

To tackle the unequal representation of women in science requires cultures and attitudes across the organisation to be changed (Athena SWAN, 2012). Those applying for the award simply to get the Award, rather than being willing to change the culture of the organisation, will be rejected:

> 'It's still clear when you read some of the submissions that people have done it because it is a process, rather than understanding the need for the culture change. But usually they don't get the award'. '… [medical schools] might be doing it because of the badge and because of the attachment to the money, because they are obliged to do it.'

Benefits from participation in the award programme can be seen in terms of culture changes, in recruitment, and in women's experiences of organisations:

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'In those departments where they have had an award for a length of time, they report that they get more applications from women. They get more applications from female students as well, which is a good thing. The women themselves report better experiences. The challenge is to make the change 'stick': there are departments that don't show up a second time.... But because we have them on a renewal cycle, we can at least give them a kick.'

Key role of men

An attitude of fairness is considered important:

'Everything we do is actually open to everyone and absolutely nothing that we say women can have that men can't have. Men can now take extended maternity leave…this is actually looking to improve the employment conditions for everyone. We are trying to remove the long hours' culture for everyone, because nobody should be working 12 hours a day in the lab'... 'When men were going part-time, it then lost its stigma. And so going *only* part-time, which is terribly apologetic…now became something that is entirely respectable'.

Women's career progression

The loss of women in science is an urgent concern but is apparently not only observed in science. The loss can be attributed to attitudes among men as well as women, and perhaps depends on the history of the particular branch of science:

'The supervisors of ….PhDs was still old school…. of the opinion ….that women didn't make chemists and therefore were dismissive of their female PhD students who then would say, fair enough, I'm off. Microbiology is much more modern and far less likely to fall into unconscious bias. And so they did retain their women better.'

Athena SWAN is effective in giving women working in science a higher profile and in changing cultures in STEMM educational establishments:

'…There are many who get converted in the process, not all.'

However, challenges remain, including changing the culture in more universities, and changing the attitudes of parents of the next generation of scientists:

'If you don't have the parents on board, the girls won't be doing science.'

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5.7.1 **Organisational culture**

Several participants spoke of organisation cultural factors as inhibitors of change and indicated the problems in tackling these 'difficult-to-define-and-manage' issues (as illustrated in for example, Bradley et al, 2007). Three of our research organisations had initiatives aimed at grappling cultural issues. The first, an NHS Trust that was experiencing difficulty in getting women and minority ethnic staff to apply for promotions, focused its attention on communication issues. The all-male executive culture with 'lots of rugby and drinking' was challenged because it was deterring women and minority ethnic staff from applying for promotion. These staff:

> '…were almost ready to be promoted into those positions but did not recognise this themselves until there was a dialogue…..There are simple ways that people notice...and it does not sit comfortably with them...
> We have to ask the question...what do we do that puts you off? (Health 2)

This NHS Trust (and other organisations too) demonstrated awareness that communication and use of language are important aspects of culture that can either promote or discourage diversity:

> '(People) need to have the opportunity for people to talk…in a non-threatening way.' (Health 2)

Another approach used in some organisations and particularly aimed at attracting job applicants from a wider pool was to attempt to change the image of the industry and the 'brand':

> 'One of the things we recognise is that we have a traditional engineering consultancy brand and that might not be as attractive to women with the image of hard hats and high-visibility jackets. We've changed the brand and used softer language. That's one area where we've developed the image.' (Consultancy 1)

A further example of seeking to change organisational culture focussed on flexible hours and its uptake. A number of organisations provide flexible hours opportunities, but employees do not always avail of them in fear of their career progression (e.g. Brandt and Kvande, 2001). Some focus group members suggested that uptake was low because of lack of communication about these opportunities in the organisation. In one global organisation interviewed for this research, the executive board had remedied the low uptake of flexible

working by seeking to change the organisational culture through storytelling, role modelling, and encouraging employees to take advantage of flexible working opportunities:

> 'We started with the very top of the company. We found out that one of our vice chancellors missed a board meeting because he had a child and wanted to stay home. He asked his boss permission, the CEO, and he gave him permission to miss the external board of director meetings. The more we talked about this, the more we found more compelling personal stories at all levels of the organisation. We started making sure we communicated different examples and it would be from the top across different disciplines.' (ConsProductCo)

The Athena SWAN award requires some cultural shifts in diversity mindset and, as illustrated in the discussion of the Athena SWAN scheme, these can prove very challenging in organisations. However, elsewhere, and in line with Brandt and Kvande (2001) and Burchielli et al's (2008) findings, the pressures of traditional patterns and expectations of working do limit employees 'uptake' of diversity initiatives such as flexible working:

> 'It was the working practice. It was a very big project and we didn't have a lot of staff. I like to succeed so if I had to do it myself, I just did.' (FG1fem2W)

Not all initiatives were perceived as successful, even when senior executives or employees were involved. For example, an enthusiastic, dynamic female president in the engineering sector set up a project to train unemployed and mature women to become electricians. The training programme was part-funded by a housing association and built around flexible working patterns because many scheme participants had children. Despite the female president's vision of other industries adopting the model, it has not been extended elsewhere:

> 'She saw a model that could be adopted by other industries but it hasn't been adopted.' (Contractors)

Some diversity initiatives do fail and, as Miller and Tucker (2013) observed, sometimes this is because firms do not see the importance of diversity, as apparent in the electrical engineering sector:

> 'The typical contractor will generally say that they could have a more diverse workforce if they tried but why would they want to? They're quite happy with the system that they're working with and they're not getting pressure to change their attitude. They have other things to worry about.' (Contractors)

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Another initiative not integrated into the organisation's strategic plan was deemed of limited success despite early positive expectations:

> 'Although these projects seem to offer great opportunities, the length of time that someone is employed on a project ….is not very long.' (Contractors)

5.7.2 Success and failure – summary of experiences

The above examples suggest that STEMM organisations design and implement diversity initiatives, especially regarding gender, though fewer focus on ethnicity and disability.

Factors that may contribute to initiatives being successful in increasing diversity in STEMM are similar to those identified in other sectors. These include active senior and employee involvement, diversity as part of an organisation's strategic plan (e.g. Dobbs, 1998; Miller and Tucker, 2013; Stein, 2013) and the culture of the organisation (e.g. Brandt and Kvande, 2001). The lack of visibility of ethnicity and disability suggests that success is limited by organisation culture factors and by limited strategic integration into the business.

5.8 Conclusions on diversity strategies and policies

This section of the report used data from WERS 2011 to demonstrate that employers in the health sector are the most likely to have policies that facilitate diversity within their workforces. These policies include encouraging female staff to return from maternity leave and job applications from minority ethnic and disabled applicants. What this quantitative data does not indicate is whether these policies are 'empty shells' (Hoque & Noon, 2004), in other words, rhetoric rather than diversity being a deeply-held value which is then enacted through practice and behaviour.

The discussion revealed a range of workplace features that militate against diversity, such as male-dominated working environments, organisational cultures and expectations that make it difficult or unattractive for members of minorities to enter and progress within this environment. A range of strategies, policies and practices were discussed as to whether they hinder or advance the progress of individuals within STEMM workplaces. Particular employment practices, such as the use of fixed-term contracts, lack of flexible working opportunities, failure to make adjustments that accommodate different physical needs, and unclear career progression criteria, were considered barriers to both entering and progressing a STEMM career. Less tangible, but nevertheless influential, features were the presence of the 'old boys' network', and the absence of heterogeneous networking groups (as opposed to specialist ones for an under-represented groups) and career 'sponsorship' by senior executives.

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Training was considered to play an important role in increasing diversity because it can underpin change and set new expectations. Pragmatic training on diversity can enlighten and inform people by increasing awareness and tackling in-built unconscious biases. Training or development programmes for specific under-represented groups can increase retention and aid progression of these individuals. Training can also aid organisational change by altering the way leaders think; it can assist them to adopt a fundamentally different mindset where diversity underpins organisational strategy and is seen as a key to achieving positive outcomes for a range of stakeholders. Leaders with a 'diversity mindset' can break away from traditional patterns and can change expectations through their modelling of inclusive thinking and behaviour, and they can help to modify norms and values that become embodied in organisational cultures (Bradley et al, 2007; Liff and Cameron, 1997).

Specific initiatives operating in the wider society and across the STEMM sector were also mentioned by the research participants. In order for the STEMM workforce to become more diverse, there needs to be greater interest in entering the sector from groups traditionally under-represented. Initiatives for children and students were discussed, including the need to create aspiration and access, provide links, attractive role models and real opportunities. For some of the organisational participants this was achieved through outreach activities, and for others it was about mentoring or expanding the net of academic establishments they looked to recruit from, for others it was about removing loaded language from descriptions of jobs and workplaces.

Figure 1 (see page 57) summarises key facets of diversity in relation to pathways into and progression within a career in STEMM.

Major initiatives such as the Athena SWAN and Juno awards have had some impact on the diversity of the STEMM workforce. In order to be accredited by the Athena SWAN scheme university science departments have had to change their employment practices; this has required cultural change led from the top of these organisations, changes that have not always been achieved by the mostly male leaders. However, insistence by national leaders, such as the Chief Medical Officer interviewed, that government funding is only available to those organisations that hold an Athena SWAN has focused the minds of decision-makers and the scheme is gradually creating change in one part of the STEMM sector.

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Of all of the initiatives that seek to increase diversity in the STEMM workforce, most have sought to improve the gender balance; disability, ethnicity and social class remain more in the background, with social class particularly lacking visibility. Figure 2 (page 75) illustrates the nature and significance of their varying visibility.

Many of the key change agents in organisations, in the STEMM sector and in society as a whole, are white able-bodied men; without their commitment to change organisational cultures, strategies and practices, and their desire to lead a process of change, the STEMM workforce will remain largely as it is.

Figure 1: Pathways to a career in STEMM

School, Family & Community Networks	School to Work Transition: Perceptions & Choices	Employment Barriers & Enablers
• Awareness of and access to 'good' science • Encouragement by teachers • Influence of parents & wider family & friends • Community perceptions of science • Choice of school • School's approach to science • Choice of science subjects • Career guidance regarding opportunities in science	**Facilitators for STEMM careers:** • Positive image / reputation of science • Positive family views of science • Encouragement to see beyond traditional career options • Mentoring • University choices leading to STEMM career **Barriers to STEMM careers:** • Absence of positive role models • Traditional views on segregated roles • Discouragement / no encouragement • No mentoring • Incorrect / poor career guidance • Funding concerns	**Entry Level:** • Selection procedures & practices impact on diversity positively or negatively • Traditional occupational roles by gender, ethnicity or class accepted or challenged • Consistent or inconsistent actions on diversity by professional bodies **Career progression within STEMM:** • Invisibility / visibility of diversity • Diversity mindset of leaders • Diversity friendly or unfriendly organisational culture & practices • Role of clients & research funders • Diversity impact: post-doc choices • Flexible work / hours in practice • Career break availability & post-maternity support

Accompanying materials: Published Works 2005-2015 p. 415

6   TEAMWORKING IN STEMM AND DIVERSITY IMPLICATIONS

So far this report has sought to address the broader research question of whether a business case for diversity can be established. Addressing the second research question of whether diverse teams do better science was complicated by a research literature beset with methodological issues and the finding that organisations in this research project have not made systematic attempts to define and measure work features such as 'creativity' or 'innovation'. Some researchers, for example, Stahl et al. (2009), Watson et al. (1993), Cox et al. (1991), have argued these positive features are the possible result of having diverse team members. Some research studies have measured diversity in terms of different scientific disciplines, rather than in terms of demographic differences (eg Hiatt, et al.,2013; Hall et al, 2008); consequently these sources have limited value to this research project because it does not directly address the particular research questions set, where diversity is defined in terms of gender, ethnicity and disability.

6.1   Importance of contextual factors

A review of the literature on the impact of diversity within teams reveals that, though there may be business improvements from increased creativity and effectiveness arising from diverse teams, there is no clear-cut relationship. Many quantitative studies of 'diversity in teams' have been carried out in quasi-experimental settings, where causal impacts can be more confidently identified but the implications of organisational context either may not, or cannot, be explored. Indeed, building on both social psychology and artificial intelligence concepts, Hong and Page (2004) develop a mathematical framework demonstrating that more diversity among groups of problem-solvers raises their performance. Their model however, leaves out two crucial features of organisational life – communications and learning. Hubbard (2004:25) contends that the task of measuring the business case for diversity relies fundamentally on viewing diversity as an 'integral part of the organizational system', and yet there is little resemblance between the conditions assumed to exist in many diversity studies and those found in organisational settings (Watson et al. 1993; and Kochan et al., 2003).

6.2   Impact of contextual factors on the performance of teams

The measurement and methodological challenges in showing a link between team-working and diversity in STEMM based teams are considerable; few studies have been carried out in real organisations and fewer still use objective performance measures. Research from other sectors (such as the service sector) suggests that management might regard diversity in teams as a problem if there is an impact on the relationship with the client and the other

team members. For example, if a team member's contribution was restricted, (such as through working part-time) it would mean that they would not be accessible to a client at all times (Michielsens et al., 2014). Another issue is how authors define diversity. For instance, a study conducted to evaluate the impact of author-team diversity (where teams comprise individuals drawn from multiple institutes and nationalities) on scientific publications in a national science laboratory in the USA. However, diversity in this study referred to task-related diversity, in which difference is described in terms of educational or professional background, rather than demographic diversity, where differences concern attributes such as gender, age, race, and ethnic differences (Hinnant et al., 2012; Hamdani and Buckley, 2011).

Some researchers (e.g. Østergaard et al. 2011; Stahl et al. 2009; Watson et al. 1993; Cox et al. 1991) argue that innovation can result from diversity; others dispute this (e.g. Jehn et al.,1999; Hamdani and Buckley 2011). Stahl et al. (2009) show how cultural diversity can have both positive and negative implications. While increased team diversity might lead to conflict and decreased social integration there could also be process gains through increased creativity and satisfaction. Team diversity and problems with communication and co-operation were also found by Homan et al., (2007).

Though Østergaard et al. (2011) found no relation between ethnic diversity and the likelihood that firms innovate, they conceded that the level of ethnic diversity in their sample may have been too low to identify an effect. Ethnic diversity is indeed a complex issue, Jones and Elias (2005) demonstrate this when they warn that occupational and ethnic segregation varies greatly (see the earlier discussion in 'Ethnicity in STEMM) and needs to be taken into account in any comparative organisational study. Hence, it is difficult to generalise about ethnic diversity in general rather than in relation to specific ethnicities.

Gratton et al. (2007) provide further evidence (mostly from outside the STEMM sector and centred on the finance sector) to support the suggestion that mixed gender teams can aid innovation and increased feelings of 'psychological security'; they report certain negative 'minority effects' when there is an uneven gender balance.

Whether or not diversity within teams leads to better outcomes, it can be affected by a myriad of factors, including the way diversity is defined and managed, organisational settings and managerial style, as well as the social and institutional forces that drive diversity in a particular organisation (e.g. Hamdani and Buckley, 2011). These more contextual factors have received less attention in previous studies on diversity in teams but warrant closer

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scrutiny to facilitate an informed and appropriate judgement on the effectiveness of diverse teams in organisational settings within STEMM.

6.3 Methodological issues with collecting objective data

It is these complexities (and associated methodological difficulties), which have thwarted previous attempts to collect definitive evidence on diversity and teams. Hence, this research project set out to collect data in real organisational settings of whether diversity impacts team performance. Whilst the data collected provide interesting examples, they are insufficient to provide conclusive proof. For example, diverse teams were thought by organisational representatives to include a greater range of perspectives, so enhancing creativity and problem-solving. Some claimed that:

> 'The evidence is overwhelming that diversity out-performs and out-innovates homogenous teams.' (ConsProductCo)

However, scant tangible evidence was put forward to support such claims, despite the anecdotal examples given:

> '…performance outcomes of diverse teams if they are skilled in dealing with diversity and the whole team are equally valued... (there are) some simple things about team development... (recognising) different personalities ... they just need to recognise there are differences ... success is a question of the sophistication of the team...being open...' (Health 2)

Focus group participants also reported on the effects of diverse teams, but again little direct evidence was offered:

> '…diverse teams perform better… and it's because of creativity. There was an MIT study that looked at the diversity of teams and I think their conclusion was that, because the team was diverse, the team was more creative with the ideas they came up with and also in production.' (FG2femANW)

A male medical scientist working in a university considered that, in his experience, there were positive effects from working in a diverse team:

> 'If you put them (scientists) in teams, they can give each other ideas and that can boost output in things like the number of publications. In my university they have small groups in the department. Each group can do similar stuff but people have different preferences. They interact with each other and give each other ideas.' (FG5malAW)

It was notable that there was little actual team-working in some of the STEMM organisations, but rather an emphasis on collaboration, especially on an international basis:

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'International collaboration works better than local.' (FG4malCNW)

The international organisation 'Physics' strongly encourages international collaboration because of:

> '…the 'meta-value' of diversity in achieving 'excellence' by fostering collaboration.' (Physics)

Scientists and mathematicians working in universities reported a lack of diversity in teams and observed that in PhD research supervision the ethnicity of the supervisor and student are very often (too often) the same, indicating a lack of diversity inside supervision teams. A biomedical scientist who had worked in a number of countries observed that the UK was different in that:

> 'In Britain, I have often noticed that people tend to group together on the basis of nationality.' (FG3femBNWDD)

Team leadership that was sensitive to diversity was considered important for gaining the potential benefits of team diversity:

> 'I've worked in functional and dysfunctional teams. If you have a dictatorial lead, they can make it dysfunctional for everyone. In a functional team one woman can be a reasonable voice even though everyone is working in their own way.' (FG1femBW)

6.4 Conclusions on teamworking in STEMM and diversity implications

In sum, previous attempts to definitively determine whether teams comprising diverse members do better science, when compared to teams with homogenous team members, have not succeeded in providing convincing evidence. Some empirical studies conducted in laboratory settings suggest that diverse groups may benefit from increased creativity, innovation and problem-solving, whilst potential pitfalls may include conflict, decreased integration and co-operation, and problems with communication. These laboratory studies do not reflect the messy reality of organisational life and existing literature suggested it is necessary to examine contextual variables such as how the diversity is defined and managed, why the organisation strives to increase diversity, the nature of the organisational setting, and the managerial style.

Data collected in this research project provide anecdotal evidence that people believe diversity creates advantages because it brings together a variety of perspectives into a group. However, the data collected also include assertions that appropriate team leadership is important for diversity to be a source of benefits rather than disadvantages. It was

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suggested that effective collaboration, rather than teamwork, was often required in the STEMM workplace and that, in the UK, people had a tendency to stay with those of a similar national background.

This aspect of the research echoes earlier work, arguing that organisational settings and leadership play significant roles in determining how diversity is viewed and managed, having in turn an impact on whether diversity acts to deliver potential benefits or not.

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7   MEASUREMENT OF DIVERSITY AND PERFORMANCE

7.1   Measuring diversity and progress towards diversity

The measures of diversity used and advocated by practitioners, academics and consultancy-based writers differ. Urwin et al's.(2011) research on the strategic business impact of diversity, commissioned by the London Development Agency, discussed the range of measures that organisations and academics use to establish links between diversity and performance. The indicators and variables used vary and, as CIPD surveys (2007, 2006) show, practice in organisations on the use of diversity metrics is at a relatively early stage of development.

While useful concepts such as the 'diversity scorecard' (Hubbard, 2004) and metrics of diversity density have been developed, metrics that can link diversity with performance need further investigation. Hopkins et al. (2008) define the concept of diversity density as referring not only to the percentage of diverse employees in an organisation's workforce, but also to the extent to which individuals from diverse groups (including diverse professional groupings) are represented at all levels of the organisation. A related concept of 'diversity mindset' refers to the extent to which an organisation's senior executives view diversity as integrated into business strategy rather than simply a human resource management (HRM) issue. Despite such developments, there is little evidence of these concepts being used in the UK within organisations, either in the STEMM sector or more widely. Indeed, the use of diversity measures in organisations is only extensive in those organisations that are 'leading edge' (CIPD 2007, 2006). Monitoring the workforce and job applicants by various demographic criteria is carried out in many organisations, but the extent of full 'diversity auditing', as recommended by Pearn Kandola (e.g 2006), is not known.

There are further academic and practitioner-led developments of relative rather than absolute diversity measures, which are yet to be fully tested. For example, the CIPD (2007) used a questionnaire to develop a 'diversity sophistication score', which can measure the progress an organisation has made in its diversity journey.

Loden (1996:16) developed the 'diversity adoption curve', which seeks to categorise organisations in relation to their progress in relation to diversity:
1. **Traditionalists,** wanting to avoid involvement with any change.
2. **Sceptics,** about new ideas, seeing diversity as potentially harmful and moving too fast.

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3. **Pragmatists,** seeing diversity as desirable after proven productivity improvement.
4. **Change agents,** seeing diversity as 'knowledge-enhancing' and good for people.
5. **Innovators,** seeing diversity as a creative opportunity.

7.2 Diversity metrics and their usage

Benchmarking and the other relative, as distinct from absolute, diversity performance measures may be considered as more practitioner-based than theoretically-driven. Benchmarking techniques emphasise the comparative dimension of organisational diversity performance. However, even if it is possible to design diversity measurement tools, it is less easy to measure diversity across organisations without taking their separate contexts into account. Metrics collected in surveys such as the Black Solicitor's Network Diversity League Tables (2008-2013) give some idea of the level of diversity across legal firms (i.e. the proportion of women or ethnic minorities within the workplace, at different levels of seniority), the implication being that more diverse firms are likely to better represent the customer base and wider society (leading to business benefits). In some studies, where large data sets have been used, a specific attempt has been made to link these measures of diversity to business benefits and firm-level metrics. Riley et al (2013) , for instance, found neither large nor widespread business benefits in the form of relative industry profitability associated with diversity. However, methodological difficulties and lack of organisational data mean that it cannot be concluded that there is no link, just because there is no evidence of one.

Benchmarking diversity monitoring data against other organisations is a technique used in the STEMM sector. 'University', four of whose six Schools are in the STEMM sector, benchmarks its diversity data with other research-intensive Russell Group of universities. The reason for this approach was given as:

> 'Benchmarking is useful because it gives context to diversity data.'
> (University)

Most of the organisations interviewed reported monitoring applicant details though the information collected may be of variable quality since it is:

> '…difficult as candidates are not obliged to give information.' (Oil &Gas)

Voluntary approaches to ethnicity monitoring tend to produce limited data and might contribute to the lack of awareness regarding issues of ethnic diversity in organisations. When organisations do collect data, but do not make use of them, their value is also limited.

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Health service organisations interviewed reported the collection and use of a range of diversity data. 'Health 1', for example, makes its data public and seeks to evaluate the extent to which its staffing mirrors the very diverse community served. It is considering whether to use the data for internal benchmarking:

> '….not exactly league tables but encouraging…(internal) competition…. We don't encourage quotas and targets…. There can be significant differences in what is going on in acute medicine in A&E and what is happening in engineering. So in a large place you have to create local balanced scorecards.' (Health 1)

The use of the balanced or diversity scorecard (Hubbard, 2004) ensures a range of factors are used and aids:

> '…transparency in what is going on in different areas.'(Health 1)

Intersectionality (the idea that people may not fit exclusively into one of the 'protected' categories, see section 2.1 'Definition of diversity') complicates how diversity is measured as it should not be assumed that people fit neatly into only one category. Indeed, statistics present a different picture whether from the perspective of social class or in terms of ethnic identity.

In response to questions about ethnic diversity, focus group participants (including those in the ethnicity focus group) and organisations tended to associate this with nationality. Two research organisations ('Research' and 'Physics') spoke of the range of nationalities represented amongst the specialist scientists in their organisations, but not about ethnic diversity:

> '…we have forty odd different nationalities.' (Research)

Such discourses contribute to the weak visibility of ethnicity as an issue per se.

7.3 Measures of performance and innovation

Measurements of performance in STEMM occupations is partial and variable between organisations, and a mixture of absolute and more relative performance measures may be in place (where they are used). Analysis of performance measures in some STEMM sectors (e.g. Diem and Wolter, 2013) indicates that, although there are hard measures of performance in use (such as measures of research outputs and citation counts in academic contexts), these may carry assumptions about gender or ethnicity. In terms of gender, analysis of research performance measured by publication record shows that female

researchers trail behind men in terms of the number of publications and the positive outcomes of research output (Aaltojärvi et al., 2008; Lariviere et al., 2011; De Witte and Rogge, 2010). The picture is more pronounced for certain subject areas (D'Amico et al., 2011); for example, Abramo et al (2009) mention industrial and information engineering. The reasons for such female disadvantage may be weak social capital (collaborators, networks), lower hierarchical positions held, lesser success in attracting funding, having more teaching duties, individual characteristics such as being less competitive than men; as well as care responsibilities leaving women less time than their male colleagues to devote to research and publication (Lariviere et al. 2011; Hunter and Leahey 2010; Sax, 2002). Symonds et al. (2006) show that ranking methods are biased against female scientists, and Leahey's research (2006) indicates that, aswomen are less likely to specialise than men, this may potentially impact negatively on them when they are compared with male colleagues. Research by Kelchtermans and Veugelers (2013) does not however support the thesis of women's disadvantage, revealing that, while women have a significantly lower probability of reaching top performance, as measured through the number of citations of their work, 'they seem to persist in top performance more easily than men do'. Other citation and gender research also shows inconsistent findings: some analyses claim publications are more cited (Borrego et al., 2010), others the reverse (Aksnes et al., 2011).

Research on the link between ethnicity and scientific performance has been particularly prominent in the USA. Hopkins et al. (2012) and Ginther et al. (2011), for example, concluded that black/African-American researchers in the USA are disadvantaged in terms of receiving research funding.

Organisations in this study reported fragmented approaches to informal and formal performance management, with 'billing' and hard measures used in some client-based organisations, and science research and universities using the number of peer-reviewed papers published. In the health service, there is a focus on measures from a service user perspective:

> '…the responses of consumers, patients and members of the public. If the people using the service are from diverse backgrounds, they can say whether or not they are valued, if they are being respect or treated with dignity…' (Health 1)

In the private sector typically financial performance measures are used, such as those in 'Consultancy 1':

> '...fiscal measures. So teams of a certain size are given a profit and loss account to measure classic business metrics such as revenue, profit

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and cash conversion. Also, we measure through client feedback and staff engagement or employee engagement index.'

As in the above example, there were combinations of metrics used. 'University' and 'Research' applied a combination of 'hard' measures of performance (peer-reviewed papers) and performance appraisal. In the international 'Physics' organisation annual performance appraisals assessing results and competencies linked to organisational values that underpin these appraisals. This is described in more detail in the box "Strategic values and competency-based diversity plan in 'Physics'"

The use of more subjective annual individual performance appraisal and performance management systems is widespread in STEMM organisations, as is evident from the HR practitioner literature on other sectors (for example, CIPD, 2009). There are, however, questions to be raised regarding the efficacy of performance management practices in relation to overall organisational performance and equality (Bach, 2005). Recent changes in performance systems focus more on employee development than the assessment of performance outcomes (IDS, 2011), as demonstrated by some of the participating organisations.

As organisations assess individual and organisational performance in different ways, the collection and robust evaluation of comparative data has been difficult to achieve, except through the use of qualitative methods of data collection.

No examples were given in this study to link the benchmarking of diversity data with benchmarking of performance data, although in some STEMM organisations this might be possible, based only on 'hard' performance data rather than more subjective performance appraisal data. If this were to be carried out, the potential bias built into such 'hard' measures, as indicated in the literature, would need to be acknowledged.

The second research question, seeking to link diversity to 'good science', has been difficult to answer definitively. The focus group participants discussed both 'good' and 'bad' science but there was little agreement on basic definitions of what each comprises. Some of the factors feeding into 'good' science were said to be linked to the 'free flow of people and ideas' and to taking into account both the 'big picture' and a long-term view. These features were evident in 'Physics' whose diversity initiatives, (see 'Strategic values and competency-based diversity plan in 'Physics') have been designed to promote fruitful science by developing greater international collaboration. In contrast, negative factors or 'bad science' had been observed by focus group participants in the practice in private corporations of 'not

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sharing material' and 'sitting on knowledge' thereby 'minimising good science'. The constant pressure in the university sector to publish is also linked to 'bad science' as it potentially leads to mediocre work published too early, rather than to high quality work published in fewer publications..

Strategic values and competency-based diversity plan in 'Physics'

A revised Diversity Programme was introduced in 2011 by a new CEO. This extends beyond legal compliance to promote awareness and commitment to diversity. It covers five dimensions:

- nationality / culture;
- gender;
- age / generation;
- profession;
- individual differences (such as ethnic origin, belief, sexual orientation or disability, or opinions provided that they are consistent with the Organisation's values).

Principles underlying the programme:

- **Appreciating differences** – Leveraging the added value that comes from bringing together people of different nationalities, genders, professions, ages, skills, backgrounds, perspective and enabling them all to contribute to their full potential.
- **Fostering equality** – Optimising talent and performance through a leadership culture that focuses on fair treatment and which rules out all forms of discrimination and bias (i.e. creating a level playing field for all).
- **Promoting collaboration** – Creating an inclusive work environment based on mutual respect and exchange where individuals feel encouraged to participate actively without the need for groupings or associations that foster separateness.

Aims of the programme:

- To have an optimally diversified workforce to achieve the goals of a world laboratory.
- To have the creativity and innovation that comes from the 'collision' of diverse ideas, perspectives, and approaches - which is at the heart of the scientific method.
- To create a work environment and behaviour that reflects the Organisation's value of diversity through use of appropriate policies, procedures and practices.

The programme is committed to:

- Promoting a workplace culture that acknowledges the added value of a diverse workforce and enables every member of its personnel to contribute to their full potential regardless of nationality, gender, age, profession, and individual differences such as ethnic origin, belief, sexual orientation or disability, or opinions provided that they are consistent with the Organisation's values.
- Assuring that these diversity principles are integrated into all organisational policies, procedures and practice.

> "As nationalities mingle and visitors come and go, the exchange of ideas and the circulation of people is the life-blood that keeps ….alive."

Implementation:

The diversity principles are embedded in the overall HR strategy and applied across the three main axes of recruitment (including talent sourcing and selection), career development (including leadership development and performance management), and work environment (including awareness and support structures).

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7.4   Conclusions on measurement of diversity and performance

The review of existing literature suggests that the term 'diversity' can be defined in a variety of ways, and that practitioners and academics may adopt different definitions in their work. The immediate consequence is that it can be difficult to compare quantitative data collected because the different diversity data sets may be measuring different things. In reality, the CIPD has shown that organisations are relatively unsophisticated in the collection and analysis of diversity data, whilst organisations may capture raw data from job applicants and staff (which may be of questionable quality) they may not do much with the data, and they are certainly unlikely to compare it to measures of organisational performance.

A range of terms and concepts have been developed to articulate the ways in which diversity, and progress towards it, can be tracked; including diversity 'scorecards', measurements of 'diversity density' and 'auditing'. Whether an organisation takes a profound and strategic approach to diversity may be assessed in terms of whether a 'diversity mindset' exists in the organisation; progress towards diversity can be plotted against Loden's 'diversity adoption curve' (1996) which operates from organisations 'dragging their feet' to fully embracing diversity and seeing it as a creative opportunity.

Diversity can be measured in absolute and relative terms, and as has been discussed, practitioners in organisations may not be very sophisticated in their measurement techniques (these comprise the absolute figures) but it is not uncommon for them to conduct benchmarking exercises so they can compare their organisation with others. Unfortunately, these cross organisational comparisons do not account for differing organisational contexts and are therefore useful only to a limited extent. On the other hand, where a benchmarking process triggers an organisation to take deliberate action to become as diverse as comparators it represents a useful catalyst for change, arguably such is the case with cross-profession Black Solicitor's Network Diversity League Tables.

On the basis that meaningful diversity data can be, and is collected, it would then need to be compared with measures of organisational performance in an attempt to demonstrate that a quantitative business case can be made. This leads back to the problem of identifying measures of organisational performance which are meaningful to a range of STEMM employers. In a health setting, one relevant measure of organisational performance was for the staff to be representative of the community served, whilst in academia the number of papers published and citations is considered relevant; in a commercial setting sales made or budgets managed may be more appropriate metrics. These 'hard' quantitative measures

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may not be fully representative of what constitutes 'performance', indeed organisations measuring performance at an individual level may often describe performance in 'soft' terms which are more difficult to describe, measure and compare; this will be compounded by the problems inherent in performance appraisal where a manager judges the performance of others.

In sum, defining and measuring diversity is not straight-forward and is prone to producing data that needs to be used with care; measures of performance are clearly context-specific; and measures of individual performance are inherently unreliable for cross-organisational comparisons. Thus the route to demonstrating a business case for diversity, and that diverse teams do 'good' science, is beset by methodological difficulties which have yet to be overcome.

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8 EFFECTIVENESS OF THE BUSINESS CASE FOR DIVERSITY IN STEMM

Overall, the findings support a business case for diversity, though one founded more on conviction than organisational evidence, with 'external' and 'internal' benefits that are problematic to measure. Most of the evidence for the business case for diversity gathered was anecdotal and hampered by a lack of past data to compare with:

> 'We're trying to get more data around this but we've seen more diverse project teams being more successful. We've had some early indications, even though not confirmed, that some of our projects with women project directors, on average, deliver more profit on their projects than men but it's a small sample because we don't have that many female directors.' (Consultancy 2)

However, the difficulty of making a business case for diversity with sound evidence was appreciated, for example:

> '…if you have a diverse population in the workforce, which reflects the larger population, there is a view that the said population will make better decisions and do better work. If you have balance, then you will make better decisions. I can't put a business case around that… You've just got to believe that they will make more good decisions than bad ones. There are a lot of cases that you can't build a business case around but you know it to be true and right.' (Consultancy 1)

Where success was referred to, diversity and inclusion were incorporated in the organisation's strategy:

> 'Perhaps that's why we've been more successful because it's become a business strategy. We focus on it and we track it the same way we would do other business measures. Otherwise, it risks becoming something that is just a background programme.' (ConsProductCo)

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9   CONCLUSIONS

This comprehensive piece of research on diversity in the STEMM sector undertaken for this project drew on multidisciplinary perspectives and mixed methods of inquiry and explored in depth the meaning of diversity in STEMM and possible components of the business case. The study began with two main initial research questions:

1. What evidence is there that establishes the business case for diversity in the scientific workforce?
2. Are diverse teams more likely to do good science?

With respect to the first question, the research findings suggest a conviction among STEMM employees in the business case for diversity, offering both 'external' and 'internal' benefits. However, the metrics and measurement of precise effects of the business case are limited by the paucity of systematic, as opposed to anecdotal, organisational evidence. As indicated in the literature too, there is a poor conceptualisation of both 'diversity' and the business case. Indeed, the study's findings indicate an overlap between the business case and a social or even moral case.

The experimental, technical, scientific problem-solving nature of much work carried out by individuals in STEMM occupations implies that 'internal' business benefits related to the second research question should be to the fore. In fact, the research indicates that it is 'external' benefits related to skills, clients/users and customers that have most relevance in STEMM. While diverse teams and collaborations are valued in positive terms, for the potential creativity and innovation they bring, the dynamics of communication and leadership of teams are either constraints or enablers of positive outcomes. Moreover, the imprecise definitions of 'good science' offered by research participants suggest that more conceptual work on this and on diversity would enable a fuller exposition of the relationship between quality of work and diversity in teams, or among collaborators.

Whilst the study revealed a range of initiatives to improve diversity, there is some evidence that the STEMM sector (outside of the Health Service) is taking fewer actions to improve diversity, via diversity polices and processes, than organisations outside STEMM. Some poor employment practices are indicated, for example, in relation to fixed-term contracts and tardiness in improving practices that enable women returners to continue careers.

Although integration of diversity issues with the organisation's business strategy is seen as important to success, it is not the only success factor. Whilst previous research indicates

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that business cases may be business context specific, they may also depend on specific organisational factors, leadership behaviours and managerial practices. This study shows that some training interventions are beneficial but that embedded cultural factors and assumptions that underpin managerial systems may also impede the success of these. To increase diversity in organisations would require: fundamentally different leadership mindsets to be adopted; the breaking away from traditional patterns of thinking and behaving; changing to adopt new expectations; and modelling inclusive thinking and behaviour to create and recreate different norms and values, which are then embodied in organisational cultures. This is extremely challenging (as the Athena SWAN experience shows) and needs the active participation of men. As this study found, men (who are also mostly white and able-bodied), in positions of power in organisations, who were asked to take part in a study on diversity were reluctant to do so in spite of active encouragement. This clearly indicates that the change process which needs them to adopt a different mindset is being inhibited.

At a strategic level, when organisations plan for more diversity, there are differences between broad, comprehensive approaches, and simple, more focused measures. Where these approaches are proving effective, they tend to be focused on gender equality and there is a general lack of visibility of ethnicity. Ethnicity is seen in global, nationality terms rather than in UK-based minority ethnic terms. Disability issues also have little visibility or action in the sector, outside of the health service. These visibility issues are illustrated in Figure 2 on p.75.

The initiatives taken by organisations to remedy this biased focus can be fragmented because the different STEMM professions have different perspectives. Presently, STEMM employers, with the exception of the health sector, appear to be lagging behind current trends in the pursuit of increased diversity. Even when initiatives are taken, there are questions about how much success they achieve in increasing diversity. When more radical changes are made, requiring more fundamental changes in organisations, they have been more effective, but the strength of existing organisational cultures can hamper progress. The question of why there is so little change brought about by diversity initiatives would usefully be the subject of future research.

Figure 2: Aspects of diversity policy and practice in STEMM – the 'Visible', 'Emerging' and 'Still Hidden'

	MEANING OF DIVERSITY IN STEMM ORGANISATIONS	DIVERSITY POLICIES COVER:	DIVERSITY IN PRACTICE COVERS:	DIVERSITY INITIATIVES
ABOVE SURFACE VISIBLE	Diversity of ideas Inclusion (Inter)nationality of workforce	Gender Disability Ethnicity	Gender	Encouraging recruitment of women Mirroring in workforce diversity: • Clients • Talent (recruits) • Services/products Legal compliance Limited diversity monitoring Flexible working
BELOW SURFACE EMERGING	Citizenship Migration	Age	Disability Ethnicity Age	Awareness raising Diversity training Mentoring Networking Use of diversity monitoring data Diversity as 'good practice' Branding – 'employer of choice'
STILL HIDDEN NOT VISIBLE	Equal treatment	Social class	Social class	Sponsoring for career progression Monitoring and evaluating diversity Diversity performance data/indicators collected and evaluated Positive action Transparency of career progression process

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10   RECOMMENDATIONS

The research suggests that the piecemeal and fragmented basis on which the range of actions is being taken is because different STEMM professions have different perspectives. More strategic central co-ordination of both initiatives and information would be beneficial. Government, the Royal Society, professional bodies and employers need to act in a co-ordinated way to set standards and perhaps establish a centre of excellence to support employers wishing to increase the diversity of their workforce. Accountabilities for action should be allocated in order to ensure effective coordination.

To further these aims the Athena SWAN award experience can be built upon to aid organisations to become diversity 'employers of choice'. Specific work related to this could include:

1. Development Of Benchmarking Frameworks
   A consistent and comparative framework needs to be developed so that valid benchmarking between organisations can take place. Given the difficulties for the STEMM sector as a whole to evidence the diversity of its workforce, it might be more practical to do this sector by sector (for example, for universities, the NHS, different industry sectors) because potential external benefits will show sectoral differences.

2. Creating A Benchmarking League Table
   The value of benchmarking diversity and performance is evidenced by the Black Solicitors' Network. Introducing a similar scheme in the STEMM sector offers the dual benefits of collecting data about diversity and providing an element of 'competition' between organisations to improve their diversity performance. By including ethnicity and disability, as well as gender, the visibility of all three could be improved.

3. Increased Monitoring of Information on Employment Practices and Career Progression
   Monitoring the application of employment activities and initiatives, such as the use of fixed-term contracts, flexible-working arrangements and requests, and progression of different groups through the organisation would enable employers to keep track of decisions being made by line managers and to intervene with new decision-making criteria for the line managers to use to promote increased diversity.

4. Encouragement of Networking, Sponsorship and Mentoring
   Creation or encouragement of social networks accessible to people working or aspiring to work in STEMM careers, the establishment of buddying and mentoring schemes and matching mentees to mentors at varying stages in their careers could

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all encourage entry and progression in STEMM careers. Similarly, outreach activities in the community are being taken in a range of STEMM environments, but the effectiveness of these is not proven and might be more fully evaluated centrally.

5. Reduce Emphasis on Class of Institution

Focus group participants wanted action to reduce the distinctions between the perceived 'class' of educational institutions. Encouragement should be given to foster (or make visible) employment opportunities to potential recruits who are studying at universities that are not routinely targeted by employers.

6. Test the Effectiveness of Diversity Training and Develop Effective Programmes

Some organisations are actively training staff on issues associated with diversity, but the effectiveness of these programmes is not fully verified. Moreover, such training is likely to be expensive to provide and may be out of the reach of many organisations, particularly Small-to-Medium-Sized Enterprises (SMEs). When training interventions are proven effective, some centralised organisation of cost-effective training would be beneficial.

7. Creation of a STEMM Employers' Good Practice Forum

Increased co-operation and coherence of diversity initiatives between professional bodies operating in STEMM professions should increase communication and awareness of diversity issues, encourage isomorphic behaviour and lead to increased diversity in organisations with respect to women, minority ethnic and disabled people.

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11 LIMITATIONS

The research was principally qualitative and gave a depth of insight into diversity in the STEMM sector, though some aspects need further, perhaps broader research. One of the findings was also a limitation. Strategic change to achieve greater diversity is shown to need the active commitment of (predominately white) men. The researchers found it very difficult to encourage white men to take part in the focus groups and also in the interviews. The majority of men, whose experiences are analysed in this research, are not white. This 'silence' of (white) men on diversity issues and apparent lack of interest in discussing the topic is a limitation of the research, but a finding in itself.

Ethnicity issues were also lacking in visibility and the underlying reasons for this need further exploration. The emphasis on gender is understandable but the lack of attention to disability is also a drawback. It was also notable that some BME women chose to attend the gender focus group, rather than the group focusing on ethnicity, indicating they wished primarily to discuss gender issues.

A further limitation entailed difficulties associated with uncovering the basis for the business case(s) for diversity in the STEMM sector. While there were positive perceptions that a business case could be made, the evidential base for this was lacking in the organisations. The researchers therefore were not able to analyse this aspect in depth, as the organisations taking part simply did not have relevant data, nor were they planning to collect them. The conceptual problems of both diversity and of defining what are 'good' or 'bad' science were also constraints in this research.

Finally, the definition of which occupations or roles are in STEMM, and which are not, needs clarification so that a clear set of occupations can be consistently used for both measuring and monitoring diversity in the future and enable accurate comparisons to be made going forward.

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APPENDICES

APPENDIX 1: DEFINITIONS OF STEMM OCCUPATIONS

For the purposes of this research on diversity within STEMM, the STEMM workforce has been defined by drawing on the Royal Society's own definition, as applied in its project "Leading the way: Increasing diversity in the scientific workforce". Thus STEMM occupations included in this research project and report fall into categories that fit the following description:

> '… the 'scientific workforce' is taken to comprise all those for whom their scientific knowledge, training, and skills are necessary for the work that they do. This includes scientists, technologists, engineers and medical practitioners...' (The Royal Society, http://royalsociety.org/policy/projects/leading-way-diversity/).

Some of the occupations included in the Royal Society's full definition of the scientific workforce are included in the quantitative analysis where they appear defined as STEMM+; this is to distinguish them from the occupations which might be considered the core of the scientific workforce (termed STEMM in this report). Thus STEMM+ comprises STEMM and:

> '…school teachers, nurses, surveyors, actuaries, economists, programmers, statisticians, technical sales staff, pilots, divers, scientific administrators, journalists.'

For the purposes of this research, the University of Westminster team has used SOC codes provided by the Royal Society to determine those included in the STEMM and STEMM+ workforce, these are set out overleaf.

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The Royal Society classification of STEMM occupations by SOC code

SOC2000	Standard Occupation	SOC2000 minor code
11210	Production, works and maintenance managers	112
11220	Managers in construction	112
11230	Managers in mining and energy	112
11231	Mining, quarrying and drilling managers	112
11232	Gas, water and electricity supply managers	112
11354	Operational research, organisation and methods managers	113
11360	Information and communication technology managers	113
11361	Information managers	113
11362	Computer operations managers	113
11363	Telecommunications managers	113
11370	Research and development managers	113
11410	Quality assurance managers	114
11810	Hospital and health service managers	118
11820	Pharmacy managers	118
11830	Healthcare practice managers	118
12110	Farm managers	121
12120	Natural environment, conservation and heritage managers	121
12190	Managers in animal husbandry, forestry and fishing nec	121
21110	Chemists	211
21111	Research/development chemists	211
21112	Analytical chemists	211
21120	Biological scientists and biochemists	211
21121	Biochemists, medical scientists	211
21122	Biologists	211
21123	Bacteriologists, microbiologists etc.	211
21124	Botanists	211
21125	Pathologists	211
21126	Agricultural scientists	211
21127	Physiologists	211
21130	Physicists, geologists and meteorologists	211
21131	Physicists	211
21132	Geophysicists	211
21133	Geologists, mineralogists etc.	211
21134	Meteorologists	211
21135	Astronomers	211
21136	Mathematicians	211
21210	Civil engineers	212
21211	Water, sanitation, drainage and public health engineers	212

21212	Mining, quarrying and drilling engineers	212
21213	Construction engineers	212
21220	Mechanical engineers	212
21221	Aeronautical engineers	212
21222	Automobile engineers	212
21223	Marine engineers	212
21224	Plant and maintenance engineers	212
21230	Electrical engineers	212
21231	Electricity generation and supply engineers	212
21232	Telecommunications engineers	212
21240	Electronic engineers	212
21241	Broadcasting engineers	212
21242	Avionics, radar and communications engineers	212
21250	Chemical engineers	212
21260	Design and development engineers	212
21270	Production and process engineers	212
21280	Planning and quality control engineers	212
21281	Planning engineers	212
21282	Quality control engineers	212
21290	Engineering professionals nec	212
21291	Metallurgists and material scientists	212
21292	Patents examiners, agents and officers	212
21293	Heating and ventilating engineers	212
21294	Food and drink technologists (including brewers)	212
21295	Acoustic engineers	212
21310	It strategy and planning professionals	213
21311	It consultants and planners	213
21312	Telecommunications consultants and planners	213
21320	Software professionals	213
21321	Software designers and engineers	213
21322	Computer analysts and programmers	213
21323	Network/systems designers and engineers	213
21324	Web developers and producers	213
22110	Medical practitioners	221
22111	Pre-registration house officers	221
22112	Senior house officers	221
22113	Specialist registrars, consultants and general practitioners	221
22120	Psychologists	221
22121	Education psychologists	221
22122	Clinical psychologists	221
22123	Occupational psychologists	221
22130	Pharmacists/pharmacologists	221
22131	Pharmacists	221
22132	Pharmacologists	221
22140	Ophthalmic opticians	221
22150	Dental practitioners	221

22151	General practice dentists	221
22152	Hospital dentists, house officers (dental)	221
22160	Veterinarians	221
23210	Scientific researchers	232
23220	Social science researchers	232
23290	Researchers nec	232
24210	Chartered and certified accountants	242
24211	Chartered accountants	242
24212	Certified accountants	242
24213	Public finance accountants	242
24220	Management accountants	242
24230	Management consultants, actuaries, economists and statisticians	242
24234	Statisticians	242
24235	Actuaries	242
24330	Quantity surveyors	243
24340	Chartered surveyors (not quantity surveyors)	243
24341	General practice surveyors	243
24342	Land surveyors	243
24343	Building surveyors	243
24344	Hydrographic surveyors	243
31110	Laboratory technicians	311
31111	Laboratory technicians (non medical)	311
31112	Medical laboratory technicians	311
31120	Electrical/electronic technicians	311
31130	Engineering technicians	311
31140	Building and civil engineering technicians	311
31150	Quality assurance technicians	311
31190	Science and engineering technicians nec	311
31210	Architectural and town planning technicians	312
31211	Town planning assistants, technicians	312
31212	Architectural technicians, assistants	312
31220	Draughtspersons	312
31221	Design draughtsperson	312
31222	Mechanical engineering draughtsperson	312
31223	Cartographical draughtsperson	312
31224	Drawing office assistants, tracers	312
31230	Building inspectors	312
31310	It operations technicians (network support)	313
31320	It user support technicians (help desk support)	313
32110	Nurses	321
32111	Hospital matrons and nurse administrators	321
32112	Staff nurses (adult)	321
32113	Staff nurses (children)	321
32114	Staff nurses (mental health)	321
32115	Non hospital nurses (e.g. general practice, community, clinics etc)	321
32120	Midwives	321

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32130	Paramedics	321
32140	Medical radiographers	321
32150	Chiropodists	321
32160	Dispensing opticians	321
32170	Pharmaceutical dispensers	321
32180	Medical and dental technicians	321
32181	Medical technicians	321
32182	Audiologists	321
32183	Dental technicians	321
32210	Physiotherapists	322
32220	Occupational therapists	322
32230	Speech and language therapists	322
32292	Dieticians	322
32293	Osteopaths, hydrotherapists, massage therapists, chiropractors	322
32294	Psychotherapists	322
34122	Technical authors	341
34220	Product, clothing and related designers	342
34221	Interior decoration designers	342
34222	Set designers (stage, etc)	342
34223	Industrial designers	342
34224	Textile designers	342
34225	Clothing designers	342
34226	Clothing advisers, consultants	342
35510	Conservation, heritage and environmental protection officers	355
35680	Environmental health officers	356
52110	Smiths and forge workers	521
52120	Moulders, core makers, die casters	521
52130	Sheet metal workers	521
52140	Metal plate workers, shipwrights, riveters	521
52150	Welding trades	521
52160	Pipe fitters	521
52210	Metal machining setters and setter-operators	522
52220	Tool makers, tool fitters and markers-out	522
52230	Metal working production and maintenance fitters	522
52240	Precision instrument makers and repairers	522
52310	Motor mechanics	523
52320	Vehicle body builders and repairers	523
52330	Auto electricians	523
52340	Vehicle spray painters	523
52410	Electricians, electrical fitters	524
52411	Production fitters (electrical/electronic)	524
52412	Electricians, electrical maintenance fitters	524
52413	Electrical engineers (not professional)	524
52420	Telecommunications engineers	524
52430	Lines repairers and cable jointers	524
52440	Tv, video and audio engineers	524

52450	Computer engineers, installation and maintenance	524
52490	Electrical/electronics engineers nec	524
53110	Steel erectors	531
53120	Bricklayers, masons	531
53130	Roofers, roof tilers and slaters	531
53140	Plumbers, heating and ventilating engineers	531
53150	Carpenters and joiners	531
53160	Glaziers, window fabricators and fitters	531
53190	Construction trades nec	531
54930	Pattern makers (moulds)	549
61112	Surgery, theatre and sterile services assistants	611
61113	Occupational therapy and physiotherapy assistants	611
61120	Ambulance staff (excluding paramedics)	611
61130	Dental nurses	611
61310	Veterinary nurses and assistants	613
81110	Food, drink and tobacco process operatives	811
81120	Glass and ceramics process operatives	811
81130	Textile process operatives	811
81140	Chemical and related process operatives	811
81150	Rubber process operatives	811
81160	Plastics process operatives	811
81170	Metal making and treating process operatives	811
81180	Electroplaters	811
81190	Process operatives nec	811
81210	Paper and wood machine operatives	812
81220	Coal mine operatives	812
81230	Quarry workers and related operatives	812
81240	Energy plant operatives	812
81250	Metal working machine operatives	812
81260	Water and sewerage plant operatives	812
81290	Plant and machine operatives nec	812
81310	Assemblers (electrical products)	813
81320	Assemblers (vehicles and metal goods)	813
81330	Routine inspectors and testers	813
81340	Weighers, graders, sorters	813
81350	Tyre, exhaust and windscreen fitters	813
81380	Routine laboratory testers	813
81390	Assemblers and routine operatives nec	813
81410	Scaffolders, stagers, riggers	814
81420	Road construction operatives	814
81430	Rail construction and maintenance operatives	814
81490	Construction operatives nec	814

The Royal Society classification of 'possibly STEMM' (STEMM+) by SOC code

SOC2000	Standard Occupation	SOC2000 minor code
11120	Directors and chief executives of major organisations	111
11130	Senior officials in local government	111
11142	Senior officials of employers, trades and professional associations	111
11320	Marketing and sales managers	113
11321	Marketing managers	113
11322	Sales managers	113
11323	Market research managers	113
11324	Export and import managers	113
11330	Purchasing managers	113
11710	Officers in armed forces	117
11711	Army officers	117
11712	Navy officers	117
11713	Air force officers	117
11730	Senior officers in fire, ambulance, prison and related services	117
12191	Animal establishment (not livestock) managers	121
12192	Forestry and tree felling managers	121
12320	Garage managers and proprietors	123
23110	Higher education teaching professionals	231
23111	University and higher education professors	231
23112	University and higher education lecturers	231
23113	Teacher training establishment lecturers	231
23114	University tutorial and teaching assistants	231
23120	Further education teaching professionals	231
23140	Secondary education teaching professionals	231
23141	Secondary head teachers	231
23142	Secondary teachers	231
23152	Primary teachers	231
23190	Teaching professionals nec	231
23194	Examiners and moderators	231
24110	Solicitors and lawyers, judges and coroners	241
24111	Barristers and advocates	241
24112	Solicitors	241
24113	Judges, magistrates, coroners and sheriffs	241
24233	Economists	242
24310	Architects	243
32290	Therapists nec	322
32291	Acupuncturists, reflexologists	322
33110	Armed forces: ncos and other ranks	331
33120	Police officers (sergeant and below)	331

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33130	Fire service officers (leading fire officer and below)	331
33191	Customs, excise and duty officers	331
34120	Authors, writers	341
34121	Authors	341
34310	Journalists, newspaper and periodical editors	343
34311	Editors	343
34312	Journalists	343
34345	Sound recordists, technicians, assistants	343
35110	Air traffic controllers	351
35120	Aircraft pilots and flight engineers	351
35121	Aircraft pilots and instructors	351
35122	Aircraft flight engineers, navigators	351
35130	Ship and hovercraft officers	351
35203	Adjudicators, tribunal and panel members	352
35310	Estimators, valuers and assessors	353
35311	Insurance surveyors, inspectors	353
35312	Insurance claims officials, adjusters	353
35313	Estimators	353
35321	Stockbrokers	353
35330	Insurance underwriters	353
35340	Finance and investment analysts/advisers	353
35341	Investment advisers	353
35342	Pension advisers	353
35345	Financial analysts	353
35370	Financial and accounting technicians	353
35410	Buyers and purchasing officers	354
35411	Buyers and purchasing officers	354
35412	Contract officers (purchasing)	354
35420	Sales representatives	354
35422	Technical sales representatives	354
35520	Countryside and park rangers	355
35650	Inspectors of factories, utilities and trading standards	356
35660	Other statutory inspectors	356
35670	Occupational hygienists and safety officers (health and safety)	356
35671	Health and safety officers	356
51110	Farmers	511
61150	Care assistants and home carers (elderly and infirm)	611
82170	Seafarers (merchant navy); barge, lighter and boat operatives	821
82180	Air transport operatives	821

APPENDIX 2: METHODOLOGY

The research design for this study consisted of three phases; these principally comprised qualitative work supplemented by analysis of quantitative national datasets.

Phase one

Phase one (August-September 2013) was designed to summarise the existing evidence on the diversity business case and consisted of a literature review and interviews with key stakeholders. These aimed to identify appropriate measures of diversity/functional diversity, and the output of scientists within an academic context; an industrial setting; and within the voluntary sector context.

These issues were explored in largely semi-structured interviews, with use of a broad topic guide. Data collected in these initial interviews were also used to feed into the next phases, and issues identified as important were explored by these stakeholders in more depth in phases two and three.

Phase one sample

The four interviewees were known by the research team prior to this research and were drawn from their own professional networks. These interviewees were chosen as representatives of diversity and science managers in organisation with significant STEMM workforces, covering different parts of the STEMM sectors.

A first interim report submitted to the Royal Society in October 2013 reported on the results of this stage and feedback on this report was received.

Phase two

Phase two (October- middle November 2013) consisted of qualitative primary data collection through focus groups and interviews. This primary data collection intended to gather multi-level data from people working (including PhD students) in STEMM fields through the use of a set of focus groups, and individual in-depth interviews.

Phase two focus groups

Invitations were sent by email to the relevant STEMM network of the Royal Society, and additional STEMM networks of the research group. The invitation was sent out via these networks; recipients were asked to send it on to other colleagues whom they thought would be interested and suitable for focus group participation.

Five focus groups of STEMM scientists were conducted in October-November 2013 at The University of Westminster premises:

- Two focussed on gender issues experienced by women and discussed in a group of female participants.
- One focussed on disability, as experienced by participants with disabilities.
- One focussed on ethnicity, as experienced by participants from a range of ethnic backgrounds.
- One comprising male participants focussed on diversity in relation to gender and other diversity strands.

The topic of social class was discussed in each focus group. The focus groups lasted 2-2.5 hours each.

All focus group participants filled in a demographic questionnaire - an overview of their demographic details is provided in Table 1 (overleaf). All participants signed a consent form agreeing that the data could be recorded and could be used for this research on an anonymous basis (see Appendix 3).

A total of 18 participants took part in the five focus groups and each participant has been given a unique tag to enable the reader to relate back a specific comment made to the person making the comment, whilst maintaining anonymity for our focus group participants. The method for determining tags is as follows:

- focus groups numbered from 1 to 5;
- 'fem' or 'male' for gender;
- letter A to E indicating a specific individual;
- W (white) or NW (non-white) for a broad ethnicity indicator;
- DD – if a disability was declared by the focus group participant.

The data from the focus group transcripts was analysed using key themes identified in the literature review and the pilot organisational interviews, and then used to form the topic guides for the organisational interviews.

These main themes arising comprised:

- the meaning of diversity for individuals;
- perceived barriers to diversity including discrimination;
- early career choices and opportunities;

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- career transitions and progression;
- the importance of networks and networking;
- social class;
- enabling the achievement of greater diversity;
- organisational context and diversity policy;
- good practice examples;
- teamwork and collaboration;
- views on good and bad science;
- views on the business case and performance measurement.

Table 1   Focus group participants

TAG	JOB TITLE	SECTOR	GENDER	DISABLED	HIGHEST QUALIFICATION	ETHNICITY	CARE RESPONSIB-ILITY	PARENTAL BREAD WINNER	OCCUPATION OF MAIN BREADWINNER
FG2femDNW	PhD researcher	Academic	Female	No	MSc, MS	Indian	99	Father	Astrophysicist
FG2femCW	PhD student	Academic	Female	No	MSc Physics	White British	No	Mother	Teacher
FG2femANW	Deputy Head - Careers	Charitable Foundation (biomedical)	Female	No	PhD	British Bangladeshi	No	Father	Restaurant Mgr/Worker
FG2femBW	VP Tech Insp Serv	Industrial/ commercial	Female	No	PhD	White British	No	Father	Engineer
FG2femEW	Project Manager	Voluntary/ Not-for-profit	Female	No	MA	British	No	Mother= Father	Nurse/ Nurse
FG4malBNW	PhD student	Academic	Male	No	Masters	Black African	No	Mother	Trader
FG4malANW	Senior Lecturer	Academic	Male	No	PhD	South Asian	Yes	Mother= Father	Researchers
FG4malCNW	PhD researcher	Academic	Male	No	MSc Pharm Science	Black African	No	Father	Pharmacist
FG4femANW	Part-time VL	Academic	Female	No	MSc transferring to MPhil/PhD	Indian (Asian)	Yes (Child aged 9)	Father	Government Employee
FG3femAWDD	Senior Lecturer	Academic	Female	Mild physical disability	PhD	White	No	Father= Mother	Lecturer
FG3femBNWDD	Senior biomedical scientist	Academic	Female	Yes, physical	PhD	99	No	Father	Doctor - GP
FG1femBW	Software Developer	Industrial/ commercial	Female	No	BSc Maths	White British	Yes (Children aged 3 & 5)	Father	Pharm Consultant

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TAG	JOB TITLE	SECTOR	GENDER	DISABLED	HIGHEST QUALIFICATION	ETHNICITY	CARE RESPONSIB-ILITY	PARENTAL BREAD WINNER	OCCUPATION OF MAIN BREADWINNER
FG1femAW	Reader (Physics)	Academic	Female	No	PhD in Physics	99	No	Father	Army Officer
FG1femW	Professor	Academic	Female	No	PhD	White	No (2 daughters at Univ)	Father	Owned Corner Shop
FG5malANW	Teaching Fellow	Academic	Male	No	PhD	White	No	Father	Judge
FG5malBW	PhD student	Academic	Male	No	MSc	White British	No	Father	Caretaker
FG5malDW	Doctoral student	Academic	Male	No	MSc	European	No	Father	Pilot
FG5malCW	Principal Lecturer	Academic	Male	No	MSc	Irish	Yes	Father	Lorry Driver

99 indicates that no answer was given by the focus group participant

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Phase two in-depth interviews

The organisations and interviewees to be included in this research were sourced and negotiated via the Royal Society and the research group's STEMM networks. In total ten organisations took part. Interviews were conducted with both HR managers who had a diversity role, and/or science line managers, with one to two interviewees per organisation. Organisations targeted were chosen as they would provide views that represented the broad variety of the STEMM sector: academia; industry; voluntary organisations; public and private organisations, health and non-health sectors.

Table 2 (overleaf) provides an overview of the interviews in phases 1, 2 and 3; it identifies the organisational roles of the interviewees (as specifically as possible but still maintaining confidentiality) and the nature of their organisation. The majority of interviews were recorded and transcribed and took on average between 60 and 90 minutes. Three interviews were conducted by telephone and for two of these only notes were available for analysis. Interviews were conducted in November and December 2013.

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Table 2   Organisational interviews

Organisations		Interviewees		
		Science Manager	HR/Diversity Manager	Strategic level interview
1	'Oil and Gas' company		√	√
2	Electrical contractors 'Contractors'	√		
3	'Consultancy 1'	√	√	
4	Large multinational science project – 'Physics'		√	
5	London hospital – 'Health 1'		√	
6	'Surveyors'	√	√	
7	Large multinational consumer product company – 'ConsProductCo'	√	√	√
8	Multinational design and engineering company – 'Consultancy 2'	√	√	
9	'University'		√	
10	'Research'	√		
11	'Health 2'			√
13	Chief Medical Officer 'CMO'			√
14	Athena SWAN Steering Committee Member			√
15	London Hospital 'Health 3'		√	

The data captured in each interview was based on a set topic list and while the topics were uniform, the interviews were largely open-ended as our concern was, according to the qualitative tradition, to discover how interviewees "filled in" these issues. Therefore it was important to introduce the topics to interviewees only in a broad way, so that respondents would then themselves define the focus. The broad topics explored in the interviews were:

- the organisation's workforce;
- meaning of diversity;
- company diversity strategy, policies and practices, diversity measures;
- performance and diversity;
- diversity awareness;
- diversity monitoring;
- recruitment to STEMM roles;
- diversity initiatives;
- diversity support;
- business case for diversity;
- barriers to diversity.

The majority of interviews were conducted by two interviewers. To keep the interview experience consistent, all interviews in a particular company/organisation were conducted by the same two interviewers. All interviewers in the research team also read the interview transcripts from those interviews that they did not attend in order to maintain consistency.

Verbatim interview transcripts were analysed by the research team. Manual coding was preferred to the use of software because of time constraints and the relatively small number of transcripts. Through an iterative process of coding, mostly inductive, a thematic analysis was developed on the following themes:

1. the meaning of diversity;
2. diversity policies;
3. diversity strategies
    a. training;
    b. recruitment;
    c. leadership;
    d. external links;
4. processes and practices
    a. measurement & monitoring;
    b. teams;

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5. initiatives – successes and failures;
6. business case;
7. performance measurement.

Phase three

Phase three included five strategic level interviews (see Table 2 for details) and some primary analysis of national data sets. The aim of the strategic level interviews was to gain some insights on diversity in the sector from strategic decision-makers; most of these interviews were conducted once initial results of Phase Two were known. In all, five such interviews were conducted, two in organisations that had also taken part in the organisational level interviews.

Quantitative data analysis - data and methodology

The phase three qualitative empirical analysis was supplemented by a quantitative analysis of diversity related issues in the STEMM sectors from the Quarterly Labour Force Survey, January-March, 2013 and the Workplace Employment Relations Survey, 2011. The aim of this was to give an up-to-date picture of the levels of diversity amongst those working within STEMM sectors and across STEMM occupations in the UK. The analysis is descriptive in nature, and does not claim to represent causal relationships. Its function is to give a context to the qualitative data.

Labour Force Survey, Q2 2013

The Labour Force Survey (LFS) is a high-quality, government survey of households living at private addresses in the UK. It is used to provide official measures of employment and unemployment and also contains information on a wide range of topics such as occupation, training, hours of work and personal characteristics. The sample currently consists of around 41,000 responding (or imputed) households in Great Britain every quarter, representing about 0.16% of the population of Great Britain. Data from approximately 1,600 households in Northern Ireland are added to this, representing about 0.23% of the NI population, allowing analysis of data relating to the United Kingdom. The LFS uses a rotational sampling design, whereby a household, once initially selected for interview, is retained in the sample for a total of five consecutive quarters. The final sample used in the analysis includes only adults aged 16 and over and people who were employed for at least one hour a week. The LFS contains questions on the worker's occupation, and these are codified using the Standard Occupation Classification (SOC 2010) system. SOC codes are internationally recognised standardised codes used to classify workers into occupational categories. These codes provide us with the means to classify workers into STEMM and Non-STEMM groups. All SOC codes

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appearing in the dataset were classed as either 'STEMM', 'Non-STEMM' or 'possibly STEMM'; 'possibly STEMM' includes, for example, teachers in secondary, further and higher education. The three groups used in the final analysis are 1) STEMM, 2) Non-STEMM and 3) STEMM plus, which combines STEMM and possibly STEMM.

Other key variables used in the analysis include gender (male or female) and ethnicity; where "Black" includes Black / African / Caribbean; "Asian" includes Indian, Pakistani, Bangladeshi, Chinese and 'Any other Asian Background'; and "Other" includes Mixed / Multiple ethnicities and 'Other ethnic group'. Disability is based on a question reporting current disability and includes 'Work-limiting disabled only', 'DDA disabled' and 'DDA disabled and work-limiting disabled'. The industrial grouping 'Industry section main job' is used to determine whether or not the person works in the health sector.

Workplace Employment Relations Survey, 2011

The Workplace Employment Relations Survey (WERS) provides large-scale, statistically reliable evidence on a broad range of employment practices across sectors of the economy. WERS collects information from managers with responsibility for employment relations or personnel matters, employee representatives and employees. Our analysis makes use of the most recent 2011 version of WERS, with data from a sample of 2680 establishments.

Our classification of organisations into STEMM and Non-STEMM is based on the main tasks and activities of the largest non-managerial group of employees within the workplace. Although the data also contains SIC 2010 codes (Standard Industrial Classification), this is only available at a very broad level (sector level). As such, this was used to divide organisations into health and non-health, whilst the SOC codes of the largest non-managerial group of employees were used to classify the organisations as STEMM or non-STEMM. In this case, it was not possible to include a group of 'possibly STEMM' organisations. In the WERS dataset, all questions relating to gender, ethnicity and disability used the responses of the organisations interviewed and did not require further classification on our part.

The research team

The research was overseen by a steering group of three – Professor Linda Clarke, Professor of European Industrial Relations at Westminster Business School and co-Director of the Centre for the Study of the Production of the Built Environment (ProBE); Professor Peter Urwin, Director of the Centre for Employment Research (CER); and Dr Miriam Dwek, Reader in Life Sciences. The research team principally comprised (Co-ordinator) Dr Angela Wright,

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Elisabeth Michielsens and Dr Sylvia Snijders. They were supported by Dr Leena Kumarappan, Michele Williamson and Olivia Birchall.

The researching team met regularly; they also met the internal steering group members to discuss and agree on key issues, including broad interview themes, selection/negotiation of interviewees, data analysis and results, and the focus and verbatim quotes to be used in the research report. The research project coordinator was in regular contact with the Royal Society.

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APPENDIX 3: FOCUS GROUP PARTICIPANT DETAILS & CONSENT FORM TEMPLATE

ROYAL SOCIETY RESEARCH ON DIVERSITY
FOCUS GROUP PARTICIPANT DETAILS

Please provide us with some details about yourself and confirm your willingness to participate in the research.

Information about you will facilitate analysis of the focus group sample; we reiterate that your details will only be used for this research, all information collected will be held confidentially, stored securely and will not be passed to anyone else.

Please return this form to:

Michele Williamson   Email:
m.williamson@westminster.ac.uk
Westminster Business School
University of Westminster
35 Marylebone Road
London NW1 5LS

1. Your contact details

    Name:

    Email:

2. Your current job title (or most recent one if not currently in employment)

    ………………….………………………………………………………………………

    Please indicate in which sector your employer is situated. Please tick one:

Academic	
Industrial/commercial	
Voluntary/Not-for-profit	
Other, please specify………………………………….	

3. What is your gender? Please tick one:

Male	
Female	

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Other	
Prefer not to say	

Do you consider yourself as disabled[4]? Please tick the categories in the table below that apply to you.

No disability	
Yes - Physical disability	
Yes - Mental disability	
Yes - Learning Difficulty	

4. Please state your highest educational qualification:

………………………………………………………………………………….............
....

5. Please state with which ethnic group you identify most:

…………………………………………………………………………………………
……

6. Please indicate if you *currently* have caring responsibilities? Please tick.

Yes, I currently have caring responsibilities	
No, currently I don't have caring responsibilities	
Comment………..………	

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[4] Under the Equality Act 2010, a person is disabled 'if they have a physical or mental impairment, and the impairment has a substantial and long-term adverse effect on his or her ability to carry out normal day-to-day activities'. 'Substantial' is defined by the Act as 'more than minor or trivial'. An impairment is considered to have a long-term effect if: (a) it has lasted for at least 12 months; (b) it is likely to last for at least 12 months; or (c) it is likely to last for the rest of the life of the person. Impairments include:
o   A specific learning difficulty such as dyslexia, dyspraxia or AD(H)D
o   General learning disability (such as Down's syndrome)
o   A social/communication impairment such as Asperger's syndrome/other autistic spectrum disorder
o   A long standing illness or health condition such as cancer, HIV, diabetes, chronic heart disease, or epilepsy
o   A mental health condition, such as depression, schizophrenia or anxiety disorder
o   A physical impairment or mobility issues, such as difficulty using arms or using a wheelchair or crutches
o   Deaf or serious hearing impairment
o   Blind or a serious visual impairment uncorrected by glasses
o   A disability, impairment or medical condition that is not listed above

7. Referring back to the family in which you grew up, what were the main occupations of the family breadwinners?

    a. The main breadwinner was (please select the appropriate option):
       father / mother / other, please specify……………………………………………..…

    b. Their occupation was (please specify an occupation or job title):
       …………………………………………………………………………………… ……………

    c. Second breadwinner (please select the appropriate option):
       father / mother / other, please specify…………………………………………………….

    d. Their occupation was (please specify an occupation or job title):
       ………………………………………………………………………………….... ....

    e. Other breadwinners were (please specify who):
       .…………………………………………………

    f. Their occupation was (please specify an occupation or job title):
       ………………………………………………………………………………….... ....

**ROYAL SOCIETY RESEARCH ON DIVERSITY
FOCUS GROUP PARTICIPANT CONSENT**

Thank you for providing these details. Please now confirm your willingness to participate in the research and awareness that the focus groups will be recorded.

I have read the information on the aims of this focus group, and I am willing to act as a participant and consent to the focus group being audio taped.

Name: ……………………………………   Signature: …………………………………………………..

Date: ………………………………………

This consent form will be stored separately from any data you provide so that your participation remains anonymous. In respect of the audio tapes made, every effort will be made to ensure confidentiality and anonymity of all those involved. The tapes and description of these tapes will be used for the purpose of this research only.

Please return this form to:

Michele Williamson   Email:
m.williamson@westminster.ac.uk

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11   Clarke, L., Michielsens, E., Snijders, S., Wall, C., Dainty, A.,
Bagilhole, B., and Barnard, S. (2015). '*No more softly, softly':
Review of women in the construction workforce.* London: ProBE
— Centre for the Study of the Production of the Built
Environment (Westminster University).

UNIVERSITY OF WESTMINSTER⊞

'No more softly, softly': Review of women in the construction workforce

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May 2015

Acknowledgement

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Introduction

For hundreds of years the proportion of women in construction occupations has remained at levels so low that - except in times of acute manpower shortages - parity with men seems to forever hover just out of view on the horizon. At the same time, paradoxically, the statistical record reveals their continuous presence, forcing constant examinations of the structure of the industry in order to understand and identify possible mechanisms of exclusion and seek ways of improving the imbalance.

This focus on the industry itself is justified given the consistently higher numbers of women undertaking full-time construction education and training in colleges and universities in Britain and in other European countries than are found in construction employment, indicating that many women do want to work in the industry but fail to obtain entry. The obstacles to their integration have in various research studies been shown to include inappropriate and poor working and employment conditions, especially long working hours, discriminatory recruitment practices based on word of mouth rather than qualifications, the persistence of a macho culture, and short-term concerns with output. As indicated in a recent historical overview, the lack of state regulation and of employer responsibility, as well as the very nature of the labour market and of training available, has also played important roles (Clarke and Wall, 2014).

Achieving gender equity will transform the industry, not just through reform of existing employment norms but also through expanding its priorities and objectives, from being concerned primarily with profit to encompassing a wider set of ethical considerations, including sustainable construction, stable employment, training and apprenticeships.

These considerations are already contributing to changing the industry and it is important that greater female participation in construction is integral to this. Forces for change include, for instance, imperatives for low-energy construction, which requires greater educational input to achieve thermal literacy, broader qualification profiles to overcome interfaces between the activities of different professionals and occupations, and integrated team working and communication given the complex work processes involved. This implies a transformation of the construction process, affecting all occupations and opening up the possibility to include more women, especially considering their generally higher educational achievements and greater presence in environmentally oriented subject courses.

Greater reliance on recruiting graduates and those - given the decline in apprenticeships - who have undertaken full-time vocational courses, means that those entering the industry depend on placements and internships to obtain work experience. As a result, employers – as already happens in countries such as the Netherlands – increasingly need to recruit directly from vocational colleges and universities, where generally higher proportions of women are found than in the labour market, and to take responsibility for providing this work experience. The employment relation itself has also been undergoing transformation, including through the use of agencies, so that the old boys' network, on which much recruitment has depended up to now, is weakening. The use of more formal recruitment practices, which give greater recognition to qualifications achieved and are more favourable to women, is also increasing. Finally, European Union and social partner (employer and trade union) policy give an added impetus to increasing the participation of women in construction, including the gender dimension of the 2020 Strategy and the European Trade Union Confederation policy for gender equality.

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1. Gender participation in construction

The number of women studying STEMM subjects in the UK has increased over recent years (Botcherby and Buckner 2012), but this has been slow to translate into improved employment participation, a picture reflected across the European Union (EU). Looking at the most recent figures (April-June 2014), of the 2,225,000 working in the construction industry only 12% are women (ONS 2014). Low female participation in construction remains stable: in 2012 there were 11 percent of women; and around 11 percent between 1990 and 2003 (Briscoe 2005; TCI 2012), hitting a 'peak' of 14 per cent in 2006 (Fernando et al. 2014). Low representation of women is more pronounced in manual trades (around 1% female representation) and in on-site roles (Lingard and Francis 2004).

The UK compares unfavourably with other European countries in terms of women's participation in STEMM professions. Engineering UK (2011) and the Association of German Engineers (2010) reported that, while a few East European countries have around 20% women in STEMM[1], the West European percentage is lower (17%) and the UK (9%) is close to the bottom of the league table. Kirkup *et al.* for the UKRC (2010: 74) reported that: '…only 5.3 % of all working women were employed in any SET occupation, compared with 31.3% of all working men'. Table A gives an overview of the most recent data on women's representation on professional bodies, indicating a reduction in the number of women. In 2012, women comprised: 20% of RIBA members; 15% of RICS members; and 5% of CIOB members (TCI, 2012). In 2014 these figures stood at: 3.1% of CIOB members; 7.8% of CIBSE members; 8.6% of ICE members; 8.0 % of CICES; 7.0% of IMechE; and 16.0% of RIBA members (data collected by report authors). This very low level of representation is mirrored in the UK Engineering Council membership data which shows women's representation at 3.3 per cent in 2008 (Barnard *et al.* 2012). In 2012, eight out of ten top construction companies had women board members (TCI 2012). This low representation is mirrored again at professional level, as shown in Table B, representing the results of the 2011 Census for construction-related profession managers and professionals. Here women represent only 10% of managers and professionals, with the lowest category being 'Electric Engineers' where they represent only 2.7% and 'Mechanical Engineers' (4.7%), followed by 'Design and development engineers' (6.7%), 'Construction project managers & related professionals' (6.9%) and 'Civil engineers' (7.2%). The Technical occupations, in which the proportion of women is 24% overall, fare much better, especially 'Quality assurance technicians' (38.5%) and Architectural and town planning technicians (28.8%), whilst only 8.9% of 'Engineering technicians' are female.

Table A: Women's representation in professional bodies (%)

	1995	1998	2012	2014
Chartered Institute of Building	0.7	0.9	5.0	3.1^
Chartered Institution of Building Service Engineers	0.6	0.2	na	7.8
Institution of Structural Engineers	0.8	1.2	na	na
Institution of Civil Engineers	1.3	1.9	na	8.6*
Chartered Institution of Civil Engineering Surveyors	na	0.1	na	8.0
Institution of Mechanical Engineers	0.7	0.3	na	7.0
Royal Institute of British Architects	7.2	8.5	20.0	16.0^
Royal Institution of Chartered Surveyors	3.9 (BS)/ 2.6 (QS)	4.8 (BS)/ 3.4 (QS)	15.0	na

Sources: 1995 & 1998 from Fielden *et al.* (2000); 2012 (TCI 2012); 2014 data collected by report authors. *This figure is for the UK only, excluding student members; ^ UK chartered members

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[1] STEMM work force are '…those for whom their scientific knowledge, training, and skills are necessary for the work that they do. This includes scientists, technologists, engineers and medical practitioners…' (The Royal Society, http://royalsociety.org/policy/projects/leading-way-diversity/).

Recent figures on women's representation in the manual trades are hard to find and so the UK census 2011 provides the best update of the gender balance in construction-related professions and trades. The overview in Table B confirms the considerable divide between operative and professional levels, with women's presence at operative level below 3%, compared with 10% for the professions – still way below average for the workforce as a whole (51% according to census 2011). These data confirm those presented by the CITB (2004) and reveal that the proportion of women in construction trades remains similar to nineteenth century levels (Clarke and Wall 2014). Comparing the different operative occupations, higher proportions of women are evident - perhaps surprisingly in 'Welding' (4.9%), followed by 'Painting and decorating' (4.8%), and 'Electrical trades' (4.3%), whilst for 'Bricklayers and masons' (1.5%), 'Carpenters and joiners' (1.4%) and plasterers (1.4%) the proportions are very much lower, though not nearly as low as for 'Pipefitters' (1%). Relatively high proportions of women are found at supervisory level, especially 'Skilled metal, electrical & electronic trades supervisors' (11%), many of whom may not be in the construction sector.

OCCUPATION (SOC 2010)	ALL	FEMALE	MALE	% FEMALE
Total Managers and professionals	1,036,798	106,836	929,962	10.3
Production managers & directors in construction	218,016	25,522	192,494	11.7
Civil engineers	92,144	6,658	85,486	7.2
Mechanical engineers	119,968	5,641	114,327	4.7
Electrical engineers	42,152	1,155	40,997	2.7
Electronics engineers	36,736	2,062	34,674	5.6
Design and development engineers	69,474	4,663	64,811	6.7
Production and process engineers	41,957	4,383	37,574	10.4
Engineering professionals nec	109,345	13,826	95,519	12.6
Architects	63,009	13,671	49,338	21.7
Town planning officers	12,508	4,674	7,834	37.4
Quantity surveyors	40,786	3,821	36,965	9.4
Chartered surveyors	89,623	9,533	80,090	10.6
Chartered architectural technologists	3,541	361	3,180	10.2
Construction project managers & related professionals	63,885	4,427	59,458	6.9
Quality control and planning engineers	33,654	6,439	27,215	19.1
Total Technical occupations	307,107	74,666	232,441	24.3
Engineering technicians	49,513	4,400	45,113	8.9
Building and civil engineering technicians	12,221	2,228	9,993	18.2
Quality assurance technicians	23,431	9,026	14,405	38.5
Planning, process and production technicians	25,156	6,419	18,737	25.5
Science, engineering & production technicians nec	114,521	30,739	83,782	26.8
Architectural and town planning technicians	21,481	6,191	15,290	28.8
Draughtspersons	60,784	15,663	45,121	25.8

Total Skilled trade occupations	2,148,809	63,791	2,085,018	3.0
Welding trades	99,048	4,877	94,171	4.9
Pipe fitters	18,709	188	18,521	1.0
Air-conditioning and refrigeration engineers	15,500	279	15,221	1.8
Electricians and electrical fitters	298,392	6,947	291,445	2.3
Electrical and electronic trades nec	94,719	4,055	90,664	4.3
Skilled metal, electrical & electronic trades supervisors	71,380	7,874	63,506	11.0
Steel erectors	14,410	206	14,204	1.4
Bricklayers and masons	120,699	1,868	118,831	1.5
Roofers, roof tilers and slaters	65,994	1,281	64,713	1.9
Plumbers and heating and ventilating engineers	208,734	3,762	204,972	1.8
Carpenters and joiners	335,436	4,630	330,806	1.4
Glaziers, window fabricators and fitters	53,722	1,955	51,767	3.6
Construction and building trades nec	347,939	10,216	337,723	2.9
Plasterers	72,745	986	71,759	1.4
Floorers and wall tilers	50,839	1,330	49,509	2.6
Painters and decorators	220,000	10,604	209,396	4.8
Construction and building trades supervisors	60,543	2,733	57,810	4.5
Total Construction Operatives	740,827	20,631	720,196	2.8
Scaffolders, stagers and riggers	42,103	541	41,562	1.3
Road construction operatives	34,091	752	33,339	2.2
Construction operatives nec	162,818	4,714	158,104	2.9
Crane drivers	21,484	606	20,878	2.8
Fork-lift truck drivers	106,233	2,838	103,395	2.7
Mobile machine drivers and operatives nec	78,171	2,577	75,594	3.3
Elementary construction occupations	295,927	8,603	287,324	2.9
Overall Total	4,233,541	265,924	3,967,617	6.3

Source: ONS, 2011 and TTT 2014
* total female workers and percentage in the organisation

2. The context:

Whilst female participation is currently low, the construction industry itself is in the process of considerable change, both in terms of skill requirements and the nature of output, opening up possibilities for greater inclusivity. Above all, there is a political and organisational will to change and to open up the industry to women.

2.1. Major infrastructure projects and people resourcing

The current and forecasted scale of investment in infrastructure construction and renewal is such that the skill requirements are likely to grow over the next few years. Currently around 10% of those employed in construction work within the SIC07 2-digit code (42) of 'Civil Engineering' (UKCES 2012). Although this may seem modest relative to the overall c£100bn construction sector output (which includes SIC 41 (Construction of Buildings), SIC 43 (specialist Construction Activities) and SIC 71 (Architects)), the division between these industry classifications is fairly blurred, with both professionals and operatives likely to move

between these sub-sectors. In addition, the period 2014 – 2018 will see unprecedented demand for infrastructure skills according to the most recent skills forecasts (CITB 2014). Over this period, infrastructure construction is expected to grow by 3.6% per annum, surpassing every other construction sub-sector with the exception of private house building, whilst infrastructure repair and maintenance is also expected to grow, in contrast to most of the other construction sub-sectors. A particular concern is that many major projects will reach peak production including Cross-Rail and London Bridge Railway Station in the capital, as well as several major provincial transport projects. Activity in the energy sector is also forecast to grow significantly, with new nuclear power stations to commence construction at Hinkley Point, Wylfa and Sizewell.

A salient feature of infrastructure projects concerns their size and longevity, aspects which can have distorting effects within local labour markets and industry sub-sectors. As infrastructure construction relative to other sectors is more capital- than labour-intensive (and so will not affect overall skill requirements to a significant extent), projects do have particular consequences for regional and skills-specific labour markets (CITB 2012).

Forbes and Hastings (2014) recently examined the impact of major projects on the UK labour market. There are an unprecedented number of such projects currently under construction or consideration that are categorised as having a value in excess of £1bn and/or an annual expenditure of over £200m. Based on their analysis, there are 73 major projects that fulfil this definition that are either under construction or will commence construction between 2014 and 2018. They forecast that the value of these projects will account for around 10% of the output of the sector as a whole (around £56bn). The labour demand for these projects is significant, with the peak demand requirement for major projects predicted to reach 286,000 towards the end of 2016. Forbes and Hastings' analysis suggests that infrastructure projects will account for around 40% of this demand. Given that the peak of these programmes is likely to be in the period 2018-2020, a 'skills pinch point' could be created at this time. Such demands should also be set within the context of an increasingly constrained labour market as the industry recovers from the global financial crisis. A survey recently commissioned by CITB reveals that the tightening of the labour market is already being felt, with some 13% of firms experiencing skills shortages in the last year and 4% suggesting that this had constrained their output (CITB/BMG 2014).

Major projects, or mega-projects as they are often termed, are characterised by their large deployment of resources, human, social and environmental impacts and complexity (Li and Guo 2011; Kardes *et al.* 2013). According to Fiori and Kovaka (2005), they typically exhibit certain characteristics that differentiate them from standard project endeavours. These are: magnified costs, complexity, increased risk, heightened ideals and high levels of visibility. Although there is no formally accepted definition of a mega-project (Fiori and Kovaka 2005; Zhai *et al.* 2009), they are typically defined as those with a value greater than $1bn. Such large and often long-lived endeavours may be managed as a complex 'system of systems' or array type projects, where success is predicated on effective meta systems integration in terms of the careful management of a series of loosely coupled sub-systems (Davies and Mackenzie 2014). As a result, they often prove very hard to deliver effectively, particularly in terms of timely delivery and performance. This sets up what has been termed the 'performance paradox', whereby the numbers of mega-projects have expanded despite a history of poor performance, and, rather than becoming vehicles *for* growth, they effectively act as obstacles to growth (Flyvberg *et al.* 2003).

2.2. Mega projects as arenas for inclusion

The size, complexity and nature of major infrastructure projects mean that they are often highly regulated and subject to scrutiny, opening up the possibility for a more inclusive employment policy, as well as a change in the composition of teams. The still on-going massive Trans-Alpine Link Tunnel project (www.alptransit.ch), for instance, which includes the 57km long Gotthard tunnel, whilst not explicitly seeking to build in equity provisions, does show the importance of achieving consensus and agreement with all parties. There has been a focus on working with clients, employers, authorities and trade unions in order to secure and safeguard particular employment conditions and provide for continuous dialogue (Baumann 2001). This has been achieved through a European Agreement covering all contractors, subcontractors, placement agencies and temporary employment undertakings operating on the project. In fulfilment of this, a site committee has been set up, similar to the project site committees established under the National Agreement for the Engineering Construction Industry (NAECI) in Britain, to discuss and agree matters such as working hours and initial and continuing training. Similarly, an all-embracing Common Framework Agreement has recently been agreed between EDF Energy and the trade unions concerned at Hinkley Point Nuclear Power Station, which places great emphasis on establishing integrated teams and new working practices, structured to optimise opportunities to bring new people into the workforce (EDF Energy 2013).

2.3. Specific equality measures on mega projects

Mega projects also open up the possibility of developing initiatives to tackle the gender balance of the workforce and for this lessons can be drawn from application elsewhere. Such projects have the advantage of highlighting practical as well as policy steps that can be taken to increase gender inclusivity, including those that may not necessarily have been very successful. In the following pages, we include several examples of good practice in large projects for benchmarking: *Vancouver Highway; US projects such as Century Freeway Project Los Angeles, Portland Main Bridge Project, and the New York Times Building and UK projects such as Terminal 5; Olympics and Crossrail*. In most of the projects cited, the emphasis has been on the operative rather than the professional workforce, with the exception of Crossrail.

Taken together, these projects all set out to use their size, capacity and profile to make a difference and set ambitious targets and aspirations as a prerequisite for action. They indicate particular factors critical to the achievement of securing greater inclusivity, and hence a higher proportion of women, including:
*   the roles of public procurement (Wright 2013);
*   the significance of Major Project Agreements (or Project Labor or Community Workforce Agreements) (Moir 2014);
*   collective agreements (Baumann 2001; Calvert and Redlin 2003);
*   the significance of local labour agreements (GLA 2007);
*   involvement of the workforce;
*   systematic and controlled recruitment (National Women's Law Centre 2014);
*   childcare provision (Moir *et al*. 2011);
*   systematic and close monitoring (Moir *et al*. 2011);
*   training, also as a means of siphoning recruitment (Griffin, Cohen and Braid 2000a and b.)
In the case of the Vancouver Highway, which largely depended on a centralised system of labour requirement and training, success even extended to the project cost coming out under the estimate.

2.4. Implications of benchmarking

Each of the projects provides important lessons concerning measures that can be effective. These can be summarised as:

a) **Securing an overriding agreement** with all stakeholders, including contractors, subcontractors, trade unions, clients, and local authorities on working conditions, direct employment and a preference for local residents. As apparent from T5 and the Olympics, the guarantee of direct employment was critical to the successful outcome of the profits, including meeting equality targets.

b) **Contract compliance**, including an insistence on equality measures and employment goals in all tender documents, carried through by pre-job compliance meetings and continued monitoring.

c) **Recruitment,** setting clear targets, employing a workforce reflective of the local population, proactive application of equal opportunity policies by all contractors and subcontractor, and 'blind' recruitment.

d) **Training,** including pre-employment training (e.g. in Tunnel training facilities), special training to facilitate broader occupational profiles, formal links with colleges and universities in the vicinity, work placements and work experience, specific aspects set aside for training purposes.

e) **Working conditions,** including structured working hours, childcare provision, inclusive maternity leave, flexible working arrangements, mentoring

f) **Securing support,** senior level support was critical to the success of projects in meeting their objectives and monitoring, as was also securing support from women's groups and trade unions, and organising meetings and conferences.

All of these considerations highlight the importance of benchmarking other projects in order to understand how gender participation can be achieved and of setting objectives

Good practice case 1: UK Terminal 5

Heathrow Terminal 5 was one of Europe's largest construction projects of the time, costing £4.3 billion over five years, from 2003 to 2008, requiring about 8,000 workers at peak, and comprising 16 major projects and over 147 sub-projects (Clarke and Gribling 2008). Similar to the Vancouver Highway, the client BAA secured a contractual relationship with suppliers, and in turn subcontractors. The T5 Major Projects Agreement established that direct employment should be adopted 'wherever possible' and took a proactive position with respect to labour management issues, including consideration of diversity and equality concerns (BAA 2004). This policy was consolidated through the careful enforcement of collective agreements and health and safety regulations: unions played an important monitoring role, ensuring employee participation and maintaining good industrial relations. However, despite the significant efforts made to encourage a more diverse workforce and to employ and train local labour, in particular by BAA, only a few female electricians and one or two women in other occupations, including welding, were employed in the operative workforce. Further, of the 150 employed over the course of three years as a result of the local labour scheme, only 3% were women (Experian 2006). Nevertheless the requirements for the employment of local labour, established by the local authorities under Section 106 planning clauses, did serve to focus the client and contractors on the need to be more inclusive and sensitive to local needs (GLA 2007).

Whilst the policy of direct employment was extremely successful in showing that there is an alternative to casual employment in construction, the diversity achievements were disappointing. The local labour force became a dwindling minority and 'travellers' the majority, as many suppliers came to rely heavily on an itinerant workforce, both from outside London and - increasingly - from different nationalities and geographic regions outside the UK. In terms of training, support was given to local colleges and to set up a special training centre, but, apart from the mechanical and electrical sector, the apprentice record was poor. Few of the many hundred construction trainees in surrounding colleges, who included many women, found work on the site (Baker and Mallet 2008).

The obstacles identified by Clarke and Gribling (2008) to obtaining a more inclusive and local labour force on T5 were: lack of work experience and placements available allowing those from local colleges to gain practical skills in construction; the training actually on offer, largely confined to traditional trades and more geared to domestic construction work; the means of recruitment, including reliance on agencies that tend to target a traditional white male and migrant workforce; and the site working hours and shift patterns set up, which, coupled with long journey to work times, made the working day almost impossible for any but travellers and migrants prepared to sign the Working Time Directive opt out and work intensively. This meant the site was almost structured to suit an itinerant rather than a local workforce, an aspect that was then supported through the incentives given to 'travellers' in the pay structure. The alternative proposals made by the authors for improving such diversity included: setting up special training projects to provide the necessary work experience and broader occupational profiles given the increasingly 'multi-skilled' nature of such activities as concreting and groundworks; fixing targets for apprentice places and work placements; establishing formal links with colleges, ConstructionSkills and training providers; carefully targeted recruitment; structuring site hours and shift patterns from the project beginning to be inclusive and in conformity with Working Time Regulations; and proactively applying equal opportunities and diversity policies, including through action plans for implementation.

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Good practice case 2: UK: Olympics

For the Olympic Park, instead of the equivalent of T5's centralised Major Projects Agreement, the Olympic Delivery Authority (ODA), preferred to sign a Memorandum of Agreement (MoA) in 2007 with all the relevant trade unions, though this did not cover the Athlete's Village. The MoA included: application of existing collective agreements; commitment to 'high employment standards', good employee relations, and 'the ethos' of a directly employed workforce; and encouragement to the employment and training of local people (ODA 2007; Druker and White 2013). By September 2010, 6,243 were recorded as working for contractors on the Park and 4,090 on the Village, a total of 10,333, though it is difficult to tell the proportion who were directly employed (ODA 2010). As a public body the ODA had a statutory duty to promote equal opportunities (EO) so that much emphasis was placed on increasing the diversity of those working on the Olympics sites, including through the requirement that all main contractors have EO recruitment policies and procedures in place.

The ODA's responsibilities for securing employment and training and boosting skill levels locally were based on explicit targets for women, ethnic minority groups, disabled people and local people, including the requirement to place at least 2,250 people into trainee programmes, apprenticeships and work placements. All of this required the monitoring and recording of those employed – a difficult task given that over 800 firms were contracted to do the work (Foster 2010). To fulfil the targets, the ODA worked in partnership with government, contractors, training organisations, sector skills councils, Jobcentre Plus and job brokerage networks in the five Olympic Host Boroughs (ODA 2011). In 2008 the Women in Construction (WiC) project was established, with the support of the London Development Agency (LDA) and the Construction Industry Training Board (CITB), designed to help women gain access to training and employment opportunities in trades such as electricians, bricklaying, engineers and carpenters (Wright 2014). According to London 2012 (2011), 3% of those who worked on the Olympic Park were women, though 11% was the targeted figure (ODA 2010). WiC succeeded in training 455 women, placing 87 into work placements and 255 in employment (Wright 2014).

The London Olympics was unprecedented in the targets for apprenticeships, underrepresented groups and the women in construction project, though it was unclear how these were to be achieved. By 2011 the ODA reported that its target of 350 apprenticeships on site had been exceeded, as 426 apprentices had some experience of working on the site (ODA 2011). However, the number of people actually trained on the sites appears relatively low, with only 60 apprentices altogether completing their training on the Olympic Park and the Athlete's Village, representing less than 1% of the workforce. The employment of women met with more success through the WiC programme and positive action initiatives taken by the ODA, including:
- Running taster days for local women
- Supporting prospective employees with child and health care
- Targeting local colleges for female prospective recruits;
- On the job-learning for women on site, including work placements
- The 'chicks with bricks' programme. (EHRC 2011)

As Samantha Paul, one of the apprentices described 'There's not really been many problems at all, most people accept you on site (ibid, p. 10)

Good practice case 3: UK: Crossrail

The £14.8bn 26 mile, Crossrail rail scheme has largely focussed on employing woman engineers on the project, seeking to increase their numbers, which currently stand at 10.7% of the Institute of Civil Engineer's (ICE) membership and between 6% and 13% of engineers in the construction industry – the lowest figure in Europe (Kitching 2014).

The initiative is driven in part by the business case, that the more gender balanced a team the better it performs, and that there is a rapidly increasing number of engineering vacancies. It also responds to the 2006 Equality Impact Assessment, which established an Equality Form and required, amongst other things: the development of a procurement policy to encourage local sourcing of goods services and labour; and working with schools education and training providers (Crossrail 2006). The steps taken include:
   ✓ Trained those involved in recruitment and promotion not to have any 'unconscious bias'
   ✓ Encouraged contractors to recruit a more diverse workforce by insisting they advertise all jobs externally
   ✓ Carried out 'blind' recruitment by removing names and gender from applications
   ✓ Set up a women's forum, diversity working group and mentoring programme, and creating opportunities for senior women to act as role models for junior engineers
   ✓ Worked with 100 schools to address the issue of female engineers and encourage more young people into engineering
   ✓ More inclusive maternity leave and flexible working policies to allow staff to balance work and family life
   ✓ Assisted in organising pre-employment training at the Tunnel and Underground Construction Academy
   ✓ Assisted in the organisation of a competition in 2014 with Transport for London and London Transport Museum to promote engineering to young women as part of National Women in Engineering Day
   ✓ Organised a 'women in construction' meeting in 2014 attended by 350 senior member of the supply chain to share ideas about the need to support women in engineering.

As a result of these various measures, Crossrail's statistics for the percentage of women in the organisation are: 29% of project managers; 12% of apprentices and 19% of graduates (Kitching 2014).

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Good practice case 4: Vancouver Highway

The $1.2 billion, seven year Vancouver Island Highway Project was one of the most successful infrastructure projects to include underrepresented or 'equity' groups (women, First Nations, people with disabilities, youth, and visible minorities). In Canada at that time women represented 0.3% of the operative construction workforce, and First Nations less than 1%. In one year alone (1998) these groups represented 21% (5% women) of those employed on the Project and accounted for 27% (10% for women) of hours worked, including, in particular, carpenters, labourers and operators (Griffin Cohen and Braid 2000a; Calvert and Redlin 2003).

First, this relative success was achieved through a 'Project Agreement' between the government, contractors and the building trade unions which, over and above seniority, gave preference to local residents living within 100 kilometres of the worksites. It also gave the umbrella organisation, Highway Constructors Limited (HCL), the right to ask the unions to dispatch qualified and new trained equity workers and trainees to sites prior to other workers. In effect this implied centralised recruitment of all construction labour on the project through a single employer, which in turn prioritised the recruitment of 'equity' employees (Griffin Cohen and Braid 2000a). Second, the agreement permitted HCL to train, with the assistance of the trade unions, large numbers from equity groups and local residents, who were then given the opportunity to take jobs on the highway (Griffin Cohen and Braid 2000b). A section of the highway was then constructed by trainees: training accounted for 13% of hours worked on the Project. Overall, 93% of the total payroll went to local residents, the project came in under the projected cost estimate and achieved a number of health and safety awards.

The compulsory equity provisions, codified in the Agreement and in the structure of project management, were possible because they had support at the highest level, were monitored and supported by women's and native groups, and were tied into recruitment. The Agreement also had important implications for the tendering process by making provisions for a workforce reflective of the population where the work occurred, so challenging the traditional encouragement in such contracts for large contractors to bring in a 'travelling' workforce from all over the country, building travel and housing into tenders (Griffin Cohen and Braid 2000a).

Good practice case 5: US Schemes: Century Freeway Project Los Angeles, Portland Main Bridge Project, and New York Times Building

Systematic attempts have been made for the past thirty years in the United States, including in infrastructure projects, to systematically include women in construction. One of the first attempts was through the Century Freeway Women's Employment Program (WEP), which was able to work collaboratively with a pre-apprenticeship programme, unions and contractors to increase black, white and Latino women's share of hours of construction work on the freeway from 1% in 1986 to 8.2% by 1993 (Price 2004). WEP monitored jobs and met regularly with union officials, apprenticeship coordinators, job superintendents, foremen and contractors, as well as providing a fund for women to help with childcare, union fees, tools, and transport. It also organised a women's support group, provided guidance, and conducted targeted recruitment (Moir *et al.* 2011). This was followed by the Portland Main Bridge Project, a four-year (1994-8), $157m bridge replacement, which increased the number of women employed to 60 through systematic daily monitoring of access and participation and through the provision of 24-hour childcare.

Building on these early initiatives, there have been attempts in New York to increase the number of women, including the New York Times Building (2004-7) which had a 15% female participation rate. The developer, Forest City Ratner Companies, is strongly committed to diversity, works in partnership with a labour organisation providing access to women seeking construction work, and makes compliance a priority through stating employment goals in tender documents, holding pre-job compliance meetings with contractors and sub-contractors, and continual on-site monitoring (Moir et al. 2011).

2.5. Setting strong measures, targets and contract compliance

From the case study projects, it is apparent that clear and strong measures need to be set if gender participation is to be improved, including overarching agreements, setting targets – even quotas, and contract compliance.

Increasingly, and as evident in the case studies (see boxes), attention is being paid by mega projects to procurement as a means to improve diversity and increase the number of women in construction. Most notable has been in the work of the Centre for Research in Equality and Diversity at Queen Mary, University of London, in particular through a conference held in 2012 *Promoting employment equality through public procurement* (Wright 2013a). This conference highlighted the importance of the Olympics and Heathrow T5 in the stipulation of direct employment only, rather than the use of what is known as 'bogus' self-employment so common in construction, allowing for closer monitoring of employment and providing an infrastructure for training and the enforcement of equality measures.

As an organisation committed to creating employment opportunities and to Corporate Social Responsibility, the ODA, for instance, required tier 1 contractors to meet contractual employment and apprentice targets and require their subcontractors to do likewise. In this case, there were clear requirements to roll out diversity training, to use job brokerage for local people, to help change the construction sector environment by bringing in more women, and to engage with local communities. As apparent on the Vancouver Highway too, the contractual requirement to use local (defined as within a 100 km radius) labour can be especially instrumental to success, with 93% of the payroll going to the local residents, as it was too – though much lower and with a far more restricted radius – for the Olympics and T5 (see for instance GLA 2007).

Key to ensuring that contract compliance is effective is close monitoring, as also highlighted in the recommendations given by the Greater London Authority in *The Construction Industry in London and Diversity Performance* (2007) in relation to Section 106 agreements. These included developers appointing 'a project officer with an accountability and enforcement remit' (p. 91) and working with target equality groups.

3. Improving gender participation in construction

The examples of mega projects provide an indication of practical measures needed at all levels to secure less exclusive employment. In this section we turn to the various reasons given both for the lack of women in construction and for improving gender participation.

3.1. Reasons for lack of women in construction employment

The reasons for the poor representation of women in construction have been attributed to structural and cultural obstacles: the fragmented nature of construction; the lack of knowledge and poor image of the sector; inappropriate selection criteria; male dominated training courses; lack of formalised recruitment practices and procedures; fragmentation of employment; traditional stereotypes and sexist attitudes; a male dominated culture, networking and environment; lack of work-life balance possibilities (Fielden *et al.* 2000; Sang and Powell 2013). The persistence of traditional career patterns and trajectories reinforce gendered assumptions, penalising non-full-time work patterns, or career breaks, when promotion decisions are being made (Lako and Daher 2009; Hart and Roberts 2011; European Commission 2013).

Research on the architecture profession, for instance, has found working practices that include long working hours, homosocial behaviour, questioning of female technical expertise and creative control held at senior (and therefore male) levels (Sang *et al.* 2014). Further, in a survey exploring health and well-being, it has been found that female architects are at greater risk of occupational stress than males: 'female architects appear to experience lower job satisfaction, poorer physical health, higher work-life conflict and higher turnover intentions' (Sang *et al.* 2007: 1314).

The academic literature on diversity in construction has mainly focussed on female professionals. At operative level, research that has been conducted has, however, shown similar barriers to those at professional level in terms of recruitment and retention. Obstacles to integration include: inappropriate and poor working and employment conditions, long working hours; discriminatory recruitment practices, the persistence of a macho culture, and short-term concerns with output (Clarke *et al.* 1999 and 2004; Wall and Clarke 1996 Michielsens *et al.* 2001; Clarke and Gribling 2008).

In summary, the cultural and structural barriers to gender diversity in construction are linked to:
- o The training and education context
- o Employment policies and practices – working and employment conditions (fragmented nature of sector and procurement; working hours; lack of flexible working)
- o HR practices such as recruitment and selection; retention policies; lack of networking, mentoring, role models
- o 'Macho' environment.

These areas are discussed in further detail in the sections below. Before doing so, it is important to consider the rationale for firms to adopt such policies in order to increase the numbers of women they employ, often termed the 'business case'.

3.2. 'Business case' for women in construction and the law

The suggestion of a business case for increasing equality in organisations was first put forward in the early 1990s (Ross and Schneider 1992; Kandola and Fullerton 1998). Since then, the literature confirms widespread belief in the business case, though evidence on the positive impact of diversity management on performance remains mixed (Dickens 1999; Kochan *et al.* 2003; Ozbilgin and Tatli 2011). It is also argued that, as the industry's approach focuses on the business case instead of an ethical argument (linked to inclusion and justice), only minimal change in terms of inclusion of non-traditional workers has been noticed (Sang and Powell 2013).

Cox and Blake's early review of the business case literature (1991) proposes six main business benefits of a diverse workforce:
1. *Cost:* the cost of doing a poor job in integrating workers is increasing, so those who manage diversity will gain a cost advantage.
2. *Resource-acquisition:* adopting a diversity–management approach will develop favourable reputations for the organisation as prospective employers for women and ethnic minorities, so these organisations will attract the best personnel.
3. *Marketing:* multi-national corporations (MNCs) will obtain insight and cultural sensitivity from having members with roots in other countries, and this will improve marketing.
4. *Creativity:* the presence of diverse perspectives, and less emphasis on conformity to past norms, should improve creativity.
5. *Problem-solving:* heterogeneity in groups potentially produces better decisions and problem-solving through a wider range of perspectives.
6. *System flexibility:* the system becomes less standardised, and therefore more fluid, which creates greater flexibility to react to environmental changes.

This framework was updated in 2013 by Urwin *et al.* (2013). Their adopted classification of business benefits into either 'External' or 'Internal' provides a useful framework to analyse the business case for gender diversity:

3.2.1 'External' benefits

External benefits relate to the context of the organisation, such as: recruitment of best talent; compliance with legislation; employer branding ('employer of choice') etc. External benefits may also relate to new market opportunities and innovation: a workforce from varying backgrounds may provide competitive advantages and enhance organisational adaptability to changing marketplaces (Noon 2007; Dickens 1999; Zanoni *et al.* 2010; Ely & Thomas 2001; Kochan *et al.* 2003 Kossek *et al.* 2011). Cox and Blake (1991) and Dickens (1999) have implied that these benefits relate more to industry than to the service sector.

Compliance with legislation is an important driver of gender diversity considerations, as confirmed by two surveys on diversity carried out by the Chartered Institute of Personnel and Development (CIPD) (2006, 2007), which show that companies identify 'legal pressures' followed by labour market considerations ('recruitment and retention' and/or 'being an employer of choice') as the most important aspects of the business case, so supporting the importance of the 'external drivers'. Legal issues could be at the fore due to the potentially negative impact of bad publicity if the circumstances of a discrimination case are reported in the press, causing damage to the corporate image and brand. 'Improving products' and

'creativity and innovation' were comparatively low down the list of benefits cited by respondents.

The legal context has changed considerably over the last decade in the UK, and the policy framework for the advancement of Equal Opportunities and Diversity is complex. In 1999, constitutional reform in the UK took the form of devolution and this has allowed the constituent nations of Great Britain to take differing approaches to Equality and Diversity policies (Bagilhole 2009); UK and devolved governments of Northern Ireland, Scotland and Wales implement interrelated policies within national contexts. However, the compliance regarding gender diversity is mostly related to the Equality Act, which came into force on 1 October 2010 in the UK. The Equality Act brought together over 116 separate pieces of legislation into a single Act. Combined, they provide a legal framework to protect the rights of individuals and advance equality of opportunity for all, across gender, race, disability, sexual orientation, religious belief and age. The Act protects individuals from unfair treatment and promotes a fair and more equal society. It covers employment, equal pay and services, public functions and associations and outlines nine protected characteristics, which cannot be used as a reason to treat people unfairly: Age; Disability; Ethnicity; Gender; Gender reassignment; Marriage and civil partnership; Pregnancy and maternity leave; Religion or belief; Sexual orientation. The Act also sets out the different ways in which it is unlawful to treat someone, such as through direct and indirect discrimination.

Looking specifically at the construction and engineering sectors, the business case argument for a better gender balance is mainly linked to external benefits: promoting the commercial benefits of employing women (see for example, Bagilhole 1997; Barnard *et al.* 2010; Dainty *et al.* 2004; Hewlett *et al.* 2008; Phipps 2008). The advantages of a diverse workforce are purported to include: tackling industry skills shortages; increased profitability and inward investment; increased effectiveness and customer satisfaction; reduced likelihood of litigation; reduced staff turnover and recruitment/training costs; reduced loss of corporate knowledge/intellectual capital; more motivated, committed and productive workforce; and, reduced absenteeism (UKRC 2005).

3.2.2. Internal benefits

So-called 'internal' business benefits are identified as resulting from improved operations within the firm. The suggestion is that diverse teams embrace a greater range of perspectives and that this can improve creativity and problem-solving, leading to improved business outcomes. Evidence for the latter is nevertheless contradictory:

Some researchers (e.g. Østergaard *et al.* 2011; Stahl *et al.* 2009; Watson *et al.* 1993; Cox *et al.* 1991) argue that innovation can result from diversity; others dispute this (e.g. Jehn *et al.*,1999; Hamdani and Buckley 2011). While increased team diversity might lead to conflict and decreased social integration, there could also be process gains through increased creativity and satisfaction. However, in some settings diversity is shown to impact negatively on performance, perhaps arising from problems with communication and co-operation (Homan *et al.* 2007).

Gratton *et al.* (2007) provide evidence to support the suggestion that mixed gender teams can aid innovation and increased feelings of 'psychological security'. They report certain negative 'minority effects' when there is an uneven gender balance. Whether or not diversity within teams leads to better outcomes, it can be affected by a myriad of factors, including the way it is defined and managed, organisational settings and managerial style, as well as the social and institutional forces driving it in a particular organisation (e.g. Hamdani and Buckley 2011).

3.2.3. Evidence for the 'business case'

Looking at the development of research, despite arguments that the 'business case' is beset with both conceptual and practical weaknesses, a number of studies have sought to show the links between diversity and improved performance. Diversity is seen to enhance organisational flexibility, recruitment, retention and financial sustainability (Drago and Hyatt 2003; Allen *et al.* 2007) and to improve employment issues around attendance and engagement (Glynn *et al.* 2002; Ollier-Mallatere 2010; Atkinson and Hall 2011).

Overall, evidence of gender diversity's positive impact on performance remains mixed, possibly because it is context specific (Özbilgin and Tatli 2011; Kochan *et al.* 2003). With notable exceptions (e.g. Herring 2009), much of the evidence on workplace diversity and business performance is qualitative and/or case-study in nature (Monks 2007; Shen *et al.* 2009). The context-specific nature of the linkages between diversity and performance shown by these workplace studies therefore provides conflicting evidence of the systematic impact of diversity on business (Kochan *et al.* 2003), and indeed of any causality. The findings of Hamdani and Buckley (2011), for instance, suggest that the success of firms might lead to diversity, rather than vice versa.

Nevertheless, recruiting the best talent and skills shortages are seen as key drivers of the business case for gender diversity, especially in industries such as construction. Within the context of major infrastructure projects that have a significant impact on the labour market and people resourcing in terms of size and establishment of practices, this becomes even more significant, and is discussed next. The case study examples discussed above show that real change can be established if an open and continuous dialogue exists, coupled with policies that ensure positive employment and working conditions.

3.3. Good practice strategies

The literature evidencing good practice and policies or initiatives that have increased gender participation shows that a more fundamental approach is needed than simply trying to attract more women into the construction professions. Lee and Faulkner (2010), for instance, highlight the culture change required to have an impact on gender inequality. Indeed, only holistic approaches show success in combatting segregation - those which tackle barriers at a strategic level with broad aims and a long term vision - as opposed to discrete and one-off initiatives. Examples of holistic approaches include, for instance: involving both senior management and employees in initiatives; incorporating diversity policies as part of an organisation's strategic plan and performance indicators; and monitoring equality and diversity and equality impact assessments, including of subcontractors (e.g. Dobbs 1998; Miller and Tucker 2013; Stein 2013; Sang and Powell 2013).

In order to tackle the structural and cultural determinants underlying gender segregation, research indicates that diversity strategies should focus on the umbrella of issues listed in Figure 1 below, as a holistic strategy. However, it is apparent that, while strategies and initiatives towards the top of the list are increasingly part of diversity practices in UK companies – also in construction, the strategies towards the bottom of the list are not (yet) incorporated (Wright *et al.* 2014):

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FIGURE 1: ASPECTS OF DIVERSITY POLICY AND PRACTICE – THE 'VISIBLE', 'EMERGING' AND 'HIDDEN'				
	DIVERSITY UNDERSTANDING; FOCUS IN ORGANISATIONS	DIVERSITY POLICIES IN ORGANISATIONS	DIVERSITY PRACTICE WHO IS TARGETTED IN ORGANISATIONS	DIVERSITY PRACTICE; WHAT IS DONE? IN ORGANISATIONS
ABOVE SURFACE	DIVERSITY OF IDEAS INCLUSION (INTER)NATIONALITY OF WORKFORCE	GENDER DISABILITY ETHNICITY	GENDER	• POSITIVE ACTION RECRUITMENT • FLEXIBLE WORKING • MIRRORING DIVERSITY OF • CLIENTS • TALENT (RECRUITS) • SERVICES/PRODUCTS • LEGAL AND CONTRACT COMPLIANCE
BELOW SURFACE 'EMERGING'	CITIZENSHIP MIGRATION	AGE	DISABILITY ETHNICITY AGE	• INTERNAL AWARENESS RAISING • DIVERSITY TRAINING • MENTORING • NETWORKING • DIVERSITY AS GOOD PRACTICE • BRANDING 'EMPLOYER OF CHOICE'
UNDER SURFACE HIDDEN SILENT	EQUAL OPPORTUNITIES EQUAL TREATMENT	SOCIAL CLASS	SOCIAL CLASS	• SPONSORING for CAREER PROGRESSION • TRANPARANCY EMPLOYMENT/CAREER DEVELOPMENT • MONITORING AND EVALUATING DIVERSITY • DIVERSITY PERFORMANCE INDICATORS • POSITIVE ACTION IN TRAINING

(Adapted from Wright *et al.* 2012)

4. Addressing obstacles to gender diversity

The distinctive context of the construction sector – its poor apprenticeship record, fragmented employment, extensive sub-contracting, working time inflexibility, and specific work locality, especially on-site work in a 'macho' context – makes for a number of challenges to increasing gender diversity. These are present at every stage: education/training before entry; at entry, and during employment (retention).

4.1. Education and training context

4.1.1. Entering construction: professionals

Throughout the nineteenth century, the engineering professions and unions adhered to a policy of deliberately excluding women (Drake 1984). Although there has been a steady increase in the number of women entering the industry in professional positions since the Second World War (Garner and McRandal 1995), women are unlikely to be attracted in significant numbers until construction careers are perceived as offering them fair and equitable career possibilities.

Higher education clearly forms the interface between career choice and working in the construction industry, but, as Srivastava (1996) found, a tension often exists between the equal opportunity policies set out by the higher education institutions, and how these are translated in practice by lecturers. In effect, women studying the built environment can be severely disadvantaged through a 'hidden curriculum' of rituals, which leads to an isolating atmosphere. This may explain why in a survey with Danish engineering education students, it was found that women are significantly more influenced by mentors in the college system than men (Kolmos *et al.*, 2013). Women studying on male dominated engineering courses have also been shown not to achieve as well as where numbers of men and women are equal (Daniels 1993). Thus, higher education can be seen to act as a 'gate keeper' to a male-dominated industry.

4.1.2. Vocational education and training in the construction trades

Critical to achieving success with respect to gender participation and equality is to ensure that initiatives with respect to education are not just confined to professional occupations but cover all vocational education and training (VET) for the entire workforce involved, whether employed by the Project, contractors or subcontractors.

4.1.2.1. Historical precedents

Women have always maintained a presence in the building trades entering through apprenticeships, the earliest records confirming this date back to the 16th 17th and 18th centuries (Clarke 2007). Following the repeal of the Statute of Artificers, their numbers dwindled to reach less than 0.3% of the total skilled construction labour force by the end of the nineteenth century (Clarke and Wall 2009). This changed in the twentieth century: during the two World Wars when women were encouraged to take up jobs opened up by male conscription resulting in over 25,000 women working in the construction industry with a participation rate, in 1943, of 3.8% (Clarke and Wall 2011). These figures go some way to disprove the longstanding argument against women entering manual occupations based on their physical abilities: in times of labour shortage, when there are no other available sources of men, industry will actively recruit women to fill vacant positions.

Source: Imperial War Museum

However, it was not until the late twentieth century, in the 1970s and 1980s, that a combination of political change and grassroots campaigning created a set of circumstances that supported considerable numbers of women to train and work in construction. Inner London, and the local authorities it comprises, can be seen as case study revealing the success of this approach (Wall and Clarke 1996; Michielsens *et al.* 1997; WAMT 2001). After the Sex Discrimination Act (1975) became law, making it illegal to discriminate on the grounds of sex in employment or education, small numbers of women accessed training in government training centres on TOPS (Training Opportunity Programme Scheme) courses (Payne 1991). These six-month intensive government courses at Skillcentres provided industrial training in construction occupations after which successful trainees were classed as 'improvers' and required a further 18 months' work before recognition as fully skilled.
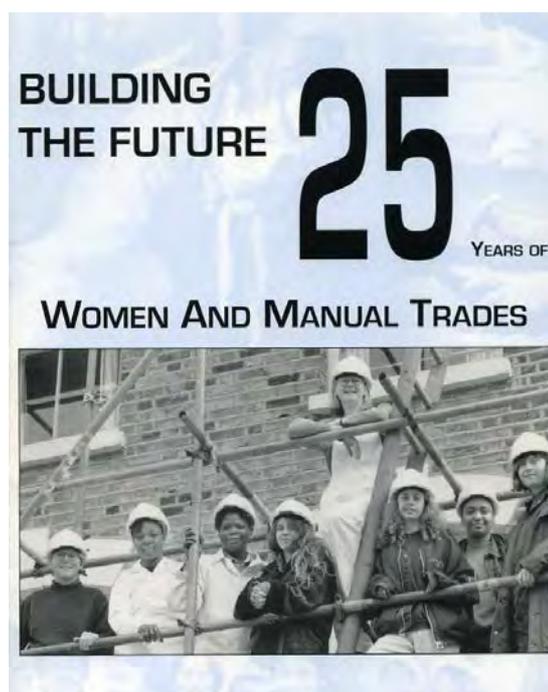
In the early 1980s, in response to increasing numbers of women failing the initial tests set at Skillcentres, women-only training workshops were set up by women who had successfully entered the trades by this route. Funded by London local authorities, they provided introductory courses in the trades before women entered the male-dominated environment of industry. Basic manual skills (NVQ Level 1), literacy and numeracy, were taught by women instructors in a supportive environment with childcare provision. Many trainees then consolidated their training through TOPS or by joining local authority building departments known as Direct Labour Organisations (DLOs) as adult trainees. For example, in the mid-1980s, Hackney DLO was running one of the largest training schemes for building workers in Britain, backed by the construction union UCATT (Union of Construction and Allied Technical Trades). Over 50% of the adult trainees were women, many of them going on to permanent jobs in construction. Local authorities committed to changing their male dominated construction workforce created a framework of support for women in the trades through the provision of: a designated women's officer; regular meetings; the placing of more than one women on any site; flexible hours of work; and a clear and transparent set of equal opportunities guidelines backed up by internal procedures to address grievances. The success of these measures can be measured by the presence of 266 women in construction manual occupations in seven Inner London DLOs in 1989.

The legacy of the systems set up in the 1980s survived, and DLOs continued to address the very low numbers of young women applying for apprenticeships by creating links with the local schools careers services (Fuller et al 2005). Recruitment prioritised the importance of positive female images in recruitment literature and advertising, a diverse range of advertising outlets and having women form part of the recruitment team. For example, of the 283 apprentices appointed by Leicester DLO between 1985 and 2002, 84 (30%) were women. In 2003, 40 (or one in 12) of the 480-strong workforce were women, employed in all the trades, as carpenters, electricians, plasterers, painters and decorators, bricklayers, heating and ventilating engineers, gasfitters and metal workers (Clarke et. al. 2006). Leicester continues this legacy today, in 2012 employing123 women as part of its 431 strong workforce and with 18 out of 75 craft apprenticeships held by women (Craig and Oates 2014). Today too there is more support than ever for employing women, including from the CITB and the trade unions.

4.1.2.2. Discrepancies in training

The consistently higher numbers of women undertaking full-time construction training in colleges than are found in construction employment indicates that many women do want to work in the industry as skilled operatives but fail to obtain entry. By 2005, women represented 3% of construction trainees, but of these the vast majority were in Further Education (FE) Colleges, where they represented 7% of all construction trainees; in London an even higher proportion (9%) of women was to be found in construction training in FE Colleges, far higher than found in construction employment (Byrne et al 2005; Briscoe 2005).

Similar findings can be told in relation to professional women. For instance, 84% of the 4,830 first year civil engineering degree students in 2012-3 were male, with just 785 female (Wynne and Sofolarin 2014). In 2014, 71% of male graduates with engineering and technology degrees entered industry employment, whereas only 56% of women in the same cohort did so (Engineering UK 2014). Engineering UK identifies obstacles to their integration beginning in gender stereotyping of STEM subjects in school and calls for a strategy to build

girls' confidence to approach science and engineering subjects. This is echoed in the US National Women's Law Center's conclusions (2014: 11) that:

> Changing longstanding patterns of occupational segregation requires prioritizing the recruitment and retention of women in non-traditional career and technical education and STEM courses.

Awareness of one's own biases can help with recognition and the potential reduction of the impact of implicit bias (see for example, Devine *et al.*, 2012). An increasing number of employers now use 'unconscious bias' awareness training as a tool to increase diversity and inclusion because of its capacity to raise self-awareness and allow self-correction in thinking patterns and decision-making. The term originates from social psychology and seeks to describe the impact of subconscious presumptions about people's characteristics (such as being female, non-white, disabled) on recruitment and performance management. UKRC WISE (Women in Science and Engineering), for example, organises training which addresses the relationship between the implicit associations, stereotypes and individual attitudes towards apprentice recruitment.

4.1.2.3 (Lack of) managerial commitment and development: awareness training

Organisational practices (for example, a long hours culture) and line managers impede the uptake of equality and diversity policies. Research demonstrates the importance of managerial commitment for the successful implementation of diversity policies (Thompson *et al.*, 2004; Maxwell, 2005; Lapierre et al., 2008). Leadership team behaviours can be strategic because of their contribution to a 'diversity mindset' (Hopkins *et al.*, 2008), which is central to increasing diversity. Policies alone, however well-designed, do not promote a work environment that encourages diversity. Den Dulk and de Ruijter (2008) found, for instance, that the values and attitudes of individual managers and supervisors have a significant impact: individual managers tended to perceive WLB policies as disruptive, though responding favourably when aware of individual circumstances and when personal mitigating factors are involved.

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Consequently, leadership development programmes in which diversity features centrally are seen as crucial. As increasing numbers of employers organise this type of awareness training, the diversity discourse in organisations has become homogenised (Farashahi *et al.*, 2005).

4.2. Recruitment and retention

Recruitment is one of the most critical HR practices that impact on changing the composition of the construction workforce, including through the use of proactive measures discussed in Section 2.5 above, such as contract compliance, quotas and targets. This is the reason for the strong emphasis on the 3Rs – recruitment, retention and respect for people – in the Rethinking Construction initiative stemming from the Egan Report of 1998 (Egan 1998; Respect for People Working Group 2002; Ness 2010). In this regard, positive action has been shown to be effective; for instance by Leicester City Council's programme for women in construction led to over 100 women becoming professionally qualified (EHRC 2011; Leicester City Council 2011). As occurred on Crossrail too (Good Practice Case 3), 'blind' recruitment, by removing names and gender from applications, is increasingly carried out.

Research has long since established the link between informal recruitment practices and homogeneity of recruitment, discussed in more recent literature as 'unconscious bias' (for instance, see Raymond, 2013; Mervis 2012; Hill *et al* 2010; McCullough 2011). Informal routes to recruitment are especially found in SMEs, including subcontractors, which is of particular relevance to construction (Clarke and Herrmann 2007). Therefore, initiatives focusing on formalising recruitment are seen as a step towards achieving greater gender diversity. Targeted advertising using positive female images has also been at the centre of the Construction Sector Skills Council's efforts to attract women into the private construction industry (CITB 2004).

4.3. Employment and working conditions

Approaches to gender equality in engineering should go beyond only looking at recruitment as the issues the industry faces include what happens once women are in industry (Faulkner 2009). Research shows that horizontal and vertical segregation remains in construction (Fernando *et al.* 2014). For instance, key issues for women professionals relate to the barriers that women face in terms of entering and progressing through their careers, including: networking, work-life balance and gendered discourses (Barnard *et al.* 2010). They also relate to working and employment conditions, and the HR approaches that aim to deal with improving diversity.

4.3.1 Direct employment

There is extensive literature outlining the problems of self-employment in the construction sector (e.g. HM Treasury 2014; Harvey and Behling 2008) and it is apparent that much of the success in improving diversity on projects, such as the Olympics and T5, was in large measure attributable to the insistence on direct employment. As emphasised by the Greater London Authority (2007):

> The prevalence of self-employment and temporary agency working (in particular of migrant workers) on short projects on sites, often under different terms and conditions even on the same site and in the same trade, hampers the development of a stable workforce with clear paths of recruitment, retention and progression that a wider, more diverse, pool of workers can enter. (pp 93-4)

4.3.2 Women as role models and mentoring

Another important concern is the position of women as role models within the organisation, helping to convey the organisation as an equal opportunities employer and demonstrate that perceived barriers to progression are not insurmountable. A successful and structured mentoring scheme can be a way to increase the numbers of women in senior management positions where they can then become role models and also mentor other members of the team. However, a consideration to be taken into account is the unconscious bias that may be into choice of mentor. In relation to sponsorship, for instance, recent evidence presented to the House of Commons Science and Technology Select Committee Inquiry into Women in STEM careers (2014) suggests that within education senior male academics may be more likely to offer sponsorship to young male early career researchers who, unconsciously, remind them of themselves at an earlier stage in their career, while women may not as frequently be afforded the same informal support and encouragement. It is highly likely that the same behaviour is found in civil engineering and in firms with a high STEM-educated proportion of the workforce. It is interesting to note that the US in January 2014 launched a pro-active approach to female recruitment to STEM subjects in the Million Women Mentors Scheme. This aims to deliver high quality mentoring programmes that connect girls and young women with STEM professionals. This is similar to initiatives already in place in the UK and delivered by WISE.

Mentoring can be also used in innovative ways as a training tool, for example reverse or reciprocal mentoring programme has been used by the company Aviva as a means for male senior managers to gain a better understanding about gender differences and how women experience the organisation. Each group executive member was paired with a high potential woman within the organisation for twelve months. The senior women benefit from career development advice while the group executive gain valuable insights about the challenges that women often face as they move up the career ladder.

4.3.3 Working conditions in construction: long working hours

One of the key problems identified with working practices in construction is the long-hours culture and expectation of total availability and 'presenteeism'. This is one of the key issues concerning gender equality because, as Ness (2012: 668) argues: 'the exclusion of women both enables and condemns men to work long hours'. Ness makes reference to the unpaid labour of women in the domestic sphere that enables (and obliges) men to 'give their all' in the workplace. Long hours working is therefore not only an obstacle to women's participation, but the product of their historical exclusion from the world of work.

Research on major projects (including Wembley and T5) in London confirms the long hours of work. As stressed by the Greater London Authority (2007: 94):

> The long, irregular working hours and travel times often required in construction act to exclude many people from working in the industry due to the difficulty of combining work with domestic and other responsibilities. These work patterns underpin the preference for engaging mobile workers…and hampers the development of a sustainable London labour market.

The GLA recommended that regional public authorities, industry lead bodies and unions should discuss:

> How it may be appropriate on major projects to promote stable working hours and shorter travel times in conformity with Working Time Directive requirements, clean environment and transport policies, effective health and safety procedures and measures, and minimising disturbance to the general public.

Indeed, diversity research identifies the long-working hours' culture as one of the key impediments to the integration of women: experienced women leave the industry in order to 'escape' the long working hours, especially after having children. People in the industry work many hours more than their contract states, and 'face time' is still a core part of the working culture, with long hours seen as an indicator of commitment and therefore used as a pre-requisite for promotion (Wright *et al.* 2014).

Men feel less of an obligation to be in the office during their contracted working hours and are also more likely to believe that their workload cannot be managed within their contracted working hours.

Although these findings are inconclusive in terms of the extent to which men and women are able to reconcile their work and out of work commitments, the qualitative responses given in Section 4.3.7 below on flexible working are more revealing in terms of the improvements that respondents consider would help maintain work/life balance.

4.3.4. Flexible work practices and diversity

In order to benefit from a diverse workforce, organizations' diversity policies address work-life balance (WLB) and flexible work arrangements (FWA), which have been found to encourage equity and social inclusion (Ryan and Kossek, 2008; Barbosa and Cabral-Cardoso, 2010, Lewis et al., 2007). While flexible working is seen as positive for diversity, it sits uneasily with the concept of work commitment and the ideal worker: managers may be reluctant to facilitate working patterns that lead to employee inaccessibility (such as part-time work) (Haas and Hwang, 2007; Holt and Lewis, 2011). The negative connotation of flexible working is strong, and has an impact on career development and reward. Cultural norms also make it difficult for men and women to take-up formal opportunities for family-friendly working policies (see for example, Devine, 1992; Elvitigala *et al.*, 2006; Etzkowitz *et al.*, 2000). This may be one of the main reasons why flexible-work is underutilised (Lewis, 1997; Kossek *et al.*, 2010, Kirby and Krone, 2002; den Dulk and de Rujiter, 2008; Brown, 2010).

Specifically relevant for the construction sector is Hart and Roberts' (2011) research on losses in female employment, which indicates that the UK science and engineering sectors 'lose' (ie leavers from the workforce) their female workforce at a much higher rate than other sectors. They suggest that a major contributing factor to this loss is the lack of part-time work opportunities, which is at its most extreme in the engineering sector. In 2010, only 12% of female engineering professionals worked part-time compared with 42% of all UK female employees.

The lack of flexible working as an opportunity to balance work and caring roles is a key element in explaining female retention problems. This has been highlighted by the European Commission (2013), which refers to not only the 'glass ceiling' but also the 'maternal wall' (barriers faced by mothers at work or seeking work (see Swiss and Walker 1993), hindering women's progression. That such barriers exist is not always corroborated: conflicting evidence emerges from studies conducted in the USA (National Science Foundation/Center for Science and Engineering Statistics, 2013).

Flexible working also appears to impact negatively on reward: A study by Bilbo *et al.*, (2014) on construction workers in the US shows that being married and having children are negatively correlated with managers' salaries. However, they go on to highlight that:

> The wage disparity between men and women in construction is the second lowest of any industry in the United States; for female project managers the wage penalty for mothers is lower, and most female project managers are able to return to their jobs after maternity leave, in some cases even earning higher salaries. Yet female participation in construction management remains very low (Bilbo *et al.*, 2014: 266)

Therefore, in the US at least, women are not returning to work after having children despite relatively low wage penalties for mothers.

Smithson and Stokoe (2005) and Kamenou (2008) suggest that FWA requests from potential recipients are influenced by social norms, limiting the extent to which there is uptake across the range of social groups and the degree to which WLB can be achieved: there is still a perception, for example, that men 'don't normally do flexible working', while part time working patterns do not fit with male managerial beliefs of what constitutes 'normal' working arrangements.

In conclusion, FWA are often insufficiently utilised, due to inhibiting cultural and structural barriers such as perceptions around career development and the impact of managerial control (Fleetwood, 2007; Lewis *et al.*, 2009; Brown, 2010; Holt and Lewis, 2011). Organisational support, cultural awareness and workplace practices are essential for successful policy delivery and take-up (Gregory and Milner, 2009; Sippola, 2007; Myers and Dreachslin, 2007; Leveson *et al.*, 2009).

4.4. Organisational environment

The 'masculine' nature of the work environment, especially on-site work, characterised by the dominant ''football and families' culture' with humour and sexualised banter in the workplace common, can prevent female inclusion (Faulkner 2009). In some cases successful integration is perceived as dependent on assuming 'male' behavioural norms and intensified work patterns because ''belonging' in construction workplace cultures is highly gendered' (Watts, 2012: 1). Although assimilation into masculine cultural norms might benefit the careers of individual women, it is unlikely to promote gender equality more generally (Greed 2000).

It has recently been suggested that both hard and soft skills are crucial for women to be successful in the UK construction industry (Fernando *et al.*, 2014). Language used in everyday talk and in reports etc. can reinforce stereotypes around gender and engineering (Faulkner 2006). Discourses, meanwhile, can reproduce dominant ideologies, even when apparently trying to tackle them (for example 'most jobs in construction can be done by women') (Ness 2012).

Organisational characteristics have a significant impact on gender inequality. While HR departments produce a number of initiatives to improve diversity, such as awareness training in recruitment or networking, obstacles to greater inclusion of women remain. Lee and Faulkner (2010) list a range of organisational barriers that fall within HR. A study by French and Strachan (2013), for instance, that looked at equal opportunities policies in construction in Australia found that few companies are proactive in their approach to gender equality measures, except in relation to sexual harassment (which is lf a response to legislation). These authors also analysed the number of women in management and the company's equality strategies and found that there is no correlation between the two: having more advanced

equality policies does not equate to greater representation of women in management positions.

In the UK, data from the Workplace Employment Relations Survey (WERS) provide evidence that fewer STEMM workplaces have formal diversity policies than in the some other parts of the economy, although it is important to acknowledge that policy statements do not necessarily reflect practice (they could be 'empty shells', as shown by Hoque and Noon (2004)).

4.4.1. Internal and external networking

Those in the minority in the construction workplace can find themselves excluded from informal networks, which are crucial to becoming accepted in the workplace. Informal networks are not only a feature of recruitment, but also play a role in gaining work experience and career progression (Loosemore *et al* 2003; Craw *et al*; 2007). The lack of supportive networks acts as a barrier to women's career success in construction (Worrall, 2012). Largely, networks are based on male interests or spheres that have traditionally excluded women, and feature unwritten rules that have been constructed by men (Singh *et al*, 2002: 77).

But HR diversity initiatives, such as women's networks and mentoring programmes, do not offer the obvious solution to issues around networking as women may prefer to build reputation through hard work and 'fitting in' rather than schemes that directly address the need for networking. These female networking opportunities do not challenge existing structural obstacles such as existing power structures, or lack of access to the decision making groups, and therefore show little advantage (Sang and Powell 2013).

4.4.2. Monitoring/evaluation of implementation and impact of policies

While diversity is established as a good practice policy in most sectors in the UK, there is a gap in terms of monitoring and evaluating the impact of these on recruitment; progression of careers and performance. Useful concepts such as the 'diversity scorecard' (Hubbard, 2004) and metrics of diversity density have been developed, but there is little evidence of these concepts being used and the extent of full 'diversity auditing', as recommended by Pearn Kandola (eg 2006), is not known.

Benchmarking diversity monitoring data against other organisations is a technique used in the STEMM sector. But, overall, organisations are relatively unsophisticated in the collection and analysis of diversity data: they may capture raw data from job applicants and staff (which may be of questionable quality) but they may not do much with the data, and are certainly unlikely to compare it to measures of organisational performance (CIPD, 2007, 2006). The use of diversity measures in organisations is only extensive in those organisations that are at the forefront.

Defining and measuring diversity is also not straight-forward and prone to producing data that need to be used with care; measures of performance are clearly context-specific; and measures of individual performance are inherently unreliable for cross-organisational comparisons (Wright *et al*, 2014).

With respect to the reliance on established informal networks and the lack of transparency and accountability in relation to diversity, subcontracting and retention processes, the GLA (2007: 91) made the interesting recommendations, that regional public authorities work with the CITB, employers and unions to:

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- Promote employment of dedicated managers/coordinators to work on large sites with a remit for promoting different methods of sourcing applicants and ensuring equal opportunities in recruitment and subcontracting;
- Consider ways of incorporating suppliers' track record in equal opportunities and diversity performance as part of tendering processes for contracts;
- Promote the appointment of equality representatives to be kept informed of recruitment and retention processes and to liaise with workers from target groups on issues of concern such as discrimination.

4.4.3. Employee involvement

Much research has addressed the role of trade unions in gender issues (for instance, Cockburn 1991; Dickens 2000; Kirton and Greene 2002; Wajcman 2000). Colgan and Ledwith (2002) provide an international overview of unions and the promotion and participation of women, revealing a wide range of different agendas across the globe. Research on women's groups or committees in unions confirms their role as catalysts for change, contributing to an environment where 'women can develop strengths and advance their concerns' (Foley 2003; Parker 2003).

Studies by Munro (2001) and McBride (2001) in the UK indicate that women's equality and employment issues have become part of the central agenda of unions such as Unison, which operate in areas of high female employment. The actions of trade unions to promote the participation of women and the incorporation of gender equality issues can, however, be summarized as more reactive than proactive. However, recent developments indicate the potential for change as the Union of Construction, Allied Trades Technicians (UCATT), has (2014) set up its first Women's Network Forum and also publishes *Women in Construction* Newsletter. A survey of the gender equality agenda in construction at skilled operative level addressing the European construction social partners (employers and trade unions) across Europe found that the construction industry still displays inertia and conservatism, and that the social partners corroborate rather than counter this in those policies, collective agreements and practices that play a role in women's integration. Together they express a 'discourse' of gender equality, but this does not automatically lead to equal opportunity policies or programmes, though they have the platform to make inroads and to change the industry from within (Clarke *et al* 2005).

5. Conclusions and Recommendations

Women are very poorly represented in the construction sector as a whole. The reasons for this are complex and multifaceted, but include both structural and cultural barriers such as: the poor image of the sector; a lack of formalised recruitment practices and procedures; the paucity of mentoring and role models; male dominated and oriented training programmes; the fragmentation of employment; male-oriented homo-social networking and social activities; a lack of flexible working and work-life balance possibilities; and enduring traditional stereotypes and sexist attitudes. The persistence of traditional full-time career patterns and trajectories also reinforce gendered assumptions about careers in the industry. Addressing these deeply rooted structural and cultural issues represents a significant challenge for the industry, and relatively little progress has been made over the last 30 years.

5.1 Key Recommendations

5.1.1 Overarching principles

A set of high level principles should inform specific actions

Ensuring senior management support and mainstreaming equality through management practice - Securing senior level support is critical to success in meeting objectives. This must extend beyond statements of the importance of gender equity within the organisation, to the mainstreaming of the equity agenda in all key policy areas. Reviewing policy areas for opportunities in this regard represents an important first step in embedding a culture of equality throughout the business. The success of embedding quality as normal business practice must then be regularly monitored and reviewed.

Promoting equity as integral to good HRM practice - Many initiatives proposed within this report could be described as good, gender-neutral human resource management practice. For example, direct employment, open and transparent recruitment processes, mentoring schemes and flexible working practices benefit all employees and care should be taken to ensure that the broader benefits are promoted to all employees in addition to the equity related aspects.

Extending influence – It is important that the principles of good practice established and routinized are not only propagated throughout the supply chain, but are also mandated through contract compliance

Creating a diversity working group – The employment of a dedicated equality manager and the creation of a group to champion equity initiatives are widely advocated. Such a group would need to be populated by a stratified group of employees to ensure representation from across the business. This group would act as a hub for overseeing and capturing learning from equity initiatives as they are developed and trialled. It would also enhance the visibility of the initiatives across the business.

Building on good practice and demonstrating sector-wide leadership – Initiatives trialled at the Olympics such as the Women in Construction scheme, and the range of measures developed by Cross Rail have provided exemplars that can be emulated and extended.

5.1.2 Specific actions for promoting equity

In addition to these overarching principles, a range of specific actions have emerged through the study that could yield immediate benefits.

Promoting work-life balance via flexible working practices
Healthy work-life practices benefit all employees as well as fostering gender equity and help raise the image and profile of the Project as an attractive employer. In order to encourage healthy work-life practice the project should:
• Regularly monitor the working hours of employees to ensure their well-being and the effectiveness of their wider employment policies
• Consider the introduction of core working hours to ensure availability at certain times of the week for meetings, but with flexibility at other times
• Consider taking into account the time spent working during commuting to work
• Consider the provision of childcare places near to the office
• Offer seminars explaining the policies, how they operate and how they can be exploited by all employees
• Create further opportunities for part-time and flexible hours working where appropriate
• Develop a clear policy around home-based working for all employees

Mentoring and career support

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Proactively supporting employees with both informal and formal advice and mentoring helps to foster an internal culture of career support. Other career enhancing measures might include:

- The sponsorship of female students as part of a structured training programme allied to the mentoring scheme
- The provision of work placements to provide first-hand experience to potential candidates of the Project environment
- The promotion and training of administrative and non-technical staff (where there is greater representation of women) to help move them into technical roles
- Actively supporting senior women in acting as role models for less senior employees

Communicating equity policy
Intentions with regards to equity and inclusion need to be carefully communicated with the dual benefit of embedding a culture of equity, thereby helping to retain the best employees, and increasing attractiveness as a potential employer to external candidates in the future. Consideration can be given to:

- Creating a suite of equality and diversity training interventions, which can in many instances be embedded into the normal training provided to staff. Particular provision to support gender equity can include sessions on unconscious bias, role-playing scenarios and training for potential mentors
- Targeting the communication of policies at the specific groups who they aim to benefit. This will mean tailoring the dissemination approach to account for where staff are based and to their particular needs, and should also signpost them to specific support
- Creating and encouraging informal social networks accessible to women working within, or aspiring to work in, the construction professions
- Creating and leading a sector-wide employers' 'Good Practice Forum' to showcase effective diversity training and development programmes
- Developing an annual event aimed at celebrating diversity as something that is enjoyable and fulfilling, and a way of bring the workforce together around an agenda of mutual interest and importance

Policy enforcement
Without sanctions, some initiatives developed are likely to remain rhetorical. In terms of the enforcement of policies, consideration should be given to:

- Setting robust equality targets against which progress can be monitored. These should be realistic but challenging relative to sector averages and should include regular and transparent audits of pay
- Increased monitoring of information on employment practices and career progression such as the use of fixed-term contracts, flexible working arrangements and requests, and the progression of different groups through the organisation
- The routine evaluation of gender balance of teams as part of the internal performance review process
- Introducing a 'gender audit template' for evaluating particular departments and areas of the business to provide a framework for data collection, analysis and evaluation, demonstrate the need for equality measures, and act as a management tool to try and assess impacts of actions going forward
- Employing dedicated managers/co-ordinators of the gender equity policy at strategic positions, charged with responsibility for policy enactment and accountable for performance against the targets set
- The nomination of equity champions to act as points of contact and to represent the interests of particular groups.

- Including specific equity requirements in contracts and incorporating an evaluation of suppliers' diversity track records as part of the tender evaluation process
- Where appropriate, mobilising wider institutional pressures on the equality agenda, particularly in relation to discriminatory behaviour, or breaches codes of professional conduct for which externally enforced sanctions already exist

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