

**INNOVATIONS IN THE 2004 WORKPLACE EMPLOYMENT
RELATIONS SURVEY**

Editors

Keith Whitfield and Katy Huxley

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The WERS2004 research team are to be commended for upholding the strong WERS survey tradition and the WERS2004 steering group for the strong direction that they gave to the project.

The specialist team members, both those involved in this project and those not, are to be thanked for making insightful recommendations for change.

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Innovations in the 2004 Workplace Employment Relations Survey

Keith Whitfield¹

1. Introduction

The 2004 Workplace Employment Relations Survey (WERS2004) is the fifth in a series of nationally representative surveys of workplace industrial/employee/employment relations that date back to 1980. WERS2004 has been developed by four sponsors – Economic and Social Research Council, the Department of Trade and Industry, the Arbitration and Conciliation Advisory Service and the Policy Studies Institute.

The WERS series is regarded as world-leading in its field and has underpinned a substantial volume of high-quality research by British and overseas authors (Forth et al., 2004). The latest survey contains many innovations relative to its predecessors. A number of these result from the work of the specialist teams set up by the survey's Steering Group, funded by ESRC and DTI.

The aim of the Innovations project reported in this volume is to highlight the work of these specialist teams and to disseminate the key findings that stem from their unique contribution. It contains contributions from team members that summarise their innovations, explain why they introduced them and indicate what the preliminary findings suggest. In so doing, their contributions emphasise that the latest in the WERS series is as innovative as its predecessors, and will thereby further enhance the esteem in which the WERS series is held.

2. The WIRS/WERS Series

The WIRS/WERS series spans twenty-four years of data-collection and is now in its fifth survey. It is used by researchers throughout the world and its analysis often allows the addressing of questions that cannot be tackled by researchers using data pertaining to their own countries. Many of the papers which use WERS98 data are by North American researchers and are published in North American journals.

Each successive survey has a distinctive focus, reflecting the key issues presenting themselves at the time of its conception. The current survey has been especially directed towards the recent attempts to develop union-management partnership agreements at the workplace and the imminence of the European Information and Consultation Directive. The lower size threshold has also been extended downwards to establishments with just five employees (following the successful reduction from 25 to 10 employees in WERS98). A financial performance questionnaire has been trialled and a wide range of new questions on employee well-being, governance and dispute resolution have been introduced.

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3. WERS5 Design and Development

At an early stage in the WERS2004 planning cycle, it was decided that continuity with the previous survey (WERS98) would be the hallmark of the fifth WERS rather than change. The rationales for this were that:

- 1) WERS98 represented a major change from its predecessor (and that further large-scale change could potentially destroy WERS's distinctive identity);
- 2) large-scale change could inhibit the development of a 24 year data-set covering two distinct phases of ER development in Britain and;
- 3) the broad WERS community was happy with WERS98.

The academic consultation exercise raised some doubts about the desirability of too much continuity and, in particular, indicated that there were areas in WERS98 that were deemed to be short of the standards achieved in equivalent surveys in the UK and elsewhere. In general, it became clear that the academic community wished for more attention to be paid to improving WERS as a stand-alone survey as opposed to one which can map change over time. Indeed, the feeling was that the former did not fundamentally compromise the latter.

Those undertaking the fifth WERS survey had a strong reputation to maintain. The first four surveys in the WERS series had widely acknowledged as leaders in their field, and had been the basis of a high volume of insightful research. A strong and experienced research team was established led by Barbara Kersley of the Department of Trade and Industry, composed of Helen Bewley (Policy Studies Institute), Alex Bryson (Policy Studies Institute), Gill Dix (ACAS), John Forth (National Institute of Economic and Social Research, on secondment to DTI), Carmen Alpin (DTI), and Sarah Oxenbridge (ACAS).

The WERS2004 Steering Group decided to set up six specialist teams to examine key areas of concern raised in the academic consultation exercise and, to a lesser extent, in the other consultation exercises. These focused on: the inclusion of small establishments in the survey; partnership arrangements; the worker representative questionnaire; job satisfaction, stress and skills; organisational performance and technology; governance and issues beyond the workplace. The full Steering Group was involved in the selection of the members of these teams and in setting their terms of reference. The membership of each team is outlined in the appendix to this chapter. Each team was led by ESRC's Senior Academic Consultant to the fifth WERS project, Keith Whitfield.

Each team reported to a deadline set by the Steering Group. It should be noted that these deadlines were very tight. Many of the teams' recommendations were adopted by the research team.

4. Key Innovations in WERS2004

The key innovations introduced into the 2004 survey are as follows:

- 1) Extension of the lower-size threshold for inclusion in the survey from ten-employee to five-employee establishments.
- 2) Introduction of a range of questions concerning the development of union-management partnership arrangements in Britain.
- 3) Development of a financial performance questionnaire to be distributed after the main management questionnaire, to be completed by a manager responsible for financial matters. These relate to more “objective” aspects of performance than those in previous surveys.
- 4) Development of new measures of technology.
- 5) Inclusion of questions on aspects of the establishment’s governance structures and the influence of the wider organisation in multi-establishment organisations.
- 6) Refinement of the questions on employee share-ownership schemes to more closely reflect the underlying legislation.
- 7) Complete redesign of the worker representative questionnaire, both to try and obtain more responses from non-union representatives and to anticipate the introduction of the European Information and Consultation Directive.
- 8) Re-design of the self-completion employee questionnaire in relation to questions on job stress, worker satisfaction, skills and earnings.

5. This Collection of Papers

The key aim of this collection of papers is to highlight the main changes introduced into the WERS2004 survey by the specialist teams. It thereby indicates key areas in which innovative WERS-based research work can take place. Additionally, by outlining the rationales behind each of the innovations it gives an indication of what was motivating the changes proposed and therefore the literature that the innovation builds on. This will allow all of those researching in this area to better locate the work that they are doing. Possibly most importantly of all, the collection indicates what can be achieved in terms of survey design and development when an experienced and skilled research team works in harmony with teams of specialist advisers who have a keen interest in the quality of the final product. Hopefully, herein will be lessons not just for any future WERS surveys, but also for all such activities taking place at the interface of academic, policy and practice-based research.

Appendix: WERS2004 Specialist Advisory Teams

Small Establishments Team

Robert Blackburn (Kingston Business School); Rob Rutherford (Small Business Service, DTI); David Storey (University of Warwick).

Governance/Beyond the Workplace Team

Simon Deakin (Cambridge University); Paul Edwards (University of Warwick); Paul Marginson (University of Warwick); Andrew Pendleton (Manchester Metropolitan University).

Worker Representative Questionnaire Team

Andy Charlwood (formerly University of Kent, Canterbury; now Leeds University); Riccardo Peccei (Kings College London); Mike Terry (University of Warwick).

Skill/Satisfaction/Stress Team

Francis Green (University of Kent); Mike Rose (Bath University); Stephen Wood (University of Sheffield)

Performance/Technology Team

Richard Harris (formerly University of Durham; now University of Newcastle); Stephen Machin (University College, London); Robert McNabb (Cardiff University).

Partnership Specialist Team

William Brown (University of Cambridge); David Guest (Kings College London); Sarah Oxenbridge (formerly University of Cambridge; now ACAS)

Reference

Neil Millward, Stephen Woodland, Alex Bryson, John Forth, Simon Kirby and Lisa Stokes (2006). *A Bibliography of Research Based on the British Workplace Industrial Relations Survey Series*. London, National Institute of Economic and Social Research. [<http://www.wers2004.info/pdf/wersbib2006.pdf>].

Ownership, Governance, and Employment Relationships: the contribution and potential of WERS

Andrew Pendleton¹ and Simon Deakin²

1. Introduction

There has been a huge growth of academic and policy interest in corporate governance in recent years. This has been reflected in the emergence of an interest in the impact of ownership structure and corporate governance practices on labour and the employment relationship (eg Blair and Roe 1999). This emphasis complements the emphasis on the potential role of product markets as determinants of industrial relations practices that emerged in the 1980s. Although there has been a rich vein of scholarship on the nature of these relationships, there has been relatively little empirical work so far. Much of the work has been on national, 'systems' level, and there is a need to investigate the hypothesised relationships at firm and workplace level within national economies.

This paper explores the contribution and potential of the Workplace Employment Relations Survey in this area of interest.³ It first reviews work generated from the series noting that, aside from early work on the IR practices of multinationals and a stream of work on employee share ownership, WERS has been under-used for analysis of ownership and governance. It then looks at recent changes in the legal and regulatory framework affecting the relationship between employment relations and corporate governance and considers their relevance for analysis of WERS. After that it outlines the changes made in WERS 2004, and suggests that this enhances the potential of WERS in this area. The paper then provides a couple of examples of how WERS can be used. The first is a brief empirical review of findings relevant to the impact of stock market listing on workplace employment practices. The second considers the impact of ownership structure on managerial remuneration. Both are intended as illustrative examples of what WERS can do rather than definitive analyses of these topics. Finally, the paper highlights the inevitable limitations of a workplace survey for analysis of corporate-level phenomena but nevertheless puts forward some recommendations for improvement in the next WERS survey.

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³ The series has changed its name twice in its twenty six year history. It started as the Workplace Industrial Relations Survey (WIRS) but changed to the Workplace Employee Relations Survey in 1998 (WERS). In 2004 it changed again to the Workplace Employment Relations Survey. For ease of presentation we will refer to the series as WERS throughout.

2. Research on the impact of ownership and corporate governance on employment relations

The influence of ownership and corporate governance has been a long-standing, though often muted and implicit, area of interest in industrial relations research and scholarship. Recently, however, there has been a significant growth in activity, and a variety of strands of work can be discerned. The stakeholder literature, primarily interested in how political economy and business organisation intersect, has shown how ownership and governance affect what firms do. It has been argued that the structure of ownership and patterns of governance in countries such as the UK and US affect HRM in a number of ways, primarily because a need to prioritise shareholder and financier interests means that firms have a lower capacity to commit to their employees (Porter 1997; Hutton 1995). In a not dissimilar vein, the emergence of the 'varieties' literature from comparative political economy has emphasised systemic complementarities between institutions, and has highlighted the interaction of ownership, governance, and labour relations (see Hall and Soskice 2001). This has spawned a number of national-level studies exploring the relationship between ownership, governance, and employment systems (eg. The studies in Gospel and Pendleton 2005). There has also been a great deal of interest within this strand in the extent and potential for convergence of national systems, especially of 'coordinated market economies', such as Germany and Japan, towards Anglo-American systems (Lane 2003).

At the same time, comparative quantitative studies have emerged, exploring the relationship between ownership structures and legal systems (La Porta et al 1998, 2000), including labour law systems (Ahlering and Deakin 2005), and between equity markets, job tenure, and payment systems (Hall and Gingerich 2001; Black et al 2006). Firm-level studies, either in the form of case studies or quantitative investigations of large number of firms, have been less in evidence. There have been just a few case studies of the impact of corporate governance on employment relations in the UK (Deakin et al 2002) and elsewhere (eg. Hopner and Jackson 2001; Vitols 2002). Quantitative studies have been mainly found in US labour economics, and have tended to focus on the role of finance in influencing employment levels and pay-setting (Hanka 1998; Sharpe 1994). In the US there has also been a body of work over a longer period on the labour effects of mergers and takeovers (Lichtenberg and Siegel 1990; Rosett 1990). Finally, there has been a resurgence of interest in the role of multinationals and how far the practice of employment relations in subsidiaries of multinationals is governed by the practices of the country of ownership and control (Almond et al 2005; McDonald et al 2003).

These literatures tend to share a number of common preoccupations though there are differences in focus (national systems vs. firm level). The key ownership dimensions of interest include the structure of ownership (dispersed vs. concentrated) and the identity of owners (family, institutions, small investors, employees etc) whilst key instruments of governance include board structures and composition, executive remuneration systems, and (in Anglo-American systems) mergers and acquisitions.

What has the WERS series contributed to scholarship in this area, and what potential does it have to make a greater contribution? Before answering this question, it is important to register a 'health warning'. WERS is a *workplace* survey, whilst ownership and corporate governance are primarily *company* level phenomena. It is difficult to do justice to any of these phenomena in a workplace-level study. However, the key contribution that WERS can make is to illustrate how these corporate-level phenomenon influence practices at workplace level. Throughout the WERS series, there have been a number of questions (in Section A of the management questionnaire) that deal with ownership. These have asked about the country of ownership, the legal form of the company owning the workplace, the national location of Head Office, and the presence of concentrated ownership. Later in the paper we will show how some of these questions, including innovations in WERS2004, might be used to address issues arising from ownership and governance. Before that we review the history of WERS-based research into ownership and governance, and then outline the content of the new questions introduced in 2004.

Despite the potential in WERS, the level of activity in this area has been fairly low. Analysis of the WERS bibliography (National Institute of Economic and Social Research 2006) shows that WERS-based output tends to reflect the broader and primary preoccupations of the discipline at any given time. So, in the early 1990s there was a great deal published on unions, their impact (eg. Denny and Nickell 1992), and their decline (Disney et al 1995). In the 2000s, papers on high performance workplaces, employee participation, and performance are perhaps the dominant strands of WERS-based work (eg. Bryson et al 2005; Bewley et al 2005; Addison and Belfield 2001), though evaluation of the impact of unions (eg. Boheim and Booth 2004) and influences on union effectiveness (Charlwood 2004) continue to loom large.

Nevertheless, two governance-related themes can be discerned in WERS-based output over the duration of the series. Periodically, WERS has been used to explore the IR/HR practices of foreign-owned workplaces. Indeed, some of the earliest work using WERS compared the industrial relations practices and comparative pay levels of domestically-owned and foreign-owned firms (Buckley and Enderwick 1983; Enderwick and Buckley 1983a; Enderwick and Buckley 1983b; Blanchflower 1984; Enderwick 1985). The impact of foreign ownership has surfaced intermittently since with papers by Milner and James (1994) and Driffield (1995). Recently, there has been a modest resurgence of work in this area with papers published on employees' experience of working for overseas multinationals (Sutherland 2003), the impact of foreign ownership on the use of micro-electronic technology and skills (Ta Velde 2003), and the relationship between foreign ownership and wages (Ta Velde 2002).

The WERS sourcebooks have also commented briefly on this issue: the report on the 2004 survey shows that in the private sector collective bargaining incidence is higher in foreign-owned workplaces (17 per cent compared with 13 per cent), and that total employee coverage is 32 per cent compared with 23 per cent (foreign-owned workplaces are on average larger than domestically-owned workplaces) (Kersley et al 2006: 181-2). There is also some initial evidence that foreign ownership has a favourable impact on value added and sales per work (Kersley et al 2006: 300).

More consistently through the series, there has been a stream of work on employee share ownership. The main topics of interest have been the correlates and determinants of share plans (Beaumont and Harris 1994; Pendleton 1997), their impact on performance (Fernie and Metcalfe 1995; McNabb and Whitfield 1998; Addison and Belfield 2000), and their relationship to other forms of employee participation (Gregg and Machin 1988; McNabb and Whitfield 1999). Recently, research in this has highlighted the role of employee stock ownership as a form of governance (Robinson and Zhang 2005; Pendleton 2005). The WERS sourcebooks have also consistently presented information on the diffusion and correlates of share ownership plans. Share plans increased in incidence during the 1980s but then declined somewhat in the period up to WERS1998. The WERS2004 analysis observes that incidence in 2004 is similar to 1998, and also shows how incidence rises with organisational size (Kersley et al 2006: 191-2).

Other ownership and governance issues that have occasionally been investigated using WERS include the impact of takeovers and the HR effects of family ownership. Hall and Pickering (1991) investigated the impact of takeovers on the performance of acquired plants, finding that takeovers lead (at least initially) to relatively poor financial performance but rising sales. Unfortunately, the paper did not assess the impact on industrial relations and HR practices. More recently, Harris et al (2004a, 2004b) have examined employee involvement and consultation practices in family-owned businesses.

Finally, work has emerged recently which has explicitly focused on the relationships between ownership, governance, and HR practices. Konzelmann et al. (2006) construct a theoretical model of HR and corporate governance, building on the suggestion that 'organizations which have a dominant external stakeholder, such as PLCs and public sector organizations, may be constrained in their ability to implement and maintain commitment-based HRM systems', because 'the meeting of remote stakeholders' demands may prevent managers from making credible commitments to employees which in turn inhibits their ability to secure the full cooperation from their workforce that is required for effective HRM'. They then test various hypotheses using WERS98, dividing the sample into four categories: public sector, PLC, owner-managed firms, and private-sector other. The findings are complex but suggestive of a significant role for ownership and governance. Analysis of the management survey finds that PLCs have a stronger managerial commitment to HRM practices than the other forms, and also exhibit a higher level of employee consultation. Corporate governance form is a less powerful predictor of HRM practices and outcomes when the employee questionnaire is analysed. The most significant finding here is that the public sector reports a higher degree of commitment by employees to the values of the organisation, but also high levels of work pressure, low levels of job satisfaction and poor job quality.

Thus work on ownership and governance has only recently begun to address the question of the impact on employment relations in a systematic way. The growing interest in this field reflects the increased importance attached to it by policy makers. We will briefly examine some recent developments in the legal and regulatory framework before reviewing the changes made in the 2004 WERS and going on to show how WERS can be used to address

the question of the impact of corporate governance structures on employment relations and outcomes.

3. Issues arising from some recent changes to the legal and regulatory framework

The UK is often characterised as a system which closely adheres to the principles of shareholder value, along with the US, in contrast to the stakeholder orientation of mainland Europe and East Asian countries. In fact, legal and institutional aspects of UK corporate governance are arguably less sharply focused on a norm of shareholder primacy, to the exclusion of employee interests, than this description implies (see Armour et al., 2003). The influence of European Union law is pulling UK practice closer towards forms of employee participation which are found in continental systems. Laws mandating information and consultation with employee representatives over redundancies and business transfers were significantly strengthened in the mid-1990s, when they were no longer confined to workplaces with trade union recognition, and legal sanctions for their breach were tightened up. Case studies carried out by Armour and Deakin (2003) suggested that these laws could have a substantial impact on corporate restructurings, empowering employees in such a way as to qualify the rights of shareholders and creditors, and could also affect the outcome of reorganisations. Thanks to the recent implementation in UK law of three European Directives – on European Works Councils, Information and Consultation of Employees and employee representation in the *Societas Europaea* or European Public Limited-Liability Company – there is now legal provision in a range of contexts for information and consultation of employees and employee representatives on a continuing basis, and not just in one-off situations such as large scale redundancies (see Deakin and Morris, 2005: ch. 9). In the context of takeover bids, new legal requirements have been introduced for the provision of information to employee representatives concerning the effects of mergers and takeovers on employment conditions, under the terms of the Thirteenth Company Law Directive. These provisions fall a very long way short of mandating codetermination along German lines – there is no prospect of mandatory employee representation on boards coming out of the EU any time soon – but they do illustrate the increasing juridification, through labour law, of managerial decision-making on matters of corporate structure, which not long ago were entirely within the commercial sphere. They also suggest a growing gap between UK and US practice on the issue of stakeholder relations.

A second force for change in the UK system is the Company Law Review which was initiated by the current government almost a decade ago, and which has finally borne fruit in the Companies Bill 2006. This is the most significant reform to company law for several decades, not simply in terms of its considerable scale and complexity, but also by virtue of its incursion into the core areas of directors' duties and the definition of the company interest. The Company Law Review Steering Group recommended the introduction into company law of a concept of 'enlightened shareholder value' to express the idea that the board's task was to strike a balance between the competing interests of the different stakeholders, in order to benefit the shareholders in the long run (Company Law Review Steering Group, 1999: 37). It accordingly proposed a restatement of directors' duties in which there would be '[a]n obligation on directors to achieve the success of the company

for the benefit of the shareholders by taking proper account of all the relevant considerations for that purpose' including 'a proper balanced view of the short and long term, the need to sustain effective ongoing relationships with employees, customers, suppliers and others; and the need to maintain the company's reputation and to consider the impact of its operations on the community and the environment' (Company Law Review Steering Group, 2000: 12; see also Company Law Review Steering Group, 2001: 41).

Clause 173 of the Companies Bill 2006 was accordingly drafted to provide that:

(1) A director of a company must act in the way he considers, in good faith, would be most likely to promote the success of the company for the benefit of its members as a whole...

(2) In fulfilling the duty imposed by this section a director must (so far as reasonably practicable) have regard to –

- (a) the likely consequences of any decision in the long term,
- (b) the interests of the company's employees,
- (c) the need to foster the company's business relationships with suppliers, customers and others,
- (d) the impact of the company's operations on the community and the environment
- (e) the desirability of the company maintaining a reputation for high standards of business conduct ,and
- (f) the need to act fairly as between the members of the company.

The new provision replaces section 309 of the Companies Act 1985, which previously provided that directors, in exercising their duties, were required to consider the interests of employees as well as shareholders. This is now subsumed into the reference to employees' interests in paragraph (b). The repeal of section 309 could be regarded as signalling a weakening of the employee interest, which is now simply one of a number of considerations which directors must take into account; but since section 309 was regarded as having no discernible impact on managerial decision making (see Deakin et al 2002a), its demise probably does not matter much. Of greater significance is the introduction of new legal remedies for the enforcement of directors' duties: the Bill eases restraints previously imposed on legal actions by shareholders against directors. In the context of listed companies whose shares are sold to the public at large, employees who are also shareholders could challenge board decisions which impact negatively on labour interests; it has been the subject of criticism from employer organisations on precisely these grounds. Because a court can halt shareholder-driven litigation in a case where it can be shown that a person acting with regard to the company's interests would not pursue it, it is unclear whether this is a real possibility; but it seems highly likely that board-level deliberations will in future be more focused on the impact of managerial decision for employees.

The Steering Group also argued for a new statutory requirement for listed companies (and certain other 'very large companies with real economic power') to publish an operating and financial review (OFR) as part of their annual reports. The OFR was meant to 'cover all

that is material in the directors' view for users to achieve a proper assessment of the performance and future plans and prospects of the business' including 'where relevant its relationships with employees and others and its impact on the community and environment' (Company Law Review Steering Group, 2000: 13). Legislation making the OFR mandatory was duly enacted but before it could come into effect the government announced in December 2005 that it was withdrawing the measure, following lobbying from the CBI (among others), on the grounds that it added to 'red tape'. Then in February 2006 the government announced that it was reconsidering its position in the light of litigation initiated by the NGO, Friends of the Earth, claiming that there had been a failure to consult relevant parties on the repeal of the law. A new version of the OFR has now been introduced into the Companies Bill 2006. Although this version does not contain the same requirement for companies to carry out a forward-looking review as before, and possibilities for litigation against boards in the context of the OFR are to be strictly limited, it still has the potential to shift board-level practice in the direction of a more explicit consideration of employee and other 'stakeholder' interests.

A third area of importance for the legal and policy framework of corporate governance concerns the growing level of engagement by pension funds and other institutional shareholders on issues of corporate social responsibility (CSR), including employee relations. An impetus towards shareholder activism was provided by the publication of policy papers on CSR by the European Commission and DTI in the early 2000s (Commission, 2001; DTI, 2001). A change to regulations governing pension funds, made in 1999 and coming into effect in 2001, encouraged greater disclosure of the extent to which funds took 'social, environmental and ethical' considerations into account in investment decisions; the Association of British Insurers has commented that this provision has had a 'significant and wide-ranging impact on the investment community...[and has] added significantly to the growing Socially Responsible Investment (SRI) movement' (ABI, 2001: 13). There are problems with the idea that shareholders should or will take action to require listed companies to act in a 'socially responsible' way: these include the high costs of direct engagement and the danger of free riding (see Armour et al., 2003). In addition, the institutional framework is not necessarily compatible with shareholder playing this role. In particular, British trade unions do not appear to have the degree of influence on boards of pension fund trustees that labour interests have in certain cases in America, as in the case of the CalPERS pension scheme which represents public-sector workers in California. UK pensions legislation has been slow to mandate employee representation on the boards of trustees of defined-benefit pension funds (a requirement for 50% employee representation came into effect only recently). It has also been thought, following the legal decision in the *Cowan v. Scargill* case in the 1980s, that social considerations cannot be taken into account by trustees when making decisions on investments, although legal opinion on this issue seems now to be shifting and greater leeway for trustees is being recognised (UNEP, 2006). Most employer-based pension schemes are moving away from a defined-benefit structure to one based on defined contributions; this displaces the risk of stock market fluctuations on to employees, making it possible that pension scheme member will become more risk averse and more narrowly focused on financial returns. However, employers have less influence in defined contribution schemes, so their growth may open up new opportunities for unions to press the case for SRI. Several unions have already

done this in the case of pension funds set up for their own employees and officers. This is an area in which we can expect to a growing role for unions engaging employers on corporate governance issues (see generally Deakin and Hobbs, 2007). The proposal of the Turner Commission to introduce what would be, in effect, a government-run defined contribution pension scheme to replace the existing second state pension, adds a further dimension to the pensions debate.

Each of the policy developments set out above has implications for the empirical research agenda arising from WERS. If WERS can be used to shed light on the relationship between management practice, corporate governance structure and employment outcomes, significant progress could be made on elucidating policy options in an area which is increasingly gaining the attention of government and the social partners, as well as the financial community. With this in mind, we now turn to a closer examination of WERS 2004.

4. Innovations in WERS 2004

The limited number of studies on the relationship between ownership, governance, and HRM/ER reflects the pattern of interests within the discipline, and the ‘mis-match’ between the workplace focus of WERS and the company-level phenomenon. However, as WERS 2004 was undergoing design it was recognised that improvements could be made to WERS to enhance its suitability for research into ownership and governance. A project team was established to develop questions in this area.⁴ The main innovations in WERS 2004 arising from this group’s work were as follows.

A question was added on whether the workplace belonged to a company that was listed on a stock exchange. Stock market listing is of key interest to corporate governance scholars from all disciplines for a variety of reasons. A key argument of the stakeholder perspective has been that active and well-developed stock markets, with highly dispersed ownership by institutional investors (as in the UK) encourage ‘short-termism’ by companies, as exemplified apparently by relatively shorter job tenures, lower employee commitment, and lower levels of firm-provided training. The weakness of direct control by owners is said to encourage the use of alignment devices in the area of executive remuneration, such as stock options, and also reliance on the market for corporate control as a form of management discipline (though its efficacy here is questioned – Franks and Mayer 1996; Deakin and Slinger 1997; Deakin et al., 2002a). Until WERS 2004 the PLC legal form had to be used as a proxy for firm exposure to equity markets. However, it is a noisy measure as by no means all PLCs are listed. Twenty per cent of the 565 workplaces belonging to a PLC in WERS2004 do not belong to a stock market-listed firm.

A related change in WERS2004 compared with WERS98 is a significant development of the question on formal status of the company. In WERS98 this question had just three categories – PLC, private sector - other, and public sector. This question did not do

⁴ Its members were Keith Whitfield (coordinator), Simon Deakin, Paul Edwards, Mahmoud Ezzamel, Paul Marginson, and Andrew Pendleton. The latter was primarily concerned with the development of questions on employee share ownership plans (Section F of the Management Questionnaire).

justice to the variety of legal forms for either private sector or public sector organisations. In the case of the private sector, the 1998 ‘other’ category now embraces companies limited by guarantee, partnerships (including the relatively new but popular limited liability partnership), trusts and charities, bodies established by Royal Charter, co-operatives, mutuals, and friendly societies.

Meanwhile for the public sector, the public sector category has been divided into trading companies (eg the Post Office), agencies, other non-trading public corporations (examples from National Accounts), Quasi Autonomous National Government Organisations (QUANGO), and local and central government authorities (eg NHS and local education).

As a result of this expansion, it is now possible to explore the distribution of HR/ER practices in a wide variety of organisational types. For instance, those interested in HR in charitable organisations will be able to use WERS for the first time, and the distinctive governance properties of mutuals can also be studied (see Cook et al., 2002). Similarly, it will be possible to examine HR in ‘spin-offs’ from major public sector organisations, such as agencies. The latter especially are of growing importance and interest because of public policy developments over the last fifteen years or so. WERS98 arguably embodied a rather old-fashioned and monolithic conception of public and private sectors which did not adequately capture the growing complexity of organisational forms.

Table 1

<i>Organisational type</i>	Distribution of organisational types by workplace 1998 and 2004				
	2004 <i>Number of workplaces</i>	2004	2004 (weighted) <i>Percentage of workplaces</i>	1998 (unweighted)	1998 (weighted)
PLC	576	25.1	20.54	37.8	29.1
Private limited company	794	34.6	46.95		
Private sector – other (1998 measure)	N/a	N/a	N/a	31	46
Company limited by guarantee	55	2.4	2.35		
Partnership	132	5.75	11.52		
Trust/charity	92	4.01	3.76		
Body established by Royal Charter	33	1.44	0.33		
Co- operative/mutual/friendly society	24	1.05	1.53		
All public sector organisations	589	25.66	13.02	31	24.9

The other main change has concerned the employee share ownership questions. WERS2004 reintroduces a question on the specific types of employee share ownership plan in use: Share Incentive Plan, Save As You Earn, Enterprise Management Incentives,

Company Share Option Plan, and 'other'. This is a return to WIRS1990 practice: WERS98 had asked a single share ownership plan question without differentiating plan types. The greater precision in the 2004 question enables an evaluation of recent policy initiatives (both SIP and EMI were introduced in 2000) and also facilitates (to some extent) exploration of how different plans are associated with other HR practices and workplace characteristics. For instance, SAYE is an option-based plan, whereas SIP can distribute free shares to employees: it may be anticipated that these plans may be used for different purposes (see Pendleton 2006).

A further innovation which is not concerned with ownership and governance per se but is nevertheless relevant to it, is the addition of a question in Section K on whether workplace targets are set at higher levels of the organisation. In general, this permits an evaluation of workplace autonomy and the distribution of powers between workplaces and higher levels of multi-site organisations (where the workplace observed is not head office). More specifically, it enables an evaluation of the argument that controls on workplaces are tighter in those organisations with specific ownership/governance characteristics.

Finally, in the Management Questionnaire, several additional categories were added to the question on changes to the establishment in the previous two years. These include a change of name and location, and change in activity, and whether the establishment has merged or split from another workplace in the organisation. Thus, WERS2004 is better able to capture restructuring within existing organisations as well as changes in formal ownership such as mergers, buy-outs, and privatisation.

Thus the innovations in the ownership and governance questions, although limited in number and scope, enable much more precise analysis of the relationship between ownership, governance, and HR/ER than WERS98. This is welcome given the growing interest in these relationships. It is possible to use the new questions in conjunction with existing Section A questions to investigate a range of events and phenomenon such as what happens in listed firms that have undergone mergers and takeovers, are limited liability partnerships mainly found in larger (professional) organisations, and do HR practices differ between large and small partnerships?.

5. Opportunities offered by WERS2004 to test predictions found in the literature

In the remainder of the paper we use the ownership and governance questions to shed light on some important issues arising in the recent corporate governance literature. It should be emphasized that these examples are not intended to provide definitive answers to the questions posed. Instead, they provide illustrative and perhaps suggestive examples of how WERS can be used to explore the impact of ownership and governance.

The impact of stock market listing on workplace management of employees

One of the central contentions found in the new literature on ownership, governance, and HR/IR is that firms exposed to stock market pressures in Anglo-American companies will be impelled to take a short-termist approach to employee management (Gospel and

Pendleton 2003). At root of this is supposed short-term behaviour on the part of dispersed, institutional investors: it is argued that these investors will prioritise short-term financial returns, often because their owners or clients (eg pension fund managers) closely monitor short-term performance. Further, the dispersion of ownership in countries like the UK is said to encourage impersonal market-based forms of intervention rather than more direct, relationship-based contact as in countries such as Germany. These interventions may take the form of buying or selling stock, leading to the possibility of takeovers, and replacement of the incumbent management (Manne 1965). A sensible management keeps the stock-market sweet.

This is said to give rise to a two-stage process. At the first, it is alleged that firms exposed to these stock market pressures will prioritise short-run financial returns over longer-term metrics such as quality and market share. This operates both directly and indirectly. At the direct level, stock market expectations will generate pressures to maintain a tight control of costs and close attention to profitability (via conventions such as quarterly and half-yearly financial statements). Indirectly, these kinds of pressures are said to encourage business strategies which favour short-term results rather than construction of longer-term capabilities and market share (Porter 1997). At the second stage, it is argued that these pressures lead to a pattern of employment relationships and HRM which are short-termist and 'uncommitted' (Hutton 1996). Examples of this are a lower commitment to training by management, a greater willingness to lay-off workers when times are hard etc.

These arguments have been developed in comparative analysis of national systems. However, they may also be drawn-upon to analyse within-system differences by comparing listed firms (potentially directly exposed to the influences outlined above) and non-listed firms. WERS2004 can be used to do this. Bearing in mind the content of WERS, several research questions can be formulated.

1. Do workplaces belonging to listed firms emphasize financial returns more than otherwise similar non-listed workplaces, and are financial returns more important than other objectives such as quality of service?
2. Do workplace managers in listed firms have different orientations to their employees than their counterparts in non-listed workplaces?
3. Do workplaces belonging to listed firms do less training than non-listed workplaces?

Unfortunately, there are no questions in WERS which permit a well-founded evaluation of business strategy.

To address the first question, we compare the use of targets in listed and non-listed firms. WERS asks about targets across a range of areas but for brevity's sake we use just two here: targets for profits/return on investment, and for quality of service. The first is especially relevant because comparative studies have emphasised that such targets are a

particularly pronounced feature of economies with large listed sectors (Carr and Tomkins 1998).⁵

Table 2

Incidence of targets in listed and non-listed workplaces		
<i>Percentage of private sector workplaces</i>		
<i>Type of workplace</i>	Profit targets	Quality of service targets
Listed sector	76	75
Non-listed sector	68	67
Non-listed sector – private limited companies only	75	69
N	995	995

Table 2 provides comparative figures for use of profit and quality of service targets for listed and non-listed workplaces. The analysis is restricted to workplaces belonging to organisations with more than 250 employees as there are very workplaces belonging to listed firms with less than 250 employees in WERS. Also, the use of formal targets is likely to be influenced by organisational size so it is important to control for size in some way. Initially, use of profit targets does seem to be more widespread in the listed sector but when charities, co-operatives etc are removed from the non-listed private sector category (as WERS2004 now enables us to do) the differences between listed and non-listed firms disappears. Small differences (significant at 95 per cent) remain for quality of service targets, with listed workplaces more likely to have these targets. Another notable result is that the quality of service targets are as widespread as profit targets in the listed sector, suggesting that the argument that listed firms prioritise financial returns over all other considerations is overly simplistic⁶.

Next, we examine whether management orientations to employees differ between listed and non-listed workplaces, using long-standing questions in Section A about management views on employment issues. The two most relevant questions for our purposes are those concerning whether employees are led to expect long-term employment and whether the workplace has a consultative approach to employment relations. A lower score indicates a more ‘committed’ management approach. Results are presented in Table 3.

Overall the results do not provide consistent evidence of differences between listed and non-listed workplaces. Listed workplaces are less likely to lead employees to expect long-term employment (significant at 90 per cent) than all private sector workplaces but when the non-listed sector is restricted to private companies (i.e. charities, co-operatives etc are excluded) the difference narrows slightly and becomes insignificant. There is little difference between listed workplaces and either group of non-listed firms in terms of consultative style.

⁵ Though latest research indicates that large listed German firms now approximate to the Anglo-American model: Carr 2005.

⁶ 90 per cent of NHS and local government workplaces have quality of service targets.

Table 3

Comparison of views on employment relations between listed and non-listed workplaces					
	<i>Mean scores</i>			<i>Mean scores</i>	
	Listed firms	Non-listed firms	T Significance	Non-listed private limited companies	T Significance
Employees are led to expect long-term employment in this organisation	2.126	2.019	1.7697 0.0771	2.02	1.045 0.300
We do not introduce any changes here without first discussing the implications with employees	2.245	2.261	0.2555 0.7984	2.227	0.174 0.862
N	995	995	995	691	691

Finally, we assess the role of listing in the provision of training by workplaces. To do this we mount ordered probit regressions where the dependent variables are the proportion of the largest occupational group receiving training in the last year and the number of days of training received by experienced members of the largest occupational groups in the last year (both are ordered category variables in WERS). We do not present full models of the determinants of training⁷: our concern is simply to assess the role of stock market listing, whilst controlling for size and sector. Results are presented in Table 4.

Table 4

The role of stock market listing in determining training in private sector workplaces		
<i>Ordered probit (weighted)</i>		
	Proportion of largest occupational group receiving training in the last year	How many days of training did the experienced members of largest occupational group undertake in the last year
Stock market listed	0.21	-0.017
(Coefficient/Z)	1.49	-0.11
Sector dummies	Yes	Yes
Size dummies	Yes	Yes
Pseudo R2	0.0543	0.0277

The results presented in Table 4 do not support the argument that stock market listed workplaces are less likely to provide training than other private sector workplaces. Listed workplaces are more likely to train a larger proportion of workers though the difference is

⁷ For analyses using WERS see Whitfield (2000).

not significant. Equally, the amount of training is slightly lower but this difference is very small.

Overall, this set of initial results from WERS is not very supportive of the arguments that listed firms will make more use of financial targets, will take a more 'hard-nosed' approach to their employees, and will do less training. This suggests that some of the common preconceptions of what exposure to equity markets does to firms should be revised. Of course, this analysis only scrapes the surface of the issue. More and deeper analysis can be conducted using WERS. However, there will nearly always be limitations of secondary analysis in that the data available is unlikely to be ideal to address the chosen questions. In this instance, we are not able to assess the severity of the targets or the quality of the training provided, though there is information in WERS to permit some further scrutiny (e.g. the type of training).

Case studies have suggested that short-termism may be a problem not of the listed company segment of the economy as such, but of particular structures of ownership within that segment and particular regulatory environments. Deakin et al. (2002b) found evidence that in regulated industries such as the utilities, shareholders could be persuaded of the benefits of taking a long-term approach to their investments, thereby making it possible for managers to make credible commitments of job stability to employees; they also found evidence of listed companies in which ownership by continental European pension funds, which explicitly based their investment policy on a long-term time horizon, encouraged the development of partnership agreements between management and labour. If this is correct, it may not be surprising that our initial analysis of WERS 2004 does not reveal a clear pattern of short-termism in the listed company sector. A large-scale survey such as WERS cannot be fine-grained enough to bring out the historical and contextual circumstances under which partnership-style arrangements emerge in particular firms but fail in others. However, there may well be potential for further analysis of WERS 2004 to reveal divergences in HRM practices and outcomes between different corporate governance forms, building on the approach of Konzelmann et al. (2006).

6. The influence of ownership concentration on managerial compensation

In this section, we turn to management compensation and provide some illustrative results from WERS2004. A central strand of the governance literature has been about how dispersed owners in Anglo-American economies exercise control of corporations and their managers (Shleifer and Vishny 1997). The dominant paradigm has been one derived from agency theory, where the interests of self-interested agents (managers) are seen to diverge from those of principals. The issue for those in the agency tradition is how owners can stop managers spending free cash flow (shareholders' cash) on executive jets?⁸ The answers provided in the literature include the managerial labour market (Fama 1980), the market for corporate control (Manne 1965), and executive remuneration. Focusing on the latter, if executive remuneration can be tied to shareholders' interests, managers seem more likely to

⁸ There is an ideological aspect to this in some strands of the US literature. There has been a concern to demonstrate that the separation of ownership and control is efficient despite the apparent capacity for opportunist and clearly sub-optimal behaviour by firm-level agents. See Fama and Jensen, 1983.

pursue policies that benefit shareholders. Hence, the use of annual bonuses, long-term incentive plans (LTIPs), restricted stock, and stock options.

There is evidence that the character of executive remuneration differs across economies, with greater use of contingent pay where there are relatively more listed firms (Black et al 2006) and where ownership is more dispersed. Within an economy it might be predicted that there will be greater use of contingent remuneration where ownership is dispersed. An alternative view is that ownership dispersal, by giving greater power to managers, will enable managers to choose remuneration systems that are less dependent on performance (Werner et al 2005). WERS can help us on this, and it is perhaps surprising that it has not been used in the past to explore managerial remuneration. There is a long-standing question in WERS asking whether a single individual or family owns at least 50 per cent of the organisation to which the workplace belongs. We use this here to explore ownership influences on executive pay. The particular hypothesis we assess is that various forms of contingent pay will be more likely found where ownership is not concentrated.

The procedure for assessing this hypothesis is to use logistic regression where the presence of specific pay practices are the dependent variables. These are the presence of a Company Share Options Plan (CSOP), performance-related pay for managers, and profit-related payments for managers. CSOP is a discretionary share options plan that is most commonly used for managers and other senior executives only (WERS2004 indicates that CSOP is used for managers only in about 60% of workplaces). Although the tax breaks were withdrawn from the formal Profit-Related Pay scheme in the late 1990s, WERS2004 shows that profit-related payments are still widespread: 42 per cent of private sector establishments reported using them for at least some of their staff. The independent variables are measures of ownership concentration, of stock market listing, and of the size of establishment and the firm. Controls are entered for industrial sector.

The results in Table 5 are consistent with predictions from the corporate governance literature. Workplaces with dispersed ownership have positive odds (significant at 10 per cent or better) of having performance pay and profit-related payments for managers. The odds for CSOPs are also positive (larger in fact than other the other forms of contingent pay) though the result is not statistically significant. It is noticeable that stock market listing is a strong determinant of CSOP presence, as it is of other forms of stock ownership plan (see Pendleton 2006): if the stock market variable is removed, the ownership dispersion variable becomes significant at 10 per cent and the odds increase to 3.45 (reflecting the fairly high correlation between stock market listing and ownership dispersion ($r = 0.257$)). As a variant on the results shown above, a measure for direct involvement in management by a majority owner was inserted in place of ownership dispersion. As would be expected, the odds of this associating with the use of contingent pay were less than one, with the result significant at 5 per cent in the case of profit bonuses.

Table 5

Determinants of contingent pay for managers			
<i>Logistic regressions (weighted)</i>			
	Company Share Option Plan	Performance pay for managers	Profit-related payments for managers
	Odds Z	Odds Z	Odds Z
Ownership	2.10	1.54	1.95
dispersal	1.04	1.84*	2.62***
Stock market listing	5.28 3.79***	1.00 0.00	0.93 -0.22
Size of establishment	1.19	1.38	1.30
Medium firm	1.46	3.44***	2.93***
	1.81	1.06	1.78
	0.96	0.17	1.57
Large firm (1000+)	4.70 2.17**	2.78 3.70***	1.77 1.91*
Very large firm (5000+)	4.18 1.87*	1.70 1.47	1.54 1.15
Sector dummies	Yes	Yes	Yes
N	1374	1374	1374
Pseudo R2	0.26	0.13	0.07

Notes: * = significant at 90 per cent; ** significant at 95 per cent; *** significant at 99 per cent.

Base: private sector workplaces excluding partnerships, trusts, bodies established by Royal Charter, co-operatives, mutual, and friendly societies

Overall, these results are supportive of the argument in the corporate governance literature that instruments such as contingent pay will tend to be used to overcome agency problems where ownership is dispersed. The contrast with the recent results of Weller et al (2005) who argue that contingent pay will be less widespread in organisations where ownership is dispersed because managers will be better able to resist it.

The analysis presented here could no doubt be pursued further with the aid of the ownership and governance data collected in Section A of the WERS Management Questionnaire. For instance, it is possible to investigate whether the relationship between ownership dispersion and use of contingent pay for managers varies between UK and overseas workplaces. Preliminary analysis indicates that the odds that ownership dispersion predicts profit-related payments and performance pay for managers are both higher and more significant in foreign-owned workplaces⁹. The odds of ownership dispersal predicting the use of CSOPS are lower, however, in foreign-owned workplaces: this is to be expected given that domestic ownership is always a very strong influence on use of equity-based rewards (for liquidity reasons).

⁹ This is done by splitting the sample between workplaces that are UK owned or part-UK owned and foreign-owned (ACONTROL)

Using WERS to analyse the determinants of executive remuneration can add significantly to the literature because there is a much wider range of variables than is available in the typical study in this area (which typically uses information from annual accounts for directors). For instance, the presence of performance pay is significantly negatively related to union density, when the latter is inserted in the regressions outlined above (though this effect is not observed for CSOP or profit payments). It would be possible to extend the analysis to investigate the influence of liquidity constraints and growth opportunities (the latter is said to raise agency costs where ownership is dispersed because the opportunities for managers to make a 'wrong' decision are enhanced) (Smith and Watts 1992; Core and Guay 2001). That said, WERS clearly cannot engage with some aspects of the executive remuneration debate. For instance, neither the salaries nor levels of bonus awards for individual managers are available in WERS, thereby precluding analysis of pay-performance sensitivity (seen as the acid test of agency views of executive remuneration). A further consideration is that the workplace focus of WERS means that the managers under investigation here are not necessarily the most senior managers in the organisation. Intriguingly, CSOPs, profit-related payments, and performance pay are significantly less common (at 0.1 per cent in each instance) in Head Offices than other workplaces in multi-site organisations. This is not inconsistent with an agency-based governance explanation: contingent pay is used for managers who are further from scrutiny by owners and for whom monitoring can be more costly.

7. Limitations and further development of WERS

From an ownership and governance point of view, WERS2004 is a substantial improvement on its forerunners in the series. For the first time it is possible to explore the HRM and IR characteristics of a variety of types of ownership, such as co-operatives, partnerships, and charities. It is also possible to investigate the relationship between stock market listing and employment relationships. As a result, it is now possible to use WERS to a greater degree than previously to engage with key issues in the corporate governance literature concerning ownership type and governance mechanisms. But it is also the case that WERS already presented opportunities in this area, though they had perhaps not been fully grasped by researchers. The two sets of analysis presented in this paper use the 2004 innovations and the long-standing questions respectively. It will of course be possible to make even greater use of the new questions through linking the Employee Questionnaire and Financial Performance with the Management Questionnaire data.

However, WERS inevitably has limitations for those interested in ownership and corporate governance. As mentioned earlier, a major strand of study in corporate governance has been investigation of the structure and identity of ownership since both seem likely to influence firm behaviour. On the whole the governance literature has not paid much attention to governance outcomes, other than performance (where the results are seen as rather indeterminate: see the review of the literature in Armour et al., 2003). WERS might help to close this gap somewhat but a limitation of WERS is that information on ownership structure and identity is limited to the concentration measure used here, the country of ownership and control, and by implication whether majority owners are individuals or

owners. Ideally, WERS might have a question on the nature of the dominant owners (investment institutions, families etc), and also one on the extent of ownership by the largest owner or group of owners. Such a question exists in the French RÉPONSE survey which is the equivalent to WERS. This would however add to the burden of those responding to the WERS surveys. One way of mitigating this might be to produce a 'Company Data Sheet' along the lines of the 'Workforce Data Sheet' which might be completed by someone other than the management respondent such as the Company Secretary.

There are further improvements which might be made to enhance information on corporate governance mechanisms such as boards of directors and contingent pay, given that a central plank of corporate governance scholarship, especially in the agency tradition, has focused on these. For instance, it could be useful to know the proportion of ownership accounted for by managers and whether other forms of incentive pay, such as LTIPs and restricted stock arrangements are available at the workplace. Of course, the problem here is that many of these are corporate level issues, and that most WERS workplaces will not be at this level. Such data might be directly relevant to only a minority of workplaces whilst the costs of collecting it might be substantial. One way of dealing with some aspects of this might be to enhance further the Employee Questionnaire by including questions on bonus levels and eligibility/participation for a variety of forms of contingent pay.

Finally, there are some less obvious ways that WERS might be modified to take account of recent areas of debate in corporate governance. One strand of literature in the US has been concerned with union and employee involvement in pension funds. Since, as we have seen, pensions arrangements are emerging as a major area of debate within the UK, WERS could be enhanced to contribute to this. For instance, the Management Questionnaire might include a question on the form of pensions arrangement available, if any, in the workplace. The newly-introduced questions on non-union representation, as well as those on union representation, might be amended to secure specific information on worker involvement in pensions committees, share plan committees etc. Currently, it is not possible to discern whether these types of committees have an impact from WERS data, but anecdotal evidence suggests that such institutions could be important in some workplaces. Unfortunately we do not reliably know how many or how important. By enhancing data on these topics, WERS could make significant improvements to our knowledge of employee involvement in governance.

8. Conclusion

We have seen that the interface between corporate governance and employment relations is the subject of a growing body of research and is increasingly gaining the attention of policy makers. The amendments to WERS 2004, which open up new possibilities for analysis of the role played by corporate governance forms in shaping employment practices and outcomes, therefore come at an opportune moment. In particular, it is possible to identify the listed company sector as a distinct category, and to say more about alternative forms of governance such as mutuals and not-for-profit companies. At the same time, we should not necessarily expect to find a point-for-point correspondence between structures of corporate

ownership and control, on the one hand, and workplace employment relations, on the other. We know from case study research that the factors influencing labour-management relations and HRM practice are often dependent on the trajectory of individual firms and organisations. WERS will not be able to capture this. However, it should be possible to use the new corporate governance categories in WERS 2004, when coupled with the rich and very detailed information on aspects of workplace relations, to deepen our knowledge in this field.

Future WERS surveys could consider further innovation in the corporate governance field, by, for example, including questions on ownership structure similar to those in the RÉPONSE survey, thereby opening up the listed company category to further subdivisions. However, constraints on further improvements in WERS are threefold: the cost of securing additional, complex information, the need to maintain WERS as a predominantly workplace survey to maintain the integrity of survey structure, and the desire of key stakeholders in WERS to maintain continuity between versions of the survey. The first step is to explore the potential of WERS in its existing form.

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The Study of Trust and Workplace Partnership

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1. The problem with ‘partnership’

Political controversy makes for elusive survey topics. The long-term vitality of the WIRS/WERS surveys has always owed much to their engagement with current policy issues, monitoring the impact of recent legislation and exploring the terrain of possible future interventions. The closed shop, industrial action and union governance are examples of policy issues that, in their time, were subject to WIRS/WERS scrutiny that subsequently informed legislative intervention. But, by their nature, controversial topics acquire a changing overlay of meanings, associations and prejudices, which may make them all but impenetrable to dispassionate survey response.

Workplace partnership has been a clear example of this. Few policy issues were more obvious subjects of attention for the 2004 Workplace Employment Relations Survey (hereafter WERS2004). The first Blair government placed the promotion of workplace partnership at the heart of the strategy it set out in the 1998 white paper ‘Fairness at Work’ which anticipated the 1999 Employment Relations Act. The Act reflected this by setting up the Partnership at Work Fund to develop and disseminate good partnership practice. At the same time the Trades Union Congress was placing workplace partnership at the heart of its union renewal strategy. Its policy document, ‘Partners for Progress: New Unionism at the Workplace’, advocated industrial partnership at the level of the individual enterprise. This was launched in 1999 at a conference at which both the Director General of the CBI and the Prime Minister spoke, the latter saying that he saw trade unions to be: ‘...part of the solution to achieving business success and not an obstacle to it’ (Brown, 2000: 305). The TUC followed this by setting up its TUC Partnership Institute in 2001 (later spinning it off into independence in 2004) to provide practical advice to those considering partnership deals. In short, if ever there were a workplace employment relations policy initiative between the 1998 and 2004 surveys that deserved assessment, it was this encouragement of workplace partnership.

Two difficulties were created by this substantial publicity devoted to propagating partnership. The first arose from the political associations that began to adhere to and confuse the issue. The second is the unavoidable loss of definition of something espoused as, in many ways, a panacea by very divergent interest groups. The first of these, the politicising of the notion of partnership, has been evident from the start. Trade union activists in many cases came to portray official endorsement of ‘partnership’ as akin to servile collaboration with management. It became, for example, a point of issue in the surprise election of Derek Simpson as the General Secretary of the union AMICUS in 2002, decrying his incumbent opponent’s excessive espousal of partnership, which he

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described as a ‘euphemism for exploitation’ (Financial Times, 9/9/02). A similar debate developed in early academic discussion of the topic, with some arguing that partnership ‘provides an opportunity for British unions to return from political and economic exile’ (Ackers and Payne, 1998: 546), while others argued that it would result in debilitating concession-bargaining and weaken the union movement (e.g. Kelly, 1998). Within a few years it was evident that some trade union organisations that were engaged in, by any standard, sophisticated co-operative working with management, were anxious to avoid applying the ‘p-word’ to it, lest it undermine their credentials of independence (Oxenbridge and Brown, 2005: 191).

The second difficulty arising from the adoption of ‘partnership’, as a desired descriptor by groups with different frames of reference, was simply that it quickly came to be applied to very diverse phenomena. For example, some employers used it to describe agreements which granted recognition to trade unions on such narrow terms that it appeared primarily to be a device to constrain their activities by, for example, explicitly denying negotiating and organising rights. Other employers, by contrast, used the term partnership for arrangements that genuinely facilitated trade union activity and encouraged recruitment and widened participation (Oxenbridge and Brown, 2002).

There is a revealing analogy with another, in many ways directly comparable, publicly encouraged initiative to reform workplace industrial relations, forty years earlier. Back in the 1960s, the first signs of formal, ‘integrative’ workplace bargaining in Britain took the form of ‘productivity agreements’. The term was coined by an agreement at Esso’s Fawley refinery, which was analysed by Allan Flanders, and led to widening interest in the potential for ‘positive-sum’ bargaining as a means of easing the inflexibilities associated with powerful workplace trade union organisation (Flanders, 1964). Direct negotiations at enterprise level were identified as a way of achieving productive changes in working practices that were beyond the reach of the industrial agreements that at that time formed the basis of British collective bargaining. This imaginative approach to reform was later encouraged both by the National Board for Prices and Incomes, and by the Donovan Royal Commission on Trades Unions and Employers’ Associations. Productivity agreements were allowed to be the main grounds for exceptional treatment under the statutory incomes policies of 1966, 1967 and 1968 (National Board for Prices and Incomes, 1967; McKersie and Hunter, 1973). All manner of meretricious arrangements were squeezed through this loophole. A notion already battered by increasingly varied interpretation became so corrupted that Edward Heath’s 1973 incomes policy spurned the phrase ‘productivity agreement’ altogether.

Forty years later, workplace partnership can be seen in part as a continuation of the same process: the involvement of enterprise-level trade unionism in co-operative rather than confrontational bargaining as a means of facilitating productivity improvement. But, in direct contrast with its progenitor of productivity agreements, workplace partnership has been seen, not as a means of taming powerful workplace unionism but, on the contrary, as means of union survival in a far harsher economic environment. The harness has become a lifeline. And as with its predecessor, by 2004 the ‘p-word’ of partnership had become so frayed by political and other exploitation as to lack any useful precision.

In a frank review of progress with partnership, Willy Coupar (2005), director general of the Involvement and Participation Association, the body that has had perhaps the leading role in promoting partnership, suggests that partnership was most heavily promoted in the late 1990s, in the early years of the Labour government, and that interest reached a peak around 2002 with the introduction of the legislation on information and consultation. Thereafter, notably in the private sector and at government level, interest in partnership has waned. By implication, a survey conducted in 2004 may have missed the high tide mark of the partnership wave.

2. Exploring partnership behaviour

The problem of definitions became evident as questions were formulated to investigate how far the policy-makers' early enthusiasm for workplace partnership had shaped behaviour and institutions since 1998. A small team of academics who had recently engaged in empirical research on partnership was invited to suggest both new questions and those that might be continued from WERS1998⁴. They suggested questions based upon four broad areas of enquiry to be of interest: the incidence and nature of partnership arrangements; associated employment relations; commitment by the parties to principles of partnership; and the level of trust associated with them. Pilot cognitive testing, however, found insurmountable problems of interpretation of the notion of 'partnership'. All formulations were felt to be so open to ambiguity or inconsistent interpretation that they would be of no value. The result was that the 'p-word' does not appear in the survey at all.

There was, however, more scope for reliable questions on 'partnership-type practices'. These were identified as: experience of joint problem solving; evidence that management consulted with workers relatively early in decision-making; that informal approaches were used in resolving problems; and that pay negotiations were to some extent open to union influence, in that they did not start with a management *fait accompli*. The most important innovation that was felt to be sufficiently robust was a cluster of questions investigating aspects of trust between different parties at the place of work.

We thus find ourselves in the paradoxical position that the policy objective of which the impact was to be evaluated – the encouragement of workplace partnership – has, in effect, turned into a will-o'-the-wisp, if it was not one already. It is too elusive and incoherent to bear survey scrutiny and may be a topic more suited to investigation through qualitative research techniques. But that does not mean that there might not be partnership practices as discussed by Guest and Peccei (2001) who identified eight clusters of 'partnership' practices based on information provided by managers and workers' representatives in organizations that claimed to engage in, or be in the process of making progress towards, partnership at work. The focus of interest then becomes partnership, or co-operative, practices. These are addressed in WERS2004 in varying degrees of detail.

⁴ This team included Sarah Oxenbridge who made a valuable contribution before moving to Australia.

3. Partnership and Trust

The key relevant innovation in WERS2004 is the introduction of measures of trust. The rationale for emphasising trust in the context of workplace partnership is the assumption that it is a requirement for the success of cooperative processes of the sort defined by Walton and McKersie (1967) as 'integrative bargaining'. While recognising that there are likely to be conflicting as well as mutual interests, integrative bargaining reflects an acceptance of the need for the key parties to work together and one indicator of the effectiveness of this process is the level of mutual trust.

The positioning of trust in the context of partnership and employment relations more generally is potentially ambiguous. Trust might reasonably be viewed as a requirement for cooperative activity; or it may be a consequence of such activity. It is possible to conceive of a positive cycle reinforcing the development of trust and partnership; but this still leaves unanswered the question of what triggers trust in the first place. As a cross-sectional survey, WERS2004 is not well-placed to explore the dynamics of trust relations. However it can explore the extent to which the core assumption holds true, namely that there will be an association between the presence of partnership practices and the levels of trust between the main parties to partnership.

A cursory inspection of the extensive literature on trust (see, for example, Wrightsman, 1991) reveals many challenges in arriving at a sound basis for its measurement. Dietz (2004), in an analysis of trust and partnership, distinguishes four types of potentially relevant trust. These range from calculus-based trust, utilising a cost-benefit analysis and therefore not implying any positive regard for the other party, through knowledge-based and relational-based to identification-based trust. Partnership is most likely to be associated with knowledge-based and relational-based trust; the former is based on information, the latter on a more emotional bond, perhaps built up through extensive contact. Identification-based trust suggests a shared identity of interests that may go beyond conventional partnership that typically recognises the co-existence of shared and conflicting interests.

There are a number of established measures of trust but none was considered to be wholly appropriate for measuring trust within the employment relationship. We therefore had to develop items. A useful analysis has been provided by Whitener, Brodt, Korsgaard and Werner (1998), in an analysis of the ways in which managers can build trust. They identify five kinds of potentially relevant behaviour. These appear to be equally relevant to all the parties involved in partnership activities; indeed, Dietz, in his case studies, uses these behaviours to inform his analysis. They consist of:

- Behavioural integrity – telling the truth and keeping promises
- Behavioural consistency – predictability
- Demonstration of concern for the interests and needs of the other party
- Extensive open communication and information sharing
- Shared input to decision-making

Ideally, we would have included items to measure all of these behaviours. However the construction of the WERS surveys consists of a series of compromises as different

interest groups seek to ensure that their items are included. In the event, three items were retained and addressed to management and worker representatives in those workplaces where both were present. These asked for responses on a five-point scale, ranging from “strongly agree” to “strongly disagree”, to the following statements:

- Management/worker representatives can be relied upon to live up to the commitments they have made
- Management/worker representatives are sincere in their attempts to understand the other party’s point of view
- Management/worker representatives can be trusted to act with honesty and integrity

These three items cover the first three dimensions identified by Whitener et al. The two remaining behaviours are more typically regarded as partnership practices and while it would have been possible and indeed desirable to gain an assessment of their operation in practice, in WERS2004 they served as inputs to, or correlates of trust. As already noted, the distinction between what constitutes an input and an outcome of the relationship between partnership and trust is blurred, further highlighting the operational problems in developing acceptable measures.

In parallel with the development of questions about trust among managers and workers’ representatives, WERS2004 introduced an expanded set of questions for the employee questionnaire intended to be completed by a representative sample of the staff at each workplace. These included three questions concerned with employee trust in management. As noted above, trust can be viewed as a potentially important mediating variable in the employment relationship and this applies equally to trust among employees. It raises the question of whether the employees share with their representatives a similar perception of the partnership practices that are associated with trust in management. By introducing these new items, WERS2004 provides an opportunity to explore this issue. The employee questionnaire also includes items addressing information sharing and consultation, providing some basis beyond the trust measures for evaluating the impact of the last two behaviours identified by Whitener et al. The three items relating to trust in the employee questionnaire are:

“Managers here:

- Can be relied upon to keep their promises
- Are sincere in attempting to understand employees’ views
- Deal with employees honestly”

The responses were once again provided on a five-point scale ranging from “strongly agree” to “strongly disagree”.

4. The Measurement of Partnership in WERS2004

Although it was impossible to agree about questions that specifically addressed partnership using the ‘p-word’, there is in WERS2004, as in previous WERS surveys, a wide range of often very detailed questions about workplace practices. Many of

these might be described as partnership practices. However in determining which practices to include, we are inevitably thrown back on the need to adopt an operational definition of partnership. The definitions offered by organisations such as the TUC (1999) and the IPA (1997) do not meet our requirements, mainly because they tend to conflate principles, practices and outcomes. Acknowledging the conceptual problems in arriving at a widely acceptable definition, an alternative is to adopt a more empirically-based approach.

In their study of organizations that espoused an interest in applying partnership, Guest and Peccei (2001) found eight sets of practices that were widely associated with partnership activity by both management and employee representatives. While this list is not without its problems, in the absence of any clear definition of partnership, these practices provide a useable operational checklist of partnership-type activities. The eight areas they identified are:

1. Direct participation by employees in decisions about their work
2. Direct participation by employees in decisions about personal employment issues
3. Participation by employee representatives in decisions about employment issues
4. Participation by employee representatives in decisions about broader organizational policy issues
5. Flexible job design and a focus on quality
6. Performance management
7. Employee share ownership
8. Communication, harmonization and employment security

Some of these eight areas of activity received more enthusiastic endorsement from one side or the other. For example, managers were more enthusiastic about performance management and employee representatives about participation in broader policy issues.

WERS2004 covers some but not all of the practices identified by Guest and Peccei so while a number are explored in considerable detail, there is nothing about direct participation by employees in decisions about personal employment issues. It also proved impractical to separate direct participation in decisions about work from flexible job design. As a result, although specific practices can be considered independently for the purpose of analysis, based on the content of the WERS2004 survey of employers, the Guest and Peccei list can be merged into the following five broad categories:

1. Direct, task-based participation, including direct contributions through quality improvement teams;
2. Representative participation in a range of issues;
3. Performance management, including performance appraisal and incentive payment systems;
4. Employee share ownership programmes;
5. Communication and information sharing.

These categories are not entirely satisfactory. Some may question why performance management is included as a partnership practice and there will undoubtedly be cases where, taken in isolation it will be inappropriate to view it as such. The final category excludes harmonization and job security which were on the original list. There is one item on job security in the survey but this does not sit well with the much larger number of items on communication and information sharing. The four broad areas of partnership practice identified by the team of researchers are largely covered within the representative participation category.

5. Partnership and Trust: The Evidence from WERS2004

In the following section we present some core findings from WERS2004. We restricted our analysis to those workplaces employing ten or more workers. Our aims are to identify the extent to which partnership is practised and to identify the levels of trust as a basis for assessing the extent to which the innovations in WERS advance our understanding of these issues. We will refer to a separate analysis of the key consequences of partnership which is presented elsewhere. The final section will offer some general conclusions, consider how successful the innovations have been in advancing our understanding of workplace partnership and offer some tentative suggestions about how any future WERS and other related research might make further progress.

Direct Participation

Direct participation by workers in decisions that affect their day-to-day work addresses the issues of delegation and shared control that form a key component of partnership. Direct participation is also likely to have more salience for many employees than representative participation, partly because it more closely affects their daily working lives (Emery and Thorsrud, 1976) but also because in most workplaces there is no form of representative participation. The core items covering direct participation are shown in Table 1. The results reveal that managers believe they provide their workers with a moderate level of task-based autonomy – the predominant response is “some” – but the results also imply that the level of autonomy is constrained. There has been some concern that levels of autonomy have been declining and that this might affect workers satisfaction (Green, 2006). A comparison with the results from WERS1998 suggests that any decline in autonomy has been halted in the intervening years.

Workers’ involvement is severely constrained when changes are considered. Although half the managers say workers were consulted, very few accept that change is an issue for local negotiation and 31 per cent of managers say they simply inform workers while a further 10 per cent do not even do this. Job flexibility, which may serve the interests of the organisation but can also broaden workers’ competence, is widely used although few organizations use it extensively for the majority of workers. Problem-solving groups and related activities such as quality circles, which have been advocated as a means of tapping in to employee expertise, only operate in one in five workplaces although they appear to have become slightly more popular since 1998. In short, levels of direct participation, one of the key dimensions of partnership activity from a worker’s perspective, remains limited and any advance in this form of partnership practice between 1998 and 2004 has been modest at best.

Table 1

Direct Participation in WERS2004				
<i>(Percentages)</i>				
<i>Task-based participation:</i>	none	a little	some	a lot
Employees have:				
Variety in their work	2	14	40	44
Discretion over how they do their work	8	26	44	23
Control over the pace at which they work	9	29	42	20
Involvement over decisions about how work	7	22	47	24
Mean score across the four items:			2.92	
<i>Involvement:</i>				
Worker involvement in introducing and implementing any changes:				
	They decided			4
	They negotiated			6
	They were consulted			50
	They were informed			31
	No involvement			10
<i>Job flexibility:</i>				
Proportion of workplaces where employees in main group do jobs other than their own at least once a week				65
Proportion with more than 60% doing so				16
<i>Quality Improvement Programmes:</i>				
Proportion of workers involved in problem-solving groups or quality circles in the past 12 months:				21
Of which:	permanent			49
	temporary			32
	a mixture			19

Representative Participation

The opportunity for representative participation depends upon the presence of representatives. As WERS2004 reports, the overall level of representation has continued to decline between 1998 and 2004, with the proportion of workplaces recognising a trade union down from 33 per cent to 27 per cent. This can be largely attributed to the changing profile of workplaces, with new workplaces less likely to have any representatives, rather than any marked reduction in representation in existing workplaces. Therefore, only 656 of the 2200 workplaces included in WERS2004 have union representatives while non-union representatives are present in 238 workplaces. In some cases, both are present. While there are extensive questions about aspects of pay bargaining, the most relevant questions from a partnership perspective concern the extent to which representatives are involved in a range of decisions that might affect the workforce. Allied to this, the presence of some form of

consultative committee or works council is an increasingly relevant issue, given the recent legislation. The results for these issues are presented in Table 2.

Table 2

Representative Participation in WERS2004				
Content of negotiation/consultation/information provision with union (non-union) representatives at workplace (<i>Percentages</i>)				
	Nothing	Inform	Consult	Negotiate
Pay	16 (28)	10 (42)	13 (18)	61 (13)
Hours	18 (22)	10 (28)	20 (31)	53 (10)
Holidays	19 (23)	17 (54)	13 (21)	52 (6)
Pensions	22 (26)	25 (58)	16 (14)	36 (2)
Staff selection	42 (38)	26 (37)	23 (24)	9 (2)
Training	36 (22)	24 (35)	31 (41)	9 (2)
Grievance procedure	15 (19)	20 (45)	36 (31)	28 (5)
Disciplinary procedure	15 (20)	21 (46)	35 (30)	29 (4)
Staffing plans	33 (25)	26 (41)	34 (32)	7 (3)
Equal opportunities	22 (23)	23 (45)	40 (30)	15 (2)
Health and safety	17 (13)	19 (39)	49 (44)	15 (4)
Performance appraisal	33 (25)	20 (39)	33 (32)	14 (4)
Per cent of workplaces with a joint consultative committee or works council				14%

Nb. These results apply only to workplaces with workers' representatives.

The results in Table 2 confirm that at the local workplace management and union representatives continue to negotiate over the core terms and conditions of employment covering pay, hours of work and holidays. As we might expect, they are likely to consult or sometimes negotiate over health and safety, equal opportunities and discipline. On a number of core human resource issues such as staffing plans, selection processes, training and performance appraisal, in a majority of cases managers say they are likely at best to inform union representatives, although in many cases they do not even do that. Non-union representatives are much less likely to be involved in any negotiations. In contrast, management seems more willing to involve non-union representatives in some way, mainly through consultation or provision of information, in staffing plans and training compared to union representatives.

The other issue covered in Table 2 concerns the presence of a joint consultative committee or works council which could be considered to be a key indicator of partnership-oriented arrangements. They are reported in only 14 per cent of workplaces, down from 20 per cent in 1998. This decline has occurred despite the imminent application of the Information and Consultation legislation. Most of the results in Table 2 are not directly comparable with data from the WERS1998. In so far as some comparisons are possible, the results reveal that in the context of consultative committees there has been an increase in the proportion that discuss pay and employment issues but a decline in the proportion discussing health and safety (Kersley et al, 2006, p.129). The significance of these changes must be seen in the context of the small proportion of workplaces with a consultative committee and set alongside a drop in the proportion of workplace engaged in any bargaining over pay

from 30 per cent to 22 per cent. Taken as a whole, these findings do not suggest a vibrant partnership environment within British workplaces.

Performance Management

Performance management justifies its inclusion because of its role in the process of mutuality and exchange that management tends to emphasise as a feature of partnership. Two core practices commonly associated with performance management are considered. These are performance appraisal and incentive payments. The results are shown in Table 3. These reveal that performance appraisal for non-managerial workers is now very widespread. Indeed its use has increased since the previous survey in 1998. Incentive payments are now used in forty per cent of workplaces, a substantial growth since 1998. The growth of practices in which management has a particular interest may be a reflection of a shift in power and a further confirmation that the balance of advantage in many partnership-related activities now lies even more firmly with management than Guest and Peccei (2001) suggested.

Table 3

Performance Management	
<i>Performance appraisal</i>	<i>Percentage</i>
Per cent of workplaces conducting regular performance appraisal for most (60%+) non-managerial workers	64
<i>PBR/Merit Pay</i>	
Workplaces with an incentive payment scheme	40
Of which:	
PBR scheme alone	23
Merit pay alone	9
Both	7
<i>In the 40% of workplaces with an incentive payment scheme:</i>	
Per cent making payments to both managerial and non-managerial staff	56
Per cent making payments to managerial employees only	10
Per cent making payments to non-managerial staff only	34

Employee Share Ownership

Sharing the profits of an organization among employees has been advocated over the years by those on both the left and the right of the political spectrum and has attracted some support from successive governments. In WERS2004, this topic was covered by two sets of questions addressing employee share ownership and profit sharing. One of the inevitable problems that arise is that financial partnership is virtually impossible in the public sector, greatly limiting the number of workplaces, and more particularly unionised workplaces, in which it can be applied.

The relevant data from WERS2004 is presented in Table 4. This reveals that 21 per cent of private sector workplaces have a scheme for employee share ownership in place. In 85 per cent of these, non managerial staff are eligible to participate and in just over three-quarters of these allowed all workers to participate. In the event, it appears that where it is available, there is quite an extensive take up of share

ownership. In 44 per cent of those cases where it was possible, every worker participated in the scheme and in 67 per cent of cases, at least forty per cent of non-manual workers participated.

The second aspect of financial reward concerns profit-related pay. The questioning extended to cover bonuses, making the public sector eligible. In the event, 30 per cent of workplaces have either profit-related pay or bonuses, rising to 37 per cent in the private sector but also including 15 per cent of the public sector workplaces. As Table 4 reveals, non-manual workers were included in less than two-thirds of the schemes; however in 49 per cent of these, all non-manual workers had received some form of profit-related pay in the previous year while in 84 per cent, some workers had done so. Analysis of the WERS panel data reported in the source book indicates no growth in financial participation between 1998 and 2004.

Table 4

Employee Share Ownership and Profit Sharing	
<i>Employee Share Ownership Programmes</i>	<i>Percentage</i>
Per cent of private sector workplaces with at least one scheme	21
Per cent of these where non-managerial employees eligible to participate	85
Per cent of these where all non-managerial staff eligible	76
Per cent of these where all workers participated	44
Per cent of these where at least 40% participated	67
<i>Profit-related pay</i>	
Per cent of workplaces with profit-related pay or bonuses	30
Per cent in the private sector	37
Per cent in the public sector	15
Per cent including non-managerial staff in the scheme	63
Per cent of these where all non-managerial employees had received profit-related pay in the last 12 months	49
Per cent of these where some non-managerial employees had received profit-related pay in the past 12 months	84

Communication and Information Sharing

Communication and information sharing lie at the heart of partnership. In Table 2 we reported the results of questions about communication with worker representatives. However we also noted that in a majority of workplace, there were no representatives. Any pretence of partnership therefore requires some form of communication with the workforce as a whole. This was explored in WERS2004 through questions about face-to-face meetings and other forms of communication and consultation. The results in Table 5 reveal a perhaps surprisingly high proportion of workplaces where there are meetings between senior management and the whole workforce. Indeed, contrary to expectations, such meetings are reported to be more frequent than meetings between senior managers or supervisors and the workers for whom they are directly responsible. Much is likely to depend on the frequency, process and content of these meetings. WERS2004 explored some of these issues. For example, one

question asked about the content of communication and specifically whether certain strategic issues were covered. The results in Table 5 suggest that financial plans, internal investment and staffing plans were covered in a majority of workplaces. However only 36 per cent covered all of these while in 15 per cent of workplaces, none of them was communicated.

Table 5

Communication and Information Sharing		<i>Percentage</i>
<i>Face-to-face meetings</i>		
Any meetings between senior management and the whole workforce		79
Any meetings between senior managers or supervisors and the workers for whom they are responsible		71
<i>Attitude surveys</i>		
Conducted formal survey in past two years		42
<i>Other forms of communication</i>		
Management communicates or consults with employees by:		
noticeboards		74
systematic use of management chain		64
suggestion schemes		30
newsletters		45
email		38
intranet		34
Content of communication (count from 0 – 3)		<i>% yes</i>
Internal investment		51
Financial position of establishment		68
Staffing plans		66
Mean score	1.84	0 = 15% 1 = 21% 2 = 28% 3 = 36%

The survey explored other forms of communication and information sharing. As Table 5 suggests, the most popular of these are notice boards and the management chain. However quite a wide variety of methods are used with over a third of workplaces now using email and the intranet. Communication within partnership should be viewed as a two-way process and in workplaces where there is no representation, this may become problematic. In smaller workplaces, informal systems may operate and there is some indication that the management meetings allow for two-way exchanges. Another method of seeking employee views that potentially involves all employees is the use of attitude surveys. WERS2004 reported that an attitude survey had been conducted in 42 per cent of workplaces within the two previous years. Despite this quite high level of use of surveys, any growth between 1998 and 2004 appears to be in downward communication, notably through greater use of the management chain, use of which has increased from 52 per cent to 64 per cent of workplaces, rather than in the kind of two-way flow of information that would reflect a partnership approach.

6. Trust Between Manager and Worker Representatives

Trust between management and union representatives does not depend on partnership. However trust may be a consequence of partnership activities and it may be a condition for effective partnership. As indicated earlier, three new questions on trust were included in WERS2004 in the interview schedules with both management and worker representatives. Responses were provided on a five-point scale from strongly agree to strongly disagree. The percentage of representatives providing responses and therefore indicating a degree of trust is shown in Table 6. The table also shows the proportion of cases in which there is mutual trust between management and worker representatives.

Table 6

Levels of Trust Between Management and Worker Representatives						
	Managers trust in union reps	Union reps trust in mgers	Mutual trust	Mgers trust in non-union reps	Non-union reps trust in mgers	Mutual trust
	<i>Percentage agree</i>					
Managers/union reps can be relied upon to live up to the commitments they have made	75	61	50	87	91	80
Managers/union reps are sincere in their attempts to understand the respondents point of view	75	62	49	85	91	78
Management/union reps can be trusted to act with honesty and integrity	83	62	53	90	88	80
Overall: trust indicated in response to all three items	64	44	31	76	81	64

The responses across the items appear to be consistent. For example, union representative trust in management representatives ranges only between 61 and 62 per cent. However this hides some variation which is reflected in the figure of only 44 per cent who indicated trust in management on all three items. There are some straightforward observations that can be made about these descriptive statistics. Managers display a higher level of trust in union representatives than union representatives show in management. As a result, levels of mutual trust are quite low, most notably when the items are combined. Indeed, there is consistent mutual trust in

only 31 per cent of cases. When we turn to non-union representatives, the picture is rather different. Levels of trust are generally higher and the worker representatives tend to report slightly higher levels of trust than their management counterparts. As a result, there is mutual trust across the three items in 64 per cent of cases.

There are various ways in which the trust items might be used for the analysis of employment relations. A factor analysis confirms that they can be treated as a single scale for multivariate analysis. With this in mind, Guest, Brown, Peccei and Huxley (2007) explored the extent to which greater application of the partnership practices is associated with higher trust. The only partnership practices associated with higher management trust in union representatives are greater task-based participation and use of quality improvement programmes, both forms of what we termed direct participation; and use of performance appraisal, part of the performance management cluster. None of the measures of representative participation are associated with higher trust. Among the union representatives, higher trust in management is associated with employee involvement in changes affecting them, the presence of quality improvement programmes, employee share ownership and use of attitude surveys. Once again, no forms of representative participation are featured. Finally, mutual trust between management and union representatives is associated with task-based participation, quality improvement programmes, attitude surveys, employee share ownership programmes and extensive use of performance appraisal. In contrast, use of profit-related pay and greater use of the miscellaneous forms of communication are associated with lower mutual trust. Taken as a whole, these results highlight the importance of direct forms of participation and the lack of any role for representative participation. It should be noted that the results indicate an association rather than causality. It might be plausible to suggest that high trust results in a greater willingness on the part of management to adopt task-based participation. The sample of non-union representatives for which there is sufficient information is reduced to 128 and the regression analysis is less reliable. There are fewer significant associations and no clear pattern in them.

7. Trust in Management Among the Workforce

Three items are used to measure trust in management among employees. As noted earlier, the three items ask whether managers at their workplace “can be relied on to keep their promises”, “are sincere in attempting to understand employees’ views” and “deal with employees honestly” A factor analysis confirms that these can be treated as a single scale. This scale has a Cronbach alpha of 0.93. The responses were provided on a five-point (reversed) scale from “strongly agree” (5) to “strongly disagree” (1). The mean score on the resultant five-point scale is 3.60 (SD 0.59) indicating a slightly positive but not generally enthusiastic average level of trust in management. Guest et al (2007) report an analysis of the association between partnership practices and workforce trust. There are a number of significant associations but only two are positive; trust is higher where there is task-based participation and where there are guarantees of job security. In contrast, workforce trust in management is lower where management use attitude surveys and more extensive and varied forms of communication: and where there are consultative committees and a wider range of issues covered in any formal interaction between management and union representatives. It is also lower where the dialogue with union representatives covers a wider range of issues. Data on workforce trust in management were collected in all

workplaces where a workforce survey was conducted, irrespective of whether any representatives were present. Union recognition and union membership density were included as control variables. There is no significant association between these items and workforce trust in management although the signs indicate a tendency towards a negative association.

8. Reflections on Future Studies

As we noted at the outset, partnership has proved to be difficult to define, to operationalise and to study. This chapter has therefore been a presentation of proxies for partnership. We have had to assume from the literature that certain practices can be marshalled under the banner of partnership. However these practices all pre-date the contemporary advocacy of partnership and can claim an independent status. Perhaps the defining characteristic of partnership is the concept of mutuality, reflected in the recognition of the coexistence of both shared and different interests among the main parties to the employment relationship and the potential benefits of applying mechanisms to ensure that collaboration with respect to the shared interests results in mutual gain. Effective collaboration may prove difficult or indeed impossible if there is no basis for representation; yet an absence of any representative system is now the norm in British workplaces and has become more prevalent in the years since the 1998 WERS despite the Industrial Relations Act and the intervening period of enthusiasm for partnership. It is also notable that mutual trust is no higher where there is any form of representative participation or other practices associated with partnership such as information sharing, consultation or negotiation. A general finding might therefore be that on the basis of WERS2004, if we accept our proxies for partnership, then partnership, and what we might categorise as the short-lived partnership movement, is a failure. There is no evidence that it is associated with higher trust and with mutual gains.

This rather harsh conclusion is a little premature. There is consistent evidence that direct, task-based participation is associated with higher trust. It is also associated with other positive outcomes with respect to workers' attitudes and workplace performance (Guest et al, 2007; Guest and Conway, 2007). However the causal association with trust needs to be more fully unpicked and it is plausible to argue that task-based participation is a pale and limited version of partnership. The earlier work on partnership by Guest and Peccei (2001) indicated that partnership works best when it is based on a package of practices. This requires some analysis of bundles of practices. In the context of the analysis of HRM, attitudes and performance in WERS2004, there is some indication that this may prove more useful than considering individual practices (Guest and Conway, 2007). More broadly, it is worth asking whether the survey approach represented by the WERS series is the most appropriate way of exploring partnership activity. It can provide a useful indicator of the extent to which certain practices and processes are in place. It cannot provide firm information about the effectiveness of these practices. In this respect, the kind of case studies reported by Oxenbridge and Brown (2002) may provide greater insights into the process of partnership and the way in which practices are combined and applied.

The key innovation in WERS2004 in the territory of partnership is the introduction of measures of trust. Two sets of three items, one set for representatives of workers and management and one for the workforce samples have been demonstrated to be robust

measures that meet the necessary psychometric criteria. The measurement of trust is important in itself. Its relation to partnership remains somewhat ambiguous. It is plausible that successful partnership should be associated with high trust. However it remains unclear whether trust is a cause, a consequence or a correlate of effective partnership. If we wished to argue that it is a proxy for effective partnership, then the evidence from WERS2004 suggests that partnership in Britain is in serious difficulty. Perhaps for union representatives in particular, it has proved to be a poisoned chalice (Oxenbridge and Brown, 2005). One conclusion from this analysis is that the relationship between trust and partnership needs further theoretical analysis. Intuitively, trust is important and its measurement can be justified in the context of WERS2004. But in the context of the diminishing debates on partnership, we are left with the question – important for what?

We have suggested that interest in partnership reached a peak in the years between the WERS surveys. In so far as it is possible to consider the intervening changes, there appear to have been virtually no advances in partnership practices between 1998 and 2004. Representative systems have been on the retreat, notably in the private sector. Management hegemony has been extended, reflected in the growth of practices allied to performance management and downward communication. The measurement of trends in workplace employment relations practices and the role of trust will continue to be important issues to monitor. Perhaps in the future this can be done without allusion to the ‘p-word’.

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The Study of Employee Share Ownership Using WERS: An Evaluation and Analysis of the 2004 Survey

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1. Introduction

There has been a rich vein of research into employee share ownership using WERS² in recent years. Analysis of the determinants, correlates, and effects of share ownership plans took-off after the 1990 survey. In part this reflects the general growth in the use of WERS for industrial relations research. Partly it reflects the heightening of interest in forms of employee involvement, high performance work practices, and the impact of human resource management practices on performance. The main streams of analysis using WERS have focused on the determinants of share ownership plans (Beaumont and Harris 1994; Pendleton 1997; Robinson and Zhang 2005), the relationship between share ownership plans and other forms of involvement (Gregg and Machin 1988), and the relationship between share plans and workplace performance (Fernie and Metcalfe 1995; Addison and Belfield 2000; McNabb and Whitfield 1998; Conyon and Freeman 2004; SenGupta et al 2006). There has also been investigation of the relationship between share plans and other HR practices, such as training (Robinson and Zhang 2006; Pendleton 2006a) and workplace targets (Pendleton 2006b).

The questions on share ownership plans in WERS have evolved over the years. The most notable change in 2004 was the reinstatement of questions about specific share ownership plans that had been dropped in 1998 (in favour of a general question about share ownership plans). This has several significant benefits for those interested in share plans, given that they are by no means homogeneous in their characteristics and usage. It enables more precise analysis of the incidence, determinants, and effects of specific share plans. It is also possible to trace the development of specific plans over time by comparing 2004 results with those from 1990. The use of multiple share plans and particular combinations of share plans can also be investigated. Within certain limits, employee eligibility and participation can be analysed with greater precision than was possible in 1998. Finally, the identification of specific share plans in 2004 enables us to compare specific share plans with a generic measure of share plans (as used in 1998) in terms of their relationships with other phenomena captured in WERS. One of the intriguing findings in WERS98 was that share plans seemed to have a weaker relationship with other forms of participation and performance than was observed in 1990 (Addison and Belfield 2000). Whether this was due to real changes in the population or methodological issues is obviously a pertinent question. The exploratory analysis pursued in this chapter implies that some of the 1998 effects could have been due to changes in question content.

The chapter outlines the nature of the questions on share ownership in WERS2004, highlighting changes from earlier surveys. It then considers the incidence of each type of share plan in 2004, and discusses methodological issues that arise in relation

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² For ease of presentation we will refer to the series as WERS. However, individual surveys will be referred to by their original title.

to these. Eligibility and participation are then considered. The chapter then compares specific share plans against a generic share plan measure, using the relationships with various forms of employee participation as an illustration. It is found that in most instances the generic measure has weaker effects than the main all-employee share plans but there are some instances where results are rather different. Finally, the limitations of question content in WERS2004 are discussed, and there are some recommendations for revisions and additions in future WERS surveys.

2. Questions on share ownership plans in WERS

Like its predecessors, WERS2004 contains questions on employee share ownership plans. These are found mainly in the Management Questionnaire, and are concerned with the presence and coverage of these plans in the workplace. Four questions are asked. The first asks about the presence of 4 specified plans which are HM Revenue and Customs (formerly Inland Revenue) approved (with a fifth category of 'other'). The second enquires about the eligibility of the plans by occupational category. The third asks about the overall eligibility rate for non-management employees in the share ownership plans in the workplace, whilst the fourth asks about the participation rate amongst these employees. There are also two questions in the Panel Survey. One asks about the presence of share ownership schemes and the other whether the share ownership scheme is limited to management or open to other employees. Neither the Employee Survey nor Workplace Representative Survey have questions on share ownership.

The questions have changed somewhat in each version of the WERS series. The main innovation in the 2004 survey is the reference to specific, named share ownership plans. This reverts to the practice in the 1990 survey (which was an advance on earlier WIRS', where generic questions were asked). In the 1998 survey, the lead-in question was concerned with a variety of forms of contingent pay: profit-related payments or bonuses, deferred profit sharing schemes, employee share ownership schemes, individual and group performance-related schemes, and other cash bonuses. The occupational category question has been changed slightly from 1998 so that there is now an all-employee category. This simplifies use of the occupational eligibility question so that it is no longer necessary to go through all occupational categories to establish all-employee eligibility. The other eligibility and participation rate questions are broadly the same but there are additional questions inviting numerical responses where percentages are unknown. The Panel questions, however, change from the 1990 to 1998 version because the Panel Survey is addressed to a subset of those responding to the Management Questionnaire in 1998.

The question on specific share plans in 2004 is a significant improvement over the 1998 practice for several reasons. Most obviously, it is more precise. Most share ownership plans open to non-managerial employees take an HMRC-form approved, and hence it makes sense to collect data on these. This enables us to identify variations in the incidence of plans between workplaces and over time (by comparing with 1990). In addition, the rather generalised wording used in the 1998 survey may pose some problems of reliability and validity. The main reference in 1998 was to 'payments received from share ownership schemes' but the main UK all-employee share plan – Save As You Earn – is not technically a share ownership plan. Instead it is a savings contract linked to share options. In principle, all participating employees

in a workplace could exercise and sell their shares instantaneously ('cashless exercise') so it would be quite legitimate for a respondent to interpret this as something other than a share ownership plan. This question might therefore understate the incidence of share plans.

A further problem in 1998 concerned deferred profit sharing. In 1990 the wording explicitly related this to the Approved Profit Sharing (APS) plan. This scheme (now withdrawn) enabled companies to distribute shares to their employees financed out of profits. In 1998 this explication disappeared so that it was not at all clear whether APS was being referred to. We cannot know whether respondents identified 'deferred profit sharing' as APS. It seems highly likely that this would lead to understating of APS plans because some respondents would not have realised that their APS plans were a form of deferred profit sharing. Equally, some respondents may have classed their APS plans as 'share ownership plans': this is terminologically correct but, since many workplaces operate more than one plan, does not resolve the under-reporting problem.

These issues are not just technical niceties. It is distinctly possible that WERS 1998 under-reported employee share plans by several percentage points. Analyses of WERS have highlighted a fall in the incidence of share ownership plans between 1990 and 1998 (Millward et al 2000:216) and broadly similar incidence between 1998 and 2004 (Kersley et al 2006: 192). However, the phrasing of the share ownership question and the exclusion of the deferred profit sharing question in 1998 may overstate the decline. Table 1 shows how.

Table 1

	The incidence of employee share plans 1990-2004			
	<i>Percentage of private sector workplaces</i>			
	1990	1998 (excluding deferred profit sharing)	1998 (including deferred profit sharing)	2004 ³
SAYE	24	N/a	N/a	17
CSOP	17	N/a	N/a	9
APS or deferred profit sharing	9	6	6	N/a
Share Incentive Plan	N/a	N/a	N/a	10
'Other'	7	N/a	N/a	4.5
Any share plan	32	24	26.5	30

Base: Private Sector Workplaces with 25 or more employees (weighted)

Table 1 suggests that the decline in share plan incidence between 1990 and 1998 is less marked if deferred profit sharing is included in the share plan category. Furthermore, if the phrase 'share ownership plan' leads to some under-reporting of

³ EMI is not included here but as only 5/1148 workplaces are involved there is not a noticeable impact on the results

SAYE plans then the decline in the population may be even less. When we are more able to compare like with like – 1990 and 2004 – the overall incidence of share ownership *workplaces* is similar between the two years. However, there is substantial decline in the incidence of SAYE and CSOP plans. It is not possible to discern from WERS why this fall has taken place: the open-ended questions on share plan termination found in the 1990-1998 Panel are not present in the 1998-2004 Panel. Nevertheless, compositional arguments can probably be ruled-out: the types of workplace which are more likely to operate a SAYE plan (eg financial services, wholesale and retail etc) have increased as a proportion of workplaces over the period (check with mq98). The fall in CSOP might be attributed to changes in the plan in 1996/7. Following a political furore over ‘fat cat’ executive pay, the limits on Discretionary Share Options (as CSOP was then called) were reduced from £100,000 to £30,000, making the plan less attractive in executive remuneration packages. These points notwithstanding, what appears to have happened between 1990 and 2004 is a decline in the incidence of some types of plan but little change in the proportion of workplaces with share ownership arrangements. In other words, there seems to have been a decline in the proportion of workplaces operating more than one share plan rather than a fall in the proportion of workplaces with at least one share plan.

So, using specific questions that are more tailored to the types of share plans allows more precise and more reliable analysis of the presence of share ownership plans generally, as well as facilitating cross-temporal investigations of particular plans. Use of rather generalised questions, as in the 1998 Management Questionnaire, may bias downwards estimates of share plan presence. This interpretation is supported by examination of the 2004 Panel Survey where the percentage of workplaces with a share ownership plan (1998 wording) is just 18 per cent, considerably lower than the proportion in the Management Questionnaire using 2004 wording. The magnitude of the different (around 12 percentage points) suggests that there is more than sampling error at work here.

It is pertinent to ask why the questions on share plans have changed over time. In part, technical issues have driven changes. But the wording also seems to reflect policy concerns at the time of design. Thus, the first WIRS in 1980 asked about the timing of the introduction of share ownership plans because a new plan – Approved Profit Sharing – had been introduced two years earlier. It was found that around half of plans had been introduced in the previous three years (Daniel and Millward 1983: 211-212). By 1990, after a decade of innovation in share plan and contingent pay, the share ownership question referred to specific plans: Discretionary Share Option plans (now Company Share Option Plans) had been introduced in 1982, Save As You Earn (or ‘Sharesave’) was introduced in 1984, and Profit-Related Pay (not a share plan) was introduced in 1987. In the 1990s there was very little legislative activity (though a great deal of company activity in employee buy-outs – See Pendleton 2001), apart from some tinkering with the terms of the CSOP in response to ‘fat cat’ executive pay issues. As a result, it is not surprising that the 1998 WERS dropped reference to specific schemes (though with the confusing possible reference to APS mentioned above). However, by the time of 2004 survey there had been two new plans introduced in the 2000 Finance Act, and there was both academic and policy interest in assessing the take-up of the new plans. This is possible with varying degrees of success (see later).

3. The Incidence of Share Ownership Plans in 2004

The refinement of the share ownership question means that we can present information on the incidence of the various types of HMRC share plan in 2004. Table 2 presents information for each type of share plan. Note that this differs from the information presented in Kersley et al (2006) because they limit analysis to workplaces with 10 or more employees so as to achieve comparability with WERS98.

Table 2

	The incidence of share plans in 2004			Number of companies with live plans HM Revenue and Customs 2004
	<i>Percentage of workplaces (except where shown)</i>			
	% of private sector workplaces	% of private sector workplaces with specified plan and other plans	% of private sector employees in workplaces with plan	
Share Incentive Plan	7.22	1.91	11.29	760
Save As You Earn	12.20	5.93	20.98	920
CSOP	6.10	2.55	11.03	2950
EMI	0.2	0.18	0.44	2,380
Other	3.07	1.81	5.82	N/a
Any share plan	19.68		31.89	N/a
1 share plans	12.41		17.92	N/a
2 share plans	5.39		10.48	N/a

Base: Private sector workplaces with 5 or more employees (weighted as appropriate)

It is worth commenting on the results for each share plan as this raises some methodological issues about the relationship between company and workplace practices. Both SIP and SAYE are all-employee plans, whereas eligibility in CSOP and EMI is discretionary. SIP and SAYE tend to be found in larger, multi-site companies, so any given plan is potentially observable in a large number of workplaces. WERS shows that the average number of workplaces per company for each workplace observed to have a SIP or a SAYE plan is over 400, compared with around 100 for non-share plan workplaces. The incidence of discretionary plans is rather different. The workplace incidence of CSOPs is slightly lower than SIP even though HM Revenue and Customs company-level statistics show that there are four times as many live CSOP plans. As CSOP is typically a discretionary plan used for executive remuneration, it is possible that a CSOP would not be present in a given workplace of an organisation even though it is used for top management remuneration because there are no top executives at the particular workplace. By the same logic, the presence of CSOP at a workplace means that it is probably a plan that is used more widely than for executive remuneration, given that only a small proportion of workplaces in WERS are head offices (18 per cent of private sector multi-site

workplaces are head offices)⁴. The average number of employees to whom options were granted under CSOP arrangements in 2004-5 was 44 per company (HM Revenue and Customs 2006). However, WERS2004 shows that in 56 per cent of CSOP workplaces, the plan was an all-employee plan. The proportion of all-employee plans is exaggerated by the factors outlined above, and it is important to bear this in mind when interpreting WERS findings.

The case of Enterprise Management Incentives (EMI), aimed at smaller, high-potential companies, is slightly different from CSOPs. The number of EMIs observed in WERS2004 is just eight: this is rather disappointing as it makes statistical analysis of this plan rather difficult. It contrasts with the large number of plans in the economy – 2,380 companies granted options in 2004-5, several times as many companies operating SAYE and SIP plans. However, as a small company plan, EMI coverage across workplaces is likely to be far smaller. Three of the eight workplaces with EMI are single establishment workplaces. In absolute terms, EMI is more selective than CSOP: the average number of beneficiaries of option awards in 2004-5 was 11 per company (HM Revenue and Customs 2006). Thus, the chance that a workplace in an EMI multi-site company is covered by the plan is rather small, and certainly smaller than CSOP. There is a further potential problem with EMI in that, in contrast to the other share ownership schemes, it is not a plan as such. Participating companies do not need to submit a plan for approval to HM Revenue and Customs. Instead, eligible companies can award options to employees under EMI arrangements. The upshot of this is that a clearly-defined EMI plan may not be readily discernible in a workplace that uses EMI, and that the management respondent may not know that options have been awarded under EMI rules.

Finally, the ‘other’ category poses something of a problem as it is quite large: there are 98 private sector workplaces (around 5 per cent) with an ‘other’ share plan. The issue is to what ‘other’ refers to. Some could be SIP or SAYE plans that are not recognised as such by the management respondent, possibly because they have different ‘brand’ names within the company. Some could be the remnants of Approved Profit Sharing plans: although tax breaks were withdrawn on new distributions from 2002, there are many plans where shares continue to be held in trust on employees’ behalf⁵. Most (78 per cent) of these ‘other’ plans are open to 80 per cent and above of the non-managerial workforce. Most are in workplaces belonging to multi-site companies. Since the vast majority of all-employee share plans are tax-approved, it is highly likely that most of the ‘other’ category are one of the three plans mentioned above. The remainder of the ‘other’ plans that are not open to non-managerial employees could either be CSOPs or EMI that are not recognised by the respondent or could be other, unapproved forms of management share plan, such as LTIPs or ‘restricted stock’. Ideally, the questions might be modified slightly in the next WERS to pin-down the ‘other’ category a little more precisely. How this might be done effectively and efficiently is not immediately obvious.

Table 2 above, shows that just under 20 per cent of workplaces with 5 or more employees have a share plan(s). An improvement on 1998 permitted by the identification of specific plans is that ‘serial’ share plan workplaces can be identified.

⁴ 3 per cent of CSOP workplaces are head offices compared with under 1 for both SIP and SAYE

⁵ 460,000 employees were awarded shares under APS arrangements in 2002-3. These are required to be held in trust for three years for tax benefits to be obtained by employees. See HMRC 2006

As Table 2 shows, just over 5 per cent of workplaces have two share plans, and a further 1.85 per cent have three plans. In other words, around one-third of share plan workplaces have more than one plan. It may be hypothesised that these multi-plan workplaces are more participative or more committed to high performance work practices than other workplaces. The current design of WERS enables this to be tested whereas the 1998 design does not.

4. Eligibility and participation in share ownership plans

A further benefit of disaggregating types of share plans is that we can investigate participation rates in each plan. By contrast, WERS1998 could only ask about share ownership plans overall. However, in WERS2004 we can only reliably ask about participation rates where there is just one plan present. Table 3 presents information on eligibility and participation in the share plans identified in the survey.

Table 3

	Eligibility and participation rates in share ownership plans							
	<i>Percentage of workplaces (except median scores for 1990)</i>							
	Open to managers only	Participation rates of non-management employees					1990 eligibility	Median 1990 participation
80 – 100 per cent		40 – 79 per cent	20 – 39 per cent	0 – 19 per cent	Don't know/refusal			
SAYE n = 152	8.55	21.05	15.15	14.47	17.10	23.68	80	20
CSOP n = 49	30.61	12.24	6.12	8.16	32.66	10.20	9	8
SIP n = 44	5.91	31.91	13.64	11.36	22.73	4.55	N/a	N/a
EMI n = 4	100	0	0	0	0	0	N/a	N/a
Other n = 47	36.17	31.92	8.51	2.13	8.51	12.77	80	15
All share ownership plans 2004	14.18	29.45	17.45	10.36	14.55	14.00	N/a	N/a

Base: Private sector workplaces

Table 3 shows eligibility for the various share plans alongside details of participation rates. All of the types of share plan apart from EMI are open to non-managerial employees in a majority of cases. Although 1990 and 2004 figures are not directly comparable, the figures suggest that eligibility for CSOP has widened over the period. Participation rates appear not to have changed too much: the distribution of participation rates for SAYE is comparable with the median participation rate of 20 per cent in 1990. The participation rate for CSOP looks like it might have increased over the period (HMRC statistics support this). Further circumstantial evidence that the 'other' category may include substantial numbers of unrecognised SIPs and

SAYEs is the large proportion of cases with participation rates of 80 per cent plus⁶ (whereas the lower participation rate in 1990s suggests may have been picking up BOGOF). Other points of note are the large proportion of ‘don’t knows’ for the SAYE category (see later). Finally, the pronounced U-shaped distribution of participation in SIP indicates that two separate dimensions of the SIP scheme are being picked-up. The cases where participation rates are very high (80 per cent plus) are probably where Free Shares are offered: in most cases these are offerings of shares made available to all employees⁷. Participation rates in the subscription-based element of SIP – Partnership Shares – are typically lower than SAYE (SIP subscriptions are more risky than SAYE), and average participation rates are around 25 per cent (Proshare 2004). On this basis, it can be concluded moderately safely that the workplaces where participation is 39 per cent or less are operating Partnership Shares on their own.

The second main reason for disaggregating the questions on employee share ownership by plan type in WERS is that the heterogeneity of plan features will potentially have differential effects or different relationships with other workplace characteristics. This implies that a single employee share ownership measure, as used in 1998, could provide misleading or at least imprecise results. To illustrate this we examine the relationship between various share plans and several forms of employee participation. There is a long strand of literature which emphasises the synergy between financial participation and employee participation (Levine and Tyson 1990; Ben-Ner and Jones 1995). However, it is possible that any relationships might not be generic but instead linked to specific types of share plan, and that differences in plan features may help to explain these differences.

To illustrate this possibility we present the results of a series of logistic regressions where various forms of employee participation are the dependent variables. On the right hand side, we include controls for company size and establishment size (natural log) along with dummy variables for various share plans. The objective is to compare the results where individual share plans are included with those where a single share ownership variable is used. The regressions make no pretence to be comprehensive or definitive estimations of the determinants of participation. Instead they are simply a way of exploring the relationship between participation and share plans, whilst controlling for the obvious influences of company and workplace size. Since it is possible that more participative share plans will be more closely related to other employee participation, and because there are variations in participation rates between share plans, we limit the share plans to where participation rates are above 40 per cent.

Each cell of table 4 represents the odds ratio in a regression where the column head is the dependent variable, and where the particular share plan and size controls are independent variables. There are several notable results in the table which illustrate the point that a generic share ownership variable may not adequately portray the

⁶ The lower participation rate for ‘other’ in 1990 could be due to this question picking up cases of BuyOneGetOneFree (BOGOF), a set of share purchase arrangements linked to Approved Profit Sharing

⁷ SIP allows free shares to be linked to performance, including individual performance, but the extant evidence suggests that they are typically distributed to all, though distribution may vary according to tenure and job grade – check Capita

effects of particular types of share plan. For instance, whilst share ownership plans, SAYE, and SIP all predict (to varying degrees) the presence of union recognition, a broad-based CSOP does not. The same is true of briefing groups. It is important to note that the effect of generic share ownership is smaller (sometimes considerably so) than those of SIP and SAYE, and could thus understate the potential effect of some types of share plans when used in isolation (as in 1998).

Table 4

Relationships between share plans and other forms of participation						
<i>Summary of logistic regression results</i>						
	Union recognition	Joint committee	Briefing group	Quality circles	Workplace financial information	Company financial information
SAYE	4.74***	1.23	2.60*	1.51	1.39	4.98***
SIP	5.49***	1.25	2.96*	2.80**	2.73*	5.29***
CSOP	1.80	0.90	2.02	1.42	11.04***	5.57***
Share ownership plan	3.22***	1.40	2.19*	1.64	2.78***	3.70***
Typical pseudo R2	0.23-0.24	0.24-0.25	0.11	0.05-0.06	0.11	0.09-0.11

A rather different result concerns quality circles where the size and significance of effects are similar between the generic share ownership variable, SAYE, and CSOP, but not SIP. SIP is significantly associated with the odds of quality circles being present. The difference between SIP and the other share plans is that most of the SIPs captured here will have the Free Shares component (ie quasi-profit sharing) whilst the others are stock purchase plans. Free shares could be a reward for participating in quality improvement projects. A more perplexing result is that for disclosure of workplace financial information. The share ownership variable is significantly associated with disclosure, and this appears to be driven by the high odds of disclosure associated with the use of CSOPs. The other share plans are associated with considerably smaller odds of disclosure. Why CSOPs should be associated with greater odds of disclosure of workplace financial information is not clear but the important point here is that the main all-employee share plan – SAYE – is not significantly related to disclosure whilst the generic share ownership variable is. In this case, reliance on a generic share ownership would give a misleading picture of the relationships between disclosure and the main all-employee share plans.

5. Limitations of WERS2004

The questions on share ownership plans in WERS2004 are an improvement on those in WERS98 for the reasons outlined above. As mentioned, WERS2004 returns to the practice found in WERS1990 of stipulating named Revenue-approved share plans. Even with these improvements there are, however, limitations in WERS2004. Some of these relate to the specification of questions, other to the absence of questions.

The most obvious limitation of the current questions concerns those dealing with eligibility and participation. In WERS2004 the first eligibility question asks which occupational groups are eligible to participate. This is based on the 1998 model but with the improvement that an 'all employee category' is now included. This provides a lead-in to questions about the rates of eligibility and participation for non-management employees. The aim of this structure is to highlight non-managerial involvement in share plans, given that discussions of WIRS1984 and 1990 were keen to differentiate broad-based from managerial share ownership plans. However, in practice it is cumbersome structure, and one that is not as informative as it might be in some respects whilst providing unnecessary information in others. The main function of the lead-in question establishes whether non-managerial workers are eligible for the share ownership plans. The detailed information on occupational categories can only be fully utilised if it is cross-checked against the occupational composition of the workplace (as found in the Workforce Data Sheet). This is a cumbersome process, and one that has not been used in full by any researchers who have analysed WERS. It also tends to be unnecessary in that SAYE and SIP are necessarily all-employee plans, and will thus in principle be open to all employee groups in the workplace. The main influences on eligibility are likely to be the length of service required for eligibility and the distribution of job tenure.

A further limitation of this set of questions is that the eligibility and participation rate questions are limited to non-management staff. This is fine in that it gives a measure of how open and broad-based plans are. However, it means that eligibility and participation rates amongst managers are obscured, and that a partial picture of the workplace is obtained. Picture a workplace where 80 per cent of the staff are managers: we would obtain participation rates based on only 20 per cent of the workplace. If participation rates were very high amongst non-managers but low amongst managers, a potentially misleading picture of overall participation would be obtained. Similarly, we may want to know participation rates in a management-only plan if our interest is management remuneration.

There is a simpler and possibly more accurate way to pose these questions. The questions on eligibility and participation rates could revert to the pre-1998 practice of asking about the workplace as a whole, rather than just non-managers. In so far as workplace respondents are supplied with information about share plan eligibility and participation from Head Office, the information is typically likely to be for the workplace as a whole rather than just the non-management component of the workforce. Thus, this could be a more reliable measure than the one currently in use. However, the use of categories for eligibility and participation (with the 2004 innovation of asking for actual numbers as a fallback) should be retained as seeking more precise information is likely to increase missing or inaccurate responses (as was found in the analysis of WIRS1990 (Millward et al 1992)). At the same time the lead-in question (FOCCGR*) could be removed, and replaced with a categorical question for the discretionary plans only (CSOP, EMI, and 'other') to establish whether a plan is for managers only, for other selected staff, or for all or most employees. As there has never been a comparative investigation of involvement in share plans by occupation using the WERS series, replacement of this question would not in practice limit cross-temporal comparisons.

A further issue concerns the use of single measures for eligibility and participation. This means that we cannot know which plan has higher participation where there are two or more plans. Comparison of plan participation rates in WERS2004 has therefore to be restricted to those cases where there is just one plan present. The problem here is that the numbers of individual plans can be relatively small: around 40 each in the case of SIP, CSOP, and 'other'. Ideally, separate eligibility/participation rates would be sought for each plan in the workplace. This might generate more accurate information and fewer 'don't knows' (12 per cent of non-managerial share plan workplaces) than at present. This is because workplace respondents may be supplied with participation information for each plan in the workplace (this information is readily obtainable) but are unlikely to receive information on the combined participation rate in the plans (it is not held in this form on share plan databases). Thus, managerial responses where there is more than one plan are probably 'inspired guesswork' in many instances. Millward et al found in 1990 that those workplaces with a single scheme were much more likely to give an estimate of participation than those workplaces with multiple schemes (1990: 274).

Finally, on the issue of participation, there is problem with SIP because SIP is a multi-module plan. Companies can offer Free Shares or opportunity to participate in Partnership Shares (potentially coupled with Matching Shares), or both. These SIP variants are not recognised in WERS so interpretation of participation rates is a little tricky. In general, high participation rates are likely to indicate that Free Shares are offered (average take-up rates are 67 per cent: Proshare 2004). Lower participation rates are likely to indicate that Partnership Shares are offered without Free Shares. The problem is that it is difficult to know where to draw the line. Drawing such a line is important because a Free Shares plan is very different from a Partnership Shares plan: one is a form of profit sharing, the other a medium-risk share subscription plan. As noted earlier, the average participation rate in Partnership Shares is around 25 per cent. Ideally, in the next WERS the question on share plan types will differentiate between the sub-forms of SIP.

6. Future opportunities

It is tempting to recommend a whole raft of additional questions on employee share ownership to enhance the capabilities of WERS in this area. However, employee share ownership is just one small area of the WERS enterprise so any major expansion would need to be compensated by economies elsewhere. Since the potential to re-balance in this way will clearly be very limited, any recommendations for extra questions have to be parsimonious with new questions having to deliver a 'big bang for the bucks'

One recurrent criticism of the WERS and other survey approaches has been that data on the presence of HR practices does not provide any indication on the 'quality' and importance of those practices (McCarthy 1994; Wall and Wood 2004). In the case of employee share ownership, an obvious limitation is that WERS does not observe the extent of employee share ownership. This might be seen as unfortunate as there is a large raft of research that indicates the level of ownership can be important, though not necessarily in a linear fashion (see Conte and Svejnar 1990). On the face of it, the more employees own of a firm the more likely employee interests and concerns are likely to be reflected in company policies and practices (Pendleton 2001), though

whether this has beneficial effects on performance is questionable. This could be a great opportunity for WERS: the potential to investigate the impact of the extent of employee ownership on performance, participation practices, and employee attitudes using a large, nationally representative sample. Typically, previous research assessing the role of ownership extent has used fairly small samples and the potential for selection bias has been considerable.

There is a case therefore for asking how much of the company to which the workplace belongs is owned by employees, with the expectation being that larger ownership is associated with bigger effects. In principle a simple question could be posed: ‘how much of the company is owned by employees?’ However, this may not be entirely straightforward. Each individual employee shareholder is an owner in their own right as far as the Shareholder Register and legal requirements are concerned, and this information needs to be aggregated. There is also potentially shares held in trust on employees’ behalf (certainly where a SIP is in use) and shares under option in SAYE, EMI, and CSOP plans (some of which may not be exercised). Despite these complications, listed companies (67 per cent of share plan workplaces belong to listed companies) will typically monitor their total employee ownership at any given time because of the requirements in the Association of British Insurers’ Code of Practice to limit the extent of employee ownership (including shares under option) to 10 per cent (see details). Thus, information on the level of employee ownership should be readily available within the firm. To deal with a possible lack of precision at any given point, it might be appropriate to use a categorical variable. One possibility, to overcome the possibility that information on company level influences on the workplace, may not be held at the workplace, is to introduce a short Company Data Sheet in WERS to accompany the Workforce Data Sheet. This could be especially concerned with ownership and governance features at corporate level, and might be completed by the Company Secretary (see Deakin and Pendleton 2006).

A second possible innovation relates to the employee questionnaire. There is considerable interest currently in the potential for linking employer-employee data-sets (Dti publication). The employee questionnaire in WERS2004 is a considerable improvement on the 1998 version primarily because of the addition of better questions on employee attitudes and views on their job and their employer. This raises the possibility that the management questionnaire and the employee questionnaire can be linked to investigate the relationship between presence of share plans and employee attitudes. This has been an important area of research into employee share ownership, and the possibility of using WERS to add to this will enrich it greatly. However, there is one major stumbling block with the current employee questionnaire: we do not know whether the observed employee participates in the share plan or owns shares in the company. Without this information any investigation of attitudinal ‘outcomes’ is going to be fundamentally deficient, and has to rest on an assumption about the probability of participation (given our knowledge from the management questionnaire of non-managerial participation rates) and/or the idea that the availability of the benefit is as powerful as actual participation in the benefit. This is the idea that the presence of share ownership plans will create a pervasive culture of participation. However, as participation cultures are not observed directly by WERS it remains a questionable assumption.

There is a case, then, for adding a question to the employee questionnaire asking whether a) the respondent participates in any current share plan, and b) whether the respondent owns any shares in the company (directly or beneficially). In the case of the Share Incentive Plan, involvement in Partnership Shares would mean a yes to both questions. In the case of SAYE, it is possible that a respondent may participate in SAYE but does not yet own any shares in the company. This might be coupled with questions on pension plan participation, given that is becoming an ever more important public policy issue.

Questions on employee involvement in share plans would also enable research into the influences on employee participation in share plans. This is a 'hot' topic, especially in the US, in the wake of the Enron and other corporate scandals because employees clearly invested too much of their pension savings in company stock. So far most of the research in this area has used a single data source (employees, administrator records etc) with the result that one set of influences (employee characteristics, firm characteristics, plan characteristics) are investigated but not their combined effect. Adding a participation question to the employee questionnaire would enable analysis of share plan, workplace, and company influences, in addition to employee characteristics, on the individual participation decision. Currently, we can investigate workplace and company influences on the participation rate of non-managerial employees at the workplace but can only imperfectly link in personal characteristics from the employee questionnaire.

Finally, it would be helpful to know a little more about the role of employee representation in the design, introduction, and operation of employee share plans. It has long been argued that employee involvement in other ways needs to complement participation in ownership for the full benefits to be achieved. In principle, employee involvement in the operation of the share plan itself may be a highly beneficial form of participation since it may demonstrate the commitment of the share plan to 'real' employee involvement. As yet, there has been very little research into this issue, other than in the case of employee buy-outs (Pendleton 2001 etc). The only survey data on this topic can be found in Kalmi et al (2005, 2006). The results suggest very limited impact of this form of participation on performance but this investigation is embryonic and with limited data (in scope and volume). However, anecdotal evidence suggests that in 'best practice' share ownership firms there is very extensive employee involvement and representation in plan introduction, and that this seems to impact on participation rates and possibly plan effects. In some cases this representation seems more advanced and extensive than in other aspects of employment relationships. This raises the possibility of whether some questions on union and union-union representation in the Management Questionnaire and Worker Representative Questionnaire can be amended slightly to refer explicitly to share plan committees and representation.

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Innovations to the Employee Representative Questionnaire

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1. Introduction

The employee representative questionnaire is a long established feature of the WERS survey series. It was introduced in the first WERS survey, and was initially addressed to union representatives only, with the representatives of manual unions the most likely to be interviewed. It is now a survey of the senior (defined by length of service as a representative) representatives. Where more than one union is present at the workplace, the representative questioned is the senior representative of the largest trade union. In 1998, the sampling frame was widened to encompass non-union representatives, but only if no union representative was present, and if the non-union representative sat on a consultative committee which dealt with a range of issues. The evaluation of WERS98 and the preliminary consultation prior to the design and commissioning of WERS2004 revealed a strong feeling among members of the WERS user community that while the employee representative questionnaire was an integral and important part of the WERS survey, not least because it sheds important light on one of the key actors in the regulation of the employment relationship and provides an interesting counterpoint to the views of managers, a significant overhaul was needed to make it fit for purpose. Three areas of concern stood out. First, given the decline of unions and union representation over the last twenty five years, and the potential for an increase in non-union forms of representation as a result of the transposition of the European Union's Information and Consultation Directive into UK law, it was felt that WERS needed to provide a better picture of non-union representation. Second, systematic comparison of responses to similar questions from managers and representatives from the same workplace revealed discrepancies in answers, but it wasn't always clear whether discrepancies were the result of differences in opinion and/or information, perhaps as a result of workplace conflict or artefacts of differences in the way that the questions were asked (Peccei and Benkhoff 2001) To try to clarify this, the group decided to drop questions where discrepancies seemed likely to be the result of representatives having poorer quality information than management and to ensure that the wording of questions was harmonised across both the management and employee representative questionnaires. A small number of new questions were also developed to probe issues like trust between employee representatives and management in more detail. Third, the employee representative questionnaire had been little used in secondary analysis, and where it had been used (e.g. Charlwood 2004) there were some problems with the wording of some of the questions which made it difficult to interpret what some of the results meant. When considering this third point, the specialist group developed the position that the objective of the survey should be to reveal who representatives are (in terms of age, gender, occupation etc). What they do in their role as representatives and what are the resources that they do it with? All questions were evaluated against this position. Questions which did not provide answers, or which provided ambiguous answers were re-drafted or removed.

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For these reasons, it was felt by the sponsors that the employee representative questionnaire was due a thorough review. Consequently a review group was set up comprising the authors and representatives of the sponsors. Over a number of meetings, the review group hammered out agreement on changes to the sampling frame and to the content of the questionnaire. The remainder of this chapter highlights the key changes, the rationale for them, and the opportunities that they open up for new research. We deliberately omit any reporting of results from the innovations to the survey, because the sheer volume of innovations introduced make it impractical to do in the space available to us. The remainder of the chapter is organised as follows. Section two considers changes made to provide a fuller account of the structure of employee representation, including non-union representatives in addition to the traditional focus on union representatives. Section three outlines changes made to facilitate understanding of employment relations in workplaces with non-union and dual channel representation. Section four outlines changes made to provide a better fit between questions asked to management and employee representatives. Section five considers changes made to enhance understanding of the representatives' role and resources. Section six outlines changes made to enhance understanding of union organisation.

2. Mapping managerial strategy towards employee representation

As we noted above, the employee representative questionnaire in previous WERS surveys concentrated on union representatives. In WERS98, non-union representatives were also interviewed if the following two conditions were met. 1) There was no union representative present. 2) The non-union representative sat on a consultative committee which discussed a range of issues. These selection rules meant that the small number of non-union reps interviewed in 1998 could not be considered as representative of the wider body of non-union employee representatives, because non-union employee representatives in 'dual channel' workplaces, where there were also union representatives present were excluded, as were non-union representatives who did not sit on multi-issue consultative committees.

Given the decline of union representation and the potential for future expansion of non-union representation as a result of the Information and Consultation Directive, it was felt that it was important that WERS should provide a fuller account of the activities of non-union representatives. We also wanted to ensure that new types of union representative, for example union learning reps were accounted for in the survey. Two questions needed to be addressed. How exactly would an employee representative be defined? How would non-union employee representatives be selected?

In answer to the first question, it was decided that to be eligible for participation in the employee representative questionnaire, a representative had to deal with a range of issues. Therefore, representatives whose purpose was to represent employees on a single issue, for example health and safety or statutory consultation over redundancies, would not be eligible to participate. However, union learning reps would be eligible to participate in the survey, because in many cases, union learning reps also fulfil other representative roles in addition to their role in promoting learning. The second question was trickier. The 1998 survey had given primacy to

union representatives and only interviewed non-union representatives if there was no union representative present. This resulted in an unrepresentative sample of non-union representatives. Yet to reverse this decision and give primacy to non-union representatives would introduce selection bias to the sample on union representatives. To interview both a union and a non-union representative in workplaces where both were present would risk adding significant costs to the survey. Various compromise solutions were considered, including randomly choosing either a union representative or a non-union representative to be interviewed in workplaces where both were present. However, none of the compromise solutions were particularly satisfactory, so the group made a strong recommendation, subsequently adopted by the sponsors, that two employee representative interviews – one with a union representative, the other with a non-union representative – should take place in workplaces where both union and non-union representatives were present. In addition to providing a fully representative sample of non-union representatives, this approach has the further benefit of allowing the processes of representation in dual channel workplaces to be investigated in greater detail (see section two below).

In total 1,203 eligible representatives were identified at 1,072 establishments. This sampling frame yielded 985 employee representative interviews (81.9 per cent of eligible representatives) from 896 workplaces. 736 of those interviewed were union representatives while 249 were non-union representatives. Response rates differed slightly by type of representative, with 83.5 per cent of eligible union reps being interviewed compared to 77.3 per cent of eligible non-union representatives (Chaplin et al. 2006). Interviews were conducted with union and non-union representatives in 89 workplaces, this represents 54 per cent of workplaces where both union and non-union reps were present. Looking in more detail at the non-union representatives, 181 (72.7 per cent) were representatives who sat on multi-issue consultative committees, while 68 (27.3 per cent) were ‘stand alone’ representatives who did not have any formal committee role (so who would not have been interviewed in the 1998 survey). Overall, if the 1998 sampling frame had been used in 2004, only around 119 interviews with non-union representatives would have been achieved in 2004 (68 would have been excluded because the representatives did not sit on a multi-issue committee and a further 62 would have been excluded because a union representative would have been selected for interview ahead of the non-union representative). We believe that these results vindicate the decision of the sponsors to undertake extra interviews in dual-channel workplaces and to extend the sampling frame of non-union representatives to include those who did not sit on multi-issue consultative committees. This innovation opens up avenues for research into the nature and activities of a nationally representative sample of non-union representatives, something which was not possible in previous WERS. This is interesting in its own right, but, as the next section will make clear, this innovation is particularly important if we are to understand the impact of the European Union’s information and consultation directive on employee representation in Britain.

3. Understanding employment relations in workplaces with non-union and dual-channel representation

As the preceding section explained, WERS2004 is the first survey in the series to be built around the clear understanding that employee representation is no longer based around a ‘union monopoly’ of representative structures directed principally at the

negotiation of terms and conditions of employment with managers. Consequently, an explicit decision was taken by the expert team responsible for the 'employee representative' questionnaire (and, indirectly, for related questions to management representatives) to develop new and modified questions designed to probe the possible emergence of new modes of representation. New questions and routing were developed specifically for non-union representatives. This dealt with one of the key weaknesses of the 1998 survey: many of the questions asked of the small number of non-union respondents were only appropriate for union representatives. The 2004 survey contains questions developed specifically to probe the role and activities of non-union representatives. Where possible these questions are analogous to equivalent questions addressed to union representatives so allowing comparisons between union and non-union representatives, but this new structure allowed the flexibility to address questions which were only applicable to either union or non-union representatives without adding dramatically to the length of the survey. These changes allow us to address a number of pertinent issues and questions which could not be addressed by the previous surveys.

Over the last several years survey and case study research has confirmed the continuing decline of traditional forms of trade union workplace representation. As union recognition has declined so too has the number of workplaces with trade union representative systems and the proportion of employees who enjoy the basic right to representation at the workplace has fallen dramatically. But it has not just been a matter of numbers. The decline in unions' workplace bargaining strength has been reflected in significant changes in the processes that characterise workplace interactions between management and union representatives and in the subjects covered by them. In particular it is claimed that *negotiation* (a process of bargaining resulting in jointly-owned compromise outcomes) has been increasingly displaced by *consultation* (seeking the views of representatives within a framework of unilateral managerial decision-making). More radically still, some research indicates a growing managerial interest in representation through non-union channels, both direct and indirect. Several of these emergent trends are given greater weight by the promulgation in 2005 of the Information and Consultation of Employees (ICE) Regulations that provide a legal framework for universal employee consultation (not negotiation) within the enterprise. These Regulations, although their full impact has yet to be assessed, run against the established model of employee representation at the workplace since they establish consultation and information as the mode of collective interaction, and they enable universal employee representation, irrespective of union membership.

As discussed in the previous section, WERS2004 provides, more completely than its predecessors, a detailed mapping of the three available forms of indirect employee representation: the traditional form based solely on trade union ('shop steward') representation; non-union systems; and 'hybrid' systems containing both union and non-union representatives. The last are of particular interest since it could be plausibly argued that they constitute the most likely form to emerge as a consequence of the operation of the ICE Regulations, as a result of the actors in workplaces with existing trade union-based systems looking to extend rights to information and consultation to groups of employees who do not enjoy trade union recognition to comply with legal requirements before the law comes into effect. New questions explored the relationships between union and non-union representatives and looked at whether

managers treated the two types of representative differently. These all enable a first investigation into the important question whether the presence of non-union representatives weakens or strengthens collective employee representation and whether, as many unions fear, managers may seek to use the presence of non-union representatives as a means of weakening or bypassing union-based forms. The three-way classification noted above can also be used for testing different hypotheses about the impact or effectiveness of the three types, both from the point of view of employee interests (wages, employment security, etc.) or from that of employers (workplace performance measures). It will provide a snapshot of the coverage of these three forms of representation as a benchmark against which to chart growth or decline in the future. In short WERS2004 allows us to explore the growing diversity of indirect representation structures and to say something useful about the different forms.³ Alongside the identification of this increased diversity, WERS2004 sought to trace and investigate a second, possibly related, phenomenon: the alleged growing significance of systems of engagement between managers and employee representatives devoted solely to *consultation* as opposed to negotiation, the more traditional approach to collective relationships. Thus if the traditional structure is held to be a joint committee of managers and trade union representatives negotiating the terms and conditions of employment, a more recent form, particularly promoted by the 1990s enthusiasm for ‘partnership’, was a body concerned with consultation of employee representatives. The difference between the two may not lie solely in the process and outcome (‘joint regulation’ and ‘managerial decision informed by consultation’). It is also argued that the agenda of consultation is significantly different from that of traditional negotiation; the latter preoccupied with economic issues of terms and conditions of employment and wages in particular, and the former broader, reflecting in part an alleged managerial enthusiasm for sharing with employees information about the challenges facing the company, competitive prospects, and corporate strategy. Finally, reflecting the earlier discussion, we tend to assume that negotiation is undertaken solely by trade union representatives (evidence on non-union representative systems shows that they are virtually never granted rights of negotiation (see Terry (1999); Butler (2004))), while consultation may be handled by all three types of representative structure outlined above. This last point again may anticipate some of the implications of the ICE Regulations which grant rights to consultation and information but on the presumption of universal systems of employee representation. This may prefigure the emergence of a form of workplace dualism with negotiation rights and processes remaining the prerogative of unions acting on behalf of their members (where recognition exists) but consultation extending through different mechanisms to a larger employee constituency.

WERS2004 probes to a greater extent than before the subjects of consultation, the structures created to enable it to take place and representative and management evaluations of its significance and influence. It provides an opportunity to check in detail whether employers’ professed enthusiasm for consultation with employees has been realised and if so what its effects are proving to be. Administered only months before the implementation of the first phase of the ICE Regulations it provides an opportunity to look for evidence of managerial and employee/trade union interest in

³ We did not have time to explore other signs of this growing diversity, such as the suggestion that there is a growth in specialist areas of representation – Health and Safety representation as in the past, but also the increasing importance of specialist Learning Representatives and Equality Representatives, strongly promoted by many trade unions in recent years.

anticipating the effects of the legislation by drawing up agreements before the law comes into force. In exploring claims for the enhanced significance of consultation it enables us to explore the vexed question as to whether the development of consultation is associated with a weakening of negotiation (as frequently argued in the past) or whether the two processes can co-exist, each with its own dedicated structure and purpose.

The survey thus provides tools to examine not only the state of play of traditional employee representation but the emergence and significance of new forms of representation and new modalities of engagement between employers and employee representative structures. It is sometimes suggested that recent changes (in particular the Information and Consultation of Employees Regulations) are introducing a form of 'dual system' into UK workplace representation systems, analogous by implication to those found in other EU Member States in mainland Europe. While WERS2004 certainly enables us to check this, it provides tools for the assessment of a far more likely set of outcomes than a structured dualism, namely a considerable diversification in both the form of indirect employee representation and the modes of engagement between representatives and employers. Earlier WERS started the task of identifying some of these trends; the most recent one will enable us to paint a much clearer picture of the multifarious forms likely to characterise workplace representation in the future.

4. Triangulating responses from employee representative and management respondents

As noted above, the third key issue considered by the specialist group was that of the triangulation of data from the management and employee representative questionnaires. Triangulation, in this context, refers to the matching or alignment of questions in the two questionnaires so as to enable a direct comparison of manager and employee representative responses to specific topics of interest. Such comparisons are important since they make it possible to check the information provided by management on these topics against that provided by employee representatives. In turn, this makes it possible to consider wider issues of interrater agreement and reliability. Such issues are central to the analysis of the WERS data and are made all the more important by the fact that much of the information available from WERS about the management and operation of individual establishments comes from management itself (Peccei & Benkhoff, 2001).

Effective triangulation requires appropriate matching of questions across questionnaires so as to enable direct comparison of responses on desired items. Since their inception, the WERS surveys have always included a number of common questions asked to both management and employee representatives in individual establishments. In the previous survey, WERS98, for example, there were over 80 questions that appeared in both the management and the employee representative questionnaires. Closer inspection shows, however, that a number of these common items were not fully matched in that the actual wording of the questions involved differed between the two questionnaires (Peccei & Benkhoff, 2001). In some cases the differences in wording were only minor, while in others they were more substantial, making systematic comparison between management and representative responses problematic. In addition, some of the common questions in WERS98 covered issues

about which employee representatives might have only limited knowledge, such as whether management at the establishment set a range of specific targets relating to sales, costs, turnover, and so on, thereby clearly limiting the value of any comparison with the information provided by management on these same items.

In light of these and similar problems, the specialist group decided to review the set of common questions asked of management and employee representatives in WERS98 and then proposed a number of changes designed to harmonise the items involved and provide a more meaningful basis for comparing responses across questionnaires in the 2004 survey. As part of the review, a number of the common questions that were asked in WERS98 were dropped in 2004, while others were changed to ensure direct relevance and comparability across questionnaires. The end result of this harmonisation exercise was the inclusion in the 2004 survey of a smaller, but more coherent, set of directly matched questions that were asked to both management and union and non-union employee representatives who participated in the survey.

The matched questions included in WERS2004 covered both filtered and non-filtered items. Non-filtered questions are primary questions asked of all management and employee representative who participated in the survey. For example, whether there are formal procedures at the establishment for dealing with discipline and dismissals. In contrast, filtered questions are secondary, or follow-up, items that are only asked of respondents who answered in a particular way to a previous primary or secondary question. For instance, if there are formal procedures for dealing with discipline and dismissals, whether employees are asked to attend a formal meeting with a manager to discuss the reason for taking disciplinary action and, if so: (a) whether employees are allowed to be accompanied by a range of possible companions at the disciplinary meeting, and (b) whether the companions, if admitted to the meeting, are allowed to ask questions on behalf of the employee. Although important, filtered questions are less directly useful than non-filtered questions for looking at issues of interrater agreement and reliability. This is because the number of valid responses on follow-up questions is often much smaller than on primary questions and can also vary significantly from one item to the next, thereby making meaningful comparisons across questions extremely difficult. As part of the harmonisation exercise, therefore, a number of matched secondary items were retained and/or introduced in the 2004 management and employee representative questionnaires. The main emphasis, however, was on the inclusion in the two questionnaires of appropriately matched primary or non-filtered questions covering a range of topics of interest.

In the event, a set of 50 directly matched primary questions were included in the WERS2004 management and employee representative questionnaires. These 50 matched items cover a range of topics and include both 'factual' questions asking respondents, for instance, to identify whether or not there had been any strikes at the establishment in the past year, as well as more 'subjective' questions requiring respondents to rate on a three-point Likert scale, for example, management's attitude towards union membership at the workplace. The specific topics covered by the set of matched items include key aspects of the management and operation of the establishment about which employee representatives could reasonably be expected to have direct knowledge and experience. The topics cover issues related to human resource (HR) practices, negotiations, information sharing, industrial conflict, change

and management attitudes towards union membership. Specifically, the matched questions cover the following areas:

- (1) The existence or otherwise of a basic set of HR practices and procedures at the establishment dealing with collective and individual grievances, and with discipline, dismissals and appeals.
- (2) Whether management ignores, informs, consults or negotiates with employee representatives over a number of important issues at the establishment, ranging from pay to health and safety.
- (3) Whether management regularly discloses information about various aspects of the operation of the establishment to employees and/or their representatives at the workplace.
- (4) Whether or not a range of forms of industrial action, such as strikes, go slows and work to rules, had either taken place or been threatened at the establishment over the past year.
- (5) Whether management had introduced a series of changes at the workplace in the past five years, ranging, for example, from changes in payment systems to changes in work techniques and procedures, and the role played by employees and their representatives in the introduction of these changes.
- (6) Management's overall attitude towards union membership among employees at the establishment.

Clearly, there are a number of other areas that, in principle, it would have been useful to collect matched information about from management and employee representatives, including, for example, other aspects of HR policy and practice at the establishment. However, given the other important additions made to the employee representative questionnaire outlined above, the specialist team thought it best to limit the number of matched items so as not to add further to the length and complexity of the instrument. The matched questions included in WERS2004, however, are both sufficiently numerous and varied to allow for a useful comparison of the extent to which management and employee representatives agree about important aspects of the management and operation of their workplace. As such, they provide the basis for an in-depth analysis of interrater agreement and reliability, as well as an opportunity to explore key related issues about validity and systematic bias in the latest version of WERS.

Finally, in this context, it is worth noting that in addition to the set of matched items discussed above, a small number of new questions designed to assess levels of trust between management and employee representatives at the workplace were also included in the WERS2004 survey. The new trust-related items are discussed in detail in the contribution prepared by the specialist group dealing with innovations relating specifically to partnership at work in WERS2004. Here it is sufficient to note that in order to assess perceived trust relations between management and employee representatives, three parallel questions were asked of the two sets of respondents in each establishment. Specifically, employee representatives were asked whether managers at their workplace: (a) can be relied upon to live up to the commitments they have made to employee representatives, (b) are sincere in their attempts to

understand representatives' point of view, and (c) can be trusted to act with honesty and integrity in their dealings with representatives. The same sets of questions were asked of management about both union and non-union employee representatives. Taken together, these parallel set of questions constitute an important innovation in WERS2004 allowing for a systematic analysis of mutual trust relations between management and employee representatives across British establishments. Importantly, this analysis can be further extended and enriched by looking at the questions from the employee questionnaire in WERS2004 designed to tap employees' trust in management. In particular, the combined trust data from the three WERS questionnaires provide a unique opportunity to explore wider issues about the role played by mutual trust not only in enhancing labour-management cooperation at the workplace, but also in contributing more generally to employee well-being and performance at the establishment.

5. Understanding the representative role

The specialist group made a number of more minor changes and additions to the worker representative questionnaire to allow the questions, of who the representatives are, what they do and what resources do they have to do it with, to be answered more thoroughly. Because a lot of what representatives do may happen through informal contact with management rather than formal consultative or negotiating meetings, a new question was added on informal contact between employee representatives and management. The extent of consultation and information sharing were examined more carefully. In workplaces with both union and non-union representatives were present, a question was introduced to look at the relationship between union and non-union representatives. Questions on whether or not representatives sought help and advice from sources outside of the workplace and if they did, who from were developed. More detailed questions on how representatives were selected for their representative role were introduced so the extent of democratic participation in representative selection could be gauged. In a similar vein, more detailed questions on the constituency of workers that the representative spoke for were developed.

6. Understanding union organisation

The final area considered in detail by the specialist group were questions on union organisation. This is a subject of considerable interest among practitioners and academics. In recent years, debate has focused on the viability of 'organising unionism' as a strategy for union revitalisation (e.g. Heery et al. 2003). WERS represents an important opportunity to investigate the extent to which the rhetoric of organising unionism is being translated into action at a grassroots level and whether or not attempts at union organising have been successful. To allow these questions to be investigated, there are now more detailed questions on union organising; the scope that unions have to expand their membership in areas where they are recognised and coverage in areas where they are not recognised. If there is scope for growth, has the union made any attempts to expand membership and coverage? If they did, what resources and tactics were used: specialist training, support and material from the unions head office or regional office? The new questionnaire also explores in more detail the nature and extent of contact and support provided to union representatives by union officials and headquarters. These new questions allow the extent of union organising activity to be mapped, and allow some analysis of the determinants of

successful and unsuccessful attempts to organise and recruit non-union workers. There are also new and more detailed questions on strike activity and the union role in grievance procedures. The questions on contact between union representatives and union officials also allow some assessment of the independence and self-sufficiency of workplace organisation to be assessed – something which may allow theories of union viability (Willman 2001) to be tested.

7. Conclusions: new directions for research

This brief chapter has highlighted the key changes to the WERS2004 employee representative questionnaire and explained the rationale behind the changes. It has deliberately omitted any discussion of the results of the survey arising from these changes, because the sheer volume of innovation makes this an impractical task given the time and space available in this book. It has identified four key sets of changes: First, major changes to the selection rule which has more than doubled the number of non-union employee representatives who participated in the survey. This change means that WERS2004 is the first WERS to include a fully representative sample of non-union representatives and the first to allow comparison of union and non-union representatives from the same workplace. This innovation will allow researchers to gain a better understanding of non-union representation while providing a benchmark against which the effect of the ICE Regulations can be assessed. It will also allow the multiplicity of representation arrangements currently present in Great Britain to be mapped more accurately while allowing some analysis of the processes and outcomes associated with different forms of representation.

Second, changes to the questionnaire to reduce unhelpful duplication of questions with the management questionnaire in cases where it seems likely that employee representatives' will not be well placed to provide accurate answers and to build a core of questions which allow accurate triangulation of responses between managerial and employee representative respondents. These questions cover the existence of HR practices, the extent of management consultation, negotiation and information sharing with representatives on a range of issues as well as information disclosure, industrial action, workplace change and managerial attitudes towards union membership. This change will allow some assessment of interrater agreement and reliability. A further set of common questions on trust between management and employee representatives are developed, this innovation is discussed in more depth elsewhere in this volume.

Third, a small number of new and more detailed questions were introduced, and wording was changed in some other questions in order to provide better answers to the question of who reps are, what they do and the resources they do it with. These innovations allow for better description of the representatives role and activities (already documented in the WERS2004 sourcebook) and if combined with some of the other innovations described above, will allow for a more in depth study of the determinants of more capable and effective forms of workplace representation.

Fourth, and in a similar vein new and more detailed questions were introduced on union organising activity, which will allow ideas about the extent and nature of union organising activity and the determinants of success in union organising to be tested.

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The Collection of Objective Data on Workplace Performance

John Forth¹ and Robert McNabb²

1. Introduction

One of the central purposes of the Workplace Employment Relations Survey series has been to map patterns and trends in employment relations in Britain. However, another principal application of the survey data has been to analyse the relationships between workplace performance and various types of human resource management practices, employment practices and compensation systems. Much of this work arises from a desire to establish the impact and efficacy of different workplace practices. The subjects investigated have included union representation, employee consultation arrangements, performance-related pay, workforce training, bundles of human resource management practices, and work-life balance policies.

A prerequisite for such analyses is the availability of information on workplace practices and relevant contextual variables, on the one hand, and workplace performance measures, on the other. In this respect, the Workplace Employment Relations Surveys (WERS) (previously, the Workplace Industrial Relations Surveys) have proved an invaluable source, as few other inquiries provide data in both areas. But despite the extensive use of WERS in industrial relations, labour economics and human resource management, some commentators have questioned its value. One such area of debate concerns the ability of the survey (indeed, any survey) to capture the complexity and diversity of human resource management practices and industrial relations at the workplace. We do not address this particular issue here. Instead, we focus on another area of contention, which concerns the validity of the measures of performance that have traditionally been available in WERS. The latter comprise subjective assessments of relative productivity and relative profitability acquired in each Cross-Section survey from the main management respondent (the senior person at the workplace with responsibility for personnel or employment relations issues). The nature of these measures, and the way in which they have been collected, have raised questions about both their reliability and their usefulness in identifying performance-enhancing or performance-limiting practices.

In acknowledgement of these concerns, efforts were made in the 2004 WERS to collect objective (accounts-based) measures of workplace productivity and profitability, in addition to the subjective measures previously captured. These efforts involved the administration of a new Financial Performance Questionnaire within the 2004 Cross-Section Survey. They also involved attempts to link both the 2004 Cross-Section and 1998-2004 Panel data with performance data collected in the Office for National Statistics' (ONS) Annual Business Inquiry.

This paper describes these attempts, and also examines the nature and availability of the objective measures of performance that were subsequently obtained. It is

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complemented by a separate paper (Forth and McNabb, 2007) which evaluates the degree of convergence between the objective and subjective measures.

2. Existing measures of workplace performance

Before we consider the objective performance data available in WERS 2004, it is useful to consider the existing measures of workplace performance available in earlier surveys in the series and collected again in WERS 2004. Here we focus on final performance indicators, that is, labour productivity and profitability, rather than intermediary measures such as labour turnover and absenteeism.

Subjective assessments of relative financial performance have been sought from workplace managers in each of the five Cross-Section surveys in the WERS series. The subjective assessment of relative productivity was added in 1990. The question text used for each measure in WERS 2004 is reproduced in Appendix A, though the wording has remained virtually identical over the series: the principal change was the move from a three to a five-point scale for the measure of financial performance in 1984. These questions have typically been directed to the main management respondent, though in 1990 they were directed to a financial manager in private sector workplaces that had someone in such a role (24 per cent of all surveyed workplaces).

There are a number of criticisms that might be levelled at these subjective measures. The first is that performance may be measured with error since the main management respondent in WERS may have only limited information on either or both of the performance variables. In the WERS 2004 Cross-Section Survey, half of all respondents were personnel specialists. A further 47 per cent were owners or general managers, whilst only 4 per cent were financial managers. It seems probable that some personnel managers will not be well informed about the level of labour productivity or financial performance within their own workplace, and will be even less knowledgeable about the performance of their competitors; the respondent requires knowledge of both in order to provide the relative evaluation sought within the question. Such concerns are seemingly given weight by the fact that around half of all respondents report their establishment's productivity or performance as being above average and only a small proportion report it to be below average (see Appendix A). There is also a significant amount of non-response.

If any measurement error was random, the impact would be to reduce the apparent strength of any associations that could be identified. However, a second criticism is that the limited variance in the data (also partly a function of the limited response categories) provides the analyst with less information than a continuous, accounts-based measure of productivity or profitability. This further restricts the analyst's ability to identify associations between practices and performance, since the impact of a practice must be sufficient to move a workplace from one category to the next in order to be observable in the data.

If any measurement error was non-random, and there were consistent positive (or negative) response biases across a range of variables, the impact could be more problematic. This may occur if a manager responsible for introducing specific practices, presumably with the expectation that they may improve productivity or profitability, then overstates any positive effect these practices may have had (or

downplays any negative impact), leading to a spurious positive correlation between responses about employment practices and responses about performance.

Quite apart from any potential measurement error, another possible criticism is that there is some lack of clarity in the WERS subjective measures as to what is actually being measured. Since 1998, a precursor to the question about financial performance has asked the respondent to specify the measure of financial performance on which their evaluation is based (sales, profits, costs etc), but there is no such precursor to the question on productivity. Two managers may then base their productivity ratings on very different measures, with one taking sales as the numerator and another taking value-added. The denominator for the respondent's evaluation is not defined for the ratings of either productivity or financial performance, and so may be variously taken as either total employees, full-time equivalents or even hours worked. Furthermore, the nature of the industry comparison is not defined and respondents may clearly have differing views as to what constitutes "your industry".

Finally, and of no less importance in policy terms, the subjective measure may be criticised because the limited, ordinal nature of the response categories means that it is not possible to quantify the impact of any particular practice on workplace performance. Instead, one is limited to making general statements about the sign of any impact or association (whether positive or negative) and about the relative importance of different practices included within the same analysis.

Notwithstanding these various concerns, subjective performance measures do have a number of significant advantages. From a pragmatic point of view, objective measures of profitability or productivity are not always available at the level of the establishment. Respondents to workplace surveys may have an accurate perception of how their establishment is performing, but may not have - or be willing to release - actual data on sales, value-added or profitability. This may be because such information is not collected at the level of the individual workplace or because, even if it is available, it is commercially sensitive. In contrast, subjective measures tend to have high response rates, with 85-90 per cent of respondents typically providing a rating in WERS. They are also less costly to construct, since one merely incurs the negligible marginal cost of asking (answering) one or two additional questions within an existing face-to-face interview that, in WERS, already lasts an average of two hours.

Prior evaluations of the subjective performance ratings in WERS have also generally been positive. In their analyses of the impact of unions on financial performance, Machin and Stewart (1990, 1996) accepted that the subjective measure included a degree of 'noise', but their tests found no evidence of systematic reporting errors. They also found that workplaces which gave higher subjective ratings of financial performance were less likely to close down in subsequent years, a finding replicated by Bryson with more recent data (2001). Machin and Stewart also pointed out that objective valuations may be subject to measurement error and may vary because of differences in accounting practice across firms, and they noted the value of the subjective measure in implicitly controlling for unobservable industry-specific effects.

Nevertheless, there have been continual calls advocating the collection of objective (accounts-based) performance data in WERS. This was first attempted during the

design phase for WERS 1990, but abandoned after piloting suggested a low response rate (Airey et al, 1992: 20).

A second attempt to obtain objective performance data was made in 1998. The Cross-Section Survey included a question (MCENPRO) which sought consent from the management respondent to link the survey data from their workplace to any return that had been provided for that workplace in response to the ONS Annual Business Inquiry (ABI). The ABI provides information, inter alia, on gross output, intermediate inputs and employment that can be used to derive a measure of per capita gross value added (Jones, 2000). Successive years of data are made available for research use within an ONS repository named the Annual Respondents Database (ARD) (Oulton, 1997; Barnes and Martin, 2002). The ABI (and hence the ARD) does not, however, contain much information on the sorts of contextual variables found in WERS and contains no data on workplace human resource practices or industrial relations.

The linking of the records was possible because both surveys drew their samples from the ONS Inter-Departmental Business Register (IDBR). However, when the matching exercise was conducted, ABI data were available within the ARD for only 175 of the 2,191 establishments surveyed in WERS 1998. The reasons were two-fold. First, the ABI covered only the production sector at the time that WERS 1998 was being designed and put into the field in 1997; data were first collected from the service sector in 1999 (albeit most typically for the calendar year January – December 1998).³ For this reason, consent to link WERS and the ABI was only sought from workplaces in the production sector (n=418) and, because it was originally envisaged that the majority of WERS fieldwork would take place before the end of 1997, the question only sought consent to link WERS to the 1997 ABI. This naturally limited the opportunities for data linking. The second issue was that, being a sample survey among enterprises with fewer than 250 employees, the ABI has only partial coverage of the population of private sector businesses. Consequently, only 229 of the 319 workplaces providing signed consent in WERS 1998 could be identified on the ARD as having provided an ABI return for 1997 (Haskel, 2005).

A further issue to be confronted in any subsequent analysis of the matched data was that most returns to the ABI are completed at enterprise level. Thus, in cases where the surveyed establishment in WERS 1998 was part of a multi-site organisation, there was commonly a discrepancy in the unit of observation within the two surveys.⁴ A similar problem arose in matching ABI returns with another establishment-level survey – the Employer Skills Survey for England. Analysis of those data proceeded either by focusing solely on single-plant enterprises (Haskel et al, 2003; Galinda-Rueda and Haskel, 2005), by apportioning enterprise output across plants on a per-employee basis (thereby assuming homogeneity across plants within the same enterprise) (ibid), or by extrapolating from the small number of observations for workplaces in multi-establishment firms (Harris and Robinson, 2006). Each option naturally raises questions about the representativeness and reliability of the results.

³ The ABI continues to exclude SIC(2003) Section J (Financial intermediation).

⁴ For example, if the WERS data related to a single outlet of a national retail chain, the ABI return may well concern the whole company. Haskel (2005) reports that only 69 of the 229 matched ABI returns had site-level data on labour productivity.

3. Collecting Objective Measures of Workplace Performance in WERS 2004

The experience of the previous surveys led the Performance/Technology Specialist Team and the WERS Research Team to consider how objective performance data might be better collected in WERS 2004. It was clear that the size of any WERS-ABI linked dataset could be extended considerably by a more wide-ranging consent question that included service industries and which also provided for linkages to be made to multiple years of data in the ARD. However, questions would still remain about the common mis-match in units of observation. Accordingly, it was also agreed that, subject to successful pre-testing, WERS would again attempt to collect data at establishment level through the development of a questionnaire focused specifically on financial performance.

Linking WERS 2004 to the ARD

The development of a revised consent question took place via discussions with the Business Data Linking (BDL) team at the Office for National Statistics, headed by Felix Ritchie. BDL have responsibility for linking data from the various statistical inquiries undertaken by ONS, and have also facilitated the few links that have been made between these inquiries and external surveys (e.g. WERS 1998, Employer Skills Survey, International Benchmarking Survey). These discussions led to the adoption of a wide-ranging consent question previously used in DTI's Work-Life Balance Employer Survey 2003. The wording of the question as it appeared in WERS 2004 is reproduced in Appendix B.⁵ Where a positive reply is obtained from the respondent, the nature of the consent obtained via this question permits links to be made (by ONS and the WERS Research Team) between the WERS data from that workplace and almost any other source of data over any time period, as long as the resultant linked data are used for research purposes. In the event, consent was obtained from 2,166 (94 per cent) of the 2,295 workplaces that participated in the Cross-Section Survey.⁶

The WERS Cross-Section data for these workplaces were subsequently linked to ARD2 by the Business Data Linking team at ONS (see Davies, 2006 for a detailed discussion of the linking process).⁷ Table 1 provides a summary of the linkages made in respect of ARD2 for 2002, 2003 and 2004. The process of linking WERS with the ARD2 was done by matching via each workplace's unique IDBR identifier (called the IDBR Local Unit reference number), this identifier being present on both data files. The table indicates that it was possible to identify 1,979 of the 2,166 consenting WERS workplaces (91 per cent) on ARD2 in 2003. The slightly higher match rate for 2003 when compared with 2004 is to be expected, since the sample for the WERS Cross-Section was drawn from the Inter-Departmental Business Register in September 2003 and establishment reference numbers disappear from the Register over time for reasons other than establishment closure (e.g. company takeover).

⁵ Verbal consent was considered sufficient by ONS in 2004. The requirement for signed consent in WERS 1998 had reduced the numbers available for matching, as signed consent forms were not collected for 54 of the 373 workplaces that were recorded to have given verbal consent in the survey interview.

⁶ The consent question was also included in the 2004 wave of the 1998-2004 Panel Survey. See section 7.

⁷ ARD2 is a revised version of the ARD, released in mid-2006, with improved consistency in variable names and definitions across years (see Robjohns, 2006, for further details).

Table 1

Number of matches between the WERS 2004 Cross-Section Survey and the Annual Respondents Database (ARD2)						
	ARD 2002	ARD 2002	ARD 2003	ARD 2003	ARD 2004	ARD 2004
	<i>Full sample</i>	<i>Trading sector (ASTATUS1^W <= 8)</i>	<i>Full sample</i>	<i>Trading sector (ASTATUS1^W <= 8)</i>	<i>Full sample</i>	<i>Trading sector (ASTATUS1^W <= 8)</i>
Total number of observations	2,295	1,757	2,295	1,757	2,295	1,757
Consent given for data linking (MLINKDAT ^W =1)	2,166	1,651	2,166	1,651	2,166	1,651
Identified on ARD2 using IDBR Local Unit Ref. No. (MATCH ^A =3)	1,535	1,381	1,979	1,612	1,855	1,503
ABI return provided (SOURCE ^A =1)	855	825	932	894	882	847
ABI return covers single workplace (LIVELU ^A =1)	178	171	175	167	149	142

Notes:

W: Indicates a variable contained in the WERS 2004 Cross-Section Survey Management data file (XS04_MQ.*)

A: Indicates a variable contained in ARD2 or the matched WERS-ARD data file

The fact that the Annual Business Inquiry is not a census of enterprises is seen by the fact that only half of those workplaces identified on the ARD2 in a particular year (47 per cent for 2003) belong to enterprises with an ABI return for that year. The proportion is slightly higher (55 per cent in 2003) when the attention is confined to WERS workplaces located in the trading sector of the economy (defined as the private sector, plus trading government corporations and nationalised industries), since the ABI purposefully does not cover the public sector.⁸ Within the trading sector, ABI returns are more likely to be available for workplaces that belong to larger enterprises and for those outside of the Financial Intermediation sector, reflecting the sample design of the ABI. One inadvertent implication is that WERS workplaces that recognise trade unions have an above-average probability of having an ABI return, since union recognition is more common among workplaces belonging to larger organisations.

⁸ In WERS 2004, trading sector workplaces are those where ASTATUS1<=8.

The table also highlights (in the final row) the common mismatch in observational units between WERS and the ABI, with only one fifth of matched ABI returns (19 per cent in 2003) being provided for a single establishment. The remainder cover a wider unit, commonly the whole enterprise to which the workplace belongs.⁹ Further analysis shows that, in instances where the ABI return is not at establishment level, the number of workplaces covered by the return is typically very high: half of all multi-establishment matched returns for 2003 covered 30 or more local units, but the distribution was heavily skewed, with the mean standing at 332. These multi-establishment returns clearly offer the *potential* for measurement error if used to estimate the productivity of a single workplace.¹⁰

Table 2 focuses further on the nature of the matched ABI data available for 2003, tabulating the period covered for each of the 929 matched returns with data on this item (3 of the 932 matched returns have no information on the period covered). Around two-fifths of matched returns cover the calendar year, i.e. January – December 2003. A further fifth cover the financial year April 2003 – March 2004.

Whilst the process of matching WERS 2004 to ARD2 yields ABI returns for only a partial sub-set of the full sample, one notable attribute of the ABI is the low rate of item non-response observed on most of the survey questions. Table 3 indicates the availability of a number of key data items within the subset of 932 matched ABI returns for 2003. The table indicates, for example, that data on turnover per employee (often referred to as ‘average labour productivity’) or gross value-added per employee are available for 868 (97 per cent) of 894 trading sector workplaces. A rudimentary measure of profits per employee (calculated as gross value-added minus employment costs and capital expenditure) is similarly available for 868 trading sector workplaces. Each of these measures is based on a simple headcount since, in contrast to the WERS Financial Performance Questionnaire (described below), the ABI does not provide separate numbers of full and part-time employees. It is also noteworthy that the employment data collected in the ABI relates to a single point-in-time (December of the survey year), and so some imprecision is invariably introduced when combining this with data on outputs.¹¹ Finally, it is also noted that the construction of production functions is inhibited since the ABI does not directly provide data on capital stocks, though ONS provide estimates of the latter in a separate database, derived using the historic pattern of net capital expenditure (see Martin, 2002).

⁹ This comparison is made possible by the LIVELU variable, which indicates the number of local units present in the ARD reporting unit. It should be noted that this does not correspond perfectly with the WERS data contained in ASINGLE: 278 (14 per cent) of the 1,979 WERS establishments identified on ARD2 in 2003 are differently classified on these two data items. This may be due to differences in the timing of data collection (see later text) or differences in interpretation by respondents to the two inquiries.

¹⁰ As well as looking at the number of units covered by the ABI return, it is also possible to make a comparison on the basis of IDBR employment, thereby identifying workplaces for which employment in the surveyed local unit comprised at least 50 per cent of employment in the reporting unit for the ABI. We identify 315 WERS workplaces where IDBR-recorded employment for that establishment comprised at least 50 per cent of employment in the matched reporting unit for the ABI. One might speculate that measurement error arising from the mis-match of units *could* be fairly minimal in this circumstance, but we do not investigate this issue further here.

¹¹ One would ideally have data on average employment over the period of the financial return. Table 2 shows that, for ABI 2003, the central date of most matched returns precedes December 2003.

Table 2

Period covered by matched returns from ABI 2003		
	Number	Per cent
March 2002 – February 2003	*	*
April 2002 – March 2003	32	3.4%
May 2002 – April 2003	11	1.2%
June 2002 – May 2003	29	3.1%
July 2002 – June 2003	79	8.5%
August 2002 – July 2003	*	*
September 2002 – August 2003	39	4.2%
October 2002 – September 2003	43	4.6%
November 2002 – October 2003	10	1.1%
December 2002 – November 2003	46	5.0%
January 2003 – December 2003	359	38.6%
February 2003 – January 2004	50	5.4%
March 2003 – February 2004	54	5.8%
April 2003 – March 2004	172	18.8%
May 2003 – April 2004	*	*
June 2003 – May 2004	*	*
TOTAL	929	100.0%

* Fewer than 10 observations; actual counts suppressed in accordance with ONS disclosure control rules.

Notes:

(i) Period data is held in variables Q801 (start date) and Q802 (end date) on ARD2.

(ii) Around 10 per cent of returns did not cover a 12-month period. Such cases were coded in the above table by identifying the 12-month period around the central date of the return.

Table 3

Availability of key data items in matched returns from ABI 2003		
	Full sample	Trading sector
All matched returns	932	894
Turnover (to) *	925	888
Total purchases of goods and services (totpurch) *	929	892
Gross value-added (to-totpurch) *	925	888
Employment (emp_pt) *	909	872
Total labour costs (totlabcost) *	929	892
Net capital expenditure (ncapex)	932	894
Average labour productivity – derived (to/emp_pt) *	904	868
Value-added per employee – derived ((to-totpurch)/emp_pt) *	904	868
Profits per employee – derived ((to-totpurch-totlabcost-ncapex)/emp_pt)	904	868

Notes: ARD2 variable names are indicated in brackets

* after excluding zero values

Further investigation of the periods covered by matched ABI returns shows that 700 workplaces in the WERS 2004 Cross-Section Survey can be matched to an ABI return covering a period that includes the date of the WERS 2004 Management interview. Some 685 of these returns derive from ABI 2004 and a further 15 derive from ABI 2003, the latter being some of the first WERS interviews conducted in February or March 2004. In 132 of these 700 cases, the ABI return covers a single establishment.

In summary, the process of matching the WERS 2004 Cross-Section Survey to ARD2 has been successful in yielding a matched dataset that is significantly larger than the equivalent matched dataset arising from WERS 1998. By including a broader consent question, WERS 2004 has provided an opportunity to match across to a much broader sample of ABI returns, including both production and service sectors. The revised consent question has also permitted matching to take place across multiple years of ARD2. This has not only provided some flexibility in the choice of 'match year' in ARD2, it also seemingly opens up the possibilities for longitudinal analysis of workplace performance. Investigation shows that some 725 of the 894 trading-sector workplaces with a matched ABI return for 2003 also have a return for 2004, suggesting that it will be possible to build a reasonable sample of workplaces with productivity data for two, three or more years as subsequent years of ABI data become available in the future.

Another positive attribute of ARD2 is the low degree of item non-response recorded in the ABI data. The implications of missing data are therefore largely limited to those arising from survey sampling or survey level non-response in both WERS and the ABI. One important question that remains, however, is the extent to which one can reliably employ data from the numerous ABI returns that have not been completed at establishment level but relate to some wider organisational unit. We return to this issue in Section 4.

4. The WERS 2004 Financial Performance Questionnaire

The development of the Financial Performance Questionnaire arose out of an appreciation within the WERS Research Team and Specialist Team that many organisations do hold data on the performance of individual establishments, though they may not always choose to supply such detailed information in response to the Annual Business Inquiry. This view has subsequently been supported by ONS' own research (Mills and Ursachi, 2006). Nonetheless, there were a variety of different ways in which one might attempt to collect such data in a voluntary survey such as WERS.

One option, similar to that pursued in the telephone-based National Employer Surveys conducted in the United States in the 1990s, was to attempt to collect quantitative financial data about the establishment via questions inserted into the existing face-to-face Management interview. However, this option raised obvious concerns about likely rates of item non-response, and about levels of data quality, particularly in cases where the WERS management interview was conducted with a personnel specialist who may not have the answers to hand. A further option was to add questions to the Employee Profile Questionnaire (a two-page questionnaire that currently covered the composition of the workforce and which was issued to management respondents in advance of the face-to-face interview). But it was thought

that the inclusion of financial questions within this document might prompt wholesale survey non-response among those unable or unwilling to provide such financial information. The preferred option therefore was to develop a dedicated Financial Performance Questionnaire that could be issued at end of the face-to-face management interview (thus minimising interference with that instrument) and passed on by the main management respondent to someone with responsibility for financial matters, who would then post the completed paper form to the survey administrators.

Most of the questions that were included in the Financial Performance Questionnaire were based on those used in the short-form versions of the ABI. The main alteration was to shorten some of the very detailed ABI instructions about what should be included or excluded in the totals, recognising that an overly technical questionnaire may provoke non-response from workplaces without specialised financial managers or accountants. Further departures from the ABI were to include questions on the numbers of full and part-time employees, the value of assets and the extent of research and development activity. Research economists and professional accountants were consulted over the range and wording of questions prior to piloting.

The level of response that could be expected was uncertain. The ABI could not provide a reasonable benchmark as the Inquiry is mandatory under the Statistics of Trade Act 1947. The attempt to collect objective data in WIRS 1990 had been abandoned at the pilot stage after a poor response (Airey et al, 1992: 20). However, the return of 22 of the 38 FPQs issued during the piloting of WERS 2004 provided a tentative indication that a response rate of 50-60 per cent might be feasible.

In the main stage of fieldwork, FPQs were distributed in 2,076 of the 2,295 workplaces that participated in the Cross-Section Survey (Chaplin et al, 2005: 63).¹² Following a three-stage reminder process, FPQs were obtained for 1,070 of these workplaces, representing a response rate of 52 per cent among workplaces accepting placement of the questionnaire and a rate of 47 per cent among all Cross-Section workplaces (*ibid*). Establishments were more likely to complete the Financial Performance Questionnaire if the respondent to the management interview had responsibility for financial matters, if the workplace was a single independent establishment (i.e. not part of a larger organisation), if the organisation was not listed on a stock exchange, and if the workplace participated in the Survey of Employees. There were also variations by workplace size and industry. As those establishments with an FPQ did not constitute a random sample of all participating establishments, weights were computed to adjust for these observable biases in the sub-sample of establishments with FPQ returns (Chaplin et al, 2005: 95-99).¹³

Respondents were asked to complete the questionnaire for the workplace that had been the subject of the main management interview, but were given the option to report on a more widely-defined unit if establishment-level data were not available. In the latter case, they were asked to indicate the total number of workplaces covered by

¹² Questionnaires were issued to workplaces in the private and public sectors. Public sector establishments were asked to report on the value of their overall budget, rather than levels of turnover.

¹³ The FPQ weight is the cross-product of the Cross-Section establishment weight (ESTWTNR) and an adjustment factor, with the latter being computed as the inverse of the predicted odds of participation, derived from a logistic regression model including a range of establishment characteristics taken from the management interview.

the return and the approximate share of turnover accounted for by the surveyed workplace, in order to provide some means of disaggregating the totals provided in the questionnaire. The number of site-level FPQ returns obtained in main fieldwork was particularly encouraging. Some 834 of the 1,070 FPQ returns (78 per cent) contained site-level data, compared with around one-fifth in the matched ABI dataset.¹⁴

One inevitable disadvantage compared to the ARD was that the data obtained in the FPQ referred to a single year. In order to promote some consistency in the periods covered by the FPQ returns, respondents were invited to provide figures for the calendar year 1st January -31st December 2003. If this was not possible, they were invited to respond about the most recent business year for which figures were available. In total, 406 (38 per cent) of the 1,070 FPQ returns covered the default period, with a further 325 (31 per cent) reporting on the financial year April 2003 – March 2004 (Table 4).¹⁵

The data collected in the FPQ is therefore historical in nature: only 58 returns cover periods that include the date of the main management interview, with the remaining returns covering periods that ended, on average, 6 months prior to the interview date. The median number of days between the end of the FPQ return period and the date of the management interview in these cases was 154 days (mean 182 days; standard deviation 118 days). But this is a necessary consequence of administering the questionnaire alongside the management interview and, indeed, a similar charge can be laid against the subjective rating (which is inevitably based on some historical comparison), other quantitative measures collected in WERS such as absenteeism or disputes (which invariably refer to the past 12 months) or the quantitative performance data collected in other workplaces surveys (such as the US National Employer Survey).¹⁶

Completion rates for the individual items contained within the FPQ were high, averaging around 90 per cent, but were inevitably somewhat below the completion rates in the ABI, reflecting the voluntary nature of the WERS instrument. The highest response rates in the FPQ were for the questions on employment levels, employment costs and R&D activity, with the lowest rates being observed on questions about asset valuations, particularly rented or leased assets (Table 5). In some circumstances, missing values could be inferred by comparing with data from the sample file or Management interview. Another approach involved inserting zeros in empty cells in cases where the respondent appeared to have ignored the general instruction to write NIL rather than leaving entries blank. The latter approach requires some rather bold assumptions about patterns of non-response, and so all imputed values are identified via flag variables to give users discretion over the use of such data in their analysis.

¹⁴ These figures include 78 cases in which the scope of the return was either recoded (58 cases) or imputed (20 cases) after comparing FPQ and MQ employment and studying comments made at Note 2 on the FPQ. These imputations are identified on the variable XCODE1.

¹⁵ It was not possible to use April 2003 – March 2004 as the default period for the questionnaire, since fieldwork began in February 2004.

¹⁶ In retrospect, it may have been preferable to request data from the most recent period that the establishment could provide, particularly in view of the eventual length of the fieldwork period. There is, of course, the option of repeating the FPQ at a later date for the same establishments, in order to obtain longitudinal data on financial performance akin to that available in the ABI.

Table 4

Period covered by WERS Financial Performance Questionnaires		
	Number	Per cent
July 2001 – June 2002	1	0.1%
October 2001 – September 2002	1	0.1%
November 2001 – October 2002	1	0.1%
January 2002 – December 2002	3	0.3%
March 2002 – February 2003	2	0.2%
April 2002 – March 2003	27	2.5%
May 2002 – April 2003	8	0.8%
June 2002 – May 2003	10	0.9%
July 2002 – June 2003	11	1.0%
August 2002 – July 2003	47	4.4%
September 2002 – August 2003	20	1.9%
October 2002 – September 2003	27	2.5%
November 2002 – October 2003	15	1.4%
December 2002 – November 2003	9	0.8%
January 2003 – December 2003	406	38.2%
February 2003 – January 2004	18	1.7%
March 2003 – February 2004	44	4.1%
April 2003 – March 2004	325	30.5%
May 2003 – April 2004	21	2.0%
June 2003 – May 2004	6	0.6%
July 2003 – June 2004	10	0.9%
August 2003 – July 2004	20	1.9%
September 2003 – August 2004	6	0.6%
October 2003 – September 2004	6	0.6%
November 2003 – October 2004	2	0.2%
January 2004 – December 2004	12	1.1%
February 2004 – January 2005	2	0.2%
April 2004 – March 2005	4	0.4%
TOTAL	1,064	100.0%

Notes: Period data is held in variables NPERIOD (whether default or custom reporting period), YRSTART (start date if NPERIOD=2) and YREND (end date if NPERIOD=2).

Around 5 per cent of returns did not cover a 12-month period. Such cases were coded in the above table by identifying the 12-month period around the central date of the return.

Table 5

Availability of key data items in the WERS Financial Performance Questionnaire data		
	Full sample	Trading sector
All returns	1,070	792
Turnover [or budget if non-trading sector] (nturnpa)	994	763
Employment – full-time (nempft) ¹	1040	778
Employment – part-time (nemppt) ²	998	742
Value of owned buildings (nownbld) ³	828	638
Value of rented buildings (nrentbld) ⁴	756	595
Value of other owned assets (nownoth)	860	667
Value of other rented assets ⁵ (nrentoth)	695	546
Capital acquisitions (nacqpa)	949	716
Capital disposals (ndispa) ⁶	861	642
Purchases (npurpa)	974	724
Employment costs (necpa)	1039	775
Any R&D at the establishment (anyrdest)	1047	786
% of total expenditure on R&D (anyrdest, rdestpc)	1008	759
Any R&D elsewhere in the organisation (anyrdorg)	1017	772
<i>Selected derived variables:</i>		
Gross value-added (nturnpa-npurpa)	-	705
Average labour productivity (nturnpa/(nempft+nemppt)) ⁷	-	715
Value-added per employee ((nturnpa-npurpa)/(nempft+nemppt)) ⁸	-	665
Profits per employee ((nturnpa-npurpa-nempcost+nacqpa-ndispa)/(nempft+nemppt)) ⁹	-	569

Notes: FPQ variable names are indicated in brackets

1: Full sample figure includes 37 values imputed by reference to SCOPE, MQ and sample file (XCODE2=2,4,5)

2: Full sample figure includes 55 values by imputed reference to SCOPE, MQ and sample file (XCODE2=1,2,4)

3: Full sample figure includes 98 values recoded from missing to zero (XCODE4=1)

4: Full sample figure includes 184 values recoded from missing to zero (XCODE4=2)

5: Full sample figure includes 176 values recoded from missing to zero (XCODE5=1)

6: Full sample figure includes 136 values recoded from missing to zero (XCODE6=1)

7: Trading sector figure includes 50 imputed values on employment (XCODE2=1,2,4,5)

8: Trading sector figure includes 47 imputed values on employment (XCODE2=1,2,4,5)

9: Trading sector figure includes 29 imputed values on employment (XCODE2=1,2,4,5) and 81 imputed values on capital disposals (XCODE6=1).

Clearly, much of the analysis of the FPQ data on workplace performance will be restricted to establishments operating in the trading sector of the economy. Restricting the sample in this way yields a sample of 792 FPQ returns from a total of 1,757 workplaces (an overall response rate of 45 per cent). Some 626 of these returns (79 per cent) are at site-level. Table 5 shows that data on average labour productivity is available for 715 (41 per cent) of the 1,757 trading sector workplaces, whilst data on

value-added per employee is available for 665 (38 per cent). Data on 'profits' per employee is available for 569 (33 per cent).

In summary, whilst one would naturally have valued higher response rates both at questionnaire and item level in the WERS FPQ, the rates achieved seem creditable given the experimental nature of the exercise and the rather limited resources expended in its administration. The high proportion of site-level returns would also appear to be a notable advantage when compared with most other sources of financial data, such as the ABI or company accounts databases.

One important question that remains, however, concerns the quality of the data collected in the FPQ. An initial investigation of the construct validity of the data, presented in the WERS 2004 sourcebook, was encouraging (Kersley et al, 2006: 294-303). But one might also wish to see some comparison of FPQ values with those obtained from another source, such as the Annual Business Inquiry. We turn to this issue in the next section.

5. A Preliminary Analysis of the Objective Performance Data in WERS 2004

Our preliminary analysis of the objective performance data in WERS 2004 has three strands. First, we examine the mutual availability of objective data from the FPQ and ABI for workplaces that participated in the WERS 2004 Cross-Section Survey. Second, we focus on workplaces that have productivity data from both the FPQ and ABI and assess the degree of convergence in those two objective sources. Finally, we assess the degree of construct validity in the objective data by looking at the association between measures of productivity and profitability and a small number of workplace characteristics. A further investigation of the degree of convergence between the objective and subjective measures of productivity and profitability will be provided in a companion paper (Forth and McNabb, 2007).

Data availability

A comparison of Tables 3 and 5 indicates that the number of workplaces with ABI and FPQ returns are available is quite similar. However, the cases do not always overlap and a number of workplaces have returns from only one of these sources. The total number of workplaces with objective performance data is therefore somewhat larger than indicated in Tables 3 or 5. One gets a sense of this from Table 6, which focuses on the sub-sample of 1,757 trading sector workplaces. Only 482 of these workplaces (27 per cent) do not have either a return in either the FPQ dataset or ABI 2003. In contrast, 411 workplaces have a return in both datasets.

Table 6

Co-availability of returns from the FPQ and ABI 2003 among trading sector workplaces				
	FPQ for workplace (NSCOPE=1)	FPQ for wider unit (NSCOPE=2)	No FPQ	All
ABI exact match (LIVELU=1)	93	7	67	167
ABI non-exact (LIVELU>1)	228	83	416	727
No ABI, but matched to ARD2	267	66	385	718
No match	38	10	97	145
All	626	166	965	1757

Correspondence

The correspondence between productivity values in the FPQ and the ABI provides an important indication of the quality of the data collected in the FPQ (the ABI being the official source of data on business performance). Since some returns are at site level and others are not, it can also provide an insight into the reliability of data in returns that cover more than one workplace. This section investigates these two separate, but related, issues.

In making such a comparison, it is not necessarily the case that data from ABI 2003 provides the most appropriate comparator for the data obtained in the FPQ. Instead, we would like to be able to take returns from any year of the ABI if they provide us with a closer match in the timing of the ABI and FPQ data. Broadening our sights to include returns from ABI 2002 and 2004, we find that 514 trading-sector workplaces with an FPQ have an ABI return in 2002, 2003 or 2004 (compared with 411 in Table 6). A comparison of the periods covered by these various returns shows that, for 76 of these workplaces, the data provided in ABI 2004 constitutes the closest match (in terms of timing) to the reporting period of the FPQ. For a further 364 workplaces, the closest match is with a return from ABI 2003 and for the remaining 74 it is with a return from ABI 2002.

Nevertheless, we would like to ensure that our comparison of FPQ and ABI data is based on returns that cover substantially over-lapping periods (and not simply two periods that are reasonably close together). Thus we restrict our attention to the 401 trading-sector workplaces with FPQ and ABI returns whose periods overlap by at least 6 months. Of these, around 40 take their data from ABI 2004, 350 obtain it from ABI 2003 and around 10 take their data from ABI 2002. This sample of 401 workplaces is our preferred basis for the comparison of productivity/profitability values obtained in the FPQ and ABI. The mean distance between the mid-dates of the ABI and FPQ returns is just 15 days in this sample. For 58 per cent of the sample the mid-dates coincide, for 74 per cent they are no more than one day apart and for 86 per cent they are no more than 31 days apart.

The first panel of Table 7 shows the mutual availability of FPQ and ABI returns for these 401 trading sector workplaces. The table indicates that there are 92 workplaces

with a site-level return in both of the surveys, 229 workplaces with a site-level return in only one of the two surveys (usually the FPQ) and 80 workplaces with no site-level return in either survey. The subsequent panels of Table 7 show the mutual availability of data on average labour productivity (turnover per employees), value-added per employee and ‘profits’ per employee within the same sub-sample of 401 workplaces.

Our investigation focuses first on the correspondence between the FPQ and ABI values of average labour productivity. At the outset, we exclude 21 cases with large, outlying values in either survey. The approach adopted was to exclude all values in either survey that exceeded the value at the 95th percentile in the FPQ distribution of average labour productivity within the sample of 357 workplaces. Most of the 21 extreme values arise from the FPQ return, rather than the ABI return, and may relate to punching errors (e.g. instances in which the respondent ignored instructions to give financial values in thousands).

Table 7

Mutual availability of data from the FPQ and ABI among trading sector workplaces where the return periods overlap by at least 6 months			
	FPQ at site-level	FPQ for wider unit	All
<i>A. Overall availability of FPQ/ABI returns:</i>			
ABI at site-level	92	7	99
ABI for wider unit	222	80	302
All	314	87	401
<i>B. Availability of data on average labour productivity:</i>			
ABI at site-level	82	6	88
ABI for wider unit	200	69	269
All	282	75	357
<i>C. Availability of data on value-added per employee:</i>			
ABI at site-level	81	6	87
ABI for wider unit	185	69	254
All	266	75	341
<i>D. Availability of data on ‘profits’ per employee:</i>			
ABI at site-level	81	6	87
ABI for wider unit	185	69	254
All	266	75	341

The upper-left quadrant of Figure 1 contains a scatter-plot based on the remaining 336 workplaces. The scatterplot presents average labour productivity from the ABI on the y-axis and the equivalent measure from the FPQ on the x-axis. It is clear from the scatterplot that there is a divergence in the two measures for a substantial proportion of workplaces. The correlation between the two measures stands at 0.74.

Some of this non-correspondence may naturally be due to measurement error in either survey. However, it is also possible that it may arise from a mis-match in the units of observation; for example, if the FPQ return refers solely to the workplace surveyed in

WERS but the ABI return has been completed on behalf of the whole organisation, of which that site is just a part. The scatter-plots contained in the next two quadrants of Figure 1 investigate this question. First, in the upper-right quadrant, we restrict the plot to those 76 workplaces with a site-level observation in both the FPQ and ABI. The points are much more closely located on the diagonal and the correlation rises to 0.89 (or 0.96 after further exclusion of one clearly deviant case). The contrast with the plot in the lower-left quadrant is clear. This third quadrant is restricted to those workplaces for which only one of the FPQ or ABI observations is at site level: here we see a more considerable spread of points and a substantially lower correlation of 0.70. These comparisons clearly indicate a close correspondence between the FPQ and ABI values when both returns are completed at site level. However, when one return is completed for multiple sites, it does not appear to represent a robust proxy for site-level data.

We can further examine the degree of non-correspondence between site-level and aggregate returns by examining how the correlation coefficient between the ABI and FPQ varies with the number of sites covered by the aggregate return. In fact we find that, where site-level returns are compared with aggregate returns covering 2-9 sites, the correlation coefficient is approximately the same as when both returns are at site level (0.91; $n=74$). But it falls to 0.39 when the aggregate return covers 10-99 sites ($n=64$) and stands at 0.70 when the aggregate return covers 100 or more sites ($n=66$).¹⁷

The lower-right quadrant in Figure 1 is included for completeness but does show that, when both returns cover multiple sites, the correspondence is in fact reasonably good. This may be because the scope of both returns is actually equivalent (e.g. both returns completed about the whole enterprise) although this has not been directly investigated.

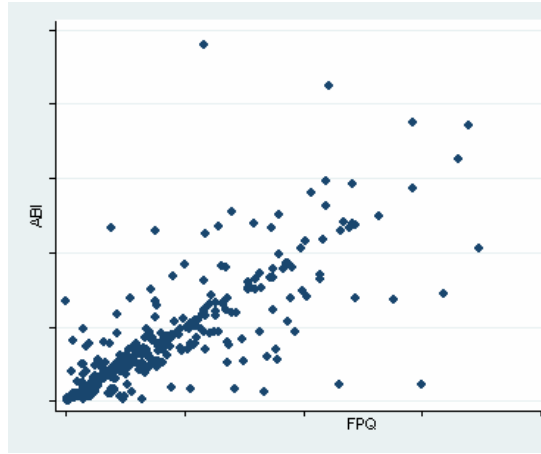
Figure 2 repeats the analysis with the measures of value-added per employee, whilst Figure 3 does so with the measures of 'profit' per employee. In both cases, the pattern is broadly similar to that which has been described in the case of average labour productivity. For both measures, the points are reasonably scattered on the plots that include all values, but this scatter is found to be primarily evident among those cases where there is a mis-match in the unit of observation. Where both returns are at site level, the correspondence is generally good: we observe correlation coefficients of 0.81 in the case of value-added per employee and 0.78 in the case of 'profits' per employee. The correspondence in either case is lower than for average labour productivity, but this probably reflects the fact that our measures of value-added and 'profits' are compiled from greater numbers of individual data items, so that measurement errors in any one data item combine to generate a greater degree of measurement error in a composite variable.

¹⁷ We should add that the cut-offs used here were chosen primarily for their convenience in dividing those workplaces with aggregate returns into three fairly evenly-sized groups, and were not identified by any more detailed investigation of break points in the relationship between the correlation coefficient and the number of sites.

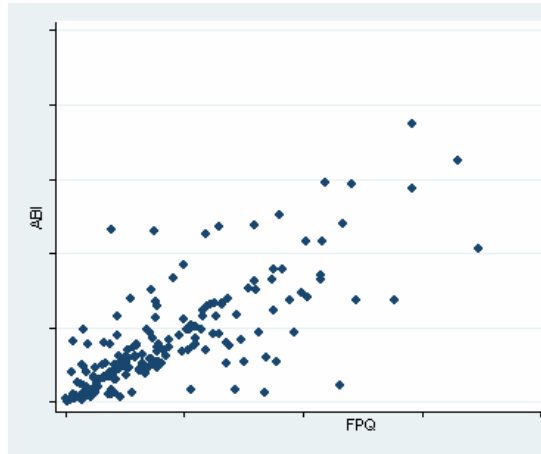
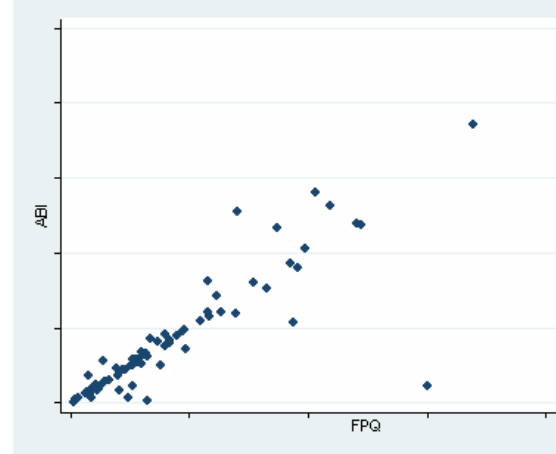
Figure 1

Correspondence between measures of average labour productivity in the ABI and FPQ

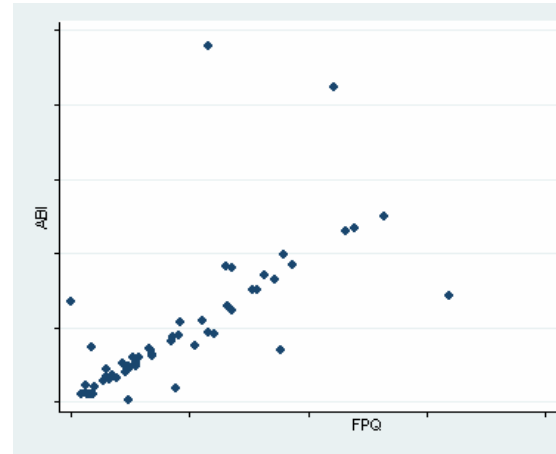
All matched units ($r=0.74$; $n=336$)^a



Both observations at site-level ($r=0.89$; $n=76$)^b



Only one observation at site-level ($r=0.70$; $n=194$)



Neither observation at site-level ($r=0.73$; $n=66$)

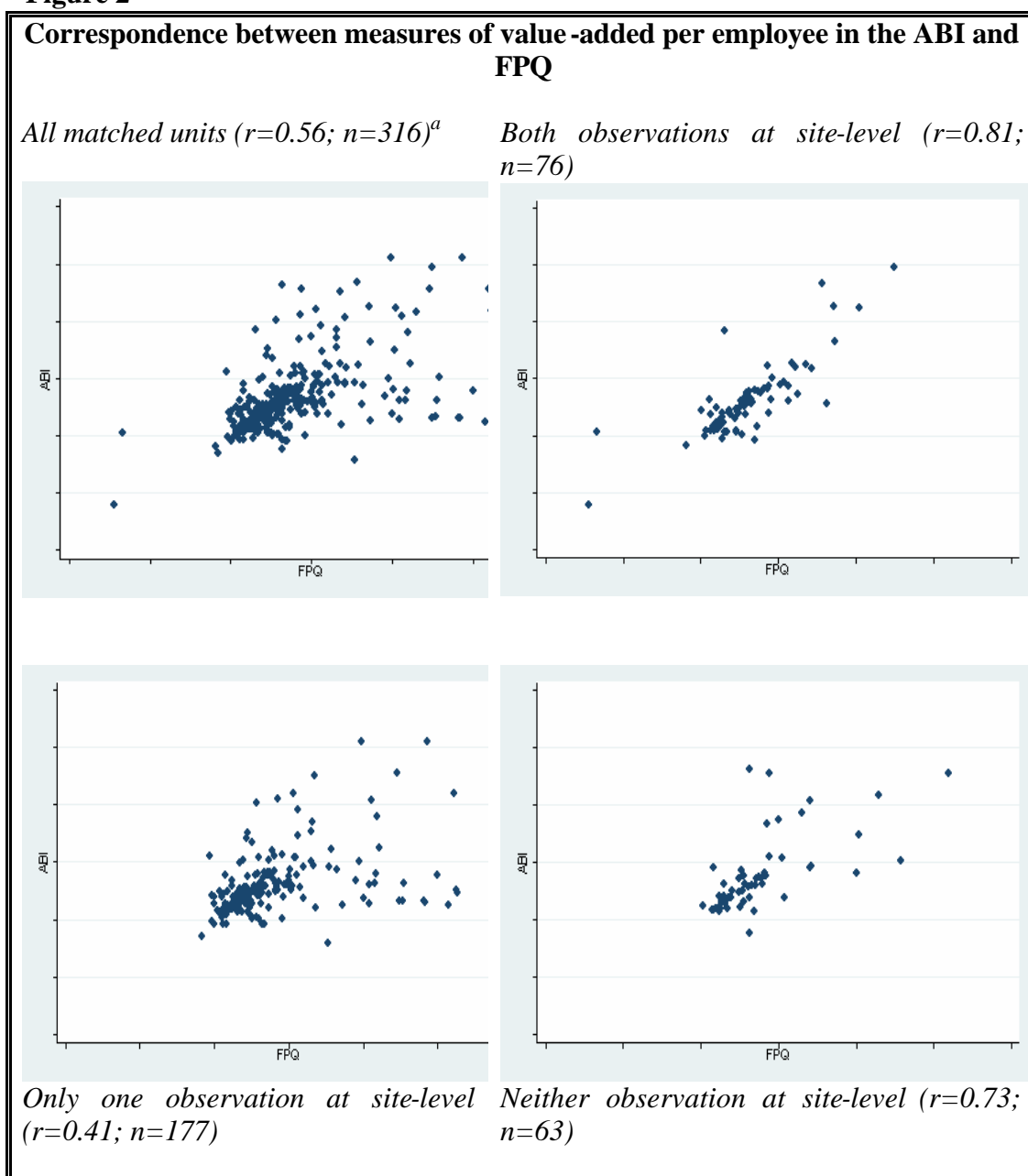
Notes:

a. Sub-sample excludes observations with values in excess of the 95th percentile in the FPQ distribution
b. The correlation rises to 0.96 after excluding the single outlying observation with a high value in the FPQ relative to the ABI.

Axes are unscaled so as to comply with ONS rules which prohibit the disclosure of specific values from the ABI.

As with average labour productivity, we can examine how the correlation coefficients between the ABI and FPQ vary with the number of sites covered by the aggregate return. In the case of value-added per employee, the overall coefficient of 0.41 arises from a correlation of 0.68 when the aggregate return covers 2-9 sites (n=72), 0.32 when it covers 10-99 sites (n=62) and 0.09 when it covers 100 or more sites (n=37). In the case of 'profits' per employee, where the overall coefficient is 0.35 (n=141), the individual coefficients are 0.40 for 2-9 sites (n=64), 0.21 for 10-99 sites (n=53) and 0.58 for 100 or more sites (n=18).

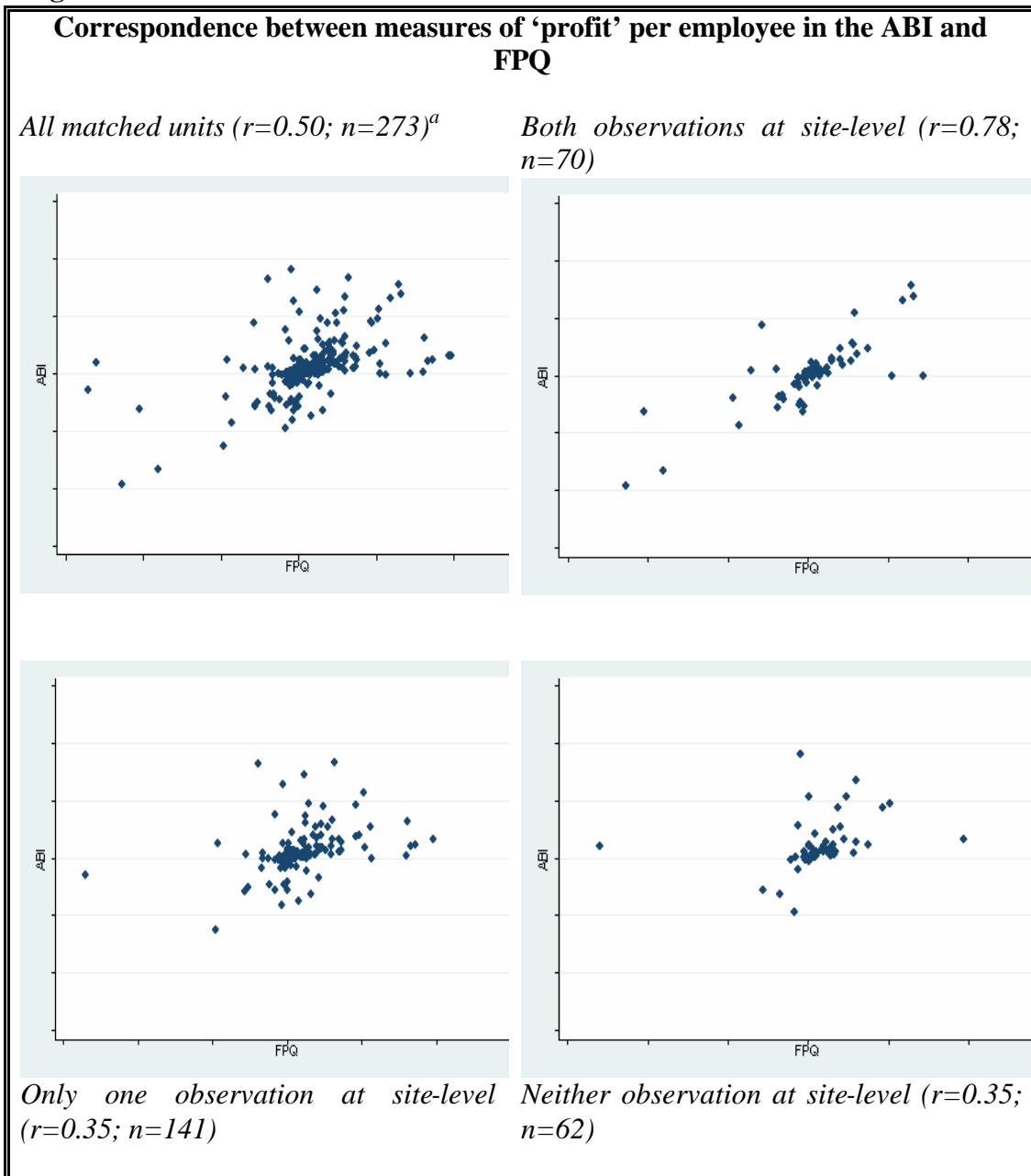
Figure 2



Notes:

a. Sub-sample excludes observations with values in excess of the 95th percentile in the FPQ distribution. Axes are unscaled so as to comply with ONS rules which prohibit the disclosure of specific values from the ABI.

Figure 3



Notes:

a. Sub-sample excludes observations with values below the 1st percentile or in excess of the 95th percentile in the FPQ distribution

Axes are unscaled so as to comply with ONS rules which prohibit the disclosure of specific values from the ABI.

From these various comparisons of FPQ and ABI values, it seems reasonable to make the following conclusions:

The FPQ data closely corresponds to that collected in the ABI in cases where the two returns have both been completed at site level.

The data do not compare as well when there is a mis-match in the unit of observation, i.e. if one return is completed at site-level and the other at some more-aggregate level (e.g. enterprise).

The degree of non-correspondence between site-level and aggregate returns is generally lower if the aggregate return covers only a small number of units than if it covers a larger number of units, although the relationship only appears to be linear in the case of value-added.

The first of these conclusions gives us confidence in the overall quality of the data collected in the FPQ. However, the second and third conclusion confirm our expectation that productivity is not necessarily homogenous across plants within the same firm, which in turn indicates that aggregate returns do not necessarily provide good estimates of plant-level productivity. The further conclusion then, is that using data from wider returns in conjunction with site-level data on workplace practices may run the risk of biases caused by measurement error in the dependent variable. A more robust approach would appear to involve focusing on site-level observations. Nevertheless, the close correspondence in FPQ and ABI values would imply that such site-level observations could reasonably be taken from either dataset. We explore this possibility in the following section.

6. Compiling a site-level dataset

There are two apparent advantages of compiling a site-level dataset of objective performance measures that takes values from either the ABI or FPQ. The first is that one is likely to be able to increase the number of surveyed workplaces for which site-level objective performance data is available, since we have already seen in Table 6 that some workplaces have data in only one of the two datasets. The second advantage is that, by having a choice of which data set to call upon for workplaces where both ABI and FPQ data is on offer, one is likely to be able to minimise the chronological distance between the return period for the objective performance data and the interview date on which the workplace practices data were collected in the main part of the WERS survey. For example, the data presented in Tables 2 and 4 suggest that, if site-level returns were available from both ABI 2004 and the FPQ, it would be likely that a return from ABI 2004 would cover a period that is closer to the WERS interview date. In this case, it would be sensible for an analysis of the relationship between workplace practices and performance to utilise data from the ABI return in preference to that available from the FPQ.

Looking for matches in the ABIs of 2002, 2003 or 2004, we find that some 1,111 of the 1,757 trading sector workplaces in the WERS 2004 Cross-Section Survey have an ABI return in at least one of these years. By expanding our view to encompass all three years, we are thus able to expand the pool of available ABI returns beyond that which would be available if we restricted ourselves to just one year (say 2004).¹⁸ We

¹⁸ Table 1 shows that just 847 trading sector workplaces have a return in ABI 2004.

then compute the distance in days between the WERS interview date (NINTDATE) and the central date for this closest available ABI return. This serves two purposes. First it enables us to reliably identify which of the ABI returns is closest to the interview date. For 829 of the 1,111 workplaces the closest return comes from ABI 2004, for a further 183 it comes from ABI 2003 and for the remaining 99 it comes from ABI 2002. Second, computing the distance enables us to compare it with the corresponding distance between the WERS interview data and the central date of any FPQ return. In cases where site-level returns are available from both sources, we are then able to identify whether it is the FPQ return or the ABI return that is chronologically closer to the WERS interview date. We undertake this last step separately in respect of the measures of productivity and profitability, since the presence of missing data for either measure means that we may prefer to choose the more distant source if the proximate source has missing data on the item in question.

When we combine the ABI and FPQ data, we find that 653 of the 1,757 trading sector workplaces have a site-level measure of productivity in either the FPQ or the ABI. In 114 of these cases, a measure is available from both sources and so we take the one closest to the WERS interview date. In 82 cases it is the ABI, rather than the FPQ. We thus obtain a dataset containing 653 site-level observations on labour productivity, 451 of which derive from the FPQ and 202 of which derive from the ABI.

Among these 653 observations, the central date of the return period precedes the date of the MQ interview date by an average of 310 days. The inclusion of performance data that precedes the interview data by some considerable distance will impair our ability to identify robust associations, and so we restrict the sample to those workplaces with returns that end no more than one year prior to the interview date. In this sub-sample of 597 observations (423 from the FPQ and 174 from the ABI), the management interview has taken place during the financial year immediately following the available return, and so we can surmise that the data available to us covers the most recent *completed* financial year.¹⁹

Following the same principles in respect of the site-level data on 'profits' per employee, we initially obtain a dataset containing 578 site-level observations on profitability, 370 of which derive from the FPQ and 208 of which derive from the ABI. Among these observations, the central date of the return period precedes the date of the MQ interview date by an average of 306 days. Restricting the sample to workplaces with returns that end no more than one year prior to the interview date brings the sample down to 526 observations (351 from the FPQ and 175 from the ABI).²⁰

These data manipulations have therefore produced objective site-level data on productivity and/or profitability for just under one-third of the trading sector workplaces in the WERS 2004 Cross-Section Survey. There has been a clear benefit in being able to call upon both the FPQ and ABI within this process. The FPQ has contributed substantially to the number of site-level observations, which would have been available for little more than one tenth of the sample had we relied solely on the

¹⁹ Restricting the sample to cases in which the management interview date lay within the return period for the objective performance data would reduce the sub-sample to only 151 observations.

²⁰ There are 144 cases in which the date of the management interview lays within the return period for the objective performance data.

ABI. The ABI, for its part, has contributed a further 100 or so site-level observations for workplaces not featuring in the FPQ dataset. It has also enabled us to maximise the proximity of the interview data and the performance data, reducing the distance between the return period for the objective data and the management survey interview date by around 40 days on average.

Two primary questions remain. The first concerns the representativeness of the sub-samples of workplaces with site-level performance data. The second concerns the behaviour of the data when used in statistical analysis.

7. Preliminary investigation of site-level data

As we have observations for only one-third of trading sector workplaces, there is an obvious concern that this sub-sample may not be representative, and that this may affect the robustness of any conclusions one might wish to draw from any statistical analysis. To investigate this issue, we have assessed the representativeness of the sub-sample on a small selection of variables – largely those which were found to be associated with non-response to the FPQ (see Chaplin et al, 2005, Section 7).

Following the methodology outlined in the Technical Report, we run a logistic regression to identify variables that are significantly associated with the likelihood of having a site-level observation in our two sets of performance data (productivity and profitability). The dependent variables are coded 1 if the performance data is present and 0 otherwise. Positive coefficients therefore indicate that workplaces with the particular characteristic were more likely to have site-level performance data than workplaces without the characteristic. Negative coefficients naturally indicate the reverse. The results are presented for both productivity and profitability in Table 8. In both cases, workplaces are more likely to have site-level performance data if they are: larger (rather than smaller); located in manufacturing (rather than services); a single-independent establishment (rather than part of a larger organisation); foreign-owned (rather than domestically-owned); listed on a stock exchange (rather than not listed); took part in the Survey of Employees (rather than refused to participate); agreed to external data linking (rather than refused it); and provided a below average rating on the subjective performance measure (rather than an average or above-average rating).

We use the predicted values from these regressions to compute a weight that can compensate to some degree for these match biases.²¹ The weights reduce the most severe sample biases and bring the profile of the matched sub-samples considerably closer to that of the full trading-sector sample. It is worth noting, however, that the weights do not bring the profile perfectly into line with the full sample, thus indicating that the weights could be improved with further work (a fact also indicated by the relatively low values for R^2 in Table 8). However, the weights we have computed are considered sufficient for this preliminary analysis, which is merely indicative of what might be done with the data.

²¹ The method is the same as that employed in the weighting of the FPQ (see page 95 of the WERS 2004 Technical Report). Specifically, we multiply each establishment's main weight (ESTWTNR) by the inverse of the predicted value from the logistic regression, after truncating the distribution of the predicted values at the 10th and 90th percentiles in order to limit the variance of the resultant weights.

Table 8

Assessing match bias within sub-sample of trading sector workplaces with site-level performance data						
	Productivity (1=597; 0=1,160)			Profitability (1=526; 0=1,231)		
	Coeff.	Std. err.	Sig.	Coeff.	Std. err.	Sig.
<i>Position within organisation:</i> (ref. Head office)						
Single independent site	0.837	0.174	***	0.827	0.177	***
Branch site	-0.509	0.164	***	-0.571	0.169	***
<i>Job title of management:</i> (ref. All other)						
Financial manager/ company sec.	0.125	0.137		-0.038	0.143	
Workplace took part in SEQ	0.910	0.137	***	0.791	0.141	***
Management respondent agreed to data linking	0.945	0.276	***	1.001	0.295	***
Foreign-owned	0.304	0.151	**	0.286	0.158	*
Listed on a stock exchange	-0.601	0.163	***	-0.701	0.173	***
<i>Subjective rating:</i> (ref. At least 'average')						
Below average	0.786	0.218	***	0.170	0.201	
Not available	0.373	0.210	*	0.311	0.230	
Private sector	0.862	0.428	**	0.994	0.471	**
<i>Workplace size:</i> (ref. 5-9 employees)						
10-24	-0.193	0.200		0.052	0.214	
25-49	-0.064	0.218		0.277	0.231	
50-99	0.083	0.224		0.358	0.238	
100-499	0.227	0.213		0.627	0.227	***
500 or more	0.558	0.245	**	0.971	0.259	***
<i>Industry sector:</i> (ref. Manufacturing)						
Electricity, gas and water	-0.903	0.438	**	-0.986	0.460	**
Construction	-0.448	0.257	*	-0.392	0.257	
Wholesale and retail	-0.726	0.191	***	-0.829	0.200	***
Hotels and restaurants	-0.559	0.262	**	-0.403	0.266	
Transport and communications	-0.761	0.252	***	-0.776	0.261	***
Financial services	-1.235	0.302	***	-1.178	0.314	***
Other business services	-0.668	0.189	***	-0.603	0.191	***
Public administration	-0.043	0.719		0.124	0.736	
Education	-0.403	0.330		-0.324	0.333	
Health	-0.656	0.229	***	-0.701	0.234	***
Other community services	-0.057	0.251		-0.135	0.236	
Pseudo-R ²	0.135			0.138		
Number of observations	1,757			1,757		

We use the matched data in a preliminary analysis in which we regress the natural log of each of the three performance variables (average labour productivity, value-added per head and ‘profits’ per head) on a small number of independent variables, including union recognition, foreign-ownership and the use of incentive pay. We have prior expectations about the sign of each association, and so the analysis is intended to provide a basic test of the construct validity of the objective data.²² Our expectations are as follows:

Table 9

<i>Independent variable:</i>	Association Expectations	
	<i>Expected association:</i>	<i>Reason:</i>
Organisation size	Positive	Economies of scale and knowledge-sharing across sites
Foreign-ownership	Positive	Economies of scale and knowledge-sharing across countries
Union recognition	Negative	Restrictions on work practices and union influence on pay bargaining
Training	Positive	Skill-enhancing
Incentive pay	Positive	Impact on employee motivation and effort

Investigations lead to the exclusion of around 20 observations with outlying values on the dependent variables prior to in each of the three analyses. This leaves 576 observations for the analyses of average labour productivity, 570 for the analysis of value-added per employee and 507 for the analysis of ‘profits’ per employee. A summary of the results is presented in Table 10. The associations that are observed in each analysis are broadly in line with prior expectations. The sole exceptions are the variable identifying workplaces that belong to large organisations, which is negative in the labour productivity regressions (although it does not reach statistical significance in any of the three equations), and the variable identifying extensive use of training, which is negatively associated with profitability (although again non-significant in each equation).

To summarise, our matched dataset of objective, site-level measures of productivity or profitability appears to perform reasonably well. It is clear that there are notable match biases among the sub-sample of workplaces with objective site-level data. However, we have identified a number of these biases through regression analysis and we have demonstrated that weights can be compiled to account for the most severe biases that are found to be present. Further, we have been able to conduct regression analysis of the objective performance measures themselves, and have identified that a number of key workplace characteristics are associated with these measures in ways that we might expect.

²² A preferable specification, at least in respect of the productivity variables, might involve the estimation of a production function with the capital-labour ratio being added on the right-hand side. We have not attempted that here, due to the added complexity of bringing in data on capital stocks for observations that derive from the ABI. However, we note that such a specification performed reasonably well in tests conducted with the FPQ alone as part of the primary analysis of WERS 2004 (Kersley et al, 2006: 299).

Table 10

Preliminary analysis of match site-level performance data									
	Average labour productivity			Value-added per employee			'Profits' per employee		
	Coeff.	Std. error.	Sig.	Coeff.	Std. error.	Sig.	Coeff.	Std. error.	Sig.
Foreign-owned	0.576	0.155	***	0.340	0.063	***	0.195	0.049	***
Large organisation (1,000 or more employees)	-0.061	0.163		-0.023	0.039		0.024	0.029	
Union recognition	-0.444	0.197	**	-0.161	0.053	***	-0.139	0.047	***
Off-the-job training for 60% or more of core employees	0.108	0.182		0.057	0.040		-0.020	0.028	
Performance-related pay	0.461	0.149	***	0.117	0.037	***	0.067	0.028	**
Number of observations	571			566			502		
R ²	0.34			0.40			0.36		

Additional controls: workplace size (5 dummies); industry sector (11 dummies). Coefficients are weighted to account for match bias. Standard errors have been adjusted to take account of the complex sample design in WERS 2004

8. Performance data in the 1998-2004 Panel Survey

The 1998-2004 Panel Survey also includes a subjective measure of workplace performance, in this instance referring solely to financial performance. The nature of the subjective measure is somewhat different to that which appears in the Cross-Section, as the intention is to collect data on the relative performance of the establishment over the period since 1998. Accordingly, the subjective measure attempts to identify the average trajectory of the industry as a whole, and then seeks to identify how the performance of the surveyed establishment has fared relative to that average trajectory.²³ The question text and resulting data are presented in Appendix C.

Clearly, this longitudinal subjective rating is subject to similar disadvantages as those summarised above in respect of the subjective measures included in the Cross-Section Survey, as well as the additional possibility of recall error on the part of the 2004 respondent. And so attempts were made to link the 1998-2004 Panel data to ARD2, as

²³ The alternative would be to ask the simple Cross-Section rating question at both time points. But a change in relative performance can then only be identified if workplaces switch categories.

a means of obtaining objective measures of performance over time. Panel workplaces were not issued with a Financial Performance Questionnaire, as no such questionnaire had been issued in Wave 1 (1998).

In order to facilitate the link to ARD2, the 2004 Panel interview included an identical consent question to that included in the Cross-Section Survey (see Appendix A). During fieldwork, consent to link the WERS Panel data to other databases was obtained from 896 (96 per cent) of the 938 workplaces that were re-interviewed for Wave 2 of the Panel. The data were subsequently linked to ARD2 by staff at ONS, following the same procedure as was used to match the Cross-Section data (see above). The extent and nature of the resultant matches are presented in Table 11.

Table 11

	Number of matches between the WERS 1998-2004 Panel Survey and the Annual Respondents Database (ARD2)		
	<i>ARD 1998</i>	<i>ARD 2004</i>	<i>ARD 1998 and 2004</i>
Total number of observations (full sample)	938	938	938
Consent given for data linking (MLINKDAT ^W =1)	896	896	896
Identified on ARD2 using IDBR Local Unit Ref. No. (MATCH ^A =3)	421	586	396
ABI return provided (SOURCE ^A =1)	245	281	166
ABI return covers single workplace (LIVELU ^A =1)	72	66	27

Notes:

W: Indicates a variable contained in the WERS 2004 Panel Survey data file (PS9804_PQ04.*)

A: Indicates a variable contained in ARD2 or the matched WERS-ARD data file

The smaller initial sample (896 workplaces) inevitably means that the process of data linking would offer fewer matches than the equivalent linking of the Cross-Section with ARD2. But the number of matches is further restricted in the Panel because the IDBR local unit reference numbers for all 896 Panel workplaces date back to 1997, when the sample for the 1998 Cross-Section was initially drawn from the Register. We have already mentioned that IDBR reference numbers may change over time (e.g. through company takeover) and this limits one's ability to trace workplaces. In the event, ONS were able to match 245 of the 896 Panel workplaces to ABI returns for 1998, whilst 281 could be matched to ABI returns for 2004. Some 166 (18 per cent of all 938 Panel workplaces) had ABI returns for both years. Alas, only 27 of these offered site-level returns for both 1998 and 2004. The opportunities for longitudinal analysis of ABI data via the 1998-2004 Panel Survey therefore appear to be extremely limited.

9. Summary and conclusions

The Workplace Employment Relations Survey series has provided the basis for a wide range of empirical investigations into the relationships between workplace practices and performance. However, its reliance on subjective ratings of workplace productivity and financial performance has raised questions over its adequacy to meet the demands that are often placed upon it. This paper describes attempts made as part of WERS 2004 to augment the performance data collected in the survey with objective (accounts-based) measures.

The developments in WERS 2004 took two forms. The first comprised attempts to link the Cross-Section and Panel Survey data to the Annual Respondents Database, in order to link the WERS data with responses to the ONS Annual Business Inquiry. The second comprised an attempt to collect establishment-level performance data directly within the WERS Cross-Section Survey, through the administration of a Financial Performance Questionnaire.

Both exercises have been completed with some success. The link between the WERS Cross-Section Survey and ARD2 has produced a matched dataset containing around 1,000 observations with very low rates of item-non-response and the prospect of obtaining longitudinal observations on the same workplaces for a number of years into the future. The disadvantage, however, is that the majority of these ABI returns are not completed for the workplace surveyed in WERS, but for a larger unit, typically the whole organisation to which it belongs. The WERS Financial Performance Questionnaire, for its part, has provided around 1,000 observations, with around 80 per cent relating to the surveyed establishment. Apart from small numbers of outlying values, the data appear to correspond well to figures provided within the ABI, for cases in which such a comparison is possible. But this dataset does not currently contain any longitudinal dimension.

Taking account of some of the strengths and weaknesses of both datasets, we have compiled a site-level dataset containing objective measures of productivity and profitability for around one-third of the trading-sector workplaces in the WERS 2004 Cross-Section. After weighting to account for observed match biases on a small selection of variables, we run some preliminary analyses, finding that a number of key workplace characteristics are associated with these measures in ways that we might expect.

A companion paper (Forth and McNabb, 2007) will provide an investigation of the degree of correspondence between the objective measures of performance contained in this site-level dataset and the traditional subjective ratings of performance.

10. Postscript

The syntax used in the compilation of this paper is to be made available within the VML, along with the combined ABI-FPQ data file discussed in Sections 5 and 6. All syntax and data are in Stata format.

Appendix A: WERS 2004 Cross-Section Survey questions to obtain subjective evaluations of workplace productivity and financial performance

KESTPER1

Compared with other establishments in the same industry how would you assess your workplace's ...READ OUT.

...financial performance :

	<i>Frequency</i>	<i>Per cent</i>
A lot better than average,	240	10
Better than average,	820	36
About average for industry,	801	35
Below average,	163	7
A lot below average,	12	1
No comparison possible,	100	4
Relevant data not available	58	3
<i>Not answered</i>	<i>101</i>	<i>4</i>
<i>All workplaces</i>	<i>2295</i>	<i>100</i>

KESTPER2*

...labour productivity :

	<i>Frequency</i>	<i>Per cent</i>
A lot better than average,	136	6
Better than average,	833	36
About average for industry,	880	38
Below average,	121	5
A lot below average,	7	<1
No comparison possible,	137	6
Relevant data not available	61	3
<i>Not answered</i>	<i>120</i>	<i>5</i>
<i>All workplaces</i>	<i>2295</i>	<i>100</i>

Note: In both cases, the respondent was given a show-card displaying the first five response options.

Appendix B: Consent question used in WERS 2004

MLINKDAT

It is sometimes possible to link the data we have collected from you with other surveys or datasets, to which we have authorised access. Would you be content for us

to do this, as it can provide us with the potential for further analysis? In doing this, we assure you that your confidentiality will be respected and the linked data will be anonymised and used for statistical and analytical purposes only, with only authorised researchers having access to the linked data.

- 1) Yes
- 2) No

Appendix C: WERS 2004 Panel Survey questions to obtain subjective evaluation of workplace financial performance

KOPTB

Generally speaking, in establishments in your industry or field has the financial performance...READ OUT...":

- 1) Improved
- 2) Stayed the same,
- 3) Or deteriorated since 1998?

{If financial performance has improved (KOPTB=1)}

KIMP*

Looking at this card, would you say that, compared with the improvement in the average financial performance of establishments in your industry or field, your own establishment has...READ...

- 1) Improved at a faster rate
- 2) Improved at a similar rate
- 3) Improved at a slower rate
- 4) Remained static, or
- 5) Actually deteriorated?

{If financial performance stayed more or less the same (KOPTB=2)}

KTable

Would you say that, compared with the stability in the average financial performance of establishments in your industry or field, your own workplace has...READ OUT...

- 1) Improved
- 2) Remained stable like the rest of the industry
- 3) Actually deteriorated?

{If financial performance deteriorated (KOPTB=3)}

Kdeti

Would you say that, compared with the deterioration in the average performance of establishments in your industry or field, the financial performance of your own workplace has...READ OUT...

- 1) Actually improved,
- 2) Remained stable,
- 3) Deteriorated at same rate as the rest of the industry, or

4) Deteriorated at a faster rate than the rest of the industry?

Resultant data (after manipulation):

<i>Establishment performance 1998-2004:</i>	<i>Frequency</i>	<i>Per cent</i>
Above industry average	318	34
About average for industry	446	48
Below industry average	97	10
<i>Not answered</i>	77	8
<i>All workplaces</i>	938	100

Appendix D: Access to performance data in WERS 2004

Until April 2007, data from the Financial Performance Questionnaire is available only via the Virtual Micro-Data Laboratory (VML) operated by the Business Data Linking section at the Office for National Statistics (<http://www.statistics.gov.uk/about/bdl/>). In April 2007, these data will be added to the WERS 2004 data on general release at the Economic and Social Data Service (<http://www.esds.ac.uk>).

The linked WERS-ABI data is also currently available via the VML. ONS restrictions mean that it will not be deposited at ESDS or elsewhere.

Summary of access arrangements at ONS:

The ONS Virtual Micro-data Laboratory can be accessed at any of the five ONS offices, namely: London, Newport, Titchfield and Southport. Dumb terminals are provided at each of these locations to enable access to the central servers on which the micro data is held. ONS have plans to extend access to other government offices in the future, in order to reduce travelling times for researchers located some distance away from ONS sites, but these plans were not confirmed at the time of writing.

To gain access to the VML, researchers must first complete an application form outlining the nature of the proposed research. Each application is approved by both ONS and the WERS Sponsors. Successful applicants are then required to then enter into a secondment arrangement with ONS, whereby their home institution formally seconds them to ONS for the purposes of conducting research in the lab. This is a purely contractual process and does not indicate any desire on the part of ONS to direct the research. The application process is usually completed within a few weeks.

Researchers are also required to attend an introductory seminar before gaining access to the lab. The seminar covers, amongst other things, the form of disclosure control that is applied to research undertaken within the lab. It should be noted that researchers are not permitted to remove any data from the lab: all analyses must be undertaken on ONS premises. Similarly, all research output must be manually checked by ONS staff prior to its removal from the lab, in order to ensure that it is not disclosive (i.e. does not contain results that may enable the identification of a survey respondent). The process of disclosure checking is usually completed within 48 hours.

Users should also note a charge of £52 per day has traditionally been levied on those using the lab, in order to cover ONS administration costs. New arrangements that come into place in January 2007 will mean that researchers using the lab for academic research (i.e. not funded by government departments or private organisations) will have these costs paid by ESRC, even if they are not working under an ESRC grant.

Further details on the operation of the VML are provided at:
<http://www.statistics.gov.uk/about/bdl>

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The Analysis of SMEs and Some Methodological Challenges

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1. Introduction and Objectives

Smaller enterprises have attracted growing interest from analysts of employment relations although, until the past five years or so, this has been slow to take off (see Marlow et al., 2005). Numerous studies of the employment relationship have been conducted by researchers in the small business field but contributions from employment relations specialists have been especially welcomed. Prior to WERS 2004, smaller units³ were arguably under-represented in the series of surveys focusing on employment relations leading to a deficiency in our knowledge and theorising on the employment relationship. The relatively slow recognition of the significance of small firms in industrial relations is a result of a number of factors associated with a focus on large organisation policies and institutions and that the field of study grew up in a period of dominance by large organisations and trade union representation (e.g. Edwards, 2003). If WERS is to survive as having some resonance with the world of work it has to develop and embrace the changes in the world of work and work organisation. This point is not new. As one commentator put it when reflecting on the WIRS series:

'Looking back to the topics that dominated the first survey, and thus were carried through to subsequent iterations, we did seem to have a fixation with the institutions and procedures of industrial relations to the exclusion of other issues in personnel management or work organisation which now seemed central to human resource management'

Purcell (2000: 252) in reviewing Millward et al. (2000)

Others have also suggested the need for permanent change and the need to break with 'continuity' between surveys.

'To conclude, while this paper might primarily be seen as a memo to those responsible for the conduct of a future WIRS 4, the subtext is that users of the data need to be alive to issues of survey method and design. The WIRS series is the most comprehensive source available for examining industrial relations practice in the workplace .../... academic researchers should be actively contributing ideas on ways in which the series might develop'

Cully and Marginson (1995: 18)

Clearly innovations in WERS are needed if it is to be adequate for the purpose of providing benchmark data on employment relations in the economy.⁴

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³ By small units we are referring to both 'establishments' and 'enterprises'.

⁴ This variable-centred research approach does of course have limitations for examining the employment relationship (see McCarthy, 1994).

The WERS small establishment's team was interested in ensuring that the shift towards smaller-scale capital was incorporated in WERS2004. Over time, there has been some recognition that studying smaller organisations is important if we are to understand the nature of employment relations in the economy. To some extent, this growing interest in small firms by industrial relations' specialists is reflected in the adaptations of the workplace employment relations surveys. WERS 1994 utilised a minimum establishment size threshold of 25 employees and WERS 1998 10 employees. WERS 2004 reduced this threshold further to five employees. Such innovations are welcomed and it is unquestionable that this move has generated a significant dataset for analysis.

Overall, the paper aims to explore the contribution of WERS2004 to our understanding of the employment relationship in SMEs. This includes a number of objectives. First, it sets out the rationale for having a lower employment size threshold in WERS. Second, it discusses some of the findings to date from WERS2004, particularly in relation to the 5-9 size band (called here micro-firms), set against a context of on raising our understanding of the employment relationship in smaller workplaces. Then the paper considers the particular methodological challenges of applying a WERS framework and style of research to SMEs. Attention is especially paid to the inclusion of micro-establishments and the challenges that a reduction of the size threshold creates.

Generally, the paper applauds the innovations in lowering the workplace establishment size threshold for inclusion in WERS. The first analyses by the WERS Project Team (e.g. Kersley et al., 2005; Forth et al., 2006) provide important baseline evidence on certain aspects of the SME workplace, identifying many of the distinctive features related to size. The findings also provide a strong justification for including smaller workplaces, and particularly the micro-establishment (5-9) since it is the group which appear at first sight to provide significant and distinctive size-based differences. Whether or not there has been sufficient shift in the approach and content of the WERS methodology to adequately capture the smaller firms employment relations environment, and thus provide a comprehensive picture of employment relations, is open to debate. Three layers of bias are discussed in the paper which leads to the argument that incremental rather than radical innovations have taken place in the small establishment area. A step change has to be made to fully examine smaller firms. The paper concludes with some suggestions for developing WERS surveys.

Table 1									
UK Whole Economy									
Number of enterprises, employment and turnover in the whole economy by number of employees, UK, start 2005									
	Enterprises	Employment	Employees	Turnover ⁵	Enterprises	Employment	Employees	Turnover ⁵	Turnover ⁵
	Number	(/ 1,000)	(/ 1,000)	(/ £ million)	Percentage	Percentage	Percentage	Percentage	Percentage
Whole economy									
All enterprises	4,423,500	28,908	25,094	2,636,420	100.0	100.0	100.0	100.0	100.0
With no employees ⁶	3,169,370	3,475	407	193,460	71.6	12.0	1.6	7.3	7.3
All employers	1,254,135	25,432	24,687	2,442,960	28.4	88.0	98.4	92.7	92.7
1-4	823,085	2,330	1,797	210,141	18.6	8.1	7.2	8.0	8.0
5-9	220,470	1,544	1,440	151,317	5.0	5.3	5.7	5.7	5.7
10-19	113,250	1,581	1,527	157,433	2.6	5.5	6.1	6.0	6.0
20-49	59,355	1,837	1,804	198,518	1.3	6.4	7.2	7.5	7.5
50-99	18,910	1,313	1,306	151,410	0.4	4.5	5.2	5.7	5.7
100-199	8,945	1,244	1,240	170,791	0.2	4.3	4.9	6.5	6.5
200-249	1,880	419	418	50,005	0.0	1.4	1.7	1.9	1.9
250-499	3,730	1,302	1,300	197,137	0.1	4.5	5.2	7.5	7.5
500 or more	4,510	13,861	13,856	1,156,208	0.1	47.9	55.2	43.9	43.9

Source: Small Business Service Analytical Unit

Numbers are rounded in order to avoid disclosure. Consequently the "All Enterprises" and "All Employers" totals may not exactly match the sum of their parts.

⁵ All turnover figures exclude Section J (financial intermediation) where turnover is not available on a comparable basis.

⁶ "With no employees" comprises sole proprietorships and partnerships comprising only the self-employed owner-manager(s), and companies comprising only an employee director.

2. The Importance of Reducing the Size Threshold

The justification for the inclusion of smaller workplaces in WERS is primarily to reflect the size distribution of organisations and employment in the economy. One of the reasons for this is the growth in the contribution of smaller *vis a vis* larger enterprises in the economy. Data from the DTI (2006) show that there were an estimated 4.4 million businesses in the UK at the start of 2005 (excluding government and non-profit organisations) an increase of 59,000 from 2004. Almost all (99.3%) enterprises were small (0-49 employees) in contrast to 0.1% or 6,000 that were large (250 or more employees) (Table 1). SMEs accounted for more than half of the employment (58.7%) and turnover (51.1%) and there were almost a quarter of a million in the 5-9 category.⁷ Clearly, the pressure to reduce the size of establishment eligible for inclusion in WERS has gained momentum and on reflection may have been well overdue. Small firms are very different in their employment practices and their exclusion from studies leads to a biased picture of employment relations.

3. Results from Innovations in Small Establishments

The innovation in the size analysis of WERS2004 includes both a reduction in the establishment size to those with 5 employees and in the way the principal analysis has been undertaken. The surveys within micro-establishments used two of the five survey collection instruments: the cross-section survey of managers MQ and the survey of employees EQ. For the whole private sector, irrespective of size, WERS2004 includes data collected from 1693 private sector workplaces and 15260 of their employees (Forth et al., 2006: 3-4). Whilst the sourcebook (Kersley et al., 2006) uses 'establishment' as the break point for any size analysis, Forth et al., (2006) sought to align their analysis with more common approaches to studying SMEs undertaken by other mainstream small business researchers and official statistics. Although the data collection point is at the workplace, post-interview these are then classified according to the size of the enterprise to which they were a part: micro (5-9), small (10-49), medium (50-249) and large enterprises (250+).

This approach led to the classification of 621 establishments and 4,682 employees within enterprises of less than 250 employees (i.e. SMEs). Within this 392 enterprises and 2438 were in small enterprises. Forth et al. report that the survey is representative of 26% of all workplaces and 76% of employees in private sector enterprises (2006: 5). Certainly, it does make this the largest dedicated survey on employment relations in small workplaces. The approach undertaken in Forth et al., that is nesting establishments within the size of the enterprise to which it is a part is an improvement on an establishment classification although it does not mesh onto the size distribution of enterprises exactly.⁸ A basic point here is that employment relations within small establishments will vary according to the size of the enterprise: those belonging to a large enterprise will probably have more structures and formal practices. The implication is that the employment relationship in small enterprises may be different from those in small establishments of the same size that are part of a larger

⁷The actual number of enterprises with employees is estimated to be around 1.2million. See DTI (2006).

⁸ As Forth et al (2006) report, however, two thirds (67%) of workplaces belonging to SMEs were single site firms and this proportion declined significantly with firm size.

organisation (see Storey et al., 2006). The effects of formality on employment relations are under investigation elsewhere.⁹

Innovation Highlights

An overview of the results on SMEs from WERS2004 has been presented by Forth et al (2006) who provide what they call ‘*a descriptive mapping of employment relations in SMEs in some of the areas covered by WERS*’ (Forth et al., 2006: 91). Our analysis adds to this baseline by unpacking some of the differences between micro and firms and those in the other size classifications. The main approach we take follows that of Forth et al. in that units are classified by size of enterprise, rather than establishment.¹⁰ This leads us to be able to classify firms by size of enterprise. The analysis covers 84 micro, 308 small, 229 medium and 1,072 large enterprises and the employees within these enterprises. What the findings show is that the additional focus of WERS 2004 on micro enterprises is vindicated: many of the observations in size differences are accentuated in the micro firms and there are also big differences within the SMEs category.

Across all the aspects covered, employee ratings of managerial responsiveness were higher in firms employing 5-9 people than all other size classes (Table 2). This was particularly high in ‘seeking the views of employee or employee representatives’ but slightly less so in relation to ‘allowing employees or employee representatives to influence final decisions’. Although it may be difficult to explain the patterns in the data definitively, the results are not surprising given both the closeness of working relations in micro firms and the dominance of owner-managers in the decision processes of smaller firms. The results suggest elements of ‘fraternalism’ whereby employers work alongside and are dependent on labour often with the same of similar skill’s set (Goss, 1991). Yet, the findings do not refute the existence of other employer strategies, including ‘paternalism’ or ‘benevolent autocracy’ (Scase and Goffee, 1982; Goss, 1991): clearly employer engagement with employees declines the closer the final decision approaches.

⁹ Forth et al. identify 621 SME workplaces. This includes, however, those owned by overseas organizations, and it may be that a ‘small’ UK operation is part of a large global company. If we are interested in ‘pure’ SMEs it may be preferable to exclude overseas-owned workplaces, which reduces the number to 568.

¹⁰ The analysis and Tables in this paper follows this approach with the exception of Tables 7-9 which present an establishment picture since it draws on the Technical report of WERS 2004. Hence, the paper presents an analysis of enterprise (firm) size rather than establishment size of all private sector employers.

Table 2

Employee Rating of Managerial Responsiveness						
			Size of Firm			
	All private sector	All SMEs	5-9	10-49	50-249	250+
<i>percentages</i>						
<i>Seeking the views of employees or employee representatives:</i>						
Very good	13	17	27	19	12	11
Good	35	36	45	37	32	34
Neither	26	25	21	22	28	27
Poor	16	14	5	13	17	18
Very poor	10	8	2	9	10	10
<i>Responding to suggestions from employees or employee representatives:</i>						
Very good	12	15	24	17	10	10
Good	33	37	46	40	31	31
Neither	29	27	21	25	31	31
Poor	17	14	8	11	18	19
Very poor	9	8	2	7	10	10
<i>Allowing employees or employee representatives to influence final decisions:</i>						
Very good	8	11	17	12	7	7
Good	24	29	43	31	23	22
Neither	34	33	29	32	34	34
Poor	20	16	7	13	21	23
Very poor	13	12	4	11	15	14

Base: all employees in private sector workplaces with 5 or more. Establishments classified according to their enterprise size bands

Figures are weighted and based on responses from the following numbers of employees (minimum): 13,712 (all private sector), 4,150 (all SMEs), 220 (micro), 1,912 (small firms), 2,018 (medium-sized firms) and 9,506 (large firms).

Research elsewhere has shown the low level of unionisation and union density in small firms. A corollary of this is the almost absence of collective bargaining in small firms. Table 3 shows that collective bargaining is almost non-existent in the smallest size band and rises to only 5.3% of firms employing 50-249. This contrasts with almost three out of 10 enterprises with 250 employees or more. Wage rates in smaller firms were much more likely to be set at the workplace compared with firms employing 250 or more. The dominant form of wage setting in the micro firms was through 'unilateral decisions by management' (in these case most probably the owners of the business): 84.2 per cent of employees in enterprises of 5-9 had pay set determined by management compared with 29.1 per cent in enterprises of 250+. These results most probably reflect the relative power of the owner-manager in the smallest enterprises. An examination of employees' ratings of their views on managers shows some stark differences by size of enterprise (Table 4). Those in micro firms were much less likely to voice disaffection for managers in relation to them keeping promises, understanding workers' needs, skills' development and treating them fairly. This difference tended to increase with size of enterprise. Only

in relation to skills' development did the large firm-micro firm gap narrow, confirming the lower ratings of opportunities for training and development by micro employees, but even here there was a 10 percentage point difference.

Table 3

	Pay Determination Methods					
	Sector	Size of organization in the UK		Firm size		
		All private sector	All SMEs	5-9 emps	10-49 emps	50-249 emps
Collective bargaining	19.6	3.2	0.1	2.3	5.3	29.1
Set by management at higher level, all	27.3	8.7	0.0	3.2	18.0	38.2
Set by management at workplace, all	46.2	75.4	84.2	81.2	65.5	29.1
Set by individual negotiation, all	5.4	10.1	13.0	11.2	8.0	2.7
Some other way	0.7	1.2	0.2	1.0	1.7	0.4
Base Weighted	84	48	16	24	9	36
Unweighted	1662	603	81	299	223	1047

Base: All employees in workplaces with 5 or more. Establishments classified according to their enterprise size bands. Col %s

These results are most probably linked to the type of management 'order' within the smaller firm. Staff in small firms, and particularly micro firms, are often managed closely, if not on a face-to-face basis, by business owners with an egalitarian ethos and teamworking approach. Indeed, the latter has become recognised as important in small business development especially where there are managerial teams (Vyakarnham and Handelberg, 2005) and a breaking down of conventional, overt worker-manager power relations through strategies such as 'fraternalism' (Goss, 1991). Findings from the survey of managers to some extent confirm the broad pattern in the data. Forth et al. (2006: 77) report that 22% of managers in workplaces belonging to micro firms disagreed with the statement that employees at the workplace sometimes tried to take unfair advantage of management compared with 16% in SMEs as a whole and one in 10 in larger firms.

Table 4

	Employees' Trust in Workplace Managers					
	All private sector	All SMEs	Size of Firm			
5-9			10-49	50-249	250+	
<i>Managers here ...</i>						
<i>... can be relied upon to keep their promises:</i>						
Strongly agree / Agree	50	59	75	63	49	46
Neither agree nor disagree	26	24	17	23	28	28
Strongly disagree / Disagree	23	17	8	15	23	27
<i>... are sincere in attempting to understand employees' views:</i>						
Strongly agree / Agree	56	63	77	67	55	52
Neither agree nor disagree	24	21	17	19	25	25
Strongly disagree / Disagree	20	16	6	14	20	23
<i>... deal with employees honestly:</i>						
Strongly agree / Agree	58	66	82	70	56	53
Neither agree nor disagree	24	21	14	18	27	26
Strongly disagree / Disagree	18	13	5	11	17	21
<i>... treat employees fairly</i>						
Strongly agree / Agree	58	67	80	70	59	53
Neither agree nor disagree	23	19	12	18	23	25
Strongly disagree / Disagree	19	14	8	13	18	22

Base: all employees in private sector workplaces with 5 or more. Establishments classified according to their enterprise size bands

Figures are weighted and based on responses from the following numbers of employees (minimum): 14,724 (all private sector), 4,485 (all SMEs), 233 (micro firms), 2,103 (small firms), 2,148 (medium-sized firms) and 10,177 (large firms).

In general, employees in enterprises employing 5-9 people appeared to have more positive levels of satisfaction about their work experience when measured on seven factors together with an overall perception of satisfaction (Table 5). In contrast, those in larger enterprises appeared to be less satisfied across the board. The greatest difference in levels of satisfaction by size appeared to be in relation to the amount of involvement in decision making (seven per cent dissatisfied in 5-9 size band compared with 23 per cent in the large size band). Within the 5-9 enterprise size band most dissatisfaction was recorded in relation to levels of pay and training but these levels were still much lower than larger firms. The differences in levels of

dissatisfaction within micro firms bear out findings from elsewhere in relation to pay rates and training opportunities. Micro and small firms generally offer lower rates of pay and less opportunities for training than larger firms as shown in Forth et al (2006) but also elsewhere (Marlow et al., 2005). Annual pay reviews appeared to be less frequent in micro-firms (e.g. 71% compared with 81% in all SMEs and 87% in large firms (Forth et al., 2006: 60). However, what is interesting is that despite these lower level of remuneration and training the levels of dissatisfaction in micro firms are still lower than those in larger firms.

Table 5

Levels of Satisfaction of Employees Job Control and Security							
	All private sector	All SMEs	Size of Firm				
			5-9	10-49	50-249	250+	
				Col %s			
<i>How satisfied are you with the following aspects of your job?:</i>				<i>Proportion dissatisfied or very satisfied</i>			
The sense of achievement you get from your work	10	7	5	6	9	12	
The scope for using your own initiative	10	7	5	6	9	11	
The amount of influence you have over your job	13	9	5	8	12	15	
The training you receive	22	19	11	17	23	24	
The amount of pay you receive	40	33	25	33	37	43	
Your job security	14	10	9	9	11	16	
The work itself	9	7	4	6	8	11	
Overall, how satisfied are you with the amount of involvement you have in decision-making at this workplace?	21	16	7	14	21	23	

Base: all employees in private sector workplaces with 5 or more. Establishments classified according to their enterprise size bands

Figures are weighted and based on responses from the following numbers of employees (minimum): 14, 858 (all private sector), 4,516 (all SMEs), 230 (micro firms) 2,109 (small firms), 2,165 (medium sized firms) and 10, 272 (large firms).

An examination of employees' views on management operations is shown in Table 6. Clearly, the smallest enterprises have employees who report lowest levels of dissatisfaction. However, there are differences in the gap between the small and largest enterprises. Hence the gap is closed when financial matters, including budgets and profits are considered (25 per cent poorly or very poorly informed by management compared with 28 per cent in enterprises of 250+ employees). This suggests that although employees in the smallest size bands are more likely to feel informed about the enterprise although on some essential matters, including finance, they are no different from those in large enterprises.

Table 6

Satisfaction Levels of Employees on Management Operations						
	All private sector	All SMEs	Size of Firm			
			5-9	10-49	50-249	250+
			<i>Percentages</i>			
<i>In general how good would you say managers at this workplace are at keeping employees informed about ...</i>			<i>Proportion saying 'poor' or 'very poor'</i>			
Changes to the way the organisation is being run	24	22	13	20	27	25
Changes in staffing	26	22	11	20	27	29
Changes in the way you do your job	19	15	8	14	19	21
Financial matters, including budgets or profits	29	31	25	30	34	28
<i>Overall, how good would you say managers at this workplace are at ...</i>						
Seeking the views of employees or employee representatives	26	21	7	22	28	28
Responding to suggestions from employees or employee representatives	26	21	10	19	28	29
Allowing employees or employee representatives to influence final decisions	34	28	11	25	36	37
In general, how would you describe relations between managers and employees here?	14	10	2	8	14	17
<i>Now thinking about the managers at this workplace, to what extent do you agree or disagree with the following? Managers here ...</i>			<i>Proportion 'disagreeing' or 'strongly disagreeing':</i>			
Can be relied upon to keep their promises	23	17	8	15	23	27
Are sincere in attempting to understand employees' views	20	16	6	14	20	23
Deal with employees honestly	18	13	5	11	17	21
Understand about employees having to meet responsibilities outside work	19	13	6	11	16	22
Encourage people to develop their skills	18	15	10	14	19	20
Treat employees fairly	19	14	8	13	18	22
Index score (from 22 items)	4.38	3.50	1.92	3.17	4.39	4.87

Base: all employees in private sector workplaces with 5 or more. Establishments classified according to their enterprise size bands

Figures are weighted and based on responses from the following numbers of employees (minimum): 13,712 (all private sector), 4,150 (all SMEs), 220 (micro firms) 1,912 (small firms), 2,018 (medium-sized firms) and 9,506 (large firms).

As for how we explain these results, there has been much debate on employee satisfaction in small firms (Curran and Stanworth, 1981b). A simple conclusion of the above would be that they confirm the Ingham (1970) thesis of a 'non-economic orientation to work' in smaller firms. But this is one thesis to which we have difficulty in subscribing, not least because of its overtly 'supply side perspective' of

job choice or size of enterprise choice by employees (Curran and Stanworth, 1981b) especially when in small firms the owner-manager has great dominance. The reasons for the above differences in responses between micro and larger firms may also be bound up within a number of other contextual factors such as demographic, occupational, full-time / part-time, business sector and managerial style issues. All require further analysis and debate.

In understanding the patterns we observe, it may help to turn this round by asking about dissatisfaction in large organizations. Idson (1990) for example, albeit studying size of workplace rather than size of firm, developed theoretical reasons why satisfaction declines with size. Crucially, there are more rules and there is more rigidity in large workplaces, and higher capital intensity leads to pressures to utilize resources and thus to reduce workers' ability to influence the pace of work. He finds that rigidity is indeed high in large workplaces. In relation to job satisfaction, apparent size effects on job satisfaction disappear or are attenuated once measures of rigidity are introduced. Our own analysis of the WERS data has shown that formality increases with organizational size, and that measures of 'employee need' are inversely related to the level of formality (Storey et al., 2006). Case studies in small firms, for example in restaurants, demonstrate a reasonably relaxed work pace and a lack of rationalization (Ram et al., 2001). These studies do not have comparisons with outlets run by large organizations, but the intense rationalization of work practised by fast food chains is now very well established (Royle, 2000).

In relation to the WERS data, Forth et al. (2006) show that small firms used formal devices such as performance appraisal less than did large ones. It was also the case that in small organizations workers reported relatively good access to flexible working arrangements – which is one indicator of a lack of rigidity. Another notable finding relates to the pattern of pay and satisfaction. In large organizations, pay compression (that is a narrowing of the range of pay) reduced job satisfaction, but this was not the case in small firms – a result that Forth et al. (2006: 64) attribute to a lack of knowledge of other workers' pay in small firms. Thus, potential sources of dissatisfaction in large firms related to job grading and fairness seem attenuated in smaller organizations.

Job satisfaction can thus be seen less as a timeless feature of small firms or a measure of 'harmony' and more as a characteristic that can be undermined by rationalization and management control. Small-firm workers are not inherently happy, but aspects of their work situation make work less clearly dissatisfying than is the case in larger organizations. Related to this point, qualitative studies (e.g. those in Marlow et al., 2005) suggest distinct tensions in small firms between fairness and clear standards, on the one hand, and, on the other, the wish of owners to make personal decisions. Firms may, for example, have pay standards which are then ignored when the owner wishes to award a bonus as he or she sees fit. Such actions may not provoke discontent, either because workers do not know of them (secrecy in pay setting being a well-known feature) or because they fall within some norms of fairness. But they underline that good employee relations are not pre-ordained. They also illustrate some issues that surveys like WERS are not designed to investigate and that need to continue to be borne in mind.

These remarks suggest ways in which the effects of firm size can be addressed further. WERS has some measures that might be taken as proxies for rigidity and capital intensity such as the use of formal targets and various management techniques such as benchmarking. We would expect these things to reduce worker satisfaction. Moreover, with Idson and a long line of writing on small firms, we might want to say that ‘size effects’ are in fact effects of the structure of work. The impact of organization size on satisfaction would then be attenuated or eliminated once measures of the structure of work were introduced.

Of course, the above evidence is useful in presenting some baseline data on the employment relationships in micro firms. However, some caution may be exercised when interpreting the results. First, the number of micro firms in the analysis is smaller than those in the other size bands, although in terms of further data disaggregation this is more of an issue in relation to the management rather than the employee questionnaire. Second, there may have been some differential response rates in that disaffected workers in micro firms may have been less likely to be interviewed because of a higher turnover (the exit voice thesis), or self-exclusion or gatekeeper exclusion from taking part in the survey. Third, we should not ignore the differences in the sector, demographic and occupational characteristics of those answering the questions. Finally, there may be some size differences in the interpretation of questions and willingness of employees to be critical of management in answering the questions posed. For example, in smaller firms the influence of the owner manager cannot be under estimated and this may generate a culture of ‘collective spirit’ even within the boundaries of lower pay and conditions, if not acquiescence. As expected, the smaller the smaller the workplace, the more likely the owner was involved full-time in the enterprise (82% in micro firms compared with 48% in medium and 8% in large sized firms).

Has WERS 2004 Innovated Enough?

In moving to incorporate micro firms into WERS, a number of issues are raised from the previous section which merit consideration. These issues include:

- i. the multiple agendas of WERS, including the need for addressing traditional industrial relations issues as well as continuity,
- ii. the methodological approaches, and
- iii. issues of nomenclature, particularly the language used in the questions.

Given the diversity of practices between small and large firms, it is fair to ask can the same research instruments be used in these differing work environments. If so, how are we to improve the relevance of the questionnaires and their content to the small firms’ context? Or should the emphasis be on seeking different questionnaires but with common core questions, to map more precisely into the practices known to operate in workplaces of different size. Analysts have pointed out that the small firm is not a shrunken down version of a large firm, with the former having no or little division between ownership and management and a strong emphasis on non-bureaucratic, informal managerial practices. More sophisticated analyses have also related the greater exposure of the internal practices of the firms to the external

markets in which they operate. This may render generic questionnaires problematic to administer and interpret.

The corollary of this may be that it is difficult to reconcile the different agendas and approaches to investigating the employment relationship using the same or similar instruments. Furthermore, is it fair to argue that the ‘agenda legacy’ of WIRS and WERS¹¹, that is the need to maintain continuity over time in terms of definitions, agendas and target populations may have, in some respects, stifled innovations? These questions cannot be answered in this short paper but the evidence presented may help fuel the debates.

4. Understanding the Relevance of WERS in the SME Workplace

There are a number of ways of assessing the validity of WERS as a means of providing evidence on employment relations in small firms. One way is to examine the ‘non-response/ no answer’ and ‘not applicable’ coding of answers to questions used in the research instruments. Response rates include both overall response rates, that is the success rate of achieving a sample from the target population, as well as responses to particular questions within the surveys. The reasons for non-response can be many but we may assume that they are indications of a lack of time, not understanding the question, a lack of interest, the absence of an appropriate pre-coded response or that the subject is perceived irrelevant. Not- applicable codes to questions are useful indicators of the relevance of the question to the subject. A high incidence of ‘not-applicable’ responses may suggest that the agenda behind the questions asked do not relate world of the interviewee. Although this may not necessarily be interpreted negatively, it is important that surveys do seek to maximise the time used in the interview to glean information on the subject under investigation. In short, as in most surveys, it is desirable to achieve as high a response rate as possible.

It was a reasonable assumption of the WERS small establishment’s team that the WERS surveys may incur particular response rate challenges from smaller units.¹² An examination of the response rates in WERS may be used to illustrate the particular size-related challenges of undertaking surveys in smaller units. There are a number of issues that require exploration here including differences in response rates across the whole sample by unit size, response rates to particular questions and differences between workplaces and enterprises of the same size on specific questions.

A preliminary examination of the data from the WERS2004 surveys show that there are indeed, particular size-related response-rate issues. These issues may be shown by examining the response rates to a) the sampling frame (the top line survey response rates) as a whole b) the management cross-section survey (MQ) and to a lesser extent the employee questionnaire (EQ). These will now be discussed in turn.

¹¹ Cully and Marginson (1995) also raised the problem of continuity on a variety issues.

¹² WERS has a number of definitions and conventions. By Unit we are including both enterprises (i.e. the over all size of the business to which any workplace is a part) and establishments (i.e. the workplace). In this paper firm and enterprise are used interchangeably. Workplace and establishment are also used interchangeably.

Top Line Survey Response Rates

WERS involved a series of surveys but a main gate for the project is engaging with managers in workplaces drawn from a sampling frame derived from the Inter-Departmental Business Register (IDBR). The ONS points out the coverage of this source:

It covers all parts of the economy, but misses some very small businesses (self employed and those without employees and low turnover) and some non-profit making organisations. There are around 4.3 million businesses in the UK of which 2.1 million are on the IDBR. The IDBR provides nearly 99% coverage of economic activity.

<http://www.statistics.gov.uk/idbr/idbr.asp>

The IDBR holds records of 2.1m businesses and is updated using VAT, PAYE, National Statistics Surveys and Companies House. From this database, the so called 'yield' of establishments from the initial sampling of 4293 units selected was 53.5% (Table 7). However, for the micro establishments (1-9 employees) this was only 35.9% compared with 56.8% in the 10+ establishments. Whilst this may not be considered a significant problem, because the yield is not referring to refusals, it does imply that the sample of firms in WERS 2005 is operating within the limitations of the IDBR. The latter is the most comprehensive sampling frame of organisations from government, but it does however have some limitations.

Most pertinent here is its tendency to avoid coverage of new firms because of its reliance on records related to registrations across various government departments for various official purposes.¹³

Table 7

Yield from WERS 2004 Sample Management Respondents (Size of establishment)	(Size of establishment)	
	5 – 9	10+
Ineligible/Out of Scope (%)	38.2	12.2
Non-productive addresses (%)	25.9	30.9
Interviews achieved (%)	35.9	56.8
Sample	694	3,599

Source: Chaplin et al. (2005), p.37.

Note: The differences between the two size groups found to be statistically significant.

Although the precise effects the IDBR sampling frame has on bias in the results of WERS 2004 are difficult to estimate, it may be that this leads to bias in the representation of micro firms since it is these that tend to be newer and shorter lived. The implication is that the sample probably collects data on older small firms than the

¹³ For example, the 'Beta model' database suggests that the IDBR covers 2.1 enterprises in comparison to its own of 2.4 which is drawn from other datasets including Thomsons and Yellow Pages. See <http://www.betamodel.com/>

true population at any point in time. New firms may also have very different employment relations practices. Clearly this is a methodological issue that requires further debate.

Table 8

Response by size of establishment (IDBR)					
	Number of employees (IDBR)				
	Total	5 – 9	10 – 24	25 - 49	50-99
Out of scope (%)	16.4	38.2	19.4	18.0	8.8
Unproductive (%)	30.1	25.9	31.3	28.9	33.1
Productive (%)	53.5	35.9	49.3	53.1	58.2
Response rate (%)	64.0	58.0	61.1	64.7	63.8
<i>Sample</i>	<i>4,293</i>	<i>694</i>	<i>686</i>	<i>612</i>	<i>514</i>

Source: Chaplin et al. (2005) p.37

Note: The response rate is equal to [productive/(productive + unproductive)]*100. Differences in the response rate across firms' size are found to be statistically significant between "5-9" and "25-49" and between "5-9" and "50-99".

Second, is the issue of the actual response rates of establishments approached for participation in the surveys. Again the results from Chaplin et al. (2005) reveal some interesting size-effects. Table 8 shows the response rates by size of establishment. Most notable is first the relatively high percentage of micro establishments that are out of scope (38.2% compared with 16.4% for the whole sample). There also appears to be a sharp drop off in non-response amongst the medium sized establishments (50-99) and this remains at between 8-10% for all 50+ sized establishments. Collectively these suggest that micro and small establishments will be more subject to non-response bias. Again this is an issue that is worth further investigation if the comparisons with micro, small and larger units are to be robust.¹⁴

Table 9

Length of Management Interviews by Establishment Size			
Establishment Size:	Mean	Median duration (mins)	<i>Sample</i>
	duration (mins)		
5-9	96	90	229
10-24	103	95	407
25-49	115	110	322
50-99	118	110	298
100-199	123	120	277
200-499	131	120	287
500-999	134	120	154
1,000-1,999	137	125	94
2,000+	138	130	141
<i>Total</i>	<i>118</i>	<i>115</i>	<i>2,209</i>

Source: Chaplin et al. (2005), p.42.

Third, once inside the establishment, it appears that the actual length of the management interview is positively related to size. Table 9 provides both the mean and the median duration of management interview by establishment size suggesting

¹⁴ The reasons for refusals are given in the Chaplin et al. (2005:p40) although these are not broken down by unit size.

distributions skewed to the right. Interestingly, the interviews in micro establishments were 96 minutes (mean) compared with for example 131 respectively in establishments employing 200-499 employees.

The reasons for these differences may be numerous. In large establishments there may be a need for management in large firms to ascertain information possibly across a number of departments whilst in smaller establishments this may be to hand. However, a more crucial argument may be that the differences may be a result of the irrelevance of so many questions in the smaller establishments. Owner-managers may be less able to answer questions that are designed for personal specialists and on topics that are alien to their day-to-day world of work. Hence, the shorter duration in micro firms may not be solely to a more efficient interview. Clearly, answers to these suggestions cannot be easily gleaned from the data provided so far but the reasons for the wide variation in the duration of interviews requires further consideration.

Analyses of Non-Response and Not Applicable in the Management Questionnaire (MQ) and Employee Questionnaire (EQ)

Given the variety of objectives of WERS and the relative new inclusion of the smaller sideband categories, and hence small enterprises, it is important that an examination of the appropriateness of questions is undertaken. The small establishment's teams initial glean of drafts the MQ suggested that some of the terminology used may not sit comfortably in small firms. One of the principal themes in the accumulation of knowledge and theorisation of small firms is the absence of formality and associated bureaucracy (eg. Gibb, 2000). However, the cross-sectional management questionnaire WERS 2004 often focused on formal policies and practices. Simply put, the term 'formal' or 'formally' appeared 36 times in the MQ cross-section questionnaire. This language is likely to be alien to small business owners and elicit responses that are difficult to interpret. An example is the question:

Is this workplace covered by a formal strategic plan which sets out objectives and how they will be achieved? (BSTRATEGIC)

Non-response to this question was minimal. However, what is more revealing is the subsequent probe regarding the issues covered in the plan. An examination of the non-response and not applicable to the question '*which of the following issues are covered in the plan?*' reveals that SMEs were much more likely to have been filtered out by the previous question than the sample as a whole, or in large firms (Table 10).

Hence, the subsequent question in asking '*were you or anyone else responsible for employment relation matters involved in the preparation of the plan?*' (BPREPARE) also resulted in different levels of not applicable by size of enterprise: for example, 69% of micros had been filtered out compared with only 10% of large firms.

Table 10

Non-Response and Not Applicable by Enterprise Size (BMANAGE1): Which of the following issues were covered in the plan (e.g. satisfaction, development)?				
(Unweighted estimates, %)				
Micro 5-9	Small 10-49	Medium 50-249	Large 250+	All
69.05 (84)	56.82 (308)	31.00 (229)	10.07 (1,072)	24.34 (1,693)

Source: WERS 2004. N values are in parentheses.

Notes: Establishments classified according to their enterprise size bands. We test the null hypothesis that the proportion of non-response and not applicable is the same between micro, small, medium and large firms. The Wald test suggests a rejection of the null hypothesis, $F(3, 1692)=127.04$.

In relation to the management of employees, the management questionnaire asked a question which may be considered difficult for respondents, particularly in SMEs:

'I now want to ask some questions about the involvement of other employees in employment matters. Approximately what proportion of non-managerial employees have job duties that involve supervising other employees? Please include line managers and foremen' (BINVANG)*

The difficulty for SMEs to answer the question is highlighted in the follow-up question (BAUTHOR1 – BAUTHOR3). Table 11 shows that 'non-response' and 'not applicable' were negatively related to size of enterprise: those in micro-firms were more than three times as likely to record non-response or not applicable than medium or large enterprises.

Table 11

Non-Response and Not Applicable by Enterprise Size (BAUTHOR1-3): Do employees with supervisory responsibilities have the authority to make final decisions on ...					
(Unweighted estimates, %)					
	Micro 5-9	Small 10-49	Medium 50-249	Large 250+	All
BAUTH1: Taking on people who work for them	35.71 (84)	21.75 (308)	10.04 (229)	10.45 (1,072)	13.70 (1,693)
BAUTH2: Deciding on pay rises for people who work for them	35.71 (84)	21.75 (308)	10.04 (229)	10.45 (1,072)	13.70 (1,693)
BAUTH3: Dismissing workers for unsatisfactory performance	35.71 (84)	21.75 (308)	10.04 (229)	10.45 (1,072)	13.70 (1,693)

Source: WERS 2004. N values are in parentheses.

Notes: Establishments classified according to their enterprise size bands. We test the null hypothesis that the proportion of non-response and not applicable is the same across different size bands. The Wald test suggests a rejection of the null hypothesis: $F(3, 1692)=13.71$ for the three cases. However, the test does not reject the null hypothesis that the proportion is the same between medium and large enterprises.

This monotonic size-relationship was also found in a preliminary exploration of 'not applicable' on a series of other variables, illustrating a key point that the management questionnaire instrument was not relevant to SME respondents or not fitting in with

their employment relations modus operandi. Non-response was less of an issue: indeed non-responses to questions were not as high as anticipated.

Section C of the MQ focused on recruitment, training and organisation of work. The sections on training tended to focus on formal, off-the-job activities and produced some corroborative evidence that SMEs tended to be less engaged in such activities. Unfortunately, informal training or on-the-job learning was not investigated even though this has found to be a key form of employee development in SMEs (Kitching and Blackburn, 2002; 2003). The nature, character and scale of employee development in SMEs differs radically from that in larger firms and there is no surprise that the findings recorded high 'not applicables' across a range of questions. The results therefore need careful interpretation as false underlying assumption may be conveyed that formality is the normative model for training.

A section of the MQ examined the use of teams as a means of organising the workforce (TEAMS). Here the opening question was:

'What proportion if any, of [NAME OF LARGEST OCCUPATIONAL GROUP- LOG] at this workplace work in formally designated team?'

The non-response to this question was almost zero, and 55% of SME workplaces reported working in teams compared with 64% in large firms. However, the subsequent probing questions presented in Table 12 suggest a relatively high level of not applicable (rather than non-response) amongst micro and smaller firms. Over a half of those in micro enterprises recorded 'non-response' or 'not applicable', compared with around 14% in large enterprises. The relatively large proportion of not-applicable in this probe question is undoubtedly linked to the absence of formally designated teams and a filtering out of almost half of all micro firms. It is also likely that the term 'formal' would be difficult to interpret in SMEs because of the relative absence of formality and even where team-working is taking place this is unlikely to be picked up by the opening question (TEAMS). The face-validity of this question may, therefore, decline with size of firm since, although team-working takes places, this may not be picked up using these questions (see for example Cooney, 2005).

Section D of the management cross-section questionnaire addressed consultation and communication in the workplace. Earlier feedback from the small establishment's team, to drafts of the MQ, had expressed concern regarding the relevance of some of the questions to the SME context.¹⁵ The section focusing on the methods used to communicate and consult with employees asked a series of questions relating to meetings, their lengths and context. An opening question on communication between managers and workers asked:

'Do you have meetings between line managers or supervisors and all the workers for whom they are responsible?' (DBRIEF)

The majority of managers (60% weighted) reported 'yes' to this question but significantly 40% said 'no'. In the subsequent probing questions over four out of 10

¹⁵ Indeed, initial feedback, from the small establishment's team, suggested that only around a half of the questions would be appropriate to the SME, and particularly micro and small firm contexts. Amendments were subsequently made to the section for the final questionnaire used in the survey.

micro and small firms has been filtered out (Table 13). Similarly, over six out of 10 micro and four out of 10 small firms were not asked about the frequency of meetings and, which issues are discussed in the meetings. In contrast, only 15% of larger firms were filtered out of this question.

Table 12

Non-Response and Not Applicable by Enterprise Size (CTEAMHOA-HOE):					
Which, if any, of the following statements apply to the way that team working operates among.... at this workplace?					
(Unweighted estimates, %)					
	Micro 5-9	Small 10-49	Medium 50-249	Large 250+	All
HOA: Depends on each other's work	55.95 (84)	35.39 (308)	20.09 (229)	13.62 (1,072)	20.52 (1,693)
HOB: Aim to appoint their own leaders	55.95 (84)	35.06 (308)	20.52 (229)	13.99 (1,072)	20.79 (1,693)
HOC: Jointly decide how the work is to be done	55.95 (84)	35.06 (308)	20.52 (229)	13.71 (1,072)	20.61 (1,693)
HOD: Giver responsibility for products and services	55.95 (84)	35.06 (308)	20.96 (229)	13.62 (1,072)	20.61 (1,693)
HOE: Tasks or roles rotate among the members	55.95 (84)	35.06 (308)	21.4 (229)	13.9 (1,072)	21.09 (1,693)

Source: WERS 2004. N values are in parentheses.

Notes: Establishments classified according to their enterprise size bands. We test the null hypothesis that the proportion of non-response and not applicable is the same across different size bands. The Wald test suggests a rejection of the null hypothesis: $F(3, 1692)=35.73$; $F(3, 1692)=34.28$; $F(3, 1692)=35.10$; $F(3, 1692)=35.48$ and $F(3, 1692)=33.66$, respectively.

Similar results are found when examining the questions in relation to joint-consultative committees and worker representatives. Whilst these questions show advanced thinking by researchers for allowing the collection of valuable data in establishments owned by large organisations, the trade-off is a loss of potential data from firms at the smaller end of the spectrum. Clearly, many of these questions did not appear to map onto the operations within SMEs. The term 'joint-consultative committee' we would argue, would simply not be in the language used by small firms' owner-managers.

Table 13

Non-Response and Not Applicable by Enterprise Size: Arrangements for Communication: Meetings between line managers or supervisors and workers.					
<i>(Unweighted estimates, percentage)</i>					
	Micro	Small	Medium	Large	All
	5-9	10-49	50-249	250+	
DBRIEFN: How frequent are these meetings?	67.86 (84)	40.91 (308)	20.5 (229)	15.0 (1,072)	23.5 (1,693)
DBWHICO1: Which issues are discussed at the meetings	66.67 (84)	40.58 (308)	19.65 (229)	14.74 (1,072)	22.68 (1,693)

Source: WERS 2004. N values are in parentheses.

Notes: Establishments classified according to their enterprise size bands. We test the null hypothesis that the proportion of non-response and not applicable is the same across different size bands. The Wald test suggests a rejection of the null hypothesis: $F(3, 1692)=53.22$ and $F(3, 1692)=52.96$, respectively.

One of the key areas for study in the field of industrial relations is employee representation and trade unions. However, given the very low levels of trade union numbers and density in smaller enterprises Section E of the WERS2004 MQ highlights the difficulties using the same questionnaire for large and small firms. The survey corroborated the low presence of unions in smaller firms and this rendered the bulk of questions on this subject as 'not applicable'. To some extent this is understandable and the need to collect data on trade union activities and representation at the workplace makes a significant contribution to mapping out the landscape contemporary industrial relations. But what of those workplaces without the presence of trade unions? WERS 2004 sought to collect information on non-union employee representatives (e.g. EELECT) but, the levels of non-response and not applicable in micro and small firms was over 90%.

The system of payments and pay determination provided some useful information on depicting the predominant regime in small firms (see Forth et al., 2006: Ch6). Although there appears an absence of collective bargaining in SMEs (with some sector differences) lower levels of pay in SMEs and seemingly unilateral pay determination by management at the workplace, levels of satisfaction with pay appears to be higher the smaller the firms. These apparent contradictions may have answers outside the data set such as different wage expectations by employees but higher perceived levels of job autonomy and recognition.

However, the section on pay setting is not without the by now familiar challenges of non-response bias: again on almost all the questions not applicable, was highest amongst micro firms. The reasons for this may be explained by the inappropriateness of some of the opening questions. For example, FJOBEVA1 asked:

'Are there any formal job evaluation schemes here? These are schemes for comparing systematically the relative value of different jobs in order to settle their relative rates of pay?'

Clearly, this would be difficult to apply to a SME, and particularly micro-context. Hence, only 7% of SMEs reported having a formal job evaluation scheme, compared with 24% in large firms.

Although the tenor of this paper is critical in focusing on what did not appear to work there were some passages in the MQ that were relevant. The series of questions relating to the frequency of pay reviews and the factors influencing pay changes for the largest occupational group (FREVIEW) appeared to have elicited responses from SMEs to provide useful comparisons with larger firms and between sectors. Response rates were high and broadly equal across all firm sizes in the passage of questions relating to pay levels and their changes. However, when asked in relation to pay determination for each occupational group at the workplace, the rates of not applicable rise to 22.4% (FSOC1) and 92% (FSOC6). The section on pay and pay determination, therefore, reveals some interesting results regarding micro firms but the ability to map pay determination is only partial compared with that of large firms.

The Employee Questionnaire (EQ) produced some interesting findings regarding the experiences, views and attitudes of employees when compared with size unit. The questionnaire was relatively short and administered by self-completion methods. Managers appeared to be positive in relation to their willingness to allow workers to complete these questionnaires, and it is notable that those in smaller units were more likely to say 'yes'. There are some issues worthy of exploration within the EQ in relation to the differences found in the results. Whilst small firm workers appeared to be happier, more satisfied with the conditions of work and trust managers more than in large enterprises, issues of non-response bias must be explored. Forth et al. (2006) investigated the concept of 'exit voice' as being one potential for low levels of discontent amongst small firm workers. However, it appears that voluntary resignations were no higher than in larger firms. One alternative explanation is that in the small firms' context staff who are not committed to the organisation are much less likely to say so whilst those in large organisations have a culture of airing discontent, given for example the presence of trade union support, and internal structures. This cannot of course be verified within the WERS data. However, the evidence from Chaplin on the number of questionnaires received back is lower as a proportion in smaller firms than in larger firms. This difference between the number of questionnaires left for completion and the proportion returned may be worthy of further investigation.

Generally, an examination of the non-response patterns in the EQ show that this tends to be higher the smaller enterprise with few exceptions.¹⁶ The highest non-response across the board is in relation to QD3. If this is unpacked further, there also appears to be a size relationship in the non-response. The analysis shows that 71% of small firm employees and 66% of micro employees provided a 'don't know' or 'no answer' (Table 14).

In section D of the EQ, employees were asked a series of questions about trade unions and trade union membership. It is clear from the non-response that this question is much less relevant in smaller firms (Table 15). Over two-thirds of those in micro enterprises who had trade unions replied 'don't know' or no answer – almost double those in all other enterprise size bands. This is not surprising given the low density of unions in smaller firms.

¹⁶ The analysis here is of non-response (ie 'no answer' or 'don't know') because all employees are asked the questions.

Table 14

Non-Response by Enterprise Size (D3):				
How would you describe management's general attitude towards trade union membership among employees here?				
<i>(Unweighted estimates, percentage)</i>				
Micro	Small	Medium	Large	All
65.98	70.46	61.92	50.78	55.49
(241)	(2,197)	(2,245)	(10,578)	(15,261)

Source: WERS 2004-Employee Survey. N values are in parentheses.

Notes: Establishments classified according to their enterprise size bands. We test the null hypothesis that the proportion of non-response and not applicable is the same across different size bands. The Wald test suggests a rejection of the null hypothesis: $F(3, 15,260)=126.68$. However, the test does not reject the null hypothesis that the proportion is the same between micro and small enterprises.

Table 15

Non-Response (D6A-C)*:					
Do you agree or disagree with the following statement about unions or staff associations at this workplace?					
<i>(Unweighted estimates, percentage)</i>					
	Micro	Small	Medium	Large	All
D6A: Take notice of members problems	36.36 (11)	16.03 (131)	15.40 (396)	15.82 (5,139)	15.84 (5,677)
D6B: ..are taken seriously by management	36.36 (11)	15.27 (131)	18.18 (396)	16.37 (5,139)	16.51 (5,677)
D6C: ..make a difference to what it is likely to work here	36.36 (11)	16.03 (131)	17.68 (396)	16.38 (5,139)	16.51 (5,677)

Source: WERS 2004-Employee Survey. N values are in parentheses.

Notes: Establishments classified according to their enterprise size bands. We test the null hypothesis that the proportion of non-response and not applicable is the same across different size bands. The Wald test suggests that the null hypothesis cannot be rejected in all cases: $F(3, 15,260)=0.63$; $F(3,15,260)=0.44$ and $F(3,15,260)=0.54$, respectively.

*The question was asked only to those who work in workplace where there is a trade union.

On the majority of other questions in the EQ, low levels of non-response were found. This suggests that on the whole the EQ questionnaire worked well within firms of all sizes although the above exceptions need to be taken on board for future refinements in WERS.

5. Discussion and the Way Forward

This paper has sought to present a critique of the innovations in WERS in relation to the move to embrace smaller establishments in WERS 2004. Small firms can no longer be ignored in this major programme of investigation. As a result, WERS 2004 has made significant breakthroughs in relation to the generation of facts on employment relations in smaller and especially micro workplaces. The stratification of workplaces according to the size of the enterprise which they are a part has provided a significant breakthrough for those seeking size-based comparisons. The argument and resources used for including micro firms in WERS has been fully vindicated since they show major differences from large firms. Analyses to date have shown that there are significant size differences in employment relations practices.

Even within SMEs there is heterogeneity. The analysis presented here has focused on micro enterprises differences between size bands. However, this has thrown up many more questions than answers. Further analysis is needed to relate these observed size differences according, for example, to contextual (industry sector, competition levels), worker profile (full-time/ part-time, age, gender, occupational class) and employer factors. We would also seek to examine differences between enterprises and establishments in baseline employment relations.

Yet, the analysis of non-response across various elements of the research programme and particularly not applicable in passages of questionnaires, has demonstrated that some bias against SMEs has been inherent. Three layers of bias may be seen to exist against SMEs and particularly micro firms: at the level of the agenda; at the level of the sampling frame; and at the level of the research instruments used in the field. As a result, whilst our knowledge base on SMEs has been enhanced as a result of WERS 2004, it remains relatively partial when compared with that of larger organisations. We would, therefore, describe the innovation on small establishments in WERS 2004 to be incremental rather than radical. The analysis of non-response to particular questions and passages of text presented in the paper is illustrative rather than exhaustive. More detailed explorations may focus for example on differences between size of employer/ workplace; multi/single plant organisations; and use more sophisticated techniques to control other variables such as occupational and sector variables which will intervene in size-comparisons.

A key issue is the multiple agenda of WERS. We accept that all surveys involve compromises particularly when they seek to record both cross sectional and time-series changes. WERS 2004 is no exception. Hence, it is accepted that the survey instruments used in WERS have to strike a balance between being innovative, and by implication introduce changes, whilst at the same time maintain some continuity to allow time-series comparisons. However, many of the questions within WERS 2004 refer to formal practices and policies. Such concepts are simply anathema to small business owner-managers. There is clear, long standing, unequivocal evidence that employment relations in small firms, *inter alia*, tend to be devoid of 'formal' practices, trade union representation and industrial relations or personnel specialists (see for example, Curran, 1991; Marlow et al., 2005; Ram and Edwards, 2003). Yet, these phenomena are amongst the pillars of 'conventional' employment relations' literatures and to some extent continue to be reflected in the data collected for WERS. Spanning the world of employment relations in small and large organisations will always prove difficult using the same survey instruments and series. It is clear debate is needed on the way forward and ideas shared on how to best satisfy the needs of various interested parties.

In looking to the future of WERS, more change is needed. WERS has to develop research instruments that have questions that demonstrate both construct and face validity fit for the small workplace. Unfortunately, WERS 2004 has too many large firm 'measuring rods' and large firm norms underlying the questions on employment relations matters. This leads to questions that have relatively high reported levels of 'non-response' or 'not applicable'. In taking WERS forward, we also noted above the brevity of interviews in small firms. Whilst not eschewing the need for data on formal practices and policies within the workplace, one solution could be to have these as probe questions rather than as part of an opening sequence. Another would

be to include questions with a small firm emphasis, just as there are now details relevant only to large firms. For example, the informality of arrangements in small firms over such issues as pay determination, training, and employee communication is widely noted. It would be possible to devise questions which try to explore this informality, for example just how decisions on pay are reached or how training takes place. Some of these inferred large firm-small firm tensions may be less of a problem than first thought. For example, more questions on informality may also reveal interesting results from larger organisations.

Finally, a more basic improvement is suggested. Our early unpacking of the data sets revealed that the ability to identify micro enterprises easily was hampered. This was because the variable recording the number of people in the enterprise as a whole (AUKTOT) was categorical and did not separate micro from small firms. In order to reach our classifications numerous iterations had to take place and we were able to identify 84 micro enterprises with confidence. In this process a number of establishments were not able to be distinguished between small and micro firms and were therefore excluded. Hence, we recommend that a continuous (rather than categorical) variable is used when recording the total number of people in the organization to which the establishments are a part.

These issues aside, WERS cannot be regarded as a definitive method for understanding the employment relationship in SMEs. There is a strong argument that quantitative surveys with closed questions are more difficult to apply within smaller firms (Blackburn, 2005) and more nuanced accounts of the employment relationship in SMEs have been developed recently (e.g. Marlow, 2005). Hence, it is a commonplace in the small firm's literature that the context is critical: a small clothing company is very different from a web design firm or a professional service firm with the same number of employees (eg. Ram, 1999). Context is of course also important in large firms. But, first, there are many more small firms than large ones so that the range of variation is greater. Second, small firms are less formally structured and are more likely to reflect idiosyncrasy. They may also be less exposed than are large ones to standardizing processes such as engagement in networks of human resource professionals. In other words, there may be fewer pressures to isomorphism.

As a broad survey, WERS is not designed to look in detail at context. Much research on small firms, by contrast, uses very small numbers, and WERS has great benefits of generalisability. But one should not be blinded by numbers alone. Although WERS embraces 621 SME workplaces, the number in any one sector will be low. Now, it is true that WERS is still likely to contain a large number of observations, particularly on employees. But these will be a collection of responses from some very diverse contexts. Carefully chosen detailed studies within particular contexts may have smaller total numbers, but they will be able to say things about those contexts and thus to identify distinct patterns and causal mechanisms underlying those patterns. Such targeted research is needed to complement what WERS can accomplish.

A particular strength of WERS relates to what we would term pure size effects. That is, because of its breadth it can in principle compare firms of different sizes confident that they represent the relevant population. The issue of course is whether such effects really exist. We are increasingly of the view that they do, and that they turn on the nature of face-to-face relationships (Tsai et al., 2006). This argument is in some

ways a reaction to the well-established position that size is correlated with other factors and that seeking simple size effects, as was the tendency in early research (see Curran and Stanworth, 1981a; 1981b), is erroneous. We of course accept that one cannot generalise about all small firms because of their size alone. But there has been some tendency to assume that size is not important at all. There was an importantly similar tendency in relation to technology, with early technological determinism being rightly rejected but with technology then being ignored; only recently has a fuller appreciation been developed (Edwards, 1988; Bélanger, 2006). In the same way, size determinism can be rejected, but size effects are still significant. Plainly, one needs a theory to say what they are and how they work, but WERS provides important means for people armed with such theories to develop relevant empirical tests. Hence, even within the limitations of quantitative surveys, there is room for improvement in WERS when SMEs are considered as a means of informing other analyses and approaches.

These points are for future innovations in WERS. We should not, however, lose sight of the positive developments in WERS and the incorporation of smaller units. Altogether, the innovations in small establishments in WERS 2004 represent an important shift in raising the knowledge base. It should provide the basis for significant secondary analysis, complementary research projects and further agendas. However, WERS has benefited in the past from the challenging of various sacred cows. This is one tradition to which we subscribe.

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Well-Being in the Workplace Employee Relations Survey 2004

Stephen Wood¹

1. Introduction

A measure of emotional well-being has been included in the Workplace Employee Relations Survey series (WERS) for the first time in 2004. This is becoming known as the well-being measure. It is based on the measure of anxiety developed by Warr (1990). As such it measures one dimension of well-being. Warr (2002) conceptualises job-related well-being in terms of three dimensions: an anxiety-contentment axis; a depression-enthusiasm axis; a job dissatisfaction-satisfaction axis. The first two are related to arousal but in different ways: anxiety is associated with high arousal, contentment with low arousal, while enthusiasm is related to high arousal, depression with low arousal. Job satisfaction is concerned with the extent of pleasure a person gains from their job. Measures of job satisfaction were included in WERS when the employee survey was created in 1998.

When discussing well-being in the work domain emphasis is often placed on psychological strain or stress, and job strain is often taken to be a combination of anxiety and depression. Layard (2005: 21), a pioneer of the new economics of happiness, conceived of happiness in similar terms, since he defines it as involving Warr's two main dimensions of well-being: contentment and joy (equivalent to Warr's enthusiasm). Yet happiness may also include in addition to well-being, overall mental health and feelings of self-esteem or worth.

We can distinguish between general and domain-specific well-being. Warr (1990) developed his measure of anxiety to serve as a domain-specific measure in the work context. However, there is no necessary reason why the items can not be used in other contexts or even for general well-being. Indeed Warr drew on general psychological literature on emotional mood (e.g. Watson, Clark and Tellegen, 1988) when developing his underlying constructs and he has applied them to the non-work context. But Warr's team suggest the General Health Questionnaire is probably more appropriate for general well-being (Mullarkey, 1999: 33-4, 57).

The anxiety-contentment and depression-enthusiasm axes are measured by asking respondents, "Thinking of the past few weeks, how much of the time has your job made you feel" each of twelve emotional states. Three positive states – calm, contented, relaxed – and three negative ones – tense, uneasy, and worried are used to measure the anxiety-contentment dimension. Similarly three positive items – cheerful, enthusiastic and optimistic – and three negative ones – depressed, gloomy, miserable – measure depression-enthusiasm. In its original applications, respondents were given a six-point response scale running from 'never' to 'all the time', and the negative scales were reverse coded so the higher values of the two scales represented greater contentment and greater enthusiasm, respectively.

The respondent's interpretation of the format of the items is assumed to be bipolar, so answers to the positive items are negatively but highly correlated to those for the

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negative item and the mid-point(s) on all items correspond to each other. Thus, for example if the mid-point of a five-point scale for the contentment items is some of the time, we would expect that some times on the tense item is equivalent to the similar answer on the calm item. If these items were weakly negatively correlated this would mean that the responses to the two items did not overlap so that the two closest responses are “not at all” tense and “not at all” calm. This is the contrasting unipolar format.

In the initial application of the instrument Warr (1990: 200) showed through principal component analysis that, with the negative items reverse coded, the twelve items separated into two discrete factors that corresponded to the two theoretical concepts. A two-factor solution for each of the pairs of six items (contentment and enthusiasm) revealed that the negative and positive items formed separate components. Subsequent applications have sometimes used either a reduced, five-point scale or a reduced number of items by limiting them to the negative items only.

The distinction between the two dimensions of psychological distress is important, even though they are related concepts. As they differ in their relationship to arousal - the anxious person has high levels of arousal and the depressed person low levels - they might predict and be determined by different phenomenon. For example of the potential predictors of well-being, high job demands may be more strongly related to anxiety than to depression, whereas the lack of personal control is more strongly associated with depression than with anxiety. Similarly for example of the possible consequences of well-being, absence may be associated with depression and not anxiety, as the lack of energy and arousal that characterises depression often leads to a reduction in activities, which may include work attendance. In contrast anxiety at work or ill-contentment in a job may lead people to seek alternative employment.

2. Well-being in the Workplace Employee Relations Survey of 2004

The employee survey of the Workplace Employee Relations Survey of 2004 (WERS2004) only includes the anxiety-contentment items and adopted the five-point scale, thus: “all of the time”, “most of the time” “some of the time”, “occasionally”, “never”. Eight job satisfaction facets are covered in WERS2004: the amount of influence the person has over their job, the amount of pay they received, the sense of achievement they get from their work, their involvement in decision making, the scope for using initiative, the training the person received, their job security, and the work itself. Of the two dimensions, contentment and enthusiasm, we might expect that the depression-enthusiasm one to most correlate with the job satisfaction items, and these might be treated as substitutes for it. A person who is depressed about aspects of their job is likely to be highly dissatisfied, while one who is enthusiastic is likely to be satisfied.

The employee survey within WERS 2004 produced a sample of 22,451 employees, which represented a response rate of 61 per cent. The data were collected via an eight-page, self-completion questionnaire distributed within workplaces where WERS surveyors had conducted the management interview. The aim was to get up to 25 employees in each workplace, who were selected on a random basis to complete the questionnaire. Employee questionnaires were distributed in 86 per cent of the workplaces where the WERS surveyors had conducted the management interview. A

further 12 percent of workplaces did not return any questionnaires, and in those with 10 or more employees these were treated for purposes of calculating the 61 per cent response rate as the same as those who had initially declined to distribute questionnaires. The median number of employees per workplace completing the questionnaire was 13, with the most frequent (in 100 workplaces) being 16 employees. The number of employees in no cases exceeded the 25 employees requested by the surveyors.

3. The behaviour of the contentment measure in WERS2004

A principal component analysis on the six contentment items (with the positive items recoded so that the scale would be from the negative state of anxiety to the positive one of contentment) revealed that they form two discrete factors, as the negative items load on one factor and the positive items on another. The correlations between the items ranged from 0.37 for a pair of negative and positive items, relaxed and not uneasy, to 0.79 for a pair of positive items, relaxed and calm.

Several explanations have been given for the separation of negative and positive items into two factors. For example following Bradburn (1969) one could infer that negative and positive feelings are independent of each other, and hence we ought not to expect bipolar responses to combinations of questions that are phrased in negative and positive terms. Or we might argue that the separation reflects measurement error (Green, *et al*, 1993). A more recent argument is that there may be a relationship between positive and negative items, but that it is non-linear. The respondent's response format may be ambiguous and, while the response categories for each item may overlap they may not follow the tidy bipolar format (Segura and González-Romá, 2003). Saying, for example, one is not calm does not mean that one is terribly tense. In such circumstances, a model that allows for non-linearity such as the Mokken model is appropriate, rather than the linear factor model. When conducted on the contentment items (using STATA9), the Mokken test achieved a good fit, which means they form a one-dimensional scale (Table 1). Scalability is evaluated by the Loevinger H coefficient (Loevinger, 1948). The overall coefficient in the model of contentment is 0.55, which indicates that the items are scalable on a bipolar dimension, since when it is over 0.5 the scale is deemed strong (González-Romá, *et al*., 2006: 170).

Table 1

Results of Mokken Scale test Contentment			
Item	Observations	Loevinger H coefficient	Significance Level
Uneasy	21796	0.5231	0.0020
Worried	21796	0.5243	0.0020
Tense	21796	0.5770	0.0021
Content	21796	0.4856	0.0023
Calm	21796	0.5712	0.0033
Relaxed	21796	0.5762	0.0026

The anxiety-contentment scale has a Cronbach's alpha of 0.85. This figure is consistent with those achieved in some of the earlier studies using the identical measure of well-being as reported in Mullarkey *et al*. (1999: 63), as the range across

the studies, predominantly in manufacturing companies, is 0.71 to 0.88 with a mean of 0.79.

Principal component analysis of the job satisfaction items suggested that they form one factor, with the model explaining 50% of the variance. The factor loadings ranged from .82 to .51 and the three extrinsic items – satisfaction with training (.63), pay (0.51) and security (.56) have considerably lower loadings than the other intrinsic ones. A measure based on the eight items has a reliability statistic, measured by the Cronbach's alpha, of 0.85. This figure is again consistent with those achieved in the 29 studies of job satisfaction overviewed by Mullarkey et al. (1999: 63), where the range across the studies is 0.85 to 0.93 with a mean of 0.88, although it used a different set of items to that used in WERS2004.

The correlation between the two measures, contentment and job satisfaction, in the WERS2004 sample is the moderately high, 0.47 (significantly different from zero at the 0.01 level). The correlation between the two sets of individual items making up the scales varied from 0.10 (not worried and satisfaction with initiative) to 0.51 (feeling content and satisfaction with work itself); those between the satisfaction items and the negative contentment items are consistently lower than those involving the positive ones.

4. Contentment amongst British Employees

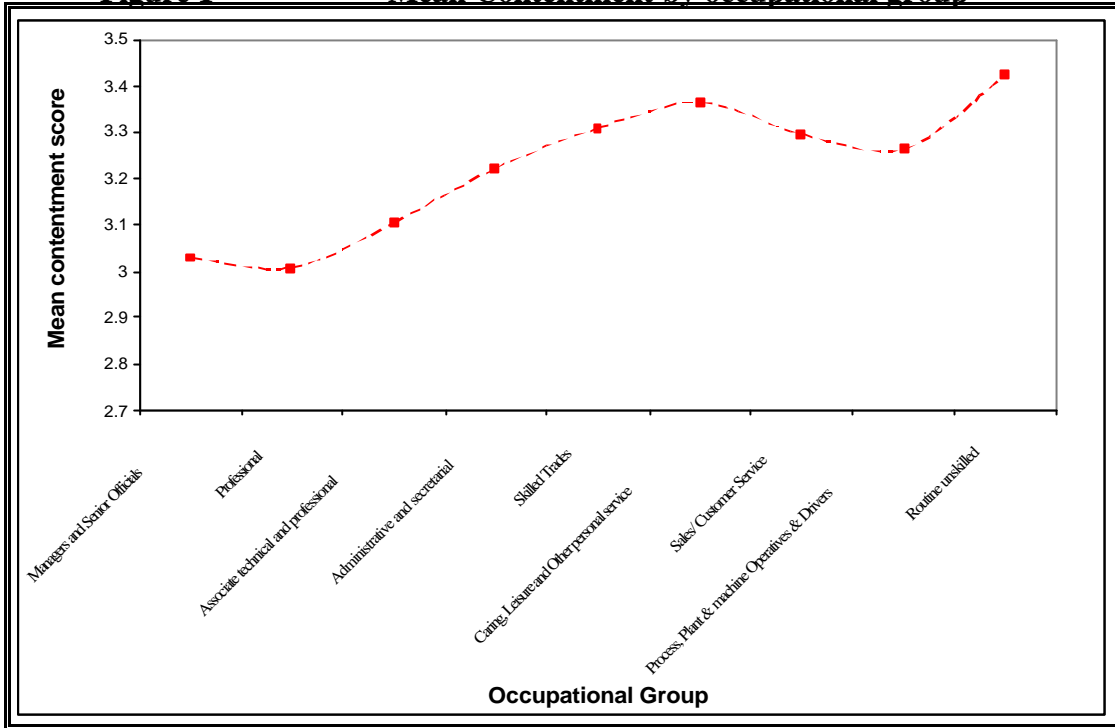
The average level on the anxiety-contentment scale in the sample is 3.2 (s.d. 0.8), and the data is distributed normally. This mean is identical to the average of the means in the studies overviewed by Mullarkey et al. (1999: 63). On the basis of the response codes for the contentment items, we would conclude that on average the British workforce is moderately content and anxious some of the time.

The mean level of contentment varies significantly between occupations ($F = 85.21$ in ANOVA tests, significant at the 1% level). Table 2 displays these and comparisons of mean scores across other groupings. Caring, Leisure and other personal services are relatively high (see Figure 1). Only skilled trades and routine unskilled workers have a level of contentment on a par with this group. Most significantly the contentment of managers is lower than all occupations with the exception of professionals. The variation is all within the range that we might classify as moderate levels of contentment, with all groups having some periods of time when they are anxious, the implication being that the amount of these is greater for managers, but not so high as to be, on average, most of the time.

Table 2

Contentment means across groupings of employees			
Well-being measure	Contentment	Well-being measure	Contentment
Grouping		Grouping	
<i>Occupation Group</i>		<i>Gender</i>	
Managers and Senior Officials	3.03	Male	3.18
Professional Associate Tech & Professional	3.01	Female	3.23
Admin and secretarial	3.10	<i>Contract</i>	
Skilled trades	3.22	Permanent	3.19
Caring, Leisure & personal services	3.31	Temporary	3.41
Sales & Customer Service	3.36	Fixed	3.28
Process, plant & machine operatives	3.29		
Routine unskilled	3.26	<i>Education</i>	
	3.42	Degree	3.04
<i>Age group</i>		No Degree	3.27
16-17 years old	3.38	<i>Tenure</i>	
18-19 years old	3.38	Less than 1 year	3.31
20-21	3.31	1-2 years	3.23
22-29	3.11	2-5 years	3.20
30-39	3.17	5-10 years	3.19
40-49	3.16	10+ years	3.14
50-59	3.24		
60-64	3.57		
65+	3.96		

Figure 1 Mean Contentment by occupational group



Most age groups are less content in their jobs than 16-17 year olds (Figure 2), but the over 60s have the highest levels of contentment. Generally, as tenure increases contentment steadily falls (Figure 3).

Figure 2 Mean Contentment by age band

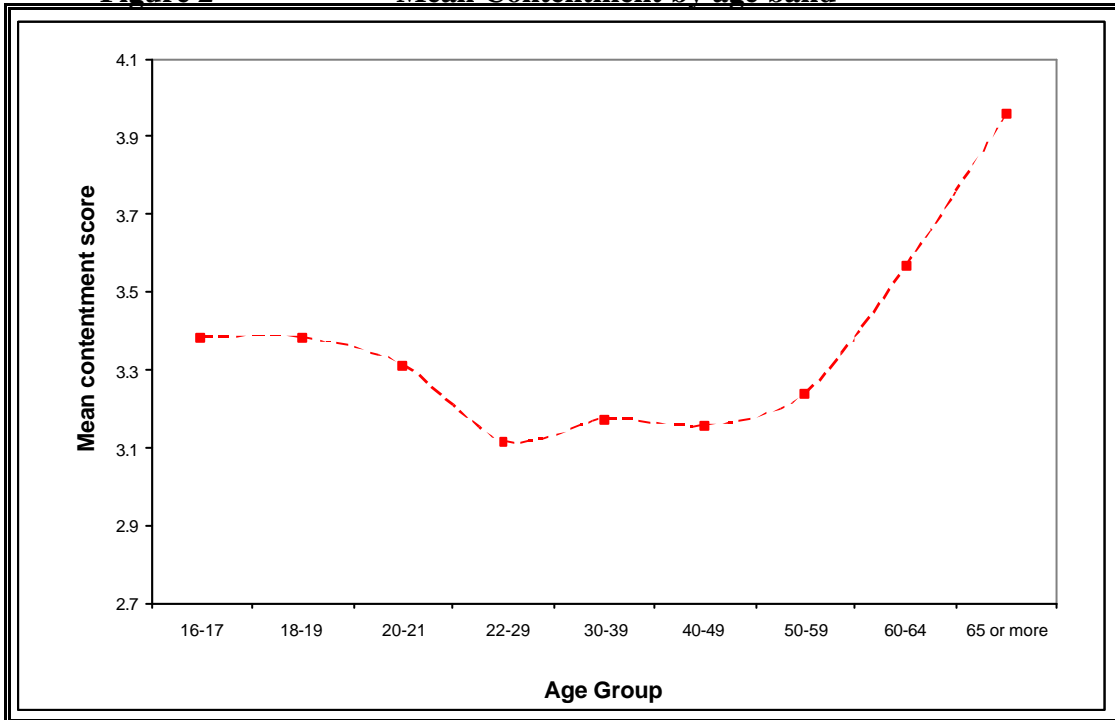
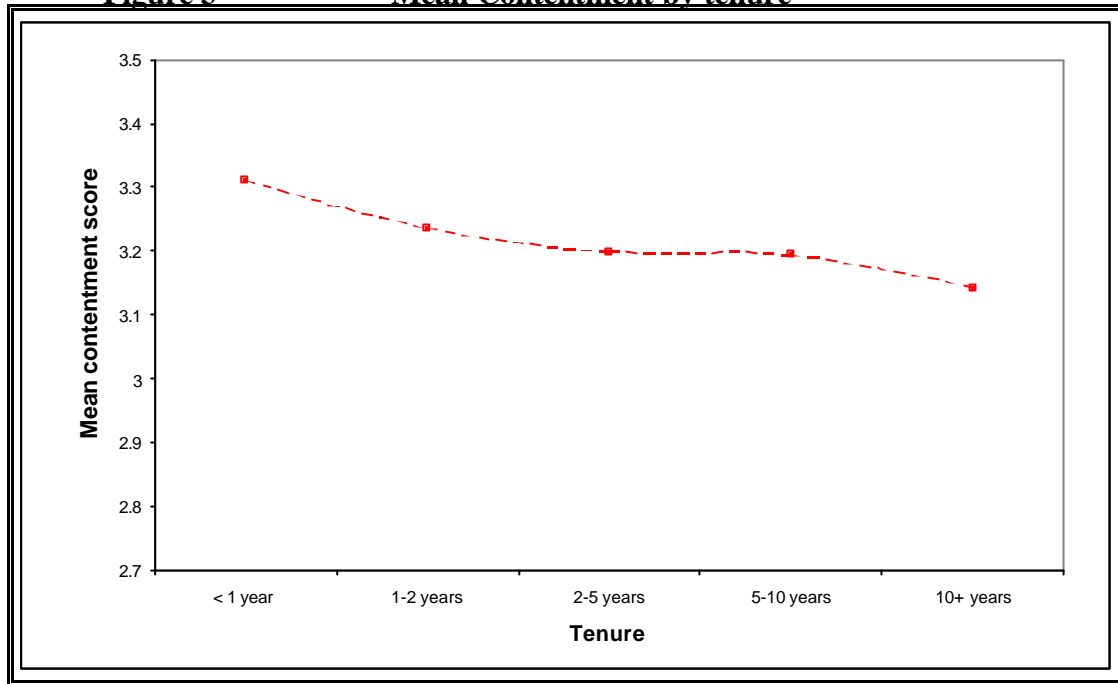


Figure 3 **Mean Contentment by tenure**



5. Predicting Contentment

Perhaps the most popular theory of well-being is Karasek's (1979) theory which is centred on the demands and discretion associated with jobs. In this, psychological strain results from the effects of the demands of a work situation and the range of decision-making freedom available to the worker facing those demands. The model thus identifies job characteristics as the principal source of distress in the workplace as it proposes that psychological strain is caused by the combination of high job demands and low job control (and for this reason it is also called the demands-control model). The underlying rationale of the model is that workers experience distress when this combination of circumstances exists because they are prevented from formulating effective responses to deal with the challenges of the job. Other researchers (Payne, 1979; Johnson & Hall, 1988) have extended the model to include a lack of social support as a third potential source of job strain; this has become known as the demand-control-support (DCS) model.

The job strain model has been formulated in two ways: an additive and an interactive form. The additive form of the DCS model predicts that high demands and low control and low social support each cause psychological strain. The interactive form of the DCS model predicts that control and social support buffer the negative impact of high demands on well-being (i.e., they interact with demands to reduce its negative impact). Both forms predict that psychological strain will be greatest given the combination of high demands with low control and low social support (in the DCS model). Karasek (1989) argued that whether one or other of the additive or multiplicative models fits reality better than the other is not the main issue as the practical implications for job design are the same. The key test of the model is then, as (de Lange *et al*, 2003: 284) interpret it, that job demands and job controls independently predict strain and/or that there is a multiplicative relationship between

them, since the theory is that employees who work in jobs with high demands and low control experience the highest level of strain.

The theory is typically tested by using measures of demands, control and supportive management based on individual's perceptions of these job and environmental characteristics. We can use WERS to test it in this way.

First, we can measure job demands by two workload measures: (a) a two-item scale based on asking respondents whether they agreed, using a five-point scale from strongly agree to strongly disagree, with three statements: "my job requires that I work very hard", "I never seem to have enough time to get my work done". Cronbach's α for the scale equals 0.60. (b) the amount of hours per week, including overtime or extra hours, that the person usually works. There is another candidate for inclusion in a measure of demands – "I worry a lot about my work outside working hours", but for the purpose of predicting well-being, its inclusion would mean that the outcome is embedded in the predictor. This item is correlated highly with the negatively worded contentment items, the highest correlation coefficient being 0.54 between it and being worried.

Second, we can measure job control by a five-item measure (Cronbach's $\alpha = 0.81$) based on asking respondents to rate on a four-point scale – "A lot", "Some", "A little" and "None" – how much influence that they have over five areas of work: "the tasks they do in their job", "the pace at which they work", "how they do their work", "the order in which they carry out their tasks", and "the time they start or finish their work".

Third, managerial support can be measured by a six-item scale (Cronbach's $\alpha = 0.93$) based on a question that asked about the extent to which the managers at the workplaces had the following characteristics: "can be relied upon to keep to their promises", "are sincere in attempting to understand employees' views", "deal with employees honestly", "understand about employees having to meet responsibilities outside work", "encourage people to develop their skills", and "treat employees fairly".

Weighted regression analysis reveals that both measures of demands and the control and support scales are significantly related to contentment. The results for a model with relevant controls and significant main effects and interactions are reported in Table 3. Job demands and hours worked are both independently negatively associated with contentment; while job control and support are positively related to it.

Analysis of the interactions between the various predictors shows that the negative association between demands and contentment weakens as job control increases. Giving employees control over their work buffers the impact of workload demands on contentment to some extent, as Karasek (1989) predicted when stressing that it is the constraints on people fulfilling their demands that is crucial. However, job control does not have similar buffering effect on the negative link between hours worked and contentment. The association between supportive management and contentment tapers off as control increases. The interaction between hours and demands is negative so the impact of longer hours intensifies as demands increase.

High hours have a greater negative impact on contentment when the wage of the employee is low, defined as not more than £220 per week. In contrast, for this group of employees the impact of supportive management on their contentment is not as strong as for those earning above this amount.

The regression analysis (Table 3) shows that contentment increases steadily with age, while only those with service of over ten years have significantly lower levels of contentment than those who have low levels of service.

There is a significant difference between men and women, as men have higher levels of contentment than women. Moreover the negative effect of long hours on contentment is stronger for women and than it is for men and the positive association between supportive management and contentment is stronger for women than for men. Finally managers and university educated personnel have significantly lower levels of contentment than others.

Further analysis including measures of employee voice revealed that where management are perceived to be consulting with the work force or their representatives contentment is higher. But employees who are members of a union do not report higher levels of contentment, suggesting that a union voice does not make any difference, at least over and beyond other consultative approaches.

Multi-level analysis that has extended the above analysis to include characteristics of the workplace has shown that these explain some of the variance in contentment but by far the greater part of this is explained by the individual-level variables associated with the Karasek model. The existence of a recognised trade union in the workplace is positively associated with contentment, but both the extent of high involvement management and family-friendly management are negatively associated with contentment (Wood, *et al*, 2006).

The pattern of relationships is similar for job satisfaction, the distribution of which is again normal with a mean of 3.48 (s.d. 0.70). Control and supportive management are significant positive predictors, and control buffers the impact of job demands so its negative impact is disproportionately concentrated in jobs with low control. The impact of supportive management weakens as control increases.

But, in contrast to contentment, the number of hours worked weekly is positively related to job satisfaction, and there is no interaction effect between hours and job demands, as there is in the case of contentment. The interaction between wages and hours is again negatively associated with job satisfaction, so the positive effect of high hours is reduced for those on a low weekly wage. There is though no relationship between low wages and job satisfaction.

Table 3

Weighted Regression analysis of anxiety-contentment			
Main Effects plus Significant interaction terms			
		Beta Coef.	T
<i>Contract</i> (Ref: Permanent)	Temporary	-0.04	-1.56
	Fixed	-0.02	-0.54
	Manager	-0.17***	-8.92
	University Educated	-0.11***	-8.60
	Male	0.05***	3.52
<i>Age group</i> (Ref: 16-17 year olds)	18-19 years old	0.09	1.48
	20-21	0.14**	2.30
	22-29	0.12**	2,24
	30-39	0.20***	4.00
	40-49	0.20***	4.03
	50-59	0.28***	5.39
	60-64	0.47***	8.06
	65+	0.58***	7.86
<i>Tenure</i> (Ref: < 1 year)	1-2 years	-0.01	-0.64
	2-5 years	-0.01.	-0.57
	5-10 years	-0.00	-0.20
	10+ years	-0.05**	-2.00
	Low wage	0.13***	6.17
<i>Main Predictors</i>	Weekly Hours	-0.00***	-2.99
	Demands	-0.28***	-41.50
	Control	0.10***	14.54
	Supportive Management	0.25***	23.23
	Demands x Control	0.02***	2.74
	Supportive Management x Control	-0.01**	-2.16
	Hours x Demands	-0.03***	-3.74
	Hours x Low wage	-0.04**	-2.09
	Supportive Management x Low Wage	0.03*	1.67
	Hours x Male	0.03**	2.30
	Supportive Management x Male	-0.05***	-3.69
	Constant	3.07	56.26
	F	(29,19674) = 242.56 ***	
	R-squared	0.33	

*** Statistically significant at p < 0.01 level, ** p < 0.05 and * p < 0.10 level. All continuous predictors were standardised.

In contrast to contentment, men are less satisfied than are women, and the interaction effects involving gender for job satisfaction differs from those found for contentment. The impact of control on job satisfaction is stronger for both men and managers and the positive association between supportive management and job satisfaction is greater for men (when it was stronger for women in the case of contentment).

The basic multiplicative Karasek model holds for both contentment and job satisfaction as job demands and control are related to them and control buffers the impact of demands on both measures. Supportive management is also important. However, hours, one measure of workload, is negatively related to contentment, as the model predicts but positively related to job satisfaction.

6. Aggregating scores to the workplace level

There are no measures of performance or withdrawal behaviours in WERS at the individual level. Analysis linking contentment to such outcomes has then to be conducted at the organizational level where such outcomes are measured. We can thus assess whether workplaces with workforces that are content have higher levels of productivity or quality and lower rates of labour turnover and absenteeism than do those where the workforce are anxious.

However, when aggregating the individual scores on a variable to the workplace level we need first to assess the level of agreement between the individuals. On a five-point scale an average score of 3 could be achieved in a number of ways, for example by all respondents scoring 3; or by a third of the respondents scoring 2, a further third, 3 and the final third 4; or by half scoring 1 and half 5. Attributing a score of three for the average score on that variable for the last of the three cases would be a highly misleading summary measure.

An index of agreement as developed for assessing inter-rater reliability can be used for assessing the representativeness of summary measures. The Index of Agreement for multi-item scales proposed by James, Demaree and Wolf, (James et al., 1984) agreement index measures inter-rater agreement for categorical variables. The index compares the observed within group variances to an expected variance from 'random responding'. For scale variables, the null distribution, used to represent 'no agreement' between respondents, is the uniform distribution where the expected proportion of cases within each of A categories is 1/A. For example on a 5-point scale, random responding would result in 20% responding to each of the 5 categories. The variance for this null uniform distribution with A categories is calculated as

$$s_{null}^2 = \frac{(A^2 - 1)}{12}$$
 . For a 5-point scale variable this null variance is always 2. The calculation of the sample variance for comparison with the null is calculated as follows:
$$s_x^2 = \frac{1}{n} \sum_{k=1}^n (X_k - \bar{X})^2$$
 , where k = number of responders and \bar{X} is the mean.

Then the index of agreement for one question is calculated using:
$$r_{WG} = 1 - \frac{s_x^2}{s_{null}}$$
 .

The index can take values between -1 and 1 with the general practice being to classify those groups with values above 0.7 as sufficiently homogenous for within group

aggregation. Negative values occur when the sample variance is larger than expected from random response and are generally replaced by 0.

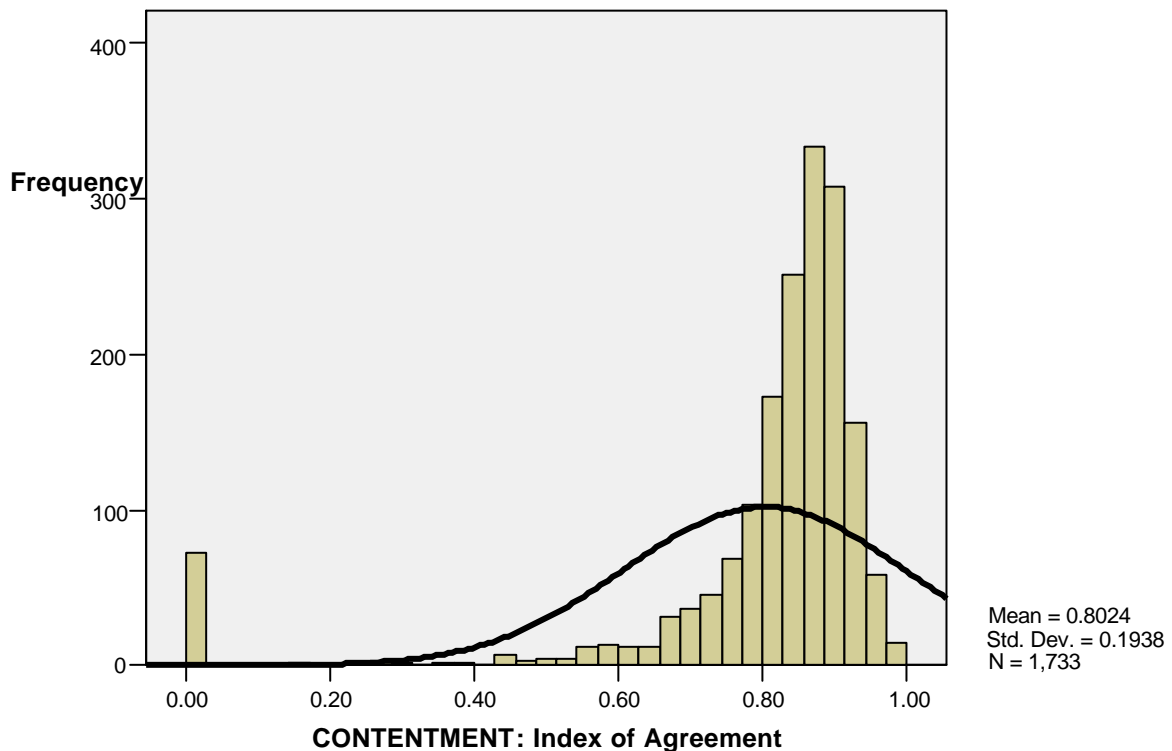
Often there are groups of questions that are related and we may wish to calculate one measure of agreement for a set of questions rather than individually. If this is the case, the following formula is applied for J related variables:

$$r_{WG(J)} = \frac{J \left[1 - \left(\frac{\bar{s}^2}{s_{null}^2} \right) \right]}{J \left[1 - \left(\frac{\bar{s}^2}{s_{null}^2} \right) \right] + \left(\frac{\bar{s}^2}{s_{null}^2} \right)}, \text{ where } \bar{s}^2 \text{ is the average variance over the } J$$

related questions.

The spread of the results for the Index of Agreement for contentment for each workplace is shown in the Figure 4. The mean index of agreement is 0.8 suggesting that for a lot of workplaces, using a summary measure would be considered a good representation of the views of individual employees. Nonetheless, 72 workplaces score 0, or less.

Figure 4 Distribution of index of agreement scores for anxiety-contentment



When a high proportion of workplaces are below the acceptable level of agreement of 0.70 we can either exclude these workplaces from analysis and limit ourselves to a considerably reduced sample or conclude that the summary statistic is too unrepresentative of workplaces to be meaningful. In the case of the measure of contentment, the proportion is 88%, and we might use the whole sample and simply

report that some workplaces have an index of agreement below 0.7 as a certain number of such workplaces below this figure is to be expected.

However, there is also an issue that there are a number of workplaces, representing 5% of those which participated in the employee survey, which have only 1 or 2 respondents and we may wish to consider excluding these from the sample, regardless of the size of the workplace, under the assumption that there is a greater chance that a summary variable for a workplace with only one or two respondents will be unrepresentative of it. When these workplaces are excluded from the sample the proportion of workplaces with an index of agreement on the contentment measure increases to 91% compared with 88% in the whole sample. Moreover the standard deviation of this index decreases by approximately 30% after the removal of these workplaces.

When doing analysis that involves several aggregate measures of workplace variables e.g. the job demands and control used in the analysis above, we might want to average the index of agreement scores for all the measures, by workplace and exclude those workplaces whose average is below the 0.7 level rather than exclude workplaces where the index of agreement scores for individual scales falls below this level. This would result in the exclusion of workplaces where there was general disagreement between views of employees rather than just disagreement on one measure. For some scales there are generally lower levels of agreement between employees. In particular, only 48% of workplaces have an index of agreement score of at least 0.7 for the control scale, suggesting that control is more related to job than workplace. In this situation it may be preferable not to use an aggregated mean score for control and exclude this score and, if possible, find a better measure of workplace control.

Analysis using the aggregate measure of contentment showed that a contented workforce is not related to any of the performance variables available in the management survey: labour productivity, financial performance, quality, absenteeism and labour turnover. Job satisfaction is however strongly positively related to labour productivity, financial performance, quality and negatively related to absenteeism and labour turnover. (Wood, *et al*, 2006).

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Coverage of Job Satisfaction

Michael Rose¹

1. Objectives in extending coverage of employee job satisfaction in WERS 5

Introduction of an employee questionnaire was the major innovation in the WERS 4 of 1998 (Cully & Woodland 1998). One strong motivation for this innovation was the overreliance in the precursor WIRS (Workplace Industrial Relations Survey) series upon management or worker representative reports of employee response to control structures and regimes. Now there was employee material directly corresponding to the workplace data gained from these other organisational participants. But as far as job satisfaction went, the new opportunities to explore the effect of workplace regime on worker attitudes was somewhat limited in WERS 4. Just four questions on aspects of job satisfaction were asked in 1998. They were judged to have broadly succeeded in showing a number of key features of workplace attitudes by the 1998 Survey's designers (Cully *et al.* 1999:18-2), and this conclusion was to be echoed in other studies. Reviewing the employee attitudes methodology of the 1998 survey, the present writer (Rose 2000) argued that four job facet questions might be a rather too narrow selection on which to make well grounded judgments about levels of overall job satisfaction, especially as the questions actually fielded represented *intrinsic* (quality of work life) aspects of jobs (*job facets*) better than the *extrinsic* (contractual and material) aspects. None the less, comparative analysis in this writer's study showed that the response distribution for satisfaction with the crucial *pay* facet seemed reasonably close to that in other large surveys of British employees. It was not possible even to offer an opinion, let alone reach a clear verdict, about the success of other facet questions in the absence of directly comparable questions in other surveys.

There were other grounds internal to the data set (such as details of workplace context) for believing the four 1998 questions had in fact worked quite well. Most tellingly in terms of technical quality, given their estimated internal consistency reliability², the questions could be considered to form a single scale. Comparison of the performance of such a WERS 4 summary measure with those produced by far better calibrated overall job satisfaction measures in other employee surveys³ were reassuring. To the crucial question about the WERS 4 job satisfaction material – how far can you trust it? – it was possible to answer: A lot further than might have been expected.

The revision of the employee questionnaire for WERS 5 built upon such evaluations of the WERS 4 experience and resulted in some changes. These changes are summarised in Table 1. Four main objectives were pursued: a) some continuity with WERS 4; b) an increase in the number of job facets covered; and c) a selection better grounded in theory of a representative set of job aspects; d) production of an adequate

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² As measured by Cronbach Alpha (0.74) it rose safely above the normally accepted threshold of 0.74, especially if allowance is made for some 'normal' attenuation (see Section 4).

³ The Work Histories and Attitudes questionnaire of the ESRC's Social Change and Economic Life (SCELI) Initiative; The Employment in Britain (EiB) survey; and the Employment Module of the British Household Panel Survey (BHPS).

summary measure for overall job satisfaction (Mullarky *et al.* 1999). These aims are considered in turn below, after noting some general measurement problems. First, job satisfaction as a concept and construct has given rise to considerable debate over meaning and measurement; but it is agreed that it makes sense to talk about such a construct, and to see it as having a unitary domain of application, albeit a somewhat complex one. In this sense it is comparable to such constructs as social mobility, human intelligence, or utility. To measure job satisfaction presents similar problems to those arising in selecting 'items' (appropriate problems, or relevant questions) to include in any 'test' (measurement operation). To survey job satisfaction successfully requires adequate *domain sampling* of the items (questions about job facets). In theory such sampling should take the form of random selection from a very large universe of items. In practice, items have at some point first been *composed*, while it would be impossible to create a list of all items ever composed and used. (Job satisfaction is possibly the most frequently studied topic in the social sciences of work and employment.) However, Nunnally & Bernstein (1994: 217) note that simply pursuing variety, though imperfect, has a broadly similar effect in practice. Moreover, variety can be improved by applying knowledge about the internal structure of job satisfaction. Just as human intelligence comprises dimensions (or factors) such as mathematical ability, verbal ability, and spatial judgment, job satisfaction has several distinct though interdependent dimensions. It is desirable to represent each one as fully as possible.

Achieving the foregoing might be done simply by increasing the number of items in the test, at least if the aim is to produce a good measure of *overall* job satisfaction. Answers to enquiries about satisfaction level with any two job-facets will correlate to some extent with each other in any fair sized sample of employees, though some facets will correlate more closely – or much more closely – than others. For example, people having higher satisfaction with their pay will tend to have higher satisfaction with their sense of achievement. (For many individuals, of course, there may be sharp divergence.)

Adding four further facet questions to a set of four will always produce a more accurate profile, whether of individuals or for large occupations, *irrespective* of exactly which job facets have been covered already in the initial four, and *irrespective* of exactly which additional four job-facets are covered. In a word, more nearly always means better in the sense of a gain in understanding. However, and rather obviously, some samples of facets will produce more additional understanding than others. Ideally, observers should sample aspects of a domain in a fully representative way; but there are always practical limits on how many separate questions, however relevant and otherwise productive, can be asked in a given survey. Such limits result from competition for space on a questionnaire, or limits to the patience of people responding to the questionnaire. In the WERS selfcomplete questionnaire, these limits are necessarily tight.

Table 1

Continuity and Change in WERS Job Satisfaction Questions			
Question wording	WERS 4	WERS 5	Why included in/excluded from WERS 5
<i>The amount of respect you are shown</i>	V	X	· Dropped because purpose unclear and possibly unreliable
<i>The amount of PAY you receive</i>	V	V	· Continuity with WERS 4. · Most frequently examined job-facet in job satisfaction surveys. Clear relevance to assessing <i>extrinsic</i> ('material' or 'economistic') job satisfaction
<i>The sense of ACHIEVEMENT you get from your work</i>	V	V	· Continuity with WERS 4. · Clear relevance to assessing <i>intrinsic</i> job satisfaction
<i>The amount of INFLUENCE you have over your job</i>	V	V	· Continuity with WERS 4
<i>The scope for using your own INITIATIVE</i>	X	V	· Standard question in one-off large employee surveys, and in BHPS [WAVES 1-6 ONLY]
<i>Your JOB SECURITY</i>	X	V	· Rated among the three most desirable job facets by BHPS employees. · Standard question in one-off large surveys. · Salience of debate on 'flexicurity' in UK.
<i>The TRAINING you receive</i>	X	V	· Standard question in one-off large employee surveys · High relevance to HRM and flexicurity debates and policy
<i>The WORK ITSELF</i>	X	V	· Standard question in one-off large employee surveys, and in BHPS · Known to correlate highly with single-item questions for overall job satisfaction
<i>Amount of INVOLVEMENT in decision-making</i>	X	V	· Relevance to issues of employee representation and HRM strategy/design

Fortunately, a theoretical guide of how to ensure representative coverage is available. The Maslovian tradition in psychology, and a lesser known sociological approach originating with Kalleberg (1974, 1977), emphasises an essential division between extrinsic and intrinsic job rewards. Further subdivision is justified by factor analysis of actor preferences, with up to six types of reward recognised. Most employees seek

rewards of all types, and evaluate them but factor analysis shows that some are of greater importance (*saliency*) than others to most workers; studies of job-facet preference rankings confirm this. The extrinsic (contractual and material) and intrinsic (quality of work life) dimensions are the most important. Coverage can be improved simply by ensuring that more questions be asked about them, and that there is a more or less equal number of questions in each case. A very crude analogy with the process of measuring intelligence can be made. A longer test is almost always better than a very short test, whatever the questions asked. Yet there is a risk of selecting questions which mostly test verbal (or mathematical, or spatial) ability. Results of a longer test will be still better if the additional questions also tap mathematical ability and spatial ability.

Continuity

Two of the four job-facets covered in WERS 4 (the *influence* you have over your job, the *respect* you receive) are essentially social and relational in nature. It seems essential for a survey of WERS' type, concerned closely with internal workplace life as it is, to deal adequately with the relational aspects of job satisfaction. However, it was argued that the question referring to 'respect' might be interpreted in more than one way and that it was hardest of all four to relate to other employee relations research. (Question forms referring to relations with an immediate supervisor or boss are closest.⁴)

It was therefore eventually replaced by a question on satisfaction with involvement in decisions. Besides being clear in meaning this new enquiry relates immediately to a huge amount of other research on employees and central debates in policy and academic circles. The two other job facet questions from WERS 4 were retained: pay is such a central job-facet for all employees, and so central to evaluation of satisfaction with the extrinsic rewards of employment as a whole, that it would be almost unthinkable not to include an appropriate enquiry. Degree of satisfaction with a sense of achievement is not often covered in large employee surveys, despite its manifest relevance for accurate assessment of the intrinsic reward of jobs, while being likely to correlate highly with data from other questions concerned with tapping the intrinsic dimension. Retaining it provided direct continuity with WERS 4.

Increased spread of job facets covered

Space on the self-administered employee questionnaire in WERS is very scarce, but it was agreed that a limited number of additional questions could be added to the main job satisfaction question battery. (The enquiry about satisfaction with involvement in decisions was to be asked later, alone and free-standing, immediately after questions about what kind and level of involvement took place in the workplace.) A large number of possible questions could be listed, but it seemed best to select job facet questions with known properties regularly featuring in other employee surveys. This drive for comparability reduced the list considerably. A further aim was to balance the new questions between extrinsic and intrinsic job facets. This meant that questions about satisfaction with hours worked, for example, which relates to a convenience dimension (Kalleberg 1977), had to be excluded. BHPS continues to include such a

⁴ Such questions were asked in SCEL1 and EiB.

question, but it produces somewhat enigmatic results: for example, it is known that many women working part-time wish to work full-time and complain that their hours are shorter than they wish, while many men, and an increasing number of those women who work full-time, are dissatisfied with their hours because they want to work fewer hours. Obviously, too, some employees may misinterpret a question about satisfaction with hours worked as an enquiry about satisfaction with their daily or weekly working time schedules.

Factor analysis of data for a large set (above 10) of job facet items shows that an extrinsic factor and an intrinsic factor have the two clearest patterns of item loading; these two 'strong' factors are by far the easiest to interpret on immediate inspection. Data on the job facets that would be preferred or prioritised in job switches or in job search also show that these are indeed, for practical purposes, what most concern most employees (Rose 2005a). Two additional intrinsic reward items were agreed without much difficulty, to go with *sense of achievement*: satisfaction with *opportunities to use initiative* and satisfaction with *the work itself*. Both enquiries figure in other important surveys (see next section). Some question may arise over how *the work itself* may be interpreted. It is intended to apply strictly to the work that is done in the current job. In many occupations very similar work would be done in other jobs bearing the same job title.

Does this affect how respondents answer the question? In particular, do many people answer, at least in important part, in terms of the generic work of their occupations? Will they be more inclined to do this if they are dissatisfied with the pattern of specific tasks and responsibilities that the current job requires? This is part of a wider problem of the field of reference for most intrinsic reward job-facets which urgently requires research.

Choice of two extrinsic reward job-facets required lengthier consideration. Apart from *pay*, the contending job-facets were: *promotion opportunities*, *training received*, *job security*, and *fringe benefits*. Of these, promotion was the easiest to eliminate, on the grounds that such opportunities are excluded or somewhat conjectural, thanks to the job held, for about one in every twelve employees. This complicates the creation of composite measures of overall job satisfaction (see below) where data on satisfaction with promotion opportunities are available. Other recent data from the Working in Britain survey (White *et al.* 2003) showed that 83% of employees considered job security 'important' or 'essential' when appraising a job opportunity; training provision was given such importance by 73%; and promotion opportunities by only 52%. No data were available about the prioritisation of fringe benefits⁵.

A key element in the debate about flexibility is the HRM claim that while job security can no longer be guaranteed nor promised with sincerity, employers can provide workers with training to enable them to find other work more readily if severance becomes inevitable, as well as improving their performance in the current post. A question about satisfaction with training received in the current post rarely figured in employee surveys until the 1990s, but Gallie and White (1998) included one in their *Employment in Britain* (EiB) survey of 1992. (However, this data set has only recently been released into the public domain.) Irrespective of the risk of severance, training

⁵ Working in Britain (WiB) data: see White *et al.* 2003.

may increase chances of promotion. Thus a case for including it in WERS, with its focus on the interaction of workplace structures and employee attitudes, was a strong one and finally agreed.

It might seem that the claim for *job security* is equally strong, especially at a time of widely perceived insecurity in the labour market. (That such insecurity may sometimes be overstated is beside the point.) However, the case for including *fringe benefits* instead was also quite strong, given the topicality of the crisis of employer funded pension schemes and the wider set of issues regarding pension provision. Finally, however, *job security* was chosen on the grounds of wider comparability.

2. Comparability with other survey data on job satisfaction.

Two difficulties in the comparability in job satisfaction data between surveys must be distinguished. The first relates to facet coverage; that is, the extent of overlap in those aspects of a job actually covered in two or more surveys. The second, comparability of measurement, creates more troublesome problems. First, scales of satisfaction/dissatisfaction offered to the respondent vary greatly: see below. Many British dedicated employee surveys are undertaken using a personal interview; some such as the Chartered Institute of Personnel and Development (CIPD) annual survey, use phone interviews; but WERS uses a self-complete schedule. (BHPS offers an overall job satisfaction question in both an interviewer administered and a self-complete form.) Lack of similar scales, differing methods of administering the questions, and slight variations in question form make it very difficult to compare results from one survey to another in any but a very indirect way. However, as will be shown, *some* comparison can usually be made for a given job facet appearing in two or more surveys, provided there are no major changes of wording in the question phrasing or the response anchors: apparently trivial changes can wreak havoc (Rose 2005b). Comparisons of *overall* job satisfaction based on composite measures (see below) are perhaps less exposed to such risks.

Table 2 summarises the coverage of job satisfaction in eight well-known employee data sets. With 8 facets covered, WERS 5 has an intermediate position between WERS 4, and BHPS Wave 7 onwards, with only four facets covered in each case on the one hand; and, on the other hand, EiB and WiB with 15 in each case. Two of the extrinsic reward facets (*pay, job security*), and two of the intrinsic reward facets (*work itself, opportunities to show initiative*), have in each case been the best covered facets of their type in other surveys. It has been less common to ask about training provision (3 out of 7 other surveys), and much less common to ask about sense of achievement (only in WERS 4). WERS 5's relational dimension questions about influence on decisions, and sense of involvement, have also been asked in each case only in one previous survey, one of these being WERS 4, the other EiB – where the specific wording in fact referred to 'communications', though the facet denoted seems to be very similar.

Table 2

Coverage of Job Satisfaction Facets in Large Employee Surveys									
Dimension of job Specific job facet	WIB	EIB	SCELL	WERS 5	AWIRS Wave 1-6	employment module	BHPS Wave 7	WERS 4	Times facet examined
<i>Extrinsic</i>									
Pay	x	x	x	x		x		x	7
Security	x	x	x	x		x		x	6
Promotion	x	x	x		x	x			5
Training provision	x	x		x	x				4
Fringe Benefits	x	x							2
Work Effort	x	x							2
<i>Intrinsic</i>									
Work performed	x	x	x	x		x		x	6
Initiative required	x	x	x	x		x			5
Variety of tasks	x	x							2
Acheivement				x				x	2
Abilities used	x	x							2
<i>Rational</i>									
Supervisor/ manager	x	x	x		x	x		x	6
Management quality	x	x	x						3
Influence				x				x	2
Coworkers	x	x							2
Involvement or Communications		x		x					2
<i>Convenience</i>									
Hours of work	x	x	x			x		x	5
Journey to work	x								1
<i>Other</i>									
Various					x				1
Number of job related facets	15	15	8	8	7	7	4	4	
Correlation Alpha value	0.87	0.8	0.77	0.85	0.70	0.77	0.68	0.74	

Comparability on any shared job-facet is sharply reduced by variation in the number of points on the scales used to gauge satisfaction. SCEL I used an 11-point (0-10) agree/unsure/disagree scale; EiB, WiB, and both modes of BHPS, used a seven-point scale; both WERS have five points; AWIRS – already idiosyncratic in the selection of job facets it offered to employees – took a resolutely minimalist approach, simply offering the 3 options ‘agree’, ‘unsure’, ‘disagree’. Creation of standardised scores is only a very incomplete fix for the problem. This makes it impossible to compare directly the proportion of positive response (percent of sample expressing some degree of satisfaction) or the mean scores obtained – quite apart from the more delicate question of whether how far it is justifiable to compute mean scores from ordinal level data in any case.⁶ An additional complication is that the WERS and AWIRS data were collected by means of a self-complete schedule, while all the other data were collected by an interviewer.

3. Measuring Overall Job Satisfaction.

During the course of revising the draft questionnaire for WERS 5, the question arose of whether to include a further question about *overall* job satisfaction, e.g. ‘All in all, how satisfied or dissatisfied are you with your job?’. Most surveys that ask about satisfaction with job-facets conclude with such a summary question. It is always asked only after all facet questions have been asked.⁷ In theory, the list of job-facet queries acts as a focusing *aide-mémoire* and results in a relatively reliable summary judgement. It was agreed not to include such a question, partly on the grounds of space and partly because of methodological worries about single-item measures of complex attitudes. The omission of such a question may seem inconvenient to some users of the data set; thus the methodological grounds for excluding such a measure will be spelled out.

There are increasing grounds for suspecting that a single-item measure (SIM) of job satisfaction provides data that is insufficiently reliable for many sorts of analysis. Two of these grounds will be discussed here. The first is job facet bias. Response to job satisfaction SIMs appear to be more closely related to ratings of intrinsic sources of job satisfaction (variety, opportunities for initiative, the task performed, etc.) than to extrinsic sources (pay, job security, opportunities for promotion, fringe benefits). This link did not become apparent until, relatively recently, when large data sets for national random samples of employees with appropriate variables began to appear. (Applied psychologists have usually drawn samples within organisations, or at most from several related organisations.) Examination of three of these data sets for the UK clearly establishes the closer association between ratings for a job satisfaction SIM and those for intrinsic job satisfaction; in terms of joint variance explained (r^2), the average is around 30% for intrinsic facet data and around 20% for extrinsic facet ratings. One association in particular stands out, that between scores for a SIM and

⁶ It should be noted, however, that psychological measurement experts are more supportive of this practice than others: see Nunnally & Bernstein chapter 1 (page 16 esp.).

⁷ Where there is a lengthy list of job facets to be covered in an interview, it is usual to rotate them, typically by moving down the list; the first respondent starts at the first on the list as printed on a hard-copy questionnaire and ends with the last; the next respondent starts on question two, completes the list, then returns to question 1. With *CAPI* (computer assisted interviewing) the rotation is achieved automatically, or can even be fully randomised. Such rotation is *not* possible in self-administered questionnaires, thus increasing the risk that a respondent will end by simply repeating a given category (response-bias).

scores for *the work itself*, where joint variance explained rises to at least 40%. Researchers who choose to use, or are obliged to use, a SIM should attempt to correct for this inbuilt bias. How this might be done is at present not clear.

The most troubling evidence against SIMs concerns *internal consistency reliability*. A rubber tape measure is useless as the units registered are likely to vary from the ‘real’ units which it purports to measure on each occasion it is used. It will not just be inaccurate but unpredictably so. Measures in the social sciences can never measure whatever they set out to measure so accurately and so predictably as a steel tape measure can register millimetres or inches. However, it is possible to make relatively good estimates of how well the inevitably imperfect measures used by social scientists should operate from one ‘trial’ to another. The internal consistency of overall measures created from several facet variables can be measured by the Cronbach’s Alpha (α) statistic. Alpha measures the degree of correlation between, on the one hand, an additive score of facet ratings for each case and, on the other, the theoretical *true score* which would be created with a perfect measuring instrument. An Alpha value of 0.70, signalling that around 50% of joint variance between it and the notional perfect measure is explained, is considered the threshold necessary for building a minimally trustworthy composite score (COM) variable (for overall job satisfaction in this case). More rigorous researchers look to achieve an Alpha value of at least 0.80, or desirably 0.90. (A low Alpha value may often be increased simply by adding extra items to the test or enquiries to the question battery, since a minimum of five or six facet questions are normally required to reach 0.70, however good the data.)

There is no direct way of providing an Alpha value for a SIM. However, an indirect method was suggested some years ago by Wanous *et al.* (DATE). In a meta analysis, the Wanous team showed that, whenever a viable COM can be computed from the data set concerned, and the data set also supplies a SIM, the degree of correlation between them provides a route towards an estimate for an Alpha equivalent value for the SIM.⁸ The Wanous meta analysis of over 30 US data sets produced a mean estimate value for Alpha Equivalent of 0.64. Research by the present author on 3 large British data sets, following the Wanous procedure, yields a value slightly higher, 0.66.⁹ These results are disheartening for anyone who must rely on SIMs. However, Wanous suggest that, because all survey data is subject to other kinds of unreliability it is unreasonable ever to expect a maximum value for Alpha much over 0.90, and never a value of 1.00. Thus, might it not be acceptable to increase an Alpha value of 0.64 by 11%, bringing it above 0.70? The present writer feels somewhat uneasy about such an adjustment, and cannot see how the value of the suggested correction has been estimated; but its logic seems impeccable. However, that still leaves such questions with far too feeble an Alpha value for comfort. In any case, the latter value is much less than those of genuine Alpha estimates for COMs when several appropriate job facet measures are available – as they are in the WERS 5 employee data.

⁸ See Wanous *et al.* 1997. The route towards a grounded minimum estimate for an Alpha equivalent value lies through the correlation value for a SIM and a COM in the same data set. If each alternate was a perfect measure of the construct, they would correlated perfectly with a value of +1.00. In practice they rarely correlate better than around 0.70. This failure must reflect unreliability in each of them. As an exact estimate for the reliability of the COM can be made, the proportion of total error in the correlation attributable to the SIM can easily be computed.

⁹ The data sets are SCEL, EiB, and WiB.

For the eight job satisfaction variables in WERS 5, internal consistency reliability is high ($\alpha = 0.84$), with joint variance explained of around 70%. A job satisfaction score can easily be computed either by simply summing the eight scores, by Factor analysis, or by Optimal Scaling. Correlation between these measures is extremely high (well over 0.90), and for many purposes they are virtually interchangeable. For some kinds of description and exposition, the simple sum of scores version is preferable, as (e.g.) mean scores are easier to relate to a meaningful scale in terms of simple units. Factor scores are perhaps preferable for statistically more intricate analysis.

4. Performance of WERS 5 job satisfaction questions

Two types of test of the quality of the job satisfaction data in WERS 5 can be applied. The first is purely internal. Table 3 shows percentages satisfied or very satisfied with the job-facet concerned. The proportion varies enormously; there was a high degree of satisfaction with all three intrinsic facets; job security, influence, and training all show a lesser degree of approval, though one with substantial majorities of satisfied employees; while involvement in decision-making and pay both show broad disapproval; *pay* was especially so with 40.8% registering that they were either dissatisfied or very dissatisfied. This pattern is one that the present writer would judge entirely typical in a British employee sample. For whatever reason, intrinsic job-facets *always* receive a relatively high rating. An optimistic, but almost certainly incorrect, view would be that this shows the high level of skill of British managers in delivering job quality. An alternative view is that, with regard to these job-facets, expectations are set lower, and that less rigorous or less exigent tests of acceptability are then applied to them. Some evidence supports the latter view, though less clearly than might be wished. Research into the reasons for the pattern, which recurs in survey after survey, would be useful.

Table 3

<i>Job-facet</i>	Performance of WERS 5 job satisfaction questions	
	'Satisfied' / 'very satisfied' *	Nonresponse**
	<i>Percentages</i>	
The scope for using your own initiative	71.9	1.4
The work itself	72.0	1.3
The sense of achievement you get from your work	70.5	1.0
Your job security	63.0	2.9
The amount of influence you have over your job	57.6	1.9
The training you receive	50.6	2.0
Amount of involvement you have in decision-making at this workplace?	38.4	0.8
The amount of pay you receive	35.6	1.35
Mean	57.45	1.6

Notes: Unweighted data, *Not answered or 'Don't know', **Percent base=valid response.

A second internal test relates to inability to decide one's level of satisfaction¹⁰ ("Don't know" selected as response) or avoidance of any response at all; this may be viewed as analogous to a refusal to provide an answer in a face-to-face interview. Given the extensive pre-testing and piloting of the WERS surveys, poorly understood questions are quickly removed or improved before the survey goes into the field 'for real'. The proportion of non-response, averaging just 1.6%, shows that no general problem arose. The actual differences in non-response to questions is none the less worth noting. The highest level of non-response was for job-security, just under 3%. Most of this is accounted for by "Don't know" responses. It seems reasonable to suppose that information on which to reach a definite verdict was indeed lacking in many of these cases. In view of the cultivation by some employers of uncertainty about job security, the figure might even seem on the low side, with many having to make a guess about their degree of job security. Whatever the truth of the matter, there is no sign here of any failure of communication on the part of the survey instrument. Finally, the very low (0.8%) non-response for involvement might well suggest that there was exceptionally high interest in the question in this sample.

The second type of quality control test is comparison with results from other surveys. As noted earlier, undertaking such tests is not straightforward, owing to the varied length of scales offered for level of agreement or disagreement, changes of question wording, and contrasting methods of data collection (interviews versus self-complete questionnaire schedules). When results from questions with manifestly comparable intent produce similar patterns of response, confidence in reliability increases. It is always possible to examine how specific groups of people answered any question covering the same job-facet (such as pay) in each of two very different surveys by reference to demographic details such as age and sex, which are invariably recorded in any employee survey. But such demographics are relatively clumsy for this purpose. A better test is, however, available in the present case. The officially recognised occupational groups in the UK Standard Occupational Classification (SOC 2000) are known to vary greatly in their modal levels of job satisfaction (Banovcova & Rose 2006; Rose, 2003). After taking mean scores (or percentages of satisfied response) for occupations *within* one data set, each occupation can be assigned a rank in a job satisfaction 'league table'. The same operation is performed on the second data set. The rankings are then compared statistically. Table 4 shows the results of doing this, using as the comparator the sample of currently employed people in the British Household Panel Survey Wave 14, which was fielded in the autumn of 2004.

Table 4 shows Spearman correlations for the rankings, in WERS 5 and BHPS respectively, for satisfaction with pay, the work itself, and for overall job satisfaction, of the eighty-one SOC 2000 Minor Occupational Groups. Mean values were used to create the rankings. It should be noted that the BHPS sample includes people working in establishments of all sizes, while the WERS 5 sample has a 5-person cut-off point; as job satisfaction is known to be boosted by working in very small workplaces, this may affect the results, hopefully in only a marginal way. Rather more important, the BHPS sample is smaller (7,340 unweighted cases), less than one-third that of the WERS 5 sample.

¹⁰ This kind of response is qualitatively different from a 'neither satisfied nor dissatisfied' reply, which indicates ambivalence, neutrality, or indifference.

Table 4

Performance of WERS 5 job satisfaction questions			
Rank Order	Correlation of Minor Occupation Groups in WERS 5 & BHPS		
	Wave 14		
	n=81	n=47 (cases>=50)	n=29 (cases>=100)
Satisfaction with pay	0.47	0.56	0.69
Satisfaction with work itself	0.59	0.71	0.76
Overall job satisfaction*	0.81	0.87	0.88

Notes: Unweighted data, *Single-item measure in BHPS, composite measure for WERS 5

Between one-quarter and one-third of the occupations small sub-sample size produces mean values subject to very large standard errors; this problem that affects only a handful of occupations in the WERS 5 sample.

As the minimum number of cases required is increased (in order to reduce confidence intervals around the occupational means) first to 50 or more persons and then to at 100 or more, the rank order correlations improve. The degree of agreement is somewhat better for the work itself than for pay, and best of all for overall job satisfaction. The WERS 5 measure of overall job satisfaction, as noted earlier, is a composite score created from scores for facet variables, and known to be better calibrated than the BHPS measure by virtue of its high Cronbach Alpha value. Use of interviewers on the one hand, and a self-complete questionnaire on the other, may be of some importance to the comparisons made here; just how much remains to be established by appropriate research. None the less, the rank correlation of 0.88 for the overall satisfaction rankings for the 29 largest occupations seems rather encouraging.

(However, values for Kendall's *tau* are slightly lower.) It may be data collection method, or establishment size, accounts for some of the remaining difference in rankings. However, in so far the difference results from less success of a measurement instrument to operate predictably, in all probability the WERS 5 ranking is the more dependable.

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