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WHICH BRITISH EMPLOYERS HAVE FAMILY-FRIENDLY POLICIES? ANALYSIS OF THE 1998 WORKPLACE EMPLOYEE RELATIONS SURVEY

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Which British employers have family-friendly policies?
An analysis of the 1998 Workplace Employee Relations Survey

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ABSTRACT

Which British Employers have family-friendly policies?

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This paper uses the new questions in the manager's questionnaire of the 1998 Workplace Employee Relations Survey (WERS) to examine the employer-related characteristics associated with establishments giving their employees an entitlement to any one of 10 family-friendly or flexible working arrangements in 1998. The paper uses logistic regression to examine which establishments did offer these arrangements and ordered probit estimations to examine the determinants of the number of arrangements that were offered. The WERS data offered a rich set of covariates that covered the main theoretical elements of the organisational theory literature under the headings of institutional factors, resource constraints, agency theory and transaction cost economics. Variables representing each of these approaches were found to be significant determinants of having family-friendly policies, although varying in extent and size by the particular policy in question.

1. Introduction

There has been growing interest in family-friendly working arrangements, often referred to as work-life balance policies. There is interest in which employers offer such arrangements to their employees, but also in which employees are entitled to access these provisions. In this paper we are interested in examining, using a newly available data set, which British employers have family-friendly working arrangements and whether there are systematic reasons associated with offering employees certain types of working arrangements.

The original motivation for this largely corporate-led initiative to create more flexible working arrangements and offer various kinds of leave came from employers' desires to recruit and retain women employees. While this first motivation was linked to women, there has been recognition that men as fathers and other workers have interests in, and can benefit from, flexible working arrangements, for a variety of personal and caring reasons. In Britain, legislation has also supported women's rights through statutory maternity leave and now statutory parental leave has extended the rights to both parents. Surveys have been documenting the extent of such arrangements in Britain, as well as in other countries. Until recently there were no multivariate analyses of British employers' data to examine which employer characteristics were primary in determining employers' adoption of such arrangements. There have been a series of US studies since data were available earlier there. In this paper, we set out to examine a newly available British data source providing information about employers' provisions of a range of family-friendly working arrangements. We were able to construct multivariate models of the determinants of employers' adoption of these flexible working arrangements using the British Workplace Employee Relations Survey (WERS) data from 1997/98.

In the rest of this paper we first (Section 2) review the earlier, largely US econometric studies. In Section 3 we assemble some frequencies on the extent of the various employer policies in Britain from recent sources. Section 4 considers the modeling approach we adopt and our general hypotheses. Section 5 described the WERS survey data. Our results are presented in Sections 6 and 7 followed by our conclusions in Section 8.

2. Earlier studies

Until the availability of the WERS data there were no British multivariate studies to explain which employers had flexible working arrangements because of the lack of suitable data. Since this research was started, a multivariate analysis of employers' uses of homeworking has been carried out using the WERS data by Felstead et al (2001a; 2001b). The results are discussed along side our own. There have been a greater number of US econometric studies and US authors have developed the theory about the availability of flexible employment in organisations. Recently Evans (2001) reported on a study from Australia in addition to employee evidence from the EU, UK and the USA.

Goodstein (1994), Ingram and Simons (1995) and Barringer and Milkovich (1997) are examples of US empirical studies on large-scale data aimed at testing hypotheses about whether organisations have provisions that address family-work challenges. A list of potential explanations was drawn up by these researchers. They are based on theories from economics and management studies about motivations and behaviour of employers and managers in the face of what are called institutional pressures, resource pressures, individuals' incentives and cost or technical constraints. Institutional pressures are those that come from governments,

interest groups or collective organisations. Resource pressures are constraints faced within organisations. Individual incentives to work hard (or not) pose employers with decisions about the best way to structure rewards, payments systems and flexible provisions. As well as the usual costs of labour, capital and other factors of production, theories have considered costs of information, monitoring workers' productivity, turnover and efficiency. This mixture of elements, some internal and some external to an organisation, have been summarised as coming under two headings; institutional pressures and expected efficiency gains (Barringer and Milkovich, 1997). The empirical work of Osterman (1995) also linked the adoption of family-work programmes to pre-existing workforce problems, and to an organisation's use of high commitment work systems although Wood (1999) disputed this using the same data.

The specific correlates found to influence US organisations' adoption of work-family provisions were:
- being large measured by employee size with associated features of large size eg. administrative capabilities, human resource specialists etc.;
- having a higher proportion of female employees;
- having women in management;
- facing demands from important exchange partners;
- having business case reasons or objectives to address eg. recruitment and retention;
- facing competition from competitors who had such provisions;
- facing favourable labour market conditions;
- having no union;
- having high commitment work systems;
- having certain types of work tasks and workers notably those with company-specific knowledge as an asset and those where it is costly to monitor effort and productivity.

The analysis of the workplace family-friendliness in the Australian AWIRS data from 1995, found that family-friendliness increased significantly with average workplace weekly earnings; professional workers; clerical/sales work; structured management; increases in employee size; having a written equal opportunities policy and being in the public sector. Family-friendliness decreased as the percentage of non-core workers increased (cited in Evans, 2001).[1]

This earlier literature allows us to formulate a large number of hypotheses about why some employers might have family-friendly or flexible working arrangements. We restrict ourselves to the selection of hypotheses we are able to examine with the data available, as described below.

3. Extent of family-friendly policies in Britain

Earlier survey data exists on the extent of flexible working arrangements in British companies, for example, Forth et al, (1997) using a 1996 survey.[2] Since the WERS data were collected the British government has seen fit to carry out another survey to provide statistical data on the extent of flexible and work-life balance practices and policies in British organisations in 2000. A comparison of the extent of the various practices from the latest sources, where they overlap, is provided in Table 1. It is only the WERS data that are the subject of the analyses contained in this paper.

Table 1. Prevalence of flexible working patterns among British and UK employers by source and date.

Per cents of employers in sample

	WERS survey of employers, 1998 *	DfEE Work-life balance baseline survey 2000 **	DTI employer survey on support for working parents 2000 **
Part time	82%	88%	77%
Flexitime +	27%	25%	32%
Term time only +	16%	17%	18%
Job share +	27%	24%	21%
Working from or at home	33%	38% occasionally	18%
Working from or at home + (non-managerial employees only)	13%		
Ability to change from full to part time hours +	46%		
Reduced hours		17%	
Parental leave +	34%		
Paternity leave (paid or unpaid)	48%		18%
Special leave for emergencies	24%		
Unpaid leave for emergencies	18%		
Annualised hours		8%	
Compressed working week		7%	

** Sample: Establishments with 5+ employees.

* Sample: Establishments with 10+ employees

+ In the case of WERS data, on the question indicated, the availability is for non-managerial employees only.

Note. The figures are those quoted in government publications.
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Of the types of arrangements being considered in this paper, the ability to change from full-to part-time hours had the highest frequency in 1998 for non-managerial employees. Working from home for non-managerial workers was the arrangement with the lowest frequency of employer provision followed by term-time work. We suspect that the main differences in statistics between sources are related to the differences in samples and question definitions of the arrangements.

4. Approach

We are interested to examine the determinants of whether an employer offered (non-managerial) employees an entitlement to particular types of working arrangements. The most

obvious framework for modelling this employer decision is as a dichotomous choice where an entitlement to the working arrangement takes the value one, and the lack of this arrangement the value zero. Logistic regression is used to examine these observed dependent variables that are treated as separate and independent employer decisions.

The probability that employer i will make a decision to offer employees a working arrangement is

$$P_i = F(Z_i) = 1 / (1 + e^{-ZI})$$

and

$$Z_i = a + ß X_i$$

Where

X_i is a vector of the characteristics of employer i;
a is a constant; and
ß are the parameters associated with employer characteristics $X_i.$

Each type of working arrangement was modelled separately, but using the same set of independent variables.

The explanatory variables representing establishments' characteristics to be entered into the model were chosen from the rich array of WERS survey questions bearing in mind policy interests as well as theoretical suggestions and the findings of earlier studies. In the first instance widespread bivariate correlations were calculated in order to see where potential covariates were highly correlated. Some important variables were recoded to avoid problems of multi-collinearly. Others were dropped as a result of this exercise.

Based on the literature and theoretical arguments, our general expectations about the determinants of whether establishments have family-friendly policies or not are as follows:

We expect that organisations are more likely to have family-friendly policies:

(1) when they experience or anticipate institutional pressures, either from statutory legal enforcement, bandwagon effects from demographic changes, pressure groups, unions or benchmarking with competitor companies. The public sector would be expected to experience most pressure from the statutory environment.

(2) when resources in the organisation are favourable to their introduction or key resources are lacking and could be procured through the introduction of flexible working arrangements; buoyant product markets; good financial or sales performance; a specialist HR function that can help to administer and manage the flexibility; in larger establishments; skill shortages that prohibit either further growth or fulfilling orders which could be alleviated by using flexible working arrangements. These will all favour the introduction of family-friendly working arrangements.

(3) when agency costs are reduced, for example, where the costs of supervision can be reduced by allowing workers flexibility, and in conditions where reward incentives such as performance-related-pay already perform the necessary control and supervision functions

(4) where technical factors are favourable and there is a clear business case for having flexible working arrangements; through recruitment and retention benefits in situations of skill and labour shortages; where there are few operational constraints to introducing the practice.

5. The WERS 98 data

The Workplace Employee Relations Survey (WERS 98) data consisted of a nationally representative sample of British establishments and were collected from October 1997 to June 1998. The survey involved interviews with managers and workers in over 2191 workplaces and questionnaires from 28,323 employees from these same workplaces.[3] The response rate obtained was 80 per cent. The 1998 survey had a new sampling base, as compared with earlier (WIRS) precursors of this survey. In the 1998 WERS, establishments with a minimum of 10 employees were sampled whereas earlier surveys had taken their minimum as 25 employees. This means that the 1998 WERS survey as a whole represented 15.8 million employees or approximately three-quarters of all employees in employment in Britain at the time. Incorporating employees into the survey was also a new innovation. The technical details of the survey are described in Airy et al (1999) and an overview of the survey findings is provided in Cully et al (1999).

There were also new additions to the content of the 1998 survey. As well as its past coverage of the nature of collective representation and bargaining, it included new questions on equal opportunities policies, family-friendly policies, performance indicators, payment systems and performance appraisal, recruitment and training, quality improvement schemes and the individualization of employment contracts. This set of new questions in combination with others in the WERS survey provided a valuable opportunity to examine the determinants of having particular family-friendly policies as well as having a higher number of policies.

Family-friendly working arrangements in WERS

The WERS manager questionnaire asked about the working arrangements that the establishment offered as entitlements to non-managerial employees. The list of provisions included covered:

- Parental leave (non-statutory, since survey before the Statutory provision);
- Job sharing;
- Term-time only;
- Working at or from home during normal working hours;
- Ability to change from full- to part-time hours;
- Workplace or other nursery;
- Help with the costs of child care; and
- flexitime.

The wording of the WERS questions is not specifically about organization policies. In this sense we might expect that answers covered both formal policies and practices of the establishments in the survey albeit only for non-managerial employees. However, the fact that the question wording used 'entitlement' implies that informal arrangements, especially if subject to a manager's discretion, would be less likely to be recorded.

In addition, another two provisions were asked about but not in a way that was restricted to non-managerial employees;

- Paternity leave; and
- Scheme for time off for emergencies.

Although this is a list of 10 arrangements, there is a risk of double counting in the case of parental leave and paternity leave. At the time of this survey parental leave was not well defined since there were no statutory arrangements in Britain and it is easily confused with maternity or paternity leave, perhaps more so for employees than employers. This should be born in mind in examining these data. These two arrangements were collapsed into one (either/or) arrangement for some analyses, particularly for counting the number of policies.

In addition, employees were asked whether their employer made family-friendly provision available but we do not use the employee data in our analysis. We rely wholly on the managers' responses. However, a comparison of these two sources on the same policies shows that there is a large measure of inconsistency in the replies about whether employees thought they had or did not have entitlement to the relevant policies. These findings suggest we should be cautious about the managers' data. Even if we could assume that all managers' responses were error free, the employee data show that organizations are far from offering all their (non-managerial) employees' access to family-friendly working arrangements, or communicating with all employees about the provisions they offer.

Other explanatory variables

The WERS managers' data provided a very wide range of other explanatory variables to use as controls. The variables included are listed in Table 2 although a full list of the variables used and their definitions, means and standard deviations is provided in Appendix Table A1. The set of variables included measures of structural characteristics of the establishment, its workforce profile, and its human resources practices.

Table 2. List of explanatory variables included in the performance models and their theoretical interest.

Structural characteristics

Establishment size (set of dummies)	Resource
Organization size (set of dummies)	Resource
Industry groups (set of dummies)	Technical
Foreign owned	Institutional
Owner controlled	Resource
Multinational	Resource
Recognised union	Institutional
Location of market (set of dummies)	Technical

Nature of competition (set of dummies)	Institutional
Percent of labour to total costs (set of dummies)	Resource

Workforce profile

Percent of female to total workforce	Institutional
High proportion part time in female workforce	Institutional
Share of non-managerial/professional to total workforce	Agency
Has recruitment difficulties	Resource
Has policy to recruit female returners	Institutional/Resource
Time taken to learn job (set of dummies)	Agency
High amount of discretion to learn main job	Agency
High proportion of temporary workers	Resource/Agency

Human Resource practices

Family-friendly ethos	Institutional
Investor in People award	Institutional
Performance-related-pay used	Agency
Other fringe benefits offered	Agency
Percent on regular overtime	Resource/Agency
HR specialist at the establishment	Resource
HR specialist at Head Office	Resource
Consults the workforce on equal opportunities and welfare	Institutional
Has equal opportunities policies (set of dummies)	Institutional
Industrial relations disputes in past year	Agency, Transactions costs
High Commitment Management practices	Institutional. Resource, Agency
Employer thinks employees involved in decisions	Institutional, Resource

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Given the many debates in the literature about the importance of high commitment management practices (HCM) we sought to have a measure of high commitment management as an explanatory variable. There are many ways in which such a measure could be constructed and differing views about what it should contain (see for example Huselid, 1995 and Osterman, 1995). The WERS survey instrument was developed to make sure the full range of possible meanings could be explored. Developing such a measure for our own analyses could not be the main focus of our research. Nonetheless, we needed to include such a variable as one of our controls, given its potential importance. We took, therefore, a relatively pragmatic approach of including a broad range of the relevant variables and running them through a factor analysis. This procedure identified one factor with an eigenvalue greater than one. We used the factor score from this variable as our HCM explanatory measure. Details of the variables this factor represents are also listed in the Appendix Table A1.

## 6. Determinants of working arrangements available

The results are displayed for each type of arrangement in Tables 3, 4 and 5. This is a large array of results. We propose to discuss them under the theoretical headings and around the specific hypotheses that we devised in advance of the data analysis, based on the previous literature and a priori reasoning. The independent variables entered into the model are in

some cases relevant to more than one theory or hypothesis. As Barringer and Milkovich noted, there are overlaps in the theories' predictions.

Institutional pressures

Our expectation that institutional pressures would make it more likely that organisations would adopt flexible working arrangements are largely supported by a number of different results. The public sector had the highest proportions of many of these working arrangements, but across the different public sector industry categories there was some variation in the size and significance of these sectors as determinants of having particular arrangements. A selection of the predicted probabilities of having selected policies for the public authorities sector are displayed in Figure 1. [1]   These probabilities were much higher than those for other private sector establishments as the later figures display. Being a public sector establishment in 1998 was not a relevant force in explaining why establishments had parental leave. This was before parental leave became a statutory arrangement. The public authorities sector was influenced to have paternity leave, term-time work, the ability to change from full to part-time hours, and flexitime but not homework. The lack of homeworking in public administration is perhaps not surprising given the need to deal mainly with customer queries. This demonstrates the role operational or technical constraints play in devising the type of flexible arrangements on offer, even within an environment where there is a basic predisposition to respond to institutional pressures as noted in
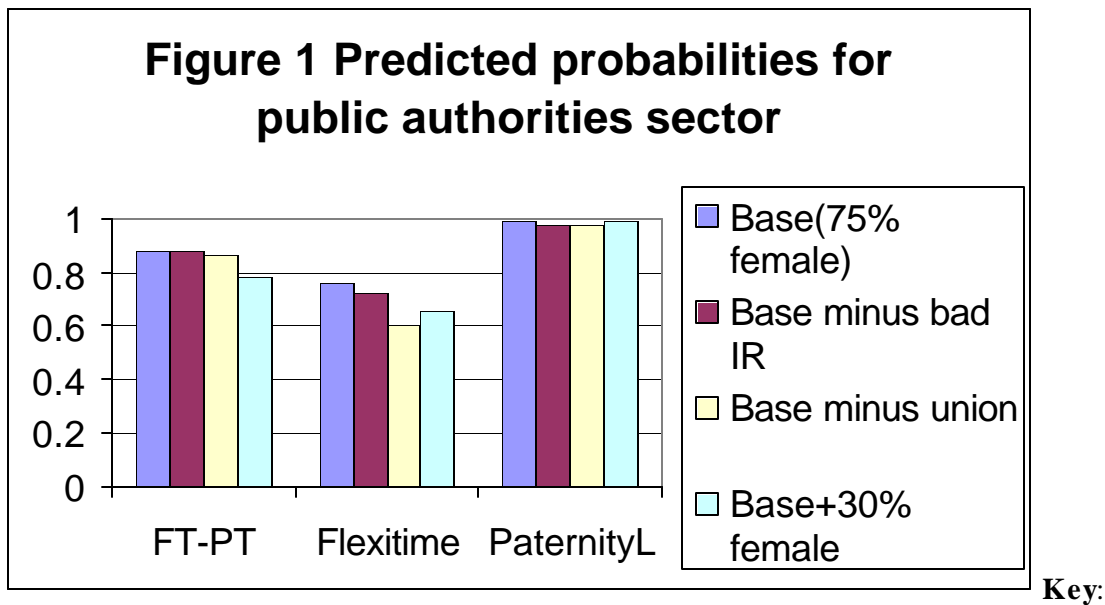
Figure 1 Predicted probabilities for public authorities sector

Key:
FT-PT – employer offers ability to change from full to part-time hours.
PaternityL – employer offers paternity leave arrangements.
IR - Industrial relations
% female – percentage of female in total workers.

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[1] The base set of characteristics for these predicted probabilities of having a particular working arrangement are as follows: establishment size of 200-499 employees, in the public authorities sectors, with a recognised union, local market, competition missing, labour costs over 75% of total costs, 2 types of workplace change, 75% female workforce, high on part time workers, 75% share of non-managerial workers, high on temporary staff, time to learn the job from 1-6 months, recruits returner females; has family-friendly ethos, Investor in People award, 30% do regular overtime, HR specialist in establishment, consults the workforce, equal opportunities implemented at high level and bad industrial relations recently. Otherwise the reference category was used.

Yeandle et al (2002 forthcoming). Our results differed in some ways from Felstead et al (2001). [4]

Unions

The earlier US studies suggested organisations were less likely to have flexible arrangements where unions were present. This may be because of the nature of US organisations, with their low level of union representation outside of certain male manufacturing enclaves and with employers offering fringe benefits as standard without union involvement. The British setting is somewhat different. In Britain there is more of a tradition of unions negotiating about working conditions across a range of industries. White collar and women in unions have been growth areas and, although there has been a general decline in membership, unions are still strong in the public sector in Britain. Even so, Casey et al (1997) found that the introduction of some types of flexible working into organisations was easier in non-union environments.

Our results show that workplaces with a recognised union were more likely to have adopted family-friendly working arrangements, especially those of parental leave, paternity leave, job share, flexitime, workplace nursery and emergency leave to a lesser extent. All of these arrangements, with the exception of emergency leave, also had a higher incidence in the public sector. We need to see the union presence in Britain, therefore, as a mechanism for reflecting and implementing institutional pressures in the public sector. This may help to explain the differences between British and US results. However, separate estimations on private and public sector establishment samples found union influence to be significant and positive in both sectors, with the exception of job share where the union coefficient was not significant in the private sector. Homework was the exception where having a recognised union was not found to be significant in our results. However, Felstead et al found their union variables (different to ours) had a negative effect on the availability of homeworking.

Female workforce

Flexible working arrangements were expected to be more likely to be available in workplaces with a higher proportion of women through the pressures caused by demographic change in the composition of the workforce. These demographic changes have resulted in further institutional pressures as governments, especially in Europe, and interest group pressures, have led over time to the introduction of new legislation The introduction and enhancements of maternity leave and pay and more recently parental leave are clear examples of the recognition of women's and now men's parenting responsibilities. The expectation of a greater adoption of family-friendly policies where women are present also has its roots in the origin of such arrangements. As we noted earlier, family-friendly working arrangements were originally devised in order to assist women workers, and it is still the case that women, even when they are in full-time employment, are more likely than men to take responsibility for children and seek certain types of flexibility in their working arrangements (Dex, 1999). Survey data on women's and men's demand for flexibility shows women are more likely to prefer options that reduce their hours of work (Hogarth et al, 2000)

Our results show that the extent of female employees is an important explanation in establishments' adoption of flexitime, parental leave, job share, term time, the ability to change from full- to part-time hours, child care and home work. In the case of job share and term-time work this is also linked to working in the public sector and certain types of work in highly gender segregated workplaces, such as schools. The adoption and use of flexitime may

be more related to the type of work being done; in particular, clerical and secretarial work have commonly been organised with ease using flexitime.[5] These, of course, are jobs dominated by female employees. The percentage of female workers was not significant in the case of homeworking in Felstead et al's (2001) analysis.

Workplaces with a high proportion of part timers in their female workforce exhibited a significant negative effect on the likelihood of having job share, child care, homework and flexitime. The homeworking result coincided with Felstead et al's (2001) analysis of homeworking. Part-time work and job shares are to some extent substitutes for each other, so this may explain why there is this negative relationship between the two. It is not surprising to see a negative effect of large amounts of part-time work on child care. There is evidence from other sources that many women with children choose part-time work as a way on combining work and family life, and in order to minimise child-care costs (Dex, et al, 1999). In workplaces with a high proportion of part timers in the female workforce, the employer would probably experience and expect little employee demand for child care or child care assistance.

HR policies
Other representations of institutional pressures come from bandwagon effects from similar or competitor companies. In some cases certain HR policies or fringe benefits become the norm and companies feel pressured to adopt them to keep abreast of new developments and benchmarking. The concept of being *the* or *an* employer of choice is one that is often mentioned in company recruitment strategies since the 1990s and clearly creates internal pressure to be parallel with or ahead in human resources as well as other practices. The same intention motivates the Investor in People award. High commitment management strategies may also be a form of this kind of instituted HR pressure. Workforce involvement and consultation are part of a high commitment management approach. Companies with human resource specialists will be more able to address and respond to these pressures, but HR specialists are also a resource, without which it is difficult to introduce and implement new HR policies. The results for this HR resource are discussed below in the *resources* section.

At the time of the WERS survey the Investor in People award did not cover family-friendly working arrangements. It is perhaps not surprising, therefore, that in our results, having an Investor in People award did not appear as a positive force for adopting family-friendly working arrangements. The award was associated with a reduction in the likelihood of working at home. This result may imply that undue emphasis should not be placed on such awards unless they cover the subject under study. It may be the case that they have a way of strictly restricting people management policies to those covered by the conditions of the award, to the extent of excluding things not covered by it.

Our measure of high commitment management practices was seen to be a positive factor increasing the likelihood of employers having homeworking, child-care help, parental leave, paternity leave, job share and the ability to change from full- to part-time hours. An additional measure of the extent to which the employer encouraged employees' involvement in the workplace was also significant in many of the same cases. Having a family-friendly ethos was significantly associated with offering parental leave, job shares, the ability to change from full to part-time hours, homework and nurseries. [6] These results overlap, in part, with the Felstead et al's analysis of homeworking, [7] and with earlier analyses of US data sources. A selection of the predicted probabilities of having these characteristics are displayed in Figure 2.

The presence of a recognised union reversed the loss of a set of characteristics associated with high commitment management in the cases of flexitime and paternity leave, but not in cases of home work or changing from full to part-time hours. [2]

Elements of what would generally be regarded as 'good employer' policies were also significant determinants of having family-friendly policies. Consulting the workforce on equal opportunities and welfare issues was associated with an increased likelihood of offering paternity leave. Having equal opportunities (EO) policies was a significant positive factor associated with flexible working arrangements in the case of all except emergency leave and to a lesser extent home work and flexitime. It is also noticeable that more active pursuit of EO policies increased the probability of having the working arrangement in the cases where it had an effect.
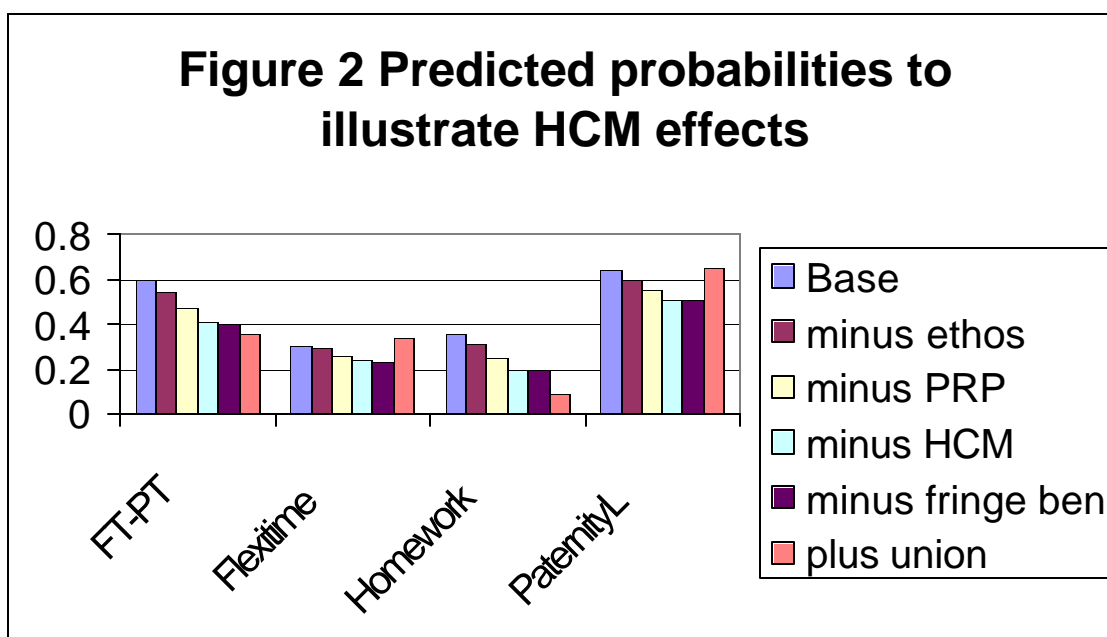
Figure 2 Predicted probabilities to illustrate HCM effects

Key: FT-PT – employer offers ability to change from full to part-time hours.
PaternityL – employer offers paternity leave arrangements.
IR - Industrial relations
% female – percentage of female in total workers.
PRP – performance related pay
HCM – high commitment management practices
Fringe ben – offers other fringe benefits
Ethos – employer has a family-friendly ethos.

The converse to being a good employer may be one where industrial disputes occur and we might expect, therefore, a reduced likelihood of family-friendly policies being available.

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[2] The base characteristics for these predicted probabilities are as follows: an establishment of 200-499 employees, in business services, with few competitors, two types of workforce change, labour costs from 50-75% of total costs; 30% share of female workers, 30% share of non-managerial workers; time to learn the job 6+months, facing recruitment difficulties, a high amount of discretion in the job, a family-friendly ethos, perfromance related pay, other fringe benefits, medium equal opportunities, high commitment management and worker involvement in decision making. Otherwise the reference category was used.

However, our measure of recent industrial relations problem incidents was associated with an increase in the likelihood of having the following working arrangements; child-care help, parental leave, paternity leave, job share, and term-time working. These results may be mainly picking up the effects of industrial relations problems in unionised environments like the public sector. It may be reflecting the fact that unionised workplaces have been subject to much disruption and increasing pressures over the last decade, but unions have also helped to develop and implement family-friendly working arrangements in some contexts as Bond et al (2002) have documented.

Competition
The extent of product (or service) market competition might influence the adoption of family-friendly working arrangements through the pressure of bandwagons. However, the extent of competition also has resource and recruitment implications.

Having no competitors was associated with having parental leave, job share, flexitime and emergency leave. Having a few competitors made it less likely the employer would offer child-care help, or term-time work. We suspect these results, are mainly a reflection of public sector workplaces, especially in the case where the competition variable was missing but was captured in a separate dummy variable and had a significant positive effect, in some cases.

Resource pressures

Size
We anticipated that flexible working arrangements would be more likely to be available in larger sized establishments and organisations. This relationship has been found in many earlier (mainly US) studies. Larger organisations will usually have personnel or human resources functions to implement flexible working arrangements. There may also be economies of scale factors in some cases, for example in providing workplace nurseries. Owner-controlled establishments tend to be smaller in which case they may be less likely to offer flexible working arrangements. Multinational companies tend to be larger and might be expected, therefore, to be more likely to offer flexible working arrangements.

In our results, the size of establishment was not relevant to an employer providing parental leave or emergency leave. However, size was an important factor associated with all the other flexible working arrangements we were able to consider. The positive relationship of homeworking with establishment size overlaps with that found by Felstead et al (2001). A graded probability of having such a policy increased in steps as the size of establishments increased. The probability increased in large steps with establishment size, particularly in the cases of nursery and term-time work. The increases were relatively small steps in the cases of flexitime, help with child care and homework. A selection of the sizes of these effects is displayed in Figure 3 for three of the policies.[3]

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[3] The base characteristics for these predicted probabilities is as follows: Manufacturing establishment with a recognised union, few competitors, labour costs between 50-75% of total costs, 2 types of workforce change, 30% female labour force and 75% non-manaerial to total workforce; the time to learn the job between 1-6 months, a percentage of workers doing regular overtime og 25% and medium equal opportunities. Otherwise the reference category was used.
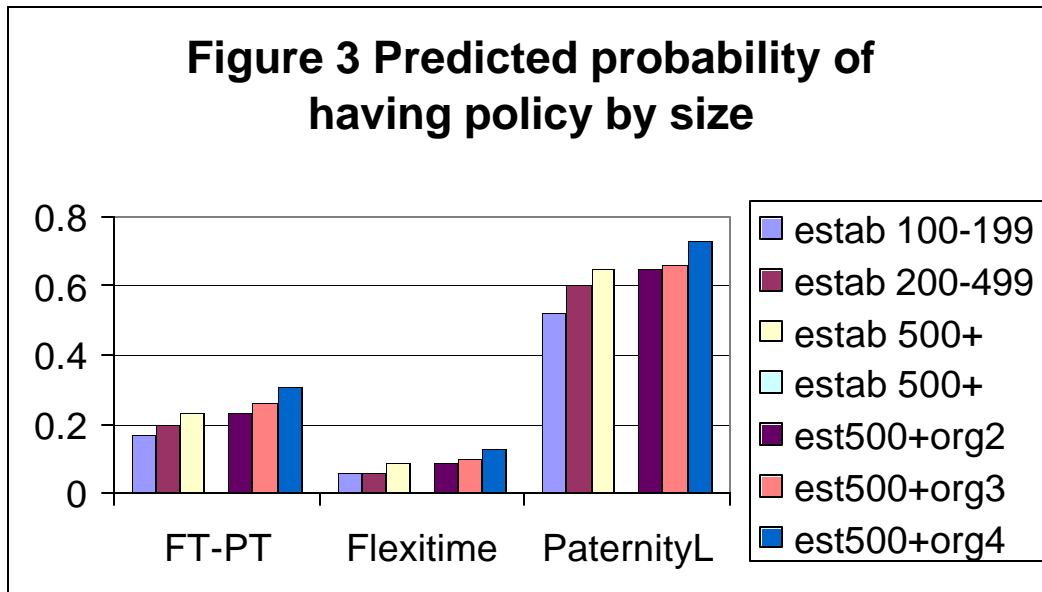
Figure 3 Predicted probability of having policy by size

Key:

FT-PT – employer offers ability to change from full to part-time hours.

PaternityL – employer offers paternity leave arrangements.

IR - Industrial relations

% female – percentage of female in total workers.

Estab – number of employees in establishment

Org2,3,4 - number of employees in organisation, 2000-9999, and
10,000-49,000 and 50,000 plus respectively.

As the size of organisation increased, the probability of an employer having parental leave, paternity leave, job share, term time, and the ability to change from full- to part-time hours also increased. However, organisation size was not relevant to the provision of a workplace nursery or homework. This is probably because the latter are arrangements that have to work at the establishment level and so the size of the organisation is less relevant. The same reasoning probably applies in the cases of child care help and emergency leave that also do not have clear progression with organisation size. However, the largest size of organisation (over 50,000 employees) did have a significant and higher probability than smaller organisations of offering these arrangements.

Employers who were also owners may also tend to represent smaller businesses. This variable was only significant in the provision of two types of arrangement, after controlling for size. Owner employers were less likely to have paternity leave and job share.

Being a multinational did not appear to be reflecting size in these results. This variable had a significant negative effect on the probability of the employer having paternity leave, term-time only work and emergency leave although a positive effect on their having homeworking. Being a multinational employer is perhaps more an influence of other cultural norms (about which we do not have further information) coupled with the nature of the work such that it cannot be done in term-time only for example. The foreign-owned dummy was significant in increasing the probability of employers offering a workplace nursery and homework. Again this is probably the influence of other national cultural norms.

HR specialist

The presence of a specialist HR function can be an important element of the resources available for HR policy development. We were able to include two measures, one relating to the establishment and one relating to a Head Office where that applied. The result for the specialist at the establishment was significant in only three types of arrangement; as a positive effect on paternity leave and a negative effect on offering either homework or a workplace nursery. Perhaps HR understands the nature of the costs of the nursery and would be loath to add administering this facility to their own workload. Having a specialist HR function at a head office was significant as a positive influence in offering a range of working arrangements, in fact all except nurseries and term-time work.

The extent of labour intensity may be a relevant factor to the resource issues in introducing flexible working arrangements. Higher labour intensity may mean that the potential costs of employee schemes and benefits are that much higher, but also that where labour is the main asset, it needs to be nurtured. These two effects would be expected to work in opposite directions. There is little support for either of these hypotheses in the results.

Good performance

It could be argued that where the organisation is doing well it will be predisposed to introducing more flexibility for employees. Certainly there is evidence of the reverse relationship when financial services companies in Britain started to withdraw some of their flexible options during the recession of the early 1990s. If companies' main motivations for introducing flexible benefits was for business case reasons we would not expect to see a relationship here. Having above average financial performance had a significant effect on offering family-friendly arrangements in only one case; that of paternity leave. However, further checking on the private sector sample showed that above average financial performance was more often associated in the cross-section with having flexible working arrangements although not with parental leave. A longitudinal study is required to offer confirmation of this relationship.

Market pressures

Flexible working arrangements were expected to be more likely to be available in certain industries, types of job and types of organisations. The constraints of competition vary by industry. They are least in the public sector and this is the sector where, as we discussed earlier, institutional pressures to provide flexible working arrangements have been felt most. One might argue that the greater the degree of product market competition, the less the extent of resources available for workforce fringe benefits, although a more important factor may be the extent of labour market competition.

In our results, industry categories had significant associations with some of the flexible working arrangements. Industry categories capture a range of dimensions of variation. At the broad level at which they were incorporated into these models, they capture some of the variations in product markets, labour market competition and variation between employers. But they also reflect some technical constraints, relating to the nature of the product, the customers, and the operations of production and management. In some cases, the significance of these associations when entered alone, were eliminated when other variables capturing the workforce profile, or the human resource practices were entered.

The manufacturing, utilities, construction and transport industries were less likely to offer all of the flexible arrangements or provisions under consideration.[8] In these cases, the traditional male dominated industries and production lines have clearly not found the need or the way to offer flexible working arrangements or provisions to the same extent as other industries. Help with child care was the one exception where the energy and utilities sector was more likely to offer this provision.

Outside of the public sector, positive and significant industry associations were not common in this set of results. However, the hotel and catering sector was associated with term-time working; business services was weakly associated with homeworking;[9] the wholesale and retail sector was associated with paternity leave, and the financial services sector was associated with flexitime working.

The location of the main market may influence the way work schedules are organised. One would expect that local markets would favour local labour and more customised working arrangements that matched the available local workforce. Unfortunately, we do not have any details, in the survey, about the local neighbourhoods that could be entered. Our results did find that where the main market was local, only term-time working arrangements were significant and positive. This may represent employers' attempts to use the available women's workforce, helping local people because it is a local service or product. Having a local market had a negative effect on flexitime and possibly on working at or from home. These may be reflecting additional size constraints or capturing further services or retail effects where the jobs require facing customers and cannot be done from home or outside of standard opening hours. Where the main market was international there was a positive and significant effect in one case – parental leave and a negative effect on flexitime. That flexitime was less likely in the case of international business may be related to the need to cover a wider range of trading hours across international time zones. Flexitime might then pose problems. If this were the case, the constraint is more one of a technical constraint, addressed under a separate heading below.

The potential effects of the nature and extent of product market competition was discussed above under institutional bandwagon factors. The results pointed to these variables reflecting mainly public sector working. However, they did lend indirect support to the view that pressures of competition were not favourable to the introduction of flexible working arrangements.

Having recruitment difficulties at the time of the WERS survey, where significant, was more likely to lower the probability of having flexible working arrangements (paternity leave, child care assistance, and possibly flexitime).[10] Having a workplace nursery was the one arrangement that may have a positive association with recruitment difficulties. Employers who said they had a policy specifically to recruit female returners certainly had significantly increased the likelihood of offering all of the arrangements under consideration, with only one exception, that of emergency leave. Given that the data are cross-sectional, our results do not enable us to infer which way the direction of runs between these variables. However, it is likely that flexible working arrangements were introduced into such workplaces at least concurrently with a workforce strategy to recruit women with children. There is plenty of evidence of this type of employer behaviour (see for example Dex and Scheibl, 2002 forthcoming).

Supervision pressures and the nature of the work

We were able to capture supervision pressures and the reward system through variables representing the nature of the work, the time to learn the job in the main occupation, the amount of discretion of the main occupation and the use of reward systems like performance-related-pay and profit sharing.

The time taken to learn the job was associated with having certain types of flexible arrangement. Jobs that took the longest time to learn (more than 6 months), in comparison with the shortest time (less than one month), were associated with having flexitime and parental leave. Jobs which were medium (1-6 months) in the length of time it took to master them were associated with job share and being allowed to change from full to part-time hours. However, such medium learning time jobs were less likely to be offered emergency leave. There is some evidence here, therefore, that more valuable workers, in whom employers have invested more training, are likely to be offered flexible working as a fringe benefit and retention incentive. Further evidence of this thesis comes from some of the other variables included.

Employers who used other fringe benefits were those who were more likely to allow working at home and the potential to change from full to part-time hours. The higher the proportion of non-managerial workers in the establishment, the less likely the employer would be to offer either flexitime, homework or paternity leave.[11] A greater amount of discretion in the work carried out was also associated with an employer allowing flexitime.

These results do support the idea that higher qualified workers are more likely to be allowed flexibility in their hours of work by their employers who are prepared to trust them to a greater extent to work flexibly in the workplace or at home. Lower qualified workers were less likely to be allowed these arrangements. The fact that high proportions of part-time female employees made it less likely that the employer would offer flexitime is further support for this relationship; part-time jobs in Britain are predominantly low skilled and low paid positions. The fact that a high proportion of temporary or fixed-term contracts in the workplace was associated with a higher chance of employers providing many of the flexible arrangements under consideration may seem to be counter evidence to this relationship. However, fixed-term contracts tend to be mainly dominated by professional workers in which case the original conclusion gains further support.

Performance-related-pay was positively associated with workplaces that offered job share, changing from full to part-time hours and working at home. This is a payment system that rewards output rather than inputs. It is not surprising, therefore, to find it correlated with the working arrangements which also require a focus on outputs. Payment systems which relied on regular overtime for a large proportion of the workforce, not surprisingly, were often associated with workplaces where flexibility or other family-friendly provisions were not offered. This relationship may be capturing some traditional male dominated workplaces.

Our results suggest that more highly qualified workers tended to be allowed or to receive more flexibility, more benefits and leave, as well as more trust.

Technical and operations constraints

Technical constraints were captured to some extent by industry categories. Public sector industries (public authorities, education and health) would be expected to find it difficult to have homework since many involve delivering services at the workplace. Rather than making it less likely that homework would be offered, our results suggested that being a public sector organisation was not a significant influence on the availability of homework. The fact that a large number of the other industry categories were significantly negatively associated with homeworking and less likely to offer it therefore, is likely to be because of the technical and operations constraints of the business. For example, the business of manufacturing and construction usually need to take place at the work place or on site; the products and services for sale in wholesale and retail, and hotels and catering industries need to be offered where the customers are located for the most part. The organisation of work has probably been changing substantially in the financial services, as the study in this JRF Programme by Bond et al (2002) describes. There is now more potential for working from home assisted by new technology and telephone communications. However, in practice, many employers have moved to use the new technology in Call Centres that have more in common with manufacturing establishments. It is perhaps not surprising, therefore, that the financial services sector also had a negative correlation with homework in these results, after controlling for other factors.

Some of the other results also reflect constraints of the nature of the work. The education sector was less likely to have flexitime presumably, again, due the necessity of delivering the service during standard school hours. However, statistically significant increases in the likelihood of the provision were associated with the education sector and the availability of nurseries, emergency leave and term-time working. Education would be expected to be the sector, above all others, that would offer term-time working, so it is reassuring that the results confirmed this. The health sector had a higher probability of offering term-time only work and workplace nurseries.

A few other factors relevant to this consideration of technical and operations constraints were noted above. The negative correlation between flexitime and workplaces where the market is international for example.

7. Number of arrangements available

As well as the separate types of flexible or family-friendly working arrangements considered above, we also examined the number of such arrangements, from the total of nine (Table 6). [12]

Table 6 Number of family-friendly working arrangements in WERS establishments

Number of arrangements for non-managerial employees*	N	%
0	312	14.2
1	444	20.3
2	434	19.8
3	380	17.3
4	293	13.4

5	194	8.9
6	94	4.3
7	32	1.5
8	8	0.4
9	0	
Total	**2191**	**100**

* One out of these 9, leave for emergencies, was not restricted to non-managerial employees. (Paternity leave and parental leave have been counted as one arrangement.)

Only 14% of the sample did not have any of the 9/10 arrangements. No establishments had all nine policies. Approximately 29 per cent of establishments had 4 or more of these arrangements. This is a much larger proportion than was found in Forth et al, but they asked about far fewer working arrangements than are counted here.

An ordered probit model was used to estimate the effects of the same set of employer characteristics on the likelihood of having a higher number of such arrangements. The hypotheses about these determinants were the same as when they were considered with respect to the separate arrangements.

The form of the model was:

$$Q_i = \beta X_i + e_i \tag{3}$$

where Q_i is a measure of the number of family-friendly working arrangements out of 9 offered by employer i; X_i are a set of characteristics of employer i, β are a set of parameters to be estimated and e is an error term.

Since the dependent variable was a scale, ordered probit was considered to be an appropriate estimation techniques in which case e has a standard probit distribution.

The observed counterpart to Q is Y. Then

$$Y = \quad 0 \text{ if } Q =< \text{?}_o \tag{4}$$

$$1 \text{ if } \text{?}_o < Q =< \text{?}_1$$

$$2 \text{ if } \text{?}_1 < Q =< \text{?}_2$$

…

$$J \text{ if } Q > \text{?}_{J-1}$$

and where the $?_j$ are unknown and to be estimated.

The results are displayed in Tables 7, 8 and 9. Institutional factors were again seen to have an affect on the number of policies through the size of organisation and establishment, the influence of the public sector and extent of competition, union involvement, the extent of the female workforce, and through human resources practices, capabilities and approaches in the organisation. Resources, labour market recruitment strategies, supervision issues related to the type of job and nature of the workforce, and technical or operational factors were also all significant influences on the workplace's number of policies. The directions of these effects were all similar to those seen in the separate models above.

Institutional pressures that significantly increased the number of family-friendly arrangements were:

- Increased establishment size;
- Increased organisation size;
- Higher proportions of female employees in the workforce;
- Lower shares of part-time in the female workforce;
- A recognised union;
- Public sector establishments not subject to competition; and
- The use of other human resource practices associated with being a good employer and having institutional pressures to adopt; for example equal opportunities policies, employee consultation, a family-friendly ethos, and high commitment management practices.

Resource pressures and constraints that significantly increased the number of policies included:

- Having access to an HR specialist outside of the workplace;

Being in an owner-controlled establishment tended to reduce the number of policies although being in a multinational enterprise also had this effect, despite its much larger size.

Market pressures associated with a significantly increased number of policies included:

- Having a recruitment strategy to employ women returners;
- High and medium amounts of labour intensity;
- Having large amounts of workplace change; and
- Performance-related payment systems other than those relying on large amounts of regular overtime.

Also being in certain industries was associated with a lowering of the number of policies on offer; notably in manufacturing, construction and transport.

The relevance of employee supervision could be seen, as previously, influencing the number of policies, which were significantly increased where there were;

- Larger proportions of managerial/professional workers;
- Large amounts of fixed-term contract staff probably mostly professionals;
- Jobs which required longer to learn;
- Greater discretion for employees in carrying out the work;
- High commitment management practices; and

- The use of other fringe benefits.

8. Conclusions

This paper resulted from a valuable opportunity to carry out multivariate analysis on one of the few large-scale British employer data sets in order to identify the determinants of employers having family-friendly working arrangements. We found that the determinants of having family-friendly policies varied by the type of arrangement, but consisted of structural factors representing size of establishment, industry groups, operational constraints and the type of organisation, human resources policies including worker representation and reward systems, and the workforce and type of job profiles. The findings of earlier surveys that did not use multivariate analysis were largely confirmed; that larger sized establishments, those in the public sector and unionised private sector establishments were important determinants of having family-friendly policies. Our analysis also showed that union involvement was also important in the public sector as well as the gender composition of the workforce in both sectors.

We found evidence to support all of the various theoretical approaches developed by organisation theorists. Indicators of institutional pressures, resource constraints, agency and transaction costs and technical or business case factors were found to be significant. This was perhaps not surprising given the large amount of overlap in these theories' predictions and content. There was also support for the theory that high commitment management practices, worker involvement and having a family-friendly ethos all increased the likelihood of the establishments adopting flexible working arrangements.

Unions were associated with having family-friendly policies. This finding contrasts with the view that the decline of unions was necessary for flexible working arrangements to come in. In fact, it seems that unions in both the public and private sectors have been instrumental in developing family-friendly solutions to the work-family challenges. Thus the view that securing Britain's economic prospects needs to be tied to an ununionised, low regulated, low–waged economy is also challenged. More flexible family-friendly working arrangements have clearly developed in the context of both unionised workplaces and those which have adopted high commitment management strategies, rather than being either /or developments.

Two caveats about these results are to be noted. The results were never uniform across all types of arrangement. The evidence suggests, therefore, that theoretical predictors were, in some cases, mediated by other factors to the extent that they become insignificant. Identifying the circumstances under which this will occur is beyond the scope of this paper and this type of data.

The second caveat arises from examining the range of our results (both those reported and those not) in conjunction with the findings of other research on the same data being carried out simultaneously but independently. We are able to see that the results can sometimes vary depending on the measures used to represent the explanatory variables and the extent of variables included in the models. The choices were greatest for the more complex measures like high commitment management, but there was also room for choices in simpler measures. In our analyses we have gone to some lengths to examine these variations and interactions, although we report only a selection of them. We are confident that our main conclusions are robust.

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Table 3 Likelihood of employer giving non-managerial employees entitlement to family-friendly policies

Explanatory variables	Parental Leave Variables alone	Parental Leave Variables + HR+Work	Paternity Leave Variables alone	Paternity leave Variable+ HR+Work	Job share Variables alone	Job share Variable+ HR+Work	Term time Variables alone	Term time Variable+ HR+Work	FT-PT Variables alone	FT-PT Variable+ HR+Work
Estab 25-49	-0.432 **	-0.359 *	0.048	0.146	-0.083	0.089	0.001	0.150	0.272	0.308
Estab 50-99	-0.026	0.019	0.579 **	0.515 **	-0.048	-0.114	0.758 **	0.993 **	0.705 **	0.708 **
Estab 10-199	-0.001	-0.163	0.514 **	0.327	0.265	0.034	1.003 **	1.110 **	0.901 **	0.667 **
Estab 200-499	0.208	-0.098	0.905 **	0.661 **	0.637 **	0.288	1.112 **	1.053 **	1.150 **	0.837 **
Estab 500+	0.410 **	0.021	1.222 **	0.856 **	0.891 **	0.522 *	1.353 **	1.271 **	1.312 **	1.042 **
Orgsize 500+	0.234	0.009	0.139	-0.248	0.483 **	0.172	0.529 **	0.543 **	0.242	-0.126
Org 2k-9999	0.667 **	0.484 **	0.323 **	-0.045	0.593 **	0.311	0.252	0.150	0.557 **	0.209
Org 10k-49999	0.642 **	0.404 **	0.556 **	0.001	0.483 **	0.049	1.235 **	1.156 **	0.668 **	0.365 *
Org 50k+	0.917 **	0.705 **	0.677 **	0.339	0.675 **	0.366	1.170 **	1.066 **	0.946 **	0.622 **
Manufacturing	-0.896 **	-0.689 **	-0.597 **	-0.241	-1.607 **	-1.470 **	-0.555	-0.358	-1.304 **	-0.999 **
Energy/utilites	-0.558 *	-1.002 **	-0.591 *	-0.921 **	-0.075	-0.213	-1.249 **	-0.935	-0.312	-0.194
Construction	-0.734 **	-0.615 *	-0.370	-0.192	-0.723 **	-0.372	-1.178 *	-0.438	-1.008 **	-0.614 *
Whole/retail	0.211	0.099	0.869 **	0.799 **	-0.492 *	-0.756 **	0.086	-0.325	0.188	0.051
Hotel&Cat	-0.776 **	-0.822 **	-0.294	-0.310	-0.219	-0.239	0.965 **	0.998 **	0.291	0.293
Transport	-0.139	-0.150	-0.211	-0.158	-0.748 **	-0.369	-1.857 **	-1.276 **	-0.605 **	-0.132
Financialservs	-0.043	-0.476	-0.163	-0.413	0.613 *	-0.236	0.355	-.0338	0.422	-0.104
Business servs	-0.172	-0.348	0.011	-0.112	-0.025	-0.329	0.111	-0.013	-0.005	-0.156
Public authorities	0.133	-0.132	1.548 **	1.361 **	0.563 *	0.099	0.694 *	0.667	0.956 **	0.784 **
Education	0.205	-0.159	0.144	-0.344	0.094	-0.252	2.828 **	2.358 **	0.237	-0.106
Health	-0.051	-0.491 *	-0.162	-0.507	0.707 **	-0.128	1.228 **	0.299	0.982 **	0.027
Foreign	0.092	0.065	0.371 **	0.224	-0.267	-0.228	-0.003	0.026	-0.113	-0.172
Owner	-0.247	0.110	-0.742 **	-0.303 *	-0.397 *	-0.010	-0.193	-0.100	-0.205	0.024
Multinational	-0.130	-0.212	-0.357 **	-0.486 **	-0.122	-0.098	-0.468 **	-0.319	-0.083	-0.115
Recgnised union	0.674 **	0.466 **	0.928 **	0.717 **	0.764 **	0.625 **	-0.121	-0.218	0.194	0.130
Local market	0.184	0.144	0.214	0.176	0.152	0.177	0.334 *	0.375	-0.102	-0.084

Explanatory variables	Parental Leave Variables alone	Parental Leave Variables + HR+Work	Paternity Leave Variables alone	Paternity leave Variable+ HR+Work	Job share Variables alone	Job share Variable+ HR+Work	Term time Variables alone	Term time Variable+ HR+Work	FT-PT Variables alone	FT-PT Variable+ HR+Work
Internat markt	0.569 **	0.375 *	-0.256	0.078	0.234	0.128	-0.581 *	-0.399	0.134	0.153
NoCompetitor	0.414 **	0.253	0.699 **	0.311	0.545 **	0.612 **	-0.104	-0.178	-0.024	0.041
Few Competitor	-0.136	-0.145	0.047	-0.002	0.083	0.125	-0.217	-0.344 *	-0.160	-0.114
Competitors missing	0.488 **	0.361 *	0.419 **	0.162	0.449 **	0.430 **	-0.026	-0.049	-0.236	-0.191
Lab costs50-75%	0.048	-0.082	0.027	-0.092	0.522 **	0.420 **	0.162	-0.076	0.130	0.012
Lab costs 75%+	0.135	-0.006	0.206	0.105	0.533 **	0.340 *	0.170	-0.045	-0.027	-0.278
Labour costs missing	0.201	-0.002	0.167	0.052	0.204	-0.112	-0.382	-0.573 *	-0.003	-0.213
Workplace changes	0.058 **	-0.006	0.030	-0.021	0.090 **	0.026	0.051 *	0.005	.084 **	0.048 *
Above average financial perform	-0.019	-0.077	0.221 **	0.205 *	-0.025	-0.113	0.066	-0.052	0.056	-0.079
Constant	-1.440	-2.262	-1.072	-0.876	-2.233 **	-3.395 **	-3.474 **	-5.480 **	-1.018 **	-2.501 **
N	2177	1977	2152	1952	2177	1977	2177	1977	2177	1977
Loglikelihood	-1298.84	-1129.17	-1127.81	-958.56	-1138.09	-918.26	829.49	-687.54	-1261.18	-1051.84

Key: Variable definitions can be found in Appendix A1.

Variables alone. Only those in the table were entered.

HR+Work - Human resources and worker profile variables included

FT-PT Ability to change from full to part-time hours of work.

Table 3 continued. Likelihood of employer giving non-managerial employees entitlement to family-friendly policies

Explanatory variables	Flexitime Variables alone	Flexitime Variables + HR+Work	Nursery Variables alone	Nursery Variable+ HR+Work	Child care Variables Alone **	Child care Variable+ HR+Work	Emergency Variables alone	Emergency Variable+ HR+Work	Homework Variables alone	Homework Variable+ HR+Work
Estab 25-49	-0.032	0.027	0.303	0.272	0.003	0.094	-0.003	-0.055	0.162	0.288
Estab 50-99	0.286	0.320	0.341	-0.049	0.170	0.287	0.197	0.120	0.092	0. 052
Estab 10-199	0.463 **	0.482 *	1.045 **	0.592	0.159	0.285	0.015	-0.168	0.551 **	0.416
Estab 200-499	0.491 **	0.384	1.528 **	0.917 *	0.708 *	0.626	-0.092	-0.246	0.458 *	0.289
Estab 500+	1.033 **	0.943 **	2.299 **	1.632 *	0.837 **	0.702	0.069	-0.014	0.946 **	0.476
Orgsize 500+	0.147	0.062	0.021	-0.113	0.505	0.099	-0.021	0.016	0.152	0.074
Org 2k-9999	-0.065	-0.115	0.400	0.279	0.858 **	0.671 *	-0.238 *	-0.159	0.094	0.170
Org 10k-49999	0.124	-0.032	0.232	0.157	0.790 **	0.310	-0.015	0.142	0.127	0.232
Org 50k+	0.404 *	0.301	0.078	0.017	0.305	-0.088	0.383 **	0.455 **	0.119	0.432
Manufacturing	-1.217 **	-0.981 **	-1.333 **	-1.261 **	-1.206 **	-0.989 *	-0.035	-0.011	-1.118 **	-0.848 **
Energy/utilites	0.672 *	0.605	-1.243 *	-1.479 **	1.727 **	1.627 **	-1.384 **	-1.187 **	0.044	-0.101
Construction	-0.712 *	-0.033	-1.395 *	-2.198 **	-1.121	-0.718	-0.105	0.040	-0.867 **	-0.645
Whole/retail	-0.437	-0.148	-1.161 *	-1.405 **	-1.762 **	-1.760 **	-0.059	-0.219	-1.067 **	-0.922 **
Hotel&Cat	-0.278	0.061	0.453	0.492	-0.334	-0.559	0.448	0.194	-1.415 **	-1.064 **
Transport	-0.251	0.212	-1.279 *	-1.862 **	-1.412 **	-1.354 *	-0.401	-0.411	-1.001 **	-0.932 **
Financialservs	1.039 **	0.878 **	-0.656	-0.921	-1.669 **	-2.083 **	-0.251	-0.431	-0.109	-0.751 *
Business servs	0.301	0.369	-0.102	-0.029	-0.057	-0.441	-0.076	-0.073	0.506 *	0.218
Public authorities	1.594 **	1.678 **	0.151	-.503	-0.000	-0.442	-0.168	-0.174 **	0.334	0.027
Education	-0.481	-0.648 *	1.054 **	1.291 **	-0.596	-0.745	0.702 **	0.836 **	0.188	0.044
Health	0.371	0.210	1.258 **	1.121 **	0.170	-0.159	-0.078	-0.112	0.212	-0.118
Foreign	-0.044	-0.104	0.467	0.713 *	0.057	0.001	0.111	0.231	0.499 **	0.434 *
Owner	-0.217	0.005	-0.169	-0.052	-0.285	0.278	0.186	0.141	-0.158	0.082
Multinational	-0.231	-0.168	-0.345	-0.456	-0.019	0.019	-0.144	-0.161	0.197	0.290
Recgnised union	0.716 **	0.739 **	0.709 **	0.656	0.356	0.007	0.248 **	0.158	-0.131	-0.134
Local market	-0.347 **	-0.316 *	-0.125	0.007	-0.071	-0.057	0.216	0.143	-0.275	-0.189

Explanatory variables	Flexitime Variables alone	Flexitime Variables + HR+Work	Nursery Variables alone	Nursery Variable+ HR+Work	Child care Variables Alone **	Child care Variable+ HR+Work	Emergency Variables alone	Emergency Variable+ HR+Work	Homework Variables alone	Homework Variable+ HR+Work
Internat market	-0.233	-0.423 *	-0.097	-0.037	0.382	0.434	-0.092	-0.076	0.511 **	0.251
No Competitors	0.464 **	0.424 *	-0.587	-0.668 *	0.017	0.007	0.294	0.358 *	0.535 **	0.336
Few Competitor	0.005	0.057	-0.439 *	-0.431	-0.855	-0.862 **	0.058	0.044	-0.169	-0.210
Competitors missing	0.238	0.212	-0.304	-0.372	-0.215	-0.297	0.472 **	0.460 **	0.239	0.057
Lab costs50-75%	0.145	-0.002	0.469 *	0.443	-0.025	-0.333	0.065	0.076	0.282 *	0.168
Lab costs 75%+	0.179	0.118	0.116	0.158	-0.121	-0.340	0.260 *	0.222	-0.102	-0.159
Labour costs missing	-0.355	-0.726 **	0.158	0.302	0.394	0.040	0.076	0.224	-0.047	-0.363
Workplace changes	0.061 **	0.030	0.089 **	0.066	0.091 **	0.005	-0.011	-0.005	0.087 **	0.029
Above average financial perform	-0.074	-0.103	-0.138	-0.212	0.035	0.063	-0.086	-0.060	0.175	0.156
Constant	-2.096 **	-2.506 **	-4.456 **	-4.669	-3.584 **	-4.458 **	-0.800 **	-0.573	-2.281 **	-2.186 **
N	2188	1981	2177	1977	2177	1977	2185	1977	2177	1977
Loglikelihood	-1019.25	-861.26	469.63	-397.20	-434.00	-368.17	-1397.58	-1252.2	-922.76	-764.86

Key: Variable definitions can be found in Appendix A1.

Variables alone. Only those in the table were entered.

HR+Work - Human resources and worker profile variables included

FT -PT Ability to change from full to part-time hours of work.

Table 4. Likelihood of employer giving non-managerial employees entitlement to family-friendly policies

Explanatory variables	Parental Leave Variables alone	Parental Leave Variables+ HR+Work	Paternity Leave Variables alone	Paternity leave Variable+ HR+Work	Job share Variables alone	Job share Variable+ HR+Work	Term time Variables Alone	Term time Variable+ HR+Work	FT-PT Variables alone	FT-PT Variable+ HR+Work
%female employees	0.614 **	0.579 **	0.277	0.427	2.042 **	2.119 **	2.539 **	2.487 **	1.756 **	1.645 **
High Female PT	0.026	-0.037	0.077	0.092	-0.584 **	-0.656 **	0.483 **	0.134	-0.019	0.037
Share non-man/prof	-0.271	0.010	-0.752 **	-0.910 **	-0.979 **	-0.347	-1.971 **	-0.203	-0.037	-0.158
Recruit difficulties	-0.102	-0.051	-0.242 **	-0.326 **	-0.131	-0.096	0.164	0.049	0.105	0.043
Recruit returner female	0.867 **	0.605 **	0.850 **	0.448 **	1.223 **	0.830 **	0.808 **	0.769 **	1.149 **	0.853 **
Time to learn job 1-6 mths	0.402	0.139	0.461 **	0.164	0.547 **	0.281 *	0.007	0.119	0.596 **	0.374 **
Time to learn job 6+mths	0.754 **	0.410 **	0.503 **	-0.024	0.605 **	0.057	0.296 *	0.037	0.586 **	0.229
Discretion high	0.023	0.167	-0.032	0.231	-0.219 *	0.003	-0.334 **	-0.331 *	-0.267 **	-0.106
Temp workers 25%+	0.494 **	0.340 **	0.526 **	0.194	0.558 **	0.179	0.396 **	0.222	0.438 **	0.021
Constant	-0.953 **	-2.262 **	0.615 **	-0.876	-1.183 **	-3.394 **	-1.898 **	-5.479 **	-1.146 **	-2.501 **
N	2092	1977	2067	1952	2092	1977	2092	1977	2029	1977
Loglikelihood	-1362.71	-1129.17	-1288.21	-958.56	-1229.40	-918.26	-903.68	-687.54	-1295.76	-1051.84

Table 4. continued. Likelihood of employer giving non-managerial employees entitlement to family-friendly policies

Explanatory variables	Flexitime Variables alone	Flexitime Variable+ HR+Work	Nursery Variables alone	Nursery Variable+ HR+Work	Child care Variables Alone	Child care Variable+ HR+Work	Emergency Variables alone	Emergency Variable+ HR+Work	Homewok Variables alone	Homework Variable+ HR+Work
%female employees	1.109 **	1.112 **	1.565 **	0.239	0.376	1.039 *	0.603 **	0.347	0.760 **	0.859 **
High Female PT	-0.787 **	-0.450 **	-0.188	-0.404 *	-0.800 **	-0.486 *	0.196 *	0.047	-1.006 **	-0.747 **
Share non-man/prof	-0.497 **	-0.812 **	-1.217 **	-0.072	-0.264	-0.195	-0.687 **	0.214	-1.719 **	-1.154 **
Recruit difficulties	-0.229 **	-0.147	0.502 **	0.110	-0.449 **	-0.470 **	-0.101	-0.055	-0.001	-0.121
Recruit returner female	0.693 **	0.235	0.942 **	0.583 **	0.644 **	0.445 *	0.201 *	0.174	0574 **	0.450 **
Time to learn job 1-6 mths	0.550 **	0.212	0.098	-0.014	0.405	0.043	-0.277 **	-0.155	0.508 **	0.296 *
Time to learn job 6+mths	0.850 **	0.389 **	0.140	0.009	0.681 **	0.188	-0.298 **	-0.276 *	0.623 **	0.348 *
Discretion high	0.006	0.302 **	-0.183	-0.145	-0.099	-0.118	-0.186 *	-0.168	0.140	0.069
Temp workers 25%+	0.552 **	0.276 *	0.716 **	0.146	0.874 **	0.401	-0.234	-0.207	0.654 **	0.279
Constant	-1.542 **	-2.506 **	-3.122 **	-4.669 **	-2.908 **	-4.458 **	0.059	-0.573	-1.036 **	-2.186 **
N	2097	1981	2092	1977	2092	1977	2093	1977	2092	1977
Loglikelihood	-1131.52	-861.26	-524.00	-397.20	-474.83	-368.17	-1380.84	-1252.2	-889.64	-764.86

Key: *Variables alone*. Only those in the table were entered.

HR+Work - Human resources and worker profile variables included

FT -PT Ability to change from full to part-time hours of work.

Table 5. Likelihood of employer giving non-managerial employees entitlement to family-friendly policies

Explanatory variables	Parental Leave Variables alone	Parental Leave Variables+ HR+Work	Paternity Leave Variables alone	Paternity leave Variable+ HR+Work	Job share Variables alone	Job share Variable+ HR+Work	Term time Variables alone	Term time Variable+ HR+Work	FT-PT Variables alone	FT-PT Variable+ HR+Work
Family-friend ethos	0.257 **	0.209	0.151	0.200	0.280 **	0.186	0.219	0.149	0.228 *	0.226
Investor in People	0.143	0.069	0.207 *	0.088	0.014	0.009	-0.050	-0.199	-0.022	-0.168
Performance Related Pay	0.089	0.152	0.103	0.185	0.038	0.387 **	-0.242	0.387 *	0.236 *	0.311 **
Other fringe benefits	0.117	0.119	0.099	0.137	0.212 *	0.135	-0.183	0.083	0.303 **	0.307 **
% on regular Overtime	-0.186	-0.123	-0.133	-0.016	-0.563 **	-0.320 *	0.002	0.205	-0.785 **	-0.256
HR specialist at establish	0.371 **	0.111	0.531 **	0.447 **	0.109	0.121	-0.151	-0.241	0.119	-0.090
HR specialist at HO	0.265 **	0.304 **	0.514 **	0.561 **	0.305 **	0.484 **	-0.166	0.173	0.375 **	0.544 **
Consults on FF and EO	0.243 **	0.157	0.520 **	0.401 **	0.226 **	0.115	0.067	-0.085	0.189 *	0.066
Equal opps medium	0.365 **	0.137	0.268 *	0.183	0.478 **	0.136	0.471 *	-0.238	0.758 **	0.614 **
Equal opps high	0.772 **	0.348 **	0.900 **	0.538 **	1.395 **	0.726 **	1.357 **	0.391	1.239 **	0.859 **
Recent bad ind relations	0.612 **	0.479 **	0.640 **	0.487 **	0.553 **	0.324 **	0.216	0.360 **	0.004	0.027
High commit management	0.422 **	0.254 **	0.389 **	0.165 *	0.535 **	0.369 **	0.347 **	0.196	0.400 **	0.218 **

Explanatory variables	Parental Leave Variables alone	Parental Leave Variables+ HR+Work	Paternity Leave Variables alone	Paternity leave Variable+ HR+Work	Job share Variables alone	Job share Variable+ HR+Work	Term time Variables alone	Term time Variable+ HR+Work	FT-PT Variables alone	FT-PT Variable+ HR+Work
Employee involvement	0.064 **	0.039 *	0.031	0.008	0.076 **	0.032	0.113 **	0.059 *	0.050 **	0.025
Constant	-2.280 **	-2.262 **	-1.102 **	-0.876	-2.789 **	-3.394 **	-3.739 **	-5.480 **	-1.289 **	-2.501 **
N	2054	1977	2028	1952	2054	1977	2054	1977	2054	1977
Log likelihood	-1245.58	-1129.17	-1096.16	-958.56	-1145.72	-918.26	-943.09	-687.54	-1224.49	-1051.84

Key: Variable definitions can be found in Appendix A1.

Variables alone. Only those in the table were entered.

HR+Work - Human resources and worker profile variables included

FT-PT Ability to change from full to part-time hours of work.

Table 5 continued. Likelihood of employer giving non-managerial employees entitlement to family-friendly policies

Explanatory variables	Flexitime Variables alone	Flexitime Variable+ HR+Work	Nursery Variables alone	Nursery Variable+ HR+Work	Child care Variables Alone	Child care Variable+ HR+Work	Emergency Variables alone	Emergency Variable+ HR+Work	Homewok Variables alone	Homework Variable+ HR+Work
Family-friend ethos	0.150	0.024	0.478 **	0.387 *	0.308	0.292	0.172	0.239 *	0.269 *	0.237
Investor in People	0.078	0.165	-0.028	0.102	-0.038	-0.045	0.146	0.912	-0.390 **	-0.362 **
Performance Related Pay	0.207	0.175	-0.249	0.530 *	0.161	0.089	-0.222 *	0.074	0.354 **	0.282 *
Other fringe benefits	0.316 **	0.233 *	-0.673 **	-0.058	0.161	-0.120	-0.243 **	-0.108	0.995 **	0.721 **
% on regular Overtime	-0.610 **	-0.451 **	-0.673 **	-1.044 **	-0.057	-0.563	-0.173	-0.015	0.301	0.161
HR specialist at establish	0.038	0.005	-0.467 **	0.036	0.134	0.090	-0.094	-0.075	-0.409 **	-0.279 *
HR specialist at HO	0.216 *	0.140	0.221	0.072	0.571 **	0.211	-0.170 *	0.038	0.350 **	0.289 **
Consults on FF and EO	0.306 **	0.163	0.529 **	0.325	0.112 **	-0.066	0.116	0.158	-0.162	-0.244
Equal Opps medium	-0.021	-0.418 *	0.891 *	0.297	0.805	0.571	-0.072	-0.206	-0.197	-0.419 *
Equal Opps high	0.643 **	-0.143	1.911 **	0.816	1.596 **	1.274 **	0.113	-0.146	0.483 **	-0.004
Recent bad IR	0.524 **	0.213	0.535 **	0.227	0.562 **	0.525 **	0.021	0.030	0.213	0.205
High commit management	0.383 **	0.092	0.269 *	0.109	0.510 **	0.312	-0.038	-0.014	0.429 **	0.304 **

Explanatory variables	Flexitime Variables alone	Flexitime Variable+ HR+Work	Nursery Variables alone	Nursery Variable+ HR+Work	Child care Variables Alone	Child care Variable+ HR+Work	Emergency Variables alone	Emergency Variable+ HR+Work	Homewok Variables alone	Homework Variable+ HR+Work
Employee involvement	0.035	0.037	0.034	0.002	0.019	0.044	0.017	-0.018	0.032	0.045
Constant	-2.176 **	-2.506 **	-4.522 **	-4.669 **	-4.950 **	-4.458 **	-0.502	-0.573	-3.408 **	-2.186 **
N	2062	1981	2054	1977	2054	1977	2058	1977	2054	1977
Log likelihood	-1091.37	-861.26	-508.27	-397.20	-460.48	-368.17	-1373.84	-1252.2	-875.86	-764.86

Key: Variable definitions can be found in Appendix A1.

Variables alone. Only those in the table were entered.

HR+Work - Human resources and worker profile variables included

FT -PT Ability to change from full to part-time hours of work.

Table 7. Effects of structural characteristic coefficients on establishments number of family-friendly working arrangements. (Estimated by ordered probit).

Explanatory variables	Structural variables only		After addition of Workforce and HR	
	Coeff.	P> |z|	Coeff.	P> |z|
Estab size 25-49	0.066	0.646	0.164	0.301
Estab size 50-99	0.457	0.002	0.442	0.007
Estab size 100-199	0.694	0.000	0.457	0.007
Estab size 200-499	0.876	0.000	0.492	0.006
Estab size 500+	1.457	0.000	1.003	0.000
Org size 500-1999	0.331	0.012	0.079	0.588
Org size 2000-9999	0.416	0.001	0.189	0.180
Org size 10k-49,999	0.619	0.000	0.361	0.026
Org size 50k+	0.897	0.000	0.686	0.000
Manufacturing	-1.275	0.000	-0.936	0.000
Energy+Utilities	0.024	0.928	-0.027	0.926
Construction	-0.988	0.000	-0.474	0.078
Wholesale & retail	-0.181	0.387	-0.273	0.219
Hotel & catering	0.093	0.701	0.146	0.565
Transport	-0.750	0.002	-0.441	0.089
Financial services	0.403	0.121	-0.163	0.567
Other business servs	0.126	0.561	0.024	0.918
Public authorities	0.948	0.000	0.738	0.003
Education	0.898	0.000	0.661	0.009
Health	0.781	0.000	0.142	0.544
Foreign control	0.986	0.490	0.079	0.601
Owner control	-0.325	0.014	-0.011	0.937
multinational	-0.233	0.034	-0.216	0.069
Recognised union	0.583	0.000	0.467	0.000
Local market	0.136	0.247	0.136	0.280
International market	0.190	0.193	0.076	0.632
No competition	0.358	0.031	0.376	0.032
Few competitors	-0.111	0.281	-0.097	0.374
Competition missing	0.327	0.019	0.273	0.070
Lab costs 50-75%	0.277	0.012	0.115	0.321
Lab costs 75%+	0.279	0.030	0.103	0.455
Lab costs missing	0.012	0.931	-0.218	0.159
Workplace changes	0.087	0.000	0.024	0.251
Above av. financial	0.031	0.695	-0.060	0.473
N	2189		1981	
Log likelihood	-3974.79		-3430.53	

Key: Variable definitions can be found in Appendix A1.

Table 8. Effects of workforce characteristic coefficients on establishments' number of family-friendly working arrangements. (Estimated by ordered probit with structural and HRM variables).

Explanatory variables	Variables entered alone		Variables entered with structural and HR variables	
	Coefficient	P>|z|	Coefficient	P>|z|
%female employees	1.699	0.000	1.480	0.000
High Female PT	-0.177	0.055	-0.182	0.095
Share non-man/prof	-1.302	0.000	-0.572	0.016
Recruit difficulties	-0.109	0.166	-0.111	0.198
Recruit returner female	1.162	0.000	0.846	0.000
Time to learn job 1-6 mths	0.455	0.000	0.225	0.029
Time to learn job 6+mths	0.650	0.000	0.135	0.279
Discretion high	-0.173	0.076	0.078	0.458
Temp workers 25%+	0.597	0.000	0.203	0.089
N	2097		1981	
Log likelihood in full model	-4017.6		-3430.5	

Key: Variable definitions can be found in Appendix A1.
  Variables alone. Only those in the table were entered.

Table 9. Effects of HRM characteristic coefficients on establishments' number of family-friendly working arrangements. (Estimated by ordered probit).

Explanatory variables	Variables entered alone		Variables entered with structural and workforce variables	
	Coefficient	P>|z|	Coefficient	P>|z|
Family-friend ethos	0.301	0.000	0.319	0.003
Investor in People Award	0.059	0.508	-0.016	0.864
Performance Related Pay	0.034	0.749	0.318	0.006
Other fringe benefits	0.252	0.004	0.253	0.009
% on regular Overtime	-0.530	0.000	-0.229	0.089
HR specialist at establishment	0.053	0.549	-0.008	0.943
HR specialist at HO	0.275	0.001	0.460	0.000
Consults on FF and EO	0.257	0.004	0.166	0.086
Equal opportunities medium	0.327	0.014	-0.005	0.971
Equal opportunities high	1.243	0.000	0.527	0.001
Recent bad industrial relations	0.501	0.000	0.370	0.001
High commitment management	0.505	0.000	0.222	0.002
Employee involvement	0.068	0.000	0.029	0.117
N	2062		1981	
Log likelihood in full model	-3853.78		-3430.53	

Key: Variable definitions can be found in Appendix A1.
Variables alone. Only those in the table were entered.

Appendix Table A1. WERS Variable Definitions

Variable	Mean	SD	Definition and WERS source variable
			Employers' Family-friendly practice variables:
Parental leave	0.434	0.496	Entitlement to non-managerial employees of parental leave 0/1 (ifamily1-80
homework	0.182	0.386	Entitlement to non-managerial employees of working at or from home in normal working hours 0/1 (ifamily1-8)
Term time	0.205	0.404	Entitlement to non-managerial employees of term-time only contracts 0/1 (ifamily1-8)
FT-PT	0.586	0.493	Entitlement to non-managerial employees switching from full-time to part-time employment 0/1 (ifamily1-8)
jobshare	0.389	0.488	Entitlement to non-managerial employees of job sharing schemes 0/1 (ifamily1-8)
nursery	0.079	0.27	Entitlement to non-managerial employees of workplace nursery or nursery linked with workplace 0/1 (ifamily1-8)
childcare	0.068	0.251	Entitlement to non-managerial employees of financial help/subsidy to parents for child care 0/1 (ifamily1-8)
flexitime	0.272	0.445	Employer has flexitime for some non-managerial employees 0/1 (jtimear1-8)
Emergency	0.402	0.49	If employee has need to take time off at short notice, there is special leave or leave without pay to cover this 0/1, (ifmoff)
Paternity leave	0.648	0.478	Employer has written policy giving male employees entitlement to specific period of leave when their children are born, or has another arrangement: 0/1, (imaleoff)
Paternity/ parental	0.687	0.464	Either has parental leave or paternity leave variables 0/1
Number of policies	2.857	1.972	Number of family-friendly policies, up to 9.
			Structural and performance variables
Estab 0-24	0.12	0.325	Reference group. Establishment size 0-24 employees, (Zallemps)
Estab 25-49	0.181	0.385	Establishment size 23-49 employees, 0/1 (Zallemps)
Estab 50-99	0.179	0.384	Establishment size 50-99 employees 0/1 (Zallemps)
Estab 100-199	0.177	0.381	Establishment size ≥100 employees and less than 199, 0/1 (Zallemps)
Estab 200-499	0.208	0.406	Establishment size ≥200 employees and less than 499, 0/1 (Zallemps)
Estab 500plus	0.136	0.342	Establishment size ≥500 employees 0/1 (Zallemps)
Org 10-499	0.351	0.477	Reference group. size of organisation 10-499 employees, (Auktot)
Org 500-1999	0.144	0.351	size of organisation 500-1999 employees, 0/1 (Auktot)
Org 2k-9999	0.211	0.408	size of organisation 2000-9999 employees, 0/1 (Auktot)
Org 10k-49999	0.15	0.357	size of organisation 10000-49999 employees, 0/1 (Auktot)
Org 50k+	0.144	0.351	size of organisation 50000 + employees, 0/1 (Auktot)
Industry categories:			
Community	0.051	0.219	Reference group. Other community services (asic)
Manufacture	0.136	0.343	0/1 (asic)
Energy/ Utilities	0.037	0.188	0/1 (asic)
Construction	0.051	0.22	0/1 (asic)
Wholesale/ retail	0.147	0.354	0/1 (asic)
Hotel &catering	0.058	0.234	0/1 (asic)
Transport	0.062	0.241	0/1 (asic)

Financial servs	0.046	0.21	0/1 (asic)
Business servs	0.104	0.305	0/1 (asic)
Public authorities	0.084	0.277	0/1 (asic)
Education	0.111	0.315	0/1 (asic)
Health	0.114	0.317	0/1 (asic)
public	0.309	0.462	Public sector organisation 0/1 (astatus)
foreign	0.103	0.304	foreign controlled: If private sector – foreign owned/controlled or predominantly foreign owned (51% or more) 0/1 (astatus and acontrol)
owner	0.129	0.335	owner controlled: If private sector but not PLC, and single individual or family have controlling interest over the company (i.e. at least 50 percent ownership) 0/1 (astatus and aconint)
multinational	0.22	0.415	multinational: organisation owns or controls subsidiary companies or establishments outside the UK 0/1 (asubsid)
Recognised union	0.559	0.497	union recognised by management for negotiating pay and conditions for any section of the workforce in the establishment, (erecog01-10) and has employees as members (Eanyemp), 0/1
Marketlocal	0.428	0.495	market for main product or service is primarily local or regional 0/1 (kmarket)
Market national	0.183	0.387	Reference group. market for main product or service is primarily national 0/1 (kmarket)
Market international	0.126	0.332	market for main product or service is primarily international 0/1 (kmarket)
No competitors	0.082	0.275	Main competitors for main product (or service) are none 0/1 (Kcompet)
Few competitors	0.246	0.431	Main competitors for main product (or service) are few 0/1 (Kcompet)
Many competitors	0.403	0.491	Reference group. Main competitors for main product (or service) are many. (Kcompet)
Competitors missing	0.269	0.444	Main competitors for main product (or service) are missing. 0/1 (Kcompet)
Labour costs 50-75%	0.232	0.422	proportion of establishment sales revenue / operating costs accounted for by wages, salaries and other labour costs like pensions and national insurance is 50-75%, 0/1, (kprosal)
Labour costs 75%+	0.217	0.412	proportion of establishment sales revenue / operating costs accounted for by wages, salaries and other labour costs like pensions and national insurance is 75% or more, 0/1, (kprosal)
Labour costs missing	0.092	0.289	proportion of establishment sales revenue / operating costs accounted for by wages, salaries and other labour costs like pensions and national insurance missing , 0/1 (kprosal)
Labour costs 1-50%	0.458	0.498	Reference group. Proportion of establishment sales revenue / operating costs accounted for by wages, salaries and other labour costs like pensions and national insurance 1-50%, (kprosal)
Workplace changes	3.813	2.209	number of workplace changes introduced by management in the past 5 years (0 to 7) (Lmancha1 –8) out of: - changes in payment systems - introduction of new technology - changes in working time arrangements - changes in the organisation of work - changes in work techniques or procedures - introduction of initiatives to involve employees - introduction of new product or service
Above average financial performance	0.493	0.5	Manager assesses workplace's financial performance as a lot better or , better than average, 0/1 (kestper1)

			HR practice and workforce variables
Ethos	0.186	0.389	Manager thinks it is up to individual employees to balance work/family responsibilities: strongly agrees or agrees = 1/0 (aphras04)
IiP award	0.335	0.472	workplace/organisation accredited as an Investor in People 0/1 (baward)
Performance related pay	0.166	0.372	performance related pay – 0/1 Has performance related pay and proportion of non-managerial employees at workplace who received performance-related pay in the past 12 months was at least 20 percent (ffacto01-12 and fpernon)
Other fringe benefits	0.29	0.454	other fringe benefits – 0/1 Employees in largest occupational group entitled to any of the following non-pay terms and conditions: company car or allowances or private health insurance (fothtit1 to fothtit6)
HR specialist at establish	0.377	0.485	HR specialist at establishment, 0/1. (brelate)
HR specialist at HO	0.535	0.499	HR specialist at Head office (if multi-site) 0/1 (bsepar)
Consults on FF and EO	0.425	0.495	Whether workplace consultation committee discusses welfare services and facilities (eg. child care) or equal opportunities, 0/1 (dwhich01 to dwhich12)
Time to learn job 0-1 month	0.269	0.444	Reference group. Time to learn job for new employee in largest occupational group to job as well as more experienced employee already working here, up to one month, (cstuckin)
Time to learn job 1-6 months	0.5	0.5	Time to learn job for new employee in largest occupational group to job as well as more experienced employee already working here, 1-6 months, 0/1 (cstuckin)
Time to learn job 6+months	0.231	0.421	Time to learn job for new employee in largest occupational group to job as well as more experienced employee already working here, more than 6 months, 0/1 (cstuckin)
Difficult recruitment any	0.55	0.498	any recruitment difficulties across all occupational groups 0/1 (cavacdif1-9)
Difficult recruitment high occs	0.326	0.469	difficulty recruiting in the following occupational groups: 0/1 managers and senior administrative; professional; technical and scientific (cavacdif1-3)
Non manager /professional share	0.769	0.237	non-managerial level staff as proportion of all employees: managerial level staff includes the occupational groups, 'Managers and senior administrative' and 'Professional' (zcle_tot + zcrt_tot + zptc_tot +zsal_tot + zope_tot +zrou_tot / zallemps)
Female returner	0.162	0.368	encourage applications from women returning to work when filling vacancies 0/1 (cspecia1-6)
Employee involvement	12.89	2.361	Scale from aggregation of 4 manager attitude questions scored on 5 point scale strongly agree to strongly disagree. Those at the top are best placed to make decisions (aphras05) We do not introduce any changes here without first discussing the implications with employees (aphras08) Most decisions at this workplace are made without consulting employees (aphras10) We frequently ask employees at our workplace to help us in ways not specified in their job (aphras01)

Recent bad Industrial Relations	0.201	0.401	Recent industrial action or disputes: 0/1 Either Industrial action threatened or taken had a very/fairly important upward effect on size of pay settlement or review (gacti001-011) or There has been a collective dispute with any group of workers over pay or conditions in the last 12 months (gdispute) or Any unions in workplace threatened to take the following action in the last 12 months: strike, overtime ban or restriction, work to rule, go slow, blacking of work, work in / sit in, other industrial action (gpstyr1-7) or Unions in workplace have balloted their members to establish level of support for industrial action in the last 12 months (gballot)
No Equal Opps	0.142	0.35	Reference group No equal opportunity policy – (ipolicy, iwhynot1-7) Workplace (or organisation of which it is a part of) does not have a formal written policy on equal opportunities or managing diversity excluding those establishments which have a policy but have not written it down or who aim at being an equal opportunities employer.
Equal Opps medium	0.340	0.474	Workplace has a formal written policy on equal opportunities or managing diversity or workplace has a policy but not written it down No further action taken. 0/1 (ipolicy, iwhynot1-7, ipracti1-7)
Equal Opps high	0.514	0.5	Workplace has a formal written policy on equal opportunities or managing diversity or workplace has a policy but not written it down and one of following done by workplace or applies to workplace: Collect statistics on posts held by men and women Monitor promotions by gender, ethnicity etc. Review selection and other procedures to identify indirect discrimination Review the relative pay rates of different groups 0/1, (ipolicy, iwhynot1-7, ipracti1-7)
% female employees	0.498	0.284	Proportion of female to total employees in establishment (zfemfull+zfemprt/zallemps)
High female part time	0.376	0.485	Percent of part time in female workforce > %. (Zfemprt/zfemfull+zfemprt)
Discretion high	0.215	0.411	To what extent do employees in largest occupational group have discretion over how they do their work. Answer = a lot 0/1 (cdiscret)
% on regular overtime	0.42	0.336	Proportion of employees (in the largest occupational group) at this establishment regularly working overtime or hours in excess of the normal working week, whether paid or unpaid – (use mid point of banded categories jovertim)
Temp workers 25% +	0.187	0.39	Proportion of all employees at this workplace working on fixed term contracts is more than 25%. 0/1 (jfiterm)
			HR Practices - Factor Analysis variables
			High Commitment Management Practices – first factor eigenvalue>1. Factor score. Variables included, dummy variables 0/1
teams	0.743	0.437	≥40% of employees (in largest occupational group) working in formally designated teams
briefing	0.894	0.308	System of briefing for any section or sections of the workforce
committee	0.328	0.469	At least one committee of managers and employers at workplace primarily concerned with consultation rather than negotiation and committee is very/fairly influential on management's decisions affecting the workforce
qualcirc	0.477	0.5	Groups at workplace that solve specific problems or discuss aspects of performance or quality
survey	0.482	0.5	Management conducted a formal survey of employees' views or opinions during the past five years
			Other ways in which management communicates or consults with employees at establishment:
othcons1	0.388	0.487	Regular meetings with entire workforce present
othcons2	0.686	0.464	Systematic use of management chain/cascading of information
othcons3	0.286	0.452	Suggestion schemes

othcons4	0.636	0.481	Regular newsletters distributed to all employees
manviews	0.234	0.661	Management's general attitude towards trade union membership among employees at establishment – scaled variable, -1 not in favour of it, 0 neutral, 1 in favour of it
N	**2191**		

Notes

[1] The AWIRS data collected in 1995 is the Australian Workplace Industrial Relations Survey modeled on the earlier UK WIRS survey, the predecessor to the WERS data to be analysed in this paper.

[2] Of the arrangements that parallel the ones available in WERS, the 1996 employer survey found that 26 per cent of employers allowed working at or from home, 7 per cent allowed term-time only work, 22-24 per cent allowed changes from full to part-time hours, 2 per cent provided a workplace nursery and 2-3 per cent provided financial help with child care (Forth et al, 1997).

[3] The survey also contained a panel element link to the earlier WIRS surveys of 1980, 1984 and 1990 but this is not used in the analyses described in this Report.

[4] Felstead et al (2001) did find a positive coefficient for the public sector over and above individual sector coefficients. We found entering a public sector variable in addition to the separate (mainly) public industry sectors as problematic and generated problems of multicolinearity.

[5] Our own analysis of the WERS employees' data found significant correlations between having access to flexitime and being a clerical worker, (see Dex and Smith 2001).

[6] In the cases of parental leave, job share, the ability to change from full to part-time hours and homework, the entry of other HR and workforce profile variable reduced the significance of the ethos variable. This indicates a level of correlation between the workplace ethos and the other workforce and HR variables.

[7] Felstead et al, entered variables related to high commitment management practices as separate variables rather than as a data reduced factor, as we did.

[8] These results overlap with those of Felstead et al's (2001) analysis of homeworking.

[9] This same result is reported in Felstead et al's (2001) analysis of homeworking.

[10] This same insignificant result is reported in Felstead et al's (2001) analysis of homeworking. However, Felstead et al found negative relationships between homeworking and labour turnover and with absenteeism. We did not enter these variables since they were highly correlated with other performance measures.

[11] A similar positive relationship between homeworking and the proportion of manager-professionals is reported in Felstead et al's (2001) analysis of homeworking.

[12] Parental leave and paternity leave were combined into one arrangement for purposes of counting the number of arrangements in order to avoid possible double counting. It was not clear that employers distinguished clearly between these two arrangements.