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EFFECTS OF FAMILY-FRIENDLY POLICIES ON BUSINESS PERFORMANCE

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ABSTRACT

Effects of family-friendly policies on business performance?
An analysis of the Workplace Employee Relations Survey

Shirley Dex, Colin Smith and Sally Winter

This paper uses the new questions in the manager's questionnaire of the 1998 Workplace Employee Relations Survey (WERS) to examine the effects on establishment performance associated with establishments giving their employees an entitlement to any one of 10 family-friendly or flexible working arrangements in 1998, after controlling for other influences. The paper uses logistic regression, ordered probit or OLS regression to estimate models of labour productivity, quality performance, financial productivity, rising sales, turnover and absence data. A data set of FTse100 data from 1998 is also examined. The results for the FTse1000 data were inconclusive. However, analysis of the WERS data found some significant effects on performance for private sector organisations associated with having certain family-friendly practices or ethos.

1. Introduction

Whether organizations that have family-friendly policies perform better than those who do not have such policies and practices is an important issue. It has been discussed by policy makers who want to advocate flexible working arrangements in companies and by academics. It is often discussed under the heading of the business case for flexibility. The evidence on this question has been assembled in a number of documents covering US econometrics studies and case studies from Britain and the USA. Up to 1998, Britain, unlike the USA, lacked large-scale survey data on British employers' performance through which to model the determinants of performance and examine the effects of family-friendly policies. In this paper we have the opportunity to examine the question of the impact of family-friendly working arrangements on organizations' performance using two relatively new British sources of data from the Workplace Employee Relations Survey (WERS) collected in 1997/98 and data collected from and collated about the FTse100 companies in 1998.

The performance measures available in the Workplace Employee Relations Survey (WERS) data are limited in scope and based mostly on subjective manager assessments. The FTse100 companies' performance data are published financial figures although available for relatively few companies and over a short time period. Nonetheless, this was felt to be an important opportunity for a British statistical examination of these issues. This paper reports on our research and its findings and contains a separate analysis of each data set. We concentrate here on the performance measures used in business case arguments having explored outcomes like employee commitment in an earlier paper (Dex and Smith, 2001a). From the data available, the case for family-friendly arrangements affecting business performance in the private sector is encouraging.

In the rest of this paper we first review some of the relevant literature (Section 2) followed by a discussion of our model (Section 3). We then describe the data (Section 4) and report the analyses of the WERS data (Section 5). In the following Sections, 6 and 7, we describe and report our findings from the analyses of the FTse100 data. Finally Section 8 contains our conclusions.

2. Effects on performance literature.

There is a general literature on the determinants of workplace performance as well as more focused reviews of the effects human resource practices have on performance. Here, we summarize the main findings of the review of human resources and flexible working arrangements on business performance but do not cover the much wider literature on the determinants of performance in general.

Richardson and Thompson (1999) reviewed the studies of the effects on performance of human resource practices. They noted that different researchers used quite different measures of human resources practices and strategies. In addition, a range of performance

measures has also been used. Not surprisingly studies have often reached different conclusions. This is an area fraught with conceptual difficulties and challenges, therefore. The summary conclusions are that, on the whole, firms scoring high on what Richardson and Thompson called 'investment employment practices' (eg. benefits, training, supervision) appeared more successful than those using 'contractual employment practices' (eg. hiring strategies, flexitime, part time, labour costs). However, firms scoring well on both also tended to have higher labour productivity.

The business case arguments about the effects of family-friendly policies in companies have stressed the need to consider the benefits, compared with the costs (BIC, 1993). The 1996 Policy Studies Institute survey of employers reported that equal numbers of British employers saw advantages and disadvantages in providing family-friendly working arrangements (Forth et al, 1997; Callendar et al, 1997). Employers were most likely to perceive benefits for improved staff morale and loyalty together with improved staff relations. The main disadvantages related to increased administration and the disruption through having to cope with staff absences (Forth et al 1997).

Other collations of case study material have found evidence of business benefits from introducing flexible working arrangements (Dex and Scheibl, 1999; Bevan et al, 1999). A number of potential effects on performance have been noted in this case study literature; notably, improvements in turnover, retention, absenteeism, productivity and morale. In some cases precise measures have been carried out; in other cases, managers' perceptions are the basis for the claimed improvements. Earlier British case studies have not carried out controlled comparisons although US studies have had control groups for the working arrangements introduced, in some cases; most notably in a set of studies examining the effects of introducing flexi time. In the USA, case study material on the flexibility issue is also supplemented by company experiments (Bailyn and Rayman, 1998). A smaller number of US econometric studies found evidence of productivity increases associated with flexible working arrangements in a survey of US companies (eg. Shepard et al, 1996).

The first analyses of the 1998 FTse100 data (Winter, 1999) suggested that companies rated 'very good' on a range of equal opportunities and family-friendly provisions had a higher than average FTse100 share performance for five years prior to 1978, than those who did not have these policies. The chronological timing of these data mean that we cannot be sure better performance has resulted from having the policies. There is evidence from another study of British Companies House data (Hambledon Group, 2000) that companies with more than 200 employees who had Investor in People awards were performing above the median for their size of company, against most of the financial benchmarks for 1994 and 1998. There was a notable before and after rise in performance among smaller companies who gained the award. The study qualified the findings with a note about the difficulties of obtaining complete data. However, at the time of this analysis in the late 1990s, the Investor in People award did not include an evaluation of family-friendly policies.

IPD's (2000) survey of HR professionals about employee absence in their organizations found it varied by region, with the South East and East Anglia having the lowest values. It also varied by industry with the highest rates being in the health followed by the food and other public services sectors. Absence figures also tended to increase with the size of the organisation. Where there had been recent increases in absence they were most commonly attributable to workforce morale and workload changes. The public sector saw stress in the workforce as the major cause of increases in absence among non-manual employees. HR professionals also reported that they thought that family-friendly policies had an effect in reducing absence.

The CIPD (2000) survey of labour turnover as reported by HR professionals found that labour turnover varied by occupation group, being lowest among managers and professionals and highest in personal services and manual operative occupations. Labour turnover also varied by industry, being highest in hotels and restaurants followed by wholesale and retail and agriculture, and being lowest in the utilities, parts of the public sector and transport. Labour turnover was found to decline with organisation size for full-time but not for part -time employees who mostly had higher turnover at all sizes of organisation. Huselid (1995), among others, found that high commitment management practices affected turnover.

Since the WERS 98 data became available and while this project was in progress, several studies have examined the performance measures available in the data. Models of the determinants of the performance measures have also been constructed and estimated. These studies have not focused on the effects of flexible working practices, although in some cases, variables capturing family-friendly policies, or those that might be expected to be correlated with family-friendly arrangements, have been entered as explanatory variables. The number of family-friendly arrangements out of 7 was not found to be a significant determinant of labour productivity by Perotin and Robinson (1999) although having equal opportunities policies was associated with above average self-assessments of labour productivity.

Summaries of the explanatory variables that have been found to affect some of the WERS performance measures in other studies are displayed in Tables 1, 2 and 3.

Table 1 Summary of studies of the relationships between performance and other WERS questions.

Performance measures **Sources**	**Labour productivity associated with:** Perotin and Robinson, 1999	**Labour productivity in public or private sectors associated with:** Guest et al, 2000
Employer/manager variables		
Existence of consultation or climate	+	+(private)
Level of consultation		-(private)
Quality circles	+	
Equal Opps policies	+	
Training given to employees	+	
Employees have more variety in their work	+	
Employees have more control over their work	+	
Employee share ownership scheme	+	
Performance related pay	+	
Increased fringe benefit entitlements	+	
Higher percent pay rise last	+	
Use shift work	+	
More cases of industrial action	+	
Higher ethnic minority share in workforce	+	
Organization size		- (public)
Establishment size		- (public) + (private)
Education sector		- (public)
Line manager involvement		+ (public)
HR strategy		+ (public)
HR practices		+(private)
Increased employee involvement		+(private)
Single union deal		- (public)
Foreign owned		- (private)
Greenfield site		+(private)
Non-union representation		- (private)
Employee variables		
Job satisfaction		+(private)
Perceived consultation		-(private)
Estimation method	Ordered probit	OLS regression

Key + associated with raised performance
- associated with reduced performance

Table 2 Summary of studies of the relationships between quality performance and other WERS questions.

Performance measures **Sources**	**Quality of product/service performance associated with:** Turner 1999	**Quality of product/service performance associated with:** Guest et al, 2000
Employer/ manager variables		
Rising value of main product/service	+	
More employee autonomy	+	
Higher degree of employment security expected	+	
Human resource system in place	+	+(public) +(private)
More employee consultation	+	+(public) +(private)
Organization size		-(public) -(private)
Establishment size		+(private)
Education sector		-(public)
Health sector		+(public)
Change of ownership		+(private)
Greenfield site		+(private)
Trade union density		+(public) -(private)
HR strategy		+(public)
HR practices		+(private)
Consultative climate		+(private)
Involvement climate		+(private)
Employee variables		
Higher employee commitment	+	
Job satisfaction		+(public) +(private)
Higher perceived employee influence		+(private)
Perceived consultation		-(public) -(private)
Estimation method	OLS regression	OLS regression

Key + associated with raised performance
- associated with reduced performance

Table 3 Summary of studies of the relationships between financial and sales performance and other WERS questions.

Performance measures **Sources**	**Financial performance associated with:** Turner 1999	**Financial performance associated with:** Guest et al, 2000	**Sales performance associated with:** Guest et al, 2000
Employer/ manager variables			
Rising value of main product/service	+		
More employee autonomy	+		
Higher degree of employment security expected	+		
Human resource system in place	+		
More employee consultation	+		
Organization size		+(public) -(private)	+(private)
Establishment size		+(private)	
Single site establishment			-(private)
Foreign owned			-(private)
Age		-(private)	-(private)
Health sector		-(public)	
Change of ownership			
Trade union density			-(private)
HR strategy		+(public)	
HR practices		-(private)	
Line manager involvement			+(private)
Productivity performance		+(public) +(private)	+(private)
Productivity change		+(public)	
Quality performance		+(private)	
Labour costs		-(public)	+(private)
Absence		+(public)	
Employee influence		-(public)	
Estimation method	OLS regression	OLS regression	OLS regression

Key + associated with raised performance
- associated with reduced performance

3. Models of performance

In this paper our model of business or establishment performance is in the form of a production function where the performance measure of establishment i is the outcome and the inputs are a set of human resource (HR) policies and practices along side a set of structural (S) and workforce characteristics (W).

$$Performance_i = F\ (S_i, W_i, HR_i, Famfriend_i)$$

The set of HR practices includes a set of family-friendly working arrangements (Famfriend) identified separately, along side other HR variables. The structural and workforce characteristics can be taken to represent the capital and, in the short term, relatively fixed components of the production or service process. In fact, all of the explanatory variables we consider in our model are relatively fixed over the short term since that is our main focus of interest. This means that where circumstances or inputs were important, in a transitory way, in determining the performance of these establishments in 1997/98 (the year to which the survey questions related) our model's explanation of performance will be worse because of their absence.

A strict test of these relationships should introduce a time dimension where the policies and characteristics of the organizations are lagged in time and recorded prior to the subsequent performance as follows:

$$Performance_{i\ t+1} = F\ (S_{it}, W_{it}, HR_{it}, Famfriend_{it})$$

It is relatively rare to have longitudinal data of this kind. In this paper, our main (WERS) data set is cross-sectional in nature with only a short period difference for the secondary (FTse100) data set.

There are of course different measures of performance and our data provide a range of such measures, as described below (Section 4). We chose to take each measure as the focus of a separate model, although recognizing that there were correlations between them. Because the variables are different in nature, different estimation procedures were used in each case, as was appropriate to the nature of each dependent performance measure variable. The same set of explanatory variables was entered into each performance model.

The earlier literature led us to expect certain relationships between our explanatory variables and the establishment's performance.

Better performance was expected from:

Smaller sized establishments and organizations;
Where competitive pressures were relatively less;
Where labour costs were lower (capital higher) as a proportion of total costs;

Where there were higher proportions of high value added knowledge workers, with greater skill levels and more discretion in their work;
Human resource policies called high commitment management (HCM) and where investment in people had higher priority; and
Employee involvement in the workplace.

Worse performance was expected from:
Certain industry sectors that were doing relatively worse than others in the 1990s (eg. manufacturing; financial services); and possibly
establishments with union recognition (to the extent that unions are successful in negotiating a wage premium that increases costs).

We might expect to see different strengths of effects on different performance measures. The HR policy variables would probably be expected to play a larger role in explaining quality performance, labour productivity, labour turnover and absenteeism than in explaining financial performance.

4. The WERS 98 data

The Workplace Employee Relations Survey (WERS 98) data were collected as a nationally representative sample of establishments from October 1997 to June 1998. The data consist of interviews with managers and workers in over 2191 workplaces and questionnaires from 28,323 employees from these same workplaces.[1] 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 a minimum of 25 employees. This means that the survey as a whole represents 15.8 million employees or approximately three-quarters of all employees in employment in Britain in 1998. 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 business performance.

WERS performance measures

A number of organization subjective performance measures were available in the WERS 98 manager survey questionnaire.

I want to ask you how your workplace is currently performing compared with other establishments in the same industry.
How would you assess your workplace's:
- *Financial performance;*
- *Labour productivity;*
- *Quality of product or service*

The coded responses consisted of a 5-point scale, in each case, ranging from *a lot better than average* to *a lot below average*.[2] We do not have any authenticating data from the organization for what are manager perceptions of their performance. One might expect that, if anything, managers would tend to exaggerate the organization's performance. The results suggest that this may have occurred. All of these questions tended to elicit what is probably a bias towards positive reporting of performance as Table 4 illustrates.

In the analyses carried out in this project, a number of recoded variables were constructed and used in estimation for each of these measures. We report the results of only one of the possible measures for each variable. Financial productivity and labour productivity were used in a dichotomous form with one indicating *above average* performance. Quality was left as a 5-point scale with zero as the average performance.

Table 4 Summary descriptive statistics on the WERS performance measures (weighted).

Assessment	Financial performance		Labour productivity		Quality of product service	
	Per cent		**Per cent**		**Per cent**	
	All Estabs	**Private sector**	**All Private Estabs**	**sector**	**All Private Estabs**	**sector**
A lot better than average	**12.8**	**14.5**	**10.4**	**11.0**	**23.1**	**26.0**
A little better than average	**35.8**	**37.9**	**32.7**	**32.3**	**47.4**	**48.2**
About average for industry	**31.5**	**31.0**	**36.1**	**39.3**	**19.7**	**18.0**
Below or a lot below average	**6.4**	**6.5**	**3.6**	**3.8**	**1.9**	**1.6**
No comparison or not relevant data	**13.5**	**10.1**	**17.2**	**13.6**	**7.8**	**6.2**
Total %	**100**	**100**	**100**	**100**	**100**	**100**
N	**2163**	**1632**	**2143**	**1618**	**2166**	**1633**
Missing	**34**	**15**	**50**	**29**	**24**	**16**

Establishments were also asked about the value of their sales over the last 12 months and whether they were rising (55% of establishments), falling (13%) or stable (32%). We constructed another dichotomous performance measure from these responses, with one indicating rising sales.

Estimations were carried out on these four measures for the private sector organizations only since the questions were not thought to be relevant to most public or voluntary sector establishments.

An alternative measure of labour productivity over the past 5 years was also examined to see if any variation was noted;[3] 81 per cent thought their labour productivity had gone up over the past 5 years. We decided, therefore, not to analyze this performance measure because of its lack of variation.

Two additional workforce or human resource performance variables were also analyzed since these have been central to the business case discussions about the effects of family-friendly policies;

- absence days (workdays lost through employee sickness or absence not authorized) over the last 12 months, with a mean of 4.4 days;
- labour turnover; calculated as a ratio of the total number of leavers during the last 12 months to employees in employment at the survey (with a mean of 20.8%).

Since these variables were relevant to both private and public sector establishments, estimations of the models were estimated on the private sector sample as well as on the whole sample of establishments. Some comment needs to be made about the absence statistics. For purposes of contributing to the work-life debate this measure is not ideal since it conflates two concepts; sickness (which can be a genuine and necessary reason for missing work) and absenteeism which is when employees have time off for reasons that are not recognised as valid by their employer. Of course, both sickness and absenteeism may increase where work-life is not in balance. Also, in practice, these two things are difficult to separate.[4] In the IPD survey of absence (2000), HR managers estimated that one third of sickness absence was not the result of ill health. Whilst there may be some overlaps, we would expect different sets of factors to influence sickness and absenteeism. Of the performance measures available in WERS, this statistic is the most problematic therefore and should be treated with the most caution .

This set of 6 performance measures consisted of 3 types of data requiring 3 types of estimation technique. Logistic regression analysis was used for the dichotomous variables (financial performance, labour productivity and rising sales); ordered probit techniques were used to estimate the ordered quality dependent variables; ordinary least squares regression (OLS) was used for the two interval data variables (turnover and absenteeism).

Family-friendly working arrangements in WERS

We were primarily interested in whether having family-friendly working arrangements were associated with improved business performance, after controlling for other potential

effects on performance. The WERS data provided a set of family-friendly working arrangements to use as explanatory variables. The 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;
- Flexi time.

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.[5] These two arrangements were collapsed into one (either/or) arrangement.

There is also a measure of the ethos of the organization from managers' responses that can be used as a potential explanatory variable. Employers were asked to score on a 5-point scale, from 1 strongly agree to 5 strongly disagree, the following statement.

It is up to individuals to balance their work and family responsibilities.

Several recoded versions of this and other variables were tried before settling, in this case, on a dummy variable where the value one indicated disagreement with this statement.

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 have or do not have entitlement to the relevant policies. These findings teach us to 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 employees access to family-friendly working arrangements, or communicating with all employees about the provisions they offer.

Other explanatory variables

The WERS data provided a very wide range of other explanatory variables to use as controls. The variables included are listed in Table 5 although a full list of the variables used and their definitions, means and standard deviations is provided in Appendix Table A1. At the start of our analysis, 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-colinearily. Others were dropped as a result of this exercise.

The set of variables included covered measures of structural characteristics of the establishment, its workforce profile, and its human resources practices. We did not enter other performance measures into alternative performance measure models as potential explanatory variables as some other studies have done. Most of the measures were highly correlated with each other, not surprising when they were all based on managers' perceptions. [6]

Table 5. List of explanatory variables included in the performance models

Structural characteristics
Establishment size (set of dummies)
Organization size (set of dummies)
Industry groups (set of dummies)
Foreign owned
Owner controlled
Multinational
Recognised union
Location of market (set of dummies)
Nature of competition (set of dummies)
Percent of labour to total costs (set of dummies)

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

Human Resource practices
Family-friendly ethos
Investor in People award
Performance-related-pay used
Other fringe benefits offered
Percent on regular overtime
HR specialist at the establishment
HR specialist at Head Office
Consults the workforce on equal opportunities and welfare
Has equal opportunities policies but little implementation
Has equal opportunities policies and greater implementation
Industrial relations disputes in past year
High Commitment Management practices
Employer thinks employees involved in decision-making

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 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 A3.

5. Results of the WERS analyses

The full set of results from the models of performance measures available in WERS are displayed in Appendix Tables A2. Here we focus primarily on the effects of incorporating family-friendly policies into the models of performance. The most well defined models were those of sales value and labour turnover. The model of absence was the least well defined, possibly because the data are conceptually confused, as we suggested earlier.

Family-friendly policies in the private sector

The results for the coefficients on family-friendly policies added one at a time to the models are displayed in Table 6 for the private sector only. What we are able to see from these results is that, after controlling for a wide range of structural and other human resources practices, family-friendly policies are associated with small amounts of

improved performance. Since we are dealing with cross-sectional data we cannot be sure that the family-friendly policies have caused the improvements in performance, only that they are significantly correlated.

Above average *financial performance* was associated with:

- paternity leave; and
- job share.

Above average *labour productivity* performance was associated with:

- Parental leave (non-statutory);
- Paternity leave;
- The ability to change from full- to part-time hours; and
- Having a higher number of family-friendly policies.

Improvements in *quality performance* were associated with:

- Term time only work;
- The ability to change from full- to part-time hours;
- Offering help with child care; and
- Having a higher number of family-friendly policies.

Rising *sales value* was associated with:

- Job share;
- The ability to change from full-time to part-time hours; and
- Having a higher number of family-friendly policies

Reduced *labour turnover* was associated with:

- Job share;
- Flexitime;
- Help with child care; and
- Working at or from home.

Absence did not have any benefits from family-friendly policies being present.

However, some performance measures appeared to suffer from the presence of certain family-friendly policies.

- Flexitime was associated with a reduction in financial performance;
- Emergency leave was associated with increases in labour turnover; and
- Term-time work and possibly flexitime were associated with increases in absence.

- **Table 6. Results on selected coefficients entered into performance models – Private sector only**

Variable entered	Financial performance With structural variables only Coeff. P> | t |	Financial performance With structural, workforce and HR variables Coeff. P> | t |	Labour productivity With structural variables only Coeff. P> | t |	Labour productivity With structural, workforce and HR variables Coeff. P> | t |	Quality performance With structural variables only Coeff. P> | t |	Quality performance With structural, workforce and HR variables Coeff. P> | t |
Manager says has:						
Parental leave	0.081 (0.49)	0.011 (0.93)	0.234 (0.04) **	0.138 (0.28)	0.064 (0.33)	0.020 (0.78)
Paternity leave	0.225 (0.05) *	0.232 (0.07) *	0.216 (0.07) *	0.252 (0.05) *	-0.051 (0.44)	-0.126 (0.08) *
Job share	0.311 (0.02) **	0.266 (0.08) *	0.179 (0.17)	0.144 (0.33)	0.102 (0.17)	0.033 (0.69)
Term time	0.045 (0.80)	-0.086 (0.67)	-0.008 (0.96)	-0.143 (0.46)	0.316 (0.00) **	0.235 (0.03) **
Ability to change FT-PT hours	0.122 (0.29)	0.006 (0.96)	0.294 (0.01) **	0.179 (0.17)	0.182 (0.01) **	0.082 (0.25)
Flexi time	-0.274 (0.07) *	-0.283 (0.08) *	-0.111 (0.46)	-0.158 (0.33)	0.017 (0.84)	-0.071 (0.43)
Nursery	-0.030 (0.92)	-0.239 (0.45)	-0.068 (0.82)	-0.238 (0.45)	-0.251 (0.12)	-0.324 (0.06) *
Help with child care	0.071 (0.78)	0.016 (0.95)	-0.030 (0.91)	-0.076 (0.78)	0.297 (0.04) **	0.196 (0.20)
Emergency leave	-0.053 (0.63)	-0.048 (0.69)	0.111 (0.33)	0.098 (0.42)	0.067 (0.29)	0.091 (0.18)
Home work	0.073 (0.63)	0.039 (0.81)	0.149 (0.32)	0.023 (0.89)	0.095 (0.27)	0.037 (0.70)
Number of policies	0.036 (0.31)	0.007 (0.86)	0.073 (0.04) **	0.039 (0.03) **	0.048 (0.01) **	0.014 (0.52)
Estimate method	logit	logit	logit	logit	Ordered probit	Ordered probit

In some cases of benefits from family-friendly policies, the benefit lost significance when other HR or workforce variables were added to the other structural variables included in the models. These differences are displayed by comparing the first and second columns for each set of results in Table 6. This meant that the family-friendly variable in question was related to the other HR variables entered, and multicollinearity that resulted reduced the significance of the family-friendly measure. The inclusion of interaction measures confirmed the significance of the family-friendly measures in the more extensive model.

Having a family-friendly ethos was associated significantly with above average financial, labour productivity, quality and sales performances (See Appendix Table A2).

The sizes of a selection of these effects is set out in Figures 1 and 2.[7] The figures display a selection of predicted probabilities of establishments having above average performance or rising sales. The effects of adding one of the family-friendly arrangements, or a number of them, to a base set of characteristics, are displayed. Adding the job share arrangement produced the largest increase in the predicted probabilities for financial performance and sales, followed by paternity leave in the case of financial performance and a workplace nursery or the ability to change from full- to part-time hours in the case of sales.

Figure 1. Predicted probabilities of above average performance, given contribution of family-friendly policy.

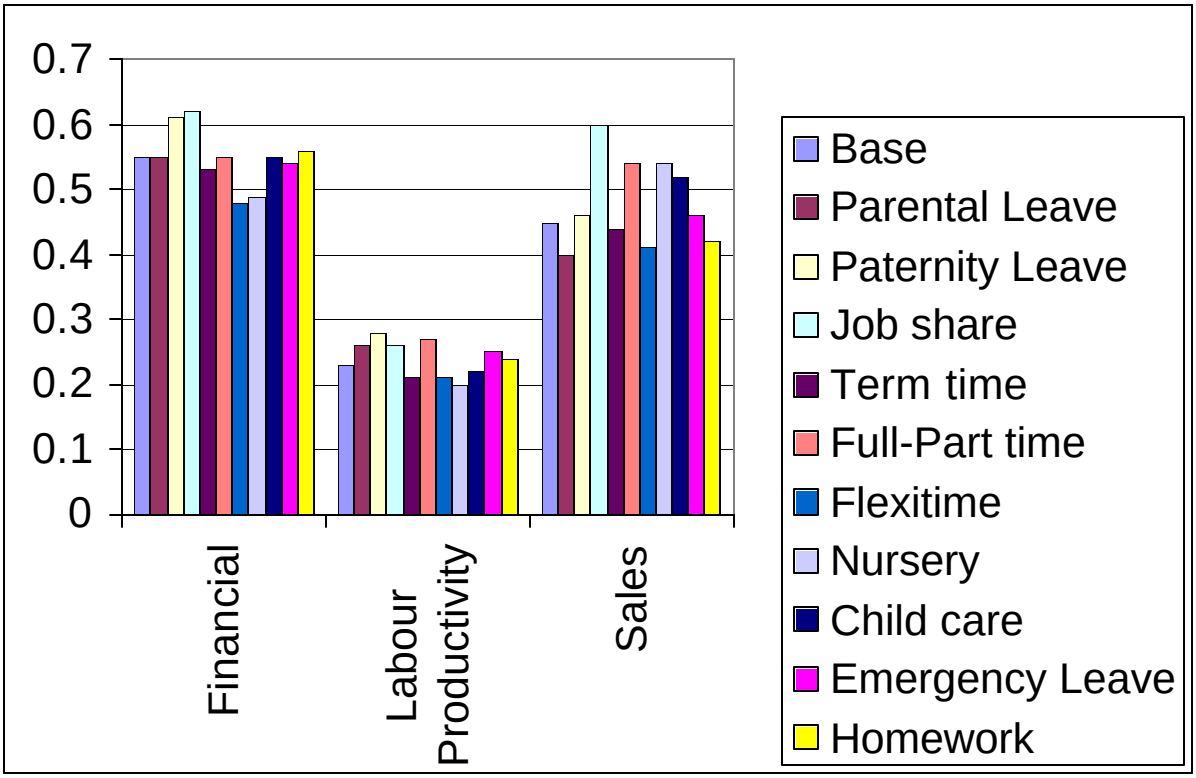
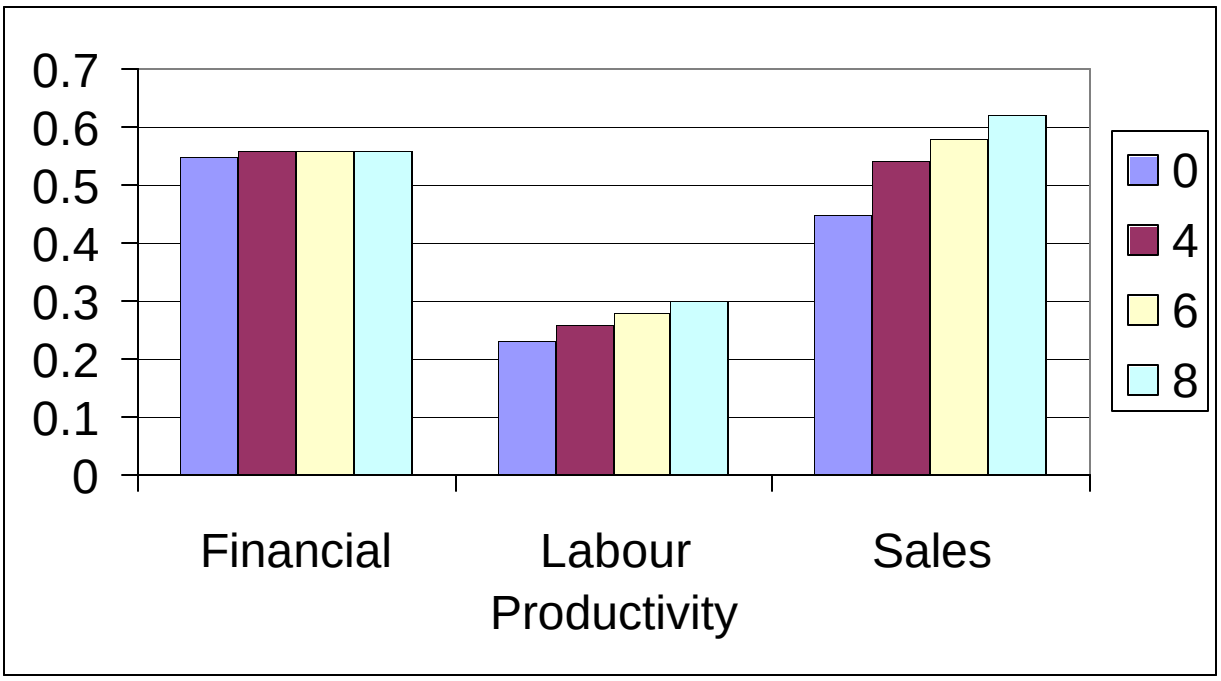


Figure 2. Predicted probabilities of above average performance, by number of family-friendly policies.



Offering paternity leave added the largest increase to the probability of above average performance in the case of labour productivity followed by the ability to change from full- to part-time hours. Increasing the number of policies had little effect on financial performance but did increase the probabilities of above average performance in labour productivity and rising sales.

The models for labour turnover and absence were estimated on the whole sample, as well as on the private sector samples only since it was felt these performance measures applied to all sectors, private and public (Tables 7 and 8). Some differences in the results are worth noting.

A reduction in labour turnover was associated with job share, flexitime, help with child care and working from or at home across both private and public sectors (Table 7). However, in all cases, there was interactions with other HR variables that reduced the significance of these associations when HR variables were entered. The bad effects on absence of term-time employment were not apparent in the sample covering both sectors although the bad effects of flexitime were repeated in both sectors (Table 8).

Family-friendly effects and the good employer

We needed to consider whether the effects of family-friendly policies on performance noted above are specific to these policies or a feature of some companies being good

employers. Separating out these possible scenarios is difficult although an attempt was made to do this in order to address this issue in our paper.

We constructed a measure of being a good employer by running a set of human resources practices through a factor analysis and identifying the resultant factors. The list of variables used and the results are described in Appendix A3. One factor with an eigenvalue greater than one was identified and the factor score for this variable was used in a set of further analyses.

The bivariate correlations of the good employer (factor score) and the individual family-friendly policies indicated significant correlations ($p<0.05$) between the good employer measure and each family-friendly working arrangement except emergency leave as follows; a higher number of family-friendly policies (0.484), parental leave (0.330), flexitime (0.291), job share (0.409), homework (0.207), having a nursery (0.210), offering help with childcare (0.197), the ability to change from full to part-time hours (0.325), term-time work (0.250) and paternity leave (0.389). These results indicated initial support for the idea that good employers were also those offering family-friendly policies in British establishments. However the correlations are far from being perfect. In each case the correlations was well below one half which suggests that offering family-friendly policies as part of being a good employer is far from being the whole explanation of these policies.

When entered into the performance models, with the structural set of independent variables only, the good employer variable was significant and positively associated with improved performance in the cases of quality performance, sales, and labour turnover. The inclusion of the good employer variable in addition to the separate family-friendly policies, affected the significance of 7 of the 18 significant family-friendly variable effects in the original estimations (Appendix Table A4). There were relatively minor changes in the sizes of the coefficients on the family-friendly set. No longer significant after entering the good employer were the following:

- The effect of flexitime on above average financial performance;
- The effect of the ability to change from full to part-time on above average labour productivity;
- The effects of a higher number of family-friendly policies on above average labour productivity;
- The effects of help with child care on quality performance;
- The effects of a higher number of family-friendly policies on rising sales;
- The effects of job share and child care in reducing labour turnover.

Table 7. Results on selected coefficients entered into labour turnover models. Private sector compared with all sectors

Variable entered	Labour turnover Private sector With structural variables only		Labour turnover All sample With structural variables only		Labour turnover Private sector With structural, workforce and HR variables		Labour turnover All sample With structural, workforce and HR variables	
	Coeff.	P> | t |	Coeff.	P> | t |	Coeff.	P> | t |	Coeff.	P> | t |
Manager says has:								
Parental leave	-0.014	(0.31)	-0.012	(0.21)	0.004	(0.80)	-0.001	(0.94)
Paternity leave	-0.008	(0.56)	-0.013	(0.20)	0.004	(0.77)	-0.006	(0.56)
Job share	-0.031	(0.04) **	-0.024	(0.02) **	-0.012	(0.44)	-0.010	(0.41)
Term time	0.033	(0.11)	0.017	(0.17)	0.042	(0.04) **	0.029	(0.03) **
Ability to change FT-PT hours	0.012	(0.36)	0.009	(0.37)	0.014	(0.34)	0.011	(0.29)
Flexi time	-0.043	(0.01) **	-0.027	(0.02) **	-0.020	(0.26)	-0.015	(0.22)
Nursery	-0.042	(0.21)	-0.013	(0.47)	-0.036	(0.29)	-0.013	(0.47)
Help with child care	-0.056	(0.05) **	-0.034	(0.08) *	-0.014	(0.65)	-0.011	(0.59)
Emergency leave	0.026	(0.05) *	0.014	(0.12)	0.024	(0.07) *	0.014	(0.14)
Home work	-0.049	(0.00) **	-0.033	(0.01) **	-0.024	(0.20)	-0.018	(0.18)
Number of policies	-0.005	(0.24)	-0.004	(0.13)	0.002	(0.64)	0.001	(0.90)
Estimation method	OLS		OLS		OLS		OLS	

Key: HR – human resources variables entered.
FT-PT ability to change from full- to part time hours

Table 8. Results on selected coefficients entered into absence models – Private sector compared with all sectors

Variable entered	Absence Private sector With structural variables only		Absence All sample With structural variables only		Absence Private sector With structural, workforce and HR variables		Absence All sample With structural, workforce and HR variables	
	Coeff.	P> | t |	Coeff.	P> | t |	Coeff.	P> | t |	Coeff.	P> | t |
Manager says has:								
Parental leave	-0.172	(0.57)	0.037	(0.87)	-0.197	(0.53)	0.099	(0.67)
Paternity leave	0.329	(0.27)	0.370	(0.14)	0.252	(0.42)	0.436	(0.10) *
Job share	0.296	(0.38)	0.216	(0.39)	0.302	(0.40)	0.373	(0.16)
Term time	1.053	(0.02)**	0.305	(0.30)	0.806	(0.08) *	0.249	(0.42)
Ability to change FT-PT hours	0.025	(0.93)	0.042	(0.85)	-0.319	(0.31)	-0.058	(0.81)
Flexi time	0.567	(0.14)	0.357	(0.19)	0.823	(0.04) **	0.631	(0.03) **
Nursery	0.073	(0.92)	-0.474	(0.27)	0.077	(0.92)	-0.567	(0.19)
Help with child care	-0.052	(0.93)	-0.225	(0.62)	0.054	(0.93)	-0.146	(0.75)
Emergency leave	0.361	(0.21)	0.254	(0.25)	0.145	(0.62)	0.161	(0.47)
Home work	-0.524	(0.18)	-0.468	(0.10) *	0.041	(0.92)	0.006	(0.98)
Number of policies	0.117	(0.21)	0.054	(0.41)	0.103	(0.28)	0.098	(0.18)
Estimation method	OLS		OLS		OLS		OLS	

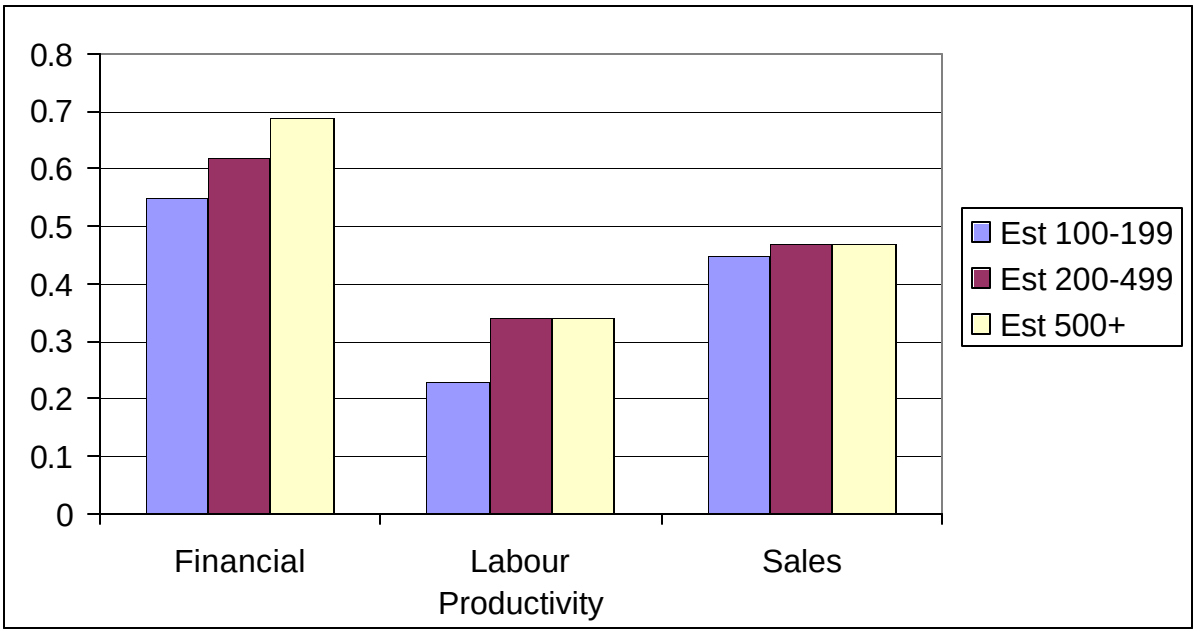
Key: HR – human resources variables entered.
FT-PT ability to change from full- to part time hours

The log likelihood or adjusted R squared values (Appendix Table A5) for the set of models containing good employer with and without family-friendly policies allowed us to examine the extent to which family-friendly policies added to the explanatory power of each model, as compared to the good employer variable. The addition of the good employer variable to the structural set of variables added most to the explanation in all performance measures except labour turnover. However, the addition of each family-friendly policy, either before the good employer variable was entered, or after it was entered, still added to the explanatory power of the model. Family-friendly policies added, therefore, to the explanation of performance over and above controlling for being a good employer.

Other controlling variables

We need to be reasonably confident that our model contained most of the relevant explanatory variables and that reasonable results were obtained if we are to have confidence in the conclusions about the effects or associations found between performance and family-friendly policies. The full results of the model with all structural, workforce and HR variables entered are displayed in Appendix Table A2.[8] Size was significant in improving the performance in the case of financial performance and labour turnover. It was the size of the establishment that was important and generally not the size of the organisation (Figure 3) [9].

Figure 3 Predicted probabilities of above average performance, by size of establishment.



Key. Est – number of employees in establishment.

Increasing size had the largest impact on financial performance. This is to be expected given that the question wording asked managers to rate their *workplace's* performance against some notional average. Financial performance tended to be best in the largest size of establishment (500+ employees) and next best in the establishments with 200-499 employees but also in those with 50-99 employees. Multinationals also had better financial performance. On the whole these are the larger organizations. Labour turnover was lowest in the establishments with 100-199 employees, rising in the smaller and the larger establishments. Labour productivity was greatest in the largest establishments (500+). Size of establishment (and organisation) were not significant influences on quality performance or absence. In the case of sales value, increases in establishment size was a significant factor determining rising sales, but one which was made insignificant by entering variables capturing the workforce profile. In all these cases, our findings did not entirely match the expectation that smaller size would be associated with better performance through the reputed faster growth of smaller businesses. Again we suspect that the nature of the questions was at least in part responsible for this finding. The questions directed managers to create a notional average with which to compare themselves; managers might well have conceived of this *average* applying to establishments of the same size as the respondent's establishment.

The performance of some industry groups was distinguishable. Financial services stood out as being more likely to have average or below average financial performance and labour productivity. Rising sales were less likely in manufacturing, energy and utilities, wholesale/retail, transport and health sectors. In part these results reflect some of the difficulties facing these industries in the late 1990s. Labour turnover was higher than other industries in the hotel and catering sector, a well known problem for this sector, given its relatively low wages and seasonal and casual employment. Absence was also higher in business services and in the health sector. The problems of the health sector and the low morale of many of its workers that underlie the absence statistic are also well known (eg. Lapido et al, 1999 on midwives).

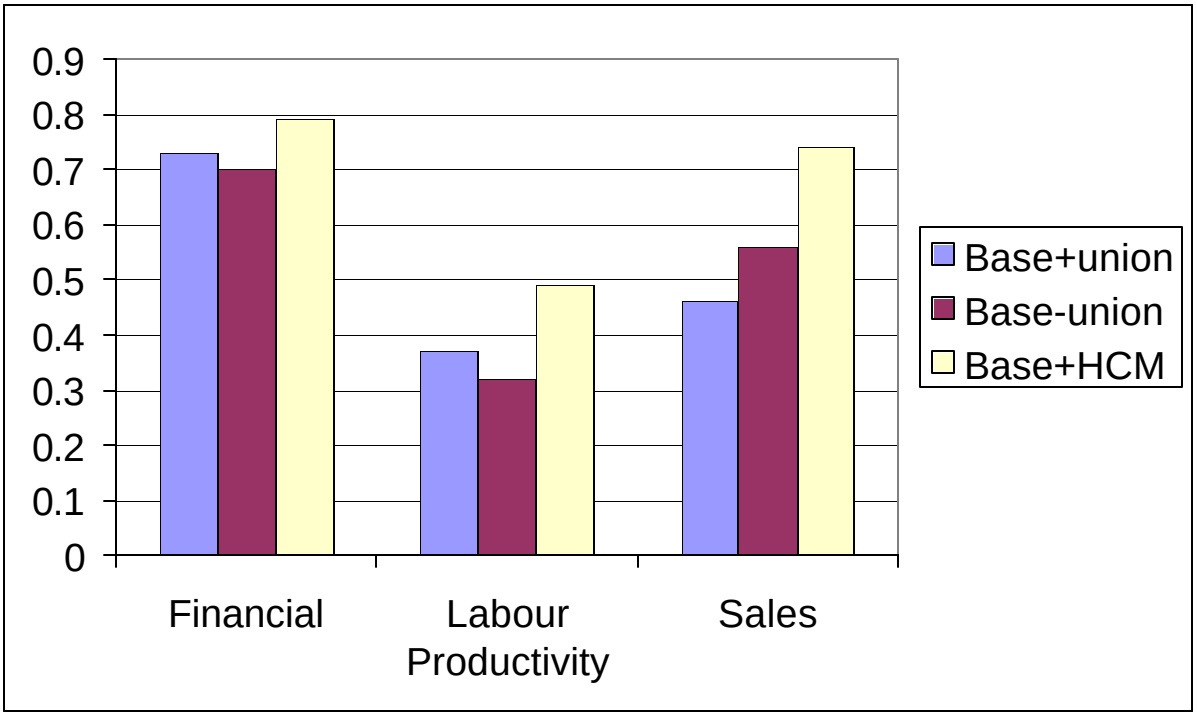
The competitive nature and location of markets were not significant influences on establishment performance in these results. High proportions of labour to total costs were associated with lower financial and sales performance.

A higher proportion of females in the labour force was associated with above average financial and quality performance but higher rates of absence. However, a high percentage of part time hours in the female workforce was associated with below average financial performance. Given the low-skilled, low-wage nature of many part-time jobs in Britain, this result supports the view that better financial performance is associated with the high-skill knowledge work, rather than low wage economies. The fact that better performance was associated with the higher skill dummy variables in all performance measures except absence, and having greater discretion was also associated with better performance on many measures (all except financial and sales), further supports this conclusion. The results for the share of non-managerial workers are counter evidence to this thesis, since better quality and sales performances were associated with higher shares on non-managerial, non-professional workers.

Performance-related-pay (PRP) and higher proportions of regular overtime were significantly associated with rising sales but not with other performance measures. This result makes intuitive sense from the incentives PRP and overtime provide to sales workers to increase their earnings. PRP was also associated with lower levels of absence, presumably through these reward systems having the same supervisory and control functions. Recruitment difficulties made above average quality performance less likely but were associated with rising sales. In the latter case this is probably a consequence of success rather than its cause.

High commitment management practices were associated significantly with above average or better performance in all performance measures except absence (Figure 4). Equally managers attaching greater importance to employee involvement was associated with better turnover and above average quality performance. Having a recognised union in the establishment was a significant factor reducing performance in terms of the quality of the product or services and sales. This overlaps with the expectations of the high commitment management theories. However, union recognition was a factor associated with lower labour turnover. Recent bad industrial relations made it less likely to have above average financial performance. However, some of the usual accompaniments to these HR policies were not always associated with better performance. Having an HR specialist in the establishment was associated with worse labour turnover and below average labour productivity, possibly as a response rather than a cause. Similarly having stronger equal opportunities policies was associated with higher labour turnover.

Figure 4 **Predicted probabilities of above average performance, by union or high commitment management practices (HCM) contribution**



Key: HCM – high commitment management practices

Most of these results were reasonable and intuitively plausible although not wholly in accord with our expectations. While support was gained, from some performance measures, for the hypotheses about the effects of size, knowledge workers, and HR practices, the picture was shown to be more complicated, partly by considering a range of performance measures along side each other. The predicted probabilities displayed in Figure 4 show that high commitment management strategies had a larger impact on improving financial and labour productivity performances than did the addition of a recognised union.

6. The FTse100 data (Financial Times Stock Exchange companies).

In order to satisfy the need for information by ethical investors, the Ethical Investment Team at the stock broking firm Rathbone Investment Management Ltd. (Bristol) contacted FTse100 companies to ask them to complete a structured questionnaire about their policies. When completed, a telephone follow up was carried out to clarify data or to request further information. Dr. Sally Winter collected these data. Survey questions that asked about family-friendly policies were included in 1996 and in a follow- up survey of the same companies in 1998. In 1998, the companies were also asked to provide information about policies to deal with harassment and work-related stress. Of the 100/104 companies represented at the two dates, data were successfully collected in 1998 from 51 companies. A summary of the initial findings was published in Rathbone Neilson and Cobbold (1999) from a Report by Winter (1999). The Ethical Investment Team at Rathbone Investment Management Ltd. kindly gave us permission to use an anonymous version of the existing data to use in carrying out further multivariate analysis. We have also attempted to make the data more complete. Telephone interviews were carried out with the 53 non-responders in 1998 to find out about their policies in 1998. In some cases it was not possible to obtain this information for a variety of reasons. However, in 30 cases we are convinced that reasonably reliable information has been obtained from this exercise. To this survey data we have linked a set of company-specific performance measures obtained from their Annual Accounts, as deposited in DATASTREAM. In total we had information from 81 of the 1998 FTse100 companies on which to carry out analysis.

FTse100 performance measures

The performance measures for the FTse100 companies were obtained from DATASTREAM. In principle, this source contains a large range of public and mostly financial measures of performance based on company accounts although in practice the records are far from being complete year on year. In some cases this is because of mergers, takeovers or sale and ownerships changes in companies that make the data incomparable over time. As indicated earlier, where available, these performance measures were merged with the policy data obtained from a telephone survey of the companies.

A selection of cross-sectional and change measures have been derived to use as dependent variables. A separate model was estimated on each performance measure. The measures of change are related to the period after the FTse100 survey about company policies was carried out. We are attempting to ask, therefore, to what extent do policies current in 1998 influence future performance of these large companies.

We set out hoping to consider longer term performance measures. However, we found that were unable to construct even three year averages from the database information for a sufficient number of companies to keep up a small sample size. We constructed some quasi productivity measures by using the per capita/employee version of the performance measure in some cases. The *dependent variable* performance measures obtained are listed below.

- Operating profit per employee in 1998;
- Average operating profit per employee 1998, 1999;
- Percentage change in operating profit 1998 to 1999;
- Return on capital in 1998;
- Average return on capital 1998 and 1999;
- Percentage change in book value of share 1998 to 1999;
- Dividend per share in 1998;
- Percentage change in dividend per share from 1998 to 1999;
- Percentage return to shareholder equity 1998; and
- Percentage change in value added 1998 to 1999.

FTse100 explanatory variables

The explanatory variables available to enter into these models are limited, compared with those available in the WERS data. DataStream variables were able to supplement the set of variables from the survey to a limited extent. Measures of the following company variables were obtained from DataStream:

- Total employees in 1998;
- Percentage change in total employment 1997 to 1998;
- Capital per employee in 1998;
- Average salary per employee in 1998;
- Percentage change in average salary 1997 to 1998;
- Labour intensity; and
- Industry categories.

Independent variables available from the survey included:

- Measures of nature and extent of Equal Opportunities policies in 1998;
- Percentages of women in management in 1998;
- Indicator of involvement of the workforce in devising policies in 1998;
- Details about existence of policy on 13 family-friendly policies in 1998; namely, part time hours, job share, flexi time, term time hours, teleworking, enhanced

maternity leave or pay, paternity leave, compassionate leave, emergency leave, family leave, workplace nursery, other help with child care, and finally, elder care leave or information about elder care assistance; and

- Extent to which company took action on stress in 1998.

7. FTse100 Results

A breakdown of the means of the performance measures available revealed that operating profit per capita and changes in added value increased significantly as the overall assessment of the extent of family-friendliness of FTse100 companies increased (Table 9). Other measures did not show any relationship with the extent of being family-friendly for this group of companies.

Table 9 Means of performance measures as related to extent of overall assessment of family-friendly policies of Ftse100 companies in 1998.

Level of family-friendly	**Operating profit per capita, £ in 1998**	**Percent change in value added 98-99**
Low	20.7 (20)	17.9 (20)
Medium	33.8 (32)	18.6 (32)
High	76.4 (23)	27.2 (23)
Total sample N	75	75

Key: Low/medium/high were classified by the researcher who carried out the interviews on the basis of the number of policies offered but also the quality of the implementation and follow through.

In the models, relatively few of the independent variables were found to be significantly correlated with any of the financial performance measures although this varied by performance measure. The model explaining the change in added value had the best fit (R square approx. 0.5 and higher in some models). Operating profit had the second best model fit. A few results are displayed in Table 10. A full summary of significant results is set out in Appendix A6

Table 10. Summary results of determinants of financial performance 1998 FTse100.

Performance measure	**Significant results (p less than or equal to 0.1)***
Average 98/99 return on capital	lower in energy industry lower in transport and distribution sector Increased with higher number of women non-exec directors Lower with stronger EO policies ▪ Increased with part time employment (p=0.1) ▪ Increased with term time employment ▪ Reduced with compassionate leave ▪ Reduced with workplace nursery ▪ Reduced with emergency leave (p=0.1)
% change in value added	Increases with increases in average salary Reduced by higher changes in average salary 97 to 98 Increased by increased labour intensity@ Higher in energy sector Higher in transport and distribution sector Higher in finance sector (on margins) ▪ Increased with part time employment@ ▪ Increased with telework@ ▪ Increased with compassionate leave@ ▪ Increased with emergency leave@
Key: @ Labour intensity and separate policy measures interact and affect each other's significance.	+ significant in some models only, again through interactions. * results also indicated at the border of the significance level of 10%.

There were some significant correlations with separate family-friendly policy measures. However, in most cases these interacted with labour intensity and often became insignificant when the measure of labour intensity was included. There were insufficient cases to extend the model to include interaction terms. Family-friendly policies appeared to have most influence and a positive affect in explaining percentage changes in value added.

When the alternative summary measures were entered (ie. number of policies, or the constructed overall assessment of the companies family-friendliness), these more general measures were largely insignificant. These overall summary measures were also highly

correlated with the strength of equal opportunities policies, but EO policies were equally lacking in significance in the results when entered separately or with other variables.

By comparison with the other determinants of business performance, the contribution of family-friendly working arrangements was relatively weak and often insignificant. In the case of percentage changes in value added and per capita operating profit, there was some evidence that pointed to family-friendly policies being associated with good performance. However, the evidence on whether family-friendly policies affect the financial or productivity performance of FTse100 companies is not strong. The FTse100 data are interesting and important for their influence in the British economy but nonetheless small in numbers of cases and variation to be explained. Also the performance measure data did not capture important longer-term performance of these companies. It is perhaps not surprising that many of the models were not well specified. Further investigation would be required, when future years of performance data are available, in order to obtain more robust conclusions.

8. Conclusions

This paper set out to address some important policy questions with newly available British data. The British discussion about how far there is a business case for employers to introduce family-friendly policies has been waiting for larger scale survey data to complement the case study material that has accumulated. Representative data are important in order to test whether any potential benefits from family-friendly policies are restricted to certain organizations where conditions are favourable. Our analysis, in the cross-section, of whether various components of private sector business performance are affected by employers offering family-friendly policies to their employees has suggested that some benefits do exist after controlling for a wide range of other determinants. In particular the WERS data found associations between a family-friendly ethos in the establishment and most aspects of the performance of private sector establishments. Also small but significant associations were noted between particular performance measures and some of the range of family-friendly working arrangements for 5 of the 6 performance measures available. In all cases, the effects noted were over and above those attributable to good employers having a bundle of policies, family-friendly policies being just one of the raft. Absence did not appear to benefit from family-friendly policies being available. However, that the statistics on absence are conceptually confused and probably the least satisfactory of the WERS performance measures. Drawing robust conclusions about the FTse100 companies will have to await a longer run of performance data becoming available.

A lot of emphasis has been placed on the business case for having flexible working arrangements. These results offer some support for the business case for flexibility, but at the same time, the effects are small. Is this bad news? Well for those hoping for greater effects, the results might be disappointing. On the other hand, the lack of sizeable negative effects from offering employees more flexibility has notable policy implications. If it helps employees, and they like it, as other evidence suggests is the case, the absence

of bad effects on performance is a good reason for pressing ahead. The public sector is the one area where some caution may need to be exercised.

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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
Turnover	0.208	0.221	During last 12 months number of permanent employees (full and part time) who stopped working here as a proportion of all current employees, (zresigne+zdismiss+zredund+zother)/zallemps)
Absence	4.378	4.462	Over last 12 months, work days lost through employee sickness or absence at this establishment, (zabsence)
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)
Labour productivity	0.419	0.493	Manager assesses workplace's labour productivity as a lot better or , better than average, 0/1 (kestper2)
Quality of product/ Service	0.916	0.754	Manager assesses workplace's quality of product or service as a lot better (+2), better than average (+1), about average for industry (0), below average (-1) or a lot below average (-2) (kestper3)
Sales value	0.385	0.487	Over the last 12months, value of sales for main product or service of this establishment has risen, 0/1, (kvalsal).

			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		

Table A2. Determinants of private sector establishment performance

Explanatory variables	Above average financial performance		Above average labour productivity		Quality of performance		Rising sales value		Labour turnover		Absence	
	Coeff.	P> | t|	Coeff.	P> | t|	Coeff.	P> | t|	Coeff.	P> | t|	Coeff.	P> | t|	Coeff.	P> | t|
Estab 25-49	0.370	0.08 *	-0.053	0.80	-0.104	0.38	-0.056	0.81	-0.057	0.02 **	-0.520	0.31
Estab 50-99	0.442	0.04 **	0.015	0.94	-0.022	0.86	-0.046	0.85	-0.089	0.00 **	-0.422	0.44
Estab 100-199	0.128	0.58	-0.232	0.32	0.036	0.77	0.067	0.80	-0.098	0.00 **	-0.736	0.20
Estab 200-499	0.440	0.07 *	0.256	0.30	0.148	0.27	0.128	0.65	-0.079	0.00 **	-0.424	0.49
Estab 500+	0.740	0.01 **	0.170	0.56	0.020	0.90	0.092	0.78	-0.065	0.04 **	-0.281	0.69
Orgsize 500+	-0.162	0.43	-0.304	0.15	-0.029	0.80	-0.183	0.44	-0.027	0.23	0.377	0.45
Org 2k-9999	-0.101	0.62	0.335	0.10	-0.004	0.97	-0.227	0.33	- 0.008	0.71	0.627	0.21
Org 10k-49999	-0.099	0.68	0.382	0.11	-0.132	0.32	-0.009	0.97	-0.019	0.47	0.643	0.27
Org 50k+	0.217	0.43	0.602	0.03 **	-0.009	0.95	-0.104	0.73	-0.021	0.48	0.565	0.39
Manufacturing	-0.289	0.37	-0.149	0.64	-0.060	0.74	-1.084	0.01 **	-0.008	0.81	1.171	0.13
Energy/utilites	0.115	0.77	-0.266	0.51	0.154	0.50	-1.875	0.00 **	-0.002	0.96	-0.100	0.92
Construction	0.188	0.62	0.259	0.49	0.370	0.07 *	-0.431	0.36	-0.041	0.34	0.213	0.82
Whole/retail	-0.128	0.68	-0.328	0.30	-0.137	0.44	-0.864	0.03 **	0.021	0.54	1.015	0.18
Hotel&Cat	0.426	0.22	0.045	0.89	0.139	0.47	-0.222	0.60	0.224	0.00 **	1.039	0.22
Transport	-0.396	0.28	0.212	0.56	0.126	0.53	-0.779	0.08 *	0.001	0.98	1.390	0.12
Financialservs	-0.735	0.05 *	-0.797	0.04 **	-0.42	0.04	-0.582	0.19	-0.026	0.53	0.658	0.47
Business servs	-0.248	0.43	-0.057	0.85	0.183	0.31	-0.597	0.12	0.028	0.43	1.417	0.07 *
Education	0.367	0.42	-0.282	0.55	0.200	0.43	-0.539	0.32	-0.036	0.48	0.617	0.59
Health	-0.434	0.24	-0.030	0.93	0.236	0.26	-1.543	0.00 **	0.040	0.31	1.637	0.07 *
Foreign	-0.064	0.72	0.083	0.64	-0.114	0.25	-0.435	0.03 **	0.013	0.50	0.569	0.18
Owner	-0.034	0.84	-0.042	0.81	0.145	0.12	0.010	0.95	-0.016	0.39	0.292	0.48
Multinational	0.347	0.02 **	0.087	0.55	-0.009	0.92	0.108	0.52	-0.012	0.47	0.244	0.49
Recognised union	-0.069	0.65	-0.031	0.83	-0.169	0.04 **	-0.412	0.02 **	-0.047	0.01 **	0.229	0.53
Local market	-0.051	0.75	-0.159	0.32	-0.115	0.19	-0.132	0.44	0.027	0.12	0.287	0.47
Internat markt	-0.191	0.31	-0.306	0.10	0.043	0.66	-0.152	0.43	-0.010	0.62	-0.009	0.98
NoCompetitor	0.154	0.62	0.014	0.96	-0.036	0.84	0.535	0.11	-0.057	0.11	0.387	0.59
Few Competitor	0.100	0.48	-0.014	0.92	0.039	0.61	0.147	0.31	-0.023	0.13	0.389	0.25
Competitors missing	-0.006	0.97	-0.223	0.27	-0.002	0.98	-4.390	0.00 **	-0.029	0.19	-0.054	0.91
Lab costs50-75%	-0.304	0.04 **	-0.254	0.10	0.018	0.83	-0.344	0.05 *	-0.006	0.73	0.404	0.29

Explanatory variables	Above average financial performance		Above average labour productivity		Quality of performance		Rising sales value		Labour turnover		Absence	
	Coeff.	P> | t|	Coeff.	P> | t|	Coeff.	P> | t|	Coeff.	P> | t|	Coeff.	P> | t|	Coeff.	P> | t|
Lab costs 75%+	-0.522	0.02 **	-0.266	0.25	0.030	0.81	-0.294	0.25	0.015	0.53	-0.089	0.87
Labour costs missing	-0.494	0.03 **	-0.271	0.23	0.054	0.67	-0.160	0.53	0.018	0.48	1.403	0.01 **
% female employees	0.510	0.08 *	0.086	0.77	0.330	0.04 **	-0.240	0.47	-0.039	0.24	1.483	0.04 **
High Female PT	-0.283	0.07 *	0.028	0.85	-0.013	0.87	0.249	0.16	0.020	0.24	0.224	0.57
Share non-man/prof	0.512	0.17	0.264	0.48	0.410	0.05 *	0.821	0.08 *	0.026	0.53	1.551	0.10 *
Recruit difficulties	0.137	0.25	-0.063	0.59	-0.223	0.00 **	0.405	0.00 **	0.054	0.00 **	0.617	0.03 **
Recruit returner female	0.213	0.23	0.198	0.26	-0.044	0.65	0.160	0.42	0.005	0.81	0.403	0.35
Time to learn job 1-6 mths	0.263	0.05 *	0.289	0.03 **	0.226	0.00 **	0.361	0.02 **	-0.030	0.04 **	-0.401	0.23
Time to learn job 6+mths	0.270	0.12	0.390	0.03 **	0.124	0.20	0.162	0.40	-0.069	0.00 **	-0.292	0.49
Discretion high	0.138	0.36	0.338	0.02 **	0.252	0.00 **	0.023	0.89	-0.045	0.01 **	-0.621	0.09 *
Temp workers 25%+	-0.110	0.51	-0.077	0.64	0.019	0.83	-0.332	0.08 *	-0.006	0.73	-0.346	0.38
Family-friend ethos	0.263	0.09 *	0.287	0.06 *	0.166	0.06 *	0.522	0.00 **	-0.021	0.23	0.151	0.69
Investor in People	0.159	0.25	0.041	0.76	0.023	0.75	0.079	0.61	-0.005	0.75	-0.062	0.85
Performance Related Pay	0.115	0.46	0.009	0.95	0.034	0.69	0.329	0.06 *	-0.013	0.43	-0.679	0.07 *
Other fringe benefits	-0.015	0.90	0.156	0.24	0.073	0.32	0.174	0.26	0.013	0.38	-0.317	0.31
% on regular Overtime	0.018	0.92	-0.038	0.84	-0.112	0.29	0.429	0.04 **	-0.017	0.42	0.379	0.42
HR specialist at establish	0.094	0.55	-0.276	0.09 *	-0.104	0.24	0.302	0.10	0.040	0.02 **	0.358	0.37

Explanatory variables	**Above average financial performance**		**Above average labour productivity**		**Quality of performance**		**Rising sales value**		**Labour turnover**		**Absence**	
	Coeff.	**P> | t|**	**Coeff.**	**P> | t|**	**Coeff.**	**P> | t|**	**Coeff.**	**P> | t|**	**Coeff.**	**P> | t|**	**Coeff.**	**P> | t|**
HR specialist at HO	-0.017	0.89	-0.080	0.55	0.033	0.65	-0.138	0.37	-0.002	0.89	0.003	0.99
Consults on FF and EO	-0.177	0.19	-0.244	0.07 *	-0.075	0.32	-0.019	0.90	-0.021	0.17	0.791	0.02 **
Equal opps medium	0.054	0.75	0.097	0.57	-0.022	0.82	0.049	0.79	0.068	0.00 **	0.122	0.77
Equal opps high	-0.035	0.85	0.008	0.96	-0.001	0.98	0.238	0.25	0.051	0.01 **	-0.187	0.68
Recent bad ind relations	-0.345	0.05 *	0.042	0.81	-0.112	0.25	-0.312	0.11	0.022	0.26	0.087	0.84
High commit management	0.224	0.02 **	0.286	0.00 **	0.111	0.03 **	0.203	0.05 *	-0.021	0.04 **	-0.188	0.41
Employee involvement	-0.039	0.12	0.021	0.04	0.039	0.00 **	-0.015	0.61	-0.005	0.07 *	0.030	0.62
Constant	-0.250	0.67	-0.669	0.26			0.069	0.92	0.333	0.00 **	-0.254	
N	1389		1389		1302		1389		1329		1159	
Loglikelihood/ R2	-905.53		-909.69		-1349.74		-738.77		0.221		0.076	
Estimation	logit		logit		Ordered probit		logit		OLS		OLS	

APPENDIX A3

Factor Analysis to construct Good Employer variable.

Observations=1949

Principal factors; 1 factor retained

Factor	Eigenvalue	Difference	Proportion	Cumulative
1	2.11402	1.16311	0.5474	0.5474
2	0.95090	0.03826	0.2462	0.7936
3	0.91264	0.44187	0.2363	1.0300
4	0.47078	0.12746	0.1219	1.1519

Factor Loadings

Variable	**Factor 1.**	**Uniqueness**
HCM	|0.61510	0.62166
Time to learn job 1-6 months	0.03030	0.99908
Time to learn job 6 months+	0.16255	0.97358
Recruits female returners	|0.24351	0.94070
High fixed term temp	0.26019	0.93230
High discretion	0.01914	|0.99963
Has HR specialist at Estab	0.24075	0.94204
Has HR specialist at HO.	0.33060	0.89071
Involves employees	0.22236	0.95056
Family-friendly ethos	0.16936	|0.97132
Uses other fringe benefits	0.07716	0.99405
Equal Opportunities medium	-0.60067	0.63919
Equal opportunities -high	0.81096	0.34235
Investor in People award	0.12233	0.98504
Performance related pay	0.18507	|0.96575
Bad Industrial relations	0.19491	0.96201
Consults on Equal Opps and welfare	0.44582	|0.80125
High use of overtime	0.02627	0.99931
Pay above average	0.08151	0.99336
Profit sharing scheme	0.13372	|0.98212

Score good emp1oyer

Variable	Scoring Coefficients
HCM	0.23683
Time to learn job 1-6 months	0.01145
Time to learn job 6 months+	0.05062
Recruits female returners	0.05454
High fixed term temp	0.06500
High discretion	0.00759
Has HR specialist at Estab	0.04964
Has HR specialist at HO.	0.06769
Involves employees	0.05101
Family-friendly ethos	0.04536
Uses other fringe benefits	0.01516
Equal Opportunities medium	-0.14893
Equal opportunities -high	0.48955
Investor in People award	0.02949
Performance related pay	0.04771
Bad Industrial relations	0.04384
Consults on Equal Opps and welfare	0.12490
High use of overtime	0.00626
Pay above average	0.01568
Profit sharing scheme	0.04892

Table A4. Comparison of coefficients of good employer and family-friendly policies (employer's information) in the model containing structural set of variables only.

	Financial performane	Labour productivity	Quality performane	Sales value	Labour turnover	Absence
Good Emp Without FF	0.110 (0.18)	0.129 (0.11)	0.097 (0.03)	0.264 (0.00)	-0.028 (0.00)	-0.261(0.21)
Good Emp (+ PL)	0.097 (0.25)	0.099 (0.23)	0.088 (0.05)	0.284(0.00)	-0.027 (0.00)	-0.191(0.36)
PL (+ Good Emp)	0.076 (0.55)	0.233 (0.07)	0.072 (0.31)	-0.203(0.16)	-0.004 (0.80)	-0.100(0.75)
PL without Good Emp	0.081 (0.49)	0.234 (0.04)	0.064 (0.33)	-0.052(0.69)	-0.014 (0.31)	-0.172(0.57)
Good Emp (+ Paternity)	0.069 (0.41)	0.097 (0.23)	0.105 (0.02)	0.233 (0.01)	-0.028 (0.00)	-0.261(0.27)
Paternity (+ Good Emp)	0.285 (0.02)	0.300 (0.02)	-0.049 (0.48)	0.047 (0.73)	0.003 (0.84)	0.352(0.26)
Pat without Good Emp	0.225 (0.05)	0.216 (0.07)	-0.051 (0.44)	0.129 (0.32)	-0.008 (0.56)	0.329(0.27)
Good Emp (+ Job share)	0.071 (0.39)	0.110 (0.19)	0.088 (0.06)	0.206 (0.03)	-0.026 (0.00)	-0.251(0.23)
Job share (+ Good Emp)	0.273 (0.06)	0.134 (0.35)	0.066 (0.41)	0.462 (0.01)	-0.011 (0.51)	0.372(0.30)
JS without Good Emp	0.311 (0.02)	0.179 (0.17)	0.102 (0.17)	0.589 (0.00)	-0.031 (0.04)	0.296(0.38)
Good Emp (+ Termtime)	0.109 (0.19)	0.133 (0.10)	0.082 (0.07)	0.264 (0.00)	-0.030 (0.00)	-0.259(0.21)
Termtime (+ Good Emp)	-0.069 (0.72)	-0.127 (0.51)	0.274 (0.01)	-0.113(0.59)	0.048 (0.03)	1.091(0.02)
TT without Good Emp	0.045 (0.80)	-0.008 (0.96)	0.316 (0.00)	-0.024(0.90)	0.033 (0.11)	1.053(0.02)
Good Emp (+ Full/part)	0.105 (0.21)	0.104 (0.21)	0.082 (0.07)	0.215 (0.02)	-0.029 (0.00)	-0.190(0.36)
Full/part (+ Good Emp)	0.005 (0.96)	0.205 (0.10)	0.141 (0.04)	0.381 (0.01)	0.015 (0.30)	-0.127(0.67)

	Financial performane	**Labour productivity**	**Quality performane**	**Sales value**	**Labour turnover**	**Absence**
FT/PT without Good Emp	0.122 (0.29)	0.294 (0.01)	0.182 (0.01)	0.427 (0.00)	0.012 (0.36)	0.025(0.93)
Good Emp (+ Flexitime)	0.119 (0.15)	0.132 (0.11)	0.097 (0.03)	0.276 (0.00)	-0.026 (0.00)	-0.288(0.17)
Flexitime (+ Good Emp)	-0.211 (0.19)	-0.052 (0.74)	-0.009 (0.92)	-0.250(0.18)	-0.042 (0.02)	0.546(0.18)
Flexiwithout Good Emp	-0.274 (0.07)	-0.111 (0.46)	0.017 (0.84)	-0.170(0.31)	-0.043 (0.01)	0.567(0.14)
Good Emp (+ Nursery)	0.108 (0.19)	0.129 (0.11)	0.102 (0.02)	0.251 (0.01)	-0.027 (0.00)	-0.206(0.32)
Nursery (+ Good Emp)	-0.132 (0.66)	-0.165 (0.59)	-0.276 (0.10)	0.369 (0.29)	-0.036 (0.31)	0.120(0.87)
Nurs without Good Emp	-0.030 (0.92)	-0.068 (0.82)	-0.251 (0.12)	0.554 (0.10)	-0.042 (0.21)	0.073(0.92)
Good Emp (+ Childcare)	0.104 (0.20)	0.129 (0.11)	0.088 (0.05)	0.254 (0.01)	-0.027 (0.00)	-0.192(0.35)
Childcare (+ Good Emp)	0.038 (0.89)	-0.103 (0.70)	0.244 (0.12)	0.150 (0.64)	-0.030 (0.35)	-0.375(0.58)
Child with-out Good Emp	0.071 (0.78)	-0.030 (0.91)	0.297 (0.04)	0.148 (0.62)	-0.056 (0.05)	-0.052(0.93)
Good Emp (+Emergen)	0.105 (0.19)	0.136 (0.09)	0.103 (0.02)	0.259 (0.01)	-0.027 (0.00)	-0.253(0.22)
Emergency (+ Good Emp)	-0.025 (0.83)	0.109 (0.36)	0.102 (0.13)	-0.014(0.91)	0.026 (0.06)	0.231(0.44)
Em without Good Emp	-0.053 (0.63)	0.111 (0.33)	0.067 (0.29)	0.059 (0.62)	0.026 (0.05)	0.361(0.21)
Good Emp (+Homewk)	0.103 (0.21)	0.122 (0.13)	0.091 (0.04)	0.265 (0.00)	-0.025 (0.01)	-0.173(0.40)
Homework+ Good Emp	0.029 (0.85)	0.057 (0.72)	0.098 (0.28)	-0.109(0.56)	-0.039 (0.04)	-0.464(0.25)
Home with-out Good Emp	0.073 (0.63)	0.149 (0.32)	0.095 (0.27)	0.007 (0.96)	-0.049 (0.00)	-0.524(0.18)

	Financial performane	**Labour productivity**	**Quality performane**	**Sales value**	**Labour turnover**	**Absence**
Good Emp (+ N pols)	0.099 (0.24)	0.101 (0.22)	0.076 (0.10)	0.232 (0.02)	-0.027 (0.00)	-0.315(0.14)
N pols (+ Good Emp)	0.021 (0.59)	0.054 (0.16)	0.041 (0.06)	0.061 (0.17)	-0.000 (0.95)	0.098(0.32)
N pols without Good Emp	0.036 (0.31)	0.073 (0.04)	0.048 (0.01)	0.111 (0.01)	-0.005 (0.24)	0.117(0.21)

Key. Good employer/Good emp – Factor score from factor analysis to identify good employer

PL _	Parental leave
Paternity(pat)	Paternity leave
Full/Part	Ability to change from full to part-time hours
TT –	Term time work
Nusery (nurs)	Provision of workplace or other nursery places
Home	Offers ability to work at or from home during normal working hours.
Em	Offers scheme for time off for emergencies.
Child	Offers financial help with child care
N pols	Number of family-friendly working arrangements out of 10.

Table A5. Comparison of log likelihood values for models including good employer and family-friendly policies (employer's information) along with structural set of variables only (Private sector)

	ADJUSTED R SQUARED/ LOG LIKELIHOODS					
	Financial performance	**Labour productivity**	**Quality performance**	**Sales value**	**Labour turnover**	**Absence**
Structural set	-1015.01	-1018.69	-1502.79	-837.20	0.152	0.012
Structural set + GE	-902.79	-912.07	-1358 43	-743.75	0.152	0.021
Parental leave						
with PL	-1009.79	-1012.23	-1498.20	-833.38	0.152	0.013
withPL+GE	-901.42	-908.95	-1357.23	-741.40	0.151	0.022
Paternity leave						
with PatL	-997.06	-1001.95	-1485.41	-825.27	0.153	0.015
with PatL +GE	-887.01	-896.72	-1344.05	-735.05	0.152	0.023
Job share						
with JS	-1007.31	-1013.26	-1497.72	-826.02	0.154	0.014
withJS+GE	-899.88	-910.21	-1357.42	-738.59	0.152	0.022
Termtime						
with TT	-1009.98	-1014.17	-1493.80	-833.45	0.153	0.018
withTT+GE	-901.54	-910.42	-1354.50	-742.26	0.155	0.026
Full-part time change						
with FT/PT	-1009.46	-1010.95	-1494.72	-827.97	0.152	0.013
With FT/PT+GE	-901.60	-909.28	-1355.67	-738.66	0.152	0.022
Flexitime						
with Flex	-1011.71	-1016.91	-1502.14	-836.66	0.155	0.014
withFlex +GE	-901.93	-912.02	-1358.43	-742.84	0.155	0.021
Nursery						
with Nurs	-1010.01	-1014.15	-1497.47	-832.11	0.152	0.013
With Nurs +GE	-901.51	-910.49	-1356.41	-741.82	0.152	0.022
Childcare						
with ChildC	-1009.98	-1014.17	-1496.63	-833.34	0.153	0.013
With ChildC+GE	-901.59	-910.57	-1356.53	-742.29	0.152	0.022

	Financial performance	Labour productivity	Quality performance	Sales value	Labour turnover	Absence
Emergency						
with Emerg	-1011.98	-1015.50	-1499.20	-836.00	0.154	0.013
With Emerg+GE	-901.08	-910.04	-1354.13	-742.87	0.154	0.021
Homework						
with Home	-1009.91	-1013.70	-1498.07	-833.46	0.156	0.015
With Home +GE	-901.58	-910.58	-1357.18	-742.23	0.154	0.023
N policies						
with Npols	-1013.35	-1015.48	-1499.89	-833.42	0.152	0.013
With Npols +GE	-902.64	-911.10	-1356.66	-742.81	0.151	0.021
Fit measure	Loglikeli	Loglikeli	Loglikeli	Log likeli	Adj R square	Adj R square
Estimation	logit	logit	Ordered probit	logit	OLS	OLS

Key. Npols – number of family-friendly policies
FF - any of the family friendly policies
GE/Good Emp – Good employer variable included
Home – Offers working from or at home during normal working hours.
ChildC - ofers financial help with child care
FT/PT - offers ability to change from full to part-time hours
TT offers term-time only hours
Flex - offers flexitime
Nurs - ofers workplace or other nursery.
JS – offers job share
PatL – offers paternity leave
PL offers parental leave (non-statutory)

Appendix A6.

Summary results of determinants of financial performance 1998 FTse100 data.

Performance measure	**Significant results (p<0.1)**
Operating profit per capita	Decreased with increases in labour intensity Increased with stronger EO policies Increased with average salary + Reduced in financial services sector + Reduced in wholesale, retail and transport + Reduced in energy +
Average 98/99 operating profit per capita	Decreased with increases in labour intensity Increased with stronger EO policies
% change operating profit per capita	Higher with higher average salary Lower with higher change in average salary Increases with higher labour intensity@ Higher in energy sector (p=0.1) Higher in finance sector ▪ Increased with workplace nursery@ ▪ Reduced with teleworking@
Return on capital 98	Lower in energy industry Lower in transport and distribution sector ▪ Increased with term time employment ▪ Reduced with compassionate leave ▪ Reduced with workplace nursery ▪ Reduced with emergency leave (p=0.1)
Average 98/99 return on capital	lower in energy industry lower in transport and distribution sector Increased with higher number of women non-exec directors Lower with stronger EO policies ▪ Increased with part time employment (p=0.1) ▪ Increased with term time employment ▪ Reduced with compassionate leave ▪ Reduced with workplace nursery ▪ Reduced with emergency leave (p=0.1)

Performance measure	**Significant results (p<0.1)**
Change in book value per share 98 to 99	Increased with higher percent female in senior managers ▪ Increased with number of family-friendly policies (on margins of significance at p=0.1) ▪ Reduced with enhanced maternity leave
Dividend in 98	Reduced with higher percentage increase in employment 97-98
Change in dividend 98 to 99	Reduced with higher change in average salary 97 to 98
% return on shareholder equity 98	Increased with higher change in average salary 97 to 98
% change in value added	Increases with increases in average salary Reduced by higher changes in average salary 97 to 98 Increased by higher labour intensity@ Higher in energy sector Higher in transport and distribution sector Higher in finance sector (on margins) ▪ Increased with part time employment@ ▪ Increased with telework@ ▪ Increased with compassionate leave@ ▪ Increased with emergency leave@
Key: @ Labour intensity and separate policy measures interact and affect each other's significance.	+ significant in some models only, again through interactions.

Notes

[1] 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.
[2] Responses could also be given 'no comparison possible' or 'relevant data not available'. Such cases were not included in the estimations.
[3] This variable is klabscale in the WERS data.
[4] As researchers, we have worked in a number of companies, large and small, carrying out research on flexible employment practices. We have yet to find a company that has found a way to accurately record absenteeism by separating it from sick leave.
[5] The WERS data were collected before the Statutory provision of Parental Leave became available in December 1999.
[6] We were not, during this project, able to consider the adoption of an alternative model that allowed the correlations between dependent variables to be fully recognised.
[7] The base characteristics for Figures 1 and 2 are as follows: an establishment of between 100-199 employees in an organisation of between 2,000 and 9999 employees, in manufacturing, a union, a multinational, trading in international markets with labour costs between 50-75 per cent of total costs, few competitors, a share of non-managerial staff of 75%, female employees 40%, time to learn the job 1-6 months, equal opportunities medium, and an HR specialist at the establishment. Otherwise the reference categories were used.
[8] Where appropriate, stepwise models were also estimated and the significant coefficients compared with the full models. Unless stated otherwise, the significant coefficients from the stepwise models were the same as those in the full model.
[9] The base characteristics for Figures 3 and 4 are as follows: an establishment of 500+ employees in an organisation of between 2,000 and 9999 employees, in manufacturing, a multinational, trading in international markets, with labour costs between 50-75 per cent of total costs, few competitors, a share of non-managerial staff of 75%, female employees 40%, time to learn the job 1-6 months, equal opportunities medium, an HR specialist at the establishment. Having a recognised union has been added. Alternatively a set of other characteristics were added: high commitment management, worker involvement in decision making, other fringe benefits, performance related pay, and a family-friendly ethos. Otherwise the reference categories were used.