Family-friendly management, organizational performance and social legitimacy

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April, 2010

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Authors' Note: The UK's Economic and Social Research Council funded this research (Grant RES-000-23-1482). We are grateful to Melina Dritsaki for her help in the creation of the variables that we use in our empirical analysis and to Alex Beauregard, Lotte Bailyn, Helen Bewley, Uta Bindl, Suzan Lewis, and Stephen Sweet for their comments on a draft of the paper. The study is based on data from the Workplace Employment Relations Survey series (WERS), those for 1998 and 2004 (WERS98 and WERS2004). This survey is jointly sponsored by the Department of Trade and Industry of the United Kingdom (UK), the Advisory, Conciliation and Arbitration Service, the Economic and Social Research Council, and the Policy Studies Institute. The National Centre for Social Research was commissioned to conduct the survey fieldwork on behalf of the sponsors. WERS is deposited and available from the Data Archive at the University of Essex, UK. Neither the sponsors nor the Data Archive have any responsibility for the analysis or interpretation of the material contained in this paper.

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Abstract

Research on family-friendly practices has concentrated on the predictors of their use, particularly from the perspective of either institutional theory or the high involvement or commitment management vogue. This paper first shows how these two perspectives can be used to generate hypotheses about the link between family-friendly management and organizational performance. Second, the paper reports research designed to test these, using data from a national representative sample of workplaces across the British economy, the Workplace Employment Relations Survey of 2004 (WERS2004). The results support the high commitment thesis that family-friendly management will strengthen the relationship between commitment and key economic outcomes, as the relationships between workforce commitment and productivity or quality is stronger when a workplace has a high level of family-friendly management, which is consistent with social exchange theory. Family-friendly management is not, however, related to the human resource outcomes of labour turnover and absenteeism. Nor does the study find support for the arguments that its use in conjunction with high involvement management enhances the performance effects of both or for the hypothesis that family-friendly management has positive effects on the legitimacy of the organization.

Keywords: family-friendly management; work–family practices; social legitimacy; organizational performance; institutional theory; high commitment management; high involvement management; organizational commitment; social exchange theory; social legitimacy.

Family-friendly, or work–family, practices have come to the forefront of employment policies in many countries in the past decade. The initial impetus for this centred on helping women with the birth and rearing of children, as it was closely tied to the equal opportunity agenda and primarily aimed at encouraging the participation of mothers in the labour market. Subsequently, the work–family agenda has typically been extended to paternity leave and other ways of helping parents become more involved with childcare, and then to the provision of help for all employees with elder care responsibilities. Societal trends lying behind these growing concerns include, apart from the demands for equal opportunity, the greater participation of women in the workforce, the ageing population, the increase in single parent households and the apparent demand for a better work–life balance. Most recently, a heightened concern for health issues and the well-being of the population in several major economies has intensified the interest in a good balance between work and non-work.

While some organizations have responded to these trends by voluntarily introducing family-friendly practices, academic and other commentators have sought to encourage a more widespread use of them. They have tended to highlight that family-friendly practices may have beneficial effects on organizational performance, particularly on reducing labour turnover amongst women and the retention of human capital, thus professing what has become known as the business case for work–family programmes (Galinsky and Johnson 1998; Dex and Scheibl 1999, p.23; Drago and Hyatt 2003). Governments have also sought to encourage organizations by increasingly legislating in this area, gauging that by setting a legal minimum, their leadership might stimulate organizations to take the issue more seriously and go beyond this minimum. Of the liberal market economies, the UK government has been at the forefront of this trend. Legislating in this area and encouraging family-friendly practices has been a major element of the successive Labour governments' employment agenda from its election in 1997 (DTI 1998). In general, employment legislation has been seen as a means of encouraging and supporting good practice, which is aimed at fostering the creativity of the workforce whilst providing a ‘minimum infrastructure of decency and fairness around people in the workplace’, as heralded by the prime minister in 1998 (DTI 1998, p.3). In the specific case of family-friendly policies, the aim was to stimulate a culture at work that would reflect a new relationship between work and family life. Legislation in this area could, it was gauged, ‘enhance’ the understanding of this new culture, and support and reinforce its development (DTI 1998, pp.3, 31).

The UK Labour government’s approach to legislation has been premised on the assumption that conflict between work and parenthood and other caring demands, or more generally employee and employer, can exist, but policies can be developed that may help to reduce these conflicts and be beneficial for all parties. In the family-friendly area, successive Labour governments have not gone so far as to reinforce the business case for work–family balance with claims that family-friendly policies will have strong positive effects on organizational performance. Nonetheless, there is an expectation that organizations should benefit if they adopt the new work culture, for example in retaining core staff.

There is little strong theory or empirical analysis to support the business case. Empirical studies have concentrated on testing the relationship between family-friendly practices and organizational performance, with little theoretical grounding justifying why one might be expected. The results of the studies are mixed, and the four studies that reveal a positive correlation (Vandenberg, Richardson and Eastman 1999; Konrad and Mangel 2000; Perry-Smith and Blum 2000; Meyer, Mukerjee and Sestero 2001) are based on American data. One US study (Baughman, Di Nardi and Holtz-Eakin 2003) found little support for the relationship, as all but one of the family-friendly benefits employers offered was not associated with labour turnover; the exception was the provision of a child care referral system. Studies in Australia and Britain concluded there was no relationship (Heiland and MacPherson 2005; Bloom and Van Reenen 2006; Wood and de Menezes 2007).

There has, however, been more theoretical development surrounding what types of organization might adopt family-friendly management, particularly on the predictors of the extent of its use or of individual family-friendly practices (e.g. Kossek, Dass and Demarr 1994; Goodstein 1995; Ingram and Simons 1995; Osterman 1995; Milliken, Martins and Morgan 1998; Wood, de Menezes and Lasaosa 2003). A key theory that has been applied to this question is institutional organization theory, in which the core idea is that organizations have to react to societal factors in ways that may not be consistent with their ideal strategy or be cost effective. Part of an organization's policies thus reflect the need to yield to pressures to help employees balance their work and family life (Boxall 2006, p.61) in order to achieve or maintain social legitimacy (DiMaggio and Powell 1983). The emphasis is, then, on the characteristics of an organization that make maintaining legitimacy particularly salient – such as its size and visibility in the public domain – as the main predictors of the adoption of family-friendly management. However, from this perspective, since practices are being adopted by organizations seeking to appear legitimate in the face of changing social and legal norms, we would expect family-friendly management to have most effect on the legitimacy dimension of an organization's performance than on its economic and human resource dimensions, what Paauwe (2004, p.70) calls the societal performance of the organization. As an organization's main motivation is to respond to environmental pressures, we might not expect a strong relationship between the use of family-friendly management or practices and overall organizational performance, though achieving legitimacy should enhance the organization's ability to attract staff and may influence workers' attitudes.

Other perspectives on family-friendly practices may, according to Wood et al. (2003), be differentiated from institutional theory not simply by their predictors, but by their conception of the nature of family-friendly management. In other words, perspectives are also distinguished by what is being predicted and not simply by their predictors. Family-friendly management involves employers having an underlying orientation to help employees obtain a balance between work and family obligations. This is expressed in management policies, so there should be some pattern in the provision of a range of family-friendly practices. For example, we may expect practices concerned with childbirth to coexist with those related to child rearing.

According to institutional theory, Wood et al. (2003) argue, we would expect this family-friendly management to have developed in response to changing societal pressures in the past two decades or so. Management have begun to institutionalize family-friendly practices in a concerted way and to have an underlying commitment to help employees obtain a balance between work and family life. If this family-friendly type of management is an identifiable managerial approach, we would expect practices concerned with childbirth to coexist not only with those related to child-rearing but also with those concerned with non-child issues such as elder care. The high involvement perspective (or as Osterman 1995 calls it, the high commitment approach) that associates family-friendly management with this modern approach to management takes this argument further, and accordingly views family-friendly and high involvement management as one integrated employee-centric high commitment approach.

At the other extreme, under what Wood et al. (2003) call the situational perspective, family-friendly practices are implemented by management only in response to a particular labour market problem that could be overcome through helping workers to accommodate their family life better. In the extreme, a family-friendly management that involves employers having an underlying commitment to help employees obtain a balance between work and family obligations would not exist on any significant scale. Managements would simply be pragmatically using family-friendly practices as and when they are perceived to have some benefit, for example if there is a high level of labour turnover or absenteeism amongst the female workforce in the organization, or there is a general shortage of labour in the locality. Thus, there is unlikely to be any systematic adoption of practices amongst employers that reflects an underlying orientation towards the facilitation of the integration by workers of their work and non-work activities.

We take Wood et al.'s (2003) argument a step further and suggest that the strong versions of each perspective also have, in theory, different implications for the link between family-friendly practices and organizational performance. The purpose of this paper is first to outline these different perspectives on the association between family-friendly management and organizational performance. Then secondly to report research that seeks to test the hypotheses that follow from these perspectives, by using data from WERS2004, a nationally representative sample of private and public workplaces in Great Britain.

Theories of the family-friendly management–organizational performance relationship

Core perspectives on family-friendly management – the institutional, the high involvement management, and the situational perspectives – were initially identified from the approaches to explain the variation in the adoption of family-friendly practices; Wood et al. (2003) showed they were also differentiated by their conception of the nature of family-friendly management. Here we explore how each might conceive the relationship between family-friendly management and dimensions of organizational performance. There may not be a perfect symmetry between the perspective that most helps in understanding the variability in family-friendly management and the one that explains best its relationship with organizational performance. That is, there is no necessary reason why a theory that successfully predicts the degree of use is best equipped for our present concerns with organizational performance. In fact the empirical evidence so far suggests that no single perspective (and certainly not in any extreme form) best predicts adoption of family-friendly management in both Britain and the USA, the two countries for which we have evidence (Osterman 1995; Wood 1999; Wood et al. 2003). Also, the value of each perspective may change over time or vary between country; as our own analysis in Britain using WERS2004 and WERS98 shows, high involvement management had a significantly stronger association with family-friendly management in 2004 than it had in 1998, while the relationship between public sector (an institutional theory predictor) and family-friendly management was not significant in 2004, although it was in 1998 (de Menezes, Wood and Dritsaki 2009). Such evidence need not prejudice our theorizing of the family-friendly management–performance relationship, though the factors indicating the salience of normative pressures that are found to be related to family-friendly management may influence the selection of any institutional factors that could moderate the relationship.

The institutional perspective

Institutional theory emphasizes the importance of legitimacy. Applied to family-friendly practices, it assumes that changing environmental factors act as pressures on organizations to react and introduce these practices, regardless of whether they fit their strategies or yield profits. Part of an organization's policies thus reflect the need to comply with such pressures (Paauwe 2004; Boxall 2006, p.61), as they need to achieve or maintain social legitimacy (DiMaggio and Powell 1983). Legitimacy is about being seen by stakeholders, including existing and potential employees, as conforming both to laws (in spirit and letter) and to strongly held or developing social norms. As such it involves the relationship between the organization and society (Paauwe 2004, p.4), meaning that the logic of appropriateness guides the behaviour of actors within an organization, and not simply economic rationality.

Applied to family-friendly practices, institutional theory predicts that they are adopted when social legitimacy is critical to the organization. The implication is that practices are introduced without management having any strong belief, or evidence, that they will greatly impact on economic performance. Indeed, the lack of research evidence on family-friendly management's impact on performance, as of 1994, was used by Kossek et al. (1994, p.1122) to argue that the logic at the centre of institutional theory must have shaped the decisions of those managements that had adopted childcare assistance. Following this argument, we would anticipate an association between family-friendly management and an organization's achievement of legitimacy. We thus test:

Hypothesis 1: Family-friendly management is associated with the social legitimacy of an organization.

Perry-Smith and Blum (2000) also hypothesized that the effects of family-friendly management on performance are greater for large organizations than they are for small ones. They argue this partly on the basis that large organizations experience more institutional pressures. This may explain the adoption of family-friendly management in an integrated and coherent way, but it does not necessarily mean that large organizations achieve more reward from its use. However, it seems plausible that the marginal impact of size on social legitimacy is amplified for those organizations that place more importance on maintaining social legitimacy. Conversely, a small organization out of the limelight of the media and other pressures is unlikely to gain much legitimacy from family-friendly management. Size as a measure of the salience of institutional pressures on organizations may, then, moderate the family-friendly management–performance relationship. By the same argument, we expect the impact of family-friendly management on social legitimacy to be greater in public sector organizations for which the societal pressures are more intense. We thus hypothesize and test:

Hypothesis 2: The association between family-friendly management and social legitimacy is moderated by (a) the size of the organization and (b) the public or private status of the organization.

Legitimacy may not, however, be at the expense of economic performance or incur such high costs that profits are eroded. It may be that some performance outcomes are directly affected by legitimacy. For example, organizations with high legitimacy and prestige may attract good staff and customers precisely because of this, and thus may have superior revenues, labour quality and profits. This implies that legitimacy mediates the relationship between family-friendly management and economic outcomes. We thus test the following hypothesis:

Hypothesis 3: The association between family-friendly management and economic or human resource outcomes is partially mediated by social legitimacy.

In a similar vein, it may be argued that an organization's social legitimacy is symbolic to employees, and this will have beneficial performance effects. Perry-Smith and Blum (2000, p.1108) argue that 'a range of work–family policies is likely to both symbolize that the organization cares about employee well-being and to represent a value system in which employees are likely to respond favorably … by contributing effort … and embracing its goals'. The effect of family-friendly management is consequently seen to work through its effect on employees' perceptions of supportive management. We therefore hypothesize:

Hypothesis 4: The association between family-friendly management and economic or human resource outcomes is partially mediated by perceptions of supportive management.

The organizational adaptation variant of institutional theory allows for differences in the significance of pressures on workers as well as management (Goodstein 1995). Given that family-friendly policies are still generally associated with balancing motherhood and work, since women continue to shoulder more of the burden of caring for children, elderly or disabled relatives (Sarkisian and Gerstel 2004), we might expect the impact of family-friendly management on supportive management, and in turn on economic performance, to be greater in organizations with a high proportion of female workers. Support for this hypothesis was the main finding of Konrad and Mangel's (2000) study of US private and public sector organizations. Thus we test:

Hypothesis 5: The associations between family-friendly management and supportive management, and between supportive management and economic or human resource outcomes, are moderated by the proportion of females in the workforce.

Variants of the institutional perspective also allow for managements' values and employees' perceptions of managerial action. We therefore may expect family-friendly management to have more impact on supportive management and this in turn on performance, where the employer values their employees having a healthy work–non-work balance and sees itself as having a role in this. We hypothesize:

Hypothesis 6: The associations between family-friendly management and supportive management, and between supportive management and economic or human resource outcomes, are moderated by whether management perceives that it has a responsibility in helping employees have a balance between work and family.

The high involvement and high commitment management perspective

A perspective on family-friendly management has emerged in the wake of the more general concern for high involvement management (Lawler, Mohrman and Ledford 1995), which is also associated with the high commitment management (Walton 1985; Wood and Albanese 1995) or the high performance system (Huselid 1995; Appelbaum, Berg and Kalleberg 2000).

High involvement management involves an underlying orientation on the part of management towards involving and developing all employees through the use of practices including job enrichment, teamworking, functional flexibility, extensive training and development, and idea-capturing methods like quality circles (Wood and Bryson 2009). The adoption of such practices and the participative philosophy underlying them would demand, and by implication successfully engender, a greater level of employee involvement and proactivity (Wood and de Menezes 2008). The high involvement model is conceived as an alternative to a control model based on job simplification, tightly defined divisions of labour, rigid allocations of individuals to narrowly defined tasks and minimal employee participation in higher-level decisions (Walton 1985). Whilst there remains doubts about its precise impact on organizational performance (Wall and Wood 2005), it is, as White, Hill, McGovern, Mills and Smeaton (2003, p.176) note, ‘reasonable to assume that many employers adopt [it]... in order to improve performance’. On motivational grounds, then, it might have the right to be called the high performance approach.

In the high involvement approach, family-friendly management is either an integral element or is strongly associated with it (Osterman 1995). If it is the former, we would expect a direct link between this holistic high involvement management and organizational performance. Evidence from analysis of the data on family-friendly practices and high involvement practices in WERS2004, however, shows that there is an association between family-friendly management and high involvement management (correlation = 0.43); but they they do not load into a single factor (de Menezes et al. 2009) and as such are separate forms of management, a result echoing that in Wood et al.’s (2003) study based on WERS98. Given this, family-friendly management may be a mediator of the effect of high involvement management on performance. Managements following high involvement management ‘seek to elicit commitment from their workers ... by instituting family-friendly policies’ (Berg, Kalleberg and Appelbaum 2003, p.172) and, assuming it has the desired effect, the increased commitment in turn increases performance. We thus test:

Hypothesis 7: Family-friendly management partially mediates the association between high involvement management and economic or human resource outcomes.

Alternatively, family-friendly management may not necessarily be driven by high involvement management, but when it is adopted in conjunction with high involvement management it acts as a support for it, thus strengthening the link between high involvement management and economic or human resource outcomes. That is, it may enhance organizational commitment and participation in the high involvement regime. In contrast, some have argued that high involvement management moderates the family-friendly management–performance link through reducing a potential increase in family–work conflict, which arises, it is argued, from high involvement management's tendency to increase the demands on workers (White et al. 2003, pp.178–179). We therefore consider:

Hypothesis 8: The interaction between high involvement management and family-friendly management is associated with economic or human resource outcomes.

It may, however, be that the effects of family-friendly management on performance come from it operating as a high commitment practice (Berg et al. 2003), regardless of whether it co-exists with high involvement management. Consequently, as a direct means of engendering commitment to the organization, family-friendly management increases productivity or quality and labour stability, and reduces absenteeism. It is this kind of argument that Vandenberg et al. (1999, p.326) put forward as a possible explanation for their positive finding that the presence of family-friendly practices was associated with the return on equity in their sample of US firms, as they speculate, 'Perhaps individuals feel a greater sense of obligation to … [their] organization and, as such, put forth much greater efforts which collectively results in greater firm profitability'. We thus hypothesize that employee commitment mediates the relationship between family-friendly and performance:

Hypothesis 9: The degree of commitment of the workforce partially mediates the association between family-friendly management, high involvement management and economic or human resource outcomes.

An alternative high commitment thesis might be that family-friendly management reinforces the effect that a committed workforce has on organizational outcomes; the level of commitment in this case is assumed to be largely independent of family-friendly management. Thus, family-friendly management moderates rather than mediates a relationship between organizational commitment and performance. This would be consistent with social exchange theory (Blau 1964), as family-friendly management might be viewed by the employee as signalling that the employer is reciprocating their commitment. In workplaces with high levels of organizational commitment we would expect family-friendly management to enhance performance. In contrast, where the commitment is low we might expect it to have no effect, as family-friendly practices might be taken for granted as employee rights, or viewed as largely irrelevant. Thus, employee commitment and family-friendly management have a mutually reinforcing impact on organizational performance. We test:

Hypothesis 10: The interaction between the degree of commitment of the workforce and family-friendly management is associated with economic or human resource outcomes.

The situational perspective

In the situational perspective of Wood et al. (2003, p.228) and the practical response perspective of Osterman (1995), managements are assumed to react to local circumstances rather than to societal normative pressures. Even though in this study we observe a pattern in the availability of family-friendly practices that is not consistent with the ad hoc, idiosyncratic adoption predicted by the situational perspective, it could still be that the link with performance is associated with highly specific local factors.

In line with economic theory, on the one hand, any strong benefit of family-friendly management may be confined to the first-mover advantage that the early adopters might gain, as shown by Heiland and MacPherson (2005), regardless of whether this is largely a symbolic effect via the employees' perception of the organization or due to the practical solutions for employees' work-life problems. In the equilibrium, we would not expect strong performance effects, either on productivity or profits, since all firms will either provide these practices or adjust their monetary compensation so that employees can buy the equivalent of what the employer would otherwise provide.

On the other hand, if the labour market does not sort individuals correctly, organizations that help to solve individuals' problems of balancing work and non-work, and have a high proportion of employees who can benefit most from family-friendly practices, will reap economic and human resource gains relative to organizations with an equally high proportion of such workers but with no such family-friendly practices. Accordingly, we would expect characteristics of the workforce or the labour market to be dominant in explaining both the use of family-friendly management and variability in its impact on economic and human resource outcomes (as in Hypothesis 5). Moreover, we would expect the link between family-friendly management and economic or human resource outcomes to be moderated by even more specific characteristics than simply the proportion of females in the workforce. WERS provides limited information on such characteristics and thus we frame our hypothesis in terms of care responsibilities of a child at school age. We can assume that men also have childcare pressures and thus test:

Hypothesis 11: The interaction between family-friendly management and the proportion of employees with pre-school aged children will be associated with economic or human resource outcomes.

This assumes that the moderating effect of the proportion of employees with children of pre-school age on the relationship between family-friendly management and economic or human resource outcomes will be independent of the proportion of women in the workforce. This may not be the case, so we therefore also test the following:

Hypothesis 12: The three-way interaction between family-friendly management, proportion of females in the workforce and the proportion of females with pre-school aged children will be associated with economic or human resource outcomes.

We now report a study designed to test the set of hypotheses that we have identified. Available studies, which have produced the mixed results, have concentrated on the association between family-friendly practices and economic outcomes.

Method

The data

In this study we use data from the UK's WERS2004. It is the fifth in an ongoing series of nationally representative surveys of British workplaces. It is the second to include family-friendly practices and the first to contain workplaces with less than 10 employees. We use data from both the management survey of workplace practices and the employee survey.

The management survey was based on a face-to-face interview with the senior person at the workplace with day-to-day responsibility for industrial relations, employee relations or personnel matters. In some cases this was a personnel specialist. In others, it was a general manager or a person with a different functional specialty, such as finance. Interviews were conducted with managers in a total of 2,295 workplaces from an in-scope sample of 3,587 addresses, representing a response rate of 64 per cent. The sample covers the private and public sector and all industries, with the exception of establishments engaged in primary industries and private households with domestic staff (7 per cent of all workplaces). Establishments with fewer than five employees (60 per cent of all workplaces) are also excluded. The sample was taken from the Inter Departmental Business Register, maintained by the Office of National Statistics.

The employee survey led to a sample of 22,451 employees, which represents a response rate of 61 per cent. The data were collected via an eight-page, self-completion questionnaire distributed within workplaces where WERS surveyors had conducted the management interview. The aim was to get up to 25 employees in each workplace, selected on a random basis, to complete the questionnaire. Employee questionnaires were distributed in 86 per cent of the workplaces where the WERS surveyors had conducted the management interview. A further 12 per cent of workplaces did not return any questionnaires, and in those with 10 or more employees these were treated for the purposes of calculating the 61 per cent response rate as the same as those who had initially declined to distribute questionnaires. The median number of employees per workplace completing the questionnaire was 13, with the most frequent (in 100 workplaces) being 16 employees. The number of employees in no cases exceeded the 25 employees requested by the surveyors.

Measures

Dependent variables

Social legitimacy is measured by a binary variable that indicates whether the workplace is accredited as an Investor in People, which is a national accreditation that organizations in the UK can apply for that looks at, among other things, their training and development (see www.investorsinpeople.co.uk). As Boxall and Purcell (2003, p.18) note, it is widely taken as providing legitimacy and is sought by managements as a sign that their organization is a good employer committed to employee development. It involves a well-established process of validation and accreditation that includes site visits and confidential meetings with a selected sample of employees from diverse backgrounds and within different levels in the organization.

Economic performance is measured by three outcomes: financial performance, labour productivity and quality, which are based on the assessment made by the managerial respondent on five-point scales.

Human resources outcomes included are: labour turnover, which is measured as the proportion of employees who resigned from the establishment in the 12 months prior to the interview; and absenteeism, which is measured as the percentage of work days lost through employee sickness or absence in the workplace over the last 12 months. Given that these two measures have distributions that are skewed with long tails, a logarithmic transformation is applied.

Independent variables

Family-friendly management is measured by the latent score from a latent trait model of nine family practices: maternity leave, emergency care leave, work at home, term-time only contracts, job-sharing, workplace nursery, childcare subsidies, financial help to care for elderly relatives, and elder care leave. The measures of practices are binary indicators of whether non-managerial employees are entitled to the practice. Thus, the latent trait model is used as it models a continuous latent variable based on binary manifest indicators.

We adopt the formulation, goodness-of-fit and reliability statistics as prescribed by Bartholomew and Knott (1999, pp.77–101). We compare the observed (O) and expected (E) response patterns for pairs and triplets of items. This is done by constructing the statistic $[(O-E)^2/E]$, where O and E are respectively the observed and expected frequencies for each response pattern. The closer it is to zero, the better the fit of the model. When a significant number of these statistics are large, there are residual associations between items that are not due to the common factor. Furthermore, if the same item (practice) is found in problematic pairs and triplets of items, it is likely to be the cause of any bad fit and thus it is excluded from the model and may be treated separately in further analysis. We assess the quality of fit of the latent trait models by examining the Chi-square statistic for observed response patterns or the percentage of G^2 (the log-likelihood ratio statistic for complete independence). The closer the percentage of G^2 is to 100 per cent, the better the fit.

The percentage of the log-likelihood ratio statistic that is explained by the model is equal to 64.4 per cent, the fits to the two- and three-way contingency tables were reasonable (residuals were less than 4) and the reliability coefficient was equal to 0.73. As WERS2004 includes elder care provisions, the measure is not concentrated solely on child-centric family-friendly management, like measures based on WERS98 inevitably were. Flexitime is discrete from this type of management. Paternity leave and paid parental leave, two practices now subject to legislation, are highly correlated with maternity leave, but together they do not form a separate dimension and thus they are excluded from the measure. The model parameters and quality of fit are summarized in Table 1.

- Insert Table 1 -

High involvement management approach is measured by two dimensions. First, a measure based on a latent trait model fitted to a set of indicators of the availability of nine flexible work organization and high involvement skills acquisition practices, as used by Wood and de Menezes (2008): quality circles, functional flexibility, teamworking, suggestion scheme, induction, interpersonal skills training, team briefing, information disclosure, and appraisal. The percentage of the log-likelihood ratio statistic that is explained by this model is equal to 63 per cent, two residuals to the two- and three-way contingency tables were less than 5 and the score's reliability coefficient is equal to 0.68.

We tested whether the high involvement practices in WERS2004 together with the family-friendly practices in our measure formed a unique dimension. A one-factor latent trait model fitted badly: the percentage of the log-likelihood statistic that is explained by the model was 40 per cent and the Chi-square statistic was huge. Hence, there is no evidence that the two sets of practices form a whole, though they are positively associated ($r = 0.43$).

Second, a score on empowered or enriched work, based on a latent trait model of three dimensions of the jobs of the largest occupation in the workplace: task variety, method control, and timing control. The percentage of the log-likelihood ratio statistic that is explained by this model is equal to 73 per cent, residuals to the two- and three-way contingency tables are all less than 1 and the score's reliability coefficient is equal to 0.82.

Mediator or moderator variables

Workforce commitment is measured by the average level of affective commitment in the workplace; organizational commitment is measured by a scale based on a three-item question from the employee survey – to what extent do you disagree or agree with these statements: 'I share many of the values of my organization', 'I feel loyal to my organization', and 'I am proud to tell people who I work for'. These items are modified versions of three of the six items developed by Lincoln and Kalleberg (1990). Aggregating values of such measures to the workplace should only be done if there is sufficient agreement in the individual-level scores within the majority of workplaces. By using the index of agreement developed by James, Demaree and Wolf (1984), we ascertained that it is statistically meaningful to aggregate the individual-level organizational commitment scores to produce the workplace average. The index of agreement was at least 0.7 (which is generally taken as an acceptable cut-off point) in 80 per cent of workplaces.

Employment level of the workplace is our measure of the size of the organization, calculated as the logarithm of the total number of full- and part-time employees.

Public workplace is a binary variable that equals one if the workplace is in the public sector and zero if it is in the private or voluntary sector.

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

Management's concern for employees' balance between work and family life is measured by the management respondent's level of agreement with this statement: 'It is up to individual employees to balance their work and family responsibilities'. Where respondents did not agree, the variable was coded one.

The proportion of the females in the workforce is the number of females as a proportion of the total workforce, calculated from data from the employee survey.

The proportion of parents with pre-school children is the proportion of total workforce that have pre-school age children.

Control variables

The control variables included as independent variables in the regression models are: the workplace is part of a larger organization, the age of the workplace (years that current owner has been operating at the present address), proportion of operational and routine workers, proportion of young workers (measured by employees aged 21 or below), proportion of part-time workers and proportion of new recruits (measured by workers that commenced work in the past 12 months), union density, 11 industry group binary variables (baseline is the construction sector, which has significantly less family-friendly management (according to results from an ANOVA).

Data analysis procedures

We test our hypotheses on the link with performance by regression analyses. All the models are weighted to account for the sample design, and the type of model varies according to the type of dependent variable. When the dependent variable is social legitimacy, the models are weighted binary logistic regressions; when it is an economic outcome (an ordinal measure based on management's rating), it is a weighted ordered logit model; and finally for the human resource outcomes that are continuous variables, we use weighted least squares. Moderators that are continuous variables are standardized.

Missing values are assumed to be at random, for we have no grounds to believe that they are informative. Consequently, in regression analyses sample sizes can fall significantly due to the many independent variables. We re-ran the models excluding those controls that were insignificant, and our results were confirmed in a larger sample.

Results

The institutional perspective

Hypothesis 1: Family-friendly management is associated with the social legitimacy of an organization.

This hypothesis is not supported by the analysis. The association between family-friendly management and our measure of social legitimacy is not high (r = 0.3). When we control for other factors, by running a binary logistic regression where social legitimacy is the dependent variable and the independent variables are the family-friendly management measure and the controls, the association is not significant (p-value = 0.13, see Table 2). Social legitimacy is positively associated with union representation and being part of a larger organization (p-values = 0.00), which are known to predict family-friendly management (e.g. Wood et al. 2003; Mumford and Budd 2006). In short, we have no support for a direct association between family-friendly management and social legitimacy, and consequently find no support for Hypothesis 1.

- Insert Table 2 -

Hypothesis 2: The association between family-friendly management and social legitimacy is moderated by (a) the size of the organization and (b) the public or private status of the organization.

Just as there is no association between family-friendly management and social legitimacy, when we control for other factors the inclusion of an interaction between family-friendly management and the standardized size of the organization to this regression model is also not significant (p-value = 0.34). Furthermore, the size of the organization does not moderate the association between family-friendly management and other performance measures, for the interaction is not significant in any of the models of performance (p-values > 0.10). Similar negative results were found when we assess if being a public sector organization moderates the relationship between family-friendly management and legitimacy (as well other performance measures).

Hypothesis 3: The association between family-friendly management and economic or human resource outcomes is partially mediated by social legitimacy.

No mediation is possible since family-friendly management is not associated with social legitimacy. Nor is family-friendly management associated with any measures of economic or human resource outcomes (see row 3, Table 3). Social legitimacy is also not associated with performance, with one exception – a negative association with labour turnover (p-value = 0.05). In consequence, we have no support for Hypothesis 3.

- Insert Table 3 -

Hypothesis 4: The association between family-friendly management and economic or human resource outcomes is partially mediated by perceptions of supportive management.

Given that there is no association between family-friendly management and performance, we have no support for Hypothesis 4. In addition, family-friendly management is not associated with supportive management (p-value = 0.16). Supportive management is, nonetheless, positively associated with quality (p-value = 0.01) and negatively associated with absenteeism (p-value = 0.01).

Hypothesis 5: The associations between family-friendly management and supportive management, and between supportive management and economic or human resource outcomes, are moderated by the proportion of females in the workforce.

The interaction of family-friendly management and the proportion of females in the workforce is not associated with supportive management, nor is that between supportive management (or family-friendly management), the proportion of females in the workforce and any performance measures (p-values > 0.15). Therefore, Hypothesis 5 is also not supported by the data.

Hypothesis 6: The associations between family-friendly management and supportive management, and between supportive management and economic or human resource outcomes, are moderated by whether management perceives that it has a responsibility in helping employees have a balance between work and family.

There is no support for Hypothesis 6; the interactions of either management's concern for family–work life balance with family-friendly management, or management's concern for family–work life balance with supportive management are not positively associated with economic or human resource outcomes (0.15 < p-values < 0.72). The combination of family-friendly management and management's concerns for family–work life balance is also not significantly related to these outcomes, with one exception where the management's approach is negatively associated with quality (p-value = 0.04).

The high involvement management perspective

Hypothesis 7: Family-friendly management partially mediates the association between high involvement management and economic or human resource outcomes.

Through testing Hypothesis 2 (Table 3) we know that there is no association between family-friendly management and economic or human resource outcomes. Nonetheless, high involvement management is positively associated with labour productivity (p-value = 0.00) and financial performance (p-value = 0.04), and work enrichment is associated with financial performance (p-value = 0.01). Neither relationship alters when family-friendly management is added to the model. Thus, though there are associations between high involvement management and some measures of economic or human resource outcomes, these are not mediated by family-friendly management.

Hypothesis 8: The interaction between high involvement management and family-friendly management is associated with economic or human resource outcomes.

The interaction between family-friendly management and high involvement management is not significantly related to performance (minimum p-value = 0.15). Thus, we have no support for both hypotheses derived from the high involvement perspective of the relationship between family-friendly management and performance.

Hypothesis 9: The degree of commitment of the workforce partially mediates the association between family-friendly management, high involvement management and economic or human resource outcomes.

As there is no relationship between family-friendly management and performance this hypothesis is not supported. Nonetheless, family-friendly management is related to the degree of workforce commitment (p-value = 0.04) and the workforce's commitment is positively related to productivity (p-value = 0.05) and quality (p-value = 0.00), but not financial performance (p-value = 0.25). It is negatively related to absence (p-value = -0.02), but not labour turnover (p-value = 0.50).

Hypothesis 10: The interaction between the degree of commitment of the workforce and family-friendly management is associated with economic or human resource outcomes.

This interaction is associated with productivity and quality (see Table 4), and the workforce's commitment remains significantly related to measures both of economic and human resource outcomes when the interaction is included in the model. This supports Hypothesis 10 and the notion that family-friendly management symbolizes that management reciprocates to employees their commitment and this enhances the impact their commitment has on economic and human resource outcomes. However, the interaction between the degree of commitment of the workforce and family-friendly management is not associated with financial performance, absence or turnover.

- Insert Table 4 -

The situational perspective

Hypothesis 11: The interaction between family-friendly management, proportion of employees in the workforce with pre-school aged children will be associated with economic or human resource outcomes.

Although the proportion of employees with pre-school aged children is positively associated with absenteeism (p-value = 0.04), the two-way interaction between it and family-friendly management is not related to economic or human resource outcomes (p-values > 0.3).

Hypothesis 12: The three-way interaction between family-friendly management, proportion of employees in the workforce with pre-school aged children and the proportion of females in the workforce will be associated with economic or human resource outcomes.

The three-way interaction involving family-friendly management, proportion of females in the workforce and the proportion of employees with pre-school aged children is not significant (p-values > 0.4). Thus we have no support for Hypothesis 12. We therefore have no evidence in favour of the situational perspective.

Discussion

This paper has focused on perspectives of family-friendly management that may predict its relationship with economic or human resource outcomes and as such provide some basis for a business case for its adoption. It is the first study that has tested the variety of predictions that these perspectives generate.

Our results rejected the non-economic arguments associated with the institutional thesis that family-friendly management will have positive effects on the legitimacy of the organization. They also show no independent relationship between legitimacy and economic or human resource outcomes. However, family-friendly management is related to two key economic outcomes, productivity and quality, but these relationships are dependent on the level of organizational commitment of the workforce: within the workplaces with high levels of commitment, the greater the level of family-friendly management, the higher the productivity and quality. This supports the notion that effects of family-friendly management are symbolic, signifying, à la social exchange theory, that management reciprocates employees' commitment to the organization.

The finding that family-friendly management is consistent with the central assumption of perceived organizational support theory, a specific application of social exchange theory, that support strengthens commitment and performance by a reciprocation process (Eisenberger, Armeli, Rexwinkel, Lynch and Rhoades 2001). Family-friendly management thus acts as a high commitment practice in the sense that it may generate commitment. It enhances the impact of the commitment on performance, but it is not a main effect on performance that is either moderated or mediated by commitment.

Given the institutional theory's assumption that the salience of institutional pressures is higher in the public sector and large organizations, we tested to see if the effect of the interaction between family-friendly management and committed workforce was stronger in public sector workplaces or as the workplace size increased. Neither was the case. We also tested if these interactions were associated with legitimacy and they were not.

The study may been seen as showing that family-friendly management does, at least in certain circumstances, have economic effects, contrary to Heiland and MacPherson's (2005) argument. The stronger association of family-friendly management with productivity and quality, as compared with absenteeism and turnover – the former being related to commitment, the latter not – reinforces the significance of the longstanding distinction between workers' motivation to produce and their motivation to participate in organizations. We should not in fact necessarily expect that what predicts effort and performance would also predict withdrawal behaviour. In emphasising the symbolic importance of family-friendly management, we are not ruling out that it has helped particular individuals to handle personal or family problems, or to balance their work and family or more generally non-work lives. Or even that such effects are more pronounced in highly committed workforces, though we did not find that the three-way interaction between family-friendly management, committed workforce and the proportion of females in the workforce was significantly related to either productivity or quality. Moreover, the evidence that family-friendly practices reduce work–family conflict is not yet strong (Thomas and Ganster 1995; Lapierre and Allen 2006).

Another significant outcome of the study is that it suggests that family-friendly management, at least currently, is independent of a general supportive management. The finding that supportive management is positively related to quality and negatively associated with absenteeism reinforces the argument that line management's behaviour may be as, if not more, important than formal policies and practices for some outcomes (Thomas and Ganster 1995; Behson 2005; Lapierre and Allen 2006; Premeaux, Adkins and Mossholder 2007). Our measure of supportive management includes an item specifically related to outside work responsibilities. Given its correlation with the other practices, we were not able to test whether this specific element of supportive management had a greater effect than a more general supportive management. Its significance does, though, raise the possibility that informal family-friendly practices, operating through line management or co-worker relationships, may have an impact on performance as well as family–work conflict. Moreover, the existence of formalized family-friendly management may boost the effect of these informal practices or facilitate the adoption of informal practices, which our test for the interaction effect between supportive management and family-friendly management and performance may not have been refined enough to capture. An additional test to judge whether our core result, that family-friendly management strengthened the link between commitment and productivity or quality where managements were supportive, however, found this not to be the case.

Our focus has been on family-friendly management conceived within the terms of current policy parameters. It can help reduce what Sturm (2001) calls first generation discrimination, but may leave largely untouched the more subtle and complex forms of biases that constitute second generation discrimination. These are embedded in the culture of organizations and more generally societies. They involve 'convictions about how work should be carried out, the nature of ideal workers or the inevitability of rather demanding and unquestioned working hours' (Lewis, Gambles and Rapoport 2007, pp.366–367). More radical approaches to work–personal life integration and gender equality would address directly the underlying structure of how jobs are designed and work is coordinated, how organizational rewards are determined (Rapoport, Bailyn, Fletcher and Pruitt 2002; Thompson 2005; Lewis et al. 2007), and above all else be based on the belief that 'personal time is a legitimate employee need' (Bailyn 1993, p.87). Such an approach would require organizations to behave much more transparently and to hold more open discussions of the issues of gender, work and non-work than is currently the case. Bailyn's (2009) action research case studies show how organizations that have taken this radical, second generation approach have achieved specific performance improvements such as reduced absenteeism and improved quality. Although such organizations may be scarce, it is not, in our judgement, premature to develop measures of the culture of organizations that capture particular dimensions, such as their perspectives on working time and concepts of the ideal worker. These could build on existing measures of work–family culture (Thompson, Beauvais and Lyness 1999) but would attempt to go far beyond traditional work–family concerns by including measures, for example, of the importance of the time people spend at work or are accessible, the relative weight in evaluation accorded to inputs versus outputs, and the model attributes of the top performer.

This study's strength is that it considers a wider range of hypotheses than previous studies, using a broad-based measure of family-friendly management and a range of performance measures. Our findings are based on a large sample of organizations across the British economy, which when weighted is representative of the UK.

The main weakness of the study is that we only have one measure of legitimacy, the Investors in People award; nonetheless, this is the best measure that was available in this data set, and no other comparable data exist with better measures. Future research might consider the development of multi-item measures to capture social legitimacy. Our test of the situational approach was based on one group of workers, those workers with pre-school children. It may yet be that the effect of family-friendly management on organizational performance is related to its utility for even more highly specific groups than we have captured.

As the data in WERS is limited to the availability of family-friendly practices, information on their use by particular employees is unavailable. It may be that a measure of use of practices in organizations is related to some or all economic and human resource outcomes measures. Yet a study (Lambert 2000) that incorporated measures of use suggests this may not necessarily be the case. Eaton (2003), however, found that perceived usability of practices (i.e. whether the employee felt free to use the practices) was related to individual performance, measured on a self-rated scale.

WERS2004's employee survey includes questions on the individual's perception of the availability of some practices. This tells us whether employees think their organization has specific family-friendly practices, but not about their use of these. take up. . As such respondents may have included informal arrangements in their assessments as well as formal practices. We recommend that the employee survey is the best place for questions on the use and relevance of practices, and that these should be included in the next WERS survey.

We investigated whether the awareness that a practice was available in the workplace was associated with performance by creating binary measures of awareness for each practice that are equal to 1 when the proportion of those who are aware is above average. A reliable index of the total awareness of practices could not be constructed. However, awareness is in most cases not associated with economic nor human resource outcomes, in models where the awareness of a family-friendly practice is the independent variable and the controls are those in our main analysis. An exception is the awareness of access to term-time only contracts (p-value = 0.02) that is found to be positively associated with labour productivity. Hence, employees' perception of the availability of family-friendly practices is not associated with performance. Interactions involving these practices and the family-friendly management measure are also unrelated to performance.

Conclusions

This paper has first outlined how theories of family-friendly management might predict the relationship between it and organizational performance, and then used data from a nationally representative sample of British workplaces to test them. Family-friendly management has been shown to be jointly related with commitment to productivity and quality, and to moderate the relationship between the level of organizational commitment of the workforce and key economic outcomes. Thus, in workplaces with high levels of commitment, the greater the level of family-friendly management, the higher the productivity and quality. While family-friendly management is not affecting performance through inducing commitment, it reinforces the effect that commitment has on performance by signalling to employees that management reciprocates their commitment to the organization. This is consistent with social exchange theory.

There is no support for institutional theory, with its emphasis on family-friendly management as a source of legitimacy, or the high involvement management perspective, according to which any effect would be due to the association between family-friendly and high involvement managements. Nor does it appear that family-friendly management's performance effects reflect situations where family-friendly practices are most needed.

For mainstream policy, our study implies support for the UK Labour government's claim that family-friendly management may be of benefit to employers – particularly affecting quality and productivity, two vital outcomes. Moreover, it is not in conflict with any organizational objectives, as it does not have negative effects on any of the outcomes we assessed. Given its synergistic effect with organizational commitment, family-friendly management may even reduce conflict between employers and employees. Such ideas would require another study, which, like any further study in this area, would have to include the extent of use and relevance, not just the availability of practices.

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Table 1: Latent trait model of family-friendly management

Family-friendly practices	Standardized discrimination coefficient	Probability that the practice is available in the average workplace in the sample
Maternity leave	0.62	0.64
Emergency care leave	0.71	0.59
Work from home	0.66	0.38
Term-time only contracts	0.88	0.20
Job-sharing	0.88	0.46
Workplace nursery	0.94	0.02
Childcare subsidies	0.80	0.08
Financial help to care for elderly relatives	0.83	<0.01
Leave to care for adults	0.86	0.06
Goodness of Fit Summary		
No. of observed response patterns	303	
No. of $((O-E)^2/E)>4$	0	
Maximum $((O-E)^2/E)$	3.9	
% G^2 explained	64.4	
Chi-square (df)	163 (89)	
Reliability		
R	0.73	
N	2295	

Table 2: Family-friendly management and social legitimacy (t-statistics with respective p-values in brackets from weighted regression models)

Dependent variable	Social Legitimacy
Independent variable/Model	*Weighted Logistic*
Family-friendly management	1.51 (0.13)
Employment level	0.25 (0.80)
Public workplace	1.50 (0.13)
Proportion of female employees	1.81 (0.07)
Workplace is part of a larger organization	6.74 (0.00)
Age of workplace	-1.49 (0.14)
Proportion of routine and unskilled workers	-0.57 (0.57)
Proportion of young workers	-0.49 (0.63)
Proportion of part-timers	-1.12 (0.26)
Proportion of new recruits	-0.85 (0.40)
Union representation	4.72 (0.00)
Manufacturing	-0.71 (0.48)
Electricity, gas and water	-1.26 (0.21)
Construction (reference category)	
Wholesale and retail	1.09 (0.28)
Hotels and restaurants	2.94 (0.00)
Transport and communication	2.18 (0.03)
Financial services	1.92 (0.06)
Other business services	1.17 (0.24)
Public administration	-0.54 (0.59)
Education	1.42 (0.16)
Health	1.27 (0.20)
Other community services	1.13 (0.26)
F(22, 1788)	9.51
Prob > F	0.00
Sample size	1810

Table 3: Family-friendly management and performance (t-values with respective significance level in brackets)

	Financial Performance	Labour Productivity	Labour Turnover	Absenteeism	Quality
Regression	*Weighted Ordered logit*	*Weighted Ordered logit*	*Weighted least squares*	*Weighted least squares*	*Weighted ordered logit*
Family-friendly management	0.41 (0.68)	0.50 (0.62)	-0.45 (0.65)	-0.35 (0.72)	0.67 (0.50)
Employment level	**2.68 (0.01)**	-0.27 (0.77)	**6.07 (0.00)**	**4.04 (0.00)**	0.66 (0.51)
Public workplace	-0.32 (0.75)	1.16 (0.25)	0.78 (0.43)	1.55 (0.12)	-1.66 (0.09)
Proportion of female employees	0.70 (0.48)	-1.36 (0.17)	**2.13 (0.03)**	0.53 (0.60)	1.17 (0.24)
Workplace is part of a larger organization	1.24 (0.22)	-1.82 (0.07)	0.51 (0.61)	1.58 (0.12)	**-2.91 (0.00)**
Age of workplace	0.13 (0.90)	-0.40 (0.69)	-0.93 (0.35)	-1.24 (0.22)	-0.64 (0.52)
Proportion of routine unskilled workers	0.52 (0.61)	-0.53 (0.57)	0.75 (0.45)	1.37 (0.17)	0.27 (0.79)
Proportion of young workers	0.24 (0.81)	-1.62 (0.10)	0.38 (0.70)	0.33 (0.74)	0.86 (0.39)
Proportion of part-timers	-1.25 (0.21)	-0.29 (0.77)	-1.67 (0.10)	**-2.19 (0.03)**	-1.55 (0.12)
Proportion of new recruits	0.27 (0.79)	1.03 (0.31)	**7.92 (0.00)**	**2.13 (0.03)**	0.14 (0.89)
Union density	-1.43 (0.15)	**-2.15 (0.03)**	**-3.06 (0.00)**	**2.50 (0.01)**	0.05 (0.96)

Manufacturing	-1.53 (0.13)	0.90 (0.37)	**-2.63 (0.01)**	0.60 (0.54)	-0.43 (0.67)
Electricity, gas and water	1.01 (0.31)	-0.14 (0.89)	**-3.92 (0.00)**	-0.59 (0.55)	-0.72 (0.47)
Construction (reference category)					
Wholesale and retail	-0.35 (0.73)	0.93 (0.35)	-1.90 (0.06)	0.62 (0.54)	-0.26 (0.79)
Hotels and restaurants	0.43 (0.67)	**2.20 (0.03)**	-1.57 (0.12)	-0.68 (0.49)	-0.12 (0.91)
Transport and communication	0.14 (0.89)	0.99 (0.32)	-1.26 (0.21)	0.94 (0.35)	-0.91 (0.36)
Financial services	1.08 (0.30)	**2.06 (0.04)**	-1.39 (0.16)	1.35 (0.18)	0.20 (0.84)
Other business services	0.04 (0.97)	**2.02 (0.04)**	**-2.87 (0.00)**	-0.08 (0.94)	0.66 (0.51)
Public administration	-0.56 (0.57)	0.88 (0.37)	**-4.20 (0.00)**	-0.88 (0.38)	-1.58 (0.11)
Education	-0.82 (0.41)	1.08 (0.28)	**-2.99 (0.00)**	-0.43 (0.67)	0.25 (0.80)
Health	-0.40 (0.69)	1.86 (0.06)	-1.80 (0.07)	0.81 (0.42)	0.87 (0.39)
Other community services	0.29 (0.77)	**2.49 (0.01)**	**-2.22 (0.03)**	-0.07 (0.95)	-0.02 (0.98)
Fit statistics F statistic	$F(22, 1661) =1.79$	$F(22, 1617) =1.89$	$F(22, 1797) =15.33$	$F(22, 1590) =3.51$	$F(22, 1743) =2.23$
Prob >F or R^2	Prob >F= 0.01	Prob >F = 0.01	$R^2 = 0.25$	$R^2 = 0.11$	Prob > F = 0.00
Sample size	1683	1639	1819	1612	1765

Table 4: Family-friendly management and performance with significant interaction involving workforce commitment (t-values with respective significance level in brackets from weighted regression models)

	Labour Productivity	Quality
Regression	*Weighted ordered logit*	*Weighted ordered logit*
Family-friendly management	0.53 (0.59)	0.51 (0.61)
Work force commitment	**2.92 (0.00)**	**4.29 (0.00)**
Workforce commitment x Family-friendly management	**2.12 (0.04)**	**2.20 (0.03)**
Employment level	-0.01 (0.99)	1.63 (1.00)
Public workplace	1.05 (0.30)	-1.01 (0.32)
Proportion of female employees	-1.52 (0.13)	1.12(0.26)
Workplace is part of a larger organization	-1.06 (0.29)	-2.10 (0.04)
Age of workplace	-0.25 (0.81)	-0.44 (0.66)
Proportion of routine unskilled workers	-0.28 (0.78)	0.53 (0.60)
Proportion of young workers	-0.32 (0.75)	1.85 (0.07)
Proportion of part-timers	-0.62 (0.53)	-2.16 (0.03)
Proportion of new recruits	0.51 (0.61)	0.49 (0.63)
Union density	-1.37 (0.17)	0.54 (0.60)
Manufacturing	1.21 (0.23)	0.40 (0.69)
Electricity, gas and water	1.15 (0.25)	0.14 (0.89)
Construction (reference category)		
Wholesale and retail	1.28 (0.20)	-0.12 (0.90)
Hotels and restaurants	2.25 (0.02)	-0.20 (0.84)
Transport and communication	1.56 (0.12)	-0.78 (0.44)
Financial services	1.54 (0.12)	-0.25 (0.80)
Other business services	1.86 (0.06)	0.45 (0.65)
Public administration	1.14 (0.25)	-1.36 (0.17)
Education	0.41 (0.68)	- 1.09 (0.28)
Health	2.24 (0.03)	0.37 (0.71)
Other community services	2.41 (0.02)	-0.53 (0.60)
Fit statistics	F(24,1229) =2.23	F(24,1322) =2.76
	Prob > F = 0.03	Prob > F = >0.00
Sample size	1253	1346