

# The Implicit Market for Family Friendly Work Practices

John S. Heywood<sup>a</sup>, W.S. Siebert,<sup>b</sup> Xiangdong Wei<sup>c</sup>

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The observation that a worker has a family friendly job reflects both the worker's decision to search for such a job and employer's decision to provide it to that worker. Previous research estimating the determinants of family friendly work practices has been severely limited by the inability to distinguish between these two decisions. Using linked employer-employee data and partial observability probit models, this paper provides the first empirical identification of the determinants of these two decisions. In addition to confirming the role of many worker and firm characteristics, the results are consistent with a theoretical model in which family friendly work practices are valuable to workers but costly to employers. Specifically, as predicted by a hedonic model of the labour market, firms providing such practices offer lower wages, all else equal.

*<sup>a</sup>Professor of Economics and Director of the graduate program in Human Resources and Labour Relations, University of Wisconsin-Milwaukee*

*<sup>b</sup>Professor of Labour Economics, Department of Commerce, University of Birmingham*

*<sup>c</sup>Associate Professor of Economics, Lingnan University*

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## **Introduction**

The last decade has seen an enormous increase in both popular and academic interest in family friendly work practices. These practices include parental leaves, provision for childcare, flexible hours and job sharing among many others. Advocates for workers and unions claim firms must “do more to help families handle the mounting conflict between work and family responsibilities” and emphasize that Australia, continental Europe and Japan have done a better job of providing this assistance (Appelbaum et al. 2002; see also DTI, 2000). The business press suggests that firms are unsure whether or not this provision is in their interest and point to the expense and uncertainty of doing so (Schrage 1999). In the UK, a government Commission (Bain, 2001) has recommended giving working parents with young children the right to require their employer to provide them a flexible working pattern. The government (DTI, 2001, 3) has accepted this recommendation, believing it will be “historic in bringing about a transformation in the culture of the workplace”. Such a right is to be implemented in the UK in April, 2003 (see below). Using UK data, the 1998 Workplace Employment Relations Survey (WERS), our paper investigates the extent to which this requirement for family friendly work practices may have the unanticipated consequence of reduced wages.

Economists might well view the prevalence of family friendly work practices as part of a broader process in which implicit markets allocate job characteristics valued by workers but costly to firms (Rosen 1974).<sup>1</sup> Surprisingly, little of the insights from this view have permeated the empirical testing by social scientists to date (as will be discussed in the next section). Despite many attempts to determine which workers receive family friendly benefits and which firms provide such benefits, the fact that two sets of decisions are being made has not been empirically modeled. A worker observed in a family friendly job is the result of that worker searching for such a job and the firm deciding to both provide those benefits to that worker. The characteristics associated with searching (demanding a family friendly job) may be the very characteristics associated with firms *not* hiring (or supplying such a job). To take a single illustration, female workers with dependents might find family friendly practices most valuable and use them most heavily. This, in turn, may well make these workers the most expensive workers to hire into a family friendly job. Thus, in typical reduced form estimates, it is unclear what partial correlation one would expect between women with dependents and family friendly

work practices, a confusion born out in empirical testing to date. This, and related, examples are drawn out in more detail in the next section.

Making use of linked employee-employer data and modeling partial observability probits, this is the first study to analytically distinguish and estimate the determinants of the desire for family friendly practices and the determinants of their provision. Using the WERS, we jointly identify worker characteristics associated with desiring family friendly practices and firm characteristics associated with their provision. The estimates confirm a hedonic model of the labour market in which workers with greater earnings demand more family friendly practices but in which firms reduce the earnings they pay when providing family friendly practices.

In what follows, the next section reviews past evidence emphasizing the importance of distinguishing the association of characteristics with the demand for family friendly practices from the association of characteristics with the provision of those practices. The third section introduces our methodology and testing framework. The fourth section describes our data while the fifth section illustrates which specific practices are of value to workers and identifies which workers have more nearly family friendly jobs. The sixth section presents our partial observability estimates of each side of the implicit market in family friendly practices. The seventh section applies the results to the UK's current policy debate, and the final section concludes.

## **The Determinants of Family Friendly Practices**

Much of the literature on work and family suggests that the provision of family friendly practices is routinely in the interest of employers (as an extreme, see Vanderkolk and Young 1991). These arguments often amount to the contention that happy employees make more profitable companies. Thus, recent estimates from Australia identify work-family conflict as a major source of employee turnover and that these turnover costs are as high as A\$75,000 per employee (Abbott et al. 1998). Family friendly practices are seen as a method that might reduce turnover costs as well as help families. Similarly, greater worker satisfaction may be associated with family friendly practices (Saltzstein et al. 2001) with the implication that more satisfied workers are more productive. Although such lines of argument are logical, the direct

evidence is far less compelling. Lanoie et al. (2001) follow a firm as it adopts a particular family friendly practice, the availability of job sharing. By comparing workers' productivity before and after the job sharing programme, they observe a significant decrease in labour productivity. Shepard et al. (1996) summarize the studies examining the productivity effect of flexible work schedules as “inconclusive” while going on to find a positive effect on productivity within the US pharmaceutical industry. Yet, Haines et al. (1999) studied paired workers showing that a flexible work schedule does not reduce either the rate of turnover or the use of sick leave among employees who have family responsibilities even as such flexibility is expensive to employers.

The point is not to suggest that firms can never benefit from the provision of family friendly practices. Instead, firms have differing ability (cost) in providing such practices and workers will value them to differing degrees.<sup>2</sup> This is nicely illustrated by the theoretical work by Deardorf and Stafford (1976) who contend that flexibility should be thought of as a practice over which both the firm and workers have preferences. Just as the employee would most desire the flexibility to work when it suits his or her schedule (yields the highest utility), the firm would like the flexibility to have the employee work when it suits the firm (is most profitable). The chance that the worker's utility maximizing extent of flexibility and the firm's profit maximizing flexibility are identical is essentially zero.<sup>3</sup> The result is that the wage is higher as the agreed upon flexibility moves closer to the firm's preferred choice and is lower as it moves toward the worker's preferred choice. Given the heterogeneity in firm's ability to offer flexibility (Duncan and Stafford 1980), a hedonic equilibrium should arise with those firms most able to give the workers a flexible schedule paying the least and those firms least able to provide flexibility, paying the most. It is interesting to note that the very term “flexible work” is used in the literature in two fashions paralleling the notion of Deardorff and Stafford. Thus, when the worker has flexibility the practice is family friendly and when the firm has the flexibility it is the opposite of family friendly such as when the firm uses on-call workers, makes short-term intensive hires and so on (see Houseman 2001 and Gramm and Schnell 2001).

Several studies have tested the hypothesis that the compensating wage reflecting family friendly practices should be lower. Johnson and Provan (1995) use a relatively small data set of individual workers drawn from a single state in the US. The estimated wage equations find that the use of family friendly practices is associated with an increased wage holding constant a

typical set of wage determinants. Gariety and Shaffer (2001) expand on this using the nationally representative and far larger sample size of the US Current Population Survey. Despite extensive controls for industry, occupation, human capital and even for the reason workers desire family friendly practices, they found that formalized “flextime” is associated with a significantly higher wage. The two studies agree, we think incorrectly, on the cause of this positive association claiming that while there might be a hedonic penalty for family friendly practices, this is outweighed by the productivity benefits of the practices, benefits reflected in higher wages.

Viscusi (1979) and more recently Gunderson and Hyatt (2001) emphasize the critical role played by the income effect when estimating compensating wage differentials. Unmeasured determinants associated with higher earnings are also associated with the desire to purchase all normal workplace characteristics including family friendly practices. In the case of workplace risk, this has been identified as the “endogenous risk model” and a variety of estimation techniques attempt to account for the endogeneity (Gunderson and Hyatt). The failure of past examination of the differential for family friendly practices to account for this endogeneity means that the positive association between those practices and wages might have nothing to do with productivity but instead reflect the income effect. Those with higher wages will purchase more family friendly practices. This point is drawn out analytically in Appendix 1.

While we are not directly estimating a compensating differential for family friendly practices, we wish to incorporate this insight into our estimates of who demands such practices and what firms supply such practices. In typical cross-section attempts to determine who has family friendly practices, individual data sources such as labour force surveys are used to estimate simple probit probability models. Thus, Golden (2001) finds that in a large nationally representative US survey, women, racial minorities, the less educated and the unmarried are less likely to have family friendly jobs. Yet, this finding may well reflect endogeneity, as each of these variables are associated with earnings (and wealth) and, through the income effect, with demand for family friendly practices. While Golden examines flexible schedules, Cowling (2000) examines the determinants of the ability to work at home. Estimating simple probits on data for individuals across 15 European countries, gender does not have a significant association with this ability to work at home while education, age and professional status are all

positively associated. Again, women may have greater demand for such ability if the determinants of earnings are all measured but without such measurement this demand is unlikely to be captured and may be swamped by the income effect. Caputo (2000) examines a sample of young women in the US showing that minorities in lower paying jobs were less likely to have a range of family friendly practices at work. Indeed, some researchers have even suggested that leave policies, in particular, may actually “reinforce inequality based on gender, race and family status.” Gerstel and McGonagle (1999) draw this conclusion from US data showing that respondent identified “need for a leave” is greatest for women, single parents, racial minorities and those with little income but that the actual taking of leaves is more likely among the married, white and those with more income. Rather than identifying this as a “disjunction” between need and use, it would again seem to be the income effect at work suggesting that those with higher earnings (and earnings potential) purchase more family friendly practices in the implicit market. The distribution of family friendly policies would reinforce inequality only if those receiving them do not pay an implicit wage price through their purchase.

This sets the stage for our contribution which is to separate the determinants of the desire for family friendly practices, including the income effect, from the determinants of supply which we hypothesis will reflect the cost implicit in provision. The next section outlines our empirical methodology.

### **An Empirical Model of Family Friendly Practices**

We start with the firm’s decision to offer a family friendly practices for a given job,  $FF=1$ . This depends on the expected profit from doing so which may well be a function of the anticipated characteristics of who might apply but, critically, it is also a function of the technology and cost structure of the firm. A firm will offer family friendly practices for a given job only if the anticipated benefits minus costs of doing so are positive,  $U_T = Y\alpha - \mu_T > 0$ , where  $Y$  is a vector of firm characteristics which influence the costs and benefits of providing family friendly practices,  $\alpha$  is a vector of parameters and  $\mu_T$  is a normal random error. Thus, the probability that the firm provides family friendly practices for a given job is

$$\text{Prob}(\text{FF}=1) = \text{Prob}(\mu_T < Y\alpha). \quad (1)$$

Following convention we anticipate that individuals will apply for a job with family friendly practices when the expected utility from doing so is positive. The main determinants of that include wealth (proxied by human capital and earnings), the implicit price of such practices and demographic characteristics influencing the value of those practices, such as gender and dependents. Let  $U_1 = X\beta - \mu_1$  be the worker's gain from having family friendly practices, where  $X$  is a vector of the individual's characteristics (including earnings),  $\beta$  is a vector of parameters and  $\mu_1$  is a normal random error. The individual worker will apply for a job with family friendly practices ( $S=1 \mid \text{FF}=1$ ) if  $U_1 = X\beta - \mu_1 > 0$ . The probability that the worker will search for such practices is given by

$$\text{Prob}(S=1 \mid \text{FF}=1) = \text{Prob}(\mu_1 < X\beta). \quad (2)$$

Given that the firm has decided to provide family friendly practices for a given job and that an individual has applied for that job, firms maximize profit, in part, through the selection of workers for that job. In particular, if the firm has decided to provide family friendly practices, an individual worker will add to profits based on the characteristics associated with their productivity and their expected use (and the associated expense) of the practices. Thus, given family friendly practices, the worker's net addition to profit (or loss) can be identified as  $U_S = Z\theta - \mu_S$  where  $Z$  is a vector of both firm characteristics and job applicant characteristics, including the wage reduction they would be willing to accept to obtain family friendly practices.<sup>4</sup> Thus, the probability of hiring an individual applicant given the firm provides family friendly practices is given by

$$\text{Prob}[(H=1 \mid S=1) \mid \text{FF}=1] = \text{Prob}(\mu_H < Z\theta). \quad (3)$$

Thus, equations (1), (2) and (3) are the structural equations describing the desire for and provision of family friendly practices in an implicit market. If  $S$ ,  $H$  and  $\text{FF}$  were observed independently we could theoretically estimate all parameters. Rare, or nonexistent, is the data

source with these variables. Instead, what is typically observed is a particular worker in a job with family friendly practices ( $G=1$ ). Thus,

$$\begin{aligned} \text{Prob}(G=1) &= \text{Prob}(H=1 \& S=1 \& FF=1) \\ &= \text{Prob}[(H=1| S=1) | FF=1] \text{Prob}(S=1| FF=1) \text{Prob}(FF=1) \end{aligned} \quad (4)$$

Recognizing that two of the decisions are those of the firm and one of the worker these may be rearranged into two probabilities allowing estimation by bivariate probit models with partial observability. The first probability is that the worker applies for a job with family friendly practices. The second is that the firm provides such practices to the worker. Thus, equation (4) is rewritten

$$\begin{aligned} \text{Prob}(G=1) &= \text{Prob}(H=1 \& FF=1) \text{Prob}(S=1| FF=1) \\ &= \text{Prob}[\mu_H < Z\theta \& \mu_T < Y\alpha] \text{Prob}(\mu_I < X\beta) \end{aligned} \quad (5)$$

For estimation purposes this may be thought of two decisions rather than three. A worker applies for a family friendly position at the firm ( $S=1$ ) and the firm decides whether to hire the worker into a family friendly position. In other words, the decision to hire the worker into a family friendly position is a single decision as the worker will not be hired by the firm otherwise, given the applicant's decision to search for family friendly jobs. Thought of this way,

$$\begin{aligned} \text{Prob}(G=1) &= \text{Prob}(H=1 \& FF=1) \text{Prob}(S=1| FF=1) \\ &= \text{Prob}[\mu_L < Y\alpha + Z\theta] \text{Prob}(\mu_I < X\beta) \end{aligned} \quad (6)$$

where  $\mu_L = \mu_H + \mu_T$ . This model consists of two probabilities, the probability a worker applies to the firm for a family friendly job and the probability, given that application, that the firm hires that worker into a family friendly job. Note that particular characteristics may well have different influences in determining these two probabilities. In particular, the hedonic model of the implicit market for family friendly practices would suggest that the observed wage should

be a positive determinant of worker's probability of applying but negatively associated with the firm's probability of provision.

## **Estimation**

When  $\mu_L$  and  $\mu_I$  are uncorrelated, the two structural equations from eq. (6) can be estimated as a sequential partial observability model (Abowd and Farber 1982 and Maddala 1993). The parameters are identified as long as there is identification (non-overlapping variables) between the combination (Y, Z) and X. This model has been used to examine the separate application and hiring decisions into union jobs and into government jobs as well as the decision to apply for insurance and be granted coverage (Abowd and Farber, 1982; Heywood and Mohanty, 1995 on unions and government jobs and Reschovsky, 1996 and Schmul, 2001 on insurance).

In practice, the assumption of zero correlation between the error terms is often inappropriate. Information not accounted for in the estimation may well influence the decisions of both the job applicant and the firm. Moreover, the sequential decision model does not account for the fact that there may be potential workers that do not apply for a family friendly job but which the firm with such jobs would like to hire. Finally, the sequential model does not account for the fact that there may be workers who do not apply for a family friendly job because they anticipate (correctly or incorrectly) being rejected. These issues are all accounted for by estimating the joint decision partial observability model (Poirier 1980, Maddala 1983) which breaks the sequential assumption and allows for correlated errors,  $\rho$ . In this case G (employment in a family friendly job) is assumed to have a bivariate normal distribution with parameters:  $X\beta$ ,  $Y\alpha + Z\theta$ ,  $\rho$ .

In our estimations, the distinction is not crucial to the general point but both models are used to estimate the structural equations for comparison. We emphasize that either model improves substantially on the testing to date which estimates a single reduced form equation of the determinants of  $G=1$ , confounding the decisions of the applicants and of the firm.

## **The Data**

The data is taken from the linked employee-employer portion of the UK 1998 Workplace Employment Relations Survey (WERS). WERS is a nationally representative sample of 2191 establishments with ten or more employees in Great Britain. Within each of the establishments a random sample of twenty-five individuals were surveyed. In those establishments with less than twenty-five employees, all workers were surveyed. The data were collected by the UK Department of Trade and Industry, with an overall response rate of 81 percent (Cully *et al.* 1999 pp. 303 ff). Such linked records are uniquely appropriate for our estimation. They provide data on characteristics of the individual workers, which influence their decision to search for family friendly practices, as well as data on firm characteristics which influence the decision to provide such practices. Table 1 details the definitions of the variables we use and their descriptive statistics.

The critical independent variable, whether or not the worker's current job is family friendly, is built up from a series of underlying indicators. As Table 1 shows, 32.2 percent of workers in the sample have family friendly jobs, according to our index. Our index is based on a k-mean cluster analysis, in which two categories of jobs are identified based on differences in seven relevant job characteristics.<sup>5</sup> We anticipate that family friendly jobs are more likely to provide flexible hours, job sharing, parental leave, working-at-home, workplace nursery and the ability to take time off and make it up latter. On the other hand, we anticipate that family friendly jobs are less likely to be those that do not allow time to be taken off. The cluster analysis confirms these expectations and shows that family friendly job characteristics tend to go together. As Table 2 shows, the jobs identified as family friendly are 2.5 times more likely to provide flexible hours, 8 times more likely to provide job sharing, consist of 100 percent of all jobs providing parental leave, are at least 2 times more likely to provide a workplace nursery and allow work at home and 15 times more likely to provide time off and only 1/3 as likely to prohibit time off. Moreover, each of these differences between the clusters are statistically significant<sup>6</sup>.

## **Results**

To illustrate the importance of the estimation approach, we start with a benchmark estimating the determinants of a family friendly job with a simple (reduced form) probit.<sup>7</sup> We have chosen

individual variables which include gender, age, disability status, race, marital status, the presence of young children, whether or not there are dependent children, union status and a series of occupational dummies. The establishment variables include the number of employees, the extent of unionization within the plant, the percent female within the plant, whether or not the firm uses workplace teams, the share of non-managerial supervisors in the plant, the share of managers in the plant, whether or not the establishment is in the private sector, an attitudinal indicator of whether or not managers feel it is workers responsibility alone to balance work and family and a series of industrial dummies. The two sets of variables are used individually and jointly, together with the measure of earnings in three separate probit estimates.

Table 3 shows the estimates using individual data in the first column. The results show that women, younger workers, the disabled and those with children are more likely to have a family friendly job. They also indicate a very strong positive relationship between earnings and such jobs. The second column uses just the firm variables, showing that workers in larger establishments, and those in establishments with more women, or using teams, or with greater unionization are more likely to have family friendly jobs. Again, earnings are a strong positive determinant of having a family friendly job. Finally, using both sets of variables reinforces the results already presented. Women, younger workers, the disabled and those with children remain more likely to have family jobs while those working for large establishments and with large shares of women, unionization and teams are also more likely to have family friendly jobs. In particular, the strong positive role of wages remains.

Thus, the simple probit estimates confirm previous studies showing a positive relationship between earnings and family friendly jobs. Yet, as we have suggested, this positive relationship likely confounds a positive income effect on the part of workers with a negative relationship on the firm side generated because family friendly benefits are costly. To examine this aspect, we next use the specification from equation (6), the bivariate probit with partial observability. We place the establishment-level variables in the firm equation and the individual-level variables in the worker equation. The exception is the variable of interest, earnings, which we have argued, belongs in both equations and should show separate correlations of opposite directions in the two.

Table 4 shows the estimation of both the sequential and simultaneous estimates using an initial set of controls. As column 1 shows, the results for the control variables in the reduced

form (column 3 of Table 3) carry over largely unchanged. Yet, the role we expected for earnings emerges very clearly. In the worker equation, earnings are a strong positive determinant of having a family friendly job. This is the income effect as those workers with greater earning power are more likely to purchase family friendly practices. On the other hand, earnings emerge as a very strong negative determinant of providing family friendly practices. These practices are expensive and the labor market creates an implicit price in form of foregone earnings.

The estimation results of the two models are very similar and the log-likelihoods from either can be used to reject the assumption that the reduced form is a sufficient estimation. In the simultaneous estimation, the correlation between the errors in the firm and worker equations is statistically significant suggesting it is the superior of the two specifications. Interestingly, it is in the simultaneous estimation that the size of the compensating differential appears larger.

The estimation remains stable to changes in specification. We added additional variables to both the determination of the employee and the workplace decisions. As seen in Table 5, the addition of tenure and education to the worker decision shows a strong role for education but worker earnings remains a positive determinant of the desire for family friendly practices. The addition of establishment age, market power and a series of worker participation variables reveal a mixed pattern with many but not all of the new variables taking significant roles as determinants of the workplace decision to provide family friendly jobs. The addition of these variables does not alter the role of higher worker earnings as a strong negative determinant of providing family friendly jobs. Again, the estimated error correlation in the simultaneous version remains statistically significant.

The estimations from the simultaneous model in Table 5 can be used to illustrate the magnitude of the market trade-off between earnings and family friendly jobs. We consider the influence on the workplace side holding constant all variables except the wage for the workplace, and holding all variables constant on the worker side<sup>8</sup>. The marginal effect is -0.039, which yields an elasticity of family friendly coverage with respect to earnings of approximately -0.121 ( $= -0.039/0.322$ )<sup>9</sup>. The reciprocal of this figure gives the elasticity of earnings with respect to family friendly coverage, -8.3, implying that legislation for family friendly work practices will be associated with substantially lower earnings.

However, we regard the -8.3 figure very much as an upper limit for the reaction of earnings to family friendly work practices. In the first place, our simple zero-one family friendly index necessarily lists as “non-family friendly” many jobs which are, in fact, family friendly in some dimensions (for instance, Table 2 shows that 23% of workers in non-family friendly jobs have access to flexible working hours). Secondly, any policy move toward family friendly work practices is likely to be sensitive to costs. Thus, in the British case the Bain Commission has said that, “if it does not make business sense to adopt a flexible working pattern, employers will not have to do so” (Bain, 2001, Executive Summary). For example, it is hard to imagine a worker successfully requesting a workplace nursery (daycare) if one does not exist already. For both these reasons, a law requiring extension of family-friendly work practices need not move large numbers of jobs from zero to one on our index. These caveats made, however, one would expect some new provision of family friendly practices (as we measure them) and this new provision is likely to be associated with substantially higher costs, as indicated by our earnings estimates.

## **UK Policy Impact**

As noted at the beginning, the UK government is displaying enthusiasm for family friendly legislation, and has made an “impact assessment” of the legislation. Given that our results are derived from UK data, they can be used to directly to assess the possible consequences of this legislative drive. The UK interest springs from the government's “Work-Life Balance Campaign” set up in the year preceding the 2001 election. The government published a consultative green paper (DTI, 2000) presaging an extension of maternity/paternity/parental leaves (forthcoming in the new Employment Act), and also proposing a new right for parents to have requests for flexible working “seriously considered” by their employers<sup>10</sup>. This “duty to consider” has received the imprimatur of the Work and Parents Taskforce (Bain, 2001), and the government has committed itself to April 2003 as the target date for implementation.

The duty to consider law aims to spread family friendly work practices more widely among firms. The practices envisaged (Bain, 2001, 2.2) involve compressed hours, flexitime, home-working, job sharing, teleworking, term-time working, shift-working, staggered hours,

annualised hours, as well as part-time working, for all of which workers can make requests<sup>11</sup>. These practices overlap with the variables underlying our family friendly index, and our results are therefore relevant (subject to the caveats above). Nevertheless, in appraising this law, neither the Bain Commission nor the government's impact assessment has considered the possibility of adverse wage movement.

The government's impact assessment forecasts a large take-up (DTI, 2001, 14) of the new right. The forecast is for a flow of around 400,000 successful new requests per year (restricted to parents of children under 6). This forecast is based on surveys of workers' responses about what they "would have liked" in the way of flexible working arrangements. For example, 25% of mothers who returned to work on a full-time basis would have liked the option of flexible working (DTI, 2001, 27)<sup>12</sup>. To put this increase of 400,000 a year in context, our index gives family friendly arrangements as being available to 32% of the workforce (Table 1), that is, about 8 million workers. Given this context, it can be seen that a considerable change is likely, if the government is correct.

On the cost side, the Work and Parents Taskforce (Bain 2001, 617-6.21) believes that the cost of accommodating requests would vary between zero and, at most, one week's wages per request.<sup>13</sup> Accepting this higher figure, the impact assessment then gives £170m. a year as the cost of accommodating requests (DTI, 2001, p 21). In addition, the cost of "running the request procedure", that is, making and processing a request, is assessed at half a day each of management's and worker's time, that is, £150 per request, or a £75m. year. This processing figure is assumed to become £100m. a year when the cost of dealing with appeals is taken in. Therefore, the total cost of the law is forecast by the government to be only £270m. a year, about half of one percent of annual labour costs.

We believe this cost estimate is too small given the large forecast take-up of the family friendly programme. Our empirical analysis shows a substantial trade-off between wages and family friendly practices suggesting such practices are costly, even among firms well placed to adopt them. To the extent that the programme requires family friendly work practices of firms that have chosen not to adopt these practices, such practices must be yet more costly (Deardorff and Stafford 1976). The consideration of possible wage reductions as an element of costs seems warranted and has a history in the economics of mandated benefits. For instance Gruber (1994) found that wages among 20-40 year old married women fell 5.4 percent as a result of mandated

maternity leave. Our empirical analysis, therefore, suggests that the government's impact analysis should be more cognizant of the implicit market for family friendly practices.

## **Conclusions**

This research recognizes the implicit market, which provides family friendly work practices. In this market those firms able to provide such practices most cheaply do so, attracting workers who value these practices and who will accept reduced earnings to cover the costs of provision. In this respect, we see the provision of family friendly practices as similar to those implicit markets which provide workplace health and safety, fringe benefits or, indeed, improved working conditions in general.

We are not the first to take this view but, as indicated above, limited testing methodology has often resulted in a failure to confirm the assumed trade-off between earnings and family friendly practices. We argue that this failure has been the result of failing to control for the strong income effect. Those with high earnings use a portion of them to purchase family friendly practices. Our empirical strategy has been unique: to isolate the determinants of these practices by separating the worker and firm determinants through partial observability techniques. We think the evidence is compelling. While workers with higher earnings are much more likely to desire family friendly work practices, firms paying lower wages are those that are more likely to provide them, all else equal. Thus, firms face a trade-off between paying higher wages and providing family friendly practices. Evidence of this trade-off is particularly timely, as the UK government seems poised to mandate increased provision of family friendly practices. Yet, when the government examined the impact of this mandate no recognition has been made of the implicit market which values these practices.

## References

- Abbot, J., H. De Cieri and R. Iverson. 1998. "Costing Turnover: Implications of Work/Family Conflict at the Management Level." *Asia Pacific Journal of Human Resources* 36(1): 25-43.
- Abowd, J. and Farber H. 1982. "Job Queues and the Union Status of Workers." *Industrial and Labor Relations Review* 35: 354 - 67.
- Appelbaum, E. and T. Bailey, P. Berg and A. Dallenberg. 2002. *Shared Work, Valued Care: New Norms for Organizing Market Work and Unpaid Care Work*. Economic Policy Institute: Washington, DC.
- Bain, Sir G (Chairman), 2001. *About Time: Flexible Working*, London: Work and Parents Taskforce.
- Caputo, R. 2000. "Race and Marital History as Correlates of Women's Access to Family-Friendly Employee Benefits." *Journal of Family and Economic Issues* 21(4): 365-85.
- Cowling, M. 2000. "At Home but in Work: The Extent and Determination of Home Working in the EU." *Working Paper of the Birmingham Business School*, December.
- Cully, Mark, Stephen Woodland and Andrew O'Reilly and Gill Dix. 1999. *Britain at Work* London: Routledge.
- Deardorff, A. and F. Stafford. 1976. "Compensation of Cooperating Factors." *Economica* 44: 671 – 84.
- DTI, 2000. *Work and Parents: Competitiveness and Choice*, London: Department of Trade and Industry.
- DTI, 2001. *Government Response to Recommendations from the Work and Parents Taskforce*, London: Department of Trade and Industry.
- Duncan, G. and F. Stafford. 1980. "Do Union Members Receive Compensating Wage Differentials." *American Economic Review* 70(3): 355 – 71.
- Forth, John and Simon Kirby. 2000. *Guide to the Analysis of "The Workplace Employee Relations Survey, 1998."* National Institute of Economic and Social Research, London.
- Gariety, B. and S. Shaffer. 2001. "Wage Differentials Associated with Flexitime." *Monthly Labor Review* 124(3): 69 – 75.

- Gerstel, N. and K. McGonagle. 1999. "Job Leaves and the Limits of the Family and Medical Leave Act." *Work and Occupations* 26(4): 510 – 34.
- Golden, L. 2001. "Flexible Work Schedules." *Monthly Labor Review* 124(3): 50 – 67.
- Gramm, C. and J. Schnell. 2001. "The Use of Flexible Staffing Arrangements in Core Production Jobs." *Industrial and Labor Relations Review* 55(2): 245 – 58.
- Gruber, Jonathan. 1994. "The Incidence of Mandated Maternity Benefits," *American Economic Review* 85(3): 622 – 41.
- Hanes, V., G. Guerin and S. St-Onge. 1999. "Effects of Flexible Hours on Turnover Rates and Absenteeism of Workers with Children." *Canadian Journal of Administrative Sciences* 16(4): 232-33.
- Heywood, J. and M. Mohanty. 1995. "Estimation of the US Federal Job Queue in the Presence of an Endogenous Union Queue." *Economica* 62(4): 479 – 93.
- Hogarth, T, C Hasluck, and G Pierre, 2001. *Work-Life Balance 2000: Baseline Study of work-life balance practices in Great Britain*, IER Warwick and IFF Research, November 2000, updated June 2001.
- Houseman, S. 2001. "Why Employers use Flexible Staffing Arrangements: Evidence from an Establishment Survey." *Industrial and Labor Relations Review* 55(1): 149-170.
- Hyatt, D. and M. Gunderson. 2001. "Workplace Risks and Wages : Canadian Evidence from Alternative Models." *Canadian Journal of Economics* 34(2): 377 – 95.
- Jirjahn, Uwe. 2002. "Performance Pay in Germany," in *Paying for Performance: An International Comparison*, eds. Michelle Brown and John Heywood, M.E. Sharpe, Armonk, NY.
- Johnson, N. and K. Provan. 1995. "The Relationship between Work/Family Benefits and Earnings: A Test of Competing Predictions." *Journal of Socio-Economics* Winter: 571 –84.
- Lanoie, P., F. Raymond and B. Schearer. 2001. "Work Sharing and Productivity: Evidence from the Firm Level." *Applied Economics* 33(9) 1213-20.
- Leroy, B. 2000. "Use Family-Friendly Perks to Attract Staff Members." *Veterinary Economics* 41(11): 14.
- Poirier, D. 1980. "Partial Observability in Bivariate Probit Models." *Journal of Econometrics* 12: 209 – 17.

- Rosen, Sherwin. 1974. "Hedonic Prices and Implicit Markets." *Journal of Political Economy* 92(1): 34 – 55.
- Saltzstein, A., Y. Ting and G. Saltzstein. 2001. "Work-family Balance and Job Satisfaction: The Impact of Family-Friendly policies on Attitudes of Federal Government Employees." *Public Administration Review* 61(4): 452 – 467.
- Schrage, M. 1999. "'Family Friendly' Firms will Find that No Good Deeds Go Unpunished." *Fortune* 139:(10), May 24, 294-94.
- Shephard, E., T. Clifton and D. Kruse. 1996. "Flexible Work Hours and Productivity: Some Evidence from the Pharmaceutical Industry." *Industrial Relations* 35(1): 123 – 139.
- Shmueli, A. 2001. "The Effect of Health on Accute Care Supplemental Insurance Ownership: An Empirical Analysis." *Health Economics* 10: 241 - 50.
- Vanderkolk, B. and A. Young. 1991. *The Work and Family Revolution: How Companies Can Keep Employees Happy and Business Profitable*. New York: Facts on File.
- Viscusi, K. 1978. "Wealth Effects and Earnings Premium for Job Hazards." *Review of Economics and Statistics* 60: 408-16.
- Waldfoegel, J. 1998 "Understanding the 'Family Gap' in Pay for Women with Children." *Journal of Economic Perspectives* 12(1):127-156.
- Waldfoegel, J., Y. Higuchi, M. Abe. 1999. "Family Leave Policies and Women's Retention after Childbirth: Evidence from the United States, Britain and Japan." *Journal of Population Economics* 12(4):523-45.

**Table 1. Variables and Their Descriptive Statistics**

Variables	Mean	Std. Dev.	Meaning
<b>Dependent Variables:</b>			
Family friendly arrangements at workplace (opinion of worker) <sup>a</sup> :			
flexhr	.321	.467	dummy=1 if flexible working hours (flexi-time) available
jshare	.169	.375	dummy=1 if able to share a full-time job with someone else
pleave	.282	.450	dummy=1 if parental leave is available
workathome	.xx	.xx	dummy=1 if able to work at or from home during normal working hours
nursery	.047	.211	dummy=1 if a workplace nursery or help with the cost of childcare is available
timeoff	.146	.353	dummy=1 if able to take time off and make it up later
ntimeoff	.028	.166	dummy=1 if not allowed to take time off
Family friendly index:			
famfriend	.322	.466	dummy=1 for family friendly workplace (an index derived from cluster analysis using the above 7 variables: see Table 2)
<b>Personal Characteristics Variables:</b>			
male	.492	.500	dummy=1 for male
age	39.727	11.854	age of the employee
married	.687	.464	dummy=1 for married
widdiv	.082	.274	dummy=1 for widowed or divorced
child4	.137	.344	dummy=1 for having children under age of 4
nodepchs	.561	.496	dummy=1 for having no dependent children (age under 16)
nonwhite	.061	.239	dummy=1 for non-white
disable	.059	.236	dummy=1 for disabled
<b>Highest educational qualification dummies:</b>			
degree	.243	.429	degree or above
alevel	.148	.355	A-level or equivalent
olevel	.251	.434	O-level
cse	.110	.313	CSE/GCSE
vocert	.365	.481	vocational training certificate
<b>Job-related Personal Characteristics Variables:</b>			
lpaywk	5.422	.707	log weekly pay
hour	37.502	12.223	normal hours of work per week
tenure	6.767	5.496	years of tenure on the current job
union	.405	.491	dummy=1 for union members
pension	.834	.372	dummy=1 if covered by a company pension scheme
sickpay	.805	.396	dummy=1 if the employer provides sick pay
<b>Occupation dummies:</b>			
manager	.104	.306	managers and senior administrators
prof	.151	.358	professionals
aprof	.110	.313	associate professionals and technical staff
clerk	.176	.381	clerical and secretarial
craft	.078	.268	craft and skilled service
service	.068	.251	personal and protective service
sale	.065	.247	sales
operator	.115	.319	operative and assembly

**Workplace Characteristics Variables:**

ltnem	5.273	1.656	log establishment size
private	.662	.473	dummy=1 for private organizations
tucover	3.134	2.603	% covered by collective bargaining arrangements <sup>b</sup>
pfemale	47.989	28.741	% female employees in the establishment
pnmsup	1.739	1.230	% non-managerial supervisors in the establishment
pmng	8.548	9.313	% managers in the establishment
balwkwfam	2.169	.772	index variable indicating management's view on the following statement: it is up to individual employees to balance their work and family responsibilities (0=strongly agree, ..., 4=strongly disagree)
teamwork	4.167	2.043	% working in formally designated teams <sup>b</sup>
jcc	.538	.499	dummy=1 if the establishment has joint consultative committees
qcircle	.532	.499	dummy=1 if the establishment has quality circles
brief	.900	.299	dummy=1 if the establishment operates a system of briefings by which management communicates or consults with employees
noconsul	.075	.263	dummy=1 if the managers do not use any other ways (other than JCC, quality circles, system of briefings) to consult their employees
infinv	.617	.486	dummy=1 if management regularly gives employees or their representative any information on internal investment plan
inffin	.751	.433	dummy=1 if management regularly gives employees or their representative any information on the financial position of the est.
infstaff	.661	.474	dummy=1 if management regularly gives employees or their representative any information on staffing plans
prperpay	.840	1.843	proportion of non-managerial employees receiving performance-related pay in the last 12 months <sup>b</sup>
pprpay	1.482	2.438	proportion of non-managerial employees receiving profit-related pay in the last 12 months <sup>b</sup>
pshareow	.594	1.487	proportion of non-managerial employees participating in share ownership schemes <sup>b</sup>
papprais	3.940	2.419	proportion of non-managerial employees having their performance formally appraised <sup>b</sup>
pintfill	2.014	1.559	proportion of vacancies filled internally <sup>b</sup>
layoff	.147	.354	dummy=1 if compulsory redundancy used in the last 12 months
mpower	.333	.471	dummy=1 if the organisation either dominates the market or has only few competitors
<b>Industry dummies:</b>			
seselect	.008	.087	utilities
seconst	.027	.163	construction
secwhole	.121	.327	wholesale and retailing
sechotel	.030	.171	hotel and catering
sectrans	.058	.233	transportation
secfinan	.045	.208	financial
secothbu	.082	.275	other business service
secpubli	.099	.298	public administration
seceduc	.116	.320	education
sechealt	.141	.348	health and social welfare
secoth	.028	.165	other industry

Sample size: 23,683

- a. These are answers to questions beginning: “If you personally needed any of these arrangements, would they be available at the workplace?” (tick all that apply).
- b. Index variable with 0=0%, 1=1-19%,2=20-39%,3=40-59%,4=60-79%,5=80-99% and 6=100%.
- c. The omitted industry category is manufacturing, and the omitted regional dummy is Yorkshire.

**Table 2: Bivariate K-mean Cluster to Derive the Family Friendly Index**

	Family Friendly	Non-Family Friendly	Col. 1/Col. 2
Flexible hours	.5427	.2297	2.36**
Job sharing	.4174	.0587	7.11**
Parental leave	.8820	.0000	inf.**
Workathome	.181	.079	2.29**
Nursery	.1808	.0792	2.28**
Time off	.1814	.0123	14.75**
No time off	.0123	.0344	.358**
Overall: percent of observations	32.2	67.8	

The numbers should be interpreted as follows: for example, the number in the first cell, .5427 means that 54.27% of the workers identified as being in a family-friendly job have flexible hours. The number at the bottom of the column, 32.2, gives the percentage of workers in family friendly jobs. Also, the overall percentage in the sample having flexible hours is the average of those in family friendly and non-family friendly jobs, ie, 32% ( $=0.54 \cdot 0.32 + 0.23 \cdot 0.68$ ), as in Table 1.

\*\*Indicates a significant difference in proportions between the family friendly and not family friendly clusters at the 5 percent level.

**Table 3: Simple Probit Estimates**

(Dependent variable: family friendly index)

	Individual Variables	Firm Variables	Both Firm and Individual Variables
Constant	-1.177** (12.91)	-2.629** (24.97)	-1.795** (14.45)
Log Earnings	.2168** (12.07)	0.1576** (10.71)	.1595** (8.087)
Female	.3266** (15.69)		.2773** (12.08)
Disabled	.1185** (3.214)		.0897** (2.396)
Age	-.0151** (16.57)		-.0151** (16.16)
Nonwhite	-.1024** (2.369)		-.1075** (2.461)
Married	.0072 (0.273)		-.0032 (0.119)
Widow/Divorce	-.0201 (0.755)		-.0261 (0.649)
Young Child	.1708** (6.037)		.1559** (5.438)
Dependents	.0888** (4.159)		.0870** (4.017)
Union Member	.3063** (16.15)		.1364** (6.259)
Occupational Dummies	Yes		Yes
Size		.0867** (14.26)	.0770** (12.23)
Private Sector		-.1127** (3.350)	-.0875** (2.529)
%Female		.0071** (15.42)	.0040** (7.979)
%Union		.0279** (6.520)	.0290** (6.049)
%Manager		.0078** (7.944)	.0058** (5.830)
%Supervisor		.0492** (6.758)	.0425** (5.734)
Teams		.0307** (6.694)	.0288** (4.870)
Worker Responsibility		.0570** (4.998)	.0484** (4.178)
Discretion		.0379** (3.478)	.2900** (2.609)
Industrial Dummies		Yes	Yes
Chi-squared	1416.9**	1250.5**	2138.3
% Correctly Predicted	69.4	70.2	70.7
N	23683	23683	23683

Note: Asymptotic t-statistics are presented in parentheses. \*\*statistically different from zero at the 5 percent level

**Table 4: Partial Observability Estimates (parsimonious specification)**

(Dependent variable: family friendly index)

	Sequential Estimation		Simultaneous Estimation	
	worker	firm	worker	firm
Constant	-1.449** (11.27)	.4620 (1.345)	-1.506** (11.68)	1.480** (3.412)
Log-Earnings	.3522** (13.78)	-.3399** (6.064)	.3564** (14.01)	-.4271** (7.270)
Female	.2686** (10.17)		.2493** (9.751)	
Disabled	.0924** (2.077)		.0907** (2.249)	
Age	.0177** (15.73)		-.0162** (14.10)	
Nonwhite	-.1525** (3.001)		-.1312** (2.846)	
Married	-.0050 (0.154)		.0010 (0.034)	
Widow/Divorce	.0431 (0.908)		-.0328 (0.768)	
Young Child	.2183** (6.191)		.1914** (5.994)	
Dependents	.0848** (3.311)		.0839** (3.632)	
Union Member	.0779** (3.078)		.0709 (3.006)	
Occupational Dummies	Yes		Yes	
Size		.2487** (12.03)		.2295** (10.01)
Private sector		-.7783** (6.579)		-.7083** (6.198)
%Female		.0081** (6.878)		.0069** (5.835)
%Union		.0583** (5.493)		.0560** (5.473)
%Manager		.0079** (3.196)		.0073** (3.087)
%Supervisor		.0722** (3.820)		.0640** (3.627)
Teams		.0364** (3.531)		.0331** (3.420)
Worker Responsibility		.1203** (3.591)		.1081** (3.462)
Discretion		.0770** (3.096)		.0708** (3.057)
Industry Dummies		Yes		Yes
Rho			-.4879** (3.584)	
Chi-squared	2189.2		2199.5	
% Correct Predictions	64.1		64.4	
N	23683		23683	

Note: Asymptotic t-statistics are presented in parentheses. \*\*statistically different from zero at the 5 percent level

**Table 5: Partial Observability Estimates (extended specification)**

(Dependent variable: family friendly index)

	Sequential Estimation		Simultaneous Estimation	
	worker	firm	worker	Firm
Constant	-1.502** (11.90)	.4695 (1.345)	-1.543** (12.30)	1.665** (3.718)
Log-Earnings	.3144** (12.56)	-.3411** (6.089)	.3210** (13.06)	-.4369** (7.264)
Female	.2601** (9.946)		.2474** (9.679)	
Disable	.1084** (2.444)		.1052** (2.548)	
Age	.0150** (12.65)		-.0141** (12.01)	
Nonwhite	-.1593** (3.142)		-.1431** (3.026)	
Married	.0084 (0.259)		.0117 (0.396)	
Widow/Divorce	-.0262 (0.558)		-.0205 (0.471)	
Young Child	.2071** (5.958)		.1894** (5.855)	
Dependents	.0817** (3.214)		.0815** (3.464)	
Union Member	.0881** (3.526)		.0817** (3.414)	
Occupational Dummies	Yes		Yes	
Tenure	-.0010 (0.245)		-.0010 (0.262)	
Degree	.3110** (7.411)		.2918** (7.348)	
A level	.2942** (7.268)		.2701** (7.088)	
O level	.2435** (7.126)		.2234** (6.887)	
CSE	-.0033 (0.081)		.0036 (0.094)	
VOCERT	-.0298 (1.324)			
Size		.2450** (9.857)		.2238** (9.124)
Private sector		-.9524** (7.090)		-.8900** (6.786)
%Female		.0078** (6.413)		.0069** (5.618)
%Union		.0596** (5.337)		.0587** (5.426)
%Manager		.0066** (2.574)		.0062** (2.487)
%Supervisor		.0695** (3.546)		.0646** (3.469)
Teams		.0234** (2.117)		.0221** (2.100)

Worker Responsibility		.1069** (3.017)		.0989** (2.944)
Discretion		.0561** (2.148)		.0527** (2.127)
Industry Dummies		Yes		Yes
Establishment Age		-.0003 (0.576)		-.0003 (0.535)
Market Power		-.1059** (2.142)		-.0954** (2.026)
JCC		.1935** (3.625)		.1782** (3.499)
Single Establishment		.1612** (2.723)		.1513** (2.683)
Quality Circle		.1556** (2.926)		.1347** (2.851)
No Consultation		-.0427 (0.573)		-.0217 (0.309)
Rho				-.4018**(2.826)
Chi-squared	2337.3		2344.4	
% Correct Predictions	65.1		68.9	
N	23683		23683	

Note: Asymptotic t-statistics are presented in parentheses. \*\*statistically different from zero at the 5 percent level

## Appendix 1

This appendix illustrates the problem that unmeasured determinants of wages imply for estimating compensating differentials for family friendly practices.

Assume individuals maximize utility across goods with price one and consumption of family friendly practices at work  $U(W, ff)$  where  $W$  is earnings and  $ff$  is a measure of family friendly practices.. Further, consider a hedonic equilibrium for such practices in which wages vary negatively with the measure,  $h(ff)$  and  $h'(ff) < 0$  and imagine a wage determinant,  $K$ , which cannot be measured in empirical applications,  $W = h(ff) + K$ . The worker then maximizes the following with respect to the extent of family friendly practices:  $U = U[W = h(ff) + K, ff]$ . The resulting first order condition shows the worker's indifference curve tangent to the hedonic locus:  $-U_2/U_1 = h'(ff)$ . The second order condition requires that  $U_{11} < 0$ ,  $U_{22} < 0$  and  $D = U_{11}[W'(ff)]^2 + U_1 W''(ff) + [U_{21} W'(ff)]^2 + U_{22} < 0$ . The comparative static associated with changes in  $K$  across otherwise similar workers is  $\partial ff / \partial K = -[U_{11} h'(ff) + U_{21}] / D$ . This expression can be signed as positive if  $ff$  is a normal good (Henderson and Quandt 1980). Thus, any empirical estimate of the relationship between  $W$  and  $ff$  confounds the positive association from the income effect with the negative relationship from the hedonic equilibrium.

## Endnotes

<sup>1</sup> Such job characteristics include reduced risk of death or injury on the job, employment security and fringe benefits among others.

<sup>2</sup> The benefits may include increased retention or improved recruiting. Waldfogel (1998) and Waldfogel et al. (1999) demonstrate that family leave increases female retention and Levoy (2000) provides an employer's view on recruiting.

<sup>3</sup> This condition is guaranteed by differences in the distribution of preferences between firms and workers and by search costs that make sorting imperfect. See Duncan and Stafford (1980) for more detail.

<sup>4</sup> As a practical matter, many of the worker characteristics are aggregated to the firm level for inclusion on the firm side of the bivariate probit.

<sup>5</sup> Jirjahn (2002) presents a similar methodology to identify high performance workplaces. As in this application, he then uses this identification as a dependent variable for which he estimates determinants in a second stage (although not using partial observability).

<sup>6</sup> It is interesting to compare WERS figures with those from the Work-Life Balance Baseline study which asked a sample of 7,500 employees whether they were using various flexible working time arrangements (Hogarth et al., 2001). For flexible working hours, the WERS gives 33% of employees as having this arrangement available, compared to 24% actually using it (Hogarth et al., 2001, Table 3). For job-sharing, WERS figures are 17% for availability to workers, compared to 4% using job sharing. These figures differ in the expected direction, since the WERS questions relate to whether particular arrangements are available to workers - they need not necessarily use them.

<sup>7</sup> All estimations are adjusted with the matched individual/establishment weights (empwt\_nr) as provided by WERS See Forth and Kirby (2000).

<sup>8</sup> Thus, we conduct a partial equilibrium analysis focusing on the workplace trade-off while holding constant the earnings (and hence the income effect) of workers.

<sup>9</sup> Green (1997 p. 908) gives the marginal effect  $\partial G/\partial \ln W$  as  $\alpha_w g^2$  where  $\alpha_w$  is the estimated coefficient on log wages from the workplace side and  $g^2 = f(Y\alpha + Z\theta)F[\{(Y\alpha + Z\theta) - \rho(X\beta)\}/(1 - \rho^2)^{1/2}]$ , where the notation follows the development in earlier sections of this paper. The coefficient from Table 5 is -.437 and  $g^2$  equals .090 thus the marginal effect is -.039. The elasticity is  $(\partial G/\partial W) \cdot (\bar{W} / \bar{G}) = (\partial G/\partial \ln W) / \bar{G} = -0.039/0.322$ .

<sup>10</sup> In fact, a government survey, the Work-Life Balance Baseline study of 2,500 workplaces and 7,500 employees found that women preferred extra flexibility in their working arrangements to an extension to their maternity leave (Hogarth et al, 2001, 24). Note that Germany (since Jan 2001) and the Netherlands (July 2000) have introduced a right to work reduced hours (Bain, 2001, App 5). However, small firms are exempt - below 15 in Germany, and below 10 in the Netherlands. If employers object, their objections have to pass a "harm test", ie the employer has to prove detrimental impact on the business (DTI, 2000, 6.33)..

<sup>11</sup> The law will be based on the following (Bain, 2001, viii):

- 1) parents of children under 6 will make a request in writing to their employer setting out the working pattern they want;
- 2) the firm will have to consider the business case for or against the proposals, meet the employee (plus advisor), and make a response in writing;
- 3) if the response is rejection - which can be only on specific business grounds, for example increased costs - the employee will be able to complain to an Employment Tribunal;
- 4) there is to be no small firm exemption, and no formal harm test.

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<sup>12</sup> The Work-Life Balance Study also found many workers not presently covered by flexible working arrangements would like such arrangements. For example 47% of workers (males and females together) would have liked flexitime, compared to only 24% using it (Hogarth et al., 2001, Tables 4 and 6), and there are similar large gaps for conditions such as job-sharing and term-time working. Interestingly, these surveys indicate that the demand for flexible working is almost as great among men as women, and does also does not differ according to caring responsibilities (DTI, 2000, 6.8), which supports our statistical approach of analysing all the workers in the WERS, rather than particular sub-groups.

<sup>13</sup> These low estimates are bolstered by evidence from the WERS that most managers of firms with family friendly practices have found them “cost-effective.” First, we note that expenditures can be very costly even as being cost-effective. Second, we would expect that in the implicit market every firm has found a cost-effective combination of earnings and family friendly practices but could not expect this to provide any guidance to a government mandated level of practices.