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## ABSTRACT

### **The Implicit Costs and Benefits of Family Friendly Work Practices\***

This paper posits that the provision of family friendly practices is, on balance, costly to firms and valuable to workers. As a consequence, we anticipate the emergence of a hedonic equilibrium in which workers provided with such practices face an implicit reduction in their earnings. Using WERS98 linked employer-employee data, we show that the ability to confirm this compensating wage differential depends critically on an appropriate treatment model designed to purge typical estimates of the income effect. We find that family friendly jobs may be associated with as much as a 20 percent reduction in earnings. Our estimates can be used to inform impact assessments of new UK legislation extending family friendly practices.

JEL Classification: J31, J32

Keywords: family friendly work practices, hedonic equilibrium, compensating wage differential, legislative impact assessment

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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 remain 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, following the recommendations of the Bain Commission (Bain, 2001) working parents with young children have been given the right to require their employer to provide them a flexible working pattern. The government (DTI, 2001, 3) said this right would be “historic in bringing about a transformation in the culture of the workplace”. This right was implemented in April, 2003 (see below). Using UK data, the 1998 Workplace Employment Relations Survey (WERS), our paper investigates the extent to which such requirements for family friendly work practices may have the unanticipated consequence of reduced wages.

Economists might well view the trade-off between wages and family friendly practices as part of a broader process in which implicit markets allocate job characteristics valued by workers but costly to firms (Rosen 1979).<sup>1</sup> Surprisingly, few of the insights from this view have permeated the empirical testing by social scientists to date. The relatively small number of attempts to estimate the implicit wage cost of providing family friendly practices use relatively narrow data sets, do not implement the methodologies now standard when estimating compensating differentials and reach contradictory conclusions.

Making use of linked employee-employer data of the UK 1998 Workplace Employment Relations Survey, we estimate earnings equations that include as determinants the provision of family friendly work practices. The data allows us to consider a wide range of such practices and so to build up several indices of whether or not a particular job is family friendly. It also allows us to use employer responses to check against employee responses to confirm whether or not particular practices are actually provided. The linked data also provides us reasonable instruments for controlling for the well known endogeneity of the desired job characteristics that arise whenever estimating compensating wage differentials. Our first estimates do not check employee responses against employer responses and do not control for endogeneity. They present a mixed pattern that leaves unclear whether or not there is any implicit wage cost for the provision of family friendly practices. The estimates that make use of the employer responses and correct for endogeneity provide much clearer support for the hedonic model of the labor market. The majority of individual practices are associated with reduced earnings and the overall index of family friendly practices is associated with approximately a 20 percent decline in earnings all else equal. We emphasize that the provision of such practices does not appear costless and that much of the cost appears to be born by the workers that the practices are designed to assist.

The next section reviews past evidence on the provision of family friendly practices arguing that it can be considered a costly term of employment likely to give rise to negative compensating differentials. It also reviews the surprisingly few previous attempts to estimate differentials for family friendly practices. The third section introduces our methodology and testing framework. The fourth section presents our estimates of the compensating differentials and the fifth section concludes and draws implications for current policy debates.

## **The Costs of Family Friendly Practices**

Parts of the literature on work and family suggest 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 (Salzstein et al. 2001) with the implication that more satisfied workers are more productive. Although such lines of argument are logical, the evidence is mixed. 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 program, they observe a significant *decrease* in labor 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 have a significant effect on 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> Competition in product and labor markets result in a wage that 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 firms' 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 demanding the most flexibility for themselves, paying the most. It is interesting to note that the very term "flexible work" is used in the academic 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 directly tested the hypothesis that the compensating wage reflecting family friendly practices should be lower. Baugman et al. (2003) examine a limited survey of 120 employers in a single county in the state of New York showing that the costs of flexible scheduling and child care are offset in part by the paying of lower entry-level wages. Yet, Johnson and Provan (1995), using a relatively small data set of individual workers drawn from a single state in the US, find the opposite. Their 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. A similar finding is reported by Gariety and Shaffer (2001), who expand on this study 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 latter two studies agree, possibly 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 Siebert and Wei (1994) and 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 examinations 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.

In typical cross-section attempts to determine who has family friendly practices, individual data sources such as labor force surveys are used to estimate simple probit probability models.<sup>4</sup> 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 may well reflect the endogeneity that concerns us 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 work 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 researches have even suggested that leave policies, in particular, “reinforce inequality based on gender, race and family status.” Gerstel and McGonagle (1999) draw this conclusion from US data showing that the “need for a leave” is greatest for women, single parents, racial minorities and those with little income but that the actual distribution of leaves is more likely among the married, white and those with more income. Rather than identifying this, as they do, 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.

When providing family friendly practices, firms weigh costs against benefits. Costs include covering for absent employees, hiring extra employees and possibly leaving sections short staffed. Indeed, Woodland et al (2003, 246) found that 70 percent of firms with family friendly practices experienced such problems. On the other hand, benefits may occur as well.

Arthur and Cook (2004) confirm abnormal stock market returns for large US firms associated with their announcement of introducing family friendly practices and Perry-Smith and Blum (2001) show that such practices are also associated with an improved perception of firm performance. Yet, two points remain critical. First, the fact that some firms have profitably introduced family friendly practices does not imply that all, or even most, firms can do the same. Theoretically, those that have introduced such practices would be expected to benefit from doing so and those that have not would lose profits by doing so. Second, saying that benefits exceeds the costs for a group of firms is not to say that costs are zero, and one way of paying for those costs may be an implicit reduction in earnings. Put somewhat differently, the profitability associated with those firms which introduce family friendly practices may well include the fact that they are able to lower wages. Thus, Bender et al. (2005) examine job satisfaction showing that US workers are willing to trade off earnings for family friendly practices.

This sets the stage for our contribution which is to use the linked employee-employer data of the Workplace Employment Relations Survey (WERS) to estimate earnings equations designed to investigate the implicit wage cost of providing family friendly benefits. The WERS has an unusually wide variety of questions about family friendly practices and has been used to examine these practices in the past. For instance, Budd and Mumford (2004) have shown that unions are negatively associated with the availability of flexible hours and work at home arrangements but are positively associated with parental leave, special paid leave and job-sharing. They did not examine the implicit wage cost of these policies. The next section outlines our empirical methodology for such an examination.

## **The Data and Methodology**

The data are taken from the linked employee-employer portion of the UK 1998 Workplace Employment Relations Survey. 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.

Our methodology is to estimate a series of wage equations including indicators of family friendly work practices. In our initial estimations we include separately each of the six such practices identified by the WERS. These are presented in the top panel of Table 1 and include whether or not the worker's current job provides job sharing, parental leave, the ability to work at home, flexible working hours, a nursery or support for childcare and the ability to take time off and make it up later. The indicators are equal to one if the worker identifies the family friendly practice is available with their job. The descriptive statistics range from 4.0 percent of workers saying they have nursery or child care support available in their workplace to 32.5 percent saying flexible hours is available.<sup>5</sup> A summary measure indicating a family friendly job is developed from a k-mean cluster of these underlying indicators. As Table 1 shows, 32.7 percent of workers in the sample have family friendly jobs, according to this index. Our index is based on a k-mean cluster analysis, in which two categories of jobs are

identified based on differences in the six relevant job characteristics.<sup>6</sup> We anticipate that family friendly jobs are much more likely to provide each of the six characteristics. The cluster analysis presented in the left panel of Table 2 confirms these expectations and shows that family friendly job characteristics tend to go together. The jobs identified as family friendly consist of 100 percent of those that provide flexible hours, they are 3 times more likely to provide job sharing or allow working at home and twice as likely to provide parental leave, a workplace nursery or time off. Moreover, each of the differences between the clusters is statistically significant.

One of the valuable aspects of the matched data is that managers are asked about their workplace's provision of the same six family friendly practices. While the manager does not link the practice to the individual workers interviewed, they do indicate whether or not the workplace provides the various family friendly practices to any of its employees. This allows us to modify the worker responses to develop alternative measures of the provision of the practices. Specifically, if the worker says the job provides a particular practice but the manager says the workplace does not provide such a practice to any workers, we assume the worker is mistaken.<sup>7</sup> As many of the workers do not actually take advantage of the practices that are provided, it seems likely that some workers may think they have family friendly practices but actually do not (Hogarth et al. 2001). When this is the case, using uncorrected indicators derived from worker responses creates measurement error biasing the estimated coefficient towards zero. Yet, it remains possible that the managers are simply itemizing the formal provision of family friendly benefits and that individual supervisors provide some benefits on an informal basis. In this case, the workers uncorrected indicators may be more

accurate. In sum, a strength of using the WERS is the ability to generate alternative measures on the presence of crucial indicators.

The second panel of Table 1 shows that the prevalence of each of the family friendly practices is reduced using the alternative measure. The range is now from 2.8 percent saying they receive nursery or childcare support to 15.3 percent reporting they have parental leave. The decline in some of the indicators is profound. Thus, of the 32.5 percent who originally reported their workplace permitted flexible hours, more than half work for an establishment in which the manager reports there is no provision of flexible hours to any employee, resulting in an adjusted measure indicating that only 14.7 percent of workers have jobs with flexible hours. Even more dramatic, the vast majority of those workers who originally report they can take time off and make it up later, work in establishments in which the manager denies this (nearly 15 percent in the original survey but only 3 percent after the adjustment). There are, of course, at least two possibilities. First, as we have already suggested, employees may be unaware of the true provision of family friendly practices at their workplace because many do not use them even when available. Second, many of the family friendly practices are provided informally without a workplace level decision about their provision. Thus, individual supervisors or lower level managers may allow such practices for some workers even within a firm that does not provide the practice as a matter of course. In the end, we have no way of knowing which explanation is more common for the difference in the perception of provisions by workers and by managers. As a consequence, we will use both sets of measures throughout the analysis.

It is interesting to note that despite the large drop in the prevalence of some of the practices, the overall index of family friendly jobs does not change dramatically. The clustering shown in the right hand panel of Table 2 shows that the adjusted indicators go

together in a somewhat different fashion. The new family friendly index includes all of the workers who have job sharing, who have parental leave and who can work at home. Again, the pattern suggests that family friendly practices go together, and the new estimate of the share of family friendly jobs is 29.2 percent, a drop of only 3.5 percentage points. Again, the differences are statistically significant and, as mentioned, we will use both indices in the estimates that follow but the estimates with adjusted measures/indices should be treated as the more reliable results.

Table 3 presents the descriptive statistics for the remaining controls used in estimating the earnings equations. They are largely standard and we note that the results we present are not particularly sensitive to modest changes in the variables included and excluded as regressors in wage equations. Yet, as we emphasized in the first two sections of the paper, we anticipate that the results will be very sensitive to the treatment of the critical indicators of family friendly work practices. In particular, we anticipate that those workers with higher earnings potential will be more likely to purchase family friendly practices. As a consequence, we fear spurious positive coefficients on the family friendly indicators.

To examine these issues, we will first estimate the earnings equations with typical ordinary least squares, reporting the coefficients on the family friendly indicators:

$$\text{Ln}(y_i) = X_i\beta + \delta f_i + \varepsilon_i, \tag{1}$$

where  $y$ =hourly pay,  $X$ =controls,  $f$ =family friendly indicator, and  $\varepsilon$ =error term

We will then follow with a series of full treatment effect models in which the dummy family friendly indicator is made endogenous (Heckman 1978) and the wage equation and the

determinants of the family friendly indicator are jointly estimated via maximum likelihood. Here we assume that the binary family friendly variable derives from an unobservable latent variable  $f^*$ , so that:

$$f^*_i = Z_i\gamma + v_i \quad (2)$$

where  $f = 1$  if  $f^* > 0$  and  $f = 0$  otherwise,  $Z$ =controls, and  $v$ =error term.

We provide reasonable instruments for the family friendly indicators in an effort to purge the influence of the income effect. While we will discuss the choice of instruments in more detail when presenting the results, the object is to identify variables that influence the probability of workers being provided family friendly practices but which do not influence the wage. In this respect, the WERS is an excellent data source as it provides a variety of measures of employer's attitude toward their employee's efforts to balance work and family. We anticipate these measures will influence the workers' probability of receiving benefits but will not directly influence their earnings. Throughout the estimation we recognize that multiple individual workers may be associated with a single workplace. Thus, all estimations are carried out with the Huber/White robust estimator of variance to account for workplace specific heteroscedasticity.

## **Results**

Table 4 presents the summary results from eight estimations of the earnings equation using the unadjusted workers' report about the provision of family friendly practices. The estimations include identical controls as indicated in the notes of the Table but vary the practices included.

The first six include, in turn, each of the individual indicators. The seventh includes all six indicators simultaneously and the eighth includes the index of family friendly practices as built up from the clustering procedure. Four of the six individually entered indicators emerge with a positive coefficient and only two emerge with a negative coefficient. When all are entered simultaneously, this pattern remains. Of the four positive coefficients, two are statistically significant while one of the two negative coefficients is statistically significant. The overall index is negative and statistically significant. On balance, the evidence for a trade-off between family friendly practices and earnings is mixed at best. One would be hesitant to suggest that there is an implicit wage cost for family friendly practices based on the evidence in Table 4.

Table 5 reproduces the estimates from Table 4 using the indicators that are adjusted by the managers' reports on the provision of family friendly practices. Again, four of the individually entered indicators take a positive coefficient but now all are statistically significant. When all indicators are entered simultaneously, three of the four indicators retain positive and statistically significant coefficients. The indicator of flexible hours retains the lone statistically significant negative coefficient. Now the family friendly index takes a positive but insignificant coefficient. In total these estimation provide almost no support for the notion of an implicit wage cost for family friendly practices. Indeed, they appear to mimic some of the earlier literature showing that such practices are associated with higher earnings.

We now implement the treatment effect model in which we instrument the indicators of family friendly practices. The critical identifying variables in the treatment equation (2) but not in the earning equation are indicators of the attitude of the employer toward the effort of workers to balance their work and family. In particular, we include the manager's response to the statement that it is worker's responsibility to balance the competing demands of work and



family and the worker's view of whether or not management cares about their family responsibilities. We will return to the properties of the instruments shortly but first wish to identify the consequences of the revised estimation.

Table 6 presents the wage equation portion of the treatment effect estimates. Recall that the indicators of family friendly practices are now endogenous. The control variables continue to be identical across estimates and the same as in the estimates in Tables 4 and 5. Indeed, the patterns of coefficients for the controls and their significance also remain largely the same. However, the pattern of the results on the family friendly indicators alters substantially. Parental leave, that took a significant and positive coefficient in the OLS estimations, now takes a significant and negative coefficient. Time-off, positive but insignificant in the OLS estimations, now also takes a negative and significant coefficient. The flexible hours coefficient retains its negative and significant coefficient and the overall family friendly index also retains its negative and significant coefficient. The coefficient on the index indicates that family friendly jobs are associated with 18.4 ( $e^{-.204} - 1$ ) percent lower earnings. Thus, estimation of the treatment model yields results far more supportive of the hedonic model and suggestive of an implicit wage cost for family friendly practices. Indeed, the results suggest a very large implicit cost, a point to which we will return.

This suggestion becomes even stronger when using the treatment effect model with the adjusted indices, shown in Table 7. With the OLS estimate, only flexible hours was associated with significantly lower earnings, and four of the indicators were associated with significantly higher earnings. With the treatment effect estimate, Table 7 shows that four of the indicators are associated with significantly lower earnings. These range from 24.7 ( $e^{-.289} - 1$ ) percent lower earnings associated with parental leave to 12.7 ( $e^{-.136} - 1$ ) percent lower earnings

associated with job sharing. For the first time with the adjusted indicators, the family friendly index takes a negative and significant coefficient indicating that family friendly jobs are associated with 21.1 percent lower earnings. It remains the case that working at home and nursery support emerge with large significant positive coefficients. Nonetheless, these are the least prevalent practices with the adjusted indicators suggesting that only 4.0 and 2.8 percent of workers have jobs that provide them. In sum, the majority of the indicators and the family friendly index present a picture supportive of a hedonic equilibrium in which providing family friendly practices imposes a net cost on the employer and some of these costs are recovered through implicit wage reductions in the earnings of the workers who have such practices available.

Moreover, to directly examine the endogeneity of the family friendly indicators, we report the results of a likelihood ratio test on the correlations of the error terms ( $\varepsilon$  and  $\nu$ ) in the two equations. In the last rows of Tables 6 and 7, thirteen of fourteen cases (and all cases for the corrected indicators) reject the null hypothesis that two errors are uncorrelated. This strongly suggests that the family friendly measures here are indeed endogenous.

### *The instruments*

Table 8 provides the estimates of the treatment equation associated with the wage estimates in Table 7. In the estimation of this equation, a range of variables were used as instruments, and excluded from the wage equation. As instruments, we attempt to add variables that influence the demand for family friendly practices such as the gender and union composition of the firm and whether or not the respondent has dependent children or young children. We also attempted to add variables that might influence the supply of such practices

including the age of the establishment, the presence of Joint Consultative Committees and the attitude of the management. As suggested, these latter attitude variables emerge as critical. We know from management the extent to which they think it is workers' responsibility alone to balance competing work and family concerns. We also know from workers whether or not they consider that management cares about their family responsibilities.

The estimation of the treatment equation confirms the importance of concern over endogeneity. As can be seen, several variables that positively influence earnings also positively influence the probability of having family friendly practices. These include education, tenure, establishment size, marital status and being a union member. Thus, as we expected, workers with higher earnings potential are indeed more likely to purchase family friendly practices.

The attitude questions emerge as strong significant determinants of the provision of family friendly practices. In each of the estimations, when workers view management as caring about their family responsibilities, the worker is more likely to have a job with family friendly practices. Importantly, this variable plays no role in the estimation of earnings. Including it in the OLS earnings equations yields a uniformly insignificant coefficient. Thus, managerial attitudes toward work-family trade-offs is a good instrument: it appears to influence the availability of family friendly practices but does not influence earnings.

### *Differences by Gender*

In this subsection we briefly review separate estimates by gender. These estimates focus on the family friendly index built up from the adjusted indicators. We compare the results in the OLS estimation and the treatment effect estimates. These results are summarized in Table 9.

Using the OLS estimation of earnings, the family friendly index is positive for both genders. It is insignificant in the male equation but significant in the female equation. The second estimate indicates that family friendly jobs are associated with approximately three percent higher wages. The treatment effects show a far different story. Family friendly jobs are associated with significantly lower earnings for both men and women. For men such jobs are associated with 24.4 percent lower earnings and for women such jobs are associated with 16.2 percent lower earnings.

A larger trade-off between earnings and family friendly practices for men than women might be anticipated if the cost to firms of men taking advantage of the practices is larger.<sup>8</sup> Certainly, men are disproportionately in jobs with team production in which the costs of absence are higher (Heywood and Jirjahn 2004). With team production the loss of a team member can threaten the output of the entire team rather than just the output of a single worker. Increasing the absence rate (due to family friendly policies) for workers in team production can be expected to generate higher costs than a similar increase in the absence rate for workers not in team production. Thus, it might be that the costs of arranging cover for men are larger. These higher costs would require a deeper fall in earnings.<sup>9</sup>

In addition, the difference between the male and female coefficients may reflect the differential ability of the instruments to eliminate the income effect. If women have a larger income elasticity of demand for family friendly practices, as makes sense, it may be that the instruments in the treatment estimates are less successful in purging the influence of income. Certainly, the OLS estimates indicate a significant positive effect for family friendly practices in the female equation but not in the male equation. As such, it appears the treatment effect estimates have more to "overcome" for women. Nonetheless, it is important to emphasize that

that the negative compensating differential appears for both men and women in the treatment model.

### **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 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 the extension of maternity/paternity/parental leaves in the 2002 Employment Act, and in 2003 also instituted a new right for parents to have requests for flexible working "seriously considered" by their employers<sup>10</sup>.

The duty to consider law aims to spread family friendly work practices more widely among firms. The practices envisaged (DTI, 2003, 12) involve compressed hours, flexitime, home-working, job sharing, term-time working, shift-working, staggered hours, annualized 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 forecast a large take-up (DTI, 2002, 2) of the new right. The forecast was for a flow of around 400,000 successful new requests per year (restricted to parents of children under 6). In the event, this forecast seems to have been about right, since about 900,000 requests were made in the first year (Palmer, 2004, 10). Of these, 80

percent were fully accepted, and probably 200,000 would have been made anyway, giving about 500,000 successful new requests. To put an increase of 500,000 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 there is considerable pressure on businesses to extend family friendly practices.

On the cost side, the forecasts have been less successful. The Work and Parents Taskforce (Bain 2001, 617-6.21) believed that the cost of accommodating requests would vary between zero and, at most, one week's wages per request. These low estimates were based on evidence from the WERS that most managers of firms with family friendly practices have found them “cost-effective.”<sup>12</sup> Accepting this higher figure, the impact assessment then gave £170m. a year as the cost of accommodating requests (DTI, 2002, 17), plus another £100m. for “running the request procedure”, that is, making and processing requests. Therefore, the total cost of the law was forecast by the government to be only £270m. a year, about half of one percent of annual labor costs.

Our estimates indicate that this cost estimate is too small. Our empirical analysis shows a substantial trade-off between wages and family friendly practices, suggesting such practices have costs that are of the order of 20 percent of the wage – even among firms well placed to adopt them. To the extent that the program 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 indicator 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 to use treatment models that recognize the endogeneity of family friendly practices. We think the evidence is compelling. Without the treatment model, the results are inconclusive at best. With the treatment model there is persuasive evidence of a trade-off between paying higher wages and providing family friendly practices. Evidence of this trade-off is particularly timely, as the UK government is mandating ever-increasing provision of family friendly practices. Yet, when the government examined the impact of this mandate no recognition has been made of the implicit wage reductions that would be required in a market that values these practices.

Table 1 Descriptive Statistics and Definitions

Variable	Mean (Std. Dev.)	Definition
<b>FAMILY FRIENDLY WORK PRACTICES (as reported by workers)</b>		
Job share	.159 (.365)	dummy=1 for job sharing
Leave	.272 (.445)	dummy=1 for parental leave
Home work	.091 (.292)	dummy=1 for work-at-home
Flex hours	.325 (.468)	dummy=1 for flexible working hours
Nursery	.040 (.196)	dummy=1 for workplace nursery or financial support for childcare
Time off	.148 (.355)	dummy=1 for allowing to take time off and make-up later
FF Index1	.327 (.468)	dummy=1 for family friendly job based on clustering
<b>FAMILY FRIENDLY WORK PRACTICES (as reported by workers and confirmed by managers)</b>		
Job share	.111 (.314)	dummy=1 for job sharing
Leave	.153 (.360)	dummy=1 for parental leave
Home Work	.040 (.195)	dummy=1 for work-at-home
Flex hours	.147 (.354)	dummy=1 for flexible working hours
Nursery	.028 (.164)	dummy=1 for workplace nursery or financial support for
Time off	.031 (.175)	dummy=1 for allowing to take time off and make-up later
FF index2	.292 (.455)	dummy=1 for family friendly job based on clustering
Sample size: 23,680		



Table 2: K-mean Clusters to Create the Family Friendly Indices

	FF Index 1 (as reported by workers)		FF Index 2 (as confirmed by managers)	
	FF Index1 = 0	FF Index1 = 1	FF Index2 = 0	FF Index2 = 1
Job share	.108	.312	0.00	.545
Leave	.218	.404	0.00	.396
Home work	.063	.208	0.00	.493
Flex hours	0.00	.997	.023	.100
Nursery	.027	.061	.013	.056
Time off	.119	.230	.030	.036
Index value (percent =1)	.327		.292	

Note: Mean values are reported in the cells and the differences between the means (with and without the practice) are all statistically significant at the 5 percent level.

Table 3 Descriptive Statistics and Definitions (Sample size: 23680)

Variable	Mean (Std.Dev)	Definition
<b>Individual characteristics:</b>		
lhpay	1.833 (.486)	natural log of hourly earnings
age	39.71 (12.24)	age of employee
tenure	6.619 (5.502)	tenure of employees
married	.6872 (.4636)	dummy=1 if married
widdiv	.0844 (.2780)	dummy=1 if widowed or divorced
union	.3890 (.4875)	dummy=1 for union members
perman	.9159 (.2775)	dummy=1 if on a permanent job
temp	.0437 (.2045)	dummy=1 if on a temporary job
private	.6879 (.4634)	dummy=1 if worker is in the private sector
pension	.8113 (.3913)	dummy=1 for availability of employer-provided pension
sickpay	.7871 (.4094)	dummy=1 if the employer provides sick pay
hours	35.97 (13.33)	usual hours of work per week
<b><u>Highest education qualifications:</u></b>		
degree	.2072 (.4053)	dummy=1 for university degree or above
alevel	.14532 (.3525)	dummy=1 for passing Advanced level (pre-university)
olevel	.2585 (.4278)	dummy=1 for passing Ordinary level (high school)
cse	.1199 (.3249)	dummy=1 for certificate of secondary education
vocert	.3663 (.4818)	dummy=1 for a certificate of vocational training
nodepchs	.5748 (.4944)	dummy=1 if the respondent has no dependent children
young chld	.1364 (.3432)	dummy=1 if the respondent has dependent children aged 0-4
disable	.0627 (.2392)	dummy=1 if the respondent has disability that limits the work she/he can do
<b><u>Occupations</u></b>		
manager	.0842 (.2777)	dummy=1 for managers
prof	.1263 (.3322)	dummy=1 for professionals
aprof	.0874 (.2824)	dummy=1 for associate professionals
clerk	.1552 (.3621)	dummy=1 for clerks
service	.0808 (.2726)	dummy=1 for service workers

sales	.0941 (.2920)	dummy=1 for sales workers
operator	.1262 (.3321)	dummy=1 for operators
craft	.1016 (.3022)	dummy=1 for craftsman or skilled workers
labour	.1216 (.3268)	dummy=1 for labourers

**Establishment characteristics:**

est. size	5.097 (1.603)	log size of the number of workers in the establishment
est. age	38.21 (45.97)	age of the establishment
%female	49.19 (29.17)	% of female employees in the establishment
%part	25.99 (27.89)	% of part-time employees in the establishment
%union	34.18 (34.04)	% of union members in the establishment
JCC	.5069 (.4999)	dummy=1 if establishment has a joint consultative council
noconsul	.0841 (.2775)	dummy=1 if the management never consult employees for decision making
man cares	.5481 (.4977)	dummy=1 if employees report that management cares about their family responsibilities
balance	2.158 (.7716)	Likert-scale answer from management on whether they agree it is up to employees to balance their work and family responsibility (5=strongly disagree, ..., 1=strongly agree)

Industries

secmanuf	.2326 (.4225)	dummy if manufacturing
secelect	.0063 (.0789)	dummy if electricity & utility
seconst	.0294 (.1690)	dummy if construction
secwhole	.1451 (.3522)	dummy if wholesale & retail trade
sechotel	.0424 (.2045)	dummy if hotel, restaurants & catering
sectrans	.0601 (.2376)	dummy if transportation & communication
secfinan	.0400 (.1961)	dummy if finance, banking & insurance
secothbu	.0837 (.2769)	dummy if other business services
secpubli	.0884 (.2839)	dummy if public administration
seceduc	.1040 (.3053)	dummy if education
sechealt	.1342 (.3408)	dummy if health care & social welfare
secoth	.0331 (.1790)	dummy if other industry

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Table 4: OLS Earnings Estimates using the Unadjusted Indicators

	1	2	3	4	5	6	7	8
Job share	.0081 (0.75)						.0067 (0.63)	
Leave		.0258** (3.24)					.0246** (3.31)	
Home work			.1115** (7.54)				.1242** (8.39)	
Flex hours				-.0356** (4.08)			-.0541** (6.12)	
Nursery					.0430 (1.44)		.0301 (1.04)	
Time off						-.0078 (0.80)	-.0107 (1.11)	
FF Index1								-.0355** (4.08)
Sample size	23763	23763	23763	23763	23763	24048	23680	23680
R <sup>2</sup>	.527	.527	.530	.528	.527	.524	.533	.528

Notes: Control variables include a constant, gender, ethnicity, disability status, two indicators of marital status, age, age squared, tenure, tenure squared, five indicators of highest education achievement, union status, permanent and temporary status indicators, whether the worker's establishment was in the private sector, establishment size, whether the worker received either employer provided pension or sick pay, hours of work, a series of occupational indicators and a series of industrial indicators. T-statistics are constructed from robust standard errors that correct for workplace-specific heteroscedasticity.

\*Significant at the 10 percent level

\*\*Significant at the 5 percent level

Table 5: OLS Earnings Estimates using the Adjusted Indicators

	1	2	3	4	5	6	7	8
Job share	.0273** (2.22)						.0190 (1.47)	
Leave		.0370* * (2.92)					.0246** (3.31)	
Home work			.1266** (6.42)				.1290** (6.40)	
Flex hours				-.0285** (2.07)			-.0492** (3.65)	
Nursery					.0769** (2.20)		.0605* (1.75)	
Time off						-.0235 (1.12)	-.0241 (1.16)	
FF Index1								.0151 (1.26)
Sample size	23763	23763	23763	23763	23763	24048	23680	23680
R <sup>2</sup>	.527	.527	.529	.527	.527	.524	.531	.527

Notes: Control variables include a constant, gender, ethnicity, disability status, two indicators of marital status, age, age squared, tenure, tenure squared, five indicators of highest education achievement, union status, permanent and temporary status indicators, whether the worker's establishment was in the private sector, establishment size, whether the worker received either employer provided pension or sick pay, hours of work, a series of occupational indicators and a series of industrial indicators. T-statistics are constructed from robust standard errors that correct for workplace-specific heteroscedasticity.

\*Significant at the 10 percent level

\*\*Significant at the 5 percent level

Table 6: MLE Treatment Effect Estimates (unadjusted indicators)

	1	2	3	4	5	6	7
Job share	.0290 (0.22)						
Leave		-.2038** (2.60)					
Home work			.3988** (10.734)				
Flex hours				-.2009** (2.59)			
Nursery					.3621** (5.19)		
Time off						-.2110** (4.72)	
FF Index1							-.2040** (2.65)
Male	.1814** (13.87)	.1638 (15.53)	.1746** (16.66)	.1729** (18.70)	.1829** (18.46)	.1806** (18.45)	.1732** (18.69)
Age	.0342** (14.07)	.0333** (13.10)	.0302** (13.16)	.0340** (13.95)	.0339** (13.38)	.0350** (14.51)	.0341** (13.92)
Age squared	-.0004** (13.50)	-.0004** (12.87)	-.0004 (12.68)	-.0004 (13.25)	-.0004** (12.72)	-.0003** (13.51)	-.0004** (13.32)
Tenure	.0102** (3.00)	.0113** (3.55)	.0092** (3.02)	.0102** (3.40)	.0096** (3.12)	.0105** (3.29)	.0102** (3.41)
Tenure squared	-.0002 (1.28)	-.0003 (1.59)	-.0002 (0.99)	-.0003 (1.44)	-.0002 (1.26)	-.0003 (1.55)	-.0003 (1.46)
Degree	.2953** (15.17)	.3208** (19.67)	.2548** (17.95)	.3099** (20.26)	.2890** (20.50)	.3081** (21.57)	.3104** (20.27)
A level	.1513** (9.52)	.1686** (12.16)	.1391** (10.97)	.1590** (12.42)	.1493** (11.10)	.1575** (12.22)	.1598** (12.40)
O level	.1095** (8.98)	.1217** (10.04)	.1061** (9.32)	.1080** (9.83)	.1093** (9.47)	.1132** (9.81)	.1079** (9.82)
CSE	.0478** (3.67)	.0495** (3.83)	.0421** (3.27)	.0474** (3.79)	.0417** (3.23)	.0531** (3.77)	.0476** (3.80)
Vocert	-.0115 (1.43)	-.0149* (1.87)	-.0033 (0.42)	-.0161** (2.13)	-.0123 (1.56)	-.0127* (1.66)	-.0166** (2.19)
Disable	-.0523** (3.28)	-.0488** (3.09)	-.0529** (3.64)	-.0433** (2.65)	-.0540** (3.72)	-.0498** (3.37)	-.0430** (2.63)
Nonwhite	.0096 (0.50)	.0013 (0.06)	.0164 (0.89)	.0202 (1.05)	.0129 (0.69)	.0095 (0.51)	.0204 (1.06)
Married	.0603** (6.43)	.0678** (6.89)	.0562** (5.83)	.0582** (6.07)	.0626** (6.39)	.0594** (6.19)	.0584** (6.08)
Wid / Div	.0369** (2.90)	.0441** (3.25)	.0333** (2.56)	.0381** (3.04)	.0372** (2.71)	.0372** (2.84)	.0384** (3.07)
Est. Size	.0214** (3.90)	.0267** (4.34)	.0213** (3.70)	.0240** (4.47)	.0139** (3.00)	.0221 (3.87)	.0241** (4.48)
Private	.0096 (0.43)	.0009 (0.04)	.0102 (0.53)	.0064 (0.33)	.0125 (0.64)	.0162 (0.78)	.0064 (0.32)
Union	.0757** (6.48)	.0872** (7.61)	.0929** (8.47)	.0712 (6.65)	.0749** (7.48)	.0726** (6.63)	.0712 (6.60)
Permanent	.0791** (3.96)	.0885** (4.50)	.0899** (4.25)	.0684** (4.60)	.0807** (4.08)	.0729** (3.88)	.0689** (4.60)
Temporary	.0478* (1.68)	.0454 (1.62)	.0657** (2.33)	.0625** (2.33)	.0538* (1.94)	.0512* (1.85)	.0633** (2.35)

Pension	.0615** (3.61)	.0679** (3.88)	.0599** (3.36)	.0600** (3.65)	.0628** (3.65)	.6040** (3.55)	.0597** (3.63)
Sickpay	.0719 (5.23)	.0722** (5.33)	.0673** (4.78)	.0713** (5.38)	.0757** (5.45)	.0714** (5.21)	.0713** (5.38)
Hours	-.0067** (12.25)	-.0068** (13.81)	-.0072** (14.47)	-.0075** (18.70)	-.0067** (14.07)	-.0070** (14.39)	-.0075** (14.21)
Occupation dummies	YES	YES	YES	YES	YES	YES	YES
Industry dummies	YES	YES	YES	YES	YES	YES	YES
Constant	.5979** (9.13)	.6424** (9.38)	.6533** (9.65)	.6450** (10.37)	.6332** (9.99)	.5985** (9.29)	.6590** (10.35)
$\chi^2(42)$	10824**	10090**	9940**	9967**	10301**	10243**	9916**
Pseudo R <sup>2</sup>	0.359	0.263	0.416	0.253	0.509	0.314	0.252
LR test of indep. eqns $\chi^2(1)$	0.02	8.16**	53.02**	4.68**	24.78**	20.80**	4.92**

T-statistics are constructed from robust standard errors that correct for workplace-specific heteroscedasticity.

\*Significant at the 10 percent level

\*\*Significant at the 5 percent level

Table 7: MLE Treatment Estimates (adjusted indicators)

	1	2	3	4	5	6	7
Job share	-.1356** (2.10)						
Leave		-.2839** (8.47)					
Home work			.4784** (14.95)				
Flex hours				-.2461** (3.87)			
Nursery					.3991** (5.69)		
Time off						-.1727** (2.92)	
FF Index1							-.2373** (4.73)
$\chi^2(42)$	10682**	9416**	8809**	9796**	10357**	10600**	9708**
Pseudo R <sup>2</sup>	.421	.306	.465	.350	.569	.525	.276
LR test of indep. eqns $\chi^2(1)$	7.18**	100.40**	165.93**	12.12**	23.24**	8.04**	26.61**

Controls are as in Table 6. T-statistics are constructed from robust standard errors that correct for workplace-specific heteroscedasticity.

\*Significant at the 10 percent level

\*\*Significant at the 5 percent level



Table 8: Estimating the Treatment Equations (adjusted indicators)

	1	2	3	4	5	6	7
	Job share	Leave	Home work	Flex hours	Nursery	Time off	FF Index2
Male	-.1746** (3.30)	-.02934 (-0.71)	-.1595** (-2.45)	.0023 (0.05)	-.3639** (-5.15)	.0551 (0.99)	-.1088** (-2.86)
Age	.0168 (1.27)	.023** (2.12)	.0724** (4.85)	.0112 (1.04)	.0278 (1.54)	.0094 (0.69)	.0156* (1.67)
Age squared	-.0003* (1.74)	-.0005** (-3.59)	-.0007** (-3.92)	-.0001 (-1.19)	-.0003 (-1.36)	-.0001 (-0.86)	-.0003** (-2.65)
Tenure	.0563** (4.07)	-.0028 (-0.23)	.0005 (0.03)	0.192 (1.28)	.0396* (1.74)	-.0109 (-0.54)	.01578 (1.34)
Tenure squared	-.0026** (3.04)	.0003 (0.47)	-.0003 (-0.30)	-.0009 (-1.06)	-.0026* (-1.88)	.0005 (0.40)	-.0007 (-0.98)
Degree	.6109** (7.86)	.2705** (4.38)	.6205** (6.65)	.2129** (2.90)	.3403** (2.81)	.0516** (0.52)	.3539** (6.12)
A level	.4501** (6.14)	.2078** (3.58)	.4864** (5.52)	.1298** (2.13)	.2572** (2.08)	.0459 (0.46)	.2877** (5.69)
O level	.3562** (5.11)	.1287** (2.55)	.1885** (2.02)	-.0491 (-0.91)	.1729* (1.68)	-.0303 (-0.35)	.1239** (2.74)
CSE	.1931* (1.90)	.04902 (0.77)	.1308 (1.23)	-.0758 (-1.27)	.2143** (2.31)	-.1215 (-1.03)	.0719 (1.26)
Vocert	-.0730* (1.74)	.0367 (1.16)	-.1140** (-2.30)	.0302 (0.72)	.0323 (0.55)	-.0080 (-0.15)	-.0030 (-0.09)
Disable	.1409 (1.28)	.0587 (0.84)	-.0071 (-0.08)	1.395 (1.54)	.1953 (1.46)	.0886 (1.04)	.1371** (2.32)
Nonwhite	.0473 (0.45)	-.1142 (-1.53)	-.1922* (-1.91)	.2262** (2.40)	-.1769 (-1.20)	-.1386 (-1.06)	.0304 (0.39)
Married	.0364 (0.64)	.0990** (2.35)	.0757 (1.34)	-.0064 (-0.14)	.2010** (2.69)	.1058 (1.39)	.0755* (1.83)
Wid / Div	.0369 (0.35)	.1394** (2.15)	.0850 (0.98)	-.0299 (-0.49)	-.2099* (-1.66)	.05219 (0.55)	.0237 (0.39)
Est. Size	.0986** (3.60)	.1048** (3.51)	.1225** (3.51)	.0889** (2.81)	.2885** (4.94)	-.0268 (-0.82)	.1159** (4.18)
Private	-.6546** (5.36)	-.3784** (-3.55)	-.1782 (-1.18)	-.7181** (-3.95)	-.0677 (-0.31)	.6462** (3.67)	-.5928** (-5.14)
Union	.1281** (3.10)	.1413** (3.47)	-.1008 (-1.49)	.0965** (2.02)	.1443** (2.09)	.07361 (1.16)	.1392** (3.93)
Permanent	.1706** (2.03)	.1537** (1.97)	-.0062 (-0.05)	.1287 (1.24)	.1453 (1.11)	-.2191* (-1.86)	.1814** (2.27)
Temporary	.2020 (1.59)	-.0945 (-0.90)	-.4108** (-1.98)	.1353 (0.98)	-.0029 (-0.02)	-.2484 (-1.39)	.1399 (1.31)
Pension	.2019* (1.79)	.4373** (4.64)	.0888 (0.57)	.0113 (0.10)	.2195 (1.21)	-.0259 (-0.23)	.2024** (2.25)
Sickpay	.3892** (4.78)	.2279** (3.18)	.2843** (2.36)	.1035 (1.11)	-.0817 (-0.65)	-.1143 (-1.00)	.2086** (2.99)
Hours	-.0038 (1.60)	.0044** (2.30)	.0105** (4.14)	-.0035 (-1.44)	.0005 (0.17)	-.0020 (-0.62)	.0001 (0.977)
Est. Age	-.0012 (1.36)	.0004 (0.94)	-.0045** (-3.82)	-.0027** (-2.99)	-.00003 (-0.03)	-.0032** (-2.30)	-.0009 (-1.60)
Percent Part-time	-.00016 (0.66)	.0049** (2.93)	-.0196** (-6.64)	-.0002 (-0.05)	-.0064** (-2.16)	.0037 (1.39)	.0192 (0.84)

Percent union	.0043** (4.16)	.0026** (2.78)	-.0048** (-3.32)	-.0017 (-1.37)	.0022 (0.95)	.0015 (0.83)	.0025** (2.63)
Percent Female	.0146** (7.99)	.0074** (4.80)	.0047** (2.04)	.0107** (4.52)	.0015 (0.45)	.0045* (1.64)	.0120** (7.68)
JCC	.0557 (0.88)	.0806 (1.47)	-.0824 (-0.94)	.1872** (2.29)	.0702 (0.44)	.0400 (0.36)	.1519** (2.74)
No Consult	.0905 (0.80)	-.3259** (-2.53)	-.0079 (-0.05)	-.1342 (-0.63)	-.4552** (-2.17)	-.1333 (-0.80)	-.0653 (-0.48)
No Child	.0368 (0.69)	-.0714* (-1.82)	.0454 (0.87)	-.0316 (-0.61)	.0154 (0.26)	-.0128 (-0.27)	-.0560 (-1.35)
Child 4	.0502 (0.81)	-.0097 (-0.18)	.1159* (1.83)	-.0970* (-1.68)	.3263* (4.31)	-.1387** (-2.18)	.0068 (0.12)
WorkFamily Balance	.0040 (0.12)	.0240 (0.67)	.0472 (1.10)	.0509 (0.99)	.0568 (0.72)	.0761 (1.24)	.0717** (2.04)
Management Cares	.2269** (5.00)	.2756** (9.22)	.2834** (6.78)	.2714** (7.44)	.1269** (2.42)	.1048** (2.13)	.3359** (10.79)
Occupation dummies	YES	YES	YES	YES	YES	YES	YES
Industry dummies	YES	YES	YES	YES	YES	YES	YES
Constant	-4.1524** (9.84)	-3.337** (9.66)	-5.846** (11.48)	-2.5827** (6.48)	-5.611** (8.84)	-2.742** (5.26)	-2.927** (9.35)
Chi-squared	10682	9416	8809	9796	10357	10600	9708
Pseudo R <sup>2</sup>	.421	.306	.465	.350	.569	.525	.276
N	22,746	22,746	22,746	22,746	22,746	22,746	22,746

T-statistics are constructed from robust standard errors that correct for workplace-specific heteroscedasticity.

\*Significant at the 10 percent level

\*\*Significant at the 5 percent level

Table 9. Separate Estimations by Gender of the influence of FFIndex2 on LogEarnings

	Male	Female
OLS estimates	.0152 (1.01)	.0275** (2.29)
Treatment model estimates	-.2802** (6.79)	-.1777** (2.23)

Notes: These are the coefficients and t-statistics from separate estimates by gender. In all other ways the estimates exactly mirror those already presented.

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## Endnotes

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<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 Leroy (2000) provides an employer's view on recruiting. Costs can include leaving sections short staffed (or the associated expansion in staff) and increased coordination expenses. For lists of firms' benefits and costs see Woodland et al (2003, 245-6).

<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> An exception is Nielsen et al (2004) who use the Dutch public sector as a family friendly employer and show that worker preferences on earnings vs. family friendly practices plays a large role in driving choice of public or private sector employment.

<sup>5</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.



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<sup>6</sup> Jirjahn (2002) presents a similar methodology to identify high performance workplaces. As in this application, he uses the resulting index as a dependent variable in second stage estimates.

<sup>7</sup> The alternative of correcting workers who inappropriately say the practice is not available cannot be implemented as any particular worker may or may not be eligible for the practice even if the practice is available. In short, the practice may be available to some but not all workers in the establishment.

<sup>8</sup> One piece of interesting collaborative evidence comes from studying the earnings of lawyers in the US. Men who took advantage of opportunities to reduce their labor market commitment after the birth of a child suffered much larger percentage earnings declines than did otherwise equal women taking advantage of the same opportunities (Wood, Corcoran and Courant 1993).

<sup>9</sup> Obviously, this reasoning assumes that the presence of family friendly benefits will increase the absence rate equally for those in team production and those not in team production. It may be the case family friendly benefits has less influence on absence rates for those in team production making the gender difference in expected absence costs smaller.

<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 aims to give some legal force to employee requests (DTI, 2003):

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1) parents of children under 6 make a request in writing to their employer setting out the permanent change in working pattern they want; 2) the firm has 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 can complain to an ACAS arbitrator or to an Employment Tribunal; 4) there is no small firm exemption, and no formal harm test.

<sup>12</sup> 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.