

MEASURE AND COMMUNICATE THE BENEFITS OF WORK-LIFE POLICIES MORE EFFECTIVELY?

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Abstract

The current paper reviews twenty one different studies of work-life programmes drawn from articles published in a range of academic and management journals and promotional documents aimed at businesses. The review was interested to find out if the use of control groups, or other rigorous forms of measurement techniques have become more widespread. The review also highlights those studies that make a contribution by developing an interdisciplinary framework or made an effort to disseminate findings in a bilingual format. On the basis of the review, the paper finds that recent studies have used one of five different research designs to measure and evaluate the impact of work -life practices. The designs included; multivariate modelling; control groups; action research; business case calculations; and social surveys. The paper concludes that there has not been a wider application of control group methods. There is also evidence that the 'action research' approach is leading the path toward a more inter-disciplinary understanding of work-life conflict.

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CAN WE MEASURE AND COMMUNICATE THE BENEFITS OF WORK-LIFE POLICIES MORE EFFECTIVELY?

1. Introduction

Action to enable men and women to reconcile the demands of work with the needs of home life was noted as a relevant and important issue for the European Community as early as 1974. The British government has indicated a clear commitment to promoting home/work balance through a ratification of the EU Directives on Working Time, Part Time Work and Parental Leave and the recent *Fairness at Work* document. It is anticipated that these initiatives will encourage more employers to introduce 'work-life practices'. The aim of such practices is to allow employees to switch to flexible or reduced hours working or to take periods of time off work to care for children or sick and elderly relatives. To date a minority of employers in Britain have voluntarily provided a full range of these practices which extend in some cases to the provision of financial assistance or help with arranging child care (Forth et al 1997). These sorts of initiatives were pioneered by a small number of companies in the early 1980s in Britain and the US without government directives and have, together with certain other non-standard working practices, come to be called 'family-friendly policies'.

There is growing support for the idea that work-life practices can reduce absenteeism and, job turnover and improve productivity (Smith 1996, Graham 1996, Opportunity 2000 1995, Business in the Community 1993, Bevan et al 1997). These sorts of claims are of considerable relevance in campaigns aimed at employers. However, a great many of the claims made in the literature and promotional documents are not founded upon rigorous research techniques. This problem has been noted elsewhere; only a third of the sixteen studies reviewed by Friedman (1991, 47) used control group techniques to measure the effects of employer childcare provision on the rate of staff absenteeism. The same review outlined an agenda to improve

work-life research which prioritised the development of an interdisciplinary focus and a wider use of control group methods together with a closer examination of the links between family and business and the relationship between absenteeism, productivity and turnover.¹ Friedman also recommended that an effort should be made to ensure that research findings are disseminated in a manner that is ‘bilingual’ or ‘easily communicated’ and not ‘buried in academic journals [which are] not readily accessible to the business community’ (Friedman 1991, 40, 58).

As we draw near to the close of the decade it will prove instructive to conduct a new review of recent studies of work-life practices to find out if research has begun to fulfil the objectives set by Friedman’s (1991) agenda. The current paper discusses the results of a review of twenty-one different studies drawn from articles published in a range of academic and management journals and promotional documents aimed at businesses. The review was interested to find out if control groups or other rigorous forms of measurement techniques have become more widespread. The review also highlights those studies that make a contribution by developing an interdisciplinary framework or made an effort to disseminate findings in a bilingual format. On the basis of the review, the paper finds that recent studies have used one of five different research designs to measure and evaluate the impact of work-life practices. The designs included; multivariate modelling; control groups; action research; business case calculations; and social surveys. The paper concludes that there has not been an increase in the application of control group methods. There is also evidence that the ‘action research’ approach is leading the path toward a more inter-disciplinary understanding of work-life conflict.

The remainder of the paper is structured as follows; section two summarises the current definitions of ‘work-life’/family-friendly practices and gives brief details of the current levels of provision in the US and UK. Section three reviews the twenty-one studies that

make a contribution under the five research design types identified. Section four draws together the implications for future research together with the conclusions.

2. Practice and Provision

2.1. What constitutes family friendly practice?

A wide range of practices have been assumed under the heading ‘work-life’ or ‘family-friendly’. There are policies concerned with employees’ hours of work (job sharing, part-time work, flexi time, four and a half day weeks), leave entitlements (parental leave, career break), financial assistance (child care, maternity pay), and particular caring responsibilities, e.g. elder care or children. We might also include homework, telework, term-time work, shift and evening work and annualised hours in a general definition. This definition excludes temporary and seasonal work which are known as flexible work but cannot be described as family-friendly (Forth et al 1997, Casey et al 1997).

A more rigorous definition developed by Simkin and Hillage (1992, 13) defined family-friendly policies as a ‘formal or informal set of terms and conditions which are designed to enable an employee to combine family responsibilities with employment’. This definition highlights the need to consider formal policies as well as more informal working practices, and that employers need to have the motive of helping employees. Forth et al extend this definition, by distinguishing between a ‘focused’ and ‘unfocused’ form of provision. A focused provision is directed toward helping the particular group of parents with young children, while an unfocused provision could benefit a wider range of employees with different needs, including the fulfilment of care for elderly relatives (Forth et al 1997, 4-5). Harker (1996, 47) argues that family-friendly policies are distinguished by a balance or synergy of interests between employer and employee, in other words there is a trust and equity in the

arrangement. Two of the studies reviewed in this paper (IRS 1997, Shepard et al 1996) examine an ‘unfocused’ form of provision. The studies by Rapoport and Bailyn et al (1996) and Bailyn et al (1998) were action research projects with the stated objective of introducing a ‘synergy’ into the work-life policies of the companies undergoing research. The remaining seventeen studies examined focused on forms of provision.

2.2. Extent of provision

Firms that have a ‘family-friendly’ orientation have been identified across a wide range of occupations and industries in Britain and the US including Chemicals, Electricity, Gas & Water, Engineering and Metals, General Manufacture, Finance, General Services, Public Services, Retail & Wholesale, and Textiles (Dex and Scheibl 1999). Surveys conducted in the US suggest that work-life policies are becoming an established feature of corporate benefit packages; a survey of 400 Conference Board members showed that 85% of firms surveyed provided unpaid maternity leave packages, 53% provided part-time working for managers, while 77% provided flexible working packages for staff (Hall and Parker 1993).

National surveys of firms in the UK indicate that the growth of family-friendly policies in Britain has been slow (McRae 1991, Forth et al 1997). Nine out of ten employers in 1996 provided at least one family-friendly arrangement; the most common provision was flexible or non-standard working with 71 per cent of employers having such arrangements (Forth et al 1997). Two thirds of employers provided two or more family-friendly working arrangements. These proportions were boosted considerably by including maternity and paternity-related provisions. The same study reported that voluntary provision of all of four categories of family-friendly initiatives, which they called a ‘model employer’ (maternity benefits, paternity leave, childcare arrangements and non-standard working hours), was found among just 5 per cent of employers. The model employer had a very

clear profile, being large and unionised. While the private sector made a lower level of provision than the public sector there was a slightly better level of provision when the private company was unionised and of a large size. These findings suggest that large, unionised progressive firms are the most likely to provide work-life practices to their employees.

The basic model developed by Forth et al is supported by the findings of a recent study which examined the characteristics of 871 firms in the USA (Wood 1996). The study, which used regression techniques, identified a pattern in firms' provision of family-friendly policies and concluded that 'family friendly management is an identifiable phenomenon' that is positively linked to the level of communication and concern for employees within the firm as well as the size of firm and degree of unionisation (Wood 1996, 22). Similar findings are reported by Milliken, Dutton and Beyer (1990), and Kraut (1992).

3. Research design in work-life studies

3.1. Measurement of outcomes by calculation of the business case

A number of bodies involved in the promotion of work life policies have advocated and pioneered the use of 'business case' calculations to evaluate family-friendly policies². This approach provides a method to identify the 'bottom line' advantages that will arise from changes in job design or management strategies. A brochure disseminated by Opportunity 2000 sets out some but not all of the relevant calculations; these are illustrated in Figure 1.

Companies are encouraged to make a calculation of *Savings* minus *Costs*. The calculation can be made for each of the measures listed above where the elements are in fact measurable. Using this formula the same document estimated that in the early 1990s a supermarket with a policy of providing a 'career bridge' (i.e. the option to work part-time) to a deputy manager with 12 years service experience

following maternity leave saved £8,589. The Business Case for providing employees with child care can be assessed by comparing the cost of replacing an employee with the cost of providing childcare assistance to retain that employee.

An increasing number of firms are publishing the findings of self evaluation studies of work-life practices that use business case calculations. Research and dissemination is most extensive in the USA where companies have seen the advantage of using their research in recruitment advertising which describes them as ‘leading edge and caring’ (Kraut 1992). Although there is an increased availability of data most of the available information is anecdotal and not fully grounded on statistical evidence. However, some self evaluation studies do report human resource measures before and after policy changes. There is an increasing use of surveys to monitor employers’ and employees’ perceptions of change within one firm. A less often used approach is a comparative analysis that contrasts one firm with competitor firms. Some self evaluation studies have used a mixture of all three research methods (Dex and Scheibl 1998).

3.1.2. Studies using business case calculations to assess the impact of childcare initiatives on staff retention and absenteeism

The review conducted for this paper suggests that there is a tendency for reports of self evaluation studies to omit base line statistics. For example, drawing on the findings of a case study which used a survey method with six employers in the UK, Bevan et al (1997) report that one of the case study firms - Midland Bank - believed that the provision of an unspecified number of nursery places had cut costs by improving the retention of maternity returnees (Bevan et al 1997). The same study also reports that the proportion of women returning to work at the bank after maternity leave rose from 30 per cent in 1988 to 85 per cent in 1994. However, it does not provide details of the comparison groups or the exact measures used to make the calculations. The report does cite anecdotal information which

indicates that the Bank valued the women returnees because they had been trained and possessed key skills; in other words the retention of these skilled workers could be offset against the start-up costs of investment in childcare (Bevan et al 1997). The same study reported that the employers in the case study who provided childcare referral services for their employees saved an estimated £2 for every £1 they spent on the service. They also reduced their unit labour costs - possibly by £50 million in the course of a year - as a result of reduced sickness absences.

A similar lack of detail is evident in Bevan et al's (1997) discussion of Asda (one of the six case study firms surveyed in the case study) which expected that the introduction of a 'term-time' working scheme in 1996 for working mothers in the summer months would have the effect of increasing staff retention and the continuity of customer service and cut staff training costs. The study does not provide details of the number of employees affected by the change or if Asda were measuring the changes systematically. An earlier report (Welch 1996) of the Asda initiative gave no details of how the study was carried out, but stated that term time working had cut job turnover by 2% and cut absenteeism by 1%.

The problem of insufficient detail is evident in a report in Business Insurance (Greenwald 1996) which outlines the findings of organisational studies of childcare innovations carried out at Owens Corning Fibreglas Corp, Lincon National Corp and Arnold and Porter Law Firm. The emphasis in the reportage of the findings is a direct communication of the benefits seen; little or no information is given about the kinds of measures used to calculate the gains. For example, the internal study at Owens Corning Fibre reported that employees with children were losing ten working days per year which the company estimated was costing in the region of \$10 million p.a. The company made an investment of \$500,000 per year in childcare provision which has, the study claims, cut the rate of absenteeism although no figures or measures were cited. Following Friedman

(1991), a major weakness of these sorts of case studies is the absence of any controls to check for the effects of any other human resource innovations which took place over the timespan.

A highly intrusive 'before and after' method was used by Lincon National in the USA. The company tracked the phone calls of all employees before and after the introduction of a near site childcare centre which was supported by childcare referral services. The company reports that the number of phone calls made home and to childminders declined as a result of the childcare innovations. However, because the study did not use a control group we cannot be sure that the decline in phone calls was the result of the childcare innovation, it could have resulted from employee fears raised by the company phone monitoring scheme or some other undisclosed human resource intervention.

The patchy nature of data and the reportage of findings clearly impedes a straight forward evaluation of the role that can be played by 'business case calculations' in the assessment of work-life policies. Furthermore, self evaluation studies commissioned and published by organisations often 'take a congratulatory tone about the success of policies and downplay any negative effects or problems' (Bond 1993). The public relations value of 'family friendliness' is such that firms have an interest in exaggerating the kinds of policies they offer. In summary there are good reasons to be sceptical about the value of business case calculations that are made in self evaluation studies that have not used a control group setting.

Research that has attempted to explore the link between work-life policies and productivity is confronted with some definitional problems. For example, it has been noted that existing measures of productivity (which evaluate the size of the output by unit of inputs) are shaped by the norms and perceptions of employers (Gonyea and Googins 1992), and organisational discourses of time which uphold a commitment to long hours working (Lewis et al 1996, Bailyn 1993).

This approach is considered inadequate for work-life research because it does not take behavioural aspects into account such as management and labour practices and the quality of output (Spearritt and Edgar 1994, 32). It is also evident that human resource measures such as absenteeism may not be relevant in organisations where flexible working is widely used.

Very few of the studies reviewed under this heading give sufficient detail of the measures used and the level of information is highly variable. For example a study prepared by New Ways to Work (1993) reports that a North Western Local Authority which had only 15 employees saw a reduction in sickness costs after they introduced a package of reduced hours; short week working; annualised hours; and term time working. The report does not indicate how the saving was calculated or the method used to collect and record the sickness data. By contrast a study conducted at the Chubb group of insurance companies provides a more detailed account; the report of their self evaluation study states that the firm saw a reduction in absences from 12,120 days per year to 10,549 days per year following the introduction of a paid time-off policy for family illnesses (Graham, 1996). The Chubb study monitored 7800 employees, 60% of which were dual career couples. Exit interviews revealed that 1/3 of this number were leaving because they thought it would help them balance home and work. The problem of high job turnover was costing the firm in excess of £3 million p.a. The firm introduced a flexible work package that included telecommuting. It then used a range of research methods including focus groups to evaluate the effect of the initiative at 14 offices. The organisers of the Chubb study collected post statistics on staff use of leave days before and after the implantation of the flexible working package. A survey of employer perceptions of the productivity of staff using the telecommuting option was also administered. The productivity of these staff was measured by recording work flow or outputs. Finally, the study tracked job turnover and absenteeism throughout the company. A less rigorous study conducted at Aetna Life and Casualty, an insurance firm based

in Hartford Connecticut, also reports that telecommuting increases productivity by 30 per cent because the workers had fewer interruptions and could focus on the work in hand (Greenwald, 1996).

A ‘before and after’ case study of a financial services company with 4000 employees in Australia used before and after statistics and reported a productivity gain after the core working hours of nine-to-five were expanded to a range of 6.30am to 10pm (Walton 1996). This study measured the impact of flexibility on productivity by monitoring the number of banking receipts that were processed in a day with a sub sample of 70 employees who were working shifts that produced a longer working day. The study monitored the quantity of receipts processed in a 24 hour timespan. It found that before the innovation 75% of receipts processed were banked on the same day. After the innovation 91% of receipts processed were banked on the same day.

Although the type of self evaluation study reviewed in this section can be criticised for a lack of rigour we might concede that ‘the strong consistency of the findings lends weight to their credibility’ (Friedman, 1991, 40). But all things considered, they do not make a very significant contribution to determining the links between productivity and absenteeism or uncovering the links between family and business issues. The contribution made is variable because rigorous techniques of measurement are not always used (or not reported adequately). However, the studies reviewed in this section do make a significant contribution to the task of disseminating ideas about work-life issues in the business arena.

3.2. Studies using social surveys to measure work-life outcomes

An increasing number of studies have attempted to calculate the costs and benefits of family-friendly policies by recording the perceptions of employers, employees and managers. The main measure or criteria used in these studies is the managers’ subjective view or belief that

the company has seen advantages or disadvantages from the change in working practice. This technique has been used to evaluate the impact of a range of working practices.

Recent research in the USA suggests that employers' perceptions are divided on the cost saving potential of flexibility and childcare provision; a survey of 400 human resource managers in US companies reports that 50 per cent thought that the introduction of flexibility in their firms had a cost cutting impact through a reduction of absenteeism and job turnover or maximising staff retention (Hall and Parker 1993).

A similar finding was reported in the recent survey by Forth et al (1997) insofar as equal numbers of British employers saw advantages and disadvantages in providing family-friendly working arrangements. Employers were most likely to perceive benefits for improved staff morale and loyalty together with improved staff relations. The main disadvantages related to increased administration and having to cope with staff absences. Nine out of ten (88%) model employers said that management gained benefits from the provision of family-friendly working arrangements compared with just over half (54%) firms with a narrower range of provisions. Model employers were more likely to mention that family-friendly working arrangements offered the advantage of improved morale or staff relations (68% compared with 50% of other employers) (Forth et al 1997).

A study of 102 large private service sector accountants undertaken for the London Institute of Accountants is reported by Boyer (1993). This study used the survey method and reported that all 102 of the employers had a programme that supported flexible working. Most of the firms had a progressive outlook on family-work initiatives; some were members of Opportunity 2000. The study reports that the employers in the sample perceived productivity gains from part-time working due mainly to reduced absenteeism. Boyer (1993) also found

that employers perceived part-time managers as more committed and productive than full-time counterparts. However, the same employers were concerned that part-time working increased administration costs (92% of sample) and benefit costs (89% of sample). The employers also thought that promotion became very complex (84% of sample), and day to day management became difficult (81% of sample). Some were concerned that workers became marginalised (47% of sample). Concern was also expressed regarding the lack of continuity and limits placed on task completion.

Very few studies that deploy the survey method have attempted systematically to measure productivity gains. Researchers believe that the 'balanced scorecard' framework which uses the survey method to measure a wider range of qualitative inputs and outputs developed by Green (1993) and Kaplan and Norton (1992)³ offers a more sophisticated understanding of how human resource interventions impact on productivity (Spearitt and Edgar 1994). An attempt to apply this method was undertaken at Fel-pro, an Illinois-based manufacturer of automotive sealing products with 2,000 employees (Spearitt and Edgar 1994). The study conducted at Fel-pro used broader 'scorecard' productivity measures, and collected data by means of a questionnaire survey and personnel records. The survey findings indicate that employees who most used work-family programs had the highest job performance evaluations and the lowest intentions of leaving the company. The survey discovered that the workforce felt a positive psychological benefit from the provisions because they knew that they could use them in times of family crisis. Further analysis showed that those employees who had used the policies were more likely to be involved in the company's total quality efforts.

Three of the studies discussed did not administer separate measures to evaluate the reliability of employer perceptions. A weakness in this type of study is the absence of any controls which monitored the effects of any other changes within the organisation that might have affected the levels of absenteeism, morale, loyalty and staff relations.

Future research might usefully re-examine the dataset analysed by Forth et al (1997) to establish if employers' views varied by industrial sector, size of firm and proportion of female employees. The Felpro study provides compelling evidence to suggest the presence of a relationship between benefit provision and increased performance productivity. But the absence of control group conditions weakens the generalisability of the findings.

3.3. Measurement by depth case study or 'action research'

The linchpin of the recent 'action research' studies conducted in a series of large companies in the USA has been to bolster the synergy conception of work-life practices and demonstrate that the goals of business, equality and quality of life are compatible (Lewis 1997, 21, Baylin et al 1998, Rapoport and Bailyn 1996). Using the criteria set out by Friedman (1989) these studies are visionary, interdisciplinary, and comparative. The dissemination of the research findings has been bilingual and academic. The authors of the Fleet study (Baylin et al 1998) point out that action research involves collaboration with members of the organisation and requires a careful assessment of both the 'intended and unintended effects of the changes introduced' (Baylin et al 1998, 3).

In many respects the action research studies are 'diagnostic'; they offer employer organisations a set of recommendations that could achieve productivity gains through inexpensive restructuring. For example, research undertaken in the USA by Rapoport and Bailyn (1996) used an action research approach with a product development team at an engineering site. This study discovered that the reason why the development team always failed to meet deadlines and complained of high levels of work family stress was due to the high level of disruption the team experienced from supervisors and other team members during the working day. The dual problems of long working hours and poor product delivery were resolved following the introduction of a 'quality time' system which gave the team blocks of

uninterrupted quiet time to complete their work. To enable this to happen a behaviour change among managers was necessary; managers had to learn how to stand back and allow workers to meet their own objectives.

The action research experiments at Fleet Banks conducted under the heading of the 'Fleet project' were supplemented by a 'dual context' method. This involves collecting data about the macro and micro conditions of the industry and organisations under study. The study also placed more emphasis on workplace culture than on policies and practices; "the goal was to uncover the assumptions that lay beneath the way work was being accomplished in order to assess their impact both on the work and on the lives of Fleet employees" (Baylin et al 1998, 3).

Three experiments were conducted at the Framingham site among a sample of 200 employees. One involved assigning an administrative experiment which provided administrative support to underwriters. The second permitted two employees to telecommute. The third 'credit reassignment' experiment reorganised the management of loans by the underwriters. The action research team used post experiment interviews, focus groups, quality of life scores, and postal questionnaires together with HRM data to evaluate the outcome of the three experiments. The post-experiment interviews with the telecommuters had positive results. Both subjects believed that their productivity had increased and experienced big increases in their quality of life.

A combination of interviews, focus groups, group meetings and measures developed by staff participants were used to assess the impact of a flexitime and telecommuting experiment in a portfolio management department at the Providence site. Surveys carried out prior to the experiments at the Providence site had indicated a high level of staff interest in these initiatives. The post-experiment focus groups gave the flexitime schedule a rating of 8 on a scale of 1-10 and

said that having colleagues telecommuting had not caused them any disruption. The staff members using flexitime and telecommuting rated their productivity more positively. Problems were noted with the telecommuting when the pressure of work increased due to the lack of resources and slower communication. The human resource indicator measured showed that turnover for the experiment group was 3.9 while it was 6.6 for the rest of the unit.

Staff at the Providence site developed and revised a series of measures to evaluate their achievement of 'production goals'. The measures showed that there was an increase in assignments not completed by their due dates during the time span of the experiments. However, the authors of the report suggest that the measures are difficult to interpret and evaluate because the research site was involved in special project during the time of the research study which took staff time out from regular work (Bailyn et al 1998, 24).

The series of action research studies discussed above compare well with Friedman's call for work-life research to draw on an interdisciplinary framework that encompasses psychological, economic and sociological perspectives. We can also appreciate that the experiments are making a significant contribution to investigating the links between business and family issues.

3.4. Control groups and experimental designs

The study by Wood (1996) established a positive relationship between family-friendly management and organisational performance. Firms identity as 'family-friendly' was established in a factor analysis of three dichotomous variables that described firms' provision of day care, pregnancy benefits, and personal benefits. A latent variable model was successfully fitted to the three dichotomous variables which allowed the authors to conclude that 'it is meaningful to talk about the 'family friendly organisation' or 'family friendly management' system' (Wood, 1996, 10). A measure of organisational

performance was built on three variables; labour turnover, labour stability and labour mobility. Regression analysis of the performance variable and the family-friendly management variable indicated a positive relationship i.e. that firms with ‘family-friendly management’ had higher levels of performance than firms who did not make the same kinds of provision. The link between family-friendly management and improved performance is supported by an econometric study that has established a link between flexible working and productivity (Shepard et al 1996). Shepard et al use a panel data covering an 11 year period constructed from a survey of 36 employers drawn from the US pharmaceutical industry. The authors set out clear reasons why we can expect workers’ productivity will increase when they are offered job flexibility:

- increased effort
- costs of losing the job become higher because time is valuable
- workers work during their peak hours
- firms will attract better workers because they prefer flexible working
- capital productivity may be enhanced due to more frequent shift changes

The authors acknowledge that ‘because reasonable arguments can be constructed suggesting both positive and negative effects on productivity, the issue will likely be resolved through empirical investigations and carefully designed case studies’ (p.128). Shepard et al construct a continuous flexitime variable which defines flexibility as ‘ a formal or informal agreement between employers and employee which allows the employee at least some discretion or control over the specific hours of the day or week when the work is to be performed’ (127). A factor argumentation model of production is used to measure the impact of flexible work hours on production and for identifying individual causal channels (p.128). A Cobb-Douglass production function model (which is modified to allow for productivity effects by incorporating the contracted flexitime variable) is used to estimate the

net effect of flexible work schedule on productivity which had been used in prior studies (Shepard 1994, Kruse 1992). Shepard et al (1996) find that flexibility increased productivity by 10% ; the authors concede that the relationship could be indirect - i.e. it could be that the climate within firms that provide flexitime encourages greater productivity through other human resource practices. The study recommends repeating the analysis using comprehensive measures of each company's human resource policies while implementing control conditions and where possible conducting in-depth case studies. Shepard et al note that more research is required to distinguish between 'productivity effects due to increased effort (or individual productivity) of workers or due to reduced absenteeism' (131).

The studies that applied multivariate regression techniques and/or control groups add weight to claims that work-life practices lead to improvements in organisational performance. However, the studies by Sheppard et al and Wood are not easily communicated in a 'bilingual' format to employers. While they do not employ an inter-disciplinary perspective they do expand our understanding of work-life issues overall.

4. Conclusions

This paper has reviewed the research designs used in a sample of twenty-one studies of family-friendly policies. A distinction was drawn between five different designs: multivariate modelling; control groups; action research; business case calculations; and social surveys. Despite the diversity of research designs all twenty-one studies reported some business benefit from the family-friendly practice monitored. Reportage of negative outcomes was more prevalent in studies deploying the social survey method. The latter approach allowed managers to express personal anxieties and perceptions about family-friendly practices which centred upon the disadvantages of increased administration and disruption to the work process (Boyer 1993). In the light of the mainly positive nature of the

findings in the studies reviewed, the paper re-articulates the conclusion of the earlier review by Friedman (1991, 40) which stated that ‘the strong consistency of the findings (across a range of measures and research designs) lends weight to the credibility of claims for business benefits of family friendly policies.

Friedman (1991) proposed that the credibility of research would be improved if more researchers used a standardised ‘control group’ approach. The current paper endorses the idea that research would benefit from increased rigour in the reportage of measures used to conduct evaluations, but proposes that a first step is to establish a set of measures that could be used with a variety of research designs. It does not follow that all research should follow the standard design of the control group; it is evident that the diversity of research designs has facilitated the growth of an interdisciplinary understanding of work-life issues particularly in the USA under the leadership of the Fleet research project. Ultimately, the diversity of research designs and measures in work-life research may be a strength rather than a weakness leading to an increase in knowledge. Furthermore, progress is being made in both academic and policy environments to develop a framework for measurement. For example, academics are developing more expansive measures of productivity (Lewis and Lewis 1996, Bailyn et al 1998). In the policy field, the benchmarking exercises supported by Opportunity 2000 offer firms a set of criteria for best practice and ‘business case’ arguments when introducing family-friendly policies. This process of benchmarking may also advance the ‘bilingual’ communication of research as more firms adopt the criteria for best practice and develop their understanding of the language and practice of measurement.

It is evident that the expansion of family-friendly policies would be supported by research that demonstrated the link between productivity, absenteeism and reductions in work-life conflict (Friedman 1991). A research design that had proved to be particularly suited to this objective is the action research programme of the Fleet

research projects which together with related projects has illustrated a clear link between job design, productivity and work-life conflict (Bailyn et al 1998). The business case research design which is being adapted and developed in the UK has also given a clear indication of the potential performance benefits of family friendly policies. It is notable that high profile firms - such as Lloyds-TSB - are currently establishing their own internal 'business case' evaluation systems in collaboration with US research teams with the aim of establishing the link between productivity and work-life conflict.

Drawing the review to a close, the current paper re-endorses Friedman's call for bilingual research with the proviso that it is particularly important that the results of studies are *designed to capture the interest and support of directors*. This point is supported by Wood's (1996) study which finds that "culture change" leading to the implementation of family-friendly policies within organisations is led from the top by directors who are more often moved by argument and ethical perspectives than external pressure or fiscal incentives. Finally, the conference and workshop context provides an excellent format for communicating the findings of both academic and 'flagship' internal studies to business people. Examples of good practice in this field are the conferences and workshops organised by the lobby and charity groups Parents at Work and New Ways to Work.

Notes

1. Friedman (1991) actually outlined six strands of research that could make a valuable contribution. In conjunction to the interdisciplinary and interactive research, Friedman saw a role for holistic research to assess the effect of corporate culture on work family conflict; comparative research within and across companies; longitudinal research; and finally visionary research which should consider the long-term consequence of ageing in society for the workforce and companies.
2. For example New Ways to Work, Business in the Community and Opportunity 2000.
3. The main groupings of the scorecard approach are as follows:
 - a. customer satisfaction (timeliness, quality, service)
 - b. internal business process (cycle time, quality, added value)
 - c. innovation and learning activities (ability to launch new products, create more value for customers, improve operating efficiencies)
 - d. financial results (cash flow, sales growth, operating income)
 - e. workplace role (employee involvement, training, work organisation, equity)

The objective is to ‘develop internally generated measurement criteria, with the aim of measuring what is to be changed and the process of attaining these outcomes’ (Spearritt and Edgar 1994, 33).

Table 1 Studies using business case calculation to measure outcome of childcare services

Research Site	Source	Sample Size	Research Design	Measures	Outcomes Actual or projected
Midland bank U.K.	Bevan et al 1997	6 employers firms No details on the cohort of returnees	Before and after Statistics	Not stated. Implied measures: Staff Retention	30% of maternity staff returned in 1988, in 1994 85% of maternity staff returned
Owens coming Fiberglas Corp U.S.A.	Business Insurance June 24.96	40,000	No details	No details	Absenteeism among parents cut.
Lincon national Corp. U.S.A.	Bests Review June 96	All employees	Tracked phone calls of all employees before and after introduction of near site childcare and referral services.	Rate of phone calls to home and to childminders	Reduction in number of phone calls made home and to childminders by an unspecified amount.
Arnold & Porter Law Firm Washington D.C.	HRM 97	All employees	Before and after statistics of staff sick leave following introduction of childcare backup system.	Sick leave	Reduction of staff's use of sickleave to cover for childcare by an unspecified amount.

Table 2 Studies using business case calculations to measure outcomes of flexible working

Site	Source	Sample	Research Design	Measures	Outcomes
Asda U.K.	People Management 12.9.96	No details	No details	No details	Cut turnover by 2% cut absenteeism by 1%
National Mutual Life Association Financial Services Australia	Walton Croner 17.12. 96	4000 employees sub sample of 70	Pre and post test experiment involving pilot of longer working day at a site of 70 employees	Quantity of Receipt processed in 24 hours	Before innovation 75% of receipts processed were banked on the same day. After innovation 91% of receipts processed were banked on the same day.
Chubb Group Insurance Company U.S.A.	HRM May 96	7800 employees 60% dual earner couples	Focus groups post implementation at 14 offices Pre and post statistics on use of leave days Survey of employer perceptions of productivity on telecommuting Monitor work flows / productivity	Job Turnover Salary costs to replace employee absenteeism	Reduction in absenteeism Productivity increases Exit interviews revealed 1/3 of this number were leaving because they thought it would help them balance home and work. Costing in excess of £3 million pa
AMS Fairfax U.S.A.	Computer World Feb 17.97	1800 new recruits	Research conducted by Garter Group. Monitored new hires and attrition in the computer industry at AMS New Hire / employee survey	Job turnover New hires	Attrition rate in the national market. For every 1800 new hires the average company loses 360 from attrition. AMS loses 270. So AMS saves 90 employees per year. Survey of new hired revealed that the new recruits were attracted by the FFP package
Xerox Customer Operations	HRM June 1997	300 employees	Pre and Post measurement of absenteeism	Absenteeism	Absenteeism reduced by 30%

Table 3 Studies measuring outcomes by employer and employee surveys

Site	Source	Sample	Research Design	Measures	Outcomes
Multiple companies Case studies of Asda and Midland UK	Bevan et al 1997	20,000 employees at 10 firms 6 employers at large firms	Survey of employees and employers	Ask employers what prompted use of FW and benefits seen or expected	Asda expects costs cut and retention to be improved from term time working
Multiple companies U.K.	IRS	71 employers	Survey of employers reasons for using PT	Asked employers why used PT, What benefits are	Of 63 firms who used PT, 6% saw make productivity gains. A further 6% said that part-time hours had cut costs. The majority (24 of 63) of companies said the rationale for the change to Part time hours was to meet the demand for this working practice from mothers returning to work.
Multiple companies and case study of Fel-pro U.S.A.	Spearitt and Edgar 1996	2000 employees at Fel-pro	Employee survey. Personnel records. Before and after design	Measured employees use of flexibility programmes and their productivity, relationships and work, absenteeism, and satisfaction with supervisors	72% of Fel-pro employees used the programme. Of this number 75% said that the benefits increased their productivity and improved their satisfaction at work
Multiple Accountancy Firms UK	Boyer 1993	102 large firms	Employer and Employee Survey	Employer perceptions used as a measure of productivity gains.	Employers reported positive productivity gains as a result of reduced absenteeism.
Representative Survey of companies in UK	Forth et al 1997		Employer and Employee Survey	Employer perceptions of benefits and disadvantages	Various subjective evaluations noted in the text.
Multiple companies in the US	Hall and Parker 1993.	400 human resource managers	Survey of HRM	HRM perceptions of cost cutting impact.	50% of HRM surveyed thought that practices had effect of reducing costs.

Table 4 Studies using action research measurement techniques

Site	Source	Flexible Sample	Working Research Design	Measures	Outcomes
Framingham Providence U.S.A.	Baylin et al 1998 Radcliff research team 1998	200 at Framingham 55 at Providence	Action research Experiments. Pre and post experiment interviews, focus groups, mail surveys and weekly logs. Human resource data and production data.	Quality of life scores. Job Turnover Five 'production goal' measures used in self evaluation scores: 1. Monthly reports 2. Quarterly reports 3. Board of directors reports 4. Team task lists 5. Production team tasks.	Productivity not disturbed by the innovations. Quality of life scores improved on average.
Xerox Corporation Corning Inc. Tandem Computers	Baily et al 1998	No details of sample size. Described as summary on ongoing research at the three named companies.	Action Research. Diagnostic focus groups before and after the experiments. Interviews.	Human resource measures of Absenteeism.	Productivity increased for product development team.

Table 5 Studies using regression or control group techniques

Site	Source	Sample	Research Design	Measure	Outcomes
Multiple companies	Wood 1996	871 firms in US	Multivariate analysis of survey data	<p>Organisational characteristics; Competition; Employer orientation; size of company; proportion female workforce</p> <p>Performance indicators : labour turnover; labour stability; Labour mobility</p>	Family friendly management is positively related to labour turnover and labour stability
Multiple Companies U.S.A.	Shepard et al 1996 Industrial Relations 35.1	36 employers 3500 organisations	Survey data from 36 employers Panel data from organisations	Production function model linking flexibility working with productivity	Flexible working increased productivity by 10%
Hewlett Packard Financial Service Colorado Springs	HRM June 97	60 employees 30 of 60 took compressed working week	Control group 30 staff on compressed against 30 staff on standard day. Pre and post innovation measure of productivity	Quantity of transactions in 24 hour time span	Productivity doubled for compressed workers. Compressed workers completed 63 transactions per day. Standard workers completed 37.
Aetna Life & Casualty co. Connecticut U. S. A.	Business Insurance June 24.96 HRM 96	29143 employees 72% of which were female	Monitored productivity of telecommuters	Pre and post test Control group evaluation of the performance of telecommuters. Attrition	<p>The productivity of telecommuters increased by 30%.</p> <p>Turnover rate was high among professional women 23%. Attrition was cut by 50%. Achieved a 90% retention rate.</p>

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