

The Incidence and Impact of Flexitime Work Arrangements

The incidence and impact of flexitime programs in Britain are assessed by using a linked dataset of employers and employees. Organizations adopt this practice for a variety of reasons, ranging from the concern for widening the scope for employee choice to the need to comply with public regulations. Recent public regulations are based on the premise that a long hours working culture exists in society that results in low levels of job satisfaction and ill and stressed employees. The results from the British 1998 Workplace Employee Relations Survey data show a significant relationship between flexitime and various establishment and employee characteristics. There is a weak relationship between flexitime and measures of job control and, more important, the relationship is negative between flexitime and employee stress and job security.

A massive ongoing area of policy development work for many employers in Britain currently involves putting in place a formal procedure for considering employee requests for flexible working. This is because of the new statutory rights¹ given to parents of young or disabled children to apply for a wide variety of flexible work arrangements – including homeworking, compressed weeks, flexitime and term-time working – and for their requests to be given serious consideration by employers. The British Government has actively encouraged family-friendly employment practices over the last few years. The Government's initial motive was to encourage employers to adopt greater flexibility in employment conditions as provided in the *Employment Relations Act (1999)* that offered employees enhanced maternity rights, new rights for unpaid parental leave and for unpaid time off for dependents.

Government policy is primarily motivated by the assumption that there is a tension between the demands of work (which in recent years has come to be associated with long working hours) and home, and so it is in the interest of employers to provide

¹ Under the terms of the Employment Act 2002, a 'qualifying employee' may apply to their employer for a change in terms and conditions of employment if the change relates to any of the following: (i) the hours the employee is required to work; (ii) the times when they are required to work; and (iii) where, as between home and a place of business of the employer, the employee is required to work.

opportunities for their workforce to achieve a better work-life balance with the pay-back of increased morale, improved productivity, and the ability to embrace change (Bevan et al 1999). Research on the effect of family-friendly employment practices provides key empirical support to this position (see, for example, a special issue of *Industrial Relations* (2003) on this subject). However, because the current policy debates in Britain frequently invoke the ill-effects of long hours culture as the main *raison d'être* for working time flexibility, it will be instructive to investigate the scope and limitations of the flexitime solution². For instance, empirical investigations will shed light on the extent to which flexitime practices are positively linked to lower levels of employee stress and job insecurity.

Empirical tests on questions such as these are made possible by the recent availability of the 1998 British Workplace Employee Relations Survey (WERS98) as it provides a comprehensive linked dataset on the managers' and employees' own assessment of the use and effectiveness of flexitime. The present study aims to investigate the incidence and impact of flexitime on employee stress and job security, and on various organizational practices. The article first provides a brief summary of the issues currently discussed in the literature on flexitime, and then discusses regression results from WERS98. The final section highlights the limitations of the study and indicates potential future research areas.

² This has been one of the central research area in work-family research in the USA (Drago and Hyatt, 2003). This research mainly focuses on the existence of long hours of employment and its effects on work and families (Schor 1991; Hochschild 1997)

The Effect of Long Hours Culture

The main goal of 'flexitime' is to give people choice about their actual working hours, usually outside certain agreed core times. This means employees can vary their starting and finishing times each day at work and sometimes also their break times during the day. This managerial innovation was initially seen as an attempt to reduce absenteeism, especially among women employees³.

However, flexitime is now seen as an important component of a work-life balance package designed for mitigating the ill-effects of a 'long hours working culture', with important ramifications for both employers and employees (Galinsky and Johnson 1998). The current policy debate involves three important sets of arguments for promoting flexitime work practices, including (i) the incidence of a long hours working culture, (ii) its impact on employee attitudes and company performance, and (iii) the role of complementary organizational practices. We discuss these in turn:

The incidence of long working hours. The thesis on flexitime examines the question of whether and why the average time that many people spend at work is increasing, despite cuts in the basic working week and increases in paid holiday. The aggregate pattern in the United States suggests that the average hours worked by individuals has not declined since 1970; indeed, for some groups average hours have increased (Golden and Figart 2000). Similar patterns have been observed for British corporate employees. The usual working week for full-time employees in Britain is the highest in the European Union: 43.3 hours, compared with an average of 39.3 hours in the

³ For instance, Piotet (1988) argues that female absenteeism is due primarily to inflexibilities in both the workplace and society at large, which result in problems associated with children together with problems of access to social and commercial services during normal hours of work (pp. 128-129).

euro area and just 37.7 hours in France. Amongst full-time employees, a quarter of British men and a tenth of women usually work more than 48 hours a week.

The 'extensive work effort' (i.e. long working hours) has in some cases been accompanied by increases in 'intensive work effort' or 'work intensity'. Green (1999) argues that recent studies on work restructuring support the view that a substantial degree of work intensification took place during the 1980s (especially in manufacturing) and may have extended into the 1990s⁴. Consequently, the old 'job for life' has been replaced by unstable and promiscuous working lives, where 'hire and fire' is rampant. Employees feel insecure – not just in terms of employability, but also in terms of the impact on their role of organizational changes in the workplace.

Creating a work-life balance. A persistent culture of extensive and intensive work efforts may run the risk of stifling worker productivity and economic competitiveness (Dex and Scheibl 1999). When people are juggling work with home responsibilities or working long hours that result in exhaustion, stress and reduced effectiveness, a toll is taken not only on their approach to work but also on their health and well-being.

According to the Labor Force Survey (LFS), nearly 1.9 million working days a week were lost to sickness and injury in summer 2000 (ONS 2000). This figure represented 1.8% of scheduled working days in Britain. Moreover, the number of claimants incapacitated by sickness and invalidity⁵ has increased substantially since the late 1970s, especially linked to the mental disorders of 'stress and depression'.

⁴ In this respect, IDS (1997) cite the example of new office accessories, such as the fax, modem and the mobile phone, which are all very convenient, but also make it harder to draw the line between work and home life. Accessibility via mobile phone and e-mail extends the working day, and many find themselves overloaded with information and working at their laptops late into the night.

⁵ Invalidity benefit was replaced by incapacity benefit in 1995.

The introduction of flexitime work arrangements, or a better work-life balance, is seen as alleviating many of the inflexibilities resulting from demanding and stressful work environments (Arnott and Emmerson 2001). For instance, Stone et al. (1994) found that the sickness records of part time workers were better than those of full-time staff. One study on the benefits of childcare suggested that employers who provided childcare referral services for employees saved an estimated £2 for every £1 they spent due to reduced sickness absence (Dex and Scheibl 1999). A Hewitt Associates (1996) survey reported that 68 percent of all U.S. companies offered flexitime. Research work conducted in the late 1970s and early 1980s using American company data found that permitting employees to exercise flexibility in their arrival and leaving times reduced absenteeism, tardiness, overtime, etc (Golembiewski and Hilles 1975; Kim and Campagna 1981; Hicks and Klimoski 1981). Later work supported the earlier findings that increased access to flexible options reduces absenteeism (Kandola and Fullerton 1998).

Complementary organizational practices. Flexibility is thus stressed as an important part of a work-life balance package, in which the primary objective is to dismantle many of the organizational barriers created by a lethargic mass production system (DfEE 2000). Flexitime encourages employee control over scheduling, as well as the work process itself, thereby enhancing the autonomy of employees to make work-related decisions independently and with a greater degree of confidence and trust (Bailyn, 1993, Atkinson and Meager 1986). Delegation of authority in this way increases employee involvement as well as securing a better match between complementary organisational practices (Wood, de Menezes and Lasasoa, 2003, Berg, Kalleberg and Appelbaum 2003). Further, the degree of freedom afforded to an

individual to schedule her work enhances her ability to make opportune decisions about her needs.

For some people, evening or weekend work means the chance to gain an extra income while a partner is at home to care for children or elderly relatives. For others, a late morning start, a longer lunch break or a shift at night, allows sport and fitness to be factored into their day. In these situations giving employees opportunities to adjust their working hours will have positive staffing consequences for the organization. For example, an increase in staff working at peak demand times on shorter shifts, such as on a 4pm – 10pm, or 5pm – 11pm shift in a control room, can cut down on the need for other staff to work overtime⁶.

A Critique. Whilst some of the conclusions of the work discussed above lay emphasis on the negative impact of an overbearing work culture, a significant body of research also seeks to provide alternative explanations for the prevalence of these particular work norms. Golden and Figart (2000) suggest that, for many, the expression ‘overwork’ is inaccurate, for it fails to encapsulate individuals’ preferences to work long hours, either to satisfy material desires or in recognition of the fact that, for many, remaining at work ‘after hours’ may be more enjoyable, fulfilling and less arduous than the domestic chores awaiting them at home. Thus, there is an important difference between those forced into working long hours by low wage rates or an exploitative employer, and those working long hours by choice.

⁶ These staff are also known as ‘key timers’. In some cases this strategy may be unpopular if staff rely on overtime hours to boost their wages.

Empirical studies also demonstrate the dangers of seeking a general thesis on working-time trends; for, while some groups (particularly white, educated men) may be identified as 'overworked' in terms of the number of hours worked, others (women, ethnic minorities, and the less educated) are often underemployed (Pe´rotin and Robinson 2000). The pressure of work and organizational change plus excessive hours may result in low levels of job satisfaction and ill and stressed employees but there is no evidence that this is entirely due to a 'long hours culture'. Moreover, job duration data show very modest changes over the last 20 years (ONS, 2003); this, in itself, refutes the assertion that job 'insecurity' has dramatically increased over this period.

The growth of extensive unpaid-overtime working may, in fact, manifest the way incentives are diffused through organizational processes such as the link between promotional opportunities and long working hours (Bell and Hart 1998, Landers et al 1996). Empirical results on 'flexitime' workplaces implementing an integrated and comprehensive management approach are also mixed - a baseline organizational requirement for the successful implementation of flexitime. Pendleton (1991) illustrates a case of the conflicts over flexible rostering and employment rules and practices in his study of railway workers.

The evidence discussed above casts doubt on the special case for work-life balance programs and raises important questions about the extent to which practices such as flexitime can be usefully employed to tackle problems such as employee stress and job dissatisfaction. Further, the role of flexitime in helping create an environment of decentralized decision-making is also ambiguous. A detailed empirical evaluation of

the effect of flexitime may possibly shed light on these questions as well as the conditions required for mitigating the ill-effects of work-life imbalances.

Empirical Analysis

The aim of the present study is to evaluate the incidence and impact of flexitime using data from the 1998 British Workplace Employee Relations Survey (WERS98).

WERS98 is a nationally representative survey of workplaces with 10 or more employees and contains a vast amount of information on diverse aspects of employee relations and organisational formats (Cully et al 1999). The WERS 98 data are designed to be nationally representative of workplaces with 10 or more employees. Face-to-face interviews for WERS98 were conducted with a manager (with day-to-day responsibility for employee relations) at 2,191 workplaces, constituting a response rate of 80 per cent. The WERS 98 survey of employees comprises 28,240 observations, constituting a response rate of 64 per cent. The use of this dataset overcomes many of the difficulties experienced by earlier research on similar topics (Cappelli and Neumark 2002).

For instance, existing literature on the determinants of work flexibility has been largely concerned with analyzing the impact of establishment level factors, such as task flexibility, on organizational productivity. It seldom employs workplace and employee information together to examine the relative contribution of employee and establishment level factors to the incidence and impact of flexible working practices. The present research fills this gap by using the WERS98 dataset, which is a linked survey of workplaces and employees.

Work benefits that are not fully contingent are hard to identify, but WERS98 provides a useful set of information about work environment, job characteristics, and occupation. The survey covers a wide range of demographic information, including age, gender, ethnic background, disability, education, number of children etc and information about job activities, such as permanent employment, occupational choice and employer-provided training. This permits researchers to examine questions such as whether individual employees have identifiable characteristics that make them more likely to have reduced levels of participation in work-life programs than other groups, and vice versa.

Research Design

The present investigation focuses on the three areas of the research outlined above, namely the extent to which flexitime has been adopted, and the impact it has had on employee stress and job control. Given the nature of the research questions, survey probit or ordered probit modelling techniques are used throughout. It is thus possible to hold constant a range of workplace and individual level characteristics, while the relationships between the dependent and independent variables are analyzed. These techniques also enable the probability of respondents' selection into the sample and the design of the survey of employees to be taken into account. Probability weights are used in all regressions.

The particular tests of the incidence and impact of flexitime are the following.

The Incidence of Flexitime Work Arrangements. A major stated goal of flexitime work arrangements is to ensure that work-life balance makes an effective contribution to the personal development of employees and to assist progress toward enterprise competitiveness. The article first examines the types of workplaces that have introduced flexitime, and considers whether there are certain types of workplaces within which the use of flexitime is significantly poorer. The results should be of particular interest to policy makers, as they will identify the types of workplaces that are less likely to have sought a flexible working approach.

To carry out this analysis, a dichotomous dependent variable is created (where 1 = flexitime workplaces, and 0 = non-flexitime workplaces). The objective is to regress a range of independent variables concerning workforce characteristics onto this dependent variable so as to identify the types of workplaces that are more/less likely to have introduced flexitime work arrangements. A full listing of the variables used is provided in Table 1. A similar analysis is undertaken by using employee data to identify employee characteristics that are more/less likely to be associated with the use of flexitime (Table 2 contains all variables used).

Employee account of job stress and employment security. Existing literature on work-life balance emphasizes the need for practices such as flexitime because of continuing concerns over the lack of employee job satisfaction and welfare (Perry-Jenkins, Repetti, and Crouter 2000, DfEE 2000). It is believed that flexitime work arrangements would alleviate the instances of stress and job insecurity within the workplace. The second aim is to use the WERS 98 survey of employees to compare

employees' experience of job insecurity and stress in flexitime workplaces and in non-flexitime workplaces.

In order to evaluate this issue, a dichotomous independent variable (where 1 = 'employees in flexitime workplaces', and 0 = 'employees in non-flexitime workplaces') is regressed onto three dependent variables. These are: firstly, whether the employee agrees with the statement that 'you worry a lot about your work outside working hours' (on a scale of 1 to 6 where 1 = 'ten days or more' and 6 = 'none'; mean score 3.33); secondly, whether the employee agrees with the statement that 'you feel your job is secure in this workplace' (on a scale of 1 to 5 where 1 = 'strongly agree' and 5 = 'strongly disagree'; mean score 2.57); and thirdly, whether the employee agrees with the statement that 'you never seem to have enough time to get your job done' (on a scale of 1 to 5 where 1 = 'strongly agree' and 5 = 'strongly disagree'; mean score 2.66). All of these equations include controls for the employee characteristics listed in Table 2.

The Relationship between Flexitime and Job Control. Organizations embracing flexitime work arrangements as part of a work-life balance package are likely to dismantle many of the features of control-based organizational systems and introduce measures which will provide better variety and control over the work itself (Berg, Kalleberg, Appelbaum 2003, Wood, de Menezes, Lasaosa 2003). This is based on the assumption that flexitime encourages employee control over scheduling, and provides the freedom to make work-related decisions more independently. As Eaton (2003) notes, "The design of work-family programs and work structures and the amount of control employees have over the pace and place of their work are all-important (p.

163)”. The third aim of this article is to test whether workplaces with flexitime work arrangements are indeed more likely to have adopted activities associated with participatory organizational practices than are their counterparts without flexitime work arrangements.

To evaluate this issue, a dichotomous independent variable (where 1 = ‘flexitime practice’, and 0 = ‘no-flexitime practice’) is regressed onto three dependent variables. These are, firstly, the extent to which employees in the largest occupational group have discretion over how they do their work? (on a scale of 1 to 4 where 1 = ‘none’ and 4 = ‘a lot’; mean score 2.19); secondly, the extent to which employees in the largest occupational group have control over the pace at which they work (on a scale of 1 to 4 where 1 = ‘none’ and 4 = ‘a lot’; mean score 2.29); and thirdly, the proportion of employees in the largest occupational group who work in formally designated teams (on a scale 1 to 7 where 1 = ‘none’ and 7 = ‘all’; mean score 2.91). All of these regressions control for a range of workplace-level characteristics listed in Table 1.

Results

The Incidence of Flexitime Work Arrangements. The results provided in Table 1 report the coefficients and standard errors from the probit equation as well as the magnitude of the effect of workplace characteristics on the probability of uptake of flexitime work arrangements. The procedure followed is to report, first, the probability of flexitime working arrangements for a ‘benchmark’ workplace, and then vary the workplace characteristics *one at a time* to see how they influence the

probability of uptake of flexitime work arrangements. There are 34 per cent of workplaces with flexitime work arrangements in the sample under investigation.

Table 1 about here

The factor that appears most significant in deciding whether flexitime is introduced is organizational size. The benchmark probability of flexitime practice increases by 37 per cent when it is recalculated using large size establishments (i.e. more than 10,000 employees) as opposed to workplaces that are part of a smaller organization (with all other variables staying the same). Small or medium size establishments are less likely to have introduced flexitime work arrangements. The magnitude of the effect is not inconsiderable. For example, the probability of flexitime work arrangements uptake falls by –25 per cent, from 0.309 for the benchmark workplace to 0.234 when it is recalculated using workplaces with 50-199 employees as opposed to 200-499 employees (keeping all other variables the same). This is a somewhat surprising result as it is generally assumed that small workplaces are more likely to use innovative practices to stay competitive in their particular markets (for instance, competing for highly skilled workers). However, since the costs of setting up (and providing) flexitime work arrangements are considerably higher for small establishments, it is likely that they are held back from embarking on that expensive route.

A considerable degree of variation in the probability of uptake of flexitime work arrangements by industry sector is also apparent from Table 1. The recalculation of the benchmark probability of uptake by using workplaces in the financial intermediation sector as opposed to manufacturing (with all other characteristics staying the same) show that the probability increases by 82 per cent. Similar trends

are found when other sectors are used: for instance, it increases by 62 per cent when the electricity, gas and water supply sector is used, it increases by 56 per cent when the health and social work sector is used, by 44 when the hotels and restaurants sector is used, and by 17 when the wholesale and retail trade and the repair of motor vehicles sectors are used. Sectors such as construction and transport, storage and communication experience the negative trend of a decreasing probability of flexitime uptake.

Workplaces operating in regional markets are more likely to have introduced flexitime work arrangements: the likelihood of the adoption of flexitime increases by 27 per cent to 0.393 when the benchmark probability is recalculated using local markets. On the other hand, workplaces serving national and international markets are less likely to have adopted flexitime work arrangements. A more significant disparity emerges between establishments partly or predominately owned locally and establishments predominantly or fully owned and controlled by foreigners – the likelihood of uptake increases by 33 per cent to 0.412 when the benchmark probability is recalculated using foreign ownership as opposed to UK owned firms. This suggests that the UK firms lag behind their foreign counterparts in taking initiatives to introduce more competitive employment packages. It may be the case that foreign owned firms are more inclined to use flexitime work arrangements so as to compete more effectively in local labor markets.

A related finding is that intensely competitive environments are negatively correlated with the adoption of flexitime arrangements – the likelihood of the uptake of flexitime work arrangements falls to 30 per cent when the benchmark probability is recalculated

using workplaces operating in highly competitive markets as opposed to workplaces with no competition. This is probably because of the constraints that workplaces in competitive markets are under, and because a more flexible approach toward managing employee schedule is considered less valuable, given the circumstances in which they find themselves.

However, workplaces with a major market share have a higher probability of introducing flexitime practice. Indeed, the probability of the uptake of flexitime work arrangements increases by 26 per cent, from 0.309 for the benchmark workplace to 0.392 when it is recalculated using workplaces with a market share of more than 50% as opposed to workplaces that occupy a small market share (with all other characteristics staying the same). It would seem that workplaces with a larger market share recognize the need to adopt more flexible organizational practices, especially if they are to maintain and control a larger part of the market. This result is consistent with the predictions of agency models that emphasize greater employee control in situations in which managers may not be able to write full employment contracts (Gibbons 1998).

The relationships between flexitime and union recognition and establishment age are found to be insignificant.

Table 2 about here

Table 2 provides details of the uptake of flexitime work arrangements using employees-level data. A range of variables for individual human capital, demographic

information, and current features of the employee's job were included in the regression. The results show that all three groups of variables are important in explaining the variation in an individual employee's opportunity to participate in work-life schemes.

A general observation is that educated workers are more likely to receive flexitime work opportunities than their relatively less educated counter-parts. It is argued that since educated workers are more likely to benefit from organizational change - it takes more education to cope with the constraints imposed by new productive systems - there is possibility that they will be more involved in various types of flexibility schemes. This prediction is fully borne out in our results. The benchmark probability of the use of flexitime work arrangements increases by 64 per cent when it is recalculated using postgraduate education as opposed to no education (with all other characteristics staying the same). It would seem that organizations with established flexibility schemes are more willing to provide education and training opportunities to their staff.

Similar findings for white collar workers (i.e. manager/senior administrator, professional and associate professional) and high-income bracket workers (i.e. from 12480.5 to 35361) suggest that more professional workers and workers at higher income levels are more likely to embrace new flexibility measures. This might either be due to the very nature of the work (as top level workers have higher responsibility thresholds, so they find the need to have more flexible hours) or because new flexitime trends tie in with their individual preferences for work-life balance.

Finally, temporary workers are, unsurprisingly, less likely to use flexitime work arrangements. The benchmark probability of flexitime work arrangements use falls by 21 per cent when it is recalculated using temporary workers as opposed to permanent employees. This is understandable, as, in many instances, flexitime work arrangements are primarily designed to facilitate the work of permanent employees. For example, temporary workers are in some instances hired to replace the permanent employees while they are on special leave.

The relationships between flexitime and ethnic minority, gender and dependent child are not found to be significant.

Employee Reports of Stress and Job Security. As demonstrated by Table 3, contrary to the flexitime case backed by public agencies, employee reports and attitudes toward stress and job insecurity are significantly more prevalent in flexitime workplaces than in non-flexitime workplaces. The results show, firstly, that employees within flexitime workplaces report a high degree of stress. Secondly, they are less likely to have felt secure in their establishments. Thirdly, they experience a high degree of job demand in their workplaces. There is a possibility that high stressed establishments are the ones actually that introduce flexitime practices, but our results should be interpreted with caution as the present analysis demonstrates at best a correlation between different practices. No inference about causality can be drawn from these results.

Table 3 about here

The major thrust of the British government policy on flexitime is based on the assumption that job 'insecurity' is endemic in the country's 'hire and fire' culture and that insecure jobs are the 'unacceptable face' of inflexible and unprotected labor markets (DfEE 2000). It is argued that when employees fail to reconcile their priorities at work and at home, they may eventually suffer stress and bad health. The organization thus loses their commitment and quality effort and incurs unnecessary productivity loss, as well as a period of reduced hours of work. Many recent public initiatives on employment and labor market practices bear the mark of these largely theoretical arguments.

However, the prediction about the supposed link between flexitime and the work-life balance does not bear out in our results. The establishments with flexitime arrangements are likely to have employees who are stressed and feel insecure, resulting in a state of discontentment and job dissatisfaction. This implies that the causes of job stress and other worked-related ailments are possibly deeper than the break down of some individual workplace norm that can be easily put to right by introducing practices such as flexitime.

The Relationship between Flexitime Work Arrangements and Measures of Job Control.

The analysis of the WERS 98 survey of managers, as reported in Table 4, focuses upon the relationship between flexitime work arrangements and three measures of job control, i.e. job discretion, job control and work teams. There is some evidence that job discretion and work teams are slightly more practised in workplaces with flexitime work arrangements than in workplaces with no flexitime. This result is consistent with other research (Batt, Valcour 2003, Wood, de Menezes, Lasaosa 2003,

Berg, Kalleberg, Appelbaum 2003) on commitment and high-performance workplace environments. However, the relationships found here are not very strong. It would seem that innovations in organizational practices such as flexitime are part of a larger program of organizational change and development. For instance, flexitime is used as a measure to help support the move from traditional hierarchical structures to new systems of flexible coordinative arrangements in modern organizations. Our findings could then be explained by examining recent institutional changes in industrial organization.

Table 4 about here

The critical advantage perceived for the hierarchical organizational systems associated largely with mass production systems was the principle of 'economies of scale', which permitted a steep decline in unit cost when volume output was increased. One result of employing such production systems was that jobs were broken down into small minute tasks so that they could be repeated an infinite number of times by operational workers with limited skills which could, though, be learned quickly with a minimum amount of effort. The association between a mass demand market, the division of tasks into small minute activities, and organizations serving as mechanisms of control and regulation meant that firms embodied highly repetitive, predictable behaviors in work toward the goal of obtaining high volume production with a modest attention to quality (Doeringer and Piore 1971).

Flexible work organizations, or integrated manufacturing systems, on the other hand, not only recognize the significant role of individual employee skill in the production

process, but also find it useful whether members of a group extend their cooperation to perform work tasks in a team environment (Marchington 1990). Special attention is accorded to developing those norms which enhance cooperative efforts, because the effective implementation of many new productive processes critically depends on team members' initiative and feedback. Such an integrative process is, to an extent, facilitated by the introduction of streamlined organizational systems such as flexitime, as the practice allows individuals to schedule their own working hours. The WERS 98 survey of managers demonstrates that the introduction and use of flexitime induce employee control over the jobs they perform; however, because the statistical strength of the relationship is not very significant it will be difficult to argue that flexitime is a major driving force behind the large scale changes seen recently in the organizational design and practice of productive activities.

Conclusions

The policy agenda on 'work-life balance' is largely based on the assumption that changes in the profile of the workforce and in shifting expectations, both of the business and the employee, are demanding reorganization of working practices to ensure that the business keeps up with the competition and that employees achieve a balance between work and life.

The present study has investigated the determinants of flexitime work arrangements by using a linked employee-employer dataset. The first aim of this investigation was to determine the extent to which such work-life programs occur in British establishments, and how this is influenced by a range of establishment and employee

characteristics. In particular, the debate on organisational flexibility has largely taken place without a consideration of the role of specific employee characteristics, which may be critical in determining the extent of employees' participation under a given scheme.

For instance, there is the possibility that employees are divided into workplaces that offer better working conditions, are more attractive places of employment and are associated with greater opportunities for work-life balance, than those that are not. It has previously been suggested that some labor market segments, such as female and ethnic employees, experience reduced levels of work-life opportunities (Pe´rotin and Robinson 2000). The results of this study, however, do not lend support to these earlier findings.

Consistent with a growing body of evidence, a range of educational, occupation and work environment variables were found to have a significant role in explaining the extent to which establishments adopt flexitime practice. A common observation is that larger, more capital intensive workplaces provide greater opportunities for work-life balance. In this study, both medium and larger establishment sizes are found to have positive relationships with flexitime measures. It is possible that small establishments are unable to offer the incentive to their employees due to high implementation costs. In contrast, large establishments will be prepared to absorb such costs, especially if they face a tight labor market. The industry in which the workplace operates has positive bearing on workplace flexibility. Significant and positive industry effects are found in relation to financial intermediation, electricity, gas and water supply, health and social work, hotels and restaurants and wholesale and retail trade and the repair of

motor vehicles sectors, for flexitime schemes. However, this is not the case for several other sectors, including workplaces in construction and transport and storage and communication sectors.

It is argued that organizations that do not recognise and address problems of work-life balance will be at a competitive disadvantage (Bevan et al 1999). At the organizational level, when work and family goals and priorities collide, realization of business goals is frequently compromised as employees experience stress and job dissatisfaction. However, there is no evidence of the establishments with flexitime arrangements having less stressed employees than non-flexitime establishments. Further, there is a positive relationship between flexitime arrangements and demanding work conditions and job insecurity. These findings raise the possibility that establishments operating flexitime schemes pursue goals that are not fully explained by a 'working long hours culture' thesis. Our results also suggest that educated and professional workers are more likely to avail themselves of the opportunity for flexitime working. It may be the case that attracting and retaining well-qualified workers is probably a goal well served by a flexitime working hours program.

Literature on flexibility suggests that strategies such as flat hierarchies, restructuring, horizontal networking and team-building are commonly designed to respond to the need for change in control- and authority-based systems of organization. Such changes enhance the ability of employees to perform their tasks more efficiently in an environment in which technology and skill are ever more important. Further, the development and effective utilization of multi-level skills require complementary

organizational and human resource management strategies such as employee participation in return, team operation and employee involvement in shop-floor decision-making. It is argued that flexitime is one such strategy, which ensures the effective implementation of decentralized organizational structures through its impact on the ability of employees to schedule their own working hours. This study only found a limited support for this supposed relationship.

Taken together, the results reported here on the impact of flexitime on employee stress and job control do not provide a clearer picture of the precise motives of workplaces in going about their flexitime programs. While the concept of flexitime has gained considerable government and management support in recent years, individual company needs and objectives must be carefully evaluated before flexible work hours are favored. A better understood managerial practice would improve the opportunities for the cost effective design and implementation of organizational development strategies such as flexitime. A case study approach may well be useful in investigating these important research questions.

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Table 1. The uptake of flexitime by workplace characteristics

	Coeff./std error	Marginal impact (% change)	Probability of uptake of flexitime
<i>Benchmark workplace: 200- 499 employees; manufacturing; local market; UK owned; no competition; less than 5% market share; non-union; operating for more</i>		-	.309

than five years
Change in characteristics from benchmark workplace:

Reference category: 200-499 employees

1-49	-102 (0.078)	-9	.282
50-199	-0.132 (0.196)	-25	.234
500-999	-0.174 (0.186)	+14	.354
10000+employees	0.496 (0.186)**	+37	.426

Reference category: SIC major group D (manufacturing)

SIC major group E (electricity, gas and water supply)	0.529 (0.077)**	+62	.501
SIC major group F (construction)	-0.101 (0.100)	-42	.182
SIC major group G (wholesale and retail trade)	0.397 (0.059)**	+17	.364
SIC major group H (hotels and restaurants)	0.653 (0.074)**	+44	.446
SIC major group I (transport, storage and communication)	0.117 (0.066)	-11	.278
SIC major group J (financial intermediation)	0.907 (0.060)**	+82	.563
SIC major group K (real estate, renting)	0.422 (0.066)**	+11	.346
SIC major group L (public admin., defense, social security)	0.152 (0.129)	+2	.318
SIC major group M (education)	0.178 (0.101)*	+6	.328
SIC major group N (health and social work)	0.721 (0.103)**	+56	.483
SIC major group O (other community, social, personal)	0.328 (0.195)**	+11	.343

Reference

category: Local market			
Regional market	0.380 (0.248)	+27	.393
National market	-0.055 (0.041)	-7	.288
International market	-0.032 (0.052)	-42	.181
Reference			
category: UK owned			
Predominately UK owned	-0.085 (0.055)	-14	.268
50/50 UK and foreign ownership	-0.013 (0.131)	-61	.121
Predominately foreign owned and controlled	0.290 (0.177)	+6	.329
Foreign owned	0.357 (0.346)**	+33	.412
Reference			
category: No competition			
Few competitors	-0.155 (0.072)*	-8	.287
Many competitors	-0.108 (0.074)**	-30	.219
Reference			
category: 1-4% market share			
5-10%	-0.092 (0.054)	-14	.268
11-25%	0.050 (0.051)	+6	.329
26-50%	0.142 (0.052)	+15	.357
More than 50%	0.351 (0.157)	+26	.392
Reference			
category: non-union			
Union recognized	0.294 (0.169)	+1	.315
Reference			
category: operating for more than five years			
Operating for less than five years	-0.024 (0.056)	-8	.287
F	4.67		
Prob>F	0.000		
N	27666		

** Significant at 1 per cent, * significant at 5 per cent.

Table 2. The uptake of flexitime by employee characteristics

	Coeff. / std error	Marginal impact of (% change)	Probability of uptake of flexitime
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Benchmark

employee

characteristics: 19

years or less; single; no qualifications; permanent; manager/senior administrator; 17420.5 annual pay		-	.334
<i>Change in characteristics from benchmark employee:</i>			
Reference category: 19 years or less (midpoint)			
22 years	-0.211 (0.053)**	-3	.326
27 years	0.346 (0.152)**	+13	.380
35 years	0.327 (0.251)**	+7	.357
45 years	-0.271 (0.052)**	-5	.322
55 years	-0.289 (0.054)	-9	.304
60 years	-0.193 (0.069)	-29	.239
Reference category: Single			
Widowed	-0.003 (0.081)	-23	.258
Divorced/separated	-0.247 (0.139)	-3	.326
Living with partner	-0.250 (0.125)*	-4	.321
Reference category:			
No qualifications			
O level	-0.214 (0.031)	-6	.315
A level	0.402 (0.334)**	+23	.411
Degree	0.455 (0.336)	+43	.478
Postgraduate degree	0.533 (0.346)**	+64	.560
Vocational qual.	-0.072 (0.018)**	-17	.279
Reference category:			
Permanent			
Temporary	-0.113 (0.044)**	-21	.265
Fixed term	0.561 (0.246)	+82	.609
Part time	-0.166 (0.025)	-47	.179
Reference category:			
Manager/senior administrator			
Professional	0.317 (0.330)**	+32	.443
Assoc.profess.	0.374 (0.135)*	+36	.457
Clerical	0.476 (0.232)	+55	.521
Craft/skilled	-0.185 (0.043)**	-72	.096
Personal/protective	-0.173 (0.042)**	-48	.174
Sales	-0.182 (0.042)	-37	.212

Operative/assembly	-0.015 (0.044)**	-83	.059
Other	-0.172 (0.041)**	-71	.100
Reference category: (midpoint) 17420.5 annual pay			
3380.5	-0.106 (0.052)*	-45	.187
5270.5	-0.182 (0.045)	-43	.193
8320.5	-0.088 (0.047)	-47	.180
10400.5	-0.105 (0.046)*	-40	.203
12480.5	-0.214 (0.047)*	-24	.257
14820.5	-0.095 (0.147)*	-9	.307
20540	0.364 (0.148)	+31	.439
25220.5	0.431 (0.249)	+54	.516
31720.5	0.461 (0.256)**	+68	.562
35361	0.474 (0.258)**	+75	.587
Ethnic minority	-0.274 (0.042)	-5	.329
Female	-0.270 (0.019)**	-4	.321
Dependent child	-0.137 (0.113)	-28	.263
F	4.11		
Prob>F	0.000		
n	26727		

** Significant at 1 per cent, * significant at 5 per cent.

Table 3. Job experience – survey of employees

	Stress	Security	Job Demand
Flexitime	0.318 (0.115)**	-0.037* (0.015)	0.376 (0.179)**
<i>Reference category: Single</i>			
Widowed	0.049 (0.067)	0.021 (0.069)	0.017 (0.067)
Divorced/separated	-0.035 (0.031)	-0.053 (0.032)	-0.041 (0.031)
Living with partner	-0.063 (0.020)**	-0.032 (0.020)	-0.088 (0.020)**
<i>Reference category: No qualifications</i>			
O level	0.006 (0.025)	0.094 (0.025)**	0.022 (0.025)
A level	0.021 (0.027)	0.163 (0.028)**	0.029 (0.027)
Degree	-0.054 (0.029)	0.134 (0.030)**	-0.178 (0.029)**
Postgraduate degree	-0.042 (0.037)	0.146 (0.038)**	-0.142 (0.037)**
Vocational qual.	-0.169 (0.402)	-0.100 (0.015)**	0.018 (0.015)
<i>Reference category: Permanent</i>			
Temporary	0.156 (0.036)**	0.754 (0.038)**	0.182 (0.037)**
Fixed term	0.082 (0.038)*	0.563 (0.039)**	0.140 (0.039)**
Part time	-0.069 (0.174)	0.861 (0.179)**	0.175 (0.180)
<i>Reference category: Manager/senior</i>			

<i>administrator</i>			
Professional	0.021 (0.027)	0.017 (0.027)	-0.156 (0.027)**
Assoc.profess.	0.338 (0.029)**	0.163 (0.030)**	0.175 (0.029)**
Clerical	0.476 (0.027)**	0.174 (0.027)**	0.208 (0.027)**
Craft/skilled	0.645 (0.034)**	0.170 (0.034)**	0.392 (0.034)**
Personal/protective	0.548 (0.034)**	-0.079 (0.035)	0.500 (0.034)**
Sales	0.477 (0.035)**	-0.159 (0.036)**	0.296 (0.035)**
Operative/assembly	0.590 (0.034)**	0.090 (0.035)**	0.338 (0.034)**
Other	0.301 (0.034)**	-0.011 (0.034)	0.323 (0.034)**
<i>Reference</i>			
<i>category:</i>			
<i>(midpoint) annual</i>			
<i>pay 17420.5</i>			
3380.5	-0.037 (0.042)	0.040 (0.043)	-0.037 (0.042)
5270.5	-0.040 (0.037)	0.123 (0.038)**	-0.028 (0.037)
8320.5	-0.009 (0.038)	0.153 (0.039)**	0.018 (0.038)
10400.5	0.014 (0.038)	0.166 (0.039)**	-0.024 (0.038)
12480.5	0.022 (0.038)	0.226 (0.039)**	0.016 (0.038)
14820.5	0.022 (0.038)	0.250 (0.039)**	-0.006 (0.038)
20540	-0.013 (0.039)	0.214 (0.040)**	-0.073 (0.039)
25220.5	-0.058 (0.040)	0.193 (0.041)**	-0.096 (0.040)*
31720.5	-0.061 (0.045)	0.218 (0.046)**	-0.049 (0.046)
35361	0.014 (0.047)	0.215 (0.049)	0.007 (0.048)
Ethnic minority	0.114 (0.487)	-1.053 (0.496)*	0.212 (0.466)
Male	-0.057 (0.015)**	-0.054 (0.015)**	-0.076 (0.015)**
Dependent child	-0.010 (0.090)	-0.062 (0.092)	-0.024 (0.091)
F	3.27	1.82	3.69
Prob>F	0.000	0.254	0.000
n	26030	25166	25372

** Significant at 1 per cent, * significant at 5 per cent.

Table 4. Job experience – survey of managers

	Discretion	Control	Team
Flexitime	0.078 (0.032)*	-0.004 (0.032)	0.059 (0.037)
<i>Reference</i>			
<i>category: 200-499</i>			
<i>employees</i>			
1-49	-0.221 (0.179)	0.356 (0.212)	0.141 (0.173)
50-199	-1.174 (0.196)**	-0.242 (0.124)**	-0.216 (0.187)
500-999	0.255 (0.186)	-0.129 (0.104)	0.530 (0.181)**
10000+employees	0.092 (0.188)	0.286 (0.193)	1.114 (0.187)**
<i>Reference</i>			
<i>category: Local</i>			
<i>market</i>			
Regional market	0.187 (0.049)**	0.113 (0.048)*	0.121 (0.054)*
National market	0.326 (0.041)**	0.108 (0.041)**	0.355 (0.047)**
International	0.372 (0.051)**	0.499 (0.051)**	0.476 (0.057)**
<i>market</i>			
<i>Reference</i>			
<i>category: UK</i>			

<i>owned</i>			
Predominately UK owned	0.302 (0.055)**	0.100 (0.053)	0.372 (0.064)**
50/50 UK and foreign ownership	0.247 (0.119)*	0.048 (0.120)	-0.331 (0.124)**
Predominately foreign owned	-0.229 (0.075)**	-0.751 (0.076)**	-0.504 (0.075)**
Foreign owned and controlled	0.172 (0.047)**	-0.208 (0.045)**	0.095 (0.053)
<i>Reference category: No competitors</i>			
Few competitors	-0.253 (0.076)**	-0.291 (0.075)**	0.178 (0.086)*
Many competitors	-0.181 (0.078)*	-0.519 (0.076)**	0.286 (0.087)**
<i>Reference category:</i>			
5-10%	0.297 (0.053)	-0.003 (0.053)	0.271 (0.057)**
11-25%	0.240 (0.051)**	-0.041 (0.050)	0.437 (0.055)**
26-50%	0.304 (0.052)**	-0.138 (0.051)**	0.513 (0.055)**
More than 50%	0.225 (0.056)**	0.066 (0.055)	0.393 (0.059)**
<i>Reference category: Non-union</i>			
Union	-0.182 (0.038)**	-0.016 (0.037)	-0.124 (0.041)**
<i>Reference category: Operating for more than five years</i>			
Operating for less than five years	0.056 (0.057)	-0.007 (0.001)	0.567 (0.073)
F	4.11	2.56	3.89
Prob>F	0.243	0.000	0.000
n	27525	27555	27557

** Significant at 1 per cent, * significant at 5 per cent.