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**EMPLOYMENT RELATIONS
OCCASIONAL PAPER**

Trends in Time and
Locational Flexibility in
British Organisations
1989-2004

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Trends in Time and Locational Flexibility in British Organisations, 1989-2004.

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Introduction

This paper is concerned with trends and current realities in British organisations' use of time and locational flexibility, from 1989 to 2004. The subject is of interest to managers, trade unionists and policy makers both intrinsically and because of its relationship with issues of 'work-life balance'.

The paper draws on Cranet data for British and Swedish organisations in private and public sectors collected at regular intervals between 1989 and 2004. Cranet is one of the largest surveys of Human Resource Management practices in the world, and the most recent data represents the most current data on its subject available in Britain.

The data is exploited here to show trends in the UK and Sweden and factor analysis is used to demonstrate the associations between different types of organisation and specific patterns of time and locational flexibility. The analysis reveals only moderate use of the flexible practices surveyed, and a certain decline in many of these forms during the last decade. The sole exception to the trend was that of home-based and teleworking. A typology of four different types of organisations associated with different forms of flexibility is generated which may be of use to practitioners and policy makers.

The paper is structured in the following way. In the following section, literature is reviewed. Next, Cranet data is introduced. In our main results section, we show British and Swedish trends and show how certain practices are prevalent in certain types of organisation. Finally, we reach conclusions and show the significance of the research.

Literature Review

'Flexibility' : A Term with multiple meanings

The 'flexibility' term is itself highly 'flexible' and has been used in widely differing ways in academic and public discourse. 'Labour market flexibility' for example has been widely used to imply high levels of employer choice in relation to hiring and especially firing employees. On the other hand it has also been used to imply employee freedom of choice for employees, crystallised in the idea of them acting as 'labour entrepreneurs' (Voß and Pongratz, 1998). In this German concept, employees are held to regard employing organisations instrumentally, and as part of a wider income-generating project not necessarily restricted to employment. The concept is thus quite different from one of the term's political uses, where 'labour market flexibility' has been used simply to indicate organisations' capacity to reduce employment with minimal constraints. This form of flexibility is not central to our paper, but use of the term to denote this practice helps to illustrate the term's fuzziness, and that it has strong normative as well as analytic elements.

The paper is mainly concerned with time and locational flexibility. The first is defined as arrangements whereby employers or employees have freedom to vary the hours of work outside of permanent, fixed hours of day-time working across 'standard' working periods, for example through annual hours contracts. The second is defined as varying the location in which work is done for example through teleworking. In general, time flexibility is also a term used in widely varying and often misleading ways. This is encapsulated in the concept of 'atypical' working when it is quite clear that 'typical' working is itself 'atypical' in both the British and global contexts (Brewster 1998).

Both of these forms of flexibility are highly relevant to notions of 'family friendly' working and 'work-life balance'. They have a considerable bearing on questions about how work is done and the ways that flexible working interfaces and interacts with employees' domestic and wider life situations. As with 'flexibility' more widely, the issue is highly influenced by normative and overtly political considerations. Thus, it is often assumed that increased flexibility in the times and locations of work are necessarily and *per se* employee or family friendly. We argue below that there is a good deal of evidence to show that the reality is a good deal more complex than that assumption allows. More widely, the spread of such practices is often assumed to be part of broader processes driven by abstract concepts such as 'globalisation'. These are also frequently linked to uniform and even monolithic descriptions of firms suggesting that firms behave in similar ways (Nolan, 2004). By contrast, the purpose of the present paper is to analyse the incidence of actual practices in a concrete, evidence-based manner and to examine whether organisations can be categorised by the practices they use.

Below, we review literature around a central question: how far may time and locational flexibility be characterised as 'employer' or 'employee'

driven? Three further issues are considered within this overarching subject, namely how far change is legally driven, where has change been occurring, and has flexibility extended consistently over the last fifteen years?

Flexibility: 'Core and Periphery' and beyond

These subjects have been widely discussed since the mid-1980s. An extensive literature has developed, debating the antecedents, causes, nature and consequences of flexible working in developed economies. Discussion began with the publication of Atkinson's model of the 'flexible firm', an intervention which remains current despite widespread criticism (Atkinson, 1984). The concept continues to attract widespread interest and (often implicit) support from management and international institutions.

Atkinson's 'flexible firm' model was intended to reflect and combine various trends in one synthetic form. It therefore tends automatically to suggest that there is one model of companies' use of labour, rather than numerous models. All of these trends tended to supersede the old 'Taylorist' or 'Fordist' company, based on mass production, and the subdivision of tasks which pushed the division of labour to the fullest extent possible given the available technology. All forms of flexible labour use were held to be increasing. The flexible firm was seen as a reaction to changes in consumer markets. Whereas Fordist producers dominated markets with their standardised products, this changed with the saturation of markets for such products. Not only had the size of markets become insecure since the return of economic recession to the western economies since the mid 70s oil price shock, but individualised customers created unpredictable demands for new products. The modern company had to compete through quick reactions to changing product demand and firms therefore require flexible workforces.

The flexible firm combines a core and peripheral workforce. In the core a multi-skilled workforce achieves functional flexibility. By breaking down occupational boundaries and rigid organisation of working time, enterprises create a form of work organisation that allows skills to be used across tasks and time. Employment is secure, skill levels are high and training frequent. Core workers have access to a dynamic internal labour market. It was in the core that time flexibility was posited to be most used (Atkinson, 1984). To achieve numerical flexibility employers may resort to a peripheral workforce. As their qualifications are generally low, they can easily be recruited on the external labour market. The use of this sort of employee can be important to the firm's operation, for example to respond to sudden increases in demand, but in Atkinson's model these peripheral workers do not enter the core. There is little need for them to receive training; their position remains marginal or precarious.

The model has relevance to unionisation, which focuses on the 'core' rather than the 'periphery' of employees since 'peripheral' employees are less likely to join unions (Croucher and Brewster, 1998). In the late 1990s, it was suggested that there was a 'new' flexible firm, in which

Atkinson's original concept was estimated to be becoming too conservative to fit reality: flexibility of new sorts was now extending into the 'core' of employees (Ackroyd and Procter, 1998). The argument was therefore that the trends were gathering pace. It seems likely that these trends may have exacerbated negative consequences for unionisation. The extension of practices previously confined to the 'periphery' may have compounded with other factors to hasten union decline. Unions, as significant means of 'lubricating' the employer-employee frictions arising from flexible working themselves suffered from the effects of flexibility. This may in turn have affected organisations' capacity to introduce some types of flexible working.

Atkinson's model was been criticised by Marxist researchers on the grounds that the developments were not new, were not part of management strategy, were not as radical as Atkinson suggested and were prescription as much as analysis. Pollert (1991:4) criticised the "(...) *implication of a radical break from the past, in the preoccupation with newness and change*". There was no great increase in the use of flexible working methods of any sort and a gap existed between Atkinson's prescriptions and company reality (Pollert, 1988). Similarly, Hyman (1992:259) pointed out that there was "*nothing novel about the segmentation within the internal labour market.*" There was an implication that less was happening than Atkinson argued. Additionally, the model was accused of overestimating managers' *strategic* use of flexibility. Hyman (1987) questioned how far the creation of horizontal divisions within workforces had ever resulted from a strategic approach. Hyman and others argued that managers' approach was not strategic; rather it was short-term and pragmatic, responding to product and labour markets and (though more weakly) to shifts in the regulatory regime (Hunter and McInnes 1992).

The onward march of flexibility?

More recent detailed empirical work has also concluded that Atkinson's model may not apply. The last Workplace Employment Relations Survey (WERS) found that the higher the overall level of skills in the workplace, the more use is made of fixed term contracts, freelance work and temporary workers. 'Numerical' flexibility occurred not only in the periphery, but also within the 'core' workforce in the form of temporary work. The authors pointed out that their findings were at odds with the Atkinson model: "*It appears that the use of non-standard forms of labour is more closely related to employment **within** the core than outside it.*" (Cully *et al.* 1999: 38) German researchers recently followed a similar line of argument (Kratzer and Döhl 2000). This shows how, in fact, a broad definition of time flexibility cuts across the different parts of the 'flexible form' model, since no section of the workforce is in principle exempt from time flexibility. It also tended to suggest that flexibility was extending its reach within workforces.

Others agreed that 'strategic' use of flexibility by management was little in evidence but also argued against Pollert's view that flexibility's extent was exaggerated. They showed that in fact there were considerable changes

occurring in the use of time flexibility across Europe in the first half of the 1990s (see, for example, Brewster 1998, Hegewisch, 1998). Researchers also pointed out that the 'flexibility' of British labour markets may have applied to the right to dismiss employees, but certainly did not apply to time flexibility within work where Continental European practices were much more developed (Hegewisch, 1998). Certain practices, such as the German trust-based working time where employers abandon all attempts at measuring employees' working time remain almost unknown in Britain (Singe and Croucher, 2002).

By the late 1990s, it was being suggested that Brewster and Hegewisch's observations were no longer valid, and that the trend for full-time jobs to decline in favour of part-time work had ceased in the mid-1990s. The possibility existed that trends in British labour markets that had been assumed to be structural were in fact being reversed. Dex and McCullough (1997) analysed British survey results for the private sector and found no evidence of British management making *strategic* use of flexibility in any form. They argued that the most dramatic changes had taken place in the early 1980s, while the proportion of British employees in part-time work reduced in the early 1990s. Crucially, this study, in common with many others, was based on surveys which tended to underestimate changes in the public sector (Rainnie, 1998). Dex and McCullough could find little evidence that change had been driven by legislation deregulating the labour market. There was, in short, no 'slide towards a dual labour market' (Rainnie, 1998: 162). Nor was the march towards flexibility continuing. It appeared that the trend was weakening or even ending.

Employer or Employee-Driven?

If the 'flexible firm' model tended to suggest that employers drove time flexibility, other researchers adopted similar views though from quite a different set of assumptions. Rainnie's (1998) language (employees 'suffer' part-time work: 162) implies that organisations impose that form of work on employees. This is one pole on a spectrum of views about the balance between employer and employee in determining time flexibility. Marxist researchers generally fell into this category, though it has not been limited to them. There was an assumption that time flexibility has been driven by employers (especially in the private sector) and their needs. The power imbalance in the employment relationship in favour of employers, especially at the point of hiring, was highlighted or assumed. Since labour costs constitute in many cases the most expensive item of operating costs, and demand for labour can be highly variable, the emphasis was on employers' need to increase time flexibility to make most efficient use of labour in relation to demand. In the public sector, constraints on public spending combined in some cases with increasing demand set a similar dynamic in train. The benefits employers gained through increased time and locational flexibility were emphasised. Employers could potentially match work more closely to demand patterns, or reduce accommodation costs via teleworking for example (Lupton and

Haynes, 2000). The assumption in this school of thought was that flexibility has been 'employer-driven'.

Others, writing from a more 'HRM' viewpoint, have suggested that employees themselves derive benefits from being able to match domestic demands more closely with their personal circumstances, and that they can therefore be more 'family friendly' and improve 'work-life balance'. Carers of children, disabled and elderly people can only work in some circumstances if non-standard hours are available (Bevan, 1996). It has also been shown that there are some relatively highly paid professional employees for whom a long-term commitment to an employer is not sought, recalling the 'labour entrepreneur' concept (Wareing, 1992). Though difficulties such as social isolation from the workplace community and self-exploitation are acknowledged, teleworking has been reported to work well for many employees (HRMID, 2003). This has given rise to a widespread assumption that flexible and locational flexibility are *necessarily* beneficial to employees, 'family friendly' or automatically 'employee-driven'.

However, other researchers have pointed out that the criterion for practices to be defined as *automatically* 'family friendly' is demanding: employees would have to have to have choice over when they work (Berg et. al. 2004). The capacity of employers to control working time suggests that the criterion is rarely met; control over the duration and timing of work 'remains largely in management's domain' (op.cit: 346). Collective bargaining, the same researchers argue, may achieve a better 'fit' between employee and employer interests, but is still likely to constrain individual employees. Brooks (2000) argues that there is a need to recognise a fundamental ambiguity between organisational requirements for flexibility and employee needs. A German consultant argues strongly that schemes of working time flexibility require adequate procedures for negotiating to deal with common implementation problems (Hoff, 2002). In practice, therefore, it appears that varying outcomes arise not only from different working schemes but also from differing personal and domestic situations, underlining the complexity of the problem (Gottlieb, Kelloway, Barham, 1998; Jarvis, 1999; Walsh 1999). Other researchers have found on the basis of detailed empirical work that employee satisfaction with flexible working hours arrangements can arise but is contingent on the sense of control employees derive from choosing them (Gottlieb, Kelloway, Barham, 1998). Other research suggests that it has been employee groups with informal greater bargaining power derived from their labour market position that have initiated employee-friendly flexibility measures by employers. Many employees appear to lack such power. (Nadeem and Hendry, 2003).

Extensive recent research on 'family friendly' practices to support flexible working in British workplaces suggests that progress at the workplace level in practical terms is in fact very small. Its incidence, the authors argue, is largely limited to workplaces with a significant trade union presence. Public sector employers feature much more prominently among those following such practices than many large private sector companies, suggesting that the 'flexible firm' may practise forms of flexibility whose

content and broader workplace context is relatively *un-* family friendly (White et.al., 2004).

Debates over the causes of time and locational flexibility continue despite considerable research into specific practices. Part-time work appears to constitute part of a pattern of disruption to the career choices of women with young children, it has recently been suggested (Himmelweit and Sigala 2002; Houston and Marks, 2003). Other research, on the other hand, based on extensive national survey data, argues that choice is the determining factor in shaping women's working lives (Hakim, 2003). Problems proliferate when using survey data to disentangle the real extent of choice individuals are making when specific patterns of work are used. Disentangling constraints and choice, it has been pointed out, is unlikely to be a simple task when working with survey material, however rich (Nolan, 2004).

In practice, the employer/employee driven dichotomy has some utility at the extremes of practice. We describe these as *polar* practices tending to be predominantly one or the other. Thus, for example, there is considerable evidence that job-sharing is favoured by employees though regarded with reservation with managers. A recent study of job-sharing and part-time working in the National Health Service showed that part-time working was congruent with management wishes to reduce costs. Many women employees favoured job-sharing, and multiple opportunities for the practice existed, but the opportunities remained highly restricted because of management reservations. (Branine, 2003). At the other extreme, there appear to be few employees who favour short-term contracts though managers can find them useful (Brewster, 1998). However, even at these extremes contrary cases may be conceived of. Some managers might feel that a greater range of skills is available through using two employees in a job-sharing arrangement, especially where the appropriate skills are scarce. Similarly, even in another 'extreme' case, that of trust-based working time, research has demonstrated that this is not necessarily 'family friendly'. Employees managed in this way may be set output targets and move towards burn-out through 'self-exploitation' (Glißmann, 2000; Hoff, 2002). The 'de-bordering of work' may occur so that work takes an increasing hold over individuals lives (Döhl et.a. 2000). Large-scale Swedish survey research suggests that the higher the degree of flexibility employees have over working hours, the higher the degree of 'work/family conflict' as the flexibility presumes adjustment of working time to the organisation's needs (Gronlund, 2004).

Summary

We suggest from the literature as a whole that numerous conditioning factors may have an impact on the reality of how flexibility operates in practice in terms of its 'employee-friendliness' and how far it may be conducive to 'work-life balance'. These factors include: the strength of employees in employment relationships; the extent to which systems are collectively bargained and how far bargains allow individual flexibility;

managerial attitudes; norms in the industry and workplace; domestic arrangements; employee psychological types. The range of factors and the variation possible within them suggest that while some forms of flexible working may in practice be 'family-friendly' for most employees and that the opposite may apply to other forms of working, all are the result of a compromise between employer and employee interests. They also suggest that configurations of flexibility practices may vary considerably between employers, and that the 'flexible firm' stereotype may be simplistic. It has been argued that some flexibility practices tend to operate in contrary directions to others. Thus, part-time workers are rarely trained to the same extent as other employees, and are therefore less likely to be capable of functional flexibility, or even on occasions some types of time and locational flexibility (Brewster, 1998). Configurations of practices may therefore reflect interactions between the conditioning factors listed above and tensions between different practices. However, little is known about how practices are configured in practice. The EU and state may affect the balance between employer and employee power within this compromise, by legislation, climate setting and other means. The historic role of the state as 'model employer' may also continue to have an influence through long-established norms and cultures in public organisations which may persist (as high union densities have for example: Cully et. al. 1999) despite privatisation. However, the European academic literature lends no support to the idea sometimes apparent in public discussion that flexibility is mainly affected by legislation (Brewster 1998). Rather, it is agreed that legislation is only one of a large range of factors conditioning the introduction of flexibility measures.

A number of conclusions can be reached from this literature. First, British practices do not appear *prima facie* particularly 'flexible' on a European scale. Second, there is no simple relationship between flexible working hours and teleworking on the one hand and employee or family-friendliness on the other. Third, it is not clear where these practices exist and whether they are grouped together in any way. Rather, the picture remains one in which a single 'flexible firm' model persists, or individual workplaces or industries' practices are analysed. Studies which transcend a simple public-private sector dichotomy are also rare. Fourth, how unionisation fits into the picture is also unclear. While capacity to negotiate flexible time working systems as a condition of employee-friendliness is a recurrent theme, how far this is linked to unionisation rather than employee strength in the labour market is unclear.

Research Issues

Some of the questions arising require further investigation through case studies, but some may be examined through survey data. The literature indicates a number of areas of interest which we intend to investigate empirically. The first is whether the trend towards increased flexibility debated as part of a wider discussion in the late 1980s and early 1990s continued into later years. The second is how far British practices are more or less flexible than those in European economies. The third is

whether those 'polar' practices that are either normally employer- or employee-driven have increased in the period. The fourth, in the light of concentration in the literature on the private sector, is whether there are any configurations of practices apparent among employers both within and across sectors.

The Cranet Data

The Cranet survey is conducted by a network of thirty four business and management schools from different countries in the world. The data are collected from senior HR Directors in all sectors of the economy and provide longitudinal information on HR policies and practices. The objectives of the survey are:

- To establish data on HR practices across all economic sectors in different countries.
- To monitor trends longitudinally, and in particular in terms of 'Europeanisation' of practices.
- To establish how far there has been a shift in these practices towards 'Strategic HRM'.

Cranet is predominantly a postal survey, and this is how it is administered in the two countries compared here. The questionnaire has been developed by the academic partners involved, and was revised in the survey's last round to reflect new practices whilst maintaining the survey's international comparability and longitudinal virtues. The questionnaire is sent to a database of senior HR managers in thousands of British and Swedish organisations employing one hundred or more employees, though the majority of respondent organisations employ two hundred or more people. The last round of the survey was completed in Britain and Sweden in mid-2003. The data were processed and analysed at Cranfield and discussed with groups of practitioners shortly after data collection. This reference group seminar took place in Britain in November 2003.

In Britain, 1115 organisations responded, giving a response rate of 12.7%. These were broadly representative of the distribution of sectors in the economy. Of the respondent organisations, roughly three quarters were private sector employers. Median labour costs as a percentage of operating costs in the respondent organisations were 70% in the public and 40% in the private sector. About three quarters of respondent organisations had their headquarters based in the UK; the single largest group of non-UK based employers were US companies, these being around ten percent of the respondents. The data presented here refer only to UK operations, whatever the employer's country of origin.

Results

The following analyses provide a description of the use of flexible working practices reported by organisations since 1989. The focus of these analyses will be on the reported use by organisations within the UK. However, a simple trend analysis will be carried out on data collected from Sweden over the same time scale to offer a comparison.

First, basic descriptive data will provide information concerning the UK data sets constructed since 1990. These data represent organisations from both private and public sectors and form a representative picture from organisations across all industry sectors. Organisations represented on the data base are predominantly employers of more than 200 workers.

A trend analysis is presented for the UK first showing how the reported use of practices has changed over fifteen years. The change in each practice is then compared, where data permits, between UK and Swedish organisations. These results are presented graphically.

Following these analyses a principal component factor analysis is presented which shows how flexible working practices appear to be used in conjunction with one another in a systematic way. These factors are then analysed further to show some of the contextual organisational features associated with the use of these 'bundles' of practices. Finally the change in use of these bundles across time in the UK is presented graphically.

1. Descriptive analyses of the CRANET data sets.

Table 1. Number of organisations represented in data sets.

	1990	1991	1992	1995	1999	2003
UK	2591	1557	1343	1297	1091	1115
Sweden	NA	368	NA	367	352	383

Table 1 presents the numbers of respondents in the survey data sets from 1990. Due to concerns with the comparability of data, the Swedish surveys from 1990 and 1992 have been omitted.

Table 2. Public and Private sector representation for 2003 UK data

	Frequency	%
Private sector	774	70.7
Public Sector	235	21.5
Mixed	26	2.4
Other	59	5.4
Total	1094	100
Missing	21	
Titak	1115	

It can be seen in table 2 that 70.7% of organisations responding to the 2003 survey were classified as Private sector with 235 responses coming from the public sector representing 21.5% of the sample. twenty-one organisations provided missing data for this questionnaire item.

Table 3. Main industry sector representation for 2003 UK data

	Frequency	Percent
Agriculture, forestry	16	1.5
Energy and chemical extraction of non	10	0.9
Metal manu; electrical office	145	13.3
Other	193	17.8
Building and engineering	36	3.3
Retail and hotels, catering	105	9.7
Transport, communication	47	4.3
Banking, insurance, services	113	10.4
Personal, recreational	3	0.3
Health	61	5.6
Other	33	3
Education	89	8.2
Social	32	2.9
Public	78	7.2
Other	117	10.8
Total	1087	100
Missing	28	
Total	1115	

Table 3 presents the distribution of responses from main industry sector for the UK respondents in 2003. It can be seen that a total of 31.1% (13.3 plus 17.8) of the sample come from organisations in manufacturing whilst 78 responses representing 7.2% of the sample are from public administration.

Table 4. Size of responding organisations for 2003 UK data

	N	Minimum	Maximum	Sum	Mean	Median
Total employed by organisation	1011	44	211063	2588246	2560	500

Table 4 shows the average size of the organisations responding to the UK 2003 survey. The mean size is approximately two and a half thousand employees. However, it should be noted that the median size (i.e. the size of organisations half way along the size distribution) is 500 employees. This indicates that a small number of very large organisations are inflating the mean, thus making it a less reliable measure of central tendency. Further analysis reveals that only 3% of the sample are larger than ten thousand employees.

The largest organisation in the sample employs over two hundred thousand workers the smallest only forty-four. The *Sum* indicates that the sample covers over two and a half million workers in total.

2. Trends in flexible working practices in the UK

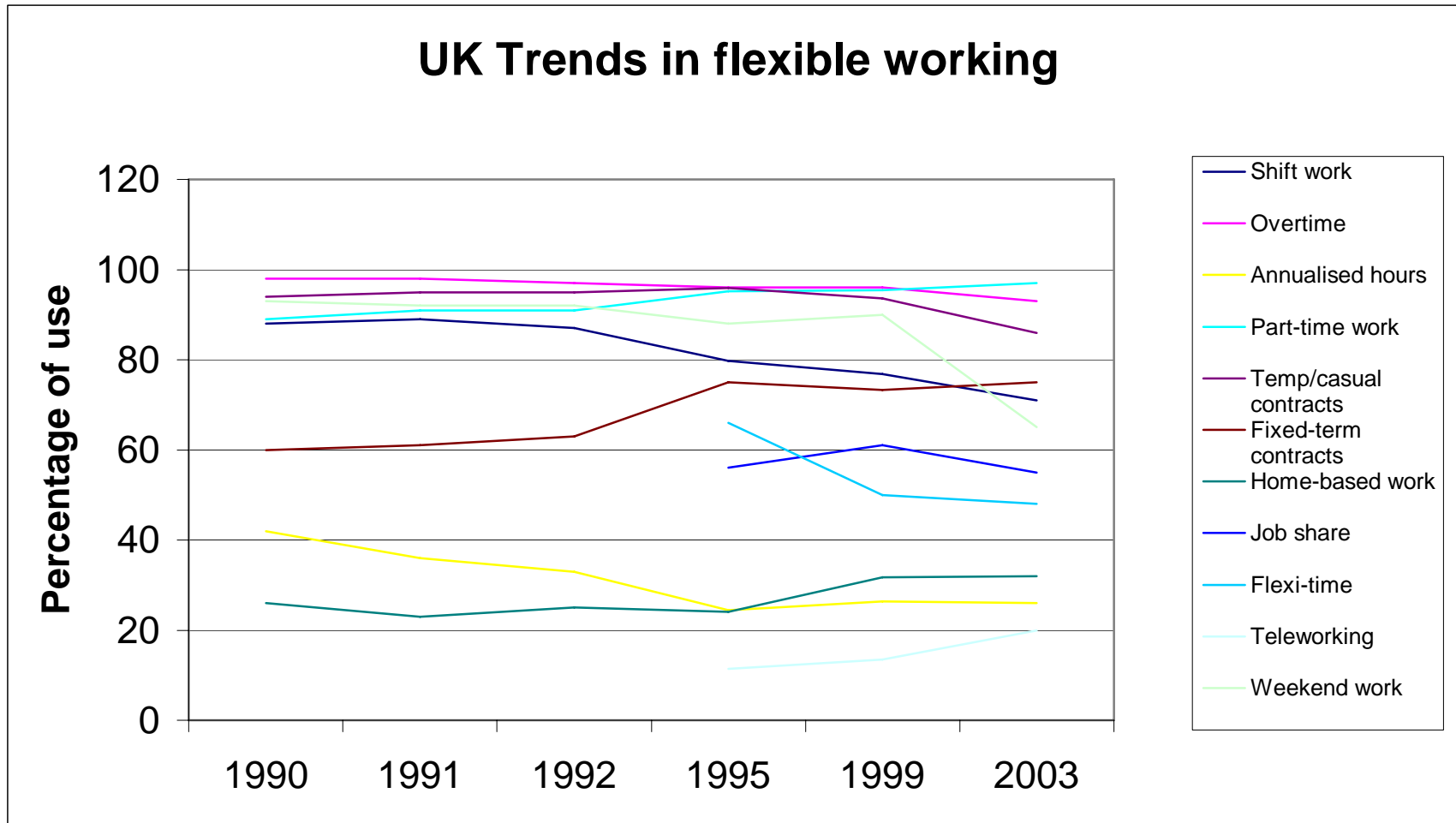
CRANET survey questionnaire asks respondents whether their organisation uses a particular practice, and if so, the percentage of workers covered by the practice. These data have been collected since 1990, though in 1995 extra practices were added to the research.

Figure one shows the percentage of organisations indicating use of a particular flexible working practice. It can be seen that data relating to job share, flexi-time and teleworking are presented from 1995 to present.

It can be seen in figure one that some practices have increased in use while others have become less popular. Increases can be observed in part-time work, fixed term contracts, home based work and teleworking. Decreases are observed in overtime, temporary contracts, weekend work, shift work, annualised hours, flexi-time and weekend work.

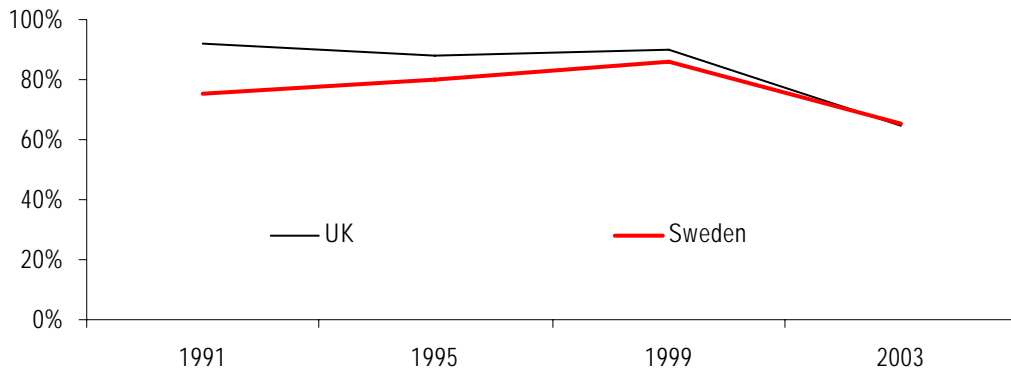
It should also be noted that some practices appear to be used much more commonly than others. For example over 80% of organisations utilise part-time workers, overtime and temporary contracts. Other practices are less common with only around a third using teleworking, home-based workers and annualised hours.

Figure 1. Trends in the use of flexible working practices - UK



3. Comparative trends between UK and Sweden

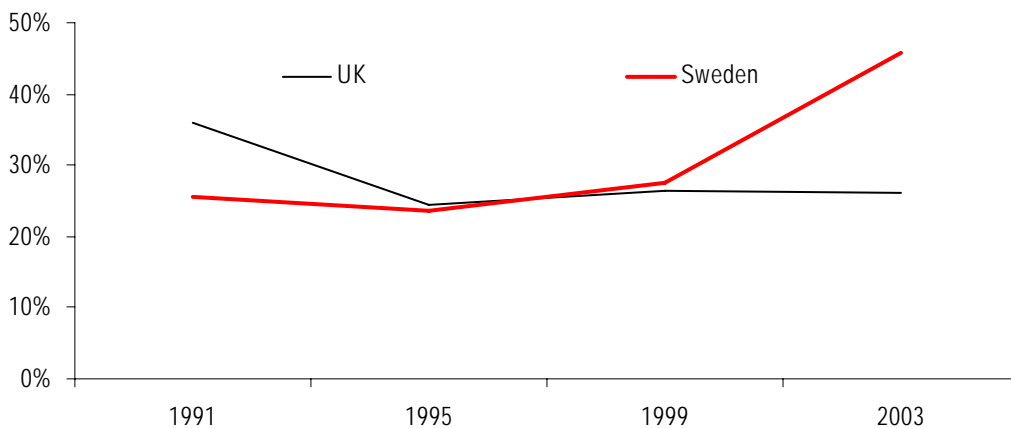
Figure 2. The use of weekend work in the UK and Sweden since 1991



In figure 2 (and the remaining figures in this chapter) data are presented from both countries. Four surveys are used to provide comparisons between the UK and Sweden; these cover the survey years 1991, 1995, 1999 and 2003. Data presented represent the percentage of organisations in these survey reporting any level of use of these practices.

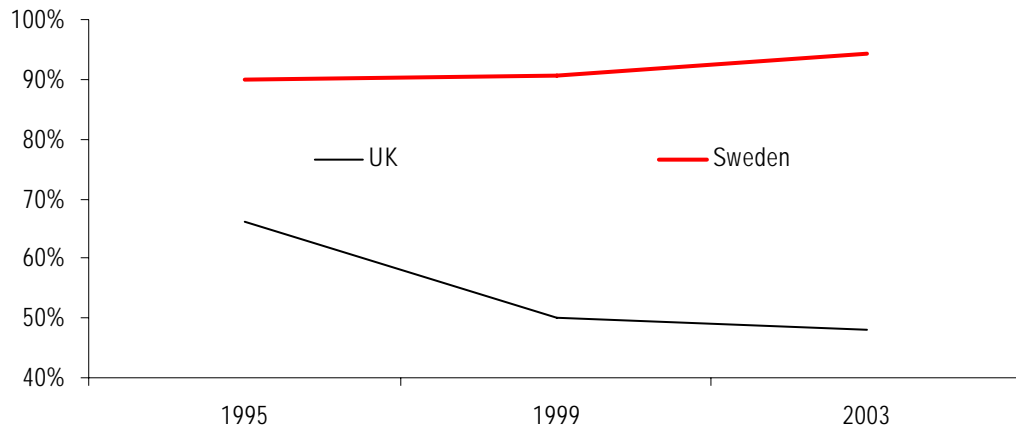
Figure two shows that the use of weekend work remained very high throughout the nineties in both countries but has recently started to fall in both. Approximately two thirds of organisations in both the UK and Sweden still use weekend work.

Figure 3. The use of annualised hours in the UK and Sweden since 1991



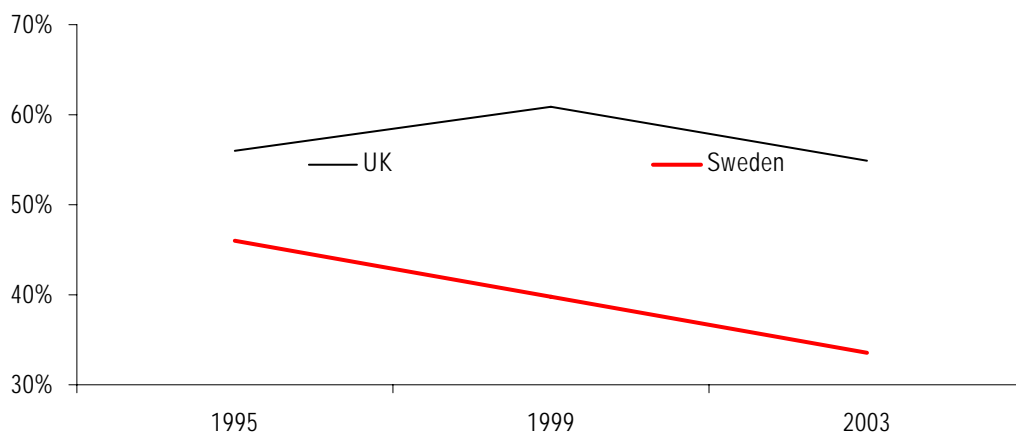
In the UK the use of annualised hours contracts fell between 1991 and 1995, remaining stable thereafter whereas in Sweden there has been a considerable increase since 1999.

Figure 4. The use of flexitime in the UK and Sweden since 1991



Data relating to flexi-time has been collected since 1995. It can be seen that this practice is used by a very high proportion of organisations in Sweden and appears to be increasing. In the UK the practice has dropped in the last decade from two thirds to less than half.

Figure 5. The use of jobshare in the UK and Sweden since 1991



Jobshare remains more popular in the UK than in Sweden with little change since 1995. In Sweden the practice appears to be diminishing.

Figure 6. The use of overtime in the UK and Sweden since 1991

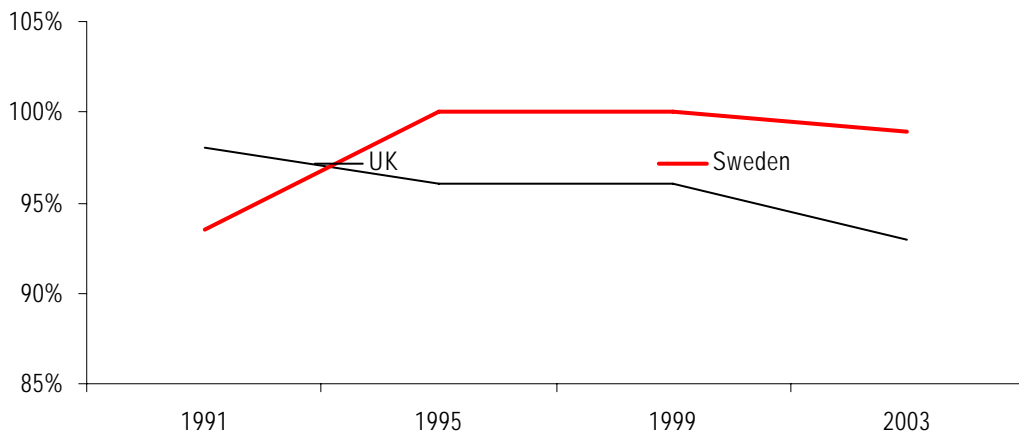
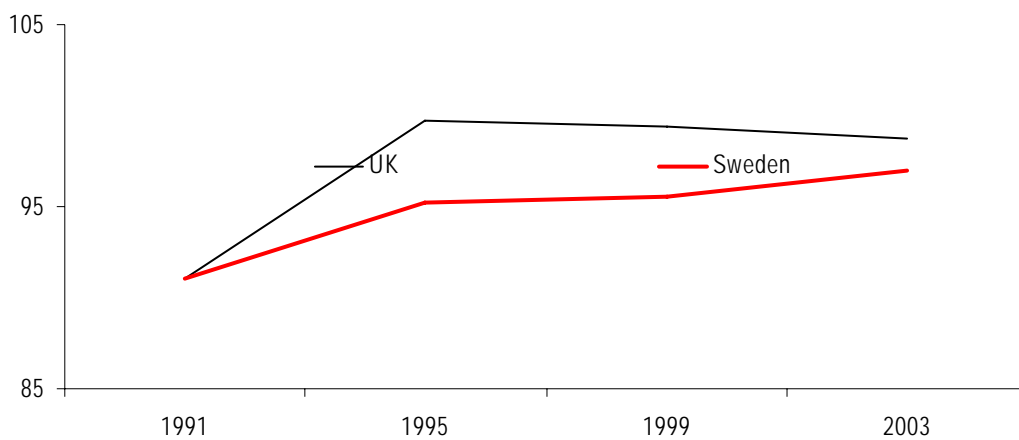


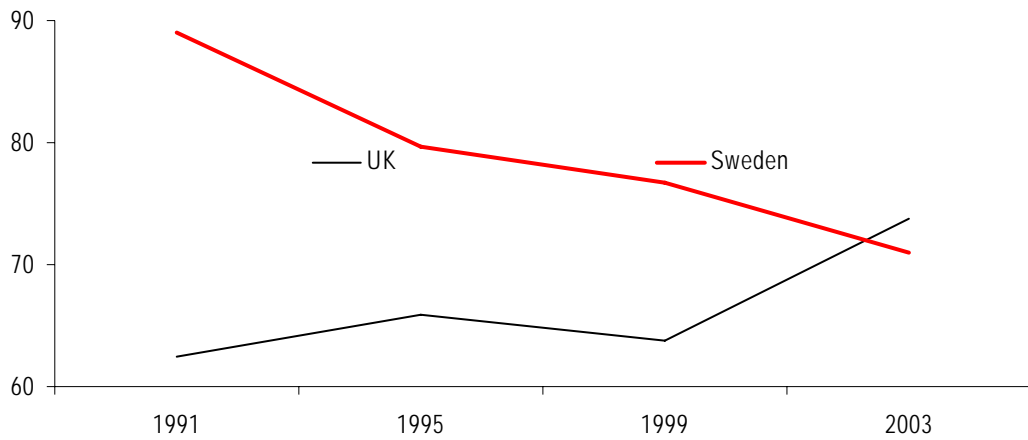
Figure 6 shows the use of overtime in Sweden and the UK. It can be seen that reported use of this practice is high in both countries though slightly higher in Sweden. In the UK it has dropped from 98% to 93% since 1991.

Figure 7. The use of part-time working in the UK and Sweden since 1991



The use of part time working has increased in both countries since 1991 from 91% of organisations to over 97%.

Figure 8. The use of shift working in the UK and Sweden since 1991



The use of shift work has fallen in Sweden since 1991 by 18% while in the UK it has increased.

Figure 9. The use of temporary and casual working in the UK and Sweden since 1991

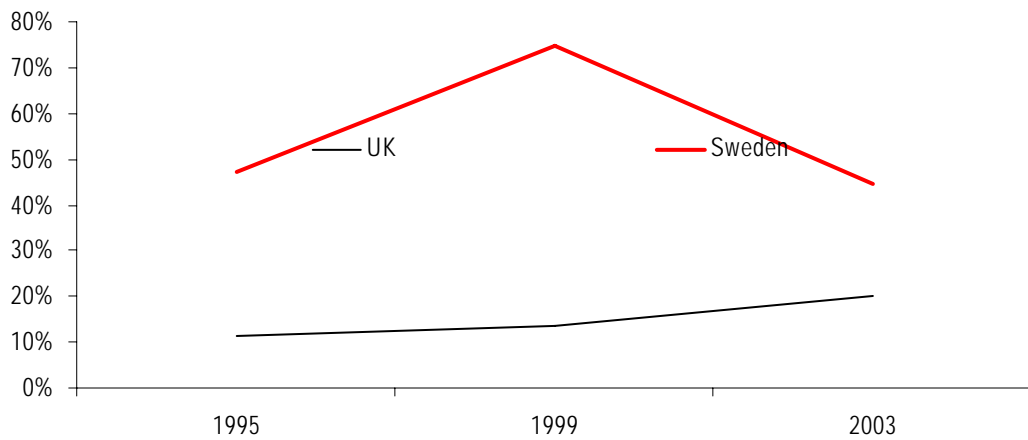


Figure nine indicates a similar pattern of change in both countries, with reported use of temporary or casual workers falling since the late nineties.

4. Contextual elements associated with the use of flexible working practices

Analyses were carried out to determine whether organisational characteristics such as the size and type of organisation were predictive of the use of certain practices. Table seven below presents the organisational characteristics examined to assess the predictive relationship with the twelve flexible working practices.

Table 7. Contextual elements in analyses

Level of unionisation	The percentage of workforce in a trade union.
Impact of union	Whether trade unions are recognised for collective bargaining
Gender balance	The proportion of male to female employees
Size of organisation	The number of people employed
Sector	Whether public or private sector

Analyses of bivariate correlations between practices and organisational characteristics.

Bivariate correlation analysis assesses the strength of association between two variables. Variables are said to be correlated if they change systematically with each other. This means that as one variable increases there is a corresponding increase (a positive correlation) or decrease (a negative correlation) in the other.

The size of the coefficient indicates how strongly the two are associated. Coefficients can take any value between 1 (a total positive association) through 0 (no association whatsoever) to -1 (a total negative association).

Table 8. Bivariate correlations between flexible working practices and organisational characteristics

Practice/ Organisational characteristic	Sector (public private)	Level of unionisation	TUs recognised in collective bargaining	Total employed by organisation	Maleness
Weekend work	.162	.194	.121	.285	-.150
Shift work	NS	.389	.320	.160	.207
Overtime	-.196	.178	.079	NS	.323
Annualised hours	.239	.172	.212	.220	-.217
Part-time	.424	NS	NS	.307	-.653
Job share	.332	.144	.126	.355	-.353
Flexitime	.422	.158	.138	.194	-.184
Temporary/ casual	.179	.87	.084	.197	-.215
Fixed term contracts	.315	NS	.065	.173	-.283
Home-based	NS	-.090	NS	.186	-.109
Teleworking	NS	-.077	NS	.190	-.078
Compressed working week	.159	.166	.143	.180	-.177

Table eight above presents the bivariate associations between each flexible working practice and each of the organisational elements. The figures reported in this table are the correlation coefficient for each analysis. Only statistically significant correlations are reported - those where no relationship exists is reported as NS (Not Significant).

By examining the table a number of findings are apparent. First, there are many significant relationships found within the data suggesting that the five organisational characteristics used are associated with many of the practices. Of the 60 analyses carried out only 9 produced a non-significant result.

Secondly, it should be noted that there is great variation in the size of relationships. For example, the association between the use of fixed term contracts and unions being involved in collective bargaining is only .065. Although this is statistically significant the size of the effect is very small. However, other coefficients are much larger such as the relationship between the use of part-time work and the gender balance within the organisation. In this analysis the coefficient is -.653 suggesting that the two variables are very closely associated. The fact that it is a negative correlation simply tells us the direction of the relationship; these practices are much more likely to be found in organisations that employ greater numbers of women.

Third, it should be noted that some practices are strongly associated with only some of the characteristics, such as part time work, whilst others show weak associations across all the tested characteristics.

Multiple regression analyses using organisational factors to predict flexible working practices

Bivariate correlational analyses are of most use to indicate how each flexible working practice is associated with each organisational characteristic. However, another useful form of analysis is multiple regression. In this form of test it is possible to see how each organisational characteristic is related to each working practice when the other characteristics are considered at the same time. By taking the other variables into account it is possible to assess how *unique* the relationship is between the practice and the characteristic. For example, in Table 8 it can be seen that for eight of the twelve practices considered both *depth of unionisation* and *involvement in collective bargaining* are associated with them. A question arises as to whether this is because these two characteristics are so similar they represent the same underlying relationship (e.g. union activity within the organisation); multiple regression allows us to test this possibility.

Twelve multiple regression analyses were carried out. In each case the flexible working practice was used as the criterion variable (the predicted variable) and the five organisational characteristics were used as predictor variables.

Table nine below provides the results from these analyses. Only the organisational characteristic variables that were included in the regression model at a statistically significant level are included. It can be said that these variables share a unique relationship with the working practice in the analysis. This does not mean that the bivariate relationships should be ignored; but it does mean that they should be considered in the light of the regression results. The variables are listed in order of the strength of their impact in the model. For example *weekend work* is most strongly predicted by the level of unionisation, followed by size of organisation and so on.

Table 9. Flexible working practices with significant predictors from regression analysis

Practice	Statistically significant organisational characteristic predictors			
Weekend work	More unionisation	Larger organisations	More female	
Shift work	More unionisation	Unions recognised in collective bargaining	Private sector	More male
Overtime	More unionisation	Private sector	More male	
Annualised hours	More female			
Part-time	More female	Public sector	Larger organisations	
Job share	More female	Public sector	Larger organisations	
Flexitime	Public sector			
Temporary/ casual	More female	Public sector		
Fixed term contracts	Public sector	More female		
Home-based	Less unionisation	More female		
Teleworking	Larger organisations			
Compressed working week	No predictors			

It can be seen from this table that there are fewer significant associations between the practices and organisational characteristics than were revealed in the bivariate analyses. This is because the organisational characteristics are associated with each other in some way and the regression modelling has accounted for this *shared variance*. For example, only one practice (shift work) is now predicted by both *union* variables. Implying that for most practices their association with *involvement in collective bargaining* is mostly due to these organisations being more densely unionised.

These analyses reveal that similar forms of flexible practice tend to be predicted by the same characteristics. For example, those practices associated with extending the working hours available to the organisation such as shift work, weekend work or overtime are all predicted by the level of unionisation. They differ however in their relationships with gender balance with weekend work more likely in organisations with more women whilst shift work and overtime more likely in organisations with more males in the workforce.

It can be seen that those practices associated with a more contingent workforce such as part-time work, fixed term contracts and temporary/casual labour are predicted by the proportion of women in the workplace.

It should also be noted that a number of practices are associated with the public sector, these include; part-time work, temporary/casual labour, flexi-time, job share and fixed term contracts.

5. Underlying factor structure of the use of flexible working practices.

The previous analyses suggest that organisations of particular forms seem to adopt certain types of practices. For example, it was noted that similar practices such as those used to maximise the number of working hours available to an organisation, such as overtime and shift work, apparently are used together. To examine whether groups of practices are used systematically together by organisations a factor analysis was carried out.

Respondents were asked to provide information concerning the level to which they used the various flexible working practices. Respondents indicated the level of use through reporting the percentage of employees covered by any given practice. Responses were banded from *Not Used* through to *over 50%* on a six-point scale. Data relating to twelve practices were collected and analysed.

Factor analysis examines the relationships shared between each of the variables and produces a model (if possible) of the underlying groups of relationships shared within the data set. If variables group together in a factor it implies that as one variable changes, the other in that factor will probably change in a systematic way with it. Thus we can identify practices that are likely to be used together by organisations in a systematic way.

Table five below shows how use of each of the practices is related to the use of other practices. It can be seen that four groups or *factors* have emerged from the analysis. Ten of the practices load uniquely onto one of the four factors. *Job share* loads onto two factors equally, while *annualised hours* fails to load significantly onto any of the factors. The level to which each of the practices relate to the factors can be gauged by the size of the loading coefficient. The larger this figure, the more core to the factor the practice is.

Table 5. Rotated factor structure of flexible working practices

Proportion:	Component			
	1	2	3	4
on at weekend		0.573		
Shift work		0.805		
on overtime		0.721		
on PT work	0.754			
job sharing	0.511		0.479	
on flexi-time			0.676	
temporary/casual	0.601			
on fixed term contracts	0.646			
home based				0.767
teleworking				0.805
on compressed working week			0.699	

Following such an analysis the task becomes one of identifying the likely common principle that underlies the factors. For example, it can be seen that factor 4 is produced from the relationship between *Home based working* and *Teleworking*. This suggests that when an organisation adopts one of the practices it is *probable* that they also adopt the other. Conversely, organisations not utilising one of them will be unlikely to use the other. Table six provides the interpreted relationship underlying the four factors.

Table 6. Proposed underlying concept for the factor model.

Factor one - Non-established workers	Part time Job share Temporary or casual Fixed term contracts
Factor two - Extended hours	Weekend work Shift work Overtime
Factor three- Flexible hours	Job share Flexitime Compressed working week
Factor four-Remote working	Home based work Teleworking

In table six above it can be seen that the four factors suggest that organisations use groups of practices in a systematic way to achieve different ends. Factor one implies that organisations will adopt multiple practices that enable at least part of their workforce to be less established. These practices include the use of fixed term contracts and temporary or casual contract labour. This is evidence of organisations adopting more than one practice presumably to address related needs.

Factor two suggests that organisations tend to adopt similar practices that will enable them to maximise the working hours available to the organisation. These practices include shift work, overtime and weekend

work. These practices clearly provide organisations with the ability to extend productive hours and it appears that if one of the practices is adopted then it is likely the others will be too.

Factor three indicates that if organisations choose to adopt a practice that allows workers to vary their hours, such as flexitime, they will also use related practices such as job sharing to enable workers to work hours that suit them. It can be proposed that this factor represents flexibility that directly benefits employees.

Finally, factor four represents the use of remotely based workers, whether as tele-workers or home-based workers.

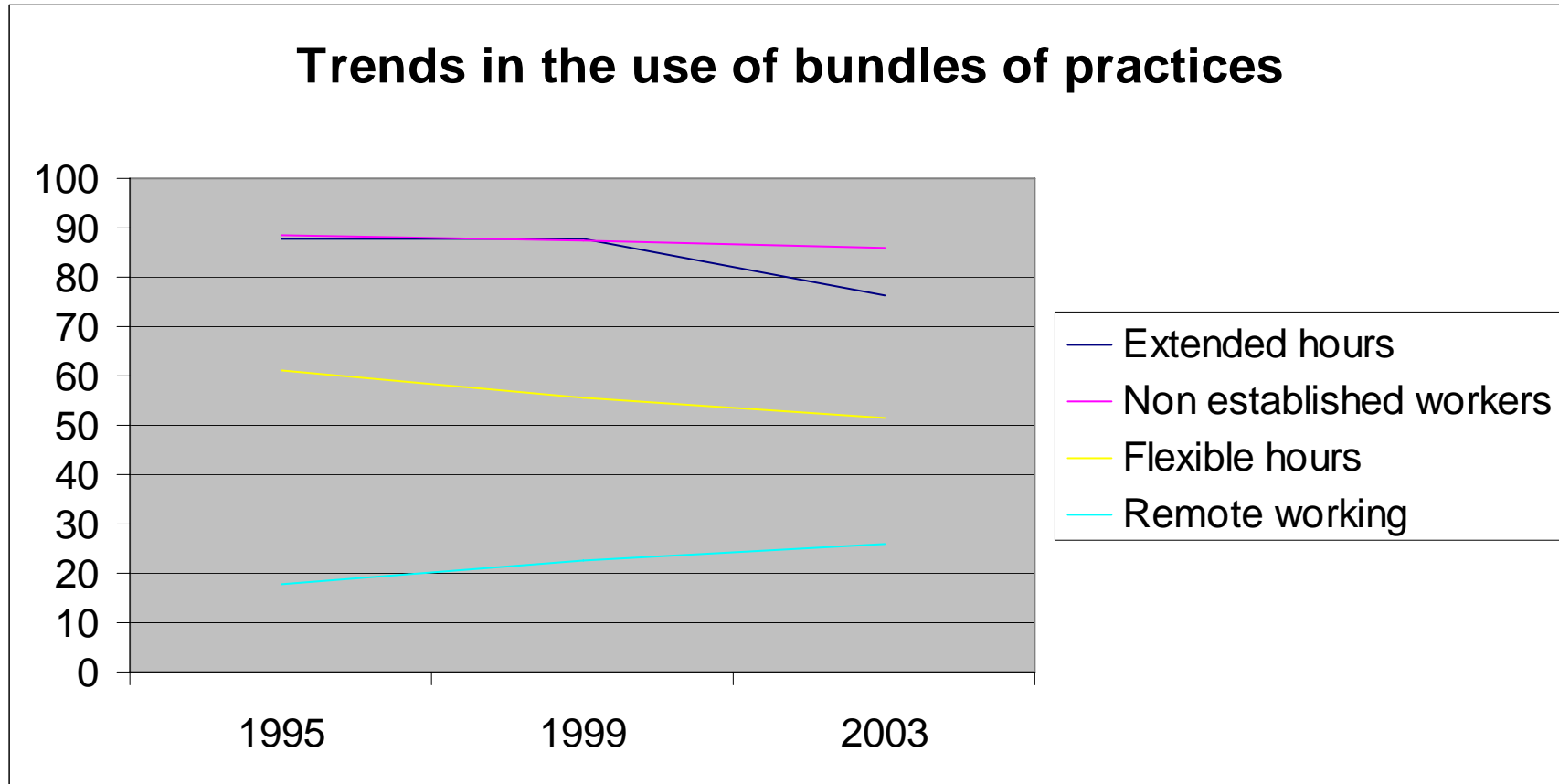
Examination of the data for this analysis suggests the variables deviate from a normal distribution and therefore we may advise caution when interpreting the results. However, the same analysis was conducted on data from the 1999 survey. These data also deviated from a normal distribution but produced a near identical factor model. This should be taken as evidence that the model is robust and that a true relationship exists to some extent between these practices in the UK.

5. Change in the use of groups of practices in the UK since 1995

In the previous section it was shown how organisations use groups of practices systematically together in order to address their needs. By combining variables representing the use of these practices it has been possible to construct variables to represent each factor. Figure Ten below shows how the use of these bundles of practices have changed since 1995. It should be noted that *job share* was included in the *flexible hours* factor and not in the *non-established workers* factor. This was done because it was felt that this practice was conceptually more fitted to this factor, since it was more consistent with the other relatively employee-driven factors in the category.

Figure ten shows how organisations have used bundles of flexible practices since 1995. It was not possible to construct variable back to 1990 as data relating to some of the practices were only collected from 1995. Variables representing the factors were constructed by averaging the percentages of organisations adopting these practices. Thus, the level of use is represented along with the change in use.

Figure 10. The use of 'bundles' of practices in the UK since 1995



It can be seen that factor 2 *non-established workers* has been high across the period and has changed little. This is evidence that practices adopted to maintain a partially non-established workforce are the most popular in the UK. The ability to extend working hours is also popular, but has shown a decrease since 1999. The use of practices that enable workers to work flexible hours has shown a decline since the mid nineties suggesting that 10% fewer organisations utilise such working arrangement. Finally, it can be seen that *remote working* is increasing in the UK, though still only a quarter of organisations are likely to utilise this.

Discussion and Conclusions

Our review of discussions about how far time flexibility might legitimately be described as 'employee' or 'employer driven' concluded that there were certain 'polar' practices such as job-sharing or shift-working which might be described respectively as predominantly employee or employer driven. However, the common assumption that any form of time or locational flexibility was *per se* 'employee friendly' was shown from the literature to be incorrect. Thus, for example, major issues of adjustment could be posed for teleworkers under certain circumstances. Similarly, public discussion emphasising legislation as either an important driver of flexibility or as a major constraint was also shown to be at variance with the academic consensus.

The literature showed certain subjects to be in need of further empirical investigation. The first was whether the trend towards increased flexibility debated in the late 1980s and early 1990s continued into later years. The second was how far British practices are more or less flexible than those in European economies. The third was whether those 'polar' practices that are either normally employer- or employee-driven have increased in the period. The fourth, in the light of the literature's concentration on the private sector, was whether there are any configurations of practices apparent among employers both within and across sectors. In other words, was the 'flexible firm' an adequate representation of reality?

These questions were approached by use of the Cranet data set for Britain and Sweden, longitudinal data spanning the 1990s and culminating in the 2003-4 survey. These data derive predominantly from larger companies, and this should be borne in mind when interpreting the results. The data also show the proportion of organisations using practices rather than the depth of those practices within organisations.

The first question was concerned with whether the trend to increased use of time and locational flexibility discussed in the late 1980s has continued down to 2003/4, or whether there was any tailing off in the trend from the mid-1990s as some researchers suggested. Our conclusion is that from the mid-1990s, use of many practices did in fact decline in British organisations. These practices included practices which could be considered both 'employer' and 'employee-driven' such as weekend working and flexitime respectively. The trend in job-sharing was rather different: the practice increased up to 1999, but then declined again. Only one set of practices, home and teleworking showed a steady increase throughout the period, albeit from a low base.

The second question related to British use in relation to other European economies. The literature review showed that some practices such as trust-based working time was used in Germany, though not in Britain. Empirical comparison was undertaken with Sweden. The comparison produced mixed results between the two countries. Weekend and shift working were equally common among British and Swedish organisations, though the British trend was upwards in 2003 in contrast to the Swedish

trend. Annualised hours use in Sweden has increased across the period, whereas it has declined in the UK. Flexitime is considerably more used in Sweden than in the UK, where it has become slightly less used by organisations. Job-sharing was more used in the UK than Sweden. Swedish organisations used slightly more overtime than British organisations. Part-time working is slightly more common in the UK than Sweden. Temporary and casual work has declined in the UK since the mid-1990s, a broadly similar trend to that in Sweden. The mixed nature of the results gives no solid support for an argument that British organisations make more flexible use of labour in working hours terms than Swedish.

The third question concerned whether 'polar' practices, i.e. those that may be seen as predominantly employer or employee-driven have increased over the period. The results show that in general these practices declined from the mid-1990s in terms of the number of organisations using them. This was the case with the ('employer-driven') annual hours, weekend work and temporary and casual work. The only exception to this was that the proportion of organisations using shift-working increased. Predominantly 'employee-driven' practices such as job-sharing or flexitime also decreased during the period. Job-sharing increased in the second half of the 1990s, but then reduced. The only forms of predominantly 'employee-driven' flexibility that increased were home- and teleworking, though these practices were not widely used among organisations generally.

The picture is therefore a complex one which shows no clear trend towards constantly increasing use of most practices, with the exception of remote working. Moreover, there is no clear tendency for either 'employer' or 'employee-driven' practices to increase in recent years. This tends to support those asserting that flexible working in general declined from the mid-1990s. It may also, if more weakly, tend to suggest that the factors driving particular practices are endogenous and contingent.

We approached the final question, as to how useful the 'flexible firm' model continues to be from an investigation of how practices clustered between organisations. We found that the 'flexible firm' model as a synthetic analogy is not especially helpful. We found from factor analysis that there are in fact four predominant types of organisational practice, and that these showed considerable continuity over time. Nor is an exclusive emphasis on firms especially relevant when discussing time flexibility across the British economy, since many practices are concentrated in the public sector. Therefore, our empirically-derived typology transcends the 'flexible firm' concept.

We proposed that there were four underlying concepts for the factor model: non-established workers, extended hours, flexible hours and remote working. Similar forms of flexible working practice tend to be predicted by the same organisational characteristics. Extended working hours are predicted by the level of unionisation. They differ in their relationships with gender balance, with weekend more likely in organisations employing more women, and shift work and overtime more

common in organisations employing a high proportion of men. Practices associated with a more contingent workforce are predicted by the proportion of women in the workplace, many of which are also associated with the public sector.

These findings may be useful to employers and policy makers when designing initiatives targeted at particular types of companies. In particular, they may prove helpful in developing the 'fine tuning' which is frequently important in fitting practices to particular workforces. Thus, for example, remote working requires particular attention in terms of tailoring it to individuals as there is a danger of isolation and burn-out for employees of certain dispositions and in specific domestic circumstances. These practices are clustered among organisations with particularly low levels of unionisation and unions therefore are unavailable to assist with 'fine tuning'. Organisations in the cluster therefore have a particular need to exchange experience in fine tuning.

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