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PSI Research Discussion Paper 27

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An Empirical Analysis using British Data

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Research Discussion Papers

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ISBN: 978-0-85374-826-7

PSI Report No: 905

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Policy Studies Institute

Employee Voice and Human Resource Management: An Empirical Analysis using British Data

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Acknowledgements

We would like to thank Steve Wood and participants at the Voice and Value Conference 2007 at LSE for valuable comments

ABSTRACT

Using British workplace data we examine the relationship between human resource management (HRM) and different forms of employee voice. After controlling for observable establishment characteristics, we find voice and HRM are positively correlated, but this positive association is confined to certain voice regimes. Previous research has found no association between HRM and union voice. However, distinguishing between union-only voice regimes and dual channel (i.e. union and non-union) voice regimes reveals that union-only regimes have the lowest incidence and intensity of HRM adoption while dual channel regimes have the highest HRM incidence and intensity. The implications of these findings for theory and practice are discussed.

The relationship between the adoption of human resource management (HRM) techniques and the presence of unions has been a topic of considerable debate on both sides of the Atlantic for a number of years. Early writers such as Guest (1989:48) emphasized the individual focus of HRM as damaging to collective organization, while others such as Kochan (1980) saw greater use of HRM techniques as part of an overt 'union substitution' strategy. Kochan and Osterman (1994), on the other hand, suggested HRM might work better in the presence of unions. Protagonists in the union versus HRM debate have often used different definitions of HRM and different measures of union presence, but a recent and comprehensive analysis of British data by Machin and Wood concluded that there is "no statistically significantly greater adoption of HRM practices in non-union workplaces than in unionized ones" (Machin and Wood, 2005:216).

The authors qualify their conclusions in two ways. First, they speculate on the possibility that their results are "uniquely British" and second they introduce the possibility that there may be "different reasons for introducing HRM practices in union and non-union environments" (2005:216). In this paper, we pursue these arguments further by distinguishing between union and non-union voice, considering their relationship to HRM separately and in combination. This proves to be crucial in understanding the relationship between HRM and union voice in the UK context. We argue that there may be something about the British context which delivers this idiosyncratic relationship between HRM and voice: we

develop this argument below, but in brief it rests on the ability of employers in Britain to combine union and non-union voice in ways that are not possible in the US.

The structure is as follows. In the next section, we distinguish voice and HRM and speculate about their relationship. We then describe some distinctive and relevant features of the UK context. In the following section, we introduce our hypotheses about HRM and voice incidence. Next, we describe our data and methods and test our hypotheses. The final section summarizes and concludes.

Voice and HRM

Voice regimes are governance mechanisms for employment contracts (Williamson, 1991; Bryson et al 2004). They exist where institutions or processes are present to generate two-way communication between managers and employees. Voice regimes can be direct or representative in nature and can be delivered in a number of ways; via a union, through management led initiatives or as part of some dual channel where union and non-union voice are both present (Millward et al., 2000; Bryson, 2004). Our conception of employee voice is not, as was Freeman and Medoff's (1984), based solely on unionism. Rather, it is closer to Hirschman's (1971) conception, embracing any form of employee voice as Hirschman embraced any form of consumer voice: it is the institutionalization of two-way communication between employers and employees designed to reduce

transaction and exit costs for both parties. It is thus a contractual governance mechanism with mutual benefits.

Voice regimes can also be accompanied by HRM practices. The specific practices that form part of any given HRM system can be quite diverse, but typically they involve managerial attempts to motivate and manage workers through a series of workplace practices rather than through strict command and control structures. HRM is a sophisticated set of control techniques designed to yield benefits to the firm by use of management-initiated techniques for people management designed to generate higher performance (Becker et al 2001). However, the effectiveness of these HRM techniques in improving organizational performance is contested (Godard 2004).

The HRM practices we consider here are derived from Pfeffer (1995) and Storey (1992) and are discussed in detail below. They may be related to voice regimes, but they are logically distinct. Somewhat like mobile phones and cameras, voice and HRM may be encountered as integrated packages or separately. They may confer different costs and benefits in different combinations and locations.

The UK Context

Britain has historically experienced a 'voluntarist' industrial relations system granting the parties to industrial relations a considerable degree of freedom to choose their preferred or agreed institutional arrangements (Clegg, 1979). The two decades prior to the 1998 Workplace Employment Relations Survey (used here and described in more detail below) broadly coincided with the Thatcher era during which a further expansion of employer choice was generated by a series of deregulatory measures which reduced legal support for trade union activity (Willman and Bryson, 2007). Employers in the UK were therefore virtually unconstrained in the period up to 1998 in their ability to mix union and non-union voice at the establishment level. This has made it possible for employers to supplement union with non-union voice without terminating relationships with unions (Willman and Bryson 2007). This situation contrasts starkly with the USA where the legal system proscribes certain non-union voice and HRM practices in a union environment to preserve unions' "sole agent" status (LeRoy, 2006).

In spite of this variety in voice regimes, UK studies on the co-existence of HRM and voice focus almost exclusively on the links between HRM and *union* voice. It is usually assumed that HRM may substitute for unions since it offers alternative solutions to worker problems, thus challenging the solutions offered by unions and potentially reducing the incentive for union organizing. There is evidence that HRM policies are associated with higher job satisfaction and a lower intention to quit (Guest and Conway, 1999) and that they reduce workers'

expressed problems at the workplace in both Britain and the US, potentially limiting workers' desire for union solutions (Bryson and Freeman, 2006).

However, studies generally find that unionized workplaces differ little from non-unionized workplaces in terms of the incidence of HRM (Wood, 1996; Wood and de Menezes, 1998; Machin and Wood, 2005) and – unlike in the USA – HRM practices do not reduce workers' desire for unionization (Bryson and Freeman 2006).¹ Furthermore, one study using the same data employed in this paper found that a positive link between HRM practices and labor productivity was confined to unionized workplaces (Bryson et al., 2005), suggesting that unionization and HRM may even be complementary. Unions in the USA may challenge employer efforts to introduce HRM, aware of the potential for HRM to undermine worker support for unionization, whether intentionally or unintentionally (Fiorito, 2001; LeRoy, 2006). These concerns, however, may not be so pertinent in the UK.

Of particular relevance for our work is that all of the studies above do not take account of the heterogeneity of voice regimes in the UK. In particular, they do not distinguish between non-union, union and dual channel (mixed union and non-union) voice regimes, presenting instead the effects of unionization on HRM across pure and mixed regimes, usually proxied by a dummy variable identifying

¹ Cully et al. (1999: 110-111) note that the higher incidence of HRM practices in unionized workplaces is largely due to their greater likelihood of being large and being in the public sector. Machin and Wood (2005) also present bivariate analyses indicating higher HRM incidence in unionised workplaces but, again, this association disappears when controlling for other factors.

workplaces in which at least one union is recognized for pay bargaining. In fact, non-union forms of voice have become increasingly prevalent. Moreover, where union voice is present, it often co-exists with non-union voice (Bryson et al., 2004). Among unionized workplaces with 10 or more employees, six-in-seven had some form of non-union voice as well (see below).

As in the USA, the union sector has been shrinking in the UK during the past three decades. By 1998, around half the workplaces in the UK had voice mechanisms that were exclusively non-union. These include direct and representative voice channels which are instigated by the employer, sometimes at the request of employees.² To our knowledge, there is no empirical evidence on the links between these various forms of voice and HRM either in the UK or the USA, in part because many authors' measures of HRM subsume voice elements in their estimation of HRM (e.g. Machin and Wood, 2005).³

Hypotheses

For our hypotheses, we adopt the following simple notation: Let **HRM (X)** be the extent of HRM use given **voice regime X**, where **X** can be: **A (absence of**

² EU legislation can require the setting up of works councils at the apex of larger organizations, but this does not affect workplace-level arrangements in the UK. The Information and Consultation Directive which came into effect in April 2005, may have some effect on voice arrangements at workplace-level but this was not in place in the late 1990s.

³ There is one exception. Fenton-O'Creevy and Wood (2005) distinguish between union voice and direct and representative forms of non-union voice. Using data on multinational companies with headquarters in Britain they find no support for the proposition that direct-voice only regimes have a higher incidence of high-commitment work practices than other voice regimes.

voice), U (use of union voice), and N (non-union voice). U and N can be present concurrently.

A management control technique like *HRM* and a contractual governance mechanism like *voice* may be complementary or substitutes. If HRM practices delivered everything voice representation did (and vice versa), the two would be substitutes. In fact, since HRM techniques emerged much later than unions and other forms of voice representation, one could argue that HRM is a natural “successor” and firms will switch from voice to HRM eventually.

On the other hand, if the effectiveness of HRM is enhanced by the simultaneous presence of voice at a workplace (e.g. because voice reduces costly worker exit or increases the flow of productivity-enhancing information), the two would be complements and we would expect them to appear together. Concurrent use of voice and HRM could also originate from a common factor driving the adoption of both – for example managerial quality – that enables a firm to cope with organizational and managerial innovations more easily. In this case, we would again expect the two practices to appear in conjunction– a workplace that draws positive net benefits from one will also draw positive net benefits from the other. We view the complementary argument(s) as more compelling and therefore hypothesize:

H₁: HRM will be more prevalent in establishments with (any form of) voice than in those without voice ($\min[HRM(U), HRM(N), HRM(U,N)] > HRM(A)$).

Conditioning on workplaces with voice, HRM, may sit better with some forms of voice than others. HRM may substitute for union voice where HRM generates outcomes that reduce employee demand for unionization. The presence of union-only voice may signal union success in monopolizing worker voice at the workplace and may imply the potential to block HRM too if the union is not persuaded of the 'high performance' ethos which drives HRM. In addition, union-only voice may imply a reliance on collective rather than individual forms of employer-employee engagement that might exclude HRM. Reliant on a narrower definition of union only voice (rather than union presence) we hypothesize, amending Machin and Wood (2005), that among voice regimes, HRM will be lowest in union-only voice regimes.

Non-union voice only exists in the UK at workplace-level where the employer has chosen to invest in its provision (Bryson et al., 2004).⁴ The fact that the employer has chosen to implement non-union voice implies that the employer may also invest in HRM to obtain a competitive advantage as described by Pfeffer (1995). The presence of non-union voice alongside union voice at a workplace is indicative of one of two scenarios, both of which are conducive to HRM. It may either signal union weakness which leaves the employer largely unconstrained in

⁴ It is plausible that direct voice emerges spontaneously in the smallest of workplaces due to worker proximity. However, these workplaces are absent from our data.

mixing voice varieties with HRM, or it may imply a 'mutual gains' environment in which unions are willing to use what Freeman and Medoff (1984) termed their 'voice face' to elicit productivity improvements. Therefore, we hypothesize;

H₂: HRM will be higher in workplaces with non-union voice than in those with union only voice ($\min[HRM(N), HRM(U,N)] > HRM(U)$).

So far our hypotheses are consistent with the proposition that HRM incidence will increase in an ordinal fashion from no-voice to union voice to non-union voice regimes.

Our main departure from previous work in this field is to stress the heterogeneity of union voice. Specifically, we identify dual voice as empirically more common than union only voice (Bryson et al 2004). If, as we hypothesize, union only voice environments restrict HRM and non-union only voice environments are a more favorable habitat, we must consider how dual voice and HRM will coexist.

Whether a workplace is unionized is, in part, an accident of history: the earlier cohort of workplaces initially adopted union-voice whereas newer workplaces adopted non-union only voice (Machin, 2000; Millward et al., 2000; Willman et al., 2007). Yet very few unionized workplaces have de-recognized their unions in Britain; instead, they have supplemented union with non-union voice (Millward et al., 2000; Kersley et al., 2006).

Dual voice regimes may have emerged in different ways. For some firms, non-union voice was added to union only regimes in response to employers perceiving deficiencies in union-only voice provision. The reverse is also possible, where employees pressed for unionization in addition to non-union consultation frameworks. In the UK, it is likely that the former has been more common.

However, if union voice acts as a drag on the introduction of HRM, employers may switch to non-union voice. Where there were no constraints on doing so, adding non-union voice mechanisms to union ones is also a risk-averse strategy for overall voice improvement (Bryson et al 2004). It is thus likely that in continuing dual regimes, no such drag operates, and we therefore hypothesize;

H₃: There will be no difference in HRM incidence and intensity between dual channel and non-union only voice regimes ($HRM(U, N) = HRM(N)$).

To summarize, our hypotheses on the incidence of voice and HRM can be expressed in the following ordinal ranking:

$$HRM(U, N) = HRM(N) > HRM(U) > HRM(A),$$

where the first equality represents H_3 , the first inequality H_2 , and the second inequality H_1 .

The Data and Context

Our data are the British Workplace Employment Relations Surveys 1998 (WERS98), a large-scale survey of industrial relations in British establishments in the public and private sectors. The key features of these data are described elsewhere (Millward et al., 2000, 3-10; 248-55). Our analysis is based on data collected from human resource managers responsible for workplace industrial relations which contain the voice-related variables and HRM items needed for our analysis. All observations are weighted by the inverse of the workplace's probability of selection for the survey. With these weights, our analyses provide a representative portrait of workplaces in Britain with 10 or more employees in 1998. We now define our measures.

Voice is defined as the presence of two-way forms of (representative or direct) communication between workers and management. In our data, the set of voice measures is as follows.

1. union recognition
2. union representatives on or off site
3. a joint consultative committee meeting at least once a month
4. non-union representatives on site

5. problem solving groups
6. regular meetings between management and employees which allow for two-way communication
7. team briefings that occur at least once a month and devote time to employees' questions/views.

Items 1-2 measure union voice. Items 3-7 measure non-union voice. No-voice workplaces are defined by the absence of all.

The context and timing of the data collection are relevant to understanding the voice measures. In 1999 the government enacted legislation which could require employers to recognize trade unions if the majority of workers so wished, hence our reliance on the 1998 dataset. We thus have four categories of voice in our analysis: no voice, union voice only, non-union voice only and a mix of union and non union voice (termed 'dual'). The incidence of these regimes in our data was 17, 5, 48 and 30 percent respectively.

The HRM measures are broadly based on Pfeffer (1995). The measure is a count of practices identified by Pfeffer, supplemented by other aspects of human resource management identifiable in the literature. These dimensions are as follows:

1. selectivity in recruiting: where manager says skills, qualifications, experience and motivation are all important factors in recruiting new employees
2. job security: policy of guaranteed job security for at least some employees
3. incentive pay: profit pay, performance related payments or cash bonuses
4. employee share ownership scheme
5. information sharing: management shares information on investment, financial position of the organization or staffing
6. 'empowerment': core employees have a lot of control over variety in their work, discretion over how they do their work or control over the pace at which they do their work
7. self-managed teams: core employees work in teams that are able to appoint their own leaders, jointly decide how work is done, or have responsibility for specific products or services
8. on-going training: on-going training is one of the main methods by which core employees are made aware of their job responsibilities
9. cross-training: at least some core workers are formally trained to do jobs other than their own
10. symbolic egalitarianism: core employees have standard contracts for all non-pay terms and conditions of employment
11. promotion from within: internal applicants given preference when filling vacancies.

In addition to these items identified by Pfeffer the score includes two other items:

12. an indicator that the workplace has a formal strategic plan, strategic planning being a key component of HRM (Storey, 1992)
13. the existence of a widespread appraisal system, that is, where at least 80% of core employees are formally appraised.

A score of 13 denotes affirmative answers to each of these questions. Lacking any one of these HRM variables would give an establishment a score of 12 and so on.⁵ This summative measure of HRM differs from others in the literature, including Machin and Wood (2005) who, because they use earlier surveys as well as the 1998, must operate with a smaller set of HRM measures. In addition, they include items such as the existence of a joint consultative committee that we define as voice. In our analysis, measures of HRM and of voice are clearly discrete sets.

Empirical Findings

Table 1 reports the incidence of voice by workplace characteristics in 1998. The percentage of establishments with some form of voice ranges from lows of 64 and 67 percent in single-establishments and family owned operations

⁵ Clearly, this is the simplest way of defining HRM intensity. Assigning different weights to each of these elements or using clusters of HRM practices does not fundamentally alter our conclusions (results available upon request).

respectively to a high of 100 percent in health establishments. The overall sample average for all establishments is 83 percent.

[Table 1]

The first indication of a positive correlation between voice and HRM is the higher incidence of voice in workplaces with high HRM scores (94 per cent among those with an HRM score of 9+) compared with workplaces with lower HRM scores (80 per cent among those with scores of 8 or under).⁶ This relationship, which supports Hypothesis 1, is illustrated graphically in Figure 1 which shows the HRM score distribution for no-voice workplaces lies to the left of that for workplaces with voice.

[Figure 1]

Table 2 reports descriptive statistics on the use of HRM practices, overall and disaggregated by workplace characteristics. In 1998, establishments used an average of 7 out of 13 HR practices. This overall figure differs considerably across workplaces with small, single-establishment, family owned, private sector and middle-aged establishments using fewer HRM practices than larger, non-family owned, public sector, and younger or older establishments.

[Table 2]

Table 2 presents HRM scores by workplace characteristics. It confirms that establishments with voice use more HRM practices. However, HRM intensity varies significantly across voice regimes. In accordance with Hypothesis 2,

⁶ Since 1984, non-union only regimes have increased three-fold in the population of workplaces with 25 or more employees. Union-only regimes have witnessed a similarly impressive decline over the same period (Willman et al, 2007).

union-only voice has the lowest HRM score amongst voice types. HRM scores are higher in dual channel and non-union only voice regimes.

The distribution of HRM scores by type of voice regime is shown in Figure 2. The panels are ranked in terms of overall mean in the HRM score. It is clear that union-only voice is associated with a compressed distribution of HRM scores (panel A). There are fewer outliers within the union voice type, with most workplaces located between 5 and 8 practices. In each panel the dotted line represents the overall frequency of scores.

[Figure 2]

Table 3 shows the incidence of each HRM practice by workplaces with and without voice. Almost every practice is more likely to be found in a workplace that also has formal voice. The exception is the use of incentives, perhaps indicating a more transactional relationships in no-voice regimes.

[Table 3]

Table 4 presents the same set of 13 practices, only now we look at patterns within the voice sector. Establishments with dual voice have a greater likelihood than others of adopting almost all HRM practices, except for the compensation related (extrinsic) components, incentive pay and employee ownership schemes, where establishments with non-union only voice are more likely to use these two practices. The biggest disparity between union-only voice regimes and other voice regimes is in relation to formal appraisal, internal promotion, selective recruitment and share ownership. The relative absence of these HRM practices,

together with the high incidence of information sharing and, to some degree, participation and empowerment, helps account for the compression of HRM practices in this sector.⁷

[Table 4]

The descriptive relationships presented here appear to confirm the three hypotheses. However, it is possible that the relationships identified are driven by observable differences between voice and no-voice workplaces which are also correlated with the incidence of HRM. For instance, Table 1 showed that the use of voice increases with establishment size, something that may also influence the costs and benefits of returns to HRM. We therefore test if these relationships change once we control for observable workplace characteristics. The results are presented in Table 5.

[Table 5]

Table 5 confirms many of the bivariate relationships identified in Table 1, such as the link between voice and establishment size. It also, confirms an independent, statistically significant relationship between HRM use and the presence of voice (row 1).

Table 6 reports estimates of the association between varieties of voice and HRM adoption and intensity. In the first column are the results of a dummy variable, which uses a cut-off of 9 HRM practices to denote a high HRM score⁸. We then

⁷ It is not surprising to see the high prevalence of HRM practices such as information sharing in union workplaces since these are often the object of union bargaining.

⁸ Other cut-offs were tried and results were not significantly different; results available upon request.

explore the robustness of these results to a change in dependent variable, where the HRM intensity score, as defined previously, is used. In column (2) the mean score was 6.89 and as our results are qualitatively the same in both columns, we will confine our interpretation of results to the more intuitive HRM score results.

[Table 6]

There is strong support for our hypotheses regarding links between voice and HRM (Table 6, row 1). Treated as a single entity, voice and HRM were positively correlated (Table 5), supporting our first hypothesis. However, across voice regimes, HRM is least prevalent in union-only regimes (Table 6), confirming Hypothesis 2. The difference between union-only regimes and those containing non-union voice is statistically significant. Indeed, controlling for observable differences across workplaces, HRM is no more prevalent in union-only regimes than it is in no voice regimes. Thus, in accordance with Hypothesis 3, it is the voice regimes with some non-union voice present – either in isolation or in combination with union voice – where HRM is most apparent.

Descriptive analyses indicated that dual channel voice regimes had a greater HRM incidence than non-union only voice regimes, However, although the HRM adoption coefficients are largest in dual channel regimes, these are not significantly higher than the coefficients in non-union only regimes in line with hypothesis 3.⁹ This suggests that the differences in the descriptive analysis were

⁹ The 0.07 difference between non-union only and dual channel coefficients in the HRM score model has a t-statistic of 0.29.

partly attributable to observable differences between establishments with these regimes that are controlled for in the regression.

For our other controls we find results in line with much of the associated literature on HRM adoption. Specifically, we find that:

- Workplace size has a positive and significant effect on the number of HRM practices adopted;
- Workplaces that are part of some multi-establishment network also adopt more HRM practices, with the number of those practices increasing with network size;
- Age of establishment displays an inverted-U shape with workplaces aged 3 to 4 years being the most intensive users of HRM, while those aged under 3 and more than 21 years have lower scores;
- Organizational affiliations generally increase the use of HRM up to a point, as the highest category (4 affiliations) seems to make little difference. Workplaces with three organizational affiliations have the highest use of HRM.

Conclusions

In the last two decades of the 20th Century unionization was in decline in Britain. Voice regimes, on the other hand, were not in decline since employers were substituting union voice with non-union voice (Millward et al., 2000; Bryson et al.,

2004). At the same time, HRM practices were on the increase, although they remained far from ubiquitous. In their important contribution to the literature on union voice and HRM, Machin and Wood (2005) argued that there was no causal link between declining unionization and rising HRM. However, their time-series data means their study relies on a partial measure of HRM which conflates HRM and voice. Furthermore, in keeping with the rest of the literature, they take no account of heterogeneity in voice regimes. This is the first paper to draw attention to the heterogeneity of union and non-union voice regimes and, in particular, the importance of dual channel voice regimes in understanding the links between HRM and unionization. We find that, although union-only voice regimes and HRM do not easily co-habit, dual channel voice and HRM do. This may go some way to explaining why despite union membership decline, large scale union de-recognition has not occurred in Britain; dual channel employers simply did not need to get rid of unions in order to introduce HRM. There is also no evidence of a switch to no-voice with HRM. Most of the decline in individual unionization was brought about by new workers entering new workplaces that had simply bypassed the union voice solution.

By using a richer conception of HRM than the previous literature and by analyzing both the incidence and intensity of HRM, we have shown that the intensity of HRM, its distribution and the relative frequency of its components differ across the union and non-union sectors and within the union sector. In particular, financial incentives are less prevalent in the union sector whereas self-

managed teams and information sharing are more prevalent in the union sector. Furthermore, dual channel regimes have more intensive HRM than union-only regimes and there is some compression in the distribution of HRM in the union-only sector compared with the dual channel sector. More 'permissive' legal and public policy arrangements obtain in the UK than the USA, making employer and worker choices more salient in determining voice and HRM outcomes. Although we can not directly answer Wood and Machin's (2005: 216) question regarding the motivations for the use of HRM in the union and non-union sectors, we argue that these patterns are consistent with explanations which emphasize the heterogeneity of union voice regimes.

The greater part of the union voice sector in the UK is also to a material degree non-union and this, we argue, explains much of the compatibility between unions and HRM. The clearest complementarity is between non union voice and HRM. Union-only voice regimes are more similar to no-voice regimes in their relationship to HRM. In this sense, the UK case may not be a good basis for generalization. Where employers face a straight choice between union or non-union voice (as in the US), the implications for HRM adoption and use may be very different.

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Table 1: Incidence of Voice (%) by Selected Workplace Characteristics, 1998

1. All Workplaces	83.1
2. By Sector	
Public	98.9
Private services	80.8
Private manufacturing	65.2
3. By Establishment size (employees)	
25-49	79.5
50-99	82.7
100-199	89.9
200-499	93.5
500-999	95.1
1000 plus	96.5
4. By Ownership	
Foreign	72.5
Domestic	84.2
5. By Establishment	
Single	70.7
Multi-establishment	87.7
6. By Size of Multi-Establishment Network*	
Single	71.8
2-10	83.9
11-50	83.3
50+	92.5
7. By Set-up date	
Pre 1980	88.5
Post 1980	78.5
8. By Decade of Set-up date	
Pre 1980	--
1980s	--
1990s	--
9. By Establishment Age*	
<3 years	80.0
3-19 years	82.1
20+ years	86.1
10. By Industry	
Manufacturing	68.5
Electricity, gas and water	99.9
Construction	70.5
Wholesale and retail	83.3
Transport + Communication	86.0
Financial services	76.8
Other business services	93.6
Public administration	99.9
Education	98.7
Health	99.9
Other community services	98.1
11. By HRM Score*	
High [9-13]	93.6
Low [0-8]	80.0
12. By Ownership Structure*	
Family owned/controlled	66.5
Other	88.8
13. By Employer Association Status	
Yes	87.9
No	82.9
14. By Number of Organizational Affiliations*	
None	82.9
One	82.1
Two	85.3

Three	87.9
Four	99.4
15. By Franchise Status*	
Franchisee	91.7
Non-franchisee	83.1
Number of Observations	1954

Table 2: Average HRM Score (score 1 to 13) actual and normalized by selected workplace characteristics, 1998.

	Average HRM Score	Normalised Z-Score
1. All Workplaces	6.9	0.09
2. By Sector		
Public	7.45	6.22
Private	6.71	-2.00
3. By Establishment size (employees)		
10-24	6.6	-3.22
25-49	6.94	0.56
50-99	7.19	3.33
100-199	7.59	7.78
200-499	7.93	11.56
500+	8.05	12.89
4. By Ownership		
Foreign	7.15	2.89
Domestic	6.89	0.00
Joint Venture	5.81	-12.00
5. By Establishment		
Single	5.81	-12.00
Multi-establishment	7.39	5.56
6. By Size of Multi-Establishment Network		
Single	5.83	-11.78
2-10	7.03	1.56
11-50	6.87	-0.22
51+	7.98	12.11
7. By Organization Size		
Small [<50]	6.60	-3.22
Large [51+]	7.92	11.44
8. By Establishment Age		
<3 years	6.44	-5.00
3-19 years	7.20	3.44
20+ years	6.64	-2.78
9. By Industry		
Manufacturing	6.01	-9.78
Electricity, gas and water	9.19	25.56
Construction	5.11	-19.78
Wholesale and retail	7.31	4.67
Hotels and restaurants	6.56	-3.67
Transport + Communication	7.10	2.33
Financial services	8.65	19.56
Other business services	7.14	2.78
Public administration	7.17	3.11
Education	7.42	5.89
Health	7.15	2.89
Other community services	5.56	-14.78
10. By Ownership		
Family owned/controlled	5.93	-10.67
Other	7.22	3.67
11. By Employer Association Status		
Yes	6.80	-1.00
No	6.88	-0.11
12. By Number of Organisational Affiliations		
0	6.88	-0.11
1	6.67	-2.44
2	6.96	0.78
3	7.08	2.11
4	7.87	10.89
13. By Franchise Status		

Franchise	6.77	-1.33
Non-franchise	6.90	0.11
14. By Type of Voice I		
No Voice	5.71	-13.11
Union	6.41	-5.33
Non-Union Only	6.86	-0.33
Dual Channel	7.51	6.89
15. By Type of Voice II		
No Voice	5.71	-13.11
Representative Only	6.28	-6.78
Representative and Direct	7.63	8.22
Direct Only	6.75	-1.56
Number of Observations	1929	

Source: Data are for Britain using WERS data 1998. *The figure 0.09 is the standard deviation for the sample.

Table 3: Incidence of HRM practices by workplaces with and without formal voice (%), 1998.

HRM Practices	By Presence of Voice at workplace		
	No	Yes	All Workplaces
1. Presence of Formal Strategic Plan	47.1	78.9	73.7
2. Guaranteed Job Security	7.2	10.9	10.3
3. Selective Recruitment	46.4	54.8	53.4
4. Employee Ownership Scheme	11.2	15.4	14.7
5. Presence of Incentive Pay	53.3	52.7	52.8
6. Ongoing Training	57.5	73.2	70.6
7. Internal "Symbolic" Equity	20.0	46.6	42.2
8. Internal Promotion	24.2	25.8	25.6
9. Formal Appraisal System	37.4	56.7	53.5
10. Information Sharing	57.5	73.2	79.9
11. Self-Managed Teams	62.6	77.5	75.0
12. Job Enrichment	61.2	70.1	68.6
13. Participation and Empowerment	69.9	59.5	61.1
Number of Observations	346 (0.17)	1742 (0.83)	2088 (1.00)

Notes: Source: Data are for Britain using WERS data 1998. Numbers in parentheses refer to sample proportions.

Table 4: Incidence of HRM practices by type of workplace voice (%), 1998.

HRM Practice	Type of Formal voice		
	Non-Union Only	Dual Channel	Union Only
1. Presence of Formal Strategic Plan	74.4	87.7	72.7
2. Guaranteed Job Security	6.9	18.4	4.0
3. Selective Recruitment	48.5	67.2	41.1
4. Employee Ownership Scheme	16.8	14.4	8.3
5. Presence of Incentive Pay	61.3	41.2	39.4
6. Ongoing Training	72.1	75.0	67.7
7. Internal "Symbolic" Equity	41.9	53.7	49.7
8. Internal Promotion	26.5	26.5	16.1
9. Formal Appraisal System	59.9	53.8	42.5
10. Information Sharing	79.9	88.0	88.9
11. Self-Managed Teams	71.8	85.6	82.1
12. Job Enrichment	66.2	76.4	68.9
13. Participation and Empowerment	59.3	59.8	60.2
Number of Observations	1005 (0.58)	634 (0.37)	103 (0.06)

Notes: Source: Data are for Britain using WERS data 1998. Numbers in parentheses refer to sample proportions

Table 5: The Determinants of Voice at the Workplace, WERS 1998.

Dependent Variable Mean	0.84
1. HRM Score	0.03 (2.41)
2. Public Sector [Private]	0.10 (2.18)
3. Foreign Owned [Domestic] Joint-venture	-0.07 (-1.11) 0.21 (3.11)
4. Family Owned or controlled [Other]	-0.12 (-2.08)
5. Franchise [Non-Franchise]	0.16 (2.28)
6. Workplace Size [10-24 employees] 25-49 50-99 100-199 200-499 500+	0.07 (1.52) 0.07 (1.78) 0.13 (3.43) 0.10 (2.55) 0.10 (2.15)
7. Size of Establishment Network [Single] 2-10 11-50 51+	0.04 (0.76) 0.03 (0.63) 0.05 (1.14)
8. Number of Organisational Affiliations [None] One Two Three Four	0.03 (0.71) 0.12 (2.24) 0.10 (1.06) 0.24 (3.98)
9. Age of Establishment [21+ yrs] 10-20 5-9 3-4 <3	-0.05 (1.00) -0.05 (-0.81) 0.01 (0.26) -0.07 (-0.94)
10. Industry [Wholesale and Retail] Manufacturing Electricity, gas and water	-0.07 (-0.81) 0.08 (1.44)

Construction	-0.12 (-1.11)
Hotels and restaurants	-0.01 (-0.12)
Transport and communication	-0.07 (-0.72)
Financial services	-0.06 (1.08)
Other business services	0.07 (1.08)
Public administration	0.08 (1.03)
Education	0.03 (0.40)
Health	0.02 (0.29)
Other community services	0.02 (0.18)
11. Intercept	0.66 (6.13)
Observations	1583
R-squared	0.17

Notes: Items in [] refer to omitted reference category. Linear estimation of the dependent variable voice (0,1). The coefficients can be interpreted as the percentage point change in voice adoption based on falling into one of our dependent categorical variable classifications. Similar results are obtained with a logit model available on request.

Table 6: The Determinants of HRM Intensity at the Workplace, WERS 1998.

Dep. Var. Mean	Dependent variable: High HRM Score Dummy [Probit Estimates]		Dependent variable: HRM Score [OLS]	
	Coefficient	t-stat	Coefficient	t-stat
	0.43		6.89	
1. Type of Voice [No Voice]				
Union only	-0.44	-1.25	-0.14	-0.39
Non-Union only	0.52	1.97	0.59	1.93
Dual Channel	0.58	2.41	0.67	2.56
2. Public Sector [Private]	-0.17	-0.78	-0.02	-0.05
3. Foreign Owned [Domestic]	0.32	1.60	0.09	0.27
Joint-Venture	-0.36	-3.45	-1.91	-3.48
4. Family Owned or controlled [Other]	-0.60	-3.22	-0.56	-2.34
5. Franchise [Non-Franchise]	-0.04	-0.12	-0.21	-0.43
5. Workplace Size [10-24 employees]				
25-49	0.06	0.39	0.08	0.44
50-99	0.15	1.00	0.36	1.76
100-199	0.42	2.82	0.81	3.77
200-499	0.57	3.70	0.94	4.17
500+	0.60	3.29	1.13	4.28
6. Size of Establishment Network [Single]				
2-10	0.46	2.50	1.46	5.39
11-50	-0.03	-0.98	0.40	1.47
51+	0.57	3.38	0.88	3.90
8. Age of Establishment [21+ yrs]				
10-20	0.24	1.49	0.51	2.31
5-9	0.22	1.20	0.53	2.30
3-4	0.51	2.13	0.94	2.96
<3	0.22	0.93	0.22	0.70
9. Number of Organizational Affiliations [None]				
One	0.02	0.13	0.03	0.21
Two	0.23	1.29	0.42	1.68
Three	0.52	1.94	0.75	1.88
Four	-0.15	-0.46	0.98	1.71
10. Industry [Wholesale and retail]				
Manufacturing	-0.65	-2.72	-0.94	-2.75
Electricity, gas and water	0.72	2.16	1.11	2.38
Construction	-0.88	-3.08	-1.52	-3.52
Hotels and restaurants	-0.36	-1.20	-1.07	-2.66
Transport and communication	-0.11	-0.32	-0.37	-1.05
Financial services	-0.05	-0.19	0.59	1.65
Other business services	-0.01	-0.04	-0.05	-0.13
Public administration	-0.01	-0.01	-0.54	-0.97
Education	-0.00	-0.01	0.15	0.44
Health	0.33	1.23	0.29	0.80
Other community services	-0.32	-1.13	-1.49	-2.99
11. Intercept	-1.00	-3.54	6.97	18.68
Observations	1583		1583	
F-stat/R-squared	5.62		0.32	

Notes: Probability estimates refer to marginal probabilities. Items in [] refer to omitted reference category.

Figure 1: Frequency of HRM Scores by Voice For British Workplaces

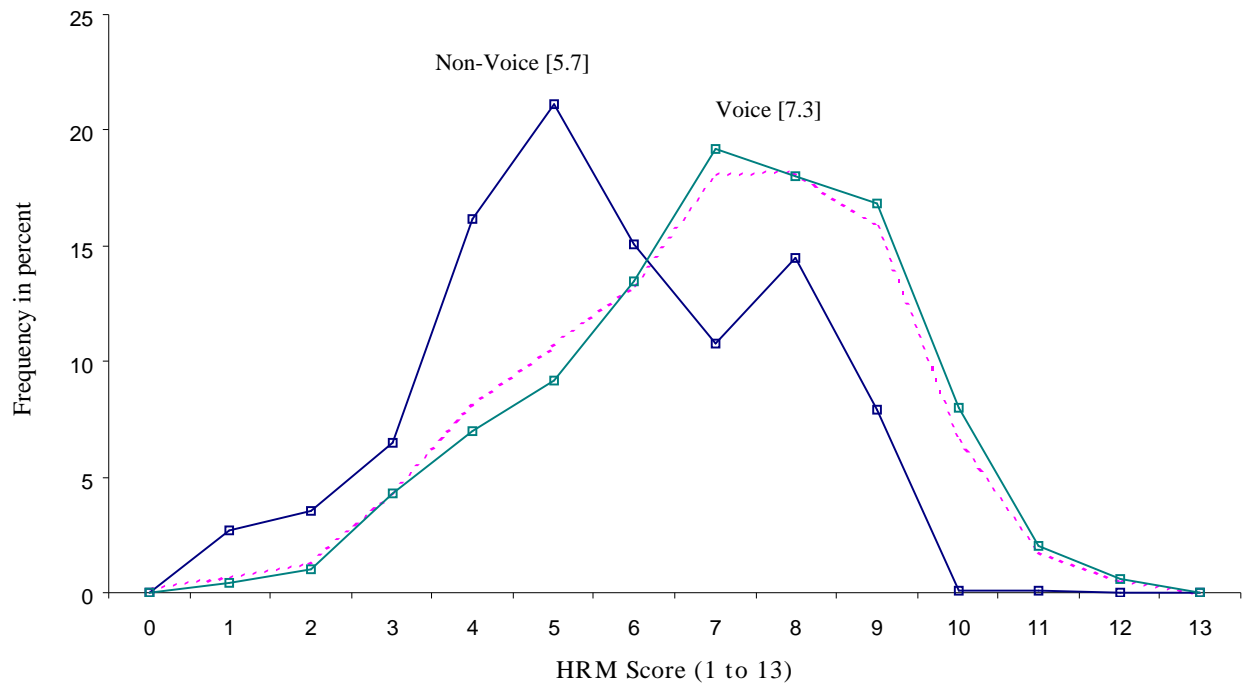
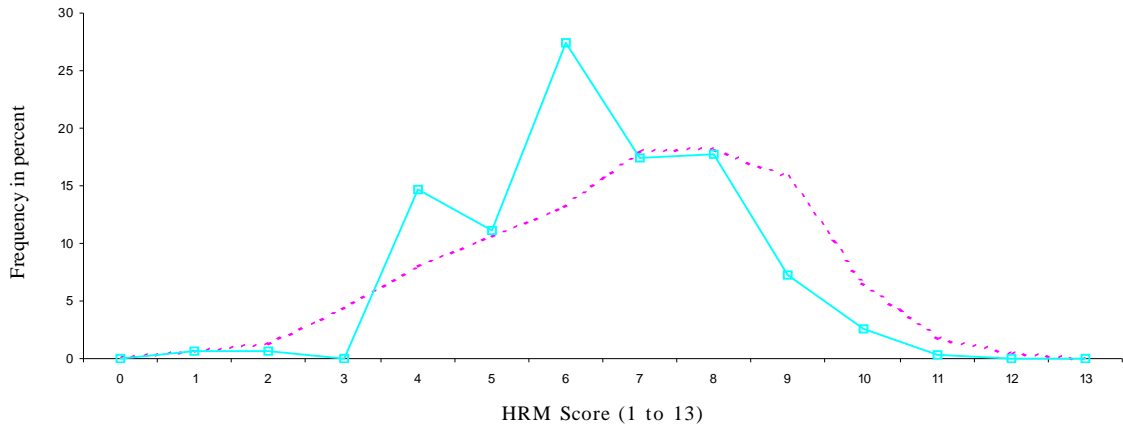
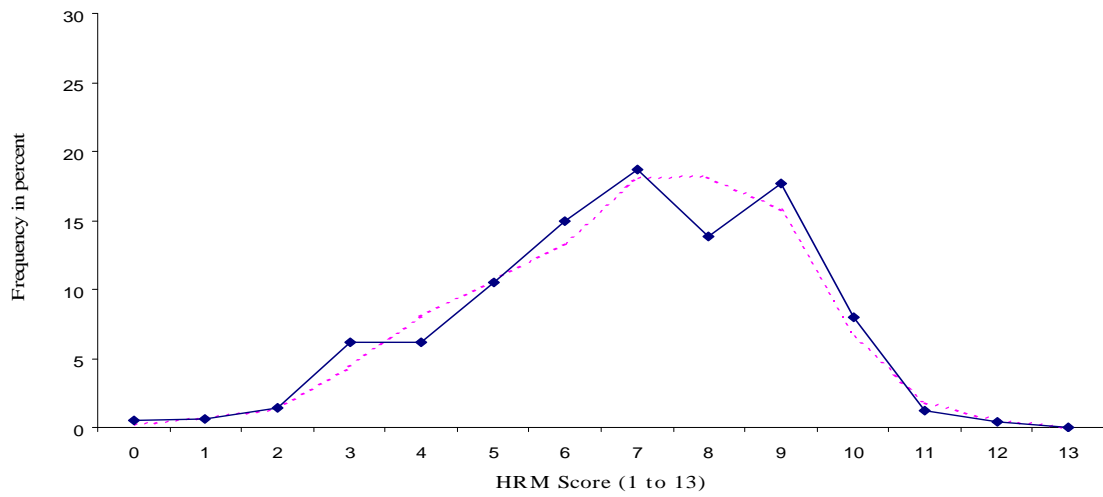


Figure 2: Frequency of HRM Scores by Voice Type For British Workplaces (the dotted line showing the distribution of HRM for all workplaces)

Panel A: Workplaces With Union Voice Only [6.4]



Panel B: Workplaces With Non-Union Voice Only [6.8]



Panel C: Workplaces With Dual-Channel (Union + Non-Union) Voice [7.5]

