

Paul Willman, [Alex Bryson](#), [Tobias Kretschmer](#) and
Rafael Gomez

The comparative advantage of non-union voice in Britain, 1980-2004

Article (Accepted version)
(Refereed)

Original citation:

Willman, Paul, Bryson, Alex, Kretschmer, Tobias and Gomez, Rafael (2013) The comparative advantage of non-union voice in Britain, 1980-2004. [Industrial Relations: a Journal of Economy and Society](#), 52 (S1). pp. 194-220. ISSN 1468-232X

DOI: [10.1111/irel.12001](https://doi.org/10.1111/irel.12001)

© 2012 [Wiley-Blackwell](#)

This version available at: <http://eprints.lse.ac.uk/39714/>

Available in LSE Research Online: September 2014

LSE has developed LSE Research Online so that users may access research output of the School. Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Users may download and/or print one copy of any article(s) in LSE Research Online to facilitate their private study or for non-commercial research. You may not engage in further distribution of the material or use it for any profit-making activities or any commercial gain. You may freely distribute the URL (<http://eprints.lse.ac.uk>) of the LSE Research Online website.

This document is the author's final accepted version of the journal article. There may be differences between this version and the published version. You are advised to consult the publisher's version if you wish to cite from it.

The Comparative Advantage of Non-Union Voice in Britain, 1980-2004

Alex Bryson

Paul Willman

Rafael Gomez,

Tobias Kretschmer*

Corresponding Author; Paul Willman

p.willman@lse.ac.uk

Word Count; 9435

Version 7.7.10

*Alex Bryson is at the National Institute for Economic and Social Research; Paul Willman is at the Department of Management at the London School of Economics. Rafael Gomez is at University of Toronto and Tobias Kretschmer is at the University of Munich. Data and programs are available on request from Alex Bryson (a.bryson@niesr.ac.uk).

Acknowledgements. We would like to thank participants at the Academy of Management workplace voice symposium Anaheim, 2008; sponsors of the Workplace Employment Relations Survey (Department for Business, Acas, ESRC and PSI) and the UK Data Archive for access to the WERS data; and the Finnish Work Environment Fund (grant No. 108294)

Abstract

Non-union direct voice has replaced union representative voice as the primary avenue for employee voice in the British private sector. This paper explains this development by providing a framework for examining the relationship between employee voice and workplace outcomes. Voice is associated with lower voluntary turnover, especially in the case of union voice. However, union voice is also associated with greater workplace conflict. We argue changes in voice in Britain are not best understood using a simple union/non-union dichotomy. Union effects on workplace outcomes and the incidence of HRM hinge on whether it co-exists at the workplace with non-union voice in what we term a 'dual' system. In the first part of the 21st Century these dual voice systems were performing at least as well as non-union only regimes, suggesting that the rise of non-union regimes is attributable to something other than clear comparative performance advantages over other forms of voice.

JEL: J24; J51; J52; J53; J63

Key Words: employee voice; productivity; industrial action; quits; labor-management relations

1. Introduction

In the last quarter century, there was a dramatic shift in the forms of employee voice in British private sector workplaces, with non-union voice growing and union voice contracting. However, the overall coverage of voice mechanisms remained high and stable (Millward et al., 2000; Willman et al., 2009). During this period there was virtually no statute constraining employers' choice of voice within establishments. British employers were thus free to choose union or non-union voice, or to combine them. They could have chosen to have no voice mechanisms at all; they did not do so, but chose non-union voice.

In this paper, we examine and seek to explain this pattern of change. Specifically we address the argument that the reason non-union voice grew is that, alone or in combination with union voice, it yields net benefits to employers. These benefits may take two forms; first, performance outcomes and, second, the ability to implement human resource management practices. We find some evidence to support the contention that the presence of non-union voice offers comparative advantages over union-only voice and no voice at all. However, the combination of non-union voice and union voice, whilst offering benefits in terms of lower quits and higher HRM incidence, has not prevented its demise as a voice regime in Britain.

The structure of the paper is as follows. First, we identify the full set of voice options that exist within workplaces. Section 2 then documents change in voice regimes in private sector workplaces 1980-2004 and identifies their association with performance outcomes that, either directly or indirectly, enter into the cost-benefit decision of the firm. Section 3 develops hypotheses linking forms of voice and workplace outcomes and practices. Section 4 does the same for HRM practices. Section 5 describes the data and methods. Sections 6 and 7 present the results. Section 8 concludes.

2. Patterns of Voice Provision

We follow Hirschman in seeing voice as “any attempt at all to change, rather than to escape from, an objectionable state of affairs..... through appeal to a higher authority

with the intention of forcing a change.... the initial assumption is a decline in the performance of a firm or organization which is remediable provided the attention of management is sufficiently focused on the task". (1970, p30-1). In this conception, voice involves management-employee dialogue over organizational improvement and below we proxy this by measures of two-way communication involving both parties and/or their representatives. It may be individual or collective, union or non-union. We distinguish voice *regimes* and voice *types*. A voice *regime* refers to the mix between union and non-union voice; regimes can take on union and non-union forms and combinations thereof. Voice can also be decomposed into representative and direct voice *types*. Union voice is always a representative type. Non-union voice can take on both representative (such as independent works councils or joint consultative committees) and direct forms (such as team briefings with no intermediary). Regimes and types may mix at establishment level; for example, what we term *dual channel* voice mixes union and non-union forms and may mix direct and representative types (see also Dundon et al., 2004; Mironi 2010). We also identify no voice workplaces in which two-way communication mechanisms are absent. We turn to a brief description of the coverage of these categories.

2.1 Voice

Figure 1 shows changes in voice in Britain for the private sector. The proportion of workplaces with voice increased from about 76 percent in 1984 to 82 percent in 2004. The no-voice rate between 1984 and 1998 remained constant at about 25 percent; it fell to 18 percent in 2004.

2.2 Voice Regimes

Figure 1 also demonstrates the growing share of non-union voice from 1984 to 2004. The most common form of voice at the start of period was dual channel at 30 percent. By the end, non-union only voice constituted 56 percent of all private sector workplace voice regimes in Britain. This stands in sharp contrast with the decline in union only voice (18 percent to 4 percent between 1984 and 2004) and dual channel voice (30 percent to 19 percent over the same period).

- Figure 1-

2.3 Voice Types

The incidence of voice types has also changed. From Figure 2 and Table 1, we see that the decline in representative voice occurred in both dual and non-union regimes. For instance, the percentage of workplaces with a joint consultative committee (JCC) meeting once a month fell from 26 percent to 15 percent by the end of the period. Though there was a small increase in non-union representation at the workplace, the decline in JCC's suggests that representative voice -- in both its union and non-union forms -- suffered a substantial decline in the private sector from 1984 to 2004.

-Table 1-

- Figure 2-

By contrast, direct voice types have been either constant or increasing in coverage since 1984. The incidence of team briefings has more than doubled (31 percent at the start of the period rising to 70 by the end). Regular meetings with senior management became more prevalent over the period 1984-1990 and have stabilised since.¹ On the whole, however, the decline in JCC's has been gradual whereas the incidence of direct voice rose dramatically.

2.4 Summary

Voice coverage is as extensive in 2004 as 1984, but both voice regimes and voice types have changed substantially over the same period. Theories of union decline in Britain have often focused on employer opposition, macro-economic environment (high-unemployment in the 1980s to early 1990s period and low inflation) and politics (an unfavourable legislative and social climate over the period prior to Labour's election in 1997 (Kelly 1998)). Theories of union decline, however, are not theories about the rise of non-union voice. Direct voice is replacing representative voice in the private sector, whether that representative voice is union or not. Examining why direct forms of voice have replaced representative forms could hold the key to understanding the rise of non-union voice.

¹ The time-series on problem-solving groups is problematic because questions are not consistent. Efforts to construct a more consistent series for the period 1998-2004 suggest modest growth in their use (Kersley et al., 2006: 93-94).

3. Voice and Workplace Outcomes.

By 2004, the primary suppliers of workplace voice in Britain were employers. In a voluntarist environment such as Britain, this shift suggests first, that voice provides benefits to employers and, second, that the returns to different voice regimes and types for employers were changing. If some voice regimes and types are associated with better outcomes such as higher labor productivity, then workplaces may, over time, substitute “successful” voice for “unsuccessful” voice. We adopt a simple cost-benefit approach in which the employer adoption of any voice regime or type is based on positive net benefits, and the choice of a particular voice regime or type is based on comparative voice performance (Willman et al 2007)..

The precedent for this approach is Freeman and Medoff (1984) who empirically tested propositions about the relationship between union voice and five workplace outcomes: profitability, labor productivity, labor turnover, industrial action and the climate of industrial relations. During the 1970s and early 1980s in the USA, workplaces with unions tended to have lower quit rates, higher productivity, and more labor unrest than non-unionised firms. These findings appear to be robust (Bennett and Kaufman, 2007), although the links between unions and labor productivity remain contested (Black and Lynch, 2004).

However, there is little empirical or theoretical research on the impacts of different voice regimes (i.e., union vs. non-union) on workplace-level outcomes, even less on voice types (i.e., direct vs. representative). The empirical work tends to focus on outcomes for workers, and indicates that there are substantial benefits accruing to workers from non-union voice (Bryson, 2004).

Since we view non-union voice as an investment in workers by firms, we should see returns to that investment relative to no voice, at least among ‘like’ workplaces that are observationally equivalent. In this section, we specify the expected direction of the voice and outcome variable relations and describe the form of the exit-voice model suitable for empirical testing.

3.1 Worker Exit and Voice Regimes

The extent of voluntary labor turnover (i.e., quits) in a given workplace is influenced by the presence of a voice regime . With a standard equation (with turnover as our workplace outcome variable) the voluntary turnover rate (LT) is:

$$[1] \quad LT_{it} = a_{it} + b_1V_{it} + b_2X_{it} + e.$$

Here a is the baseline turnover rate for workplace i at time t , V is the voice variable that in all specifications is categorical and has as the omitted reference category 'no-voice' and can be run in two specifications in which the voice categories are either the three voice regimes (union, non-union and dual) or voice types (direct, representative, direct and representative), X is the vector of control variables that includes observable workplace characteristics such as industry, region, foreign ownership, age of establishment, single establishment status, workforce composition (percentage of females, non-manuals and part-timers), and workplace size.

Focusing on V as our voice variable we can deduce expected signs of the co-efficient(s) with respect to quit rates. All voice categories are expected to have negative coefficients, $b_1 < 0$ with respect to our excluded reference category (no voice) as a workplace with voice is expected to display lower exit than a workplace without. Across V categories, however, we would expect the strength of this association to vary systematically by voice regime and type.

Union voice is more difficult for a firm to jettison and the collective and independent nature of union voice provides public goods to union members. As such, union voice (both union only and dual forms) will display the lowest turnover rates whereas non-union voice is less embedded and provides fewer public goods, and hence less likely to reduce turnover.² The exit-voice hypothesis therefore implies that i) the presence of voice is likely to lead to less exit and that ii) more embedded forms of voice will be associated with lower exit. As dual voice contains both union and non-union voice side-

² Union membership is associated with a wage premium (Blanchflower and Bryson, 2007), structured promotional opportunities, greater on the job training and seniority rules that encourage longer tenure.

by-side, it seems the least likely form of voice to be jettisoned by a firm and hence the most likely to discourage exit. Our expected ranking of voice coefficients is therefore:

$$[2] \quad LT_{it} = b_1 [(Dual\ Voice < Union\ Voice < Non-Union\ Voice)_{it} < (No\ Voice)_{it}].$$

We expect this relation to be fairly robust over time. This may not be the case with respect to other workplace outcomes discussed below.

3.2 Industrial Climate and Industrial Action

The exit-voice hypothesis implies a positive association with industrial action and poor perceptions of workplace climate. The lack of voice encourages exit, and the exit option reduces observed conflict inside the workplace. Unlike exit-voice, our climate and conflict measures will be more directly affected by legislation (e.g., laws preventing work stoppage in certain industries would lower measures of conflict such as strikes despite voice presence) and other external changes to the labor market (e.g., rising prices that could fuel demands for higher wages). Hence we would not expect these outcomes to be as stable as labor turnover in their coefficient estimates year-to-year. To allow for this we estimate both climate (CL) and industrial action (IA) separately as in equation (1) :

$$[3] \quad CL_{it} = a_{it} + b_1 V_{it} + b_2 X_{it} + e$$

and,

$$[4] \quad IA_{it} = a_{it} + b_1 V_{it} + b_2 X_{it} + e.$$

This formulation in eq. [4] for industrial action would have the opposite sign expectation(s) to our exit measure.

The effects of voice versus no voice workplaces on climate (CL) may not be so clear. On the one hand *no voice* may well engender worse feelings than any voice, but it could increase exit to offset any declines in workplace climate. Thus we expect our voice regime coefficients with respect to industrial action to be:

$$[5] \quad IA_{it} = b_1 [(Union\ Voice > Dual\ Voice > Non-Union\ Voice)_{it} > (No\ Voice)_{it}],$$

For good climate we see the pattern running in the other direction but are not as ready to ascribe such a strong prediction.

3.3 Labor productivity.

Voice increases the incentive to invest in a workforce since its tenure is more easily prolonged. It should therefore raise productivity. We therefore predict that voice should foster greater labor productivity than no voice. However, across voice regimes, differences may arise. Since the stronger or more embedded forms of voice, such as union voice, often impose restrictions on what management can do, there is likely to be benefit to a firm that can establish its own brand of voice (typically direct) with or without union influence. Kim et al (2010;386) find team (direct) voice and representative voice interact negatively with productivity, so it may be that non-union only voice has the highest positive relationship with productivity.

We refer once again to our simple version of equation (1) above, where labor productivity (LP) replaces turnover and:

$$[6] \quad LP_{it} = a_{it} + b_1V_{it} + b_2X_{it} + e$$

is expected to yield a positive co-efficient $b_1 > 0$ for all voice types relative to no-voice.

When we look at all the categories of voice, however, the order of voice coefficients would be expected to follow:

$$[7] \quad LP_{it} = b_1 [(Non-Union Voice > Dual Voice > Union Voice >)_{it} > (No Voice)_{it}],$$

where the forms of voice that reduce exit but also allow for more managerial experimentation and discretion may raise labor productivity the most.

3.4 Financial performance.

This is perhaps the most ambiguous of workplace outcomes in relation to voice. Voice entails an upfront investment and on-going cost, which only firms with financial ability will be able to pay, implying that the relation between financial performance and voice could be two-way (i.e. financially secure firms invest in voice, or vice versa) (Metcalf, 2003). Second, regardless of the specific causal linkages, in equilibrium, we would expect that workplaces should have optimally sorted themselves such that the returns to whatever particular voice regime is chosen would yield the same net benefits. This means that in

equilibrium, we should observe very little variation in financial performance across workplaces with respect to the presence or absence of voice.

To understand this interpretation we run a final estimation of financial performance (FP) as (1) above:

$$[8] \quad FP_{it} = a_{it} + b_1 V_{it} + b_2 X_{it} + e,$$

where we expect our test of voice equilibrium to be either zero with the equality of all voice coefficients, including no-voice (i.e., if the system of employee voice-choice in Britain over the period 1984-2004 was in equilibrium)

$$[9.1] \quad FP_{it} = b_1 [(Union\ Voice = Dual\ Voice = Non-Union\ Voice)_{it} = (No\ Voice)_{it}],$$

or, if in disequilibrium, a positive or negative direction of effects in particular periods will emerge across different voice regimes. The only clue we have as to which form(s) of voice may provide the greatest net-returns has been the spectacular rise in non-union direct forms of voice over the past 20 years in Britain. So we expect the positive relations to follow the following rank order:

$$[9.2] \quad FP_{it} = b_1 [(Non-Union\ Voice > Dual\ Voice > Union\ Voice >)_{it} > (No\ Voice)_{it}].$$

Just as exit-voice is a hypothesis that provides for an unambiguous (negative) time invariant interpretation for the effect of voice on exit, so the test of equilibrium or disequilibrium in voice provision should provide an interpretation of the effect of voice and voice regimes on financial performance.

4. Voice and Workplace Practices.

One way to assess the relative net benefits of a voice regime or type is to focus on outcomes, but the estimation of the performance consequence of any organisational practice or set thereof is complicated and the data available for the UK have substantial limitations. A second avenue involves the examination of associations between voice

regimes and types on the one hand and management practices on the other. Specifically, voice regimes may be differentially associated with and – perhaps – synergistic with other practices in the management of labor.

One set of practices of interest is the set of human resource management practices (HRM) used at establishment level. There is a literature associating such practices themselves with positive performance outcomes (Becker et al, 2001). There is also a literature arguing for and against relationships between bundles of such practices and particular voice regimes, particularly union voice (Guest 1989; Machin and Wood, 2005). The relationship between HRM and different voice regimes and types, however, has not been examined. It may be that one factor influencing voice choice is the compatibility between voice regimes and types on the one hand and HRM practices on the other.

What factors might account for the variance and covariance of HRM and voice across workplaces? Our hypotheses are as follows. 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 voice), U (union voice), and N (non-union voice). U and N can be present concurrently in dual channel voice.

HRM and voice may be complements or substitutes at the workplace. If HRM practices delivered everything voice representation did (and vice versa), they would be substitutes. Conversely, if the effectiveness of HRM is enhanced by the simultaneous presence of voice at a workplace (because, as we hypothesize above, voice reduces costly 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 (Bryson et al, 2007).

The question of substitutability or complementarity is an empirical one but we view complementarity as more likely for several reasons. First, voice and HRM may be useful for different groups of employees, and in specialized organizations the productivity of

one group raises the marginal productivity of another (Kretschmer and Puranam, 2008). Second, we contend that voice and HRM are largely distinct sets and, as such, it is unlikely that one does everything the other does. Third, there is evidence that managerial quality drives use of good practice in several dimensions (Bloom et al., 2008); voice and HRM may be manifestations of good management in different dimensions We therefore hypothesize:

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

The second point is that HRM may sit better with some forms of voice than others. HRM could partially substitute for union voice where HRM generates outcomes that reduce employee demand for unionization. The presence of union-only voice could also signal union success in monopolizing worker voice at the workplace and imply the potential to block HRM if the union is not persuaded by the 'high performance' ethos driving HRM adoption (Wood, 1996; Bryson et al., 2005). Union-only voice could also imply a reliance on collective rather than individual forms of employer-employee engagement that might exclude HRM. Using a narrow definition of union-only voice (rather than union presence which encompasses dual voice) we hypothesize, amending Machin and Wood (2005), that among workplaces with employee voice, HRM will be *lowest* in union-only voice regimes.

[11] *Within voice establishments, HRM will be less prevalent in workplaces with union only voice than in those with non-union voice present ($\min[HRM(N), HRM(U,N)] > HRM(U)$).*

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. If, as we hypothesize, union-only voice regimes restrict HRM and non-union only voice environments are more favorable, we must consider how dual voice and HRM coexist.

Non-union voice exists where the employer has chosen to invest in its provision (Bryson et al., 2004). If the employer implements non-union voice, it may also invest in HRM to obtain a competitive advantage (Pfeffer, 1995). The presence of non-union voice

alongside union voice at a workplace is therefore indicative of one of two scenarios, both of which are conducive to HRM. It may either signal union weakness, leaving the employer largely unconstrained in mixing voice with HRM, or a 'mutual gains' environment in which unions use their 'voice face' to elicit productivity improvements (Freeman and Medoff, 1984).

Dual voice regimes may therefore emerge in different ways. For some firms, non-union voice may be added to union-only regimes in response to employers perceiving deficiencies in union-only voice provision. The reverse is also possible where employees press for unionization in addition to non-union voice. In Britain the former is more common.³ It is thus likely that in a dual-voice regime workplaces can adopt HRM practices freely. We therefore hypothesize:

[12] *HRM intensity in dual channel voice regimes will be greater than or equal to that in non-union only voice regimes ($HRM(U, N) \geq HRM(N)$).*

To summarize, our hypotheses on the incidence of voice and HRM can be expressed in the following ordinal ranking: $HRM(U, N) \geq HRM(N) > HRM(U) > HRM(A)$.

5. Data and Measures

The Workplace Employment Relations Surveys (WERS) are nationally representative surveys of British workplaces conducted in 1980, 1984, 1990, 1998 and 2004. The key features are described in detail elsewhere (Millward et al., 2000, 3-10; 248-55; Kersley et al 2006). Although we are reliant on a single managerial respondent for all data our respondents are particularly well-informed as it is the manager responsible for workplace industrial relations who is sampled. In the majority of cases, practices are known to cover either the largest occupation (what we term 'core' employees) or a high percentage of all non-managerial employees (as in the case of appraisals). Observations

³ Earlier cohorts of workplaces initially adopted union-voice whereas newer workplaces adopted non-union only voice (Millward et al., 2000; Willman et al., 2007). Few unionized workplaces have de-recognized (de-certified) their unions in Britain; instead, they supplement union with non-union voice (Millward et al., 2000; Kersley et al., 2006).

are weighted by the inverse of the workplace's probability of selection in the survey. With these weights, our analyses provide a representative portrait of British workplaces.

- Table 2-

5.1 Measuring Voice

The set of voice mechanisms are depicted in Table 2. They were originally used in Millward et al's. (2000) analysis of voice in Britain and have been used extensively since. Items 1-2 measure union voice, while items 3-7 measure non-union voice. Voice workplaces have at least one of these mechanisms in place whereas no-voice workplaces are defined by the absence of all.

5.2 Measuring performance

The performance measures are as follows

1. Quit rates; measured since 1990, the percent of employees who resigned or left in the previous year.
2. Climate, managers are asked "how would you rate the relationship between management and employees generally at this workplace?" Subjective ratings range from "very poor" to "very good"
3. Strikes, managers were asked whether there has been any form of industrial action at the workplace in the last 12 months (excluding lock-outs).
4. Productivity; since 1990 managers rate labor productivity relative to the industry average, on a scale running from "a lot below average" to "a lot above average." For the regression analysis this is collapsed into a three-way variable identifying workplaces identifying themselves as "below average", "average" and "above average".
5. Financial performance relative to the industry average, measured in the same way as labor productivity.

5.3 Measuring HRM

Defining a set of practices based on an established definition of HRM is difficult given the many definitions in the literature (Kaufman, 2004). Our primary HRM measure in table 3 ('Full HRM') is based on a set of 13 practices common to the HRM literature (Kochan and Dyer, 2001). It is a count of practices identified by Pfeffer(1995) and others (Brewster, 1995; Nolan and O'Donnell, 2003).

-Table 3-

A count of 13 denotes affirmative answers to each of the HRM questions. Lacking any one of these HRM variables would give an establishment a count of 12 and so on.

Two of the items in our Full HRM measure (self-managed teams and information sharing) entail some two-way communication between employees and management and thus bias our estimated associations with voice upwards. We test the sensitivity of our results by excluding these two items from our original HRM score. We call this 11 count measure “Core HRM” to distinguish it from our Full 13 Count measure. Estimates are carried out with both measures and compared.

For the practice measures, we have used the WERS survey for 1998. The rationale here is to measure practice diffusion at the end of a long period of voluntarism; from 1979-1997, a Conservative government oversaw an industrial relations regime in which compulsion to adopt specific practices or institutions was almost completely absent (Willman and Bryson, 2007). The 1998 survey thus mapped arrangements at the end of this period of employer choice. In 2000, the UK began implementation of EU legislation mandating information disclosure and consultation, and it is likely that the 2004 survey results reflect this statute.

- Table 4-

6. Estimated Voice and Workplace Outcome Equations

The results are based on pooled and separate year regressions that control for single-digit industry, region, foreign ownership, age of establishment, single establishment, workforce composition (percentage of females, non-manuals and part-timers), and workplace size. The empirical analysis identifies independent associations between voice regimes and workplace outcomes. Multivariate analyses imply that we are comparing those associations across observationally equivalent workplaces. We test for the statistical significance of differences across our four voice regimes (no voice; union

only voice; dual voice; and union only voice) in relation to outcome measures, as well as the joint significance of the voice coefficients.

6.1 Estimated Exit-Voice Relations

Panel A of Table 4 shows that quit rates were lowest in workplaces with union voice, a result that persists throughout the period.⁴ In 1990 the regime with the lowest quit rates was union-only voice. However, quit rates rose in these workplaces through to 2004, whereas they fell in dual channel workplaces such that, at the end of the period, quit rates were lowest in dual channel workplaces. Contrary to expectations, quit rates were higher in non-union only voice workplaces than they were in no voice workplaces, although their quit rates had converged by 2004. To establish whether voice regimes had an independent association with quit rates we ran regression analyses controlling for workplace characteristics. The results are in Panel A of Table 5.

- Table 5 -

They confirm the descriptive results. In the pooled years regressions both union regimes had significantly lower quit rates than non-union only and no voice regimes. In the single year regressions only dual channel voice is significantly associated with lower quits than the no voice regime. Relative to non-union voice only, both union only and dual channel voice regimes were associated with lower quit rates in the pooled years' regression analysis and for separate year regressions in 1990 and 1998, though in 2004 it is only true for dual channel versus non-union only voice. The general pattern is that union voice variables are negatively related to quit rates in the British private sector.

In Panel A of Table 6, a similar pattern emerges with respect to representative versus direct forms of voice. Although no type consistently outperforms no voice, representative voice has consistently lower quit rates compared to direct voice; these differences are usually statistically significant in both the pooled and specific year regressions. It appears that more embedded voice is associated with fewer quits.

- Table 6-

⁴ We have removed outliers with quit rates greater than 110% but their inclusion does not change the results appreciably.

6.2 *Estimated Industrial Climate and Industrial Action*

The percentage of workplaces reporting 'very good' climate tends to be higher with non-union voice and is poorest in union-only workplaces (Panel B of Table 4). Non-union only voice is also associated with the best perceptions of climate although climate in these workplaces has been deteriorating at a faster rate than in other workplaces.

Table 5 Panel B presents coefficients from ordered probit regressions for climate collapsed into a three-way variable in which 1=poor/average 2=good and 3=very good. In the pooled regression results, the presence of non-union only voice is associated with better climate than no voice and union-only voice. However, reflecting the descriptive results, the gap has closed over time; whereas non-union only voice was associated with significantly better climate than both union-only voice and dual channel voice in 1984, this was no longer the case by 2004. Indeed, the voice measures were no longer jointly significant by 2004.

Direct voice is associated with the best climate responses amongst managers (Panel B of Table 6). In pooled years, direct voice is associated with better climate than representative-only voice and no voice, but there are no significant differences between direct voice only and regimes that combine representative and direct voice. Thus perceived climate is best when the voice regime includes direct voice. These relations do change over time however, as direct only voice is not the 'best' type from 1990 onwards. Indeed in 1998 the combination of representative and direct voice is associated with better climate than other voice. By 2004 there are no significant differences across any types.⁵

On strikes, (Table 4 Panel C) there has been an overall reduction in industrial action across all workplaces. Not surprisingly, union-based regimes are associated with a higher probability of industrial action than non-union voice only and no voice. This is confirmed statistically in Panel C of Table 5 regression analyses for the pooled years

⁵ In results not reported here, when we split the voice regimes into their components and run the same regressions the only statistically significant effect is the positive effect of having regular meetings between senior managers and all sections of the workforce.

and in separate regressions for 1984-1990.⁶ If one re-runs the regression analyses separately identifying constituents of the voice typology (in results not reported here), workplaces with unions recognised for pay bargaining continue to have a higher probability of industrial action than otherwise 'like' non-unionised workplaces in 2004. This reinforces the corollary to the exit-voice hypothesis, that by establishing voice, conflict is internalised through action rather than being externalised through higher turnover.

6.3 *Estimated Labor Productivity*

Labor productivity is highest in non-union only voice workplaces and lowest in union-only regimes. The gap is most pronounced in 2004 (Table 4 Panel D). In pooled regressions for regimes (Table 5 Panel D), none of the voice regimes outperform no voice workplaces. However, union only voice is associated with lower productivity than non-union only voice (-0.27, $t=2.29$)⁷. Dual channel voice is also associated with lower labor productivity than non-union only voice, though the differential effect is only on the margins of statistical significance (-0.18, $t=1.93$). Separate year models are less clear cut as no statistically significant differences across voice regimes exist and no obvious time trends emerge. The findings on type of voice are inconclusive, all coefficients being weak and non –significant.

6.4 *Estimated Financial Performance*

Panel E in Table 4 indicates a clear association between a workplace's financial performance and its voice regime. Non-union voice is associated with better financial performance than union-only voice in all years, often by a wide margin. The performance of dual channel regime workplaces improved markedly over the period. In the pooled regression estimates in Panel E of Table 5 non-union only voice performs better than all other regimes. However, the coefficients for the other three regimes are virtually identical, suggesting some kind of separated equilibrium. The effects are very clear in the early 1980s, disappear in 1990s, but return once again in 2004.

⁶ It was not possible to run an analysis for 1998 due to the very low incidence of industrial action in that year.

⁷ Asterisks in the tables denote statistically significant differences *relative to no voice workplaces*. We checked for statistically significant differences between voice regimes other than the no voice reference category using STATA's LINCOCOM command which computes point estimates and t- statistics for linear combinations of coefficients.

Interestingly, as one would predict if equilibrium processes were at work, over the entire period, differences between the other 3 voice regimes are not statistically significant.

In Table 6 Panel E, direct voice only appears to perform better than others and representative only voice performs particularly poorly. In pooled regressions for all years we find that direct only voice is positively associated with financial performance as compared to no-voice and union-only voice, but it is not significantly different from the combination of direct and representative voice. In the 1984 regression direct only voice 'outperforms' all other regimes including the combination of direct and representative voice but, by 2004, the only significant difference is the significantly better performance of direct-only voice over 'no voice'.

In summary, then, we find that union voice is associated with higher conflict and lower quits, confirming previous findings. Non-union voice, however, is associated with better climate and, in some instances, with better financial performance. There is thus some limited evidence of an incentive for employers to invest in non-union voice.

7. Voice and HRM

Table 7 reports descriptive statistics on the use of HRM practices, overall and disaggregated by workplace characteristics. Columns 1 and 2 report results for our Full HRM (13 count) and Core HRM (11 count) measures. Establishments used an average of 6.9 out of 13 HRM practices and 5.3 out of 11 core HRM practices. HRM incidence differs considerably across workplaces with small, single-establishment, family owned, and private sector and establishments using fewer HRM practices than larger, non-family owned, and public sector establishments.

Table 7

7.1 Descriptive Results

Table 7 supports the contention that establishments with voice use more HRM practices. Moreover, as is evident in Table 7 row 1, HRM intensity varies significantly across voice regimes. In keeping with [11], union-only voice has the lowest HRM score among workplaces with voice. HRM scores are highest in dual channel workplaces followed by those with non-union only voice. This finding is consistent with Black and Lynch's (20010

finding based on US data that unionized establishments with both non-union voice and some HRM practices such as incentive pay have higher productivity than union only ones. Positive union/HRM interactions have also been observed in UK data (Bryson et al 2005).

Table 8 column A shows HRM practice incidence by workplaces with and without voice. Almost every practice is more likely to be found in a workplace that also has voice. The exception is the use of incentives, perhaps indicating a more transactional set of relationships in no-voice regimes. Table 8 column B presents the same set of 13 practices tabulated against voice regime. Establishments with dual voice have a greater incidence of most HRM practices, although establishments with non-union only voice are more likely to use incentive pay and formal appraisals.

Godard (2004) argues that certain practices conventionally described as new HRM practices were in fact commonplace and longstanding attributes of unionized firms: examples are job security (or no compulsory redundancy agreements), internal promotion (internal labor markets) and information sharing. We are able to comment on the relationship between specific HRM practices and the presence of unions; the data are presented in Table 8. Panel B indicates that union only workplaces are much less likely than those with some non-union voice to have job security provisions, incentive pay, internal promotion and formal appraisal systems. This perhaps explains the **upper** end compression of the union distribution in Figure 3; i.e. there are specific HRM practices absent where unions monopolise voice. But dual voice workplaces are also more likely than either union or non-union only workplaces to have several items, including job enrichment and self managed teams.

As Godard argues, union only workplaces are very likely to have information sharing; but we also find that they are likely to have self managed teams. This has two implications. First, it may explain the **lower** end compression in figure 3; i.e. there are few union only workplaces with very low HRM scores because some of the items have long association with unionized establishments. Second, these items are those excluded from our core HRM measure, so we have fallen back on the core rather than full HRM definitions in Figure 3. This narrower core specification of HRM does not yield different results.”

-Table 8-

-Figure 3-

The descriptive relationships presented here are in line with our hypotheses. However, they may be driven by other observables (such as systematic workplace size differences between voice and no-voice workplaces), which are also correlated with HRM incidence. We therefore control for workplace size, age, sector, industry, ownership, organizational affiliations and being part of a multi-establishment network.

7.2 Multivariate Results

Table 9 reports the association between varieties of voice (including no voice) and HRM use across our 'Full HRM' (column 1) and 'Core HRM' (column 2) measures with control variables in place. The results are qualitatively the same for both, with coefficients slightly falling in magnitude in our Core HRM estimates, owing to the smaller overall mean of the dependent variable.

- Table 9 -

There is robust support for our hypotheses regarding the links between HRM and voice in both our Full and Core HRM estimates (Table 9, row 1, columns 1 and 2). Treated as a single entity, voice and HRM are still positively correlated (the voice categories are jointly significant at 5% level), supporting [10].⁸ However, across voice regimes, HRM is less prevalent in union-only regimes (Table 9, row 1). Controlling for observable differences across workplaces, HRM is no more prevalent in union-only regimes than in no-voice regimes. Not surprisingly, the difference between union-only workplaces and those with non-union voice is significant in both columns, confirming [11]. Although dual voice workplaces have the highest use of HRM practices in both columns, the coefficients are not significantly different from those for non-union only voice so [12] is only weakly confirmed.

8. Conclusions

⁸ If one replaces the four-way voice variable with a dummy variable identifying the presence of employee voice it has a coefficient of 0.47 and a t-statistic of 2.16.

This paper has looked at voice types and regimes and tried to examine whether variations in voice provision across firms are associated with two kinds of comparative advantage for employers; first, better performance outcomes and second, greater use of HRM practices. The background conditions are a sustained commitment of employers to voice, but substantial change across the period in both voice types and regimes. The findings are as follows.

Quits are lower in union only settings and in dual representation settings. This is what would be predicted by the exit voice model. On other outcome measures, based on management perceptions, the presence of non-union voice seems to be associated with better perceived outcomes. The picture on HRM facilitation also indicates that where non-union voice is present, there is greater use of HRM. Where there is non-union voice, alone or in a dual system, outcomes and HRM usage are greater than for union-only voice or no voice employers. However, both sets of findings point to a paradox.

The most common regime/type combination in 1984 was dual/representative; in 2004, it was non-union/direct. However, on these data, the expanding coverage of non-union/direct voice is not easy to explain in performance terms. There were no consistent significant differences between dual/representative and non-union/direct voice on productivity, and in the later years dual/representative systems were not significantly different in financial performance from direct/non-union only voice. Furthermore, the dual system performs better in terms of quits and does a good job in supporting the use of HRM. In contrast, union-only voice is the regime least supportive of HRM.

Since dual system firms appear to have improved their performance relative to non-union/direct voice firms over the period, something other than performance must be driving this trend toward non-union voice. Two possibilities occur. First, employers may find management of a dual system more complex than a non-union only system; the latter may economize on managerial time. Second, it may be that the direct costs of a dual system are greater than a non-union only system; into these costs one needs to put the possibly small but still present cost of a strike.

Our data have some considerable limitations. They allow us to look at benefits and outcomes but not at voice costs. We have employed very broad definitions of two

central, contested, concepts, *voice* and *HRM*, aware that they may overlap. However, we have a very similar story to tell about the comparative advantages of non-union voice whether the dependent variable is performance or management practice.

There are a number of avenues for further research. This aggregated data set runs only to 2004. After that, it is likely that the no-voice sector will shrink markedly under the impact of the *EU Directive on Information and Consultation*. The disappearance of our omitted reference category may affect relations between the variables under study. This can be tested with data from the next survey. At the micro level, we need better to understand the dynamics of interplay between voice elements, practices and performance outcomes in order to understand how, in the increasing proportion of workplaces without unions or representation, employers design voice for competitive advantage.

References

Becker, Brian, Mark Huselid and David Ulrich. 2001. *The HR Scorecard; Linking People, Strategy and Performance*. Boston: Harvard Business School Press,

Bennett, James and Bruce Kaufman (eds). 2007. *What Do Unions Do? A Twenty Year Perspective*. New Brunswick; Transaction Press.

Black, Sandra. E. and Lisa. M. Lynch 2001. "How to compete: the impact of workplace practices and information technology on productivity." *Review of Economics and Statistics*, 83 (3): 434-445.

Blanchflower, David. G. and Alex Bryson. 2007. *The Wage Impact of Trade Unions in the UK Public and Private Sectors*. IZA Discussion Paper No. 3055.

Bloom, Nicholas, Tobias Kretschmer and John Van Reenen. 2011. "Are Family-Friendly Workplace Practices a Valuable Firm Resource?" *Strategic Management Journal*, 32 (4): 343-367..

Brewster, Christopher. 1995. "Towards a European Model of HRM." *Journal of International Business Studies*, Vol. 26, no. 1, pp.1-21.

Bryson, Alex. 2004. "Managerial responsiveness to union and non-union worker voice in Britain", *Industrial Relations: A Journal of Economy and Society*, Vol. 43, No. 1, pp. 213-241.

Bryson, Alex, John Forth and Simon Kirby. 2005. "High-performance practices, trade union representation and workplace performance in Britain", *Scottish Journal of Political Economy*, Vol. 53, No. 3: pp. 451-491.

Bryson, Alex, Paul Willman and Rafael Gomez. 2004. "The End of the Affair? The Decline in Employers' Propensity to Unionize." In John Kelly and Paul Willman (eds.), *Union Organization and Activity*, Routledge, London, pp.129-149.

Bryson, Alex, Rafael Gomez, Tobias Kretschmer, and Paul Willman. 2007. "The Diffusion of Workplace Voice and High-Commitment Human Resource Management Practices in Britain, 1984-1998". *Industrial and Corporate Change*, Vol. 16, 3: 395-426

Dundon, Tony, Adrian Wilkinson and Mick Marchington. 2004. "The meanings and purpose of employee voice." *The International Journal of Human Resource Management*, Vol 15, pp1318-1334.

Freeman, Richard, and James Medoff. 1984. *What Do Unions Do?* New York: Basic Books:

Godard, John. 2004. "A critical assessment of the high-performance paradigm." *British Journal of Industrial Relations*, Vol 42, No. 2, pp25-52.

Guest, David E. 1989. "Human Resource Management; Its Implications for Industrial Relations and Trade Unions." In John Storey (ed), *New Perspectives on Human Resource Management*. London; Routledge pp. 41-55.

Hirschman, Albert. 1970. *Exit, Voice and Loyalty*. Cambridge, Harvard University Press.

Kaufman, Bruce, 2004. "Toward an Integrative Theory of Human Resource Management". In Bruce E. Kaufman (ed), *Theoretical Perspectives on Work and the Employment Relationship*. IRRA Series, pp. 321-366.

Kelly, John. 1998. *Rethinking Industrial Relations: mobilization, collectivism and long waves*. London: Routledge.

Kersley, Barbara, Carmen Alpin, John Forth, Alex Bryson, Helen Bewley, Gill Dix and Sarah Oxenbridge. 2006. *Inside the Workplace; Findings from the 2004 Workplace Employment Relations Survey*". London; Routledge.

Kim, Jaewon, John-Paul Macduffie and Fritz K. Pil. 2010. "Employee voice and organizational performance; team vs representative influence." *Human Relations*, Vol 63, No. 3 pp371-394.

Kochan, Thomas A. and Lee Dyer. 2001. 'HRM: An American View'. In J. Storey (ed), *Human Resource Management: A Critical Text 2nd ed*. London: Thomson Learning, pp. 272-87.

Kretschmer, Tobias and Phanish Puranam. 2008. "Integration Through Incentives within Differentiated Organizations." *Organization Science*, Vol. 19, No. 6, pp. 860-875.

Machin, Stephen, and Stephen Wood. 2005. "Human Resource Management as a Substitute For Trade Unions in British Workplaces" *Industrial and Labor Relations Review* Vol. 58, No. 2 pp.201-18.

Metcalf, David. 2003. " Unions and productivity, financial performance and investment". In John Addison and Claus Schnabel (eds) *International Handbook of Trade Unions*. Cheltenham, Edward Elgar.

Millward, Neil, Alex Bryson, and John Forth. 2000. *All Change at Work*. London: Routledge.

Mirani, Mordehi. 2010. "Reframing the Representation Debate; Going beyond Union and Non-union Options" *Industrial and Labor Relations Review* Vol. 63, No. 3 pp.367-83.

Nolan, Peter, and Kathy O'Donnell. 2003. "Industrial Relations, HRM and Performance". In Paul Edwards (ed), *Industrial Relations; Theory and Practice* 2nd ed. Oxford: Blackwell, pp. 489-513.

Pfeffer, Jeffrey. 1995. "Producing sustainable competitive advantage through the effective management of people". *Academy of Management Executive*, Vol.9, No. 1, pp. 55-72.

Willman, Paul and Alex Bryson 2007 "Union Organization in Great Britain", *Journal of Labor Research*. Vol. 28, No.1 pp 93-115.

Willman, Paul, Alex Bryson and Rafael Gomez. 2007. "The long goodbye: new establishments and the fall of union voice in Britain". *The International Journal of Human Resource Management*, Vol 18, No. 7, pp1318-1334.

Willman, Paul, Rafael Gomez and Alex Bryson. 2009 "Voice at the Workplace: where do we find it, why is it there and where is it going?". In William Brown, Alex Bryson, John Forth and Keith Whitfield (eds). *The Evolution of the Modern Workplace*. Cambridge, Cambridge University Press

Wood, Stephen. 1996. "High Commitment Management and Unionization in the UK". *International Journal of Human Resource Management*, Vol. 7, No. 1, pp. 41-58.

Wood, Stephen, Sian Moore and Paul Willman. 2002. "Third Time Lucky? Statutory Union Recognition in the UK." *Industrial Relations Journal*, Vol 33, No 3, pp215-34.

Table 1:
Incidence (%) of Voice Types in Britain, Private Workplaces, 1980-2004

All Workplaces	Year					
	1980	1984	1990	1998	2004	Diff*
	[1]	[2]	[3]	[4]	[5]	[5]-[1]
Panel A: Employer Provided Voice						
<i>Representative Voice</i>						
1. Any on-site Joint Consultative Committee (JCC)	30	26	20	24	21	-9
2. On-site JCC that meets at least once a month ("Functioning" JCC)	26	24	18	19	15	-11
3. Non-union on-site employee representatives†	NA	NA	10	12	16	+6
<i>Direct Voice</i>						
4. Regular meetings between senior managers and all sections of workforce	NA	34	39	34	36	+2
5. Team briefings	NA	31	42	49	70	+39
6. Problem solving groups	NA	NA	70	61	72	+2
Panel B: Union Provided Voice						
7. Any union members	60	58	49	36	37	-23
8. Any recognised union	50	48	38	24	22	-28
9. Any on-site union lay representative	38	38	26	16	13	-25

Notes: †Excluding health and safety. *For values with no 1980 data latest time period is chosen for difference.

Source: WERS survey various waves.

Table 2: Voice Measures and Definitions

Measure	Definition
A. Union Voice	Presence of items 1 and/or 2
1. Union recognition	Presence of a union recognized for the purposes of collective bargaining
2. Union representative(s)	Presence of one or more union representatives on or off site.
B. Non-Union Voice	Presence of any items 3 through 7.
3. Joint consultative committee	Committees of managers and employees at this workplace primarily concerned with consultation, rather than negotiation
4. Non-union representation	Presence of a non-union employee representative on site.
5. Problem solving groups	Groups set up for the purposes of solving specific workplace problems.
6. Regular Employer-Employee Meetings	<i>Regular meetings which allow for two-way communication and deliberation.</i>
7. Regular Team Briefings	<i>Meetings that occur at least once a month that devote time to employees' concerns/questions/views.</i>
C. Dual Voice	Any combination of items 1-2 and 3-7.
D. No-Voice	Absence of any items 1 through 7.

Table 3: HRM Measures and Definitions

<i>Measure</i>	Definition
1. Strategic planning	An indicator that the workplace has a formal strategic plan, strategic planning being a key component of HRM
2. Job security	Policy of guaranteed job security for at least some employees
3. Selective recruitment	Where manager says skills, qualifications, experience and motivation are all important factors in recruiting new employees
4. ESOP scheme	Employee share ownership scheme
5. Incentive pay	Profit pay, performance related payments or cash bonuses
6. On-going training	On-going training is one of the main methods by which core employees are made aware of their job responsibilities
7. Symbolic egalitarianism	Core employees have standard contracts for all non-pay terms and conditions of employment
8. Internal promotion	Internal applicants given preference when filling vacancies.
9. Formal appraisal system	The existence of a widespread appraisal system, that is, where at least 80% of core employees are formally appraised.
10. Job Enrichment	At least some core workers are formally trained to do jobs other than their own
11. 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
12. Information sharing *	Management shares information on investment, financial position of the organization or staffing*
13. 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*

Starred * Items refer to HRM measures that we exclude from our definition of Core HRM.

Table 4:
Outcomes by Voice Regimes in British Private Sector Workplaces, 1984-2004

	Year					
	1984	1990	1998	2004	Difference	Change
	[1]	[2]	[3]	[4]	No Voice*	[4]-[1]
Panel A	Outcome: Turnover (Percentage of Employee Quits)					
1. By No Voice	NA	13.9	17.6	18.64	--	4.7
2. By Union Only Voice	NA	8.2	13.2	12.1	-6.5	3.9
3. By Dual Voice	NA	12.9	12.7	10.6	-8.0	-2.3
4. By Non-Union Only Voice	NA	17.1	20.3	18.3	-0.3	1.2
Panel B	Outcome: Industrial Climate (Percentage Reporting "Very Good" Climate)					
1. By No Voice	44.8	32.9	35.3	38.8	--	-6.0
2. By Union Only Voice	30.8	35.6	31.4	33.5	-5.4	2.7
3. By Dual Voice	36.7	24.8	41.0	33.0	-5.8	-3.7
4. By Non-Union Only Voice	54.8	39.1	40.0	40.2	1.4	-14.6
Panel C	Outcome: Industrial Action (Percentage of Workplaces Reporting Any Industrial Action in Last 12 months)					
1. By No Voice	0.50	0.4	0.0	0.80	--	0.3
2. By Union Only Voice	20.6	6.4	2.8	7.1	6.3	-13.5
3. By Dual Voice	19.6	12.8	3.9	4.1	3.3	-15.5
4. By Non-Union Only Voice	0.20	1.4	0.0	2.0	1.2	1.8
Panel D	Outcome: Labor Productivity (Percentage of Workplaces Reporting Above Average Labor Productivity)					
1. By No Voice	NA	48.5	44.1	51.5	--	3.0
2. By Union Only Voice	NA	38.2	43.7	43.1	-8.4	4.9
3. By Dual Voice	NA	46.5	51.2	43.3	-8.2	-3.2
4. By Non-Union Only Voice	NA	50.8	51.0	59.3	7.8	8.5
Panel E	Outcome: Financial Performance (Percentage of Workplaces Reporting Above Average Financial Performance)					
1. By No Voice	41.0	55.8	56.3	45.8	--	4.8
2. By Union Only Voice	42.6	53.1	56.4	41.3	-4.5	-1.3
3. By Dual Voice	40.7	62.6	57.9	53.2	7.4	12.5
4. By Non-Union Only Voice	60.8	54.2	63.7	63.6	17.8	2.8

*Differences in voice categories with respect to No Voice are calculated with most recent end of period (2004) values.

Table 5:
Estimates of Voice Regimes on Outcomes in British Private Sector Workplaces

	Year					
	Expected Sign	Pooled 1	1984 2	1990 3	1998 4	2004 5
Panel A	Dependent Variable: Turnover†					
1. [No Voice]						
2. Union Only Voice	<0	-4.29**	NA	-3.76	-6.07	-5.29
3. Dual Voice	<0	-4.67**	NA	-0.94	-8.15**	-7.27**
4. Non-Union Only Voice	<0	0.58	NA	2.18	-1.61	0.30
Panel B	Dependent Variable: Industrial Climate††					
1. [No Voice]						
2. Union Only Voice	<0	-0.09	-0.31	-0.05	-0.01	-0.08
3. Dual Voice	<0	0.07	-0.10	-0.10	0.37*	0.15
4. Non-Union Only Voice	>0	0.19*	0.24	0.22	0.23	0.15
Panel C	Dependent Variable: Industrial Action†††					
1. [No Voice]						
2. Union Only Voice	>0	1.21**	1.61**	1.07**	NA	0.65
3. Dual Voice	>0	1.28**	1.62**	1.52**	NA	0.44
4. Non-Union Only Voice	=0	0.45	-0.58	0.58	NA	0.25
Panel D	Dependent Variable: Labor Productivity††††					
1. [No Voice]						
2. Union Only Voice	<0	-0.15	NA	-0.28	-0.08	-0.07
3. Dual Voice	>=0	-0.05	NA	-0.06	0.05	-0.06
4. Non-Union Only Voice	>0	0.12	NA	0.04	0.05	0.24
Panel E	Dependent Variable: Financial Performance†††††					
1. [No Voice]						
2. Union Only Voice	<0	0.00	0.08	0.05	-0.01	-0.14
3. Dual Voice	>0	-0.00	-0.14	0.09	0.14	-0.01
4. Non-Union Only Voice	>0	0.17*	0.50**	-0.13	0.15	0.32*

Notes: Cells in columns 1-5 are coefficients and variables in [] are omitted reference category. All specifications (panels A to E) control for single-digit industry, region, foreign ownership, age of establishment, single establishment, workforce composition (percentage of females, non-manuals and part-timers), and workplace size. All regressions are survey-weighted. Full results are available from the authors on request. * indicates 5% and ** 1% significance. † Turnover (measured as quits) was estimated using Tobit regressions to account for the left-censoring of the data at zero. †† Industrial climate was estimated using ordered probit where 1=poor/average 2=good 3=very good. Although 1998 data are included in pooled estimates, the single year estimates for 1998 are omitted due to the very low incidence of industrial action that year. ††† Industrial action was estimated using probit for any industrial action in the previous 12 months. †††† Labor productivity was estimated using ordered probits for labor productivity relative to the industry average where 1=below average 2=average 3=above average. These data were not collected in 1984. ††††† Financial performance was estimated using ordered probit for financial performance relative to the industry average where 1=below average 2=average 3=above average

Table 6
Estimates of Voice Types on Outcomes in British Private Sector Workplaces

	Year					
	Expected Sign	Pooled 1	1984 2	1990 3	1998 4	2004 5
Panel A	Dependent Variable: Turnover					
1. [No Voice]						
2. Direct Only Voice	<0	0.29	NA	1.98	-2.14	0.30
3. Direct & Representative Voice	<0	-2.74	NA	-0.16	-4.64	-5.62*
4. Representative Only Voice	<0	-2.93	NA	-2.21	-5.33*	-2.60
Panel B	Dependent Variable: Industrial Climate					
1. [No Voice]						
2. Direct Only Voice	>0	0.18*	0.34	0.21	0.18	0.14
3. Direct & Representative Voice	>0	0.16	-0.03	-0.02	0.45**	0.23
4. Representative Only Voice	<0	-0.05	-0.32*	0.04	0.06	-0.02
Panel C	Dependent Variable: Industrial action					
1. [No Voice]						
2. Direct Only Voice	=0	0.53	-0.51	0.72	NA	0.20
3. Direct & Representative Voice	>0	1.15**	1.50**	1.32**	NA	0.50
4. Representative Only Voice	>0	1.07**	1.49**	0.94*	NA	0.51
Panel D	Dependent Variable: Labor Productivity					
1. [No Voice]						
2. Direct Only Voice	>0	0.12	NA	-0.03	0.09	0.23
3. Direct & Representative Voice	>0	0.03	NA	0.06	0.08	0.00
4. Representative Only Voice	=0	-0.10	NA	-0.22	-0.19	0.14
Panel E	Dependent Variable: Financial Performance					
1. [No Voice]						
2. Direct Only Voice	>0	0.19*	0.58**	-0.13	0.18	0.31*
3. Direct & Representative Voice	>0	0.07	-0.06	0.07	0.25	0.12
4. Representative Only Voice	=0	-0.03	0.06	-0.02	-0.19	-0.06

Notes: Cells in columns 1-5 are coefficients and variables in [] are omitted reference category. Full results are available from the authors on request. See footnote to Table 5 for details of controls, dependent variables and notation.

Table 7: Average HRM Count by Selected Workplace Characteristics.

	<i>Mean Full HRM Count (13 item max)[1]</i>	<i>Mean Core HRM Count (11 item max)[2]</i>
All Workplaces	6.7	5.2
1. By Type of Voice		
No Voice	5.7	4.4
Union-only	6.1	4.5
Non-Union Only	6.9	5.4
Dual Channel	7.4	5.7
2. By Establishment size (employees)		
10-24	6.4	5.0
25-49	6.7	5.2
50-99	7.1	5.4
100-199	7.5	5.7
200-499	7.9	6.0
500+	8.0	6.1
3. By Ownership		
Foreign	7.1	5.6
Domestic	6.7	5.2
Joint Venture	5.8	3.9
4. By Establishment		
Single	5.8	4.4
Multi-establishment	7.4	5.8
5. By Size of Multi-Establishment Network		
Single	5.8	4.4
2-10	7.0	5.4
11-50	6.9	5.4
51+	8.1	6.4
6. By Organization Size		
Small [<50]	6.4	5.0
Large [51+]	8.3	6.5
7. By Establishment Age		
<3 years	6.2	4.7
3-19 years	7.1	5.5
20+ years	6.2	4.9
8. By Ownership		
Family owned/controlled	5.9	4.6
Other	7.1	5.5
9. By Employer Association Status		
Yes	6.6	5.1
No	6.6	5.1
10. By Number of Organizational Affiliations		
0	6.6	5.1
1	6.4	5.0
2	6.8	5.3
3	7.0	5.4
4	7.7	5.9
11. By Franchise Status		
Franchise	6.7	5.2
Non-franchise	6.8	5.2
Number of Observations	1369	

Source: WERS 1998.

Table 8: Incidence of HRM practices by all workplaces and by type of workplace voice (%).

HRM Practices	A. By All Workplaces		B. By Voice Workplaces Only		
	No Voice	Voice	Union Only	Dual Channel	Non-Union Only
1. Strategic planning	43.5	72.6	67.4	77.3	71.7
2. Job Security	6.1	7.4	0.1	9.7	7.2
3. Selective Recruitment	48.7	52.1	49.5	57.2	50.9
4. ESOP Scheme	12.0	17.0	14.3	27.8	14.3
5. Incentive Pay	52.3	62.4	35.9	60.5	64.6
6. Ongoing Training	54.2	68.7	68.0	62.1	70.5
7. Symbolic egalitarianism	19.9	39.8	35.3	33.1	41.9
8. Internal Promotion	25.6	26.0	8.2	30.5	26.0
9. Formal Appraisal System	35.9	57.6	36.9	57.0	59.2
10. Job Enrichment	64.1	70.1	54.8	82.0	68.0
11. Empowerment	72.2	60.0	55.5	58.6	60.7
12. Information Sharing*	65.3	81.5	84.6	81.5	81.3
13. Self-Managed Teams*	59.2	74.8	78.0	84.3	72.1
Number of Observations	132 (0.22)	1059 (0.78)	34 (0.04)	406 (0.16)	619 (0.59)

Notes Numbers in parentheses refer to sample proportions. Starred items * are omitted from our core HRM definition.

Source; WERS 1998.

Table 9: The Determinants of HRM Intensity at the Workplace, OLS Regressions.

	Dependent variable: Full HRM (13 count) (1)		Dependent variable: Core HRM (11 count) (2)	
Dep. Var. Mean	6.7		5.2	
	Coefficient	t-stat	Coefficient	t-stat
1. Type of Voice [No Voice]				
Union only	-0.39	-1.01	-0.68*	1.87
Non-Union only	0.66**	2.10	0.43	1.46
Dual Channel	0.78***	2.95	0.57**	2.49
2. Workplace Size [†] [10-24 employees]				
25-49	0.15	0.63	0.11	0.55
50-99	0.41*	1.70	0.21	0.98
100-199	0.77***	3.01	0.47**	2.06
200-499	0.83***	3.06	0.53**	2.17
500+	1.10***	3.22	0.75**	2.51
3. Age of Establishment [21+ yrs]				
10-20	0.65***	2.53	0.44*	1.93
5-9	0.62***	2.43	0.33	1.51
3-4	1.02***	2.79	0.75**	2.17
<3	0.27	0.80	-0.01	0.02
4. Size of Establishment Network [Single]				
2-10	1.07***	3.99	0.83***	3.68
11-50	0.77***	3.25	0.77***	3.69
51+	1.51***	4.83	1.37***	4.91
Intercept	4.45***	10.99	3.57***	10.09
Observations	1193		1193	
R-squared	0.34		0.31	

Notes: Models also control for number of employer affiliations, ownership structure (foreign, family-owned, franchise) and industry. Regression tables with coefficients for these controls are available on request

Figure 1:
Share (%) of *Voice Regimes* in Britain, Private Sector, 1984-2004

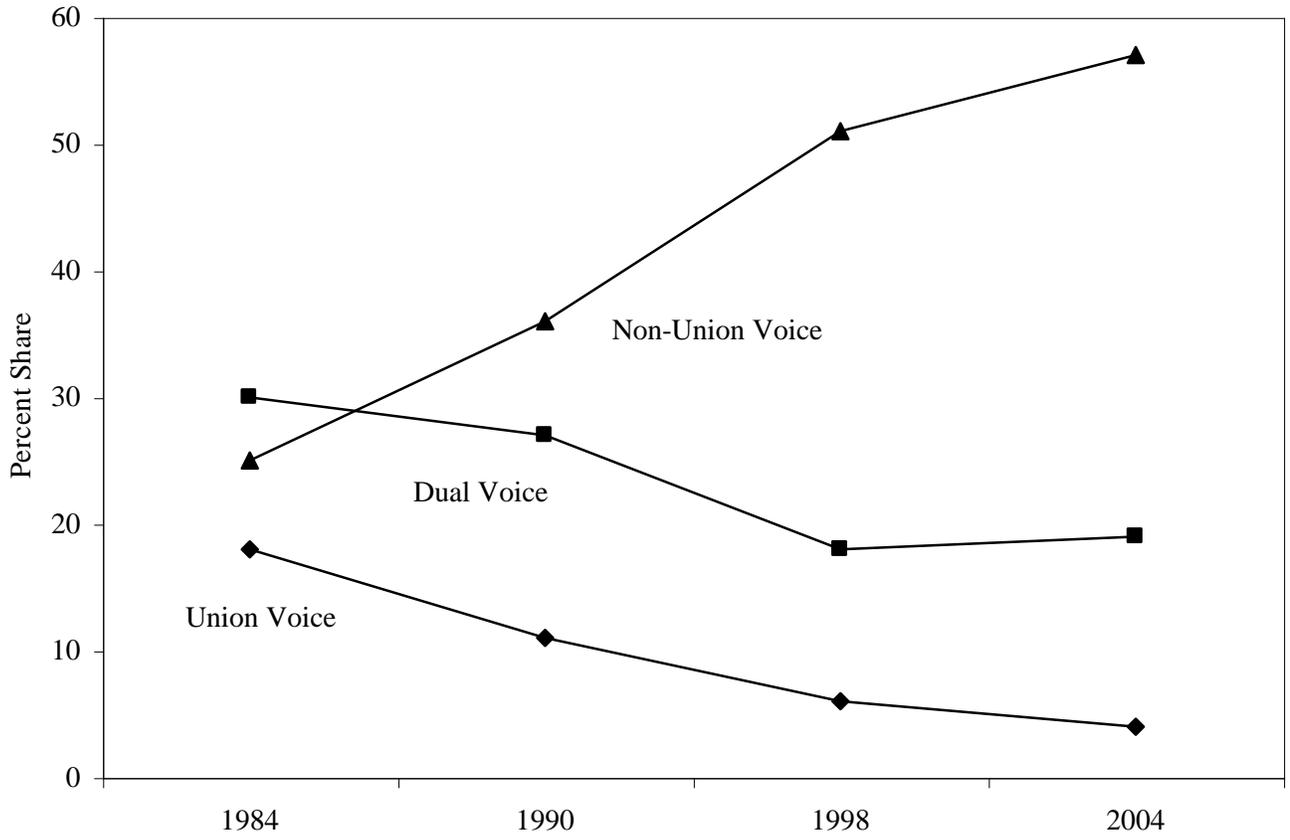
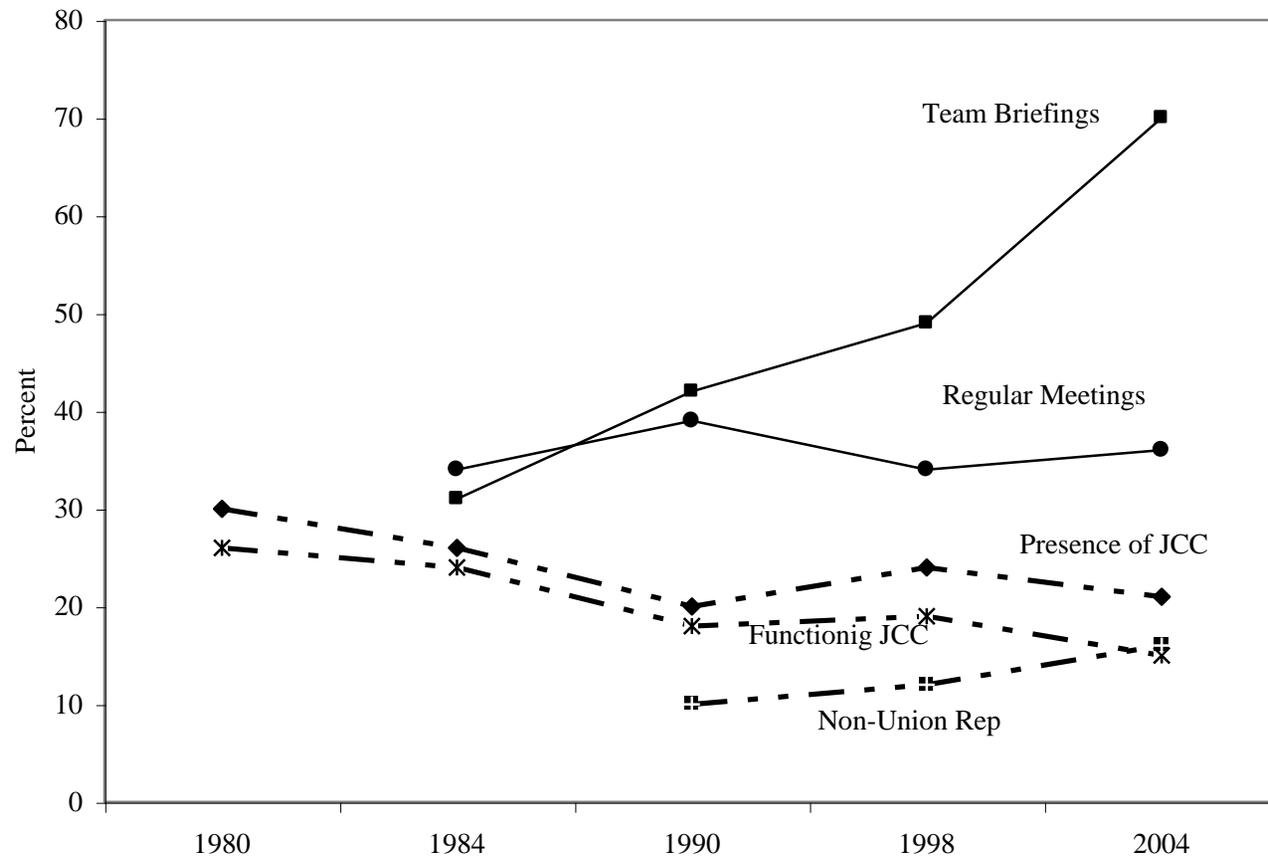


Figure 2:
Share (%) of Employer Provided *Voice Types* in Britain, 1980-2004



Note: Dark lines refer to non-union direct voice. Dotted lines represent non-union representative voice. JCC refers to Joint Consultative Committee.

Figure 3; Voice Type and HRM; Core Measure

