Union Decline in Britain

Stephen Machin[*]

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* Department of Economics, University College London and Centre for Economic Performance, London School of Economics

Abstract

This paper considers the rapid decline in the unionization rate that has occurred in Britain since the late 1970s. An establishment based analysis reports that the overwhelming factor in explaining falling unionization was a failure to organise the new establishments that were set up in the last twenty years or so. Patterns showing low rates of union recognition and density in new establishments set up in the 1980s and 1990s are seen to be very similar for new workplaces in both decades: as such developments since 1990 represent a continuation of the pattern revealed in earlier work for the 1980-90 period. The sharpest falls in unionization occurred in private manufacturing establishments set up post-1980, with significant falls also occurring, but from a lower initial level, in private sector services. In the public sector there is no establishment age based decline in recognition. Finally, there is some evidence that age of workplace, rather than age of worker, is the critical age based factor as the negative association with unionization is found for all age groups in workplaces set up post-1980.

1.   Introduction

It is now well known that, from 1979 onwards, the British labour market underwent a rapid and sizable deunionization that has continued to today. In 1979 53 percent of workers were union members; by 1999 this had fallen to 28 percent. In 1980 around 70 percent of employees' wages were set by collective bargaining; by the mid-1990s this had sharply fallen to less than 45 percent. What lies behind the sharp reduction in the presence of and the role played by unions in Britain? There are a number of possibilities, ranging from unions becoming outdated in the modern labour market, to increased competitive pressures, adverse macroeconomic shifts, compositional changes in the nature of the labour force, through to explicit employer opposition to union activity or unions' own organizing activities.

In some earlier work, considering union decline up to 1990 based on workplace data from the first three Workplace Industrial Relations Surveys of 1980, 1984 and 1990, Disney et al. (1994, 1995) concluded that the sharp fall in union recognition that occurred between 1980 and 1990 was driven by a failure to organise in new workplaces. In this paper I use the newly available 1998 Workplace Employee Relations Survey data to extend this analysis into the 1990s. This is important because most knowledge we have on the pattern of union decline since the 1980s is limited to specific surveys[1], data on union membership of individuals (e.g. in the Labour Force Survey) or is simply anecdotal.

The work reported here starts by asking whether developments since 1990 represent a continuation or a change from those established for the 1980-90 time period. The findings confirm that there has been a continuation of the 1980-90 patterns into the 1990s. First, unionization continued its downward trend into the 1990s, and the way in which it fell was rather similar to that seen in the previous

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decade. The pattern of the 1980s, with much lower recognition rates in newer establishments, carried on through the nineties. This finding remains robust to controlling for compositional changes in the nature of workplaces that have occurred through time. It is also seen if one looks at union density, or individual union membership, rather than recognition. Second, there are sectoral differences. The sharpest falls in union recognition occurred in private manufacturing workplaces set up post-1980, with significant falls also occurring, but from a lower initial level, in private sector services. In the public sector there is no establishment age based decline in recognition. Thirdly, there is some evidence that age of workplace, rather than age of worker, is the critical age based factor as the negative post-1980 set up association with unionization is found for all age groups.

The rest of the paper proceeds as follows. Section 2 begins by briefly describing the extent of union decline at the aggregate level, based on a number of indicators of union presence. It then moves on to describe the more micro picture, discussing what has happened to unionization over time, by making use of the workplace data in the WIRS/WERS series. Section 3 then presents econometric estimates of the determinants of union recognition, density, and individual union membership. Section 4 concludes.

2. Union Decline in Britain

Measuring Union Presence

One can measure the presence of unions at a point in time in a number of ways. In this Section I use what data exists to paint a background picture of what has happened to union activity in Britain over time. The measures considered include:

i)   union density – the proportion of workers who are union members;

ii)   union coverage – the proportion of workers whose pay is set by collective

         bargaining;

iii)   union recognition - the proportion of workplaces that recognise trade unions

         for collective bargaining purposes.

The coverage/recognition measures are probably better measures of union influence[2], but union density measures are observed on a more frequent basis and further back in time. I therefore look at all of these measures of the extent of union presence in what follows.[3] The analysis briefly considers aggregate data on unionization but mostly focusses on the 1980-98 period using the workplace data available in the Workplace Industrial/Employee Relations Surveys, which I describe next.

The Workplace Industrial/Employee Relations Surveys

        There are now four nationally representative British establishment level surveys that permit one to consider what has happened to the unionization rate over time at the micro (workplace) level. These are the 1980, 1984 and 1990 Workplace Industrial Relations Surveys (WIRS80, WIRS84 and WIRS90), and the recently made available 1998 Workplace Employee Relations Survey (WERS98). The first three surveys were representative samples of establishments with at least 25 employees.[4] WERS98 lowered this size threshold to 10 employees, and contains a matched survey of employees within sampled workplaces. In this paper I use all four surveys, and the 1998 employee sample, restricting most of my analysis to workplaces with at least 25 employees in each case to ensure comparability over time.

What Happened to Aggregate Unionization Over Time?

        The time series pattern of unionization, in particular the decline after 1979, is well known. Aggregate union density shows a remarkable stability in the post-war period (at around 40-45 percent membership), followed by a sharp rise in the 1970s,

but then an even sharper fall from the late 70s onwards. After 1979 aggregate union density has trended downwards so that, by the end of the 90s, less than 30 percent of the workforce are members of trade unions.[5]

Union coverage and recognition display similar trends since the late 1970s and early 1980s. Table 1 reports information on the proportion of establishments that recognised trade unions for collective bargaining purposes between 1980 and 1998 from the Workplace Industrial/Employee Relations Surveys. The Table shows that by 1998 only 42 percent of all workplaces recognised union(s) for collective bargaining purposes. The Workplace Industrial/Employee Relations Surveys also show sharp aggregate declines in the other indicators of union presence: Table 1 shows that union density and coverage both fall over time in much the same way as recognition.

The lower panel of Table 1 shows what has happened by broad sector. It is clear that there are sectoral differences. The greatest fall takes place in private sector manufacturing, which was traditionally a stronghold area for union activity. There are also sharp falls, but from a lower initial level, in private sector services. By contrast, recognition remains high, over the eighteen year period in the public sector.[6]

Union Recognition and Age of Establishment

The statistics presented thus far do, however, conceal a very important pattern linked to establishment age. Earlier work (Disney, Gosling and Machin, 1994, 1995) based on the first three WIRS makes it clear that when one looks at falling union recognition at the micro (workplace) level the key driving influence is failure to achieve recognition in new workplaces. Table 2 revisits this, by showing union recognition rates for older and newer establishments from the three earlier WIRS and the 1998 WERS. It also shows differential closure rates by union recognition status

between 1984-1990 and between 1990-1998, and the incidence of derecognitions and new recognitions in existing establishments between those years.

The upper panel of the Table shows substantially lower recognition rates in newer establishments (here defined as less than ten years old at the survey date) in the later surveys.[7] The pattern continues into the 1990s according to the WERS98 data. According to the 1990 and 1998 data union recognition rates in both years were a massive .25 (1990) and .23 (1998) points lower in establishments less than ten years old. In the 1980 and 1984 surveys the gaps were much smaller at .06 and .10 respectively.

That these large establishment age based differences drive the aggregate fall in recognition is made clear by looking at closure rates and derecognitions or new recognitions among existing workplaces. Panel B of the Table shows that closure rates between did not differ by union recognition status between 1984-90 and 1990-98. Hence, it is not differential exit rates that drive lower recognition. Furthermore, panel C reveals that derecognition in existing workplaces was infrequent in the 1984-90 and 1990-98 periods.[8] The same is true of new recognition being granted in existing workplaces. This fits well with theoretical work on what lies behind union organisation: for example, Smith and Morton (1993) argue derecognition to be rare due to the substantial fixed costs associated with changing the union status of establishments. As such, lack of recognition in newly set-up workplaces seems key to falling recognition.

Table 3 considers the age based differences in more detail, now focussing on differences in recognition between workplaces set up before and after 1980. The Table presents mean differences in recognition by age (with associated standard errors) from each survey. In 1984 the sample of post-1980 set up establishments is

very small (and, of course, there are none in 1980) so most focus should be placed on the 1990, 1998 and pooled[9] results. These show markedly lower rates of union recognition in the workplaces set up after 1980. For example, according to the pooled data, recognition was a sizable .30 points lower in establishments set up post-1980.

There are again some important sectoral differences. The recognition rate has collapsed in establishments set up post-1980 in private sector manufacturing. In the pooled data mean recognition is .37 lower at .21 for the post-1980 workplaces. In private services there is also a sharp fall of .19, but in the public sector there is essentially no age related gap. It is also striking that the rate of union recognition in establishments set up after 1980 is identical at .21 in private manufacturing and services. Unlike the position taken by some who like to stress the absence of unions in services, stories about the rise of the union free workplace now seem equally applicable in manufacturing and services.

These descriptive statistics point to a very important establishment age related decline in union recognition. However, over the time period being studied there have also been some important compositional changes, like the increased incidence of smaller workplaces, and the move away from manufacturing to services. The next part of the paper presents empirical estimates of the age based recognition decline derived from econometric models that control for such shifts in composition.

3.   Empirical Models of Unionization

Table 4 reports a number of econometric models of the determinants of unionization. The first three columns look at establishment-level union recognition, and the last at individual-level union membership. The first two columns report estimates of union recognition models based on data from all four surveys pooled together. The

differences in the two specifications are that the first column allows the establishment age effect to be different for workplaces set up in the 1980s and 1990s, while the second restricts them to be the same (this always turns out to be a valid statistical restriction – see below). The third column looks at recognition using just the 1998 data. The final column uses the employee data from the 1998 survey to consider individual union membership.

In all specifications in the Table a common set of establishment control variables are included. These were chosen on the basis of consistent definition across the surveys and in terms of what are likely to have been the most important compositional changes in the economy over this time period. The models therefore include variables reflecting establishment size (five dummy variables compared to a base of 25-49 workers), whether the establishment was single-site or foreign owned, the proportion of part-time workers, dummies for broad sector (private manufacturing and public sector as compared to the base of private services) and, in the pooled models, dummies for the relevant survey (1998 being the omitted reference group). The final column specification includes an additional set of variables measuring workers' characteristics (see the notes to the Table).

The econometric models in the first three columns show that the negative recognition probabilities associated with the 'Set up in the 1980s' and 'Set up in the 1990s' variables are robust to the inclusion of the controls. The Table shows probit coefficient estimates (with associated standard errors) with the coefficients converted into marginal effects (in square brackets). In the pooled column (1) model these marginal effects show recognition to be .12 points lower for the 'Set up in the 1980s' establishments and .10 points lower for the 'Set up in the 1990s' establishments. These two effects are, however, not significantly different from one another $(\chi^2(1) =$

.74 as compared to a 5% critical value of 3.84) and column (2) lumps them together to show that workplaces set up post-1980 have recognition of .11 lower than those set up before.[10] Much the same picture emerges if one focuses on the 1998 data alone (column (3) marginal effect = -.11).

So as to further understand the scale of these changes the final row of the Table expresses the estimated marginal effects as a percentage of the average level of recognition in establishments set up in 1980 or before. One can see that, for all three specifications, after one standardises for the different characteristics of establishments, recognition post 1980 is around 20 percent lower than in the older establishments.

One of the key innovations in the 1998 data is the fact that data was collected on employees within the workplace. So one can estimate individual-level union membership equations. An individual-level union membership equation from the 1998 employee data is therefore presented in the final column of the Table. In this equation there is a significantly negative coefficient on the post-1980 variable, showing individual membership, like recognition, to be significantly lower in establishments set up after 1980. The 1980s and 1990s effects could easily be restricted to be equal in statistical terms and the marginal effect shows individual membership to be .08 lower in establishments set up post-1980. The percentage gap in the bottom row of the Table show the percent decline in individual union membership in post-80 workplaces *vis-à-vis* those set up before to also be of the order of 20 percent.

Sector Differences

As with the earlier descriptive statistics, the broad sector differences remain when the econometric models are estimated. Table 5 reports separate pooled union

recognition models (including controls) for private sector manufacturing, private services and the public sector. In all cases one can restrict the 'Set up in the 1980s' and 'Set up in the 1990s' to be equal as a 'Set up post 1980' effect and the biggest negative effect is found in private manufacturing (marginal effect = -.24), with a significant negative effect in private services (-.12) and a statistically insignificant zero post 1980 set up effect in the public sector (.00). The percentage effects given in the final row show that the post-1980 marginal effect is sizable in the private sector when expressed as a percentage of the mean unionization in the older establishments (at around 40 percent for private sector manufacturing and 30 percent for private services).

Age of Worker

The matched employee-employer data in the 1998 survey also permit one to ask whether age of worker (which is provided in the employee survey), as well as age of workplace, matters for union decline. This is potentially important as rates of unionisation are very much lower amongst younger workers as well as in newer workplaces. Indeed, numbers from the 1999 Labour Force Survey and 1983 General Household Survey data show that only 17 percent of individuals aged 18-29 were members of unions in 1999, as compared with 44 percent of the same age group fifteen years earlier. Union membership rates have also fallen for older workers, but not to anywhere near such low levels (from 52 to 29 percent for 30-39 year olds and from 57 to 33 percent for those aged 40 to 65).

Table 6 therefore looks at individual union membership equations for three different age groups of workers, those aged below 30, those aged 30-39 and workers aged 40 or more. The pattern of estimated coefficients shows two main things. First the 1980s and 1990s effects can be restricted (in statistical terms) to be a common

post-80 effect for all ages. Second, there is always a significant negative post-80 association with recognition. The post-1980 marginal effects are of rather similar magnitude for all age groups (ranging from - .08 to -.12 in the restricted models). Expressed as percentages of the unionization rate in establishments set up 1980 or before they are a little more negative for workers under 30 as the unionization rate of younger workers is lower, but are essentially rather similar in magnitude across the age range. As such the results suggest that establishment age matters for all ages of worker, suggesting that age of workplace, rather than age of worker, is likely to be the critical age based factor underpinning union decline.[11]

4. Conclusions

This paper has focussed upon union decline in Britain, looking specifically at the extent of the decline in unionization using the four Workplace Industrial/Employee Relations Surveys of 1980, 1984, 1990 and 1998. A failure to organise the new establishments that were set up in the private sector in the last twenty years or so is central to falling unionization. The low rates of recognition and density in new establishments set up in 1980s and 1990s are seen to be very similar for new workplaces in both decades. The sharpest falls in union recognition are among private manufacturing establishments set up post-1980, with significant falls, albeit from a lower initial level, in private sector services. In the public sector there is no evidence of an establishment age based decline in recognition.

These findings point to the critical factor underpinning union decline in the private sector as the failure of trade unions to organise workers, and to gain recognition for collective bargaining purposes, in establishments and firms that have been set up since 1980. One reading of this is that the mechanisms that used to

operate to enable trade unions to make employers concede recognition demands in new workplaces have ceased to exist. At least in part, this reflects unions' own inability to organise workers in the new kinds of firms that have been set up in recent years, and it seems likely to be linked to the increased competitive pressures now facing workplaces in many sectors. Of course, testing the latter requires more work on the interaction between changes in competition and union organizing behaviour. But the observed trends are consistent with the notion that firms earning quasi-rents in non-competitive situations used to be able to sustain a positive union wage mark-up and an associated reduction in profit margins (see Stewart, 1990, 1995). This, however, seems to be much less of a sustainable position in newer workplaces set up in recent years.

At first glance the findings of this paper paint a rather bleak future for unions. The relentless decline in union presence through the 1980s and 1990s, and the increasing proportion of new union-free workplaces where unions are unable to even get a toe in the door, are unlikely to be reversed easily. But at least trade unions are now more aware of where they need to organise. And the new Employment Relations Act will give unions several possible routes to gain recognition (see Wood and Godard's, 1999, in depth discussion). One such route involves participation in election ballots to try to gain recognition, rather like the union representation elections that take place in the United States. A careful evaluation of these ballots and unions' success or failure in them, together with the potential of the new Act to slow down union decline will be an important part of the industrial relations research agenda in the coming years. But, on a more negative tone, it is also worth noting that in America union presence is even lower than in Britain, and in the private sector it has continuously fallen since the 1950s. Furthermore, the increasingly powerful 'new

economy' seems to offer little role or place for trade unions. It may be all the union

movement can do to halt the decline in their power and influence, let alone reverse it.

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Table 1: Union Presence in Britain, 1980-1998

	1980	1984	1990	1998
A. Aggregate Changes				
Proportion of Establishments With Any Union Recognised For Collective Bargaining Purposes	.64	.66	.53	.42
Proportion of Workers (Full-timers in 1980, all in other years) Who Are Union Members	.62	.58	.48	.36
Proportion of Workers Covered by Collective Bargaining	-	.71	.54	.41
B. Sectoral Changes				
Proportion of Establishments With Any Union Recognised For Collective Bargaining Purposes, Private Sector Manufacturing	.65	.56	.44	.30
Proportion of Establishments With Any Union Recognised For Collective Bargaining Purposes, Private Sector Services	.41	.44	.36	.23
Proportion of Establishments With Any Union Recognised For Collective Bargaining Purposes, Public Sector Services	.94	.99	.87	.87

Notes: Aggregate (i.e. all establishments with 25 or more workers) proportions taken from the sourcebooks for the 1980, 1984 and 1990 Workplace Industrial Relations Surveys and the 1998 Workplace Employee Relations Surveys (1980: Daniel and Millward, 1983; 1984: Millward and Stevens, 1986; 1990: Millward et al., 1992; 1998: Cully at al., 1998, 1999). Proportions for sub-sectors (private manufacturing, private services and the public sector) from Disney, Gosling and Machin (1994, 1995) for 1980, 1984 and 1990 data and own calculations from the 1998 data. 1998 recognition data recodes recognition to zero for fifteen workplaces which recognised teacher unions but who in fact had pay set by the Pay Review Bodies (this follows the same procedure as in Chapter 10 of Cully at al., 1999). The serial codes for these fifteen workplaces were kindly provided by John Forth and Neil Millward.

Table 2: Union Recognition By Age of Establishment, Union/Non-Union Closure Differences and The Extent of Derecognition/New Recognition in British Workplaces

A. Union Recognition By Age Of Establishment				
	1980	1984	1990	1998
Age < 10 Years	.59	.58	.34	.27
Age $10 Years	.65	.68	.59	.50
B. Closure Rates By Union Recognition, 1984-90 and 1990-98				
		Establishments With Recognised Unions	Establishments Without Recognised Unions	
1984-90 Closure Rate		.14	.15	
1990-98 Closure Rate		.14	.15	
C. Derecognition/New Recognition, 1984-90 and 1990-98				
		1984-90	1990-98	
Proportion of Panel Workplaces With Derecognition Over Time Period in Question		.09	.06	
Proportion of Panel Workplaces With New Recognition Over Time Period in Question		.04	.04	

Notes: taken from WIRS/WERS sourcebooks (see notes to Table 1) or own calculations; closure gaps for 1984-90 from Machin (1995) and for 1990-98 from data kindly provided by John Forth and Neil Millward. The age variable refers to age of workplace for 1980 and 1984 and to years at current address for 1990 and 1998. Using age of workplace in 1998 where both age of workplace and years at current address data are available produces similar results, especially at the 10 year cutoff point (for private sector comparisons revealing similar patterns for recognition patterns in 1998 for age cutoffs based on the two variables see Table 4.6 of Millward, Bryson and Forth, 2000).

Table 3: Union Recognition And Set Up Date of Establishment

	All Establishments	Private Sector Manufacturing	Private Sector Services	Public Sector
1980 WIRS				
Set up 1980 or before	.64 [1930]	.66 [493]	.40 [823]	.94 [614]
1984 WIRS				
Set up 1980 or before	.66 [1895]	.56 [399]	.43 [800]	.99 [696]
Set up post 1980	.54 [48]	.40 [12]	.40 [25]	1.00 [11]
Gap (standard error)	-.12 (.07)	-.16 (.12)	-.03 (.12)	.01 (.03)
1990 WIRS				
Set up 1980 or before	.59 [1413]	.54 [275]	.41 [643]	.86 [494]
Set up post 1980	.34 [539]	.26 [148]	.22 [304]	.91 [87]
Gap (standard error)	-.25 (.02)	-.28 (.04)	-.18 (.04)	.05 (.04)
1998 WERS				
Set up 1980 or before	.54 [559]	.50 [89]	.28 [257]	.88 [213]
Set up post 1980	.29 [528]	.14 [108]	.18 [330]	.85 [89]
Gap (standard error)	-.26 (.02)	-.36 (.05)	-.10 (.03)	-.02 (.03)
Pooled Data				
Set up 1980 or before	.62 [5797]	.59 [1257]	.40 [2523]	.93 [2017]
Set up post 1980	.33 [1115]	.21 [267]	.21 [660]	.89 [187]
Gap (standard error)	-.30 (.01)	-.37 (.03)	-.19 (.02)	-.04 (.02)

Notes: based on establishments with reported age data with at least 25 workers (WERS98); weighted sample sizes in square brackets; gaps are the differences in union recognition for establishments set up post 1980 as compared to those set up in 1980 or before. Sample sizes may not perfectly add up due to rounding.

Table 4: Estimates of the Relationship Between Unionization And Set Up Date of Establishment

	Establishment Union Recognition			Individual Union Membership
	Pooled	Pooled	1998	1998
Constant	-.341 (.064)	-.332 (.063)	-.441 (.102)	-1.987 (.132)
Set up in the 1980s	-.382 (.057) [-.122]			
Set up in the 1990s	-.307 (.077) [-.097]			
Set up post 1980		-.359 (.051) [-.112]	-.279 (.069) [-.106]	-.224 (.061) [-.084]
50-99 employees	.148 (.054) [.041]	.149 (.054) [.041]	.106 (.106) [.040]	.266 (.096) [.090]
100-199 employees	.398 (.056) [.102]	.398 (.056) [.102]	.493 (.108) [.176]	.460 (.090) [.146]
200-499 employees	.749 (.058) [.174]	.751 (.059) [.174]	.807 (.105) [.276]	.700 (.090) [.202]
500-999 employees	.964 (.072) [.195]	.964 (.072) [.195]	.917 (.138) [.285]	.426 (.102) [.136]
1000+ employees	1.107 (.077) [.214]	1.109 (.077) [.214]	.965 (.175) [.289]	.748 (.114) [.212]
Single site	-.552 (.048) [-.181]	-.551 (.048) [-.181]	-.730 (.089) [-.284]	-.775 (.069) [-.301]
Foreign owned	-.332 (.051) [-.104]	-.331 (.051) [-.104]	-.572 (.105) [-.224]	-.382 (.092) [-.147]
Part-time proportion	-.487 (.080) [-.140]	-.489 (.080) [-.140]	-.128 (.132) [-.049]	-.233 (.116) [-.088]
Private manufacturing	.570 (.044) [.147]	.568 (.044) [.147]	.681 (.094) [.234]	.674 (.091) [.197]
Public	1.670 (.054) [.378]	1.670 (.054) [.378]	1.695 (.094) [.518]	1.309 (.064) [.289]
WIRS80	.273 (.058) [.074]	.265 (.057) [.062]		
WIRS84	.337 (.058) [.090]	.328 (.057) [.088]		
WIRS90	.092 (.044) [.026]	.078 (.051) [.021]		
Log-likelihood	-3190.848	-3191.217	-883.621	-11630.635
Sample size	7713	7713	1883	25007
Set up date marginal effect as % of mean unionization for workplaces set up 1980 or before	80s: 20 90s: 16	Post 80: 18	Post 80: 21	Post 80: 18

Notes: for recognition - probit coefficient estimates; for individual membership – random effects probit coefficient estimates (heteroskedasticity consistent standard errors in round brackets, marginal effects in square brackets). The final column specification also includes variables measuring the age, sex, education, ethnicity and marital status of individuals.

Table 5: Sectoral Differences in the Estimated Relationship Between Establishment-Level Union Recognition And Set Up Date of Establishment

	Establishment Union Recognition					
	Private Manufacturing		Private Services		Public	
Set up in 1980s	-.711 (.113) [-.235]		-.351 (.073) [-.133]		.052 (.164) [.003]	
Set up in 1990s	-.752 (.182) [-.257]		-.259 (.095) [-.099]		-.091 (.215) [-.006]	
Set up post 1980		-.720 (.103) [-.236]		-.323 (.066) [-.124]		.003 (.136) [.000]
Controls included	Yes	Yes	Yes	Yes	Yes	Yes
Log-Likelihood	-948.671	-948.690	-1749.450	-1749.863	-393.046	-393.203
Sample size	2247	2247	2821	2821	2645	2645
Set up date marginal effect as % of mean unionization for workplaces set up 1980 or before	80s: 40 90s: 44	Post 80: 40	80s: 33 90s: 25	Post 80: 31	80s: 0 90s: 1	Post 80: 0

Notes: as for recognition models in Table 4. Controls are those included in the full pooled models in Table 4.

Table 6: Individual Union Membership And Set Up Date of Establishment, Variations By Age of Worker

	Individual Union Membership					
	Age < 30		Age 30-39		Age > 39	
Set up in 1980s	-.363 (.113) [-.093]		-.321 (.097) [-.126]		-.253 (.086) [-.100]	
Set up in 1990s	-.336 (.107) [-.085]		-.277 (.091) [-.108]		-.162 (.078) [-.064]	
Set up post 1980		-.349 (.088) [-.088]		-.297 (.076) [-.116]		-.201 (.064) [-.080]
Controls included	Yes	Yes	Yes	Yes	Yes	Yes
Log-Likelihood	-2419.606	-2419.629	-3614.011	-3614.089	-6236.935	-6237.339
Sample size	5948	5948	6967	6967	12092	12092
Set up date marginal effect as % of mean unionization for workplaces set up 1980 or before	80s: 20 90s: 18	Post 80: 19	80s: 19 90s: 16	Post 80: 18	80s: 15 90s: 10	Post 80: 12

Notes: as for individual union membership models in Table 4.

Endnotes

[1] Among many others, a good example is Smith and Morton's (1990) data collection on union recognition changes in the provincial newspaper industry.

[2] Discrepancies between density and coverage can occur because of free riders whose wages are set by unions, but who choose not to be union members. Coverage has traditionally been a little above density in Britain, unlike some other countries (notably the Nordic countries) where the incidence of free riders is basically zero. However, the number of non-union members who are paid according to collective bargaining contracts is small compared to the extreme case of France where only around 8 percent of workers are union members, but over 90 percent of workers are paid union negotiated wages.

[3] Other indicators of the extent of union presence could be considered. For example, strike activity is sometimes used. However, by the time one gets to the 1990s strikes occurred so infrequently that their use as a measure of union presence becomes severely limited. The number of trade unions is another possibility, though union mergers (often as a 'backs against the wall' strategy) also affect the usefulness of this measure.

[4] These data sources have been used widely by industrial relations specialists and labour economists in Britain to look at the industrial relations landscape and its economic effects (see Millward et al, 1999, for an up to date listing of publications based on these data).

[5] For selected years aggregate union density (in percent) was as follows: 1946 – 43; 1950 – 41; 1960 – 41; 1970 – 46; 1975 – 51; 1980 – 52; 1985 – 46; 1990 – 38; 1995 – 32; 1999 – 28. Sources for these numbers are Price and Bain (1983), Waddington (1992), Cully and Woodland (1998), and my own calculations from the 1999 (Autumn) Labour Force Survey.

[6] The number of .87 in the public sector in 1998 is a consequence of coding recognition to zero (no recognition) for fifteen workplaces where respondents said teacher unions were recognised, but pay was actually set by the Pay Review Bodies (this follows Chapter 10 of Cully et al., 1999). If these fifteen workplaces were counted as having recognition the number would have been .94.

[7] One should notice that the age of establishment variables are not identical across surveys. Millward, Bryson and Forth (2000) present recognition numbers using the different definitions. I get very similar results to them if I restrict my time periods to the same consistently defined questions (age of workplace in 1980, 1984 and 1998, or years at current address in 1990 and 1998). I therefore adopt the coarser age definition by merging the two slightly different questions for some of the analysis (where all four cross sections are pooled) but in others focus on the most recent survey.

[8] For corroborating evidence on this from sources other than WIRS see Claydon (1989), Gregg and Yates (1991), Smith and Morton (1993), Gall and McKay (1994) and Towers (1997).

[9] The pooled data refers to the pooling of all four surveys.

[10] The focus (for consistency reasons to ensure comparability over time) is on workplaces with 25 or more workers throughout but where one can include smaller workplaces (10-24 workers in the 1998 survey) the results are hardly affected. Expanding the sample and estimating the recognition model for workplaces with 10 or more workers produced a coefficient (standard error) on the post-1980 variable of -.258 (.065) and an associated marginal effect of -.100. Again the restriction of the 1980s and 1990s effects to be equal was strongly supported in statistical terms (indeed the marginal effects were very similar at -.109 and -.095 respectively).

[11] A stronger test of the age of worker versus age of workplace issue would need longitudinal data on workers and workplaces. Unfortunately currently we only have one wave of employee-level data in the 1998 survey.