

The added value of trade unions

**A review for the TUC of
existing research**



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Abbreviations

CO	Certification Officer
EO	Equal Opportunities
HR	Human Resource
MQ	Management Questionnaire (WERS)
OLS	Ordinary Least Squares
QLFS	Quarterly Labour Force Survey
SEQ	Survey of Employees Questionnaire (WERS)
WERS	Workplace Employment Relations Study

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Summary of literature review

Introduction

The aim of this report is to provide an overview of the current research evidence on the economic impact of workplace union representation. Our review focuses on quantitative studies that have been conducted on good quality, nationally-representative samples of British workplaces or employees, and we rely where possible on results from multivariate statistical analyses which control for observable differences between union and non-union workplaces or employees. We utilise evidence from qualitative case studies where this serves to fill in gaps in the quantitative literature.

The literature contains no robust and comprehensive evaluation of the net benefits from workplace representation. However, our summary of the evidence suggests that there is a good, prima facie case for supporting workplace union representation. One way in which employers may do this is through the provision of facility time.

What is the evidence on the provision of facility time?

Some 24 per cent of private sector employees work at a workplace where there are lay representatives from a recognised trade union; the equivalent figure in the public sector is 72 per cent. These figures have been stable over the past decade. Lead representatives in private sector workplaces spend an average of 11 hours per week (paid or unpaid) on their representative duties, whilst those in the public sector spend an average of 15 hours per week. However, this difference is not statistically significant and is mostly accounted for by the larger number of union members in public sector workplaces. Lead reps in the public sector are less likely than reps in the private sector to be paid by their employer for engaging in union duties, but the facilities provided to workplace union representatives in the two sectors are broadly similar.

Unions' impact on pay

Historically, one of the principal benefits for union members in Britain has been the delivery of a wage premium over similar non-members through collective bargaining. The recent evidence indicates that union members in Britain earn around 5 per cent more than equivalent non-members on average; the premium is, however, slightly higher in the public sector than in the private sector. Because unions help to raise the wages of the lowest paid and also encourage the use of more objective criteria in pay setting, wages in unionised jobs are also less widely dispersed; unions have thus historically helped to limit wage inequality.

Unions' impact on employment and hours

If unions raise employees' wages, one may expect negative effects on employment levels and thus job security. However if unions merely raise wages to the level of employees'

productivity, or improve levels of workplace efficiency, the effects on employment may be zero or even positive. The research evidence in the 1980s and 1990s indicated that unionised plants in the private and public sectors grew more slowly than non-union plants, and that redundancies were more likely. However, the recent evidence on employment growth (available only for the private sector) shows no differences between union and non-union workplaces. Moreover, unionised workplaces are more likely to have job-security provisions, which imply that redundancies are more likely to be arrived at voluntarily when they do occur.

Research into unions' effects in limiting long-hours working is surprisingly limited, but quantitative research does indicate that unionised employees work fewer hours of unpaid overtime. Union members also enjoy longer paid holiday entitlements.

Unions' impact on the provision of fringe benefits

Research into the impact of unions on the provision of extra-statutory fringe benefits is less extensive than research into union wage effects, and is also a little dated. However, the few studies which have been conducted are consistent in showing that workplaces with recognised unions are more likely to provide extra-statutory sick pay, employer-provided pensions, special paid leave for emergencies and subsidized childcare.

Union Learning Reps (ULRs) positively influence training levels in a significant proportion of cases, with those effects most likely where ULRs spent a substantial amount of time on their role; were supported by a workplace Learning Centre or Union Learning Fund, were valued by managers, and were able to consult or negotiate over training. Although less positive than ULRs themselves, a significant proportion of managers nevertheless say ULRs have a positive effect on training. The most recent study using WERS 2011 finds private sector employees' likelihood of receiving off-the-job training was significantly higher if the workplace has an on-site union representative compared to a like individual in a like workplace without an on-site union representative.

Unions' impact on the work/life balance arrangements

Evidence from the late 1990s showed unionised workplaces to have higher levels of provision of family-friendly practices – notably parental leave, paid family leave, child-care and job sharing – compared with “like” workplaces without unions. Provision of parental and paid family leave rose with union density, suggesting their presence reflects union bargaining power. Unions also increased employee awareness of such practices through information provision, thus facilitating their use. However, the options to work at home or have flexible working hours were less common in a union setting. Further work is required to up-date these analyses in the light of changes in legislation.

Unions' impact on dispute resolution

It has long been argued that union representatives can serve as ‘lubricants’ in the workplace, facilitating the informal (and formal) resolution of grievances and disciplinary matters. Recent case studies continue to support this proposition, but emphasise that unions' effectiveness in dispute resolution is contingent on the presence of strong and skilled union representation and trusting relationships with managers. Quantitative

research, for its part, has shown that disciplinary procedures are more systematic in workplaces with recognised unions, and that dismissals and disciplinary sanctions are less common where union membership density is higher.

Unions' impact on equal opportunities

Union representation and collective bargaining provides one means of promoting equality of opportunity within a firm or workplace through the formulation of centralised standards and procedures for monitoring and evaluation. Quantitative research has shown that workplaces in which unions negotiate, or are consulted, over equal opportunities (EO) issues are more likely to have EO practices in place. Furthermore, small-scale surveys of trade union equality reps and disability champions indicate that their impact on employers' equality practices is greater when such issues are subject to negotiation; their impact also rises with the amount of time spent on the role.

Unions' impact on health, safety and sickness absence

A new study finds union density is positively associated with managerial perceptions of the health and safety risks faced by employees, but union density is not associated with worker control over those risks, suggesting a limited ability for unions to mitigate those risks. However, having on-site worker representatives dealing with health and safety is associated with workers being exposed to lower health and safety risks than workers who rely on direct consultation between management and employees to deal with health and safety matters. Early studies for Britain found either positive or no significant union effects on workplace absence rates but there is no recent evidence on this issue.

Unions' impact on worker well-being

Studies often show that unionised workers have lower levels of job satisfaction than non-union workers but, once differences between union and non-union workers are fully accounted for, switching into union coverage is associated with higher satisfaction with pay and hours of work. Recent research also indicates that the job-related anxiety that accompanies organisational change at work is ameliorated when employees work in a unionized workplace and are involved in the introduction of the changes.

Unions' impact on labour turnover

Unions are capable of relaying and helping to resolve concerns employees have at work, resulting in them staying longer than they might have done in the absence of unionisation. This is the essence of "union voice". However, the most recent evidence suggests the effect is confined to workplaces with a union representative on-site, raising questions about the effectiveness of union recognition in the absence of a representative. Non-union forms of voice generally have no effects on voluntary labour turnover but, in one study, have a positive impact.

Unions' impact on innovation and the management of change

Evidence from the 1980s suggested union bargaining over job demarcations were a brake on labour reorganisation, while unions' ability to bargain over the additional surplus created by capital investment discouraged product and process innovation. This has since changed. Many of the craft-based and other job demarcations began to disappear in the 1980s, sometimes with unions winning wage concessions in return. This created the pre-conditions for more flexible working, such as the team working and functional flexibility, such that these high-involvement practices are more likely to be found in union than non-union workplaces today. Workplace and firm-level bargaining in Britain is now positively associated with product innovation. It is also positively associated with the introduction of new technology but not statistically significantly. It seems that early empirical studies suggesting unions may be detrimental to innovation thus offer a misleading picture of union effects today.

Unions' impact on productivity and profitability

There are a multitude of channels by which unions could, in theory, affect productivity, whether measured in terms of sales per employee, value-added, or their quality-adjusted equivalents. The literature has tended to assume that unions' "voice" face can be pro-productive. For instance, it may improve the quality of information managers use to make their decisions. Equally, it is assumed that unions' "monopoly" face used to bargain for higher wages could be detrimental to firm performance, at least measured in terms of profitability. However, union bargaining over higher wages can also be positive for firm productivity since, other things equal, higher wage levels can attract and retain more productive workers, as well as motivating them to work harder. Furthermore, by creating conditions in which workers are less likely to quit, unions may create the conditions for higher employer investments in human capital, which should also lead to higher productivity.

Despite the ambiguity regarding the theoretical effects of unions on productivity and profitability the empirical literature is quite clear. The negative association between unionisation and workplace performance and productivity identified in the 1980s disappeared by the 1990s. This remains the case. The disappearance of the gap is due to an improvement in the relative position of unionised workplaces rather than any deterioration among non-unionised workplaces.

The impact of unions in the aftermath of recession

Although the recession had a profound impact on workers and firms through falling real wages and labour productivity, the impact of recession appears to have been similar, for the most part, in the union and non-union sectors, although the more unionised public sector did suffer greater job losses and workers in the public sector experienced greater job insecurity than those in the private sector. There were, however, two areas in which economic effects differed between the union and non-union sectors. First, private sector unionised workplaces were more likely to close between 2004 and 2011 than similar non-union workplaces. Second, there is some evidence of greater labour intensification in the union sector compared to the non-union sector.

Conclusions

Our review has summarised the current research evidence on the micro-economic impact of workplace union representation, covering a wide range of issues of interest to workers and employers. Such a review provides a useful reference point for discussions around the Trade Union Bill, which would inevitably place some additional restrictions on union activity in the UK. More broadly, however, reviews such as this also provide potentially useful reference points for employees - for whom the economic returns to union membership are a key factor in deciding whether to join (Charlwood, 2002) – and for employers who are largely free to decide whether to encourage or discourage union organisation within the UK's largely-voluntarist system of collective employment relations.

We find that unions still deliver observable benefits to the average union member, in terms of higher wages, more extensive fringe benefits, higher levels of workplace training and the more effective resolution of individual workplace disputes. At the same time, the negative effects on employers, once a common feature of empirical studies, have largely dissipated in recent years.

There are two important caveats to this conclusion, however. First, it is clear that union effects are heterogeneous, and that a number of the observed effects are confined to workplaces with on-site representatives or high membership density. This contributes to heterogeneity of experience across sectors and types of worker. Second, we focus on the private returns to workers and firms. Unions also have broader potential impacts on society, such as their role in promoting democracy (see, for example Bryson et al., 2014), which are not touched on here.

Introduction

Background to the review

Research into the effects of trade union representation and collective bargaining has a long history, but up-to-date reviews of the literature are relatively scarce. This is unfortunate since such reviews are valuable in the context of discussions such as those that accompanied the 2016 Trade Union Act, offering potentially important insights into the empirical evidence on the costs and benefits of trade union activity.

The Trade Union Act 2016 will affect the activities of trade unions through:

- the recording (and possible cap) of facility time for workplace union representatives in the public sector
- the removal of check-off in the public sector (where administrative costs are not agreed and covered by the union)
- the introduction of voting thresholds for all industrial action ballots, and additional thresholds in specific public services
- the extension of notice periods for industrial action, and the expiry of ballot mandates.
- the introduction of rules covering the supervision of picketing
- the introduction of opt-in arrangements for new union members' contributions to unions' political funds, and new political fund expenditure reporting requirements
- extended powers for the Certification Officer.

Alongside the introduction of the Trade Union Bill to parliament, the Department for Business Energy and Industrial Strategy consulted on two further issues:

- Whether employers should be allowed to use agency workers to replace striking workers.
- Whether there should be changes to the law on picketing, e.g. to prevent intimidation of non-striking workers.

The government is yet to respond to the consultation on agency workers. On the intimidation of non-striking workers, it has announced that in addition to the new picketing requirements in the Trade Union Act, the Code of Practice on Picketing will be updated to include information on trade unionists' use of social media. This is likely to happen in 2017.

The general consensus is that these new provisions will make trade union activity more difficult. Supporters of the Trade Union Act take the view that the current level of trade union influence is too high, at least in some specific respects, whereas opponents of the Act would disagree – and some may even argue that it is too low (see Earls, 2015, for example).

The underlying question, then, is whether the current supply of unionisation and union activity in the economy is optimal from a social welfare point of view? This is a very difficult question to answer in simple terms. Union activity is multi-faceted and has a wide variety of outcomes, some of which vary across sectors and sub-groups of the population. However, in order to even attempt an answer, one must have some appraisal of the current evidence on the costs and benefits of union representation.

We attempt to provide such an appraisal here. We focus on the impact of trade unions' activities within workplaces and firms in the UK, encompassing unions' role in collective bargaining over the terms and conditions of employment and their more general activities in representing union members vis a vis their employer.

Before we begin our review of the evidence, however, we first take a step back and consider the rationale for union representation at the workplace. This helps to illustrate some of the broad considerations in respect of its regulation.

Labour market regulation and the supply of unionisation

The employment relationship is notably different to most other contractual exchanges, because the employer purchases 'labour power' (the capacity to work) and there are uncertainties on both sides as to when and how it will be applied within the firm. This is for two reasons:

- First, the role of employees in production is difficult to specify in exact terms. The human element is complex and difficult to write down.
- Second, the parties have imperfect information about each other: the employer does not have full information about the employee's productivity, whilst the employee does not have full information about the conditions under which they will be required to work. This makes it difficult to assess the outcome of the exchange in advance, and so the value of the match is uncertain for both parties a priori.

The employment relationship also differs from many other contractual exchanges in that it has a strong social dimension – the employee (the supplier of labour) and the employer (the purchaser) are not only participants to the contract, but they are also participants in production. So they have concerns that extend beyond the price to the manner in which the contract will be carried out.

This means that contracts are difficult (and thus costly) to write in a way that satisfies all parties. As Pencavel (1991) notes, the employer then has two options. One is to eschew the employment contract in favour of a contract for services, under which the problem of converting labour power into productive output is handed over to another employer (a sub-contractor). The alternative is to develop rules and procedures to govern the employment relationship.

The development of such rules and procedures can be managed in different ways. One is for the employer to dictate the terms of the engagement, with the employee then having to 'take it or leave it', but this holds inherent risks for the employer when employees cannot be easily replaced. Another is for the employer to negotiate individually with each worker in turn (and typically in private), but this can be time-consuming and the lack of transparency

can lead to distrust. A third option – which offers the potential for lower transaction costs and greater transparency – is for the employer to bargain openly and collectively with a group of workers who appoint a representative to act on their behalf. This is typically a union.

The adoption of such a collective approach not only changes the process by which the employment relationship is governed – for instance challenging the exertion of monopsony power by employers in wage-setting – it also has the potential to affect the production function within the firm (see Booth, 1995: 51–81, 183–223 for a detailed exposition). First, the union's control over the supply of labour has the potential to lower efficiency through 'restrictive practices', or to raise it by shocking inefficient employers into the use of more productive methods. Second, the union has the potential to improve the flow of information between employees and managers in respect of the production process. Here, the representative function of the union makes it easier for managers to learn about workers' preferences; it also encourages employees to share private information (e.g. about potential productivity improvements) because they have greater confidence that any resulting rents will be shared. Finally, the union can also act as a 'lubricant' in the workplace, helping to resolve disputes between employers and employees. The adoption of union bargaining thus has the potential to make the transformation of 'labour power' into 'effective labour' more efficient than might be possible under single-worker bargaining or the 'take it or leave it' approach. In other words, it offers the potential to increase the joint surplus within the firm.

Nevertheless, it is clear that not all employers rush to adopt unions. This is because it is difficult for an employer to obtain the benefits noted above unless the union has some organisational strength. The employer then cedes some control over the governance of the employment relationship and, in particular, over the distribution of any surplus. The employer may fear that the union could use its monopoly power in the short term interests of workers and without regard to the long-term interests of the firm; the degree of trust between the parties is thus an important factor in shaping their actions (see Freeman and Medoff, 1984).

Some employers who seek a collective approach may seek to 'make' their own non-union arrangements for employee representation and information-sharing, rather than 'buying' these services from a union (Willman et al., 2003). However, the costs of representation then fall wholly on the employer, and the employer faces the challenge of convincing employees that their interests are best served under such an arrangement. A union possesses the advantage of independence from the employer but, for its part, must convince workers that it will represent each of their individual interests and concerns effectively whilst also serving the collective interests of the wider membership.

What, then, is the role of government regulation in respect of unions? The overarching objective of labour market regulation is to balance equity with efficiency and growth (see Budd, 2004, for one discussion). In respect of trade unions, regulation should then seek to support employees and employers in obtaining an economically-efficient level of supply of union influence. Given free reign, employers will tend to give worker institutions such as unions less power than is optimal, whereas employees will push for institutions that have more power than is optimal (Freeman and Lazaar, 1995: 29-31). The task of arriving at some

'middle-ground' could be left to bargaining between the parties, but governments tend to intervene at some level because they are concerned about the potential spillovers from activity that takes place inside firms.

The nature of the regulatory intervention will depend – at least in part – on policy makers' understanding of the evidence concerning the economic impact of workplace union representation, and this is where we aim to contribute to the debate.

Our contribution

As implied above, our contribution focuses on the economic impact of union representation within firms or workplaces in the UK. Unions can have broader impacts at national level, for instance through their involvement in regulatory or advisory institutions, such as the Low Pay Commission, or through lobbying. However those activities are not the focus of our review. Nor do we concern ourselves with the broader macro-economic effects of those union activities which take place at the micro-economic level (though see Aidt and Tzannatos, 2008, for one relatively recent review).

We begin by briefly setting out the current state of workplace union representation in the UK. We then go on to present the micro-economic evidence on the impact of unions on a variety of outcomes of primary interest to workers, such as pay and job security, before turning to their impact on outcomes of primary interest to employers, such as productivity and profitability.

It can be noted at the outset that there are areas where the quantitative evidence is relatively sparse or out-of-date. In addition, in those areas where the evidence is more plentiful, the empirical regularities are often based on data and methods which fall short of a robust identification of the causal impact of unions. Instead, findings are usually based on point-in-time comparisons between union and non-union workers (or their workplaces), with account taken of the differences between them on other observable characteristics. On some occasions, longitudinal data is available which allows for unobservable characteristics also to be accounted for, but quasi-experimental methods have rarely been used and true experimental evidence is non-existent. Nonetheless, our review summarises the current state of understanding about union effects in the workplace, given these limitations. We focus on quantitative studies for the most part, keeping our discussion of case study work relatively brief because such studies are not typically able to arrive at any quantifiable estimate of union effects.

Existing research uses a variety of measures of unionisation and we show – where feasible – how effects vary across these different measures (particularly in respect of measures of organisational strength or power, such as membership density). We also summarise some of the heterogeneity in union effects across types of employer (e.g. private vs public sector) and groups of worker (e.g. high and low paid). The counterfactual is typically 'no union', but some studies compare union representation with non-union representation; the comparative effects of these two types of representation are noted where possible.

Trade union membership and organisation

Introduction

The voluntarist UK system of employment relations – which provides relatively limited institutional prescription in the area of employee representation (certainly in comparison to other countries such as France and Germany) – encourages a relatively free market for ‘voice at work’. Within this market, trade unions act as suppliers, offering employees the prospect of collective representation vis a vis employers in the workplace, in return for a membership fee. Delivery of the service of union representation is usually undertaken by lay workplace representatives, supported by a comparatively small network of paid officials. This workplace-level organisation receives varying degrees of encouragement from employers, ranging from wholehearted support through indifference to outright opposition.

This system means that unions’ legitimacy, power and financial resources are ultimately based upon membership, and thus upon the demand for unionisation among employees. However, unions’ efficacy in the workplace is also contingent on employers’ attitudes.

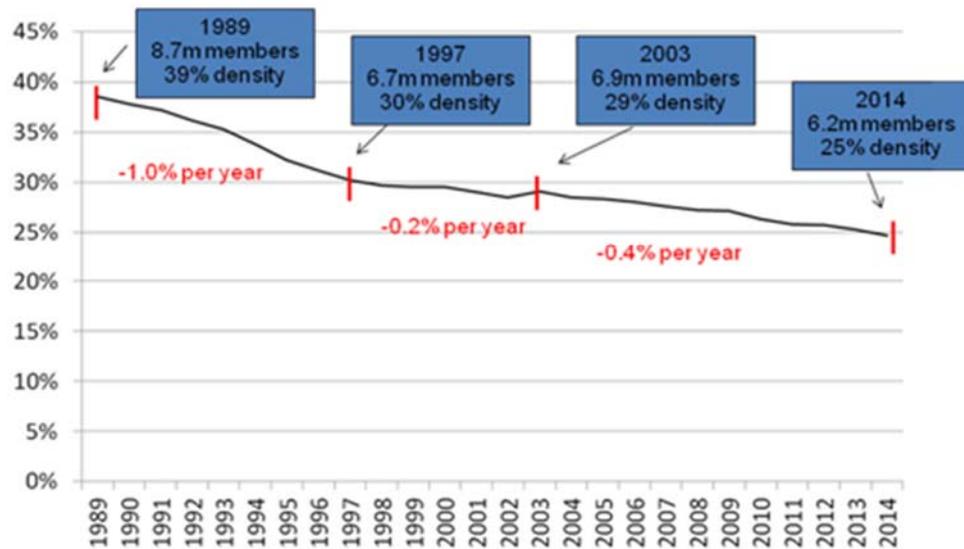
In the following sections we provide a variety of statistics which flesh out this picture in the UK, as it currently stands. We discuss membership levels, the spread of representation, and employees’ and employers’ attitudes, in order to give an overview of trade union membership and organisation in the UK at the present time. Much of the discussion is taken from Forth and Bryson (2015).

Trade union membership

The long-term trend in union membership in the UK is well-known. The total number of union members is recorded by the Certification Officer from membership returns which have to be submitted annually by each trade union (Department for Business Innovation and Skills, 2015b). These records indicate that the total number of members attained a high point of around 13 million in 1979, having risen more or less continuously since the 1930s. Since then, there has been a precipitous decline, such that there are now around 7.1m members in the UK: just over half of the 1979 figure.

The Quarterly Labour Force Survey (QLFS) allows us to investigate the recent trends in more detail, although in doing so we switch our focus to Britain. Figure 1 shows the recent trend in union membership density, i.e. the percentage of all employees who belong to a trade union. In Britain, union density declined at an average of 1 percentage point per year between 1989 and 1997 – falling from 39 per cent to 30 per cent. It was then broadly stable from 1997 to 2003, but has since fallen by a further four percentage points over the past ten years to reach 25 per cent in 2014.

Figure 1: Trade union membership density, GB, 1989-2014



Source: Labour force survey

Density is considerably higher in the public sector (54 per cent) than in the private sector (14 per cent), but is declining in both sectors (as it is among both men and women, among workers of all ages, and in virtually every type of industry). If the current rate of decline continues, then aggregate union membership density in Britain will be close to 20 per cent within a decade.

Part of the overall story of declining membership is that workplace managers are less likely to actively support union activity now than in earlier decades (Table 1). The final column of Table 1 shows how the density of union membership varies with management attitudes, and clearly indicates that unions find it more difficult to organize when managers are either ambivalent towards union membership or in opposition to it.

Table 1: Managers' attitudes towards union membership

	1998	2004	2011	Membership density in 2011
% of workplaces where manager is..				
In favour of union membership	28	20	19	50
Neutral towards it	55	63	65	13
Not in favour of it	17	17	16	3

Source: Workplace Employment Relations Survey

Base: All workplaces with more than 10 employees

Nonetheless, Table 1 also indicates that there is considerable scope for unions to raise membership above its current level where managers are in favour of union organisation. The challenge of convincing employees of the utility of union representation increases as each new cohort of young people enters the labour market, since they enter with progressively less second-hand experience of union membership (e.g. via their parents or older friends). The evidence suggests that employees do not tend to gravitate towards unions as they age (Table 2), and so a continuing objective for unions must be to raise the appetite for union membership among young people.

Table 2: Membership density by age and cohort

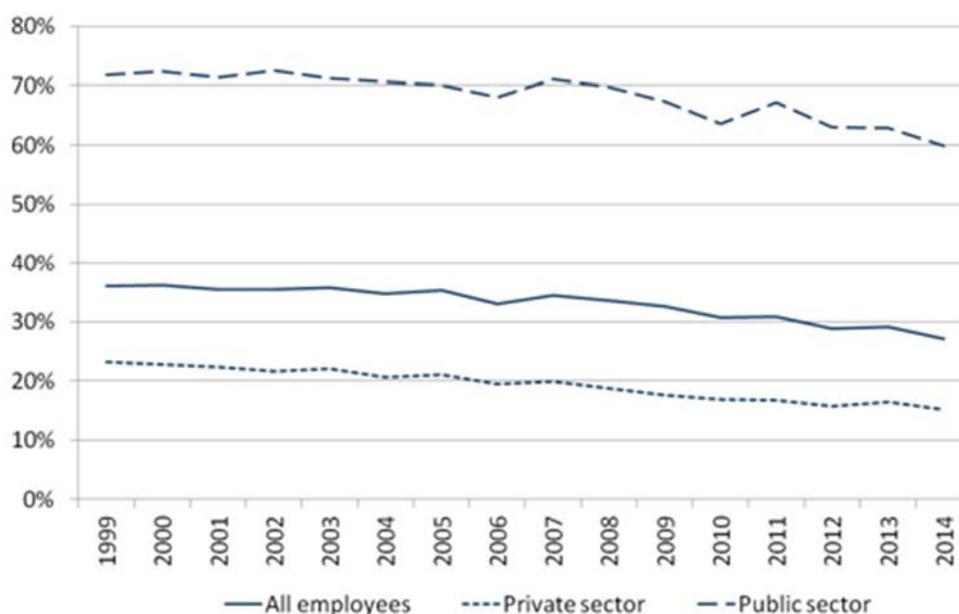
Age:	Decade of birth				
	1940s	1950s	1960s	1970s	1980s
25-29			33	23	19
30-34		41	32	25	22
35-39		40	32	27	
40-44	43	39	33	28	
45-49	43	39	34		
50-54	41	39	35		
55-59	38	37			

Source: Source: Labour Force Survey, 1989-2014

Bargaining coverage and scope

In addition to membership density, another indicator of organizational strength is whether unions can persuade employers to recognise them for negotiations over wages, and a recent weakening is also apparent here. Figure 2 shows the percentage of all employees whose pay is set by collective bargaining between their employer and a trade union, again using data from the QLFS. The trend was broadly flat between 1999 and 2007, but the last seven years have seen a downward trajectory in both the private and public sectors. The fall in the public sector over this time has been particularly pronounced (around 10 percentage points) and is evident across a range of public sector services.

Figure 2: Employees whose pay is set by collective bargaining, by sector



Source: Labour Force Survey

Employee support for collective bargaining also appears to be declining, albeit gradually. Among those employees whose wages are set by collective bargaining, the percentage who are union members has been falling over time (from 66 per cent in 2004 to 62 per cent in 2014). This reduces the subscription income that is available to support negotiating activities, and also arguably weakens the unions' negotiating position. 'Free-riding' has tended to be slightly lower in the public sector (where the share of covered employees who are members currently stands at 65 per cent) than in the private sector (where it currently stands at 59 per cent). But whereas the period since 2010 has seen some reduction in 'free-riding' in the private sector, in the public sector it has been rising.

Collective bargaining may extend to a wider range of issues than pay. An indication of the scope of bargaining is provided by the 2011 Workplace Employment Relations Survey (WERS), with Table 3 showing the range of issues subject to negotiation (and consultation) in the 22 per cent of workplaces in Britain with recognised unions. The table shows that pay, hours and holidays are the topics most frequently subject to bargaining, following by

pensions. However, they also suggest that formal recognition of unions may sometimes resemble a 'hollow shell' in which unions and their members have little influence over core terms and conditions.

Table 3: Negotiation and consultation over specific terms and conditions in workplaces recognising unions

	Public sector	Private sector	All workplaces
Pay	52 (72)	56 (70)	54 (71)
Hours	45 (72)	37 (61)	42 (68)
Holidays	44 (66)	41 (61)	43 (64)
Pensions	38 (62)	24 (55)	33 (59)
Training	17 (54)	6 (42)	13 (49)
Grievance and disciplinary procedures	30 (71)	19 (68)	25 (70)
Health and safety	22 (69)	10 (59)	17 (65)

No parentheses indicates the incidence of negotiation and parentheses indicates the incidence of negotiation or consultation

For each item employers are asked, 'Does management normally negotiate, consult, inform or not inform unions....'

Base: Workplaces with 5 or more employees with at least one union member present and recognising a union for bargaining purposes

Source: 2011 Workplace Employment Relations Survey

Workplace union representation

In order to estimate the prevalence of lay union representation at the workplace, we again turn to WERS. The 2011 survey indicates that 36 per cent of all employees in Britain work at a workplace where there is a lay representative from a recognised trade union (24 per cent in the private sector and 72 per cent in the public sector) (Van Wanrooy et al., 2013: 59). Encouragingly for unions, these figures have been stable over the past decade: although the percentage of all workplaces with a representative of a recognized trade union on-site fell dramatically through the late 1980s and early 1990s, it has remained broadly unchanged since 1998 (Table 4). The figure now stands at 23 per cent among workplaces with 25 or more employees (7 per cent among those with 5 or more employees).

Table 4: Presence of union reps at workplace level, 1980-2011

	1980	1984	1990	1998	2004	2011
<i>% of workplaces with a rep of a recognised union on-site:</i>						
All workplaces	50	55	38	26	23	23
Workplaces with a recognized union	79	83	72	69	62	63
<i>% of members in a workplace with an on-site steward</i>						
	92	93	85	83	79	81

Base: all workplaces with 25 or more employees

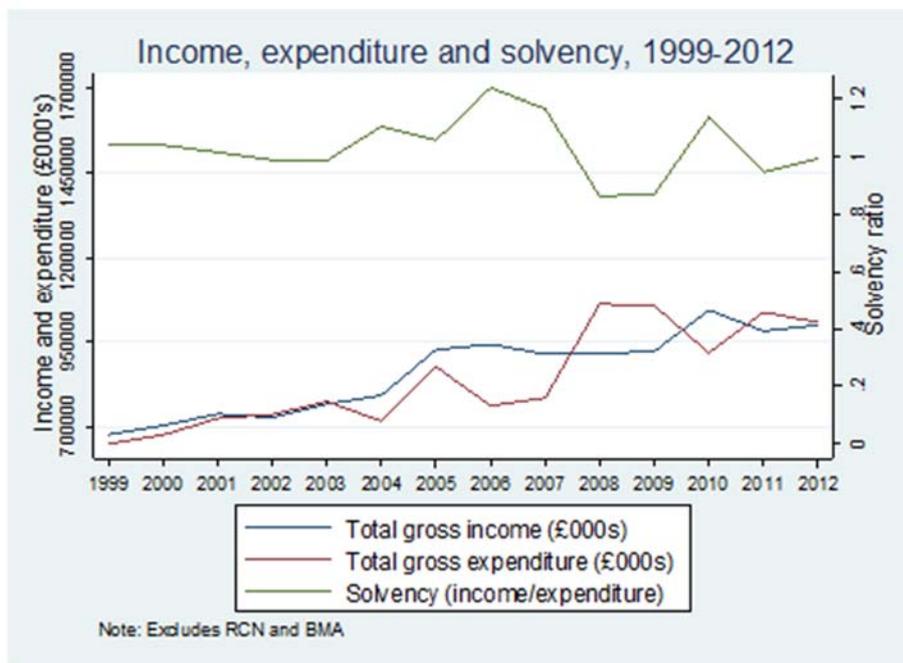
Source: Workplace Employment Relations Survey

WERS also provides information about lay representatives' facility time – albeit only for the lead rep in each workplace. The lead representatives in private sector workplaces spend an average of 11 hours per week (paid or unpaid) on their representative duties, whilst those in the public sector spend an average of 15 hours per week. However, this difference is not statistically significant and is mostly accounted for by the larger membership base in public sector workplaces and the greater likelihood of union recognition (Van Wanrooy et al., 2013: 59-60). Lead reps in the public sector are less likely than reps in the private sector to be paid by their employer for engaging in union duties (84 per cent versus 95 per cent), but the facilities provided to workplace union representatives in the two sectors are broadly similar (Bacon and Hoque, 2015).

Union finances

As noted earlier, unions' finances are heavily dependent on income from membership subscriptions and so the decline in membership has put considerable pressure on unions' financial position. Data from the accounts that unions submit to the Certification Officer show that unions, as a group, were barely solvent in the period 1999-2003. Their total income barely exceeded their total expenditure: the ratio was just above one (Figure 5). In the period 2004-2006 they managed to increase their income whilst holding expenditure broadly steady, and this improved their financial position, but the period 2006-2009 was less healthy: income from subscriptions was rising above the growth in average earnings but expenditure was rising faster than retail prices, partly because of increases in expenditure on pensions. Unions' financial position has recovered somewhat in more recent years, but the position still looks fragile at the current time.

Figure 5: Income, expenditure and solvency, 1999-2012



Source: Certification Officer

Summary

One in every four employees in the UK are currently union members but union membership density continues to fall and, if the current rate of decline continues, this ratio will fall to one in five within a decade. Unions therefore face a twin challenge: to extend their recruitment efforts into a larger number of workplaces, particularly as a means of reaching larger proportions of younger workers; and also to raise membership density in workplaces where unions already have a foothold. The network of workplace reps has remained relatively resilient in recent times and so a platform exists for such organising activity. The challenge, however, will be to remain 'effective' (both in the eyes of employees and employers) if membership continues to fall. With this in mind, we now turn to an assessment of the current effects of workplace union representation.

What do unions deliver for workers?

Introduction

We begin our review of union effects by considering outcomes that are primarily of interest to workers, that is:

- pay
- employment and hours
- fringe benefits
- skills and training
- work/life balance policies and practices
- individual dispute resolution
- worker wellbeing
- equal opportunities.

The following section of the report (Section 4) will go on to consider outcomes that are primarily of interest to employers.

Throughout our discussion, we show – where feasible – how effects vary with respect to measures of union strength (notably union membership density). We also indicate some of the heterogeneity in union effects across types of employer (e.g. private vs public sector) and groups of worker (e.g. high and low paid). During the course of the discussion, we remark on limitations and gaps in the literature, although the reader is also referred to the broad comments on the evidence base that were noted in Section 1.

Pay

Historically, one of the principal benefits for union members in Britain has been the delivery of a wage premium over similar non-members through collective bargaining. The union wage premium has historically been seen as a measure of union power since, although such a premium relies on the availability of economic rents (and is hence to some extent dependent on product markets), higher union wages are also predicated on unions having sufficient power to force employers to give away a higher share of these rents than they would in the absence of unions.

The recent evidence indicates that union members in Britain earn around 5 per cent more than equivalent non-members, on average. The precise estimate varies according to the dataset and methodology, but the most up-to-date estimates come from Forth and Bryson (2015), who compare the wages of union members with those of non-union employees with similar characteristics using the QLFS. They find that the wage premium associated

with union membership stood at around 7 per cent in 2014. This premium has gradually fallen over time however (down from around 10 per cent in the late 1990s), with the exception being an uptick in 2009-2011, which probably reflects unions' ability to maintain their members' wages when the wages of non-union workers were being squeezed in recession. That effect was only a temporary one, however, with many union members' wages now being affected by public sector pay restraint.

One limitation of these estimates is that, being based on data from household surveys, they may be upward-biased because of the limited range of workplace characteristics that can be accounted for in the analysis. Unions are more likely to organise in higher-paying workplaces where unions are able to bargain over surplus rents. Bryson et al. (2015) use data from WERS and find a union wage premium of 5 percentage points in 2011 when using a wider set of workplace controls (Forth and Bryson find a premium of 9 per cent in the same year using the QLFS). Bryson et al.'s estimate falls further to just 4 per cent when they compare members and non-members within the same workplace.

As one might expect, union wage premia are found to vary – sometimes quite considerably – between different sub-groups of workers. For example Blanchflower and Bryson (2010), using the QLFS, show that the premium is around twice as high in the public sector as in the private sector, perhaps because union strength in the sector and the absence of overt product competition make it easier for unions to capture rents. Bryson and Blanchflower also show that the union wage premium is around twice as large for women as it is for men in both sectors. In the private sector, the wage premium rises with the level of union membership density at the employee's workplace (Bryson et al., 2015); the pattern is less clear when they expand their sample to include the public sector, however, perhaps because much public sector wage bargaining typically takes place at a higher level, and so workplace-level density is a less accurate guide to union power.

The evidence listed above focuses on a comparison of union members and non-members, but bargaining units usually comprise both and so some non-members will typically benefit from union negotiations. Bryson and Green (2015) use the 2012 Skills and Employment Survey to provide one of the few up-to-date estimates of the wage premium arising from union coverage, which, in their analysis, stands at 4 per cent. Spillovers from union bargaining can also potentially occur to non-union workplaces, via threat effects, although Belfield and Heywood (2001) find that this is less apparent in the UK labour market than in the US.

Because unions have historically helped to raise the wages of the lowest paid and have encouraged the use of more objective criteria in pay setting, it is common to find that wages in unionised workplaces are less widely dispersed than those in non-union workplaces. Forth and Bryson (2015) show that the 'unexplained' components of employees' wages are around 10-15 per cent more dispersed among non-members. This suggests that there is a larger idiosyncratic component to wages among non-members than among union members. Unions have thus historically helped to limit wage inequality. However, their 'restraining' role does appear to be weakening across the world as density falls and as union members increasingly occupy higher points in the wage distribution (Pontusson, 2013). Indeed, Card et al. (2004) estimate that between 9 and 29 per cent of the

growth in wage variance in the UK between 1983 and 2001 could be attributed to declining union power.

Employment and working hours

Employment

If unions raise employees' wages then, under a 'right-to-manage' model in which wages are bargained with the union and employment is set unilaterally by the employer, one may expect negative union effects on employment levels and thus job security. Theory would suggest that these outcomes can be avoided, however, if unions and employers bargain over both wages and employment simultaneously. Union effects on employment can also be positive if unions bid up wages to the level of employees' productivity, or improve levels of workplace efficiency, (Booth, 1995: 216-8).

The research evidence in the 1980s and 1990s – based almost exclusively on data from WERS – indicated that annual rates of employment growth in workplaces which recognised unions were around 2-4 percentage points lower than those in non-union plants. The effects were found in numerous studies (e.g. Blanchflower et al., 1991; Machin and Wadwhani, 1991; Bryson, 2004a; Addison and Belfield, 2004), leading some to refer to the employment impact of unions as the 'one constant' in studies of unions' economic effects. Most of the evidence was for the private sector, but Addison and Belfield also studied the public sector and found the effect to be equivalent. Negative employment growth effects were also found to be more pronounced where bargaining coverage was high (Bryson, 2004a), suggesting that they did arise as a consequence of wage bargaining.

The recent evidence on employment growth (available only for the private sector) finds no differences between union and non-union workplaces in the late 1990s and early 2000s however (Bryson and Blanchflower, 2009: 63-5). The negative union effect on employment growth may thus have ameliorated in the private sector, in common with many other workplace effects observed in earlier decades (see Section 4). Updated replication studies have yet to be done for the public sector, but Bryson and Green (2015) find that a substantive union/non-union gap in perceptions of job insecurity emerges in aggregate data from individuals in the 2000s, a pattern which they surmise may be attributable to the rise in job insecurity in the public sector.

The aforementioned workplace studies treat employment growth as a continuous variable and so do not tend to distinguish between employment expansion and workforce reductions. Those which do tend to find a higher incidence of workforce reductions in unionised plants (White and Bryson, 2013). However, they also find that unionised workplaces are more likely to have rules (job-security provisions), which increase the chances that redundancies are arrived at voluntarily when they do occur. In the private sector, the chance of having such protections also rises with union membership density at the workplace.

Much of this workplace-level evidence comes from continuing workplaces (those that survive from one period to the next). However, researchers have also studied the impact of unions on workplace closure. Evidence from the 1990-98 WERS panel suggested that the

presence of a recognised union raised the chance of workplace closure in the private sector by around 5 percentage points (Bryson, 2004b). Again the effect seems to have weakened though, with Bryson and Dale-Olsen (2010) finding no association between recognition and workplace closure in the 1998-2004 WERS panel. Indeed, they find that workplaces with stronger unions (higher levels of membership density) actually have lower-than-average closure rates. However, the theoretical model underpinning their paper would suggest that this latter result is restricted to the private sector in Britain, where local bargaining applies; the same result is not likely to hold in the public sector where most bargaining is centralised.

Working hours

In addition to union effects on the extensive margin of employment, there may also be effects on the intensive margin, i.e. working hours. On the one hand, unions' monopoly power over the supply of labour may lead to attempts to reduce worker effort. However, restrictive practices of the type observed in the 1960s and 1970s are now undoubtedly rare (see Metcalf, 1989). Indeed Bryson and Green (2015), using data from the 1992-2012 Skills and Employment Surveys, find that there has been a steady reversal in the union association with workers' perceptions of effort intensity. Whereas employees covered by union bargaining reported lower levels of effort intensity than similar non-covered employees in 1992, the sign of the association had switched around by 2012, with covered employees then reporting higher levels of effort than non-covered workers.

Many unions do bargain over hours however, no doubt partly seeking to limit long-hours working and to ensure that hours worked beyond contract are appropriately remunerated. Research into unions' effects on these particular issues is surprisingly limited in view of the long-standing debates about the 48 hour week, and current discussions around 24-7 provision in the public sector. However, Veliziotis' (2013) study of overtime using the BHPS does indicate that unionised employees work fewer hours of unpaid overtime in the for-profit, non-caring sector of the economy. Forth and Bryson's (2015) research using the QLFS also finds that union members enjoy longer paid holiday entitlements.

Fringe benefits

As part of negotiations over wages and work effort, unions can also affect non-wage components of the reward package. In keeping with the research evidence (summarised above) which tends to show that union members earn higher wages, on average, than similar non-members, research studies have also found that unions tend to increase the provision of non-wage forms of compensation.

Research in this area is less extensive than that on union wage effects, and is also a little dated. However, the few studies which have been conducted are consistent in showing that workplaces with recognised unions are more likely to provide extra-statutory sick pay, employer-provided pensions, special paid leave for emergencies and subsidized childcare. The most up-to-date analysis is provided by Budd (2004) and Budd and Mumford (2004), with both papers based on data from WERS 1998. Budd (2004) shows that coverage by collective bargaining raises the probability of receiving at least four weeks of annual leave by 18 percentage points when compared with uncovered workers; it also raises the

probability of access to an employer pension scheme by 16 percentage points and the chances of having an extra-statutory sick pay scheme by 9 percentage points (it lowers the chances of private health cover by 6 percentage points). Budd and Mumford (2004) then show that paid family leave is 13 percentage points more likely in unionised workplaces, whilst subsidized child care is 2 percentage points more likely. The monetised value of these benefits has not been estimated, however, and so it is not currently feasible to provide an indication of unions' effects on 'total reward'.

Skills and training

One might expect a positive association between unionisation and training for a number of reasons. In order to offset the cost-increasing impact of any union wage premium, employers will want to increase worker productivity via training and skills acquisition. Second, if union voice reduces voluntary quits, thus raising worker tenure, this creates an additional incentive for firms to invest in their workers' human capital. Third, members will look to unions to assist them in skills acquisition, whether firm-specific or general. There is another reason, rarely acknowledged: according to the Skills and Employment Surveys (SES) conducted in 1992, 2001, 2006 and 2012, jobs in the union sector have had greater learning requirements than those in the non-union sector. By 2012 the gap in learning requirements across the two sectors had become statistically significant, even among "like" workers (Bryson and Green, 2015).

In the late 1990s and early 2000s workers themselves did not perceive unions as a means to promote their own career progression (Bryson and Freeman, 2007). Unions were perceived as having limited capacity to address workforce learning requirements in sectors like steel where it was viewed as a primary way of remaining employable (Stroud and Fairbrother, 2008). Nevertheless, analysis of employees in private sector workplaces in the 1998 WERS indicated that employees in unionised workplaces were more likely to receive employer-provided training than similar employees in the non-union sector (Boheim and Booth, 2004). However, in the 2004 WERS there was little relationship between unionisation - recognition, membership density or the presence of Union Learning Reps (ULRs) - and the incidence of employer-provided training, although there was a weak positive association between recognition and training for male non-managerial employees in the public sector (Hoque and Bacon, 2008). There was also greater equality in the distribution of training within workplaces where there was a ULR. Training duration was weakly associated with higher union density. The authors investigate the disappearance of the positive union effect on private sector training found for 1998 and show that the effect had disappeared by 2004 due to a decline in training provision in the union sector.

However, union effects are more apparent in recent work. By 2007/8 ULRs were positively influencing training levels in a significant proportion of cases, with those effects most likely where ULRs spent a substantial amount of time on their role, were supported by a workplace Learning Centre or Union Learning Fund, were valued by managers, and were able to consult or negotiate over training (Bacon and Hoque, 2010a). Although less positive than ULRs themselves, a significant proportion of managers nevertheless say ULRs have a positive effect on training (Hoque and Bacon, 2011). In another study, ULR effectiveness was thought to rely heavily on strong employer commitment to the ULR (Hollinrake et al., 2008)

The most recent quantitative study using the QLFS 2001-2013 finds that employees' likelihood of receiving job-related training is significantly higher if the employee is a union member, is covered by collective bargaining or works in an establishment with union recognition (Stuart et al, 2015). The same study also analyses WERS 2011 and finds that the likelihood of employees in the largest non-managerial occupation receiving off-the-job training is significantly higher if the employee is a union member, is covered by collective bargaining or works in an establishment with an on-site union representative. A union presence raises the probability of off-the-job training even if the employee is not a union member. The positive association between unionisation and training was most pronounced for training of at least 5 days in the last 12 months.

In their investigation of the private sector using WERS 2011 Forth et al. (2016) find the likelihood of an employee receiving off-the-job training to be 5 percentage points higher in workplaces with an on-site union representative, but their investigation is confined to the private sector.

In 2001, 2006 and 2012 the Skills and Employment Surveys (SES) asked employees how strongly they agreed with the statement "In my current job I have enough opportunity to use the knowledge and skills I have". In 2001 and 2006 employees in the union sector were significantly less likely to agree to the statement than their non-union counterparts, suggesting their skills were more likely to be under-utilised, but the gap had closed and become statistically non-significant by 2012 (Bryson and Green, 2015).

Work/life balance policies and practices

In the late 1990s unionised workplaces had higher levels of provision of family-friendly practices – notably parental leave, paid family leave, child-care and job sharing – compared with "like" workplaces without unions (Budd and Mumford, 2004; Dex and Smith, 2002). Provision of parental and paid family leave rises with union density, suggesting the presence of these policies reflects union bargaining power. Unions also increase employee awareness of such practices through information provision, thus facilitating their use. However, the options to work at home or have flexible working hours were less common in a union setting, perhaps reflecting what some view as union concerns about employer-led flexible working and the challenge it can pose to collective rights (Gregory and Milner, 2009). Although there has been insightful qualitative research shedding light on factors increasing union effectiveness on work/life balance issues, such as the importance of female union reps (Rigby and O'Brien-Smith, 2010) further work is required to up-date quantitative analyses in the light of changes in legislation.

Resolution of individual disputes

It has long been argued that union representatives can serve as 'lubricants' in the workplace, facilitating the informal (and formal) resolution of grievances and disciplinary matters. Recent case studies continue to support this proposition, but emphasise that unions' effectiveness in dispute resolution is contingent on the presence of strong and skilled union representation and trusting relationships with managers.

Saundry et al. (2011), for instance, report on studies of eight private and public sector organisations, in which union representatives helped to encourage self-discipline amongst

the workforce, provided early warning of emerging disputes and helped to facilitate informal processes of resolution. Reps also helped to ensure that managers followed formal procedures correctly and that disciplinary hearings ran smoothly when they were needed. However, the effectiveness of union representation in these circumstances relied on adequate training for reps, positive relationships between reps and key stakeholders, and robust union organisation. Non-union companions in disciplinary proceedings rarely made an active contribution, partly because of their comparative lack of expertise and their fears of reprisal.

Quantitative research, for its part, has shown that disciplinary procedures are more systematic in workplaces with recognised unions, and that disciplinary outcomes are more moderate where union membership density is higher. In respect of procedures, Wood et al. (2014) show that workplaces with recognised unions are more likely than non-union workplaces to have disciplinary procedures that comprise the three steps described in the Acas Code of Practice (i.e. setting out the issue in writing, holding a meeting to discuss the issue, and giving the employee the right of appeal). In respect of disciplinary sanctions, Wood et al. (2014) find no statistically significant differences in disciplinary outcomes between workplaces with and without recognised unions, but previous studies have shown that higher levels of union density are associated with fewer disciplinary sanctions and dismissals (e.g. Knight and Latreille, 2000; Antcliffe and Saundry, 2009).

Worker health, safety and wellbeing

Although unions seek to maximise the welfare of their members, workers often organise a union in the first place to combat problems at work, including poor working conditions, making it difficult to establish the impact of unions on workers' wellbeing. A recent review of the literature for Britain concluded that "the small number of empirical studies in the area has failed to establish a coherent and consistent statistical relationship between trade union presence and improved workplace safety" (Robinson and Smallman, 2013: 676). Their own analysis of WERS 2004 showed injury rates fell with rising union density and in workplaces with higher levels of managerial engagement with union representatives.

A new study using WERS 2011 finds union density is positively associated with managerial perceptions of the health and safety risks faced by employees, but union density is not associated with worker control over those risks, suggesting a limited ability for unions to mitigate those risks (Bryson, 2016). However, having on-site worker representatives dealing with health and safety is associated with workers being exposed to lower health and safety risks than workers who rely on direct consultation between management and employees to deal with health and safety matters.

The association between unions and higher job dissatisfaction, often found in studies, might arise for one of three reasons: either workers become unionised because they are dissatisfied in the first place, they work in poorer conditions that make them dissatisfied and thus trigger union organising, or else the process of union voice and bargaining creates dissatisfaction. In fact the association disappears having accounted for the poorer working conditions that may trigger unionisation (Bender and Sloane, 1998), and when one controls for unobserved differences between those who join unions and those who do not (Bryson et al., 2004; Bryson and White, 2016). Indeed, once differences between union and non-

union workers are fully accounted for, switching into union coverage is associated with higher satisfaction with pay and hours of work (Bryson and White, 2016). Recent research also indicates that the job-related anxiety that accompanies organisational change at work is ameliorated when employees work in a unionized workplace and are involved in the introduction of the changes (Bryson et al., 2013b).

Equal opportunities

Union representation and collective bargaining provides one means of promoting equality of opportunity within a firm or workplace through the formulation of centralised standards and procedures for monitoring and evaluation. Although fewer than one fifth of workplaces with recognised unions bargain over equal opportunities (EO) issues (Kersley et al., 2006: 194), quantitative research using the 2011 WERS has shown that workplaces in which unions do negotiate, or are consulted, over equal opportunities (EO) issues are more likely to have EO practices in place (Hoque and Bacon, 2014). Workplaces with unions that were not involved in negotiations or consultation over EO issues were found to be no different in terms of their equality practices to workplaces without recognised unions. This latter finding echoes that of Hoque and Noon (2004) who found, using WERS 1998, that workplaces with recognised unions were more likely than non-union workplaces to have an EO policy, but that they were no more likely, on average, to have adopted supporting policies.

These quantitative studies largely pre-date initiatives to train new sets of union equality reps and disability champions, and so the situation may now be somewhat different. Bacon and Hoque's (2012, 2015) surveys of 209 equality reps and 159 Disability Champions find that the vast majority perceive themselves to have had a positive impact on employers' EO practices. They also find that the reps' perceived impact is greater when such issues are subject to negotiation; their impact also rises with the amount of time spent on the role. However, a robust, up-to-date comparison of EO practice in union and non-union workplaces has yet to be undertaken.

What do unions deliver for employers?

Introduction

It is often assumed that unions, as membership organisations largely reliant on membership dues for their income, focus solely on their members' interests. But this is not the case, particularly in countries like Britain, where unions are reliant on employers - at least to some degree - if they are to gain access to workplaces to organise workers and provide them with representation services on-site. Willman et al. (2016) have pointed to the importance of employers in the provision of what they term "off-balance sheet" resources for unions, such as employer good-will and facilities time above statutory minima. Unions also recognise that they can often be more effective when working together with employers, in what are sometimes termed "partnership" or "mutual gains" relationships than they might be in more adversarial arrangements. The case study literature is full of examples (eg. Kochan et al., 2009).

It is often assumed that union bargaining must be to the detriment of the employer since the union is seeking to bargain away some of the surplus that might otherwise go to the employer and its shareholders. But, as Section 1 highlighted, this does not have to be the case because union bargaining can help to arrive at efficient outcomes. In addition, by aggregating worker preferences and communicating them with a single voice to the employer, the union can save an employer the time and money involved in setting up alternative voice arrangements. Finally, the union can also perform what might be termed an agency role for employers, intervening in disputes and providing a disciplining and monitoring role over their members.

Clearly, employer demand for unionisation has been falling, linked to the increased viability of non-union solutions, specifically non-union forms of direct worker voice and related Human Resource Management practices (Bryson et al., 2004; Kaufman, 2014). However, as we will see below in our review of the evidence, there is no clear evidence that non-union forms of voice deliver better results for employers in Britain than union solutions.

In the review of the empirical literature below, two over-arching points are worth bearing in mind. First, much of the literature linking unionisation and employer outcomes makes the simple distinction between being unionised or not. These studies overlook the heterogeneity within the union and non-union sectors. This is unfortunate because as Freeman and Medoff (1984) point out, the real issue is not whether the employer must deal with a union or not, but rather the nature of the relationship between any union and the employer. It is the quality of this collective employment relationship which is key to understanding union effects. Second, most of the literature is based on fairly rudimentary *ceteris paribus* estimates of union effects, often with cross-sectional data, where employer outcomes in a unionised environment are compared with those in an observationally equivalent employer. These regression-adjusted estimates control for obvious sources of potential difference between employers which may affect both the propensity to unionise

and the outcome of interest. However, it is often difficult to judge how robust the results are to assumptions concerning the potential confounding effects of omitted variables and the degree to which estimates may suffer from reverse causation (as might occur, for instance, if a union is organised in response to a poor climate of employment relations, rather than the union creating a poorer climate). With these caveats in mind we turn to the evidence on links between unionisation and employer outcomes in Britain on seven dimensions, namely:

- labour turnover
- absenteeism
- climate of employment relations and collective disputes
- innovation and managing change
- productivity
- financial performance.

Labour turnover

From an economic perspective it is not clear what constitutes an optimal level of labour turnover for a given employer since preventing voluntary quits can be costly to the employer and may not be profit maximising where replacement labour is readily available. However, costs will rise with the investments firms make in their human capital, especially where those investments are in firm-specific human capital. Bryson et al. (2013a) estimated annual quit rates for private sector workplaces in 1990, 1998 and 2004, and in models pooling all three years of data. They found that, conditioning on other structural features of workplaces, union voice regimes had lower quit rates than observationally equivalent "no voice" and non-union voice workplaces. Having non-union voice did not significantly lower quit rates relative to being a "no voice" workplace. Using similar data and estimation techniques Guest and Bryson (2008) find union recognition is negatively associated with the rate of voluntary quits at the workplace, as do Addison and Belfield (2001) and Fernie and Metcalf (1995). In a comparative study for Britain and France using private sector workplace data for 2011 from WERS and REPOSE respectively, Amossé and Forth (2016) highlight the importance of having a union representative on-site for reductions in voluntary quits.

Indeed, in both countries, the negative association between unionisation and voluntary quit rates is only apparent where unions have an on-site union representative. What is more, the presence of direct (non-union) voice is positively associated with quits in Britain, but not in France, the positive effect being of a similar magnitude to the negative union representative effect.

The implication of these studies is that union voice is capable of relaying and helping to resolve concerns employees have at work, resulting in them staying longer than they might have done in the absence of unionisation. However, the most recent evidence suggests the effect may be confined to workplaces with a union representative on-site, raising questions about the effectiveness of union recognition in the absence of a representative.

Absenteeism

Union effects on absenteeism are indeterminate, a priori. On the one hand union representation may reduce "presenteeism" whereby employees go to work even if they are unwell and should really be taking sickness leave. This may occur where union representation reduces employee concerns regarding the prospect of arbitrary dismissal. This would appear in most data sets as an increase in absenteeism. On the other hand, if unions are successful in resolving the sorts of problems that lead to absenteeism such as poor working conditions, stress and fatigue, they will reduce absence taking.

There were a number of studies investigating links between absenteeism and unions in the United States in the early 1980s which tended to find a positive association between union presence and absence (eg. Allen, 1984). An early study for Britain based on the 1990 Workplace Industrial Relations Survey found no association between various measures of unionisation (pre- and post-entry closed shops, management recommending membership, recognition) and absence rates (Fernie and Metcalf, 1995). However, Addison and Belfield (2001) in their investigation using the 1998 Workplace Employment Relations Survey find a positive association between unionisation and worker absence.

Another stream of research has focused on differentiating union effects according to the type of union presence and the relationship with management. For instance, in their study of the automotive industry in Australia Deery et al. (1999) find work absence is lower where there is a positive union-management relationship founded on strong, effective unionism. Addison and Belfield (2004) investigate the effects of stronger and weaker unions in the private sector using WERS 1998: they find the positive association between union presence and absence is stronger where union density is high (above 75 per cent) and where management favours union membership.

More recent evidence comes from other countries. For instance, a study for Canada indicates that union presence is associated with greater use of sick pay entitlements but that unions also reduce the amount of sick leave taken in the presence of high-involvement management practices (Pohler and Luchak, 2014).

But there is little recent evidence for the UK. The most recent study is Veliziotis (2010) who finds a positive association between union membership and sickness absence in the LFS for 2006-2008. Further empirical investigation of this issue is overdue. Any analysis would require investigation of factors influencing employee demand for absence (such as working conditions and wages) but also the factors affecting employer supply of absence, as Treble and Barmby (2011) call it, which relate largely to the nature of the production process.

The climate of employment relations and collective disputes

If unions are successful as collective voice mechanisms then their ability to resolve disputes should, ceteris paribus, improve perceptions of the climate of employment relations at the workplace for employees and management alike. However, it can be in unions' interests to foment discontent among covered employees to improve their bargaining hand vis-a-vis the employer, such that the union sacrifices good relations in return for a better bargaining

outcome for employees. In this scenario it is possible that employer perceptions of climate might be poorer than covered employees' perceptions in the same workplace. Difficulties arise in identifying the true effects of unions on perceptions of climate, just as in the case of job satisfaction, because the trigger for unionisation is often a poor or deteriorating workplace climate. Most studies are cross-sectional which makes it difficult to establish the direction of any causal relationship between unionisation and climate.

Early studies investigated union associations with managerial perceptions of the climate of employment relations contained in the Workplace Employment Relations Surveys. They found negative associations in 1990 (Wood and de Menezes, 1998; Fernie and Metcalf, 1995) but no association in 1998 (Addison and Belfield, 2001). A study examining the association in all five WERS studies between 1980 and 2004 found the negative association between managerial perceptions of climate and unionisation diminished over time in the private sector such that by 1998 unions had no statistically significant effect (Blanchflower and Bryson, 2009). Bryson et al. (2013a) come to similar conclusions when examining the associations between managerial perceptions of climate and alternative voice arrangements at the workplace: "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" (2013: 211). Indeed, the voice measures were no longer jointly significant by 2004. This disappearance of a negative association between union status and climate was also apparent in employee perceptions, as captured in the British Social Attitudes Survey (Bryson and Forth, 2011). The trend is consistent with a decline in other indicators of conflictual relations, such as industrial action (Dix et al., 2009), suggesting a potential fundamental change in the nature of employment relations in Britain.

In the 1998 WERS on-site lay union representation was associated with poorer employee perceptions of climate, but had no effect on employer perceptions, a finding the author suggests is consistent with the possibility that poorer employee perceptions of climate may be "a by-product of union effectiveness in holding employers to account" (Bryson, 2005: 1129). No such *ceteris paribus* investigation has been undertaken with WERS 2011

Union presence is strongly associated with more frequent collective disputes, whereas non-union forms of voice are not. This was true in the past, but it is also true in the private sector in WERS 2011 and, of course, in some sectors the spillover effects to other firms and workers can be substantial. However the role of unions in raising the chance of industrial action is nowhere near as pronounced as in French workplaces (Amossé and Forth, 2016).

Innovation and managing change

Much of the early theoretical and empirical literature on unions and innovation started from the premise that unions would see management's desire to initiate changes as an opportunity to bargain over the terms under which change could take place. The Donovan Commission of the 1960s described how union representatives would resist employer efforts to reorganise work on the grounds that it required workers to undertake work that went beyond craft-based job descriptions. This came to be known as the enforcement of "restrictive practices" or "featherbedding" (Johnsen, 1990). However, many of these craft-based and other job demarcations began to disappear in the 1980s, sometimes with unions winning wage concessions in return (Metcalf, 1989). This created the pre-conditions for

more flexible working, such as the team working and functional flexibility described earlier. Indeed, recent studies have found that unionised workplaces are more likely than non-union workplaces to employ 'high performance' methods of work organisation, such as team working and problem-solving groups (Askenazy and Forth, 2016). Unionised workplaces are, however, less likely to have extensive systems of incentives, such as performance-related pay (ibid.).

Turning to capital investments, employers' desire to invest in capital offers opportunities for trade unions to capitalise on firm sunk investments, such as R&D, to negotiate higher wages (Grout, 1984; Malcolmson, 1997). This was termed the "hold-up" problem and was thought to deter capital investment in unionised firms. The early literature found empirical support for this proposition (Menezes-Filho, 1997). However, a more recent review of the literature finds mixed union effects in the UK: technological diffusion is positively related to unionisation but, conditioning on potentially confounding factors, it is unrelated. Unionisation is also unrelated to R&D intensity (Menezes-Filho and Van Reenen, 2003). The review finds more negative union effects in the United States which the authors suggest might be linked to a stronger focus on wage bargaining in the US, to the exclusion of employment.

The literature has moved on again recently in two important respects. First, it has begun to focus on the level at which union bargaining occurs, namely workplace/firm level, or sectorally (Haucap and Wey, 2004; Mukherjee and Pennings, 2011). This matters because union behaviour is thought to differ in these two settings in ways that can affect the trade-off between wages and employment. Second, there is increased interest in firm product innovations, as well as process innovations discussed above. Product innovations may increase the demand for labour, something valued by unions, whereas process innovations often entail the substitution of capital for labour, so these two different types of innovation may have different implications for unions. The very recent empirical literature suggests that workplace or firm-level bargaining in Britain is positively associated with product innovation. It is also positively associated with the introduction of new technology but not statistically significantly so (Bryson et al., 2016a). The authors conclude: "Early empirical studies suggesting unions may be detrimental to innovation thus offer a misleading picture of union effects today".

Productivity

There are a multitude of channels by which unions could, in theory, affect productivity, whether measured in terms of sales per employee, value-added, or their quality-adjusted equivalents. The literature has tended to assume that unions' "voice" face can be pro-productive. For instance, it may improve the quality of information managers use to make their decisions. Equally, it is assumed that unions' "monopoly" face used to bargain for higher wages could be detrimental to firm performance, at least measured in terms of profitability. However, union bargaining over higher wages can also be positive for firm productivity since, other things equal, higher wage levels can attract and retain more productive workers, as well as motivating them to work harder. Furthermore, by creating conditions in which workers are less likely to quit, unions may create the conditions for higher employer investments in human capital, which should also lead to higher productivity.

Despite theoretically ambiguous effects, early studies tended to find that the average effect of unions on productivity in the United States was very small but positive, but negative in the United Kingdom (Doucouliagos and Laroche, 2003), though in his review Hirsch (2004) emphasised how much union productivity effects vary across workplaces.

In Britain, the majority of studies have used the WIRS/WERS data to investigate links between unions and productivity. These studies usually rely on a subjective measure of how productive the workplace has been relative to the industry average and changes in this measure. Studies for the 1980s through to 1990 found a negative association (Ferne and Metcalf, 1995). But the association was no longer statistically significant by 1998 and, furthermore, unionisation was associated with significant improvements in productivity in the three years prior to the survey (Addison and Belfield, 2001).

There are no directly equivalent studies covering 2004 and 2011, but Bryson et al. (2013a) consider union effects in the presence or absence of non-union voice. Running separate analyses for the surveys in 1984, 1990, 1998 and 2004, they find neither union nor non-union voice outperforms no voice regimes in any year. However, if one pools the data for all years union-only voice is associated with lower productivity than non-union voice, and there is weak evidence that this is also the case for dual channel voice in which union and non-union voice are combined.

Studies that examine the interaction between unionisation and other features of the workplace find these really matter when understanding union effects on productivity. High-involvement management practices are usually thought to be productivity-enhancing but in their analysis of WERS 1998, Bryson et al. (2005) find this is only the case in a unionised setting. The positive correlation between unionisation and various forms of high-involvement or high-commitment practices may help account for the disappearance of the negative union association with productivity recently.

In their classic study of union effects in the United States Freeman and Medoff (1984) argue that it is the relationship between management and unions that is crucial to the impact unions have at the workplace. Bryson et al. (2006) tested this proposition using WERS 1998 but found that while employer responsiveness to worker voice was productivity-enhancing the effect was only apparent in the non-union sector.

Product market conditions also matter. Using WERS 1998 Metcalf (2003a) found unions were associated with lower productivity in the trading sector where the employer faced little competition, but the effect was not apparent when they faced many competitors. The finding is consistent with unions being able to extract greater rents when employers are faced with fewer competitive pressures. However, opportunities for such rent extraction are likely to diminish in the face of increasing product market competition, both globally and domestically, in most industries.

Pencavel's (2004) exhaustive comparison of productivity effects in WERS 1990 and 1998 focused considerable attention on the importance of bargaining structures (whether there were multiple unions and, if so, whether they bargained jointly or separately). His conclusion is that "by the end of the 1990s, average union-non-union differences in labour productivity appear to be negligible. Where differences emerge, they are in those

establishments with fragmented bargaining” (op. cit., pp. 219-220), but these only accounted for around 7 per cent of all workplaces.

A recent investigation of union effects on workplace labour productivity using the 2011 WERS focuses on the role of worker representatives at the workplace. It finds on-site union lay representatives are positively but not significantly associated with labour productivity in the private sector in Britain whereas they are negatively associated with labour productivity in France (Amossé and Forth, 2016). Direct voice, on the other hand, is positively associated with labour productivity in Britain in 2011.

Financial performance

The standard assumption in economics is that private sector firms seek to maximise profits. Improvements in labour productivity are, of course, essential to societal well-being but, at the firm and workplace-level, profit-maximising employers must consider the costs as well as the productivity benefits of what they do, how they manage, and the practices and procedures they adopt. Thus, even if unions are productivity-enhancing, these benefits must be considered alongside the costs of unionisation, most notably the union wage premium discussed earlier. If unions are unable to compensate for the union wage premium with better productivity than the non-union sector, this implies that they hit company profits. Adverse effects may also arise if unions’ ability to capture rents reduces firms’ incentives to invest, or if industrial action damages the firm’s reputation with its customers or directly affects their ability to sell goods or services.

Reviewing the international evidence, Metcalf (2003b) finds early empirical studies, primarily for the United States, found a negative association between unions and profitability. Hirsch (2004) comes to the same conclusion in his review. But more recent studies point to a more nuanced set of results in which union effects depend quite heavily on other factors such as the degree of market competition and labour-management relations. Similarly, for Britain, early studies found unions were negatively associated with workplace financial performance in the 1980s (Blanchflower and Oswald, 1988). By WIRS 1990, the relationship between unions and financial performance was highly contingent on unions’ interaction with other factors such as market conditions, workplace practices, firm size, and union strength, which led to speculation that unions’ ability to extract rents from firms had diminished over the 1980s (McNabb and Whitfield, 1997; Bryson, 1999; Addison et al., 2000; Machin and Stewart, 1996; Booth and McCulloch, 1999). By 1998, most studies were finding no significant relationship (Bryson and Wilkinson, 2002; Addison and Belfield, 2001).

There are difficulties identifying trends in union associations with performance across studies when they use different methodologies and model specifications. So Blanchflower and Bryson (2009) run identical analyses for the separate WERS studies in 1980, 1984, 1990, 1998 and 2004. They find a negative and statistically significant association between union recognition and financial performance among private sector workplaces in 1980 and 1984, but negative non-significant effects since 1990, confirming the diminution of union effects over time. Further analysis revealed that the gap had disappeared “due to an improvement in the relative position of unionised workplaces rather than any deterioration among non-unionised workplaces” (op. cit., p. 68).

The only study investigating unions' associations with workplace performance using WERS 2011 is the British-French comparative study undertaken by Amossé and Forth (2016). They find that the presence of an on-site union representative is not significantly associated with financial performance in either country; the same is true if the indicator of on-site union representation is replaced with a broader indicator of the presence of recognised unions at the workplace.

The impact of unions in the aftermath of recession

Introduction

The recent recession had profound effects on the UK labour market, most notably in terms of falling labour productivity and real wages. It was followed by a substantial squeeze on public sector finances that led to a reduction in the size of the public sector. Given speculation about the role of unions and their ability to retain their influence in the workplace, the recession posed particular challenges for trade unions and their members. Here we briefly review some of the emerging evidence on unions' ability to influence outcomes for employers and workers under the following headings: wages; job security; work effort; and workplace performance.

Wages

The decline in real wages in Britain since the onset of recession is almost unprecedented in a period of low inflation, raising questions as to how management has been able to make such sizeable wage adjustments. One common hypothesis is that the reduced incidence of collective bargaining and a loss of union bargaining power has limited unions' ability to block pressures for wage reductions. In fact, the incidence of workplace trade unions and membership density changed little between 2004 and 2011 (see Section 2), although there was a reduction in the scope of collective bargaining in the private sector which may be indicative of unions' reduced ability to maintain influence over a wide bargaining agenda (van Wanrooy et al., 2013). However, analyses of private sector workplaces in the 2011 WERS indicate that unionisation was not associated with the likelihood of managers saying they froze or cut wages in response to the recession, nor to wage freezes or cuts in the last pay settlement for the largest non-managerial occupational group. Nor was there a noticeable decline in the size of the union wage premium - instead we see counter-cyclical movement, consistent with previous studies (Forth and Bryson, 2015; Bryson and Green, 2015). The wage union coverage premium in the public sector was two to three times larger than it was in the private sector and remained constant between 2006 and 2012 (Bryson and Green, 2015). It is therefore difficult to pinpoint a break in union power which may have provided employers with the opportunity to downwardly adjust real wages. If such a change has occurred, it may date back further than the onset of the recession itself.

Job insecurity

If unions continue to achieve a wage premium, while demand for goods and services has fallen, union covered employees may be increasingly concerned that their jobs could be at risk if employers seek cost reductions through redundancies. Alternatively unions may mitigate feelings of insecurity in recession where they modify their wage claims or intercede

with employers on members' behalf to avoid compulsory redundancies. The proportion of employees in the Skills and Employment Survey (SES) who thought there was "any chance at all" of losing their job and becoming unemployed in the next 12 months rose between 2006 and 2012 among union and non-union employees and, while the proportion saying so in 2012 was higher among union than non-union workers, the difference is not significant when comparing "like" employees (Bryson and Green, 2015). In earlier surveys (1986, 1997, 2001 and 2006) the differences were quite small and only statistically significant in 2001 and 2006. Similarly, in WERS neither union recognition nor union density were associated with perceived job insecurity among private sector employees, either before or after the crisis. However, union members perceived greater job insecurity than their non-member counterparts in 2011, even within the same workplace (Bryson et al., 2016b).

Work effort

According to the SES there were marked increases between 2006 and 2012 in the proportion of employees who strongly agreed "my job requires that I work very hard" but the trend was much stronger among union employees such that the gap was large and statistically significant by 2012 (Bryson and Green, 2015). The implication is that unionised workers have found it more difficult to resist work effort intensification in the light of the recession. However, evidence from private sector employees in WERS 2011 indicates that neither union recognition nor union membership were associated with feeling greater time pressure at work (Bryson et al., 2016).

Workplace performance

Analyses of private sector workplaces in WERS 2011 finds neither the presence of a union recognised for pay bargaining nor union density were significantly associated financial performance or labour productivity. However, workplaces that experienced increasing union density between 2004 and 2011 saw improvements in both their financial performance and labour productivity (Bryson and Forth, forthcoming). The authors speculate that this may be limited evidence in favour of the proposition that unionisation may be beneficial to workplaces seeking to improve their performance after the recession, perhaps because unions may have adopted a "mutual gains" stance. However, there is also evidence that those workplaces recognising a union in 2004 were more likely to have closed down by 2011 than similar non-unionised workplaces (van Wanrooy et al., 2013: 27-28)

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