Accounting for geographical variance in the union satisfaction gap

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ABSTRACT

Evidence of spatial variance in the relationship between trade union membership and job satisfaction is limited. Using three nationally representative data sets, we examine lower levels of satisfaction among union members and considers how this relationship varies geographically across the nations and regions of Great Britain. The analysis demonstrates that the union satisfaction gap can largely be accounted for by relative characteristics of union members and the jobs that they hold. However, there is evidence of geographical variance. The union satisfaction gap is generally found to be highest within Scotland and North of England. Despite high levels of union membership, evidence of a union satisfaction gap in Wales is relatively weak. These differences relate to differences in the perceptions of industrial relations among employees across these areas, which appear to be related to geographical variance in worker heterogeneity.

1 INTRODUCTION

Satisfaction with work has become a popular topic with government now keen to measure well-being not just in terms of economic outcomes (ONS, 2016). One of the most widely researched issues related to job satisfaction is the apparent dissatisfaction with work expressed by union members (the 'union satisfaction gap'), with this literature going back as far as Freeman (1978) and Borjas (1979). The emphasis of this vast empirical literature has been to establish whether the lower levels of satisfaction among union members either relates to the role of unions in voicing and fostering feelings of dissatisfaction among members or whether it is simply a spurious statistical by-product arising from differences in the characteristics of union members or in the quality of the jobs that they hold. Few studies of the union satisfaction gap have considered the issue of geographical variation and those that do have tended to compare differences across countries (Green and Tsitsianis, 2005; Hipp and Givan, 2015; Laroche, 2016; Lincoln and Boothe, 1993); regional variance within nation states has been ignored. This is surprising for several reasons. First, unionisation rates differ markedly across regions implying that perceptions of unionisation and its value may vary geographically. Second, union effects often vary with union density because density affects union bargaining power and unions' capacity to voice

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workers' concerns, so one might expect the causal effects of unions to differ between high and low union density regions. Third, job quality, an important determinant of union membership, has been demonstrated to vary across different parts of the UK (Felstead *et al.*, 2013). Finally, the climate of industrial relations, which is central importance to understanding the union satisfaction gap (Bender and Sloane, 1998), has also been demonstrated to vary across Great Britain (Drinkwater and Ingram, 2005). We therefore hypothesise that geographical differences in the employment relations context could have particular relevance in contributing to spatial variance in the relationship between union membership and job satisfaction between the regions and nations of Great Britain.

This article directly addresses these issues through an examination of the relationship between union membership and job satisfaction within Great Britain and how this relationship varies spatially. This is undertaken via an analysis of three nationally representative surveys: the Skills and Employment Survey (SES), the Workplace Employment Relations Survey (WERS) and the British Household Panel Survey (BHPS). Each of these surveys have their relative strengths and weaknesses in terms of their ability to allow us to accurately control for the determinants of job satisfaction. Through a systematic and, where possible, consistent examination of the importance of person, job and workplace characteristics to our understanding of the relationship between unionisation and job satisfaction, the analysis aims to identify the presence of commonalities in our findings derived from the three data sets being considered. We utilise both measures of overall job satisfaction and measures based upon different facets of job satisfaction. The analysis demonstrates that whilst the union satisfaction gap can largely be accounted for by relative characteristics of union members and the jobs that they hold, there is evidence of geographical variance. The union satisfaction gap is estimated to be highest within Scotland and Northern England. Despite high levels of union membership, evidence of a union satisfaction gap in Wales is absent. These differences appear to relate to differences in the perceptions of industrial relations among employees across these areas.

2 JOB SATISFACTION, UNION MEMBERSHIP AND PLACE

In his seminal study, Freeman (1978) observed that union members exhibited both lower levels of job satisfaction and lower levels of turnover, a counterintuitive relationship that subsequent literature has sought to resolve. Three explanations are usually offered. The first is causal and emphasises the role of unions in providing workers with a 'voice' through which they express their dissatisfaction with work, as opposed to having to 'exit' their jobs (Freeman, 1978). Unions may also generate dissatisfaction to strengthen their bargaining hand in negotiations with employers by encouraging workers to be more critical of their workplaces and their jobs (Freeman and Medoff, 1984). Some authors have however questioned whether it is indeed in the interest of unions to generate feelings of dissatisfaction (Barling *et al.*, 1992; Pfeffer and Davis-Blake, 1990), suggesting instead that unions should be expected to increase levels of job satisfaction through supporting improvements in job quality and engendering increased levels of commitment among workers. Alternative explanations suggest that the union satisfaction gap is simply the result of omitted variable bias that induces a spurious negative association between membership and job satisfaction. These may relate to the inability to adequately control for the poorer quality jobs or workplaces in which union members are employed. Bryson and Freeman (2013)

find that perceptions of poor working conditions are strongly associated with a desire for union representation. Some job characteristics may be endogenous with respect to unionisation, such as being employed in high-risk occupations or sectors (Fiorito and Dauffenbach, 1982; Hirsch and Berger, 1984). The third explanation considers the influence of personality traits that predispose employees with a greater propensity for job dissatisfaction to also be most likely to see the benefits of union joining—a selection process inducing reverse causation. In keeping with this proposition, analyses based upon panel data tend to find that union effects on job dissatisfaction are much reduced after accounting for individual fixed effects (Bryson and White, 2016). Cross-sectional studies using instrumental variables to isolate any causal impact of unionisation come to similar conclusions (Bryson et al., 2004). In a meta-analysis of the union–job satisfaction relationship, Laroche (2016) concludes that, after controlling for selection effects, 'the evidence for the expected negative impact of union membership on job satisfaction is comparatively weak' (Laroche, 2016: 735).

Official estimates for 2017 for the UK reveal that union density in England ranges from 18 per cent in London to approximately 28 per cent across Northern England. Among the devolved nations of the UK, union density is also estimated to be approximately 30 per cent (DBEIS, 2018). The persistence of such geographical variations in trade union membership within the contemporary period demonstrates that labour continues to be easier to organise in areas characterised by an historical legacy of trade unionism (Beynon et al., 2012; Charlwood, 2002; Holmes, 2006; Monastiriotis, 2007). Explanations point to the importance of the 'experience good' model of union joining behaviour (Bryson and Gomez, 2003; Gomez and Gunderson, 2004), where difficult to quantify benefits of union membership can only be fully appreciated through its direct experience or through the recommendations of family (Blanden and Machin, 2003; Bryson and Davies, 2019) or other close associates (Griffin and Brown, 2011). An alternative explanation for the path dependence of union density is provided by Booth's (1985) social custom model, which suggests that both the reputational benefits associated with membership and costs associated with non-membership will be greater in areas characterised by more favourable attitudes towards trade unions. If the cause of the union satisfaction gap is the increased propensity of those working in poor quality environments to become union members, each explanation suggests that any threshold of dissatisfaction with work that may trigger the decision to join a trade union may be expected to be higher in areas of low union density. Other things being equal, such explanations suggest that estimates of the union satisfaction gap may be lower in areas of high union density.

If unions are a force for attaining improvements at the workplace, we may also expect them to be better able to achieve this in areas of high union density due to the increased power that they are able to exert (Booth and Bryan, 2004). However, an important aspect of job quality with which unions are inseparably linked relates to the poorer climate of industrial relations within unionised workplaces. Given the value that workers place on good relationships at the workplace (Freeman and Rogers, 1999), the adversarial nature of collective bargaining that is inherent within the exit voice model will be expected to contribute to lower levels of job satisfaction among unionised workers (Hammer and Avgar, 2005). This is confirmed in an analysis of the SCELI survey of six British labour markets by Bender and Sloane (1998), who reveal that after accounting for endogeneity between union status and job satisfaction, the union satisfaction gap disappears upon controlling for the poorer relations between employers and employees that are perceived by union members.

They conclude that the key measure of job quality often omitted in analyses of the union satisfaction gap is the climate of employment relations at the workplace. Their analysis however did not examine issues of spatial variance in estimates of the union satisfaction gap.

Evidence of geographical variation in the climate of industrial relations across Great Britain is provided by Drinkwater and Ingram (2005) in their analysis of the British Social Attitudes Survey. After conditioning for the poorer climate industrial relations that are generally perceived by those who are employed at workplaces where unions are present, Drinkwater and Ingram (2005) demonstrate that perceptions of the industrial relations climate vary spatially; workers are most likely to report good industrial relations in Wales, with workplace harmony being worst in the West Midlands, Scotland and the North West. Why might such differences emerge? Beynon *et al.* (2012) describe how the emergence of an industrial civilisation within a rural context contributed to the establishment of a unique kind of union movement in Wales. Based around mining and its intense associated with local communities, the emphasis of the movement was on solidarity among an unskilled workforce and whose influence spilled over to other areas of everyday life. Beynon *et al.* (2012) suggest that such conditions have contributed to the persistence of more favourable attitudes towards trade unionism within the contemporary period (also see Huggins and Thompson, 2015). The evolution of trade unionism in Wales can possibly be contrasted with a more turbulent history of industrial relations elsewhere. Foster (2001) describes the evolution of a particularly militant, strike prone Scottish trade union movement during the 20th century characterised by political strikes, demarcation disputes and willingness to confront both powerful Scottish industrialists, the Labour Party and policies aimed at supporting big business. We hypothesise that estimates of the union satisfaction gap may be expected to be greater to those areas characterised by poorer climates of industrial relations and that conditioning for employment relations will make a greater contribution to our understanding of the satisfaction gap in these areas.

3 DATA AND METHODS

In order to explore the relationship between union membership and job satisfaction within Great Britain, we utilise data from the SES, the WERS and the BHPS. Each of these surveys collects data on a variety of individual, job and workplace characteristics, including questions related to job satisfaction and trade union membership. The SES are nationally representative sample surveys of adults aged 20–60, collecting data on the skills and employment experiences of those in work. The present analysis uses data from the 2006 and the 2012 surveys. WERS provides nationally representative data on the state of workplace relations and employment practices in Britain within workplaces with five or more employees, excluding the agricultural sector. The analysis utilises data from the 2004 and 2011 surveys (see Kersley *et al.*, 2006; van Wanrooy *et al.*, 2013) and draws upon data collected from both the main management interviews and the survey of employees conducted at surveyed workplaces. Finally, the BHPS is a survey tracking individuals and households over time. A major development at Wave 9 (1999) was the recruitment of two additional samples to the BHPS in Scotland and Wales that facilitate independent country-level analysis and comparisons with England post-devolution (Taylor, 2010). We utilise BHPS data from 1991 to 2008.

In terms of measuring job satisfaction, respondents to SES, WERS and BHPS are asked how satisfied they are with detailed aspects of their jobs. The SES asks respondents about 14 job aspects encompassing pay, promotion prospects, relations with the boss, job security, opportunity to use abilities, ability to use initiative, quality of management, hours, fringe benefits, the work itself, the amount of work, variety in the work, training and the friendliness of co-workers. Within both the 2004 and 2011 WERS, respondents to the Employee Survey are asked how satisfied they are with respect to eight aspects of their jobs related to achievement, initiative, influence, training, pay, security, the work itself and involvement in decision making. Finally, across each wave, respondents to the BHPS have been asked to rate how satisfied they were with their pay, job security, the work itself and their hours. Both the SES and BHPS ask respondents to rate their satisfaction on a seven-point scale, whilst WERS utilises a five-point scale. We recode responses to these questions to centre on zero. For each data set, we construct a summative index that encapsulate the attitudes of respondents towards different aspects of their jobs by taking the simple mean value of the recoded responses to all of the 'detailed' job aspects available. In addition, the SES and BHPS also ask respondents to provide an overall assessment of their job satisfaction, which we also utilise so that the robustness of our results can be further assessed. Respondents to the SES are asked, 'All in all, how satisfied are you with your job?' whilst respondents to the BHPS are asked, 'All things considered, how satisfied or dissatisfied are you with your present job overall?' We again recode responses to these questions to centre on zero.

Regarding the measurement of union membership, both the SES and WERS surveys ask all respondents, 'Are you a member of a trade union or staff association?' Respondents to the BHPS are asked, (1) 'Is there a trade union or similar body such as a staff association recognised by your management for negotiating pay or conditions for the people doing your sort of job in your workplace?' Those who respond yes are then asked, (2) 'Are you a member of this trade union/association?' Up until Wave 7 of the BHPS, those who responded 'no' to question 1 or 2 were also asked, (3) 'Are you a member of any trade union or similar body?' This question was however removed following Wave 7, and so for consistency, we only utilise information from questions 1 and 2 in the derivation of union membership. Also, during Waves 2, 3 and 4 of the BHPS, union membership questions were only asked of individuals who had changed job since the previous wave. During these waves, we impute union membership status from lagged values for those individuals who remain in the same job, on the assumption that people do not generally leave unions unless they change job (Bryson et al., 2005). Finally, information on the climate of employment relations at the workplace is only available from WERS. Respondents to the employee questionnaire were asked, 'In general, how would you describe relations between managers and employees here?' Similarly, respondents to the management questionnaire are asked, 'How would you rate the relationship between management and employees generally at this workplace?' We consider the importance of both to our understanding of the union satisfaction gap.

To consider whether unionisation is independently associated with job satisfaction, we estimate a series of regression models based upon individual-level data from each of the surveys described previously. Regressions of the following general form are estimated:

$$JS_{it} = \alpha + PC_{it}\beta + E_{it}\gamma + U_{it}\delta + \varepsilon_{it}$$

The dependent variable JS_{it} represents our alternative measures of job satisfaction reported by employee i during period t. Our key variable of interest relates to union membership status (U_{it}). By simultaneously controlling for the personal characteristics (PC_{it}) and employment-related characteristics (E_{it}), our statistical models identify the separate and additional effect of trade union membership on reported levels of job satisfaction. Separate analyses are undertaken on data from the SES, WERS (both repeated cross-sectional data) and BHPS (unbalanced panel data) for each available measure of job satisfaction. As questions of membership status are not asked of the self-employed within the BHPS, for consistency, our analyses are restricted to employees. We make the assumption of cardinality for our measures of job satisfaction so that ordinary least squares and fixed effects regressions can be applied. To account for the clustering of observations within WERS (workplaces) and the BHPS (individuals), assessments of statistical significance are based upon robust standard errors. We initially undertake a systematic Great Britain-level analysis of the union satisfaction gap so that estimates derived from the three surveys can be compared. The second stage of our analysis then examines whether the relationship between union membership and job satisfaction varies spatially through the introduction of regional specific control variables for union membership within models, which otherwise remain unchanged.

Previous empirical literature has highlighted the importance of omitted variable bias in contributing to union membership being associated with lower levels of job satisfaction. The three surveys utilised in our analysis each exhibit strengths and weaknesses in terms of their ability to accurately account for job, workplace and individual heterogeneity. Comprehensive measures pertaining to these characteristics are not uniformly available from each data set. Even where present, the focus and wording of questions can vary between surveys. We therefore present a series of estimates of the effect of union membership upon job satisfaction that condition for different aspects of job quality so that the sensitivity of our results to the control variables deployed can be assessed. We first estimate 'baseline' estimates of the union satisfaction gap based upon pooled cross-sectional data utilising simple ordinary least squares techniques containing a parsimonious set of personal and workplace controls that are available within each survey including age, gender, education, ethnicity, hours, workplace size, sector and industry. These controls are plausibly exogenous with respect to union membership status and are used to account for differences across workers to isolate the overall relationship between union membership and job satisfaction. We then estimate a 'full' specification that conditions on job traits that may be endogenous with respect to unionisation to account for differences in the characteristics of jobs held by members and non-members of unions. These include controls for occupation, tenure, pay, labour market prospects, promotion prospects, skills utilisation, discretion and work intensity. The availability and definitions of these variables are described in Table A1. Some of these characteristics may reflect potential positive outcomes associated with union membership, such as pay (Booth and Bryan, 2004) and job security (Meng, 1990). Others are included as potential sources of the satisfaction gap, primarily as a result of unions being more likely to organise within problematic workplaces, such as reduced levels of discretion and opportunities for promotion among union members (Pfeffer and Davis-Blake, 1990; Renaud, 2002). The separate effects of introducing these control variables one at a time upon estimates of the union satisfaction gap are also considered in Table A2. Having examined the effects of job heterogeneity, we then utilise the hierarchical properties of the BHPS and the WERS data to estimate fixed effects regressions that

can control for otherwise unobservable differences across people and workplaces, respectively. We also return to the WERS data to examine the effect of conditioning for perceptions of employment relations upon the union satisfaction gap.

4 RESULTS

4.1 Descriptive analysis

Table 1 presents estimates of trade union membership and job satisfaction derived from the SES, WERS and BHPS. All figures relate to employees aged 16 and over (20 in the case of SES). Survey weights are applied so that the achieved samples reflect their populations. Across each survey, overall levels of union membership among employees within Great Britain are estimated to be approximately 31 per cent, broadly comparable with official estimates of trade union membership derived from the Labour Force Survey over this period (37 per cent in 1991, 29 per cent in 2001 and 26 per cent in 2011; DBEIS, 2018). Despite pooling data from these surveys over time, the sample sizes that are available for detailed geographies are relatively small. In both the BHPS and the SES, dedicated boosts to survey samples for both Wales and Scotland help to alleviate this problem. We group the remaining regions of England into three areas: the North comprising the North West, North East and Yorkshire and Humberside; the Midlands comprising the East Midlands and the West Midlands; and the South comprising London, the East of England, the South East and the South West. Wales consistently exhibits the highest rates of union membership (40–48 per cent) whilst rates are lowest in the South (24–26 per cent). Across each of the five measures of job satisfaction, average levels of satisfaction with work is highest in Wales. There is no consistent ordering across the remaining areas. Based upon an index of relative job satisfaction presented in italics, Table 1 also confirms that union members generally report lower levels of job satisfaction than non-members do across each of the surveys. In terms of geographical variations, relatively large differences in job satisfaction by union membership status are reported among employees in the North of England.

Both variations in job satisfaction by region and union membership status will reflect differences in a variety of personal-related and job-related characteristics. The key to our understanding of the union satisfaction gap is the climate of industrial relations. Table 2 presents evidence of geographical variations in perceptions of employment relations based upon data from WERS. Perceptions of employment relations expressed by managers are higher than those expressed by employees. Thirty-five per cent of employees are employed at workplaces where managers express that the relationships between managers and employees are very good. However, only 21 per cent of employees rate these same relationships 'very good'. Across all areas, union members are less likely to be employed at workplaces where managers perceive relationships with employees as very good (28 per cent compared with 38 per cent). However, differences by membership status are greater when the perceptions of employees themselves are considered. Almost half of union members (49 per cent) perceive relationships with managers as being 'not good', compared with approximately a third (32 per cent) of non-members. Consistent with previous evidence, perceptions of 'very good' relationships with managers are highest in Wales among both employees (27 per cent) and managers (42 per cent). It is also observed that differences in the reporting of 'very good' employment relations by membership status

Table 1: Regional variations in union membership and job satisfaction

	North	Midlands	South	Wales	Scotland	Great Britain
Skills and Employment Survey (2006, 2011)						
Union membership (%)	36.0	29.8	25.6	43.9	34.7	30.6
Overall job satisfaction	1.35	1.37	1.28	1.52	1.35	1.33
Union satisfaction ratio	*0.91*	*1.02*	*1.03*	*1.03*	*0.99*	*1.00*
14-Item job satisfaction index	1.14	1.15	1.10	1.28	1.15	1.13
Union satisfaction ratio	*0.93*	*0.93*	*1.01*	*0.99*	*0.92*	*0.97*
Sample size	1,737	1,820	2,767	868	1,434	8,626
Workplace Employment Relations Survey (2004, 2011)						
Union membership (%)	35.3	30.3	24.1	48.4	39.6	30.6
8-Item job satisfaction index	0.50	0.53	0.53	0.57	0.51	0.52
Union satisfaction ratio	*0.63*	*0.76*	*0.72*	*0.72*	*0.77*	*0.71*
Sample size	11,243	6,596	17,138	2,063	4,636	41,676
British Household Panel Survey (1991–2008)						
Union membership (%)	37.8	30.3	25.7	40.2	35.2	31.1
Overall job satisfaction	1.19	1.26	1.20	1.25	1.24	1.21
Union satisfaction ratio	*0.86*	*0.88*	*0.90*	*1.01*	*0.92*	*0.90*
4-Item job satisfaction index	1.37	1.42	1.37	1.42	1.36	1.38
Union satisfaction ratio	*0.86*	*0.90*	*0.90*	*0.94*	*0.94*	*0.90*
Sample size	21,075	13,966	33,796	13,017	17,153	99,007

Sample sizes for SES and BHPS refer to non-missing observations for the overall measures of job satisfaction. In the case of the BHPS, these refer to the repeated observations of panel members. Figures in italics refer ratio of job satisfaction among union members measured relative to non-members. Cronbach's alphas for the summative indices are SES: 0.89, WERS: 0.85 and BHPS: 0.65. The relatively low value for the BHPS reflects the relatively small number of variables (4) that contribute to this index.

Table 2: Regional variations in relationships with managers and job satisfaction

Area	Relationships with managers	Manager's perceptions of employment relations			Employee perceptions of employment relations		
		Non-members	Members	All	Non-members	Members	All
North	Not good	8.3	9.6	8.8	30.9	50.7	37.9
	Good	52.1	61.2	55.3	43.7	35.9	41.0
	Very good	39.5	29.1	35.8	25.4	13.4	21.2
Midlands	Not good	10.8	9.8	10.5	32.6	47.4	37.0
	Good	53.8	65.1	57.2	43.5	38.8	42.1
	Very good	35.3	25.0	32.1	23.9	13.9	20.9
South	Not good	8.3	13.2	9.5	31.5	48.7	35.6
	Good	52.7	57.9	53.9	43.8	39.2	42.7
	Very good	38.9	28.5	36.4	24.7	12.2	21.7
Wales	Not good	2.0	7.4	4.6	27.1	42.9	34.8
	Good	51.9	56.2	54.0	39.8	37.1	38.5
	Very good	46.1	36.4	41.4	33.1	20.0	26.7
Scotland	Not good	7.8	14.3	10.4	33.4	48.3	39.3
	Good	56.2	58.8	57.2	43.8	40.1	42.3
	Very good	35.9	26.7	32.2	22.9	11.6	18.4
Great Britain	Not good	8.5	11.4	9.4	31.6	48.7	36.8
	Good	53.0	60.0	55.2	43.6	38.1	41.9
	Very good	38.4	28.4	35.3	24.8	13.2	21.3
Job satisfaction							
Great Britain	Not good	0.36	0.23	0.31	0.04	0.02	0.04
	Good	0.52	0.37	0.47	0.66	0.65	0.66
	Very good	0.70	0.55	0.66	1.09	1.09	1.09
	All employees	0.57	0.40	0.52	0.57	0.4	0.52
	Sample	26,193	15,483	41,676	26,193	15,483	41,676

are narrowest in Wales, whether they be based upon the perceptions of managers (21 per cent differential in Wales compared with 26 per cent across Great Britain) or of the employees themselves (40 per cent in Wales compared with 47 per cent across Great Britain), which may contribute to the union satisfaction gap being lower in Wales. The base of Table 2 demonstrates that job satisfaction among employees increases monotonically with the reporting of good relationships between managers and employees. This relationship is stronger when perceptions of employment relations are expressed by the employees themselves. Finally, differences in job satisfaction by membership status can be entirely accounted for by conditioning on the climate of industrial relations reported by employees.

4.2 Multivariate analysis

Table 3 presents estimates of the association between union membership and job satisfaction derived from the multivariate analysis. In each case, the reference category are non-members of unions. Across each of the five measures of job satisfaction

derived from the three surveys, the 'baseline' specification (Model 1) confirms that union members exhibit significantly lower levels of job satisfaction than non-members do. Analyses of the SES and BHPS indicate that estimates of the union gap based upon overall measures of job satisfaction are larger than those derived from the summative indices (approximately 40 and 30 per cent, respectively). Upon introducing controls for job quality (Model 2), the size of the union satisfaction gap declines within both the analyses of the SES and WERS but remains relatively unchanged in the analysis of the BHPS. Across each data set, estimates of the satisfaction gap are relatively insensitive to the inclusion of a variety of controls for job attributes (see Table A2). Only discretion at work, estimated to be positively associated with job satisfaction but levels of which are lower among union members, contributes to a sizeable reduction in the union satisfaction gap. The relative persistence of the union satisfaction gap within the analysis of the BHPS could in part be attributable to the absence of a measure of discretion from this survey.

The estimation of a workplace fixed effect regression based upon WERS data indicates that after accounting for job heterogeneity, the remaining union satisfaction gap (-0.040^{***}) cannot be attributed to workplace heterogeneity (-0.034^{***}). Controlling for individual fixed effects within the BHPS reduces the size of the negative coefficient on union membership by approximately a third for overall job satisfaction and by almost two-thirds in the case of the summative index. These unobserved characteristics could include time invariant personality traits or job characteristics not measured by the BHPS. The persistence of lower levels of job satisfaction after controlling for individual fixed effects within the BHPS could be attributable to union voice or, in the context of limited controls for job quality, to the effects of time varying omitted variable bias, such as changes in working conditions that influence joining behaviour.

Finally, we return to WERS to examine the influence of the employment relations climate. Conditioning upon employment relations climate as perceived by managers does not influence estimates of the union satisfaction gap. However, the inclusion of controls for employee perceptions of the industrial relations climate accounts entirely for the lower levels of satisfaction reported by union members, even in the absence of other controls for job quality (see Table A2). What is unclear is the extent to which union membership is associated with a genuinely poorer climate of industrial relations or whether union members simply exhibit an increased propensity to 'voice' poorer quality relations between managers and employees. However, as controlling for worker heterogeneity within the BHPS was unable to account for all of the satisfaction gap, perceptions of the poorer employment relations among union members in WERS would appear at least in part to reflect real differences in the industrial relations climate.

We next consider whether the negative association between union membership and job satisfaction derived from these multivariate estimates varies spatially through the inclusion of regional specific control variables for union membership. The estimated coefficients represent the differential in job satisfaction between union members and non-members for the area in question. The upper panel of Table 4 presents results derived from our baseline specifications that contain relatively limited controls that account for regional variation in both workforce characteristics and in the industrial and sectorial composition of employment. Evidence of a statistically significant negative relationship between union membership and job satisfaction appears to be strongest within the North of England, particularly in relation to overall measures of job satisfaction, but it is also apparent in the Midlands and Scotland. Evidence

Table 3: Accounting for the union satisfaction gap

	SES		WERS		BHPS	
	Member	R^2	Member	R^2	Member	R^2
Overall satisfaction						
1. Baseline	−0.090*** (−2.87)	0.04			−0.122*** (−7.02)	0.04
2. Full	−0.075*** (−2.56)	0.27			−0.140*** (−7.97)	0.06
3. Fixed effects					−0.088*** (−4.29)	0.45
Sample	$N = 8,572$		$N = 41,667$		$N = 98,933$	
Summative index						
1. Baseline	−0.064*** (−2.94)	0.03	−0.110*** (−11.33)	0.07	−0.095*** (−6.49)	0.05
2. Full	−0.035* (−1.84)	0.35	−0.040*** (−5.52)	0.47	−0.127*** (−8.67)	0.08
3. Fixed effects			−0.034*** (−4.44)	0.55	−0.042*** (−2.79)	0.54
4. Full + managerial perceptions of employment relations			−0.040*** (−5.61)	0.47		
5. Full + employee perceptions of employment relations			−0.000 (−0.05)	0.59		
Sample	$N = 8,569$		$N = 41,667$		$N = 98,160$	

Estimated effects of union membership upon job satisfaction. See text and Table A1 for a description of control variables. Z statistics are reported in parenthesis.

* Significance at 10% level.
** Significance at 5% level.
*** Significance at 1% level.

Table 4: Geographic estimates for the union satisfaction gap

| | SES | | WERS | BHPS | |
	Overall	Sum	Sum	Overall	Sum
1. Baseline specification					
North	−0.188*** (−3.10)	−0.096** (−2.27)	−0.140*** (−8.07)	−0.183*** (−5.10)	−0.138*** (−4.49)
Midlands	−0.105* (−1.69)	−0.100** (−2.31)	−0.095*** (−4.08)	−0.114*** (−2.58)	−0.122*** (−3.23)
South	−0.002 (−0.03)	−0.013 (−0.37)	−0.107*** (−7.07)	−0.118*** (−3.78)	−0.093*** (−3.44)
Wales	−0.099 (−1.19)	−0.064 (−1.10)	−0.085** (−2.13)	−0.071* (−1.93)	−0.018 (−0.58)
Scotland	−0.092 (−1.37)	−0.113** (−2.42)	−0.076*** (−3.04)	−0.100*** (−2.80)	−0.085*** (−2.95)
2. Full specifications					
North	−0.150*** (−2.78)	−0.048 (−1.34)	−0.055*** (−4.28)	−0.184*** (−5.18)	−0.157*** (−5.16)
Midlands	−0.058 (−1.05)	−0.038 (−1.03)	−0.022 (−1.39)	−0.136*** (−3.14)	−0.158*** (−4.27)
South	−0.004 (−0.08)	0.027 (0.88)	−0.025** (−2.23)	−0.141*** (−4.59)	−0.127*** (−4.81)
Wales	−0.077 (−1.05)	−0.034 (−0.70)	−0.033 (−1.28)	−0.089** (−2.42)	−0.057* (−1.87)
Scotland	−0.115* (−1.93)	−0.122*** (−3.10)	−0.075*** (−4.09)	−0.125*** (−3.57)	−0.124*** (−4.44)
3. Employment relations and individual fixed effects					
North			−0.011 (−1.06)	−0.081* (−1.86)	−0.026 (−0.81)
Midlands			−0.003 (−0.21)	−0.062 (−1.20)	−0.051 (−1.35)
South			0.016* (1.75)	−0.113*** (−3.14)	−0.056** (−2.11)
Wales			0.004 (0.19)	−0.077 (−1.46)	−0.035 (−0.90)
Scotland			−0.026* (−1.71)	−0.085* (−1.72)	−0.037 (−1.06)
Sample	8,572	8,569	41,667	98,933	98,160

See notes to Table 3.
* Significance at 10% level.
** Significance at 5% level.
*** Significance at 1% level.

for the presence of a union satisfaction gap in Wales is relatively weak. The second panel of Table 4 considers whether this geographical variance persists upon conditioning for further measures of job quality, but with the continued omission of controls for employment relations. Within the BHPS, evidence of a union satisfaction gap remains strongest within the North of England, whilst estimates for Wales are noticeably smaller than those for other areas. After controlling for job quality within the SES and WERS, evidence of a union satisfaction gap now appears to be strongest within Scotland and then the North of England.

Finally, the lower panel of Table 4 first examines the effect of accounting for perceptions of the industrial relations climate on area-based estimates of the satisfaction gap utilising data from WERS. For brevity, controls based upon both the perceptions of employees and managers are included together. As expected, the introduction of these controls largely accounts for the relative dissatisfaction with work otherwise reported by union members within Scotland, the North and the South, reflecting the relatively poor climate of employment relations perceived by employees in these areas. However, what remains unclear is *why* perceptions of employment relations are able to account for geographical variance in the union satisfaction gap. One explanation could be geographical variance in worker heterogeneity, shaped by the historical context of industrial relations, which influences why people join unions and how union members view their jobs. Alternatively, geographical variations in the perceptions in employment relations could reflect real differences in how employees, unions and firms interact. A possible insight is provided by fixed effects estimates of the union satisfaction gap based upon BHPS data also presented at the base of Table 4. Conditioning upon individual heterogeneity also has the effect of dampening estimates of the union satisfaction gap in areas of high union density, with the exception of Wales where union membership does not appear to be associated with otherwise unobservable time invariant characteristics that are correlated with lower levels of job satisfaction. The smaller, relatively uniform and generally insignificant estimates of the union satisfaction gap that persist in high density areas could indicate an absence of geographical variance in the nature of union voice. The important caveat to this is the absence of detailed controls for job quality (including employment relations) that would allow us to examine this directly. Finally, after controlling for individual heterogeneity, a significant union satisfaction gap persists in the South. In the context of the relatively low levels of union membership, this result could reflect the particularly low levels of job quality that workers in this area have to experience before deciding to join a trade union.

5 CONCLUSIONS

The moderating effects of the employment relations context across different geographical settings, encompassing the ideological dimension of unionisation, are potentially important factors in understanding how union membership influences job satisfaction (see Laroche, 2016: 732). Previous studies that have considered the issue of spatial variance have however been limited to cross-country comparisons (Green and Tsitsianis, 2005; Laroche, 2016; Lincoln and Boothe, 1993). This article provides a consistent and comparative analysis of the relationship between trade union membership and job satisfaction between the regions and nations of Great

Britain. Utilising both overall and summative measures of job satisfaction, multivariate analysis of three nationally representative surveys confirms previous research that union members express lower levels of satisfaction with work. However, the size of the union satisfaction gap varies spatially. Estimates of the union satisfaction gap are found to be relatively high in Scotland and the North of England. These differentials persist upon the introduction of a variety of potentially endogenous controls for job quality. By contrast, within Wales—the most unionised part of the Great Britain—evidence of lower levels of job satisfaction among trade union members is relatively weak. This provides a possible insight as to why job satisfaction has previously been found to be generally higher in Wales (Jones and Sloane, 2009; Sutherland, 2008; Sutherland, 2016). Our results also accord with previous evidence of geographical variance in industrial relations across the UK (Drinkwater and Ingram, 2005). Consistent with Bender and Sloane (1998), we find that geographical variations in the union satisfaction gap can be accounted for by conditioning on the poorer relationships with managers reported by union members. Our analysis demonstrates that the effect of the industrial relations context on the union satisfaction gap varies spatially.

In reflecting upon the extensive literature regarding trade union membership, Beynon *et al.* (2012: 200) suggest that 'some rather fundamental questions about why people join trade unions have been overlooked, most notably the impact of history and location and the patterning of kinship ties that affect collective understandings'. The context and character of the union movement need to be considered in order to understand its continued influence, and any analysis of geographical variance needs to consider the 'historically received understandings' of collective action and support held by employees. Such issues are central to our understanding of the relative dissatisfaction with work expressed by union members, where it is of particular importance to consider the 'social context that shapes attitudes and behaviour' (Brown *et al.*, 2012: 26) within which assessments of job satisfaction are formed. This is demonstrated by accounting for worker heterogeneity, which suggests that geographical variance in the union satisfaction gap and accompanying assessments of the industrial relations climate are being driven by person-level fixed traits of individuals joining unions. Even within areas of high union density where the 'experience good' model of union joining behaviour predicts that benefits of membership can be more easily perceived, the reasons why people join trade unions appear to vary geographically. Our analysis contributes to addressing a key concern raised by Hammer and Avgar (2005); in the analysis of the union satisfaction gap, worker heterogeneity is not random, and research must pay closer attention to the complexity of attitudes. We demonstrate that attitudes of workers to union membership and their jobs will be shaped in part by contextual factors related to the historical legacy of trade unionism across different geographical settings. This is also of practical significance to policy makers who are keen to measure well-being at work not just in terms of economic outcomes (ONS, 2016).

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APPENDIX

Table A1: Description of control variables

	SES	WERS	BHPS
Age (years)	20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–65	16–21, 22–29, 30–39, 40–49, 50–59, 60+	16–20, 21–25, 26–35, 36–45, 46–55, 55–65, 65+
Family status	Male/Female—no children	Male/Female—no children	Male/Female—no children
	Male/Female—youngest 0–5 years	Male/Female—youngest 0–4 years	Male/Female—children
	Male/Female—youngest 6–16 years	Male/Female—youngest 5–11 years	Male/Female—children
		Male/Female—youngest 12–18 years	
Industry†	Agriculture (not WERS)		Mining and utilities
	Manufacturing		Manufacturing
	Electricity, gas		Wholesale, Distribution
	Construction		Transport, Storage and Communications
	Wholesale		Finance and Business
	Hotels		Other Services
	Transport		
	Finance		
	Real Estate		
	Public Administration		

(Continues)

Table A1. (Continued)

	SES	WERS	BHPS
Ownership	Public Non-profit Private—UK Private—Part UK Private—Foreign	Education Health Other Public Private—UK Private—Foreign	Private Public Non-profit Other
Workplace size	1–10, 10–25, 25–100,100–500, 500+	5–9, 10–24, 25–49, 50–99, 100–249, 250–499, 500–999 1000+	1–9, 10–24, 25–49, 50–99, 100–199, 200–499, 500–999, 1000 or more
Hours	1–10, 11–20, 20–30, 30–35, 35–40, 40–45, 45–50 50+	1–19, 20–29, 30–39, 40–49, 50–98	1–19, 20–29, 30–39, 40–49, 50+
Occupation‡	Sub Major Groups of Standard Occupational Classification		
Tenure	<1, 1–2, 3–5, 6–10, 11–20 20+	<1, 1–2, 2–5, 5–10, 10+	<1, 1–2, 2–3, 3–4, 4–5,5+
Pay	Pay decile	Pay band	Pay decile

(Continues)

Table A1. *(Continued)*

	SES	WERS	BHPS
Labour market prospects	Chance of job loss in next 12 months Never Very Unlikely Quite Unlikely Evens Quite Likely Very Likely Missing If looking for work today, how easy or difficult to find a job as good as your current one? Very Easy Quite Easy Quite Difficult Very Difficult	I feel my job is secure in this workplace Strongly Agree Agree Neither Agree or Disagree Disagree Strongly Disagree	
Promotion	Chances of being given a significant promotion within present organisation.		Opportunities for promotion in current job? Yes

(Continues)

Table A1. *(Continued)*

	SES	WERS	BHPS
			No
Skills	No Chance	Skills match those	
	Low	needed to do job?	
	Evens	Much Higher	
	High	A bit Higher	
	Definite	About the Same	
	I have enough	A bit Lower	
	opportunity to use the	Much Lower	
	knowledge and skills		
	that I have.		
	Strongly Disagree		
	Disagree		
	Agree		
	Strongly Agree		
Discretion	How much influence do	How much influence do	
	you personally have	you have over the	
	on?	following?	
	How hard you work,	Tasks undertaken, pace	
	what tasks you do, how	of work, how work is	
	to do tasks, quality	done, order of work	
	standards to which you	and start/finish time.	
	work.	Responses coded as:	
	Responses coded as:	A lot	
	A great deal	Some	

(Continues)

Table A1. (*Continued*)

	SES	WERS	BHPS
	A fair amount	Little	
	Not much	None	
	None at all	Index derived based on average response provided.	
	Index derived based on average response provided.		
Speed/ Deadlines	Working to Deadlines/ Working at Speed:		
	All the Time		
	Almost all the time		
	Around three quarters of the time		
	Around half the time		
	Around quarter of the time		
	Almost never		

† SIC92 replaced SIC80 as classification for industry of employment from Wave 12 of the BHPS. Data for Waves 1–11 have been converted to SIC92 with the aid of SIC mapping resources developed by Jennifer Smith (see http://www2.warwick.ac.uk/fac/soc/economics/staff/jcsmith/sicmapping/).
‡ SES and WERS each utilise SOC2000 ($N = 25$). BHPS utilises SOC90 ($N = 22$).

Table A2: Separate influence of job attributes on the union satisfaction gap

	SES		WERS		BHPS	
	Member	R^2	Member	R^2	Member	R^2
Overall satisfaction						
1. Basic model	−0.090*** (−2.87)	0.04			−0.122*** (−7.02)	0.04
2. Occupation	−0.090*** (−2.81)	0.05			−0.105*** (−6.01)	0.04
3. + Tenure	−0.105*** (−3.29)	0.04			−0.105*** (−5.96)	0.04
4. + Pay	−0.095*** (−3.01)	0.05			−0.144*** (−8.26)	0.04
5. + Lab Mkt	−0.114*** (−3.78)	0.11				
6. + Promotion	−0.098*** (−3.21)	0.09			−0.154*** (−8.92)	0.05
7. + Skills	−0.099*** (−3.40)	0.16				
8. + Discretion	−0.045 (−1.47)	0.10				
9. + Speed/Deadlines	−0.083** (−2.64)	0.05				
Summative index						
1. Basic Model	−0.064*** (−2.94)	0.03	−0.110*** (−11.33)	0.07	−0.095*** (−6.49)	0.05
2. + Occupation	−0.050** (−2.21)	0.05	−0.105*** (−11.00)	0.08	−0.075** (−5.08)	0.06
3. + Tenure	−0.081*** (−3.64)	0.03	−0.108*** (−11.07)	0.07	−0.092*** (−6.20)	0.05
4. + Pay	−0.066*** (−3.01)	0.04	−0.112*** (−11.76)	0.10	−0.127*** (−8.63)	0.06
5. + Lab Mkt	−0.079*** (−3.76)	0.11	−0.093*** (−11.23)	0.29		
6. + Promotion	−0.070*** (−3.35)	0.11				
7. + Skills	−0.071*** (−3.58)	0.20	−0.111*** (−11.97)	0.12	−0.121*** (−8.38)	0.06
8. + Discretion	−0.025 (−1.21)	0.13	−0.051*** (−6.02)	0.27		
9. + Speed/Deadlines	−0.061*** (−2.77)	0.04				
10. + Manager Perceptions of IR Climate			−0.110*** (−11.51)	0.08		
11. + Employee Perceptions of IR Climate			−0.005 (−0.69)	0.39		
	$N = 8,572$		$N = 41,667$		$N = 98,160$	