Abstract

The introduction of a statutory recognition procedure offers British unions the opportunity to reverse membership decline by organising non-union workers. The aim of this paper is to test theories of individual union joining in order to assess the likely impact of the new procedure on British union membership. Responses of a nationally representative sample of non-union employees to the question 'how willing would you be to join a union if one were available at your workplace?' are analysed. Results suggest that the new legislation will cause union membership to rise among manual employees, but that unions will face a much harder challenge organising non-manual employees. Unless unions can change their environment, or change themselves then long-term decline is likely.

JEL classifications: D71 J51

Key words: Trade Unions, employee attitudes, unionisation

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Why Do Non-Union Employees Want To Unionise? Evidence from Britain

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Introduction

In Great Britain trade union membership, power and influence have declined sharply since the end of the 1970s. The proportion of the workforce that have their wages determined by collective bargaining has fallen from 70% in 1979 to just 36% in 1998. Over the same period, union membership declined from 12.9 million to 7.8 million (Metcalf 2001). Unions could reverse declining membership in two ways: first, by strengthening organization and increasing membership in workplaces where they already have a recognition agreement (if mean union density in workplaces where unions are already recognized were to return to the levels of 1980, union membership would rise by around 2.3 millions). Second, by recruiting, organising and gaining recognition in workplaces currently without a union presence. The 1998 British Social Attitudes Survey found that 40% of employees in non-union workplaces would be very likely or fairly likely to join a union if one were present at their workplace. If unions were able to use the statutory recognition procedure created by the 1999 Employment Relations Act to organise these workers, union membership would rise by around 3.2 millions. Of course unions will only be able to do this if employees who want to unionise are concentrated in similar jobs and industries. Otherwise unions will not enjoy sufficient support to win recognition campaigns. This paper focuses on the viability of union membership renewal through organising non-union employees.

The aim of this paper is to examine the determinants of willingness to join a union among non-union employees, using a nationally representative sample of non-union employees from the 1998 British Social Attitudes Survey. Although studies that examine the attitudes of non-union employees towards unionisation are common in the USA, this is the first time such an analysis has been attempted for the UK. The analysis will test of the applicability of US theories of union joining to Great Britain. It will also allow an assessment of the likely impact of the new procedure for statutory union recognition (introduced in the 1999 Employment Relations Act) to be made. Reviewing the evidence provided by the Workplace Employee Relations Survey series, Millward, Bryson and Forth (2000) argued that British employees had 'lost their appetite' for union membership. The paper will also allow an assessment of the scale of that loss of appetite. The paper is organized as follows: Section 1 looks at issues around union membership and union recognition, specifically the causes of union decline, the opportunities and threats for unions contained in the 1999 Employment Relations Act. It argues that the key to union fortunes, at

least in the short-term is the attitude of non-union employees to union membership. Section 2 reviews the literature and theory on the determinants of union joining, and develops testable predictions based on theory. Section 3 describes the British Social Attitudes Survey data; Section 4 sets out the results and discusses the practical implications. Section 5 sets out conclusions.

1. Union Membership and Recognition in Great Britain

1.1 The causes of union membership decline

Analysis of successive Workplace Industrial Relations surveys have shown that since 1980, private sector employers establishing new workplaces have been unlikely to bargain with unions, and that the consequent decline in union recognition is a key cause of the overall decline in trade union membership (Disney *et al*., 1995; Machin, 2001; Millward *et al*., 2000). This decline in union recognition can be partly attributed to 1) the actions of the Conservative Governments of Margaret Thatcher and John Major, and 2) to wider changes in the structure of UK and world economies. Product markets were de-regulated, state controlled enterprises privatised and state subsidies cut. Previously protected industries were exposed to the full force of global competition. In this environment management had a stronger incentive to resist unionisation. Policies of full employment were abandoned in favour of control of inflation so unemployment soared. The state withdrew support for collective bargaining which had existed since the 1968 Royal Commission (Donovan report). The 'abstentionist' legal framework and tacit government support for collective bargaining that had its roots in the 1906 trades disputes act was abandoned. In its place were a series of rigid legal rules that restricted the ability of unions to pursue industrial action; unions could no longer coerce employers into 'voluntary' recognition agreements with threats of secondary action and 'blacking' of work (Dunn and Metcalf, 1996). The cumulative effect of these changes seriously weakened unions, however academic opinion differs on the inevitability of further decline. Towers (1997) has argued that the decline of unions has left a 'representation gap'. Workers still desire a voice at work, this desire offers unions a way back. By contrast, Millward *et al*. (2000) after reviewing the evidence of successive WER surveys came to the conclusion that employees had 'lost their appetite' for union membership, so decline is set to

continue (Pencavel, 2000, discusses this debate, and argues that the balance of evidence supports Millward *et al*.). Machin (2001) reached a similar conclusion.

If unions are to reverse membership decline, they will have to organize workers in the non-union private sector. The statutory recognition procedure introduced by the 1999 Employment Relations Act offers unions the prospect of organising these workers. Whether this prospect can be realised depends upon the way in which the unions respond to the opportunity, the way in which the legislation works in practice, and of course the level of demand for unions among non-union employees. The next section casts a brief eye over the union and employer responses to the statutory recognition procedure, and the early evidence about the way in which the procedure is working in practice.

1.2 The impact of statutory recognition; an initial assessment

The 1999 Employment Relations Act introduced a statutory procedure for recognizing trade unions for collective bargaining purposes. The first principle of the procedure is majoritarianism; the main justification for awarding recognition is that the majority of the workforce want it. The employer must recognise a union if either the union can demonstrate that more than 50% of workers in the bargaining unit are union members. Or if a majority of the workforce in the bargaining unit vote for union recognition, and this majority includes more than 40% of the workforce in that bargaining unit, *i.e.* a simple majority is not enough if turnout is low. (See Wood *et al*., 2001 for a full discussion of the new procedure and Wood and Goddard, 1999 for a comparison with the US and Canadian systems). Although this legislation is an advance for trade unions, key features of a neo-liberal environment are preserved; a change in government has not restored the trade union privileges and protection removed by successive Conservative governments. Neither the state or leading managers envisage a significant role for unions in macro-economic management and the union role in the workplace remains limited (Boxall and Haynes, 1997).

Unions are responding to this environment by investing increased resources in organising and recruitment activity (Heery *et al*., 2000). However there remain large variations in trade union organising effectiveness. It seems likely that unions' ability to get new recognition agreements will depend in large part on the attitudes and behaviour of employers (Charlwood, 2001). Kleiner (2000) develops an analytical framework to explain variation in union membership levels between the USA and Canada. He posits that the key variable, which explains the difference in unionisation rates between these two countries is

the intensity of management resistance. The intensity of management resistance reflects the balance of incentives and disincentives to oppose unionisation. This analytical framework clearly has important implications for Britain, which are investigated below.

Research by Forth and Millward using the 1998 WER survey has demonstrated that there is a union wage differential of 10%, but that there is no difference in the current level of pay settlements, in other words the union wage mark-up is a historical legacy which is unlikely to be carried forward when employers sign new union recognition agreements (Forth and Millward, 2000a; 2000b). Therefore the immediate threat of unions raising wage costs is minimal; this threat is further reduced by the willingness of unions to pursue policies of partnership and co-operation with employers. This means that the costs of unionisation are likely to be low if employers establish a partnership with a union voluntarily. An employer must weigh these (probably minimal) costs against the risks of higher costs caused by an aggressive organising campaign from a hostile union. In the USA, an employer can be confident that he or she will be able to use the legal minefield of the NLRB procedure to exclude unions indefinitely. This may yet become the case in the UK, but until case law is established any employer attempting to do this would face considerable risk. The threat of future militancy and the inconvenience of having to negotiate with unions may mean that employer's preferences are to remain union free, but until employers have a full understanding of the tactics which they can get away with, the intensity of resistance is likely to be low by North American standards.

Evidence on employer attitudes and behaviour support this hypothesis. Surveys of employers found that just one non-union employer in five said that they would definitely oppose a union organizing campaign (Gall and McKay, 2001). There is anecdotal evidence that some employers are fiercely resisting unions, but a large number of voluntary agreements are also being concluded. According to TUC figures, in the period from Labour's election victory in 1997 to the end of 2000, 323 new recognition agreements were signed between unions and employers. 50% of these agreements occurred during the year the procedure became law (2000). All but one of these agreements was signed voluntarily. As of November 2000, just twelve cases were under Central Arbitration Committee adjudication (TUC, 2001). This evidence suggests that in the short term at least, unions are facing a relatively permissive organising environment; the biggest constraint on unions is likely to be the attitudes of the workforce. Particularly if Millward *et al*. are correct in arguing that employees have lost their appetite for union membership. The next section explores the theoretical literature on employee attitudes towards unionisation.

2. Theories of Union Joining

There is an extensive theoretical and empirical literature of attempts to model the individual's unionisation decision. Wheeler and McClendon's extremely useful review of the literature cites 36 separate studies from the USA alone (Wheeler and McClendon, 1991). They also cite similar studies from Great Britain, Canada, Holland and France. The British literature is less extensive, Wheeler and McClendon cite a single study; Guest and Dewe's (1988) social psychological study of union membership among a sample of workers in the UK electronics industry. Although that study uses a similar theoretical framework to the one adopted here, it is based on workers in a single industry, not a nationally representative sample of all workers, and examines union membership among workers who are already unionised, not willingness to join a union among non-union workers. Wheeler and McClendon use three classifications for the theoretical models used in these studies. First, model A: frustration/dissatisfaction/dissonance explanations of union joining. Second, model B: explanations based on a rational evaluation of the benefits of union membership. Third, model C: political/ideological explanations.

2.1 Theoretical framework

Model A – Dissonance theories: Dissonance theories are based on the premise that dissonance between expectations of work (*e.g.* that work should be enjoyable and rewarding) and the experience of work (*e.g.* work environment is unpleasant and pay is low) is the trigger to unionisation (see for example Premack and Hunter, 1988). However if dissonance causes workers to want to unionise they will only do so if they perceive unions to be effective at remedying their discontent. From this theoretical insight we can develop two hypotheses that can be tested using the BSAS98 data:

Hypothesis 1: An individual who expresses job dissatisfaction will be more likely to be willing to join a union than an individual who is satisfied.

Hypothesis 2: An individual who believes that their pay is low will be more likely to be willing to unionise than an individual who believes that their pay is reasonable or on the high side.

Model B – Utility theories: Utility theories are based on the premise that the decision to unionise is based on a rational calculation of the costs and benefits of unionisation

compared to the costs and benefits of remaining non-union (see for example Farber and Saks, 1980). Clearly this theory is not incompatible with model A, however under model B employees can unionise even if they are not dissatisfied. Model B leads to the following hypothesis:

Hypothesis 3: An individual will be more likely to unionise if he or she believes that the presence of a union at their workplace will improve their workplace, and be less likely to unionise if he or she believes that a union would make no difference or make their workplace worse.

Model C – Political/ ideological belief theories: Model C is distinct from the other two models because it is not based on a rational calculation of costs and benefits. Individuals will unionise for these altruistic reasons if they have left wing political views which lead them to believe in the necessity of social solidarity between workers (Adams, 1974). Adams himself rejected this idea as overly simplistic, subsequent studies have found little evidence to support it. However it is also possible that political beliefs may cause workers to unionise for reasons that are not altruistic. Political beliefs will alter an individual's assessment of the costs and benefits of unionisation. An individual with left wing political views is likely to believe that the benefits of unionisation are higher, and the costs lower, while an individual with right wing political views is likely to believe the opposite (Kelly, 1998). Political views may affect willingness to join a union by altering an individual's calculation of the utility of union membership, instead of via the more simplistic mechanism of altruism set out in model C.

Hypothesis 4: An individual with left-wing political views will be more likely to be willing to join a union than an individual with centrist or right-wing political views.

Wheeler and McClendon developed a theoretically rigorous model, which also integrates models A and B and which fits the large body of empirical evidence. Simply put, they argue that the trigger to unionisation is a gap between expectations and achievements, but the form that the gap takes influences the path to unionisation or rejection of unionisation that the individual follows. From the perspective of this paper the problem with this theory is, it is not possible to directly test it using the cross-section data available.

2.2 Other influences on desire for union membership

Demographic and individual characteristics: Many of the previous studies in this area have found associations between particular individual and demographic characteristics (*e.g.* gender, age, occupation) and willingness to unionise. However, with two notable exceptions, there is little consistency between the findings of different studies. These exceptions are that other things equal, workers aged 60 and over are less likely to unionise, and black workers are more likely to unionise. Wheeler and McClendon explain the latter finding in terms of greater solidarity, and higher levels of dissatisfaction due to discrimination. It seems likely that where studies do find associations between individual characteristics, that similar explanations can be extrapolated. For this reason it is sensible to use multivariate analysis to control for these characteristics. The empirical models presented in Section 4 include controls for age, gender, ethnicity, marital status, educational attainment, geographical location, occupation, job tenure, broad industry and workplace size. Separate models are estimated for manual and non-manual employees. Previous studies of unionisation in Great Britain (Green, 1990, Bain and Elias, 1985) have found significantly different patterns of unionisation between these two groups of workers. These differences are likely to reflect fundamental differences in the experience of work at the point of production. Finally, there are a number of other factors which might be expected to systematically influence an individual's propensity to unionise, these are discussed below.

Previous union membership: If an individual who is currently a non-member in a non-union workplace was formerly a union member this may affect their perceptions of union instrumentality. If Towers (1997) is correct in arguing that Conservative policies towards trade unions created a 'representation gap' we would expect former members to be more likely to join in the future.

Current union membership: A small proportion of employees in non-union workplaces retain union membership despite the lack of a bargaining presence for that union at their workplace (this is the equivalent of associate membership in the USA). We would expect these individuals to be more likely to join a workplace union if one were available.

Alternative voice mechanisms: Evidence from the USA shows that if managers put in place effective non-union participation and representation structures, workers no longer desire union representation (Freeman and Rogers, 1999). Therefore we would expect workers who report non-union representation at their workplace to be less likely to want to join a union. However evidence on the effectiveness of non-union representation in Britain

points in the opposite direction; the limitations of non-union voice actually increase desire for unionisation in the company studied by Gollan (2001).

Voice or exit?: Dissatisfied workers can either seek to change their workplace through unionisation (voice) or quit to find a new job that meets their expectations of employment (Freeman and Medoff, 1984; Hirschman, 1970). Therefore we might expect that employees who intend to voluntarily quit their job for reasons other than retirement will be less likely to want to join a union.

3. Data

Data comes from the 1998 British Social Attitudes Survey. This is the sixteenth of an annual series designed and conducted by the National Centre for Social Research. The survey is designed as a representative sample of British adults, aged 18 and over. Overall 3,146 interviews were carried out, a response rate of 59%, of these, 1408 were employees in employment. Full details of the survey design can be found in Jowell *et al*. (1999). The strength of the British Social Attitudes survey is that it questions employees on aspects of workplace life and industrial relations. It also contains detailed information on employee's social and political attitudes and socio-economic background, which may have an important bearing on their attitudes and actions towards trade unions (Bryson, 1999). The weakness of the data stems from the breadth of subjects that the survey examines. This means that a lot of key variables are based on single items that may fail to adequately capture the factor that they are attempting to measure. The usual disclaimers about the limitations of cross-section data apply; it can only illuminate associations between variables, not causal relationships.

For the purposes of this paper, the key question was, 'If there were a trade union present at your workplace, how likely would you be to join?' Respondents were asked to reply on a four-point scale, from very likely, to not at all likely. Responses to this question were used as the dependent variable in cross-tabulations and multivariate analysis. Observations were discarded if they had missing values for any of the variables used in the multivariate analysis. This left 285 observations for non-manual workers, and 197 observations for manual workers.

4. Results and Discussion

Table 1 shows cross-tabulations between willingness to join a union and a range of individual, job and workplace characteristics for employees in non-manual occupations. Table 2 presents the same information for employees in manual occupations. 50% of manual employees describe themselves as either very likely or fairly likely to join a union if one were available at their workplace. The equivalent figure for non-manual employees is 33 %.

These results suggest that unions will be able to achieve recognition agreements using the statutory procedure among groups of manual workers, but that getting majority support among groups of non-manual employees will be more difficult. Two major caveats need to be added to this extrapolation. First, we don't know how workers are distributed across workplaces. Second, we do not know how employee's attitudes towards union membership will change in the context of a union organizing campaign. Research from the USA suggests that union and employer tactics are critically important influences on the individual unionisation decision (Bronfrenbrenner, 1997). What these figures do show is the baseline from which unions will be starting. In the case of non-manual employees this baseline may be too low for unions to be able to achieve majority support in most circumstances.

The cross-tabulations show a very strong relationship between a belief in union instrumentality and willingness to unionise for both groups of employees. Among manual workers, 28% thought that a union would make their workplace better in some way, with 57% indifferent. Among non-manuals, the proportion who thought that unions would make their workplace better was just 12.5%, with 67% indifferent. Given the strength of the relationship between a belief in union instrumentality and willingness to join, the scale of employee indifference towards unions that these figures reveal should surely be a cause of concern for unions.

There is also a positive relationship between both job dissatisfaction, perceptions of low pay and willingness to join for both groups. These initial findings are in line with both dissonance and utility theories of unionisation. To investigate these associations further, and to get estimates of the influence of other individual, demographic and workplace characteristics *all other things being equal* two regression models were estimated, the first for employees in manual occupations, the second for employees in non-manual occupations[1]. The results from these analyses were then converted to marginal effects. Marginal effects

can be interpreted as the change in the probability of an individual being in each of the four categories compared to the sample mean if the dummy variable changes from zero to one and all other things are held equal. The exceptions are the two scale variables for social and political attitudes (information about the components of these scales and descriptive statistics for the scales themselves can be found in the technical appendix). Here the marginal effects can be interpreted as the change in the percentage probability of being in each category if there is a one standard deviation change in the individual's score on the scale and all other things are held constant. The marginal effects for the two samples are reported in Tables 3 and 4. Full details of the modelling procedures and full results from the regression analyses can be found in the technical appendix.

Dissonance: Contrary to expectations, there is with one exception, no association between increased job dissatisfaction and increased willingness to join a union compared to the sample mean, other things being equal. The exception is for non-manual employees who are highly dissatisfied. However there is large and statistically significant association between high levels of job satisfaction and decreased willingness to join a union for both manual and non-manual employees. The results for low pay are similar, although the size of the effects are smaller, and with one exception not statistically significant (the exception is non-manual employees who perceive themselves to be very low paid, who are around 13% more likely to want to unionise than an equivalent worker who believes that their pay is reasonable) These findings only partially confirm hypotheses one and two, but they are still compatible with path theories of unionisation which see dissatisfaction as a trigger. Workers who are very satisfied are dramatically less likely to want to unionise than all other workers. High levels of satisfaction mean that conditions do not provide a potential unionisation trigger. For all other workers there is an element of dissatisfaction built into the job, which may provide a trigger for unionisation.

These results are different from comparable results in the USA (*e.g.* Kochan, 1980; Farber and Saks, 1980). US results find that increasing job dissatisfaction is associated with an increased propensity to unionise. The difference may be explained by the different context in which the data was collected. In America, the union organising campaign provides the trigger – unions focus general dissatisfaction on a few key issues, and mobilise around them. In Britain, this mobilisation process is absent so the results differ.

[1] The extremely strong correlation between perceived union instrumentality and willingness to join meant that union instrumentality variables could not be included in the model.

Politics: As expected there is a strong positive relationship between left wing political views and willingness to join a union and a negative relationship between right-wing political views and willingness to join. The effect is smaller for manual workers than for non-manual workers. Other things being equal a manual worker at the left extreme of the distribution would be 24% more likely to join compared to a worker at the sample mean while a manual worker with political views on the right extreme of the distribution would be 24% less likely to join. A non-manual worker with extreme left views would be 27% more likely to join, while a non-manual worker with extreme right wing views would be 27% less likely to be willing to join. These results confirm hypothesis four. The influence of social attitudes also varies with occupation. The association between authoritarian social attitudes and a decreased willingness to join is slight and insignificant for non-manuals. It is larger for manual workers, a manual worker with libertarian views would be 19% more likely to be willing to join compared to the sample mean, while a manual worker with authoritarian views would be 19% less likely to be willing to join. This association is only just short of statistical significance.

Previous union membership: Among manual employees, a former member is around 14% more likely to want to join a union compared to the sample mean (effectively a worker who has never been a union member). For non-manual employees, previous union membership has absolutely no relationship with current willingness to join. This finding suggests that for manual workers only, there is a representation gap. Manual workers have not 'lost their appetite' for union membership (or if some have, considerable numbers retain it), rather management have taken union membership off the menu. This finding suggests that the observed fall in union membership in workplaces where unions continue to have a presence that prompted Millward *et al.* to reach their 'loss of appetite' conclusion was not solely due to changes in the preferences of workers. Instead management behaviour, which reduced union effectiveness seems a likely cause (see Fairbrother, 2000 for case-study examples of this process).

Geography: The problem with straightforward geographical variables (for example Government administrative regions) is that they are a rather crude way of measuring the characteristics of an area where a person lives. Differences in the distribution of wealth and industry within geographical regions (for example between urban and rural areas) are likely to be as important as differences between regions. The Office of National Statistics (ONS) has developed social economic categories for different localities based on data from the 1991 census. These categories are; Mining, Manufacturing and Industry (traditional industrial

areas), Prosperous England (the most affluent suburban, rural and urban areas), Outer London and Education Centres (London suburbs and large towns and cities like Oxford and Brighton), Inner London, Rural Areas, Urban Fringe (suburban towns, mixed light manufacturing and services) and Coast and Services (Large towns and cities with service dominated economies, *e.g.* Bristol and Leeds, and coastal towns and cities). Further details of these categories can be found in the technical appendix.

Among manual workers, an individual's probability of being willing to join a union is higher if the individual lives in a mining, manufacturing and industry area, coast and services area or an education centres and outer London area. One possible reason for this relates to the dominant type of industry likely to be present in these types of areas, which is more likely to be traditional unionised heavy industry. Previous employment in these industries or close relatives and friends employed in these industries may lead to normative values that are in favour of union membership (Klandermans, 1984). However, this does not explain the education and outer London finding. A second possible explanation might be residence in predominantly working class communities; manual workers in these areas are more likely to be geographically concentrated in working class communities, and to have direct or indirect experience of trade unionism. This is particularly the case for the education centres and outer London areas because high housing costs concentrate manual workers in areas of local authority and ex-local authority housing. Education centres and outer London areas are also more likely to have tight local labour markets, and this may make workers bolder in expressing their desire for unionisation, while higher living costs may strengthen the incentive.

Among non-manual workers there is a smaller but still statistically significant association between increased willingness to join and residence in rural areas, outer London and education centres areas and mining, manufacturing and industry areas, this finding is harder to explain. Once again it may relate to the type of industry located in these areas, and the type of more detailed occupational categories of the residents. Non-manual employees in occupations like shop assistants, call centre agents and clerical work may hold similar attitudes to unions as close family members in manual employment. Overall, the findings on the influence of geography show that where you live impacts on your willingness to unionise. The most likely explanation of this finding is that the community and the family plays a key role in shaping an individual's normative values and that these normative values reflect the previous and current experience of work among the community and family.

Occupation: Among manual workers, individuals in the other unskilled occupations were around 13% less likely to want to unionise compared to the sample mean (as were individuals in personal and protective services occupations, but this relationship was not statistically significant). It should be noted that around half of individuals in this category fell into the sub-category of cleaners and domestics. Individuals in these occupations are more likely to have a tenuous connection to the labour market; consequently they may feel that the risk of unionisation is too great, or that it is not worth unionising because they are unlikely to stay in the job long. There were no statistically significant differences among non-manual workers, although associate professional and technical occupations were around 10% more likely to want to unionise and other unskilled occupations were around 20% more likely to want to unionise. (The latter group consists entirely of care assistants.)

Personal characteristics: There were no large or statistically significant differences between men and women, white and non-white and married or single people in either sample. Workers aged 60 and over were much less likely to be willing to unionise for both samples. Manual workers who worked part-time were around 25% more likely to want to unionise.

Education: An individual's level of educational attainment does influence willingness to join a union, but the effects are different for manual and non-manual employees. A manual worker who has experienced higher education is around 32% more likely to be willing to unionise, while a non-manual worker with the same level of education is likely to be 10% less likely to want to unionise (both are statistically significant). This may be because the dissonance between the expectations of work and its realities are greatest for university educated manual workers. The result for non-manual workers may be because higher education is acting as a proxy for expectation of promotion, which some studies have shown is associated with decreased willingness to unionise (Farber and Saks, 1980). Alternatively, graduates in non-manual occupations may feel more able to solve employment problems themselves.

Job tenure - Individuals in both samples are approximately 10% more likely to want to unionise if they have been in their present job for two to five years (the size of the association is slightly larger for manual workers). There is no clear reason why this should be, but it does suggest that union organizing campaigns may be more successful if unions wait for a few years after a new workplace opens before attempting to organize it. Surprisingly, there is no relationship between an intention to quit and a decreased willingness to unionise.

Workplace size: Among non-manual employees, workplace size has little effect on the propensity to unionise. However, among manual employees, working in a large workplace with 500 or more employees is associated with a 25% increase in an individual's probability of being willing to unionise. Presumably this is because manual employees in large workplaces feel unable to influence management by acting individually.

Non-Union representation: The presence of non-union reps in the workplace had virtually no influence on an individual's willingness to unionise, this result is in stark contrast to comparable results from the USA (Freeman and Rogers, 1999). It suggests that there are large cultural differences in the way British and American managers manage employee voice. However the prediction of Gollan (2001) that dissatisfaction with non-union representation will actually increase demand for union membership is not supported by the results.

5. Conclusions

The introduction of a statutory trade union recognition procedure in the United Kingdom as part of the 1999 employment relations act means that the issue of why workers choose unionise has become of critical importance for assessing if British trade unions will be able to reverse membership decline. Assessments of the effects of British unions on an enterprise's wage bill, polls of employers, and evidence from new recognition agreements signed in the last twelve months all suggest that British unions will face a less hostile employer response to organising drives than their counterparts in the USA. However the critical factor is likely to be the ability of unions to demonstrate the majority support of the workforce, so the individual unionisation decision is crucial. Theory suggests that 1) dissatisfaction is the critical trigger to unionisation. 2) Individuals who are dissatisfied (and even those who are not) also need to perceive that a union will be effective before they will join, so calculations of the utility of union membership are very important. 3) Politics and ideology and notions of social solidarity may lead workers to unionise for altruistic reasons. Political views affecting an individual's willingness to join a union can also be explained by the fact that they change an individual's calculations of the utility of union membership, this explanation is more easily compatible with points one and two.

Empirical analyses were carried out using willingness to join a union as the dependent variable. To summarise these results in an easily digestible form, the probabilities of being

either very or fairly likely to join a union, and of believing that a union would make their workplace better were calculated for six 'typical workers' (three each for the manual and non-manual samples), two have high probabilities of joining, two have near average probabilities of joining, and two have low probabilities of joining. The probabilities and typical worker characteristics are set out in Table 5.

Results offer some support to all of the theories set out above. However increasing dissatisfaction does not increase willingness to join, instead a high level of satisfaction reduces willingness to join. However in the context of an organising campaign this result might change. In addition, geographical location also plays an important role in determining an individual's willingness to join a union, this was not predicted by theory. The main explanation for this, certainly among manual workers, is likely to be that residents of traditional industrial areas, and predominantly working class communities are more influenced by notions of social solidarity than residents in more prosperous and socially diverse areas. These normative values affect calculations of the utility of union membership. This finding fits with the 'value expectancy theory' of Klandermans (1984). Perhaps the theoretical frameworks developed and tested in North America have neglected important causal variables by failing to incorporating these ideas into theory. Consequently subsequent empirical studies have not sought to test these ideas, so have found no evidence for them. However any attempt to explicitly test value expectancy theory will be hampered by the cost and complexity of collecting the data which will be needed to operationalise it.

The results suggest that non-manual workers in particular have lost their appetite for unionisation, but a significant number of manual workers retain their appetite for unions. Therefore Union membership is likely to rise as a direct result of the new statutory recognition procedure, because it will allow unions to meet the currently unmet demand for union representation among manual workers. Because support for unionisation among manual workers is geographically concentrated community unionism initiatives might prove effective, although British unions appear reluctant to develop this type of strategy (Wills, 2000). However, in the long term decline looks set to continue, because the level of demand for unionisation among the growing number of employees in non-manual work is simply not high enough for unions to be able to win majority support. Employment levels among manual workers are falling, while non-manual employment is set to increase (see Table 6). Similarly population is declining in the traditional union heartlands, and increasing in the more prosperous and suburban parts of the country where demand for union membership is less (see Table 7). If further union decline is to be avoided public policy will need to shift in

a direction which provides more support for unions or unions will have to become much more effective in persuading workers that unionisation will make a difference to their working lives. Whether unions can do this on a large scale without stronger support from government or employers is an open question. The difficulties that unions are likely to face in securing majority support, particularly among non-manual workers may force them to develop new services which appeal to the large and growing group of workers who do not appear to believe that traditional forms of collective action are appropriate ways of remedying their problems at work. White-collar unions in particular may have to develop new business models if they are unable to develop traditional forms of collective organisation in non-union workplaces. Without collective workplace union organisation increasing, amounts of full-time officials' time will become tied up with individual casework for isolated individual members, and there will be insufficient full-time officials to meet the demand for servicing given the current level of membership fees (Willman, 2001). However unions may face stiff competition to provide individual services from law firms and Internet recruitment agencies (Freeman and Diamond, 2001). If unions are unable or unwilling to change either themselves or their environment membership decline will continue in the long-term.

Table 1: Individual willingness to join a union if one were available at the workplace among non-manual employees by personal, job and workplace characteristics

Cell percentages

	% Very likely to join	*% Fairly likely to join*	*% Unlikely to join*	*% Not at all likely to join*	*% Of sample with characteristic*
All	9.3	24	32.2	34.5	
Belief in Union instrumentality					
A union would make my workplace….					
A lot better	82	18	0	0	3.1
A little better	42	48	6	4	9.4
No difference	4	25	39	32	69
A little worse	4	14	25	57	8
A lot worse	0	5	25	70	10.3
Job satisfaction					
Very satisfied	3	11.5	32.1	54.4	37.1
Fairly satisfied	12.8	29.4	32.8	24.9	46.1
Not very satisfied	24.5	26.7	26.7	22.2	12.8
Not at all satisfied	28.5	35.8	14.4	21.4	4
Pay					
Pay is 'on the high side'	4.7	4.7	27.9	62.8	12.2
Pay is 'reasonable'	6	23.9	35.3	34.8	56.9
Pay is 'a bit low'	10.5	30.3	32.9	26.3	21.5
Pay is 'very low'	33.4	36.4	18.2	12.1	9.4
Individual characteristics					
Current union member	24.9	31.3	6.2	37.5	4.5
Former union member	12	21.7	30.1	36.1	23.5
Intention to quit	19.8	26.9	26.9	20.9	25.9
Age					
18 - 24	11.1	33.4	51.1	4.4	12.7
25 – 34	8.2	22.9	25.7	43	30.8
35 – 44	9	29.9	28.6	28.6	21.8
45 – 59	11.3	17.9	32.1	38.7	29.9
60+	0	6.6	26.7	66.5	4.2
Gender					
Men	9.8	21.1	26.3	42.9	37.6
Women	9.1	25.8	35.8	29.4	62.4
Marital status					
Married	8.7	22.5	29.2	39.6	67.8
Single	10.5	27.2	38.6	23.7	32.2
Ethnicity					
White	9.7	23.8	32.3	34.3	96.3
Non-white	0	30.8	30.8	38.4	3.7

	% Very likely to join	*% Fairly likely to join*	*% Unlikely to join*	*% Not at all likely to join*	*% Of sample with characteristic*
Highest educational qualification					
None	10.7	27.6	36.4	25.5	13.3
GCSE or equivalent	9	24.6	45.1	21.3	34.6
A level or equivalent	12.9	33.3	22.2	31.5	15.3
Higher education	7.7	18.5	22.3	51.5	36.8
Geographical location					
Prosperous England	7.7	12.3	46.1	33.8	18.4
Urban fringe	6.6	24.2	25.3	44	25.7
Rural areas	4.6	34.9	18.6	41.8	12.2
Outer London & Education centres	3.9	16	44.1	36	7.1
Inner London	9	18	36.3	36.3	3.1
Coast and Services	17.6	14.7	47.1	20.6	9.6
Mining, manufacturing & industry	14.1	34	25.9	25.9	24
Job characteristics					
Occupation					
Manager and senior administrative	7.5	19.4	22.4	51	27.7
Professional	4.1	24.9	29.2	41.6	6.8
Associate professional and technical	10.3	23	35.8	30.8	11
Clerical	11.5	28.3	37.2	23	31.9
Personal and protective services	24.8	12.4	24.8	37.6	2.3
Sales	5.7	26.8	37.3	29.8	18.9
Other unskilled	39.7	0	39.7	21.6	1.4
Job tenure					
< 1 year	5.4	26.1	35.9	32.6	26
1 – 2 years	10.6	33.3	28.8	27.3	18.6
2 – 5 years	13.9	19	37.9	29.1	22.3
5 – 10 years	12.5	17.2	29.7	40.6	18.1
10+ years	3.7	24.5	24.5	47.2	15
Part-time	8.7	26.1	31.5	33.7	26
Fulltime	9.5	23.3	32.4	34.7	74
Workplace characteristics					
Industry					
Production sector	8.9	17.9	32.9	40.3	19.4
Public services	7.6	34.5	30.8	27	7.3
Private services	9.9	24.9	31.2	34	73.1
Non union representative at workplace	7.5	27.5	35	30	11.6
Workplace size					
1 – 9 employees	8.4	24.2	36.8	30.5	26.8
10 – 24 employees	6.8	27.1	27.1	39	16.7
25 – 99 employees	11.2	26.5	32.7	29.6	27.7
100 – 499 employees	11.9	16.4	35.8	35.8	18.9
500 + employees	5.7	25.7	0.2	48.5	9.9

Weighted base: 300 individual employees in non-manual jobs

Table 2: Individual willingness to join a union if one were available at the workplace among manual employees by personal, job and workplace characteristics

Cell percentages

	% Very likely to join	*% Fairly likely to join*	*% Unlikely to join*	*% Not at all likely to join*	*% Of sample with characteristic*
All	22.1	27.5	26.7	23.6	-
Belief in Union instrumentality					
A union would make my workplace….					
A lot better	86	14	0	0	14.3
A little better	27	57	8	8	13.5
No difference	9	31	32	28	57.9
A little worse	11	0	71	18	7.1
A lot worse	17	1	17	65	7.1
Job satisfaction					
Very satisfied	7.6	33.7	31.5	27.2	35.7
Fairly satisfied	28.8	26.3	23.7	21.2	45.7
Not very satisfied	34.4	18.5	31.3	15.6	12.4
Not at all satisfied	31.3	18.7	12.6	37.6	6.2
Pay					
Pay is 'on the high side'	15.5	15.5	0.385	30.8	5
Pay is 'reasonable'	15.9	30.4	28.8	24.8	48.5
Pay is 'a bit low'	29.2	23.6	27.8	19.5	27.9
Pay is 'very low'	29.2	29.2	16.7	25	18.6
Individual characteristics					
Current union member	39.9	20	20	20	3.9
Former union member	29.7	24.2	19.8	26.4	35.4
Intention to quit	29.2	22.2	27.8	20.8	28.1
Age					
18 - 24	23.8	31	16.6	28.6	16.3
25 – 34	16.9	35.2	33.8	14.1	27.5
35 – 44	22.4	32.7	25.8	19	22.5
45 – 59	28.4	16.2	28.4	27	28.7
60+	8.4	16.8	8.4	66.7	4.7
Gender					
Men	18.8	26.7	28.3	26.1	53.5
Women	25.8	28.3	25	20.8	46.5
Marital status					
Married	20.4	24.7	30.9	24.1	62.8
Single	25	32.3	19.8	22.9	37.2
Ethnicity					
White	21.8	27	26.6	24.6	96.1
Non-white	29.9	39.9	42.8	0	3.9
Highest educational qualification					
None	21	32.9	17.1	29	29.5

	% Very likely to join	*% Fairly likely to join*	*% Unlikely to join*	*% Not at all likely to join*	*% Of sample with characteristic*
GCSE or equivalent	20.4	30.6	25	24.1	41.9
A level or equivalent	10.3	13.8	51.7	24.1	11.2
Higher education	37.2	20.9	32.6	9.3	16.7
Geographical location					
Prosperous England	8.8	20.6	44.1	26.5	13.2
Urban fringe	27.5	33.3	7.3	31.9	26.7
Rural areas	17.8	17.8	42.2	22.3	17.4
Outer London & Education centres	35.4	29.4	17.6	17.6	6.6
Inner London					0
Coast and Services	10.3	34.5	41.4	13.8	11.2
Mining, manufacturing & industry	28.1	28.1	23.4	20.3	24.8
Job characteristics					
Occupation					
Clerical and admin	25.2	12.6	50	12.6	3.1
Craft and related	17.8	23.3	38.4	20.5	28.3
Personal and protective services	28.6	28.6	20.6	22.2	24.4
Sales	0	66.7	33.3	0	1.2
Operative and Assembly	28.8	23.7	18.6	28.8	22.9
Other unskilled	10.8	36.5	23.1	26.9	20.2
Job tenure					
< 1 year	20	30	23	27	38.8
1 – 2 years	24.1	17.3	34.5	24.1	11.2
2 – 5 years	22	43.9	29.3	4.9	15.9
5 – 10 years	25.6	25.6	25.6	22.8	16.7
10+ years	22.2	15.5	28.9	33.3	17.4
Part-time	20	38.8	23.7	17.5	31
Fulltime	32	39.9	28.1	26.4	69
Workplace characteristics					
Industry					
Production sector	27.1	22.9	27.1	22.7	27.3
Public services	23.9	23.9	28.5	23.9	8.2
Private services	21	29.3	25.8	24	65.2
Non union representative at workplace	9.5	33.3	28.6	28.6	8.4
Workplace size					
1 – 9 employees	10.5	29.8	33.3	24.7	22.4
10 – 24 employees	19.3	19.3	35.1	26.3	22.4
25 – 99 employees	28.8	31.2	17.5	22.5	31.4
100 – 499 employees	20.5	30.8	25.6	23.1	15.3
500 + employees	36	18.2	27.3	18.2	8.5

Weighted base: 205 individual employees in non-manual jobs

Table 3: Estimated marginal effects on individual willingness to join a union among non-manual employees

	Change in % probability of being very likely to join	*Change in % probability of being fairly likely to join*	*Change in % probability of being unlikely to join*	*Change in % probability of being not at all likely to join*
Sample mean	10.1	23.6	32.1	34.2
Job satisfaction (ref: fairly satisfied)				
Very satisfied	-10.3***	-10.8***	-0.1***	21.2***
Not very satisfied	3	3.2	0	-6.2
Not at all satisfied	10.6 *	11*	0	-21.6*
Pay (ref: pay is reasonable)				
Pay is 'on the high side'	-3	-3	-	6
Pay is 'a bit low'	-1	-1	0	2
Pay is 'very low'	6*	7*	0	-13*
Individual characteristics				
Current union member	11**	11**	0	-22**
Former union member	0.7	0.7	0	-1.4
Intention to quit	1.2	1.2	0	-2.4
Political attitudes	-4.2***	-4.5***	0	8.7***
Social attitudes	1	0	-1	0
Age (ref: age 18 – 24)				
25 – 34	-10.3	0	5.3	5
35 – 44	-3.2	-3.3	0	6.6
45 – 59	-4.3	-4.5	0	8.8
60+	-18.8***	-19.8***	-0.01***	38.7***
Gender (ref: men)				
Women	3.5	3.7	0	-7.2
Marital status (ref: married)				
Single	2.7	2.6	0	5.3
Ethnicity (ref: white)				
Non-white	-2.3	-2.4	0	4.7
Highest educational qualification (ref: GCSE or equivalent)				
None	-1.5	-1.6	0	3.1
A level or equivalent	1.6	1.6	0	3.2
Higher education	-4.6*	-4.9*	0	9.5*
Geographical location (ref: prosperous England)				
Urban fringe	2.1	2.2	0	-4.3
Rural areas	6.1*	6.4*	0.1*	-12.6*
Outer London & Education centres	7*	7.4*	0.1*	-12.6*
Inner London	2.1	2.2	0	-4.3

	Change in % probability of being very likely to join	*Change in % probability of being fairly likely to join*	*Change in % probability of being unlikely to join*	*Change in % probability of being not at all likely to join*
Coast and Services	4.9	5.1	0	-10
Mining, manufacturing & industry	7.5**	7.8**	0.1	-15.4**
Job characteristics				
Occupation (ref: Manager and senior administrative)				
Professional	-2.8	-3	0	5.8
Associate professional and technical	5.1	5.3	0	-10.4
Clerical	1.9	2	0	-3.9
Craft and related				
Personal and protective services	-10.9	-11.5	-0.1	22.5
Sales	0.7	0.8	0	-1.5
Operative and Assembly				
Other unskilled	11.4	11.9	0.1	-23.4
Job tenure (ref: <1 year)				
1 – 2 years	2.2	2.3	0	4.5
2 – 5 years	5.1**	5.4**	0	-10.5**
5 – 10 years	5	5.3	0	-10.3
10+ years	-0.4	-0.3	0	0.7
Part-time (<30 hours per week)	0.1	0.2	0	-0.3
Workplace characteristics				
Industry sector (ref: private services)				
Production sector	0	0	0	0
Public services	-1.6	-1.7	0	3.3
Non union representative at workplace	-0.6	-0.6	0	1.2
Workplace size (ref: 1-9 employees)				
10 – 24 employees	-0.7	-0.7	0	1.4
25 – 99 employees	-1.2	-1.2	0	2.4
100 – 499 employees	-0.4	-0.5	-	-0.9
500 + employees	0.6	0.6	0	-1.2

Notes:

1. n= 285
2. The marginal effects reported in this table were calculated from the coefficients reported in Table A1.
3. Marginal effects can be interpreted as the estimated change in the predicted probability of an individual being in each category compared to the sample mean if the dummy variable changes from zero to one, other things being equal. In the case of the two scale variables (political and social attitudes) the marginal effect can be interpreted as the change in predicted probability of being in each category if there is a one standard deviation change in the individual's position on the scale.
4. * indicates the statistical significance of the underlying coefficient. *= significant at the 10% level or higher, **= significant at the 5% level or higher and ***= significant at the 1% level or higher.

Table 4: Estimated marginal effects on individual willingness to join a union among manual employees

	Change in % probability of being very likely to join	*Change in % probability of being fairly likely to join*	*Change in % probability of being unlikely to join*	*Change in % probability of being not at all likely to join*
Sample mean	21.7	27.8	25.7	24.8
Job satisfaction (ref: fairly satisfied)				
Very satisfied	-11.5**	-4.1**	3.4**	12.3**
Not very satisfied	8.2	3	-2.4	-8.8
Not at all satisfied	-9	-3.2	2.6	9.9
Pay (ref: pay is reasonable)				
Pay is 'on the high side'	-4.7	-1.7	1.4	5
Pay is 'a bit low'	6.5	2.4	-1.9	-7
Pay is 'very low'	5.8	2.1	-1.7	-6.2
Individual characteristics				
Current union member	14.9	5.4	-4.4	-15.9
Former union member	10.1*	3.7*	-3*	-10.8*
Intention to quit	-1.1	-0.4	0.3	1.2
Political attitudes	-6*	-2*	2*	6*
Social attitudes	-4.3	-1.5	1.3	4.6
Age (ref: age 18 – 24)				
25 – 34	5.9	2.1	-1.7	-6.3
35 – 44	-3.3	-1.2	1	3.5
45 – 59	-4.8	-1.8	1.4	5.2
60+	-33.4**	-12**	9.8**	35.6**
Gender (ref: men)				
Women	8.5	3	-2.5	-9
Marital status (ref: married)				
Single	1	0.4	-0.3	-1.1
Ethnicity (ref: white)				
Non-white	-5.6	-2	1.6	6
Highest educational qualification (ref: GCSE or equivalent)				
None	9.1	3.3	-2.7	-9.7
A level or equivalent	-6.8	-2.5	2	7.3
Higher education	23.6***	8.5***	-6.9***	-25.2***
Geographical location (ref: prosperous England)				
Urban fringe	6.8	2.5	-2	-7.3
Rural areas	5.4	1.9	-1.6	-5.8
Outer London & Education centres	33.3***	12***	-9.8***	-35.6***

	Change in % probability of being very likely to join	*Change in % probability of being fairly likely to join*	*Change in % probability of being unlikely to join*	*Change in % probability of being not at all likely to join*
Inner London				
Coast and Services	14.8*	5.3*	-4.3*	-15.8*
Mining, manufacturing & industry	17.1**	6.1**	-5**	-18.2**
Job characteristics				
Occupation (ref: Operative and assembly)				
Clerical	10.1	3.6	-3	-10.8
Craft and related	3.4	1.2	1	3.6
Personal and protective services	-12.1	-4.4	3.6	12.9
Other unskilled	-13*	-4.7*	3.8*	13.9*
Job tenure (ref: <1 year)				
1 – 2 years	0.2	0.1	-0.1	-0.2
2 – 5 years	10.5**	3.8**	-3.1**	-11.2**
5 – 10 years	-1.8	-0.6	-0.5	1.9
10+ years	-3.4	-1.2	1	3.6
Part-time (<30 hours per week)	19.2**	6.9**	5.6**	-20.5**
Workplace characteristics				
Industry sector (ref: private services)				
Production sector	-1.2	-0.4	0.4	1.2
Public services	-10.3	-3.7	3	11
Non union representative at workplace	-0.1	-0.1	0.1	0.1
Workplace size (ref: 1-9 employees)				
10 – 24 employees	3.8	1.4	-1.2	-4
25 – 99 employees	5.9	2.1	-1.7	-6.3
100 – 499 employees	-0.8	-0.2	0.2	0.8
500 + employees	18.7*	6.7*	-.5*	-19.9*

Notes:

1. n= 197
2. The marginal effects reported in this table were calculated from the coefficients reported in Table A1.
3. Marginal effects can be interpreted as the estimated change in the predicted probability of an individual being in each category compared to the sample mean if the dummy variable changes from zero to one. In the case of the two scale variables (political and social attitudes) the marginal effect can be interpreted as the change in predicted probability of being in each category if there is a one standard deviation change in the individual's position on the scale.
4. * indicates the statistical significance of the underlying coefficient. *= significant at the 10% level or higher, **= significant at the 5% level or higher and ***= significant at the 1% level or higher.

Table 5 - Estimated probability of willingness to join a union for composite workers

Characteristics of composite workers	*Probability of being willing to join*
1. High probability manual worker **Individual characteristics:** Female, aged 25-34, married, white, no formal qualifications, former union member, lives in a mining, manufacturing and industry area, does not intend to quit work in next 12 months. Social and political views are set to the sample mean. **Job characteristics:** Full-time, operative and assembly occupation, job tenure 2 – 5 years, dissatisfied with the job, and believes own pay is low. **Workplace characteristics:** Production sector, 25-100 employees, no non-union representation system.	0.97
2. Average probability manual worker **Individual characteristics**: Male, aged 35-44, married, white, GCSE's or equivalent, never been a union member, lives in an urban fringe area, does not intend to quit work in next 12 months. Social and political views are set to the sample mean. **Job characteristics:** Full-time, operative and assembly occupation, job tenure 5-10 years, satisfied with the job, and believes own pay is reasonable. **Workplace characteristics:** Production sector, 25-100 employees, no non-union representation system.	0.52
3. Low probability manual worker **Individual characteristics:** Male, aged 35-44, white, married, A levels or equivalent, never been a union member, lives in a prosperous England area, does not intend to quit work in next 12 months. Social and political views are set to the sample mean. **Job characteristics:** Full-time, craft occupation, job tenure 5-10 years, very satisfied with the job, and believes own pay is on the high side. **Workplace characteristics:** Production sector, 25-99 employees, no non-union representation system.	0.007
4. High probability non-manual worker **Individual characteristics:** Male, aged 25 – 34, single A level or equivalent, never been a union member, lives in a mining, manufacturing and industry area, does not intend to quit in next 12 months. Social and political views set to the sample mean. **Job characteristics:** Full-time, technical occupation, job tenure 2 – 5 years, very dissatisfied with job and believes own pay is low. **Workplace characteristics:** Private services sector, 25 – 99 employees, no non-union representation.	0.961
5. Average probability non-manual worker **Individual characteristics:** Female, aged 45 – 59, married, GCSEs or equivalent, never been a union member, lives in a urban fringe area, does not intend to quit work in the next 12 months. Social and political views are set to the sample mean. **Job characteristics:** Full-time, sales occupation, job tenure 5 – 10 years, satisfied with job, believes own pay is reasonable. Workplace characteristics: Private services, 100 – 499 employees, no non-union representation	0.34
6. Low probability non-manual worker **Individual characteristics:** Male, aged 25-34, married, higher education, never been a union member, lives in prosperous England, does not intend to quit in next 12 months. Social and political views are set to the sample mean. **Job characteristics:** Full-time, managerial occupation, job tenure 5 – 10 years, very satisfied with job and believes own pay is on the high side. **Workplace characteristics:** Private services, 25 – 100 employees, no non-union representation.	0.014

Table 6: Projected change in numbers employed by occupation 1999 – 2010

Occupational group	*Projected change 1999 - 2010*
Managers and senior officials	5,840
Professionals	155,140
Associate professional and technical	53,810
Administrative and clerical	14,370
Craft and skilled trades	-75,120
Personal and protective services	-4,080
Sales	-2,580
Operative and assembly occupations	-108,600
Elementary occupation	-82,560
All	72,52

Source: Institute for Employment Research/ Department for Education and Employment (http://www.skillsbase.dfee.gov.uk/Database)

Table 7: Population change 1991 – 1998 by socio-economic area

	Population 1998	*Population change 1991 - 1998*	*% change 1991 – 1998*
Rural Areas	6,580,000	280,000	+4.4
Urban Fringe	11,497,000	308,000	+2.7
Coast and Services	7,289,000	121,000	+1.7
Prosperous England	8,827,000	371,000	+4.4
Mining, Manufacturing and Industry	16,311,000	-56,000	-0.4
Education Centres and Outer London	4,749,000	198,000	+4.4
Inner London	2,295,000	120,000	+5.5

Source: Bailey *et al*. (1999) p. 31.

Technical Appendix

A.1. Measures of political and social attitudes

Since 1986, the British Social Attitudes Surveys has contained identical scales for measuring Social and Political attitudes. Political attitudes on a five item left right scale. On each item the respondent is asked to assess the extent he or she disagrees with a statement on a five-point scale. The items in the scale are:

1. Government should redistribute income from the better off to those who are less well off.
2. Big business benefits the owners at the expense of the workers.
3. Ordinary working people do not get a fair share of the nations wealth.
4. There is one law for the rich and one for the poor.
5. Management will always try to get the better of employees if it gets the chance.

If the respondent strongly agrees with an item they score one, if they strongly disagree they score five. The scale is calculated from sum of the scores for all five items. Social attitudes are measured in the same way. The items on the social attitudes scale are:

1. Young people today don't have enough respect for traditional British values.
2. People who break the law should be given stiffer sentences.
3. Schools should teach children to obey authority.
4. The law should always be obeyed even if a particular law is wrong.
5. Censorship of films and magazines is necessary to uphold moral standards.

Both of these scales were standardised before they were used in the regression analyses.

A.2 The ONS Classification of local authorities

The ONS classification of local authorities in Great Britain groups units of local government into clusters, groups and families with similar socio-economic characteristics using data from the 1991 census. The rich census data was reduced to a set of 37 aggregate variables for each local authority area. These variables measured the age and racial profiles of an area, household composition, type of housing, population turnover, the proportion of the population with a higher education qualification, the proportion in each social class based on occupation, the proportions of lone carer and lone parent households, two earner households, two car households and no car households and the rate of limiting long-term illness. Local

authority areas were then grouped into clusters, families and groups based on analysis of similarity and difference. Full details of the methodology used can be found in Bailey *et al.* (1999). Table A2 summarises the families, groups and clusters.

A.3 General modelling approach

Because the dependent variable (individual willingness to join a union) is an ordinal variable – individuals are asked to assess the likelihood that they would join a union on a four-point scale, the appropriate method of analysis is ordered probit analysis. Observations with missing information are omitted from the analysis. Both models are run using data weighted by the inverse of the individuals sampling probability. This means that the results can be generalized to the population from which the sample is drawn. It also prevents estimation bias caused by differential sample selection probabilities (Skinner, 1997). The Huber-White robust variance estimator was used; this estimation method produces consistent standard errors in the presence of heteroscedasticity. This procedure uses pseudo-likelihood methods, so the point estimates are from a weighted 'likelihood,' which is not the distribution function from the sample. This means that standard likelihood ratio tests are not valid (STATA manual, release 6, Volume 4, 1999). The full results for both models, including coefficients and robust standard errors are set out in Table A2.

Some Police Officers (identified by 3 digit SOC code) identified themselves as working in non-union workplaces. Police Officers are represented by the Police Federation, so are not eligible for union membership even if they desired it. Consequently any members of the Police were dropped from the analysis.

Table A1: Mean values of political and social attitudes scale

	Manual		*Non-manual*	
	Mean	Standard deviation	Mean	Standard deviation
Political attitudes scale	2.38	0.55	2.7	0.76
Social attitudes scale	3.86	0.59	3.75	0.62

Weighted base: 300 employees (non-manual) and 205 employees (manual)

Table A2: Full results of ordered probit analyses on individual willingness to join a union and belief in union instrumentality

	Model 1 *Non-manual employees*	*Model 2* *Manual employees*
	Coefficient (robust standard errors in parentheses)	**Coefficient (robust standard errors in parentheses)**
Job satisfaction (ref: fairly satisfied)		
Very satisfied	-0.7916	-0.4807
	(0.162)***	(0.214)**
Not very satisfied	0.2344	0.3443
	(0.249)	(0.306)
Not at all satisfied	0.8083*	-0.3744
	(0.426)	(0.456)
Pay (ref: Pay is reasonable)		
Pay is 'on the high side'	-0.2244	-0.1962
	(0.294)	(0.508)
Pay is 'a bit low'	-0.0938	0.2726
	(0.183)	(0.23)
Pay is 'very low'	0.4844	0.243
	(0.261)*	(0.263)
Individual characteristics		
Current union member	0.8727	0.6216
	(0.405)**	(0.481)
Former union member	0.0513	0.424
	(0.27)	(0.237)*
Intention to quit	0.091	-0.47
	(0.187)	(0.244)
Political attitudes	-0.3244	-0.2488
	(0.079)***	(0.129)*
Social attitudes	-0.0372	-0.1795
	(0.08)	(0.111)
Age (ref: 18-24)		
25 – 34	-0.3849	0.2481
	(0.275)	(0.3)
35 – 44	-0.245	-0.1391
	(0.31)	(0.334)
45 – 59	-0.3273	-0.2048
	(0.334)	(0.391)
60+	-1.4504	-1.393
	(0.422)***	(0.637)**
Gender (ref: men)		
Women	0.2706	0.3526
	(0.174	(0.291)
Marital status (ref: married)		
Single	0.1963	0.0427
	(0.189)	(0.212)
Ethnicity (ref: white)		
Non-white	-0.1751	-0.2356
	(0.453)	(0.436)
Highest educational qualification (ref: GCSE or equivalent)		

	Model 1 *Non-manual employees* **Coefficient** **(robust standard errors in parentheses)**	*Model 2* *Manual employees* **Coefficient** **(robust standard errors in parentheses)**
None	-0.1139	0.3798
	(0.236)	(0.245)
A level	0.1193	-0.285
	(0.21)	(0.22)
Higher education	-0.3572	0.9863
	(0.206)*	(0.3)***
Geographical location (ref: Prosperous England)		
Urban fringe	0.1624	0.2846
	(0.223)	(0.322)
Rural areas	0.4713	0.2259
	(0.261)*	(0.307)
Outer London & Education centres	0.5409	1.3897
	(0.324)*	(0.493)***
Inner London	0.159	-
	(0.563)	
Coast and Services	0.3751	0.6178
	(0.311)	(0.329)*
Mining, manufacturing & industry	0.5751	0.7134
	(0.234)**	(0.321)**
Job characteristics		
Occupation	(ref: managers and senior administrators)	(ref: operative and assembly)
Professional	-0.2161	
	(0.299)	
Associate professional and technical	0.3899	
	(0.312)	
Clerical	0.1485	0.422
	(0.227)	(0.537)
Craft and related		0.1437
		(0.304)
Personal and protective services	-0.8417	-0.5063
	(0.585)	(0.371)
Sales	0.056	-0.4808
	(0.275)	(0.496)
Other unskilled	0.8736	-0.5436
	(0.802)	(0.326)*
Job tenure (ref: <1 year)		
1 – 2 years	0.1706	0.0064
	(0.23)	(0.3)
2 – 5 years	0.3928	0.442
	(0.197)**	(0.221)**
5 – 10 years	0.3858	-0.0736
	(0.244)	(0.294)
10+ years	-0.0262	-0.1422
	(0.272)	(0.294)
Part-time (<30 hours per week, ref: full-time)	0.0109	0.802
	(0.21)	(0.267)***

	Model 1 *Non-manual employees* **Coefficient** **(robust standard errors in parentheses)**	*Model 2* *Manual employees* **Coefficient** **(robust standard errors in parentheses)**
Workplace characteristics		
Industry sector (ref: private services)		
Production sector	-0.0043	-0.0493
	(0.196)	(0.26)
Public services	-0.1231	-0.431
	(0.354)	(0.448)
Non union rep present	-0.0454	-0.0055
	(0.2)	(0.29)
Workplace size (ref: 1-9 employees)		
10 – 24 employees	-0.0528	0.1575
	(0.241)	(0.264)
25 – 99 employees	-0.0341	0.2486
	(0.204)	(0.25)
100 – 499 employees	-0.0341	-0.0314
	(0.231)	(0.341)
500 + employees	0.0455	0.7814
	(0.329)	(0.419)*
Cut 1	-0.4658	0.3226
	(0.407)	(0.537)
Cut 2	0.6698	1.177
	(0.412)	(0.536)
Cut 3	1.8372	2.12
	(0.419)	(0.538)
Cut 4		
Wald Chi2 test	179.3	77.1
Prob > chi2	0.000	0.001
n	285	197

Notes:

1. * = statistically significant at the 10% level or higher. ** = statistically significant at the 5% level or higher. *** = statistically significant at the 1% level or higher.
2. The measures of social and political attitudes are the standardised scores of the British Social Attitudes libertarian-authoritarian scale 'left-right' scale respectively.

Table A3: ONS classification of local authorities using socio-economic data from the 1991 census

Family	*Groups within family*	*Clusters within family*	*Typical local authority*
Rural Areas	1. Remoter Rural		
	2. Rural Amenity	i. Rural Scotland	Highland
		ii. Rural England & Wales	Herefordshire
Urban Fringe	1.Established manufacturing fringe		Flintshire
	2.New & Developing areas	i. New Towns	Northampton
		ii. Developing Towns	
	3. Mixed Urban	i. Most Typical Towns & Cities	Stockport
		ii. London & Glasgow periphery	Hertsmere
Coast & Services	1.Coast & Country resorts	i. Seaside Towns	Shepway
		ii. Traditional Rural Coast	Arun
	2. Established Service Centres		City of Bristol
Prosperous England	1.Growth Areas	i. Town & Country Growth	Tewkesbury
		ii. Prosperous Growth Areas	East Hants
	2. Most prosperous		Tandridge
Mining, Manufacturing & Industry	1.Coalfields	i. Mining & Inner City	Halton
		ii. Mining & Industry	Wakefield
		iii. Former Mining Areas	Wear Valley
	2.Manufacturing Centres		Coventry
	3.Ports & Industry		
		i. Urban Industry	North Ayshire
		ii.Liverpool & Manchester	Liverpool
		iii. Clydeside & Dundee	Dundee City
Education Centres & Outer London		i. Suburbs	Croydon
		ii. Cosmopolitan Outer London	Waltham Forest
		iii. Education Centres	Brighton & Hove
Inner London	1. West Inner London		Camden
	2. East Inner London	i. Inner City Boroughs	Southwark
		ii. Newham & Tower Hamlets	

Source: Bailey *et al*. (1999), pp. 120 & 58-99.

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