

**The Anatomy of Union Membership Decline in Great
Britain 1980 – 1998**

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Abstract

Between 1980 and 1998, the proportion of British employees who were union members fell from around 52 per cent to around 30 per cent. Was this decline in trade union membership mainly ‘structurally determined’ by changes to the economic, political and social environment, or was union failure a large part of the reason for union decline? If structural determinants were of more importance, what was the relative importance of economic and business cycle factors compared to legal and political changes, changes to employee attitudes and values and secular changes to economic organisation? This thesis seeks to answer these questions in the light of detailed econometric analysis of the micro-level processes of declining union density at the workplace level (using data from the Workplace Industrial/Employee Relations Surveys) and the individual level (using data from the British Household Panel Survey). The central argument is that environmental changes provide a more compelling explanation for union decline than explanations based on union failure. There is little evidence that changing employee attitudes and values or legal changes or the business cycle directly caused decline. Instead, secular changes to economic organisation which changed the balance of incentives associated with unionisation for firms, organisations and workers seem the most likely cause of declining union membership density. The scale and magnitude of these changes can be attributed to Government policy.

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Chapter 1. What Causes Union Membership Change?

In 1980 British trade unions claimed to have around 12,980,000 members. By 1998 the equivalent figure was 7,657,000, a fall of 40 per cent. Between 1980 and 1998 the percentage of British employees in union membership fell from around 52 per cent to around 32 percent. Union membership and density fell in every year between 1980 and 1998. Since 1998 membership has increased slightly, but density has continued to fall, all be it at a much slower rate, as employment has expanded faster in the non-union sector of the economy. The period 1980 – 1998 was unique in the history of the British labour movement. Never before had trade unions lost so many members over so sustained a period of time (Charlwood and Metcalf 2005).

The decline of trade union membership is significant because trade unions have the potential to affect output, employment, productivity, investment and the distribution of earnings, for good or ill (Freeman and Medoff 1984, Pencavel 2003, Metcalf 2005). The actual outcomes that arise from trade unionism in a particular country at a particular period in time are a matter of empirical investigation (Metcalf 2003). In Britain, those who sifted through the empirical evidence came to the judgement that, in the 1970s, trade unionism had a negative effect on productivity, output and investment (Crafts 1991, Metcalf 1989, Prais 1981, for a dissenting view see Nolan and Marginson 1990), while the decline of trade unionism, particularly since 1990, suggests that the ‘disadvantages [for firms] of trade unionism’ have lessened during the 1990s (Addison and Belfield 2001: 356).

At the macro-economic level, Nickell and Van Ours (2000) found that the increased labour market flexibility that has resulted from union decline means that the ‘natural rate’ (the lowest level of unemployment compatible with price stability) is around 2.7 percent lower than it would be otherwise. These perceived benefits of union decline have not been without costs in other areas. Earnings inequality has widened (Gosling and Machin 1995, Charlwood 2004a), the number of workers making work related complaints to citizens advice bureaus increased by 30 per cent between 1983 and 1997 (Kelly, 1998: 45) and the number of applications made by workers to employment tribunals more than doubled between 1985 and 1997 (Burgess et al. 2001). These figures suggest that increasing numbers of workers feel that their employers are treating them unfairly. Over the same period, there is evidence that the intensity of work increased considerably with associated rises in stress and stress-related illness (Green 2001).

Given these far reaching effects of union decline in Britain, it is important to understand how and why union decline happened; not least because it is difficult to draw inferences about the future prospects of unions without first understanding the causes of decline. There are broadly two schools of thought with regard to the determinants of union membership change: Those who argue that union membership is largely shaped by structural determinants (Bain and Elsheikh 1976, Bain and Price, 1983, Booth 1983, Carruth and Disney 1988, Disney 1990, Freeman and Pelletier 1990, Phelps Brown 1990 and Howell 1999) and those who argue that union agency (what unions do themselves) has a critical role to play in determining the level of membership (Undy et al. 1981 Kelly and Heery 1989, Kelly 1990, Mason and Bain 1993, Metcalf 1991, Towers 1989). There are also significant differences of opinion about the relative importance of different structural determinants amongst those who argue for a structural determinist position and differences in the importance ascribed to the role of unions in shaping their own destiny among union interventionists. There is also a third group of authors who have considered the issue of union decline in Britain since 1980, whose work does not fall easily into either the structural determinist or union interventionist camps.

My central aim in this thesis is to provide an answer to two questions. First, to what extent was union membership decline between 1980 and 1998 determined by structural variables? Second, if there is evidence that structural variables were the key determinants of decline, what was the relative importance of different structural variables? I will then consider the future prospects for trade union membership in the light of the answers. As Pencavel (2003) has noted, to answer this type of question requires a strong dose of judgement, because, in the words of Towers (1989), it is 'devilishly difficult' to weight the relative importance of the different factors responsible for union decline. It is important that judgement should be informed by empirical evidence. Here I will present new empirical evidence on the micro-processes of union decline at the level of the workplace and individual. This analysis will be based in part on an analytical model proposed by Freeman (1988).

The thesis is organised as follows. This chapter briefly considers the patterns of change in union membership density in Britain since 1893 before critically evaluating debates over union membership decline since 1980. Chapter Two evaluates the existing empirical evidence, and considers the methodological issues involved in analysing union membership change. Chapters Three to Six provide the empirical analysis and chapter Seven concludes.

1.1 Change in union membership density 1892 – 2003

The focus of this thesis is union membership density rather than union membership in absolute terms. Union density refers to the proportion of civilian employees in employment who are in union membership¹. I focus on this measure, because raw union membership figures have little meaning unless placed in the context of the wider workforce. 100,000 union members is a relatively large figure if there are only 5 million employees, it is much smaller if there are 25 million employees. Disney et al. (1995) and Machin (2000) have argued that union recognition is the key indicator of union presence in the labour market. The implication of this position is that if we want to understand the decline of trade unions then we ought to be studying the decline of union recognition rather than the decline of union membership. I reject this position for three reasons. First, it is not apparent to me that union recognition, defined as a binary variable, is the key indicator of union labour market presence. The coverage and scope of union recognition are at least as important, and are arguably more important because the simple existence of a workplace recognition agreement tells us little about union labour market presence unless we know what proportion of workers are covered by it and the issues that are subject to collective bargaining. Second, historical data on union coverage and union recognition are partial and incomplete, while there is a time-series of union membership density stretching back to 1892, which allows union membership decline in the 1980s to be placed in a wider historical context. Third, union members are key resources for unions. Recognition without membership or with low levels of membership density would suggest that the workplace union is a 'hollow shell' and that the union is weak and does not enjoy the support of workers. Consequently, I prefer to focus on union membership density rather than union coverage or union recognition (although I investigate the causes and consequences of declining union coverage in the 1990s elsewhere, see Charlwood 2004a).

The main empirical contribution of the thesis will be based on analysing changes in membership density using nationally representative data-sets. These data were generated following a detailed and costly period of careful design and planning. Consequently, we can be confident that they have measured union density accurately.

¹ Here I follow Carruth and Disney (1988) in basing union density on employees rather than the total workforce. As Towers (1989) has noted, there are at least 8 different ways to calculate union density. For the sake of simplicity and expediency, I focus on this single measure.

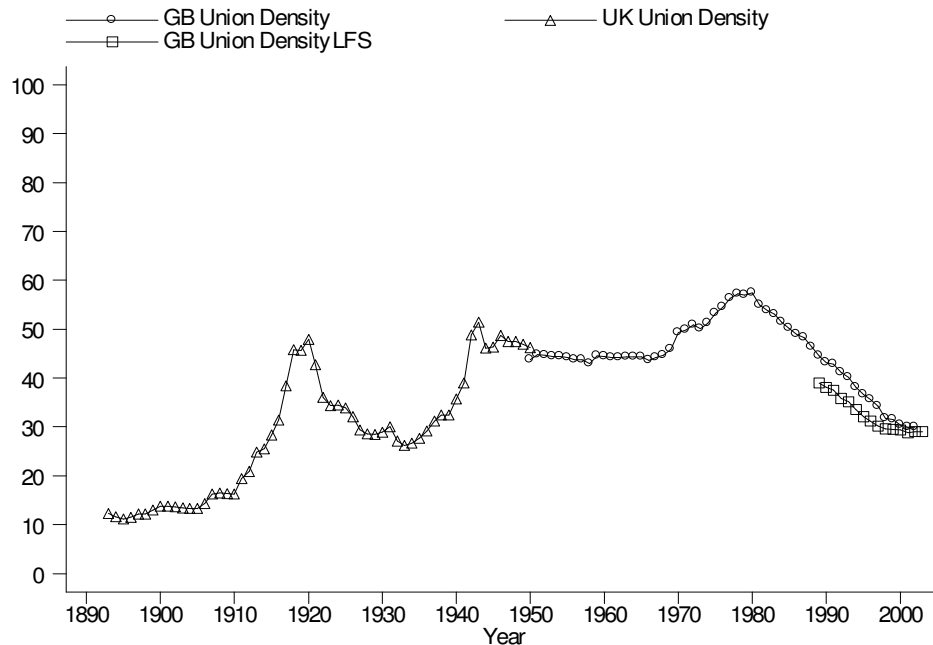
However, the earliest such data set is from 1977, so if we want to get a sense of how changes since 1977, and particularly since 1980, fit with the longer historical record, it is necessary to look for other sources of data.

Between 1893 and 1975, trade union membership figures were collected by the Registrar-General for Friendly Societies. The Certification Officer for Trade Unions and Employers Associations took on the task in 1975. These data provide us with a long historical time-series of trade union membership, which can be used in conjunction with time-series data on employment levels to generate a time-series for density. Figure one plots out this time-series. Note that there are a number of problems with these data – changes in the way in which both union membership and employment levels have been recorded mean that neither time-series has been collected in a consistent manner over time. Trade union membership figures include unemployed, self employed and retired members if unions choose to keep these groups on their books. Trade unions sometimes make administrative errors in collating their membership figures. The official time-series of employees in employment is actually a time-series of employee jobs, and as some employees hold more than one job, it is likely to overstate employment levels (for a fuller discussion of these issues see Charlwood and Metcalf 2005).

Despite these drawbacks, the time-series of membership density represented in Figure One (the numbers from which the illustration is drawn can be found in table A1 in the technical appendix) is likely to provide a reasonable approximation of the level and changes in union membership density over time which allow the changes in density since 1980 to be put in a wider historical context. Figure One shows that there have been distinct periods of union growth and decline interspersed with periods of relative stability. After contraction between 1893 and 1895, unions experienced slow but steady growth until 1905, then a larger jump in 1906. Density levels then stabilised until 1910, when they raced ahead with growth continuing until 1920. There then followed a long period of decline, briefly interrupted by modest growth in 1930 – 31 (which may plausibly be explained by the failure of unions to excise unemployed members from their books) until growth resumed in 1935. Growth was to continue until 1946. 1946 – 68 was a period of relative stability, although density declined somewhat because union membership growth failed to keep pace with rising employment levels. Growth then resumed in 1968, and growth was recorded in most years until 1980, when the long and sustained period of decline, which is the focus of this thesis, began. I shall now briefly review the historical background to these changes.

Figure 1

Trade Union Density 1893 – 2003



Sources: Charlwood and Metcalf (2005) for the 1950 – 2003 figures and Milner and Metcalf (1993) for the 1893 – 1950 figures.

Notes

- Changes in the way in the way in which union membership figures were collected and reported, particularly as a result of changes in the statutory definition of a trade union, mean that the 1892 - 2002 time-series of union membership figures on which figure one is based are not consistent over time. For a fuller explanation of these issues, see Charlwood and Metcalf (2005).
- Figures for British trade union membership were calculated by deflating the UK figure by 0.9705 to account for members in overseas and Northern Irish branches. Note that figures on the number of members in overseas and Northern Irish branches were not available for the years after 1978. The deflator is based on the average proportion of UK trade union membership in overseas and Irish branches between 1950 and 1978.
- In the calculations of UK and GB density from the Certification Officer (or his predecessor the Registrar-General for Friendly Societies), the numerator is the total number of union members and the denominator is employee jobs. Density figures may be biased upwards if unions over claim membership, and because unemployed and retired members may be included in the figures. A downward bias may occur because some employees hold more than one job. See Charlwood and Metcalf (2005) for a fuller discussion.
- The Labour Force Survey has provided a more accurate source of data on membership density since 1989
- The density figures can be found in table A1 in the appendix.

1893 – 1914

At the end of the nineteenth century, unions faced an environment that comprised of many small and medium sized owner managed firms operating in highly diversified product markets. Competitive pressures were building in both domestic and foreign markets. However, increased competition was accompanied by a simultaneous increase in collusive behaviour by employers – a development facilitated by the close geographical proximity of manufacturers making similar products. The predominant pattern of employment relations was one where firms were not committed to their workforces, and workers displayed little commitment to their employers. Consequently, ‘them and us’ attitudes were commonplace among the working class (Gospel 1992). In this environment, union advance was critically dependent upon labour market conditions. If labour markets were tight and demand for labour inelastic, workers and their unions were able to take advantage of these conditions. When this happened, the union objective of establishing a uniform ‘rate for the job’ and the employer objectives of not being disadvantaged by higher labour costs compared to competitors and keeping unions out of the workplace coincided to produce multi-employer collective bargaining amongst firms in particular industries and districts. However, when product and labour market conditions were slacker, employers would counter attack to try to force down wages and increase effort. The last years of the nineteenth century were marked by union defeats in the engineering industry and in the railways (as a result of a judicial decision which had profound implications for unions’ ability to wield the strike weapon). The election of a Liberal Government in 1906 led to legislation that overturned this decision, but the change in public policy did not lead to anything more than a modest increase in union membership.

From 1910 onwards, Britain, in common with other countries with an industrial base, experienced a major upswing in strike activity as a combination of economic growth, tight labour markets and inflation provided workers with the opportunity for greater industrial militancy in order to defend real wages from the corrosive effects of inflation, and if possible to improve wages and conditions. This upswing in strike activity was accompanied by an upswing in union membership as workers unionised on the back of successful industrial action (Kelly 1998). The strike wave was brought to an abrupt halt by the outbreak of World War I in August 1914. War was to exert a profound effect on union fortunes.

1914 – 1920

Between 1914 and 1920, the number of trade union members more than doubled, with density rising to a peak of almost forty eight per cent (Bain 1967). This dramatic change was brought about by the interaction of economic and legal changes and Government action. War conditions tightened labour markets and made demand for labour highly inelastic as war production guaranteed high levels of demand for whatever could be made. At the same time, the war bestowed legitimacy on trade unions as leading trade unionists were brought into the Government and civil service to ensure that labour was managed in a fair and efficient manner. To prevent an explosion of industrial action that would have damaged the war effort, as workers determined to use the power that tight labour markets and inelastic labour demand gave them to try to offset the effects of inflation and secure real pay rises, industrial action was made illegal for the duration of the war. Instead, a system of compulsory arbitration was established to settle industrial disputes. Unions enjoyed a high degree of success in bringing successful claims through the arbitration system. This success encouraged unionisation and changed the structure of collective bargaining from local multi-employer agreements to national multi-employer agreements. This change served the interests of all parties. Unions were successful in establishing a national 'rate for the job', employers escaped the danger of being made uncompetitive by rising labour costs that competitors were not subject to, and pressure on the arbitration system was relieved by the reduction in claims that a shift to national agreements brought about (Bain 1967, 1970). These advances had the effect of transforming the outlook of the working class. A vigorous rank and file movement emerged from the shop floor, intent upon pushing for advances in wages and improvements in working conditions (Cronin 1984). This movement became increasingly assertive in the years up to 1920, resulting in near revolutionary conditions emerging in some parts of the country before state and employer counter-mobilisation succeeded in halting its advance.

1920 – 1935

The end of the war brought about a dramatic change in economic fortunes. During the years of war, manufacturing capacity had expanded dramatically to meet the almost limitless demand for munitions. After the war, much of this productive capacity was no longer needed. At the same time, the system for regulating international trade

based on the gold standard had been ruptured beyond repair. The result was a dramatic post-war slump in trade, demand and economic activity. At the same time, labour supply was expanding as the armed forces demobilised. These changes dramatically altered the balance of power between management and labour. As firms cut prices in response to falling demand, they attempted to maintain profits by cutting wages. If workers resisted, they were locked out while stocks were run down. The threat of unemployment became the key weapon in the employers' armoury in a war of attrition with the unions in sectors like coal, engineering and textiles (Cronin 1984). In this harsh environment, declining union membership was inevitable. A bad economic situation became much worse in the wake of the Wall Street crash of 1929. In 1930, unemployment rose to 20 per cent of the workforce, and was to remain at this level for three years. Union revival was an impossibility in these circumstances.

1935 – 1945

From 1935, union fortunes began to revive as economic growth returned and unemployment fell, particularly in the South East and Midlands of England. Initially union gains were modest and hard fought. Union advance, when it occurred was dependent on at least two of the following three factors being present: 1) Power at the point of production through workers who had a strategic place in the production process and who were hard to replace. 2) Close knit working class communities that provided bonds of solidarity and support. 3) Socialist or communist activists prepared to take a lead in organising workers (Cronin 1984). Economic revival was given a fresh impetus by the beginnings of a major rearmament program as the nation began to awake the threat posed by Nazi Germany. Much of the employment growth associated with rearmament occurred within the well organised, craft based aircraft production industry. Union strength in this industry meant that organisation was quickly extended to the new aircraft factories (Cronin 1984).

Once again the outbreak of war boosted union fortunes, particularly after the fall of Neville Chamberlain's Conservative/National administration in May 1940 and its replacement with a coalition Government including the Labour Party. Between 1940 and 1945, union membership grew by around 2.8 million members. Two pieces of regulation were particularly helpful to the trade unions. Essential Works Orders enabled the Government to prohibit workers changing jobs if they were deemed to be essential to the war effort. However, terms and conditions had to be no less favourable than

those negotiated through collective bargaining with trade unions. This encouraged employers to be party to recognise unions so that they might have some influence on the settlements that were being applied to them. Order 1305 prohibited industrial action, and specified that in the absence of voluntary agreements between the parties, the dispute would be settled by binding arbitration. It was possible for unions to refer cases to arbitration even if they were not recognised by the employer. When threatened with the prospect of having a wage structure imposed by the arbitrator, many employers decided that voluntary recognition was the lesser of two evils. Finally, although the Government declined to make union recognition the subject of statutory regulation, there were four courts of inquiry into union recognition disputes during the war, and in each case, the court recommended that employers should concede recognition (Bain 1967, 1970).

1945 – 1968

The situation facing unions at the end of World War II was immensely more favourable than that which they had faced at the end of World War I. There were two key differences: First, the election of a majority Labour Government in 1945. The Labour Party was committed to using state economic planning to maintain domestic demand and employment. The Labour Government nationalised key industries like coal, the railways and the health sector, with the result that unions in these industries found themselves on a much more secure footing. At the same time, the threat of further nationalisation and strong normative values for collectivism and state intervention to regulate the market had a disciplining effect on private sector employers, who feared the consequences of being branded ‘bad employers’ through conflict with unions. Second, the establishment of the Bretton-Woods system of trade and currency management ensured that international trade began to recover from the damage caused by the ruptures to the global economic order that occurred in the 1920s and 1930s.

All of this resulted in substantial changes to the structure of markets and firms. Markets became less competitive, and domestic producers enjoyed a degree of tariff protection. Firms became larger and markets more oligopolistic. The net result was that changes in the elasticity of labour demand over time became less pronounced, with labour demand for many workers remaining largely inelastic, even through the short periods of recession. This meant that even though most of the war time regulation favourable to trade unions was swept away, unions were able to hold onto what they had.

In these favourable conditions, increasingly assertive workplace union organisations were able to challenge the established order of national industry level collective bargaining to try and advance their own positions. This gave rise to ‘wage drift’ where wages spiralled away from nationally negotiated agreements in a way that was believed to contribute to wage inflations. Attempting to solve this problem was to become an abiding objective of politicians and policy makers for much of the 1960s and 1970s.

1968 – 1980

Unions grew strongly between 1968 and 1970 on the back of a major strike wave that affected most advanced industrial countries. That this growth spurt was sustained throughout the 1970s, after the strike wave ran out of steam, owes much to the public policy choices of the British state. Two aspects of state policy in particular helped to create a climate favourable to unions. First, the Royal Commission into Trades Unions and Employers Associations (known as the Donovan Commission) gave strong support for an extension and de-centralisation of collective bargaining to the level of the enterprise as a way of confronting wage drift and improving productivity. Second, the approach to economic management of both Labour and Conservative Governments was to try to regulate inflation through incomes policies, so pay settlements were the subject of statutory regulation. Groups of strongly organised workers seemed to be able to use their industrial muscle to escape the worse effects of these policies. Consequently, many workers saw unionisation and collective bargaining as key ways of addressing the perceived unfairness that arose from statutory incomes policy.

The public policy and economic environments were to change dramatically after the election of Margaret Thatcher’s Conservative Government in 1979, presaging a long period of union decline (Table One summarises declining density since 1980 using all available data sources). Chapter Two will consider the existing empirical evidence on the causes of this decline in more detail and the detailed empirical analysis of the micro-level processes behind this decline will begin in chapter Three. First, I shall consider different attempts to theorise union membership change in general and decline since 1980 in particular.

Table 1 The number of trade unions, trade union membership and membership density
Great Britain 1980 - 2001

	Membership of trade unions headquartered in Great Britain (thousands)	Employees in employment in the Great Britain (thousands)	Trade Union density	Trade Union Density (BSAS)	Trade Union Density (LFS)	Trade Union Density (WERS)	Trade Union Density (BHPS)
1980	12890	22432	57.5			65	
1981	11743	21362	55				
1982	11245	20896	53.8				
1983	10899	20557	53	49			
1984	10664	20731	51.4	47		58	
1985	10496	20910	50.2	47			
1986	10223	20876	49	46			
1987	10161	21081	48.2	46			
1988	10065	21748	46.3	-			
1989	9853	22143	44.5	44	39.0		
1990	9649	22353	43.2	40	38.1	47	
1991	9297	22140	42	43	37.5		38.4
1992	8777	21792	40.3	-	35.8		
1993	8439	21460	39.3	40	35.1		
1994	8030	21525	37.3	-	33.6		34.0
1995	7846	21839	35.9	36	32.1		
1996	7743	23019	33.6	36	31.2		32.0
1997	7606	23597	32.2	34	30.2		
1998	7657	24108	31.8	33	29.6	36	
1999	7702	24416	31.5	32	29.5		
2000	7588	24697	30.7	33	29.4		
2001	7562	24848	30.4	31	28.8		
2002	7727	24839	31.1	32	29.2		
2003	-	-	-		29.3		

Sources: Charlwood and Metcalf (2005) and own calculations

BSAS – British Social Attitudes Survey

LFS – Labour Force Survey

WERS – Workplace Employment Relations Survey

BHPS – British Household Panel Survey

1.2 Structural determinist explanations of union membership decline

Structural determinist explanations of union membership change are by no means homogenous. For analytical purposes, this section will separate them into 1) business cycle/macro-economic explanations, 2) law and state intervention, 3) employee attitudes and values and 4) hybrid accounts.

Business cycle/ macro-economics

The original, and perhaps most influential and controversial, of the structural determinist arguments, is that union membership change can be largely explained by business cycle/ macro-economic variables, i.e. changes in prices, incomes and unemployment. In the UK context, this argument was developed by Bain and Elsheikh (1976) from ideas about the influence of the business cycle on union fortunes that were originated by John R. Commons and the 'Wisconsin school' of industrial relations in the early decades of the 20th century. In doing this, they were following in the footsteps of the labour economists Hines (1964) Ashenfelter and Pencavel (1969) and Sharpe (1971) who had sought to develop the Wisconsin school's insights into a time-series econometric model that was able to account for change in union membership over time.

Bain and Elsheikh argued that the business cycle influenced individual demand for union membership. When prices rise faster than incomes, individuals will want to unionise to protect their standard of living (the threat effect). When money wages rise rapidly, workers are likely to give unions credit for securing these pay rises, so making them more likely to unionise because they perceive unions to be effective (the credit effect). When unemployment is low and changes in the unemployment rate are small, the effect of unemployment on demand for unionism is likely to be negligible. High and rising unemployment may reduce the benefits of and hence the demand for union membership because employers have the whip hand. Alternatively, unemployment might encourage employees to unionise to protect themselves against the threat of unemployment (Bain and Elsheikh 1976).

While subject to considerable criticism on both theoretical and methodological grounds (Richardson 1977), the key problem that undermined the claims of Bain and Elsheikh's econometric model was an empirical one. It failed to adequately predict the down turn in union fortunes from 1980. This failure led to attempts to develop and improve the Bain and Elsheikh approach rather than its abandonment. Booth (1983), Price and Bain (1983) and Carruth and Disney (1988) all offered refinements. Disney

(1990) summarised these developments and explained why, in his judgement, Carruth and Disney's (1988) model offered a significant improvement over the work of Bain and Elsheikh, Price and Bain and Booth.

Disney elucidated two key problems with the earlier time-series/business cycle research. First, the empirical models failed to separate long-term trends in unemployment, prices and earnings from cyclical effects. Second, and partly as a result of the first point, the 'business cycle' label was misconceived, because cyclical changes in unemployment and prices were much less important than the 'threat' effects of low real wage growth. Carruth and Disney argued that 'steady state' demand for union membership was largely a function of real wage growth; when real wage growth is high, demand for union membership is low, while when real wage growth is low or negative, demand for union membership is high.

Carruth and Disney's model was largely successful in predicting both the upswing in union membership in the 1970s and the downswing of the 1980s, although a careful reading of Disney (1990) suggests that the model underestimated the continued decline in union membership in the latter half of the 1980s. Whether or not the Carruth and Disney model would successfully predict the decline of unions to 1998 is a moot point, as is the question of whether their model would 'work' if re-estimated using more recent advances in econometric method, for example the co-integration approach of Johansen (1988, 1991). However, the broad picture which emerges from the Carruth and Disney model seems to be largely congruent with the events of the late 1980s and 1990s. Strong real wage growth has removed the incentive to unionise, with the result that union membership has fallen.

Despite this congruence between the Carruth and Disney model and the empirical record, a more careful consideration of their chain of causality gives reason to question Disney's interpretation of Carruth and Disney's results. The central problem with Disney's explanation is that real wage growth is ultimately driven by productivity, and there is a large body of theory and evidence that suggests that unions influence productivity (Prais 1981, Metcalf 1989, Crafts 1991). Indeed, Metcalf (1989) argued that unions were a cause of Britain's weak productivity performance in the 1970s, and the weakening of unions in the 1980s was in part responsible for greatly improved productivity growth in manufacturing during the 1980s. If this is the case then it must be wrong to argue that union decline has been caused by a weakening incentive to unionise due to real wage growth. Instead, union decline is likely to be the result of

declining union power, which then causes both membership decline, productivity growth and real wage growth. As the union imposed barriers to productivity are removed, workers no longer feel that unions are effective so stop joining. At best, Carruth and Disney's empirical estimates are seriously biased because real wage growth is endogenous to union membership. At worst, this bias renders the results entirely meaningless. In either case, it is incorrect to talk of real wage growth 'causing' union decline, even though there is a statistical correlation between the two, because it seems likely that both were actually caused by a third, unobserved variable; the decline of union power in the labour market.

The law and state intervention

In contradiction to Carruth and Disney (1988), Freeman and Pelletier (1990) presented a time-series econometric model that incorporated an index of the favourableness of employment law towards trade unions. According to their results, changes in this index of labour law explained both growth in union membership in the UK in the 1970s, decline in the UK in the 1980s and variations in the pattern of change in union density in the UK compared to the Republic of Ireland.

Disney (1990) criticised the approach of Freeman and Pelletier on two grounds. First, changes in the law happened simultaneously with other harder to measure changes in the 'climate of industrial relations'. Consequently, Freeman and Pelletier's measure of the law may be a proxy for many other unmeasured changes. Second, Freeman and Pelletier's model suggested that a change in the law led immediately to drops union membership, but there is no clear picture of the process by which this might happen. Indeed some commentators have suggested that the arrow of causality runs in the other direction. Weakening trade unions and falling trade union membership emboldened Government to implement laws increasingly hostile to trade unions. Mason and Bain (1993) have also criticised the index of employment law developed by Freeman and Pelletier. They argue that employment law changes initiated by the Heath Government of 1970 – 1974 were less favourable to unions than Freeman and Pelletier's index assumes. If this is the case, then Freeman and Pelletier's results will be biased by measurement error.

The key problem with the approach of both Freeman and Pelletier, Carruth and Disney and the other time-series econometric models is that all could have their results plausibly explained by difficult to measure variables, for example, union power and the

climate of industrial relations which, as a consequence of the difficulty of measurement, are not included in the models. At the same time, some of the variables included in the models, particularly inflation and real wage growth may be endogenous. Therefore results are likely to be biased by omitted and endogenous variables. This weakness raises fundamental questions about the appropriateness of the time series econometric methodology for the investigation of the causes of union decline.

Despite these problems with both the business cycle/ macro-economic argument and the state intervention/ role of legal changes arguments in their pure forms, the interaction of legal changes and macro-economic factors are held to be an important explanatory element in the causal explanations of union membership decline developed by a number of other authors. I will develop this point below.

Employee attitudes and values

In a wide-ranging and beguiling essay, Phelps Brown (1990) argued that the ‘counter-revolution of our time’ was the replacement of collective values and policies with individualist ones. This change facilitated and was facilitated by the ‘dissolution of the labour movement’. Consequently, the decline of trade unions can be seen in large part as being determined by this shift in attitudes².

For Phelps Brown, the shift to individualism was the result of a number of related factors. First, the reaction against the perceived failings of the collectivist policies that were dominant in Britain from the 1940s to the 1970s, particularly Britain’s relatively poor economic performance. Second, the growth in prosperity that dramatically increased the number of income tax payers and the numbers of people who enjoyed an economic stake in society through home ownership. This caused the downward spread of middle class values and economic interests. Third, technological changes, like the spread of the motorcar and television, contributed to the break up of occupational communities close to the point of production and led to the privatisation of social life. Fourth, the shift in the locus of collective bargaining from the national level to the local level combined with increased opportunities for individual advancement through education and training.

The net effect of these changes was to shift the political centre of gravity to the right, such that the Conservatives were able to win power and implement a neo-liberal

² It is important to note that Phelps Brown uses the term ‘labour movement’ to mean more than simply the trade unions, and that his essay is not closely focused on explaining the decline of union membership, but wider social and political changes.

agenda. Resistance to this change was muted as a result of the decline of the labour movement, by which Phelps Brown meant not the specific institutions of the trade unions and Labour Party, but the sense of common purpose and working class solidarity which had animated the grass roots activists and members of those institutions, and which in Phelps Brown's eyes had resulted in a labour movement which was greater than the sum of its constituent parts.

The weakness of Phelps Brown's account as an explanation of union membership decline is that while the shift in values and attitudes that he describes might be accurate, they must have been underway before 1980, during a period when union membership was rising. Therefore, while changing values and attitudes may be a contributory factor in explaining union decline, particularly the political shifts that led to changes in the economic and legal environment after 1979, the rise of individualist attitudes is not enough in itself to explain declining union membership. However, as Millward et al. (2000) noted, the rise of acquisitive individualism seems to have re-enforced and been re-enforced by changes to the system of industrial relations in Britain, including union decline. The interesting question is to what extent can the rise of individualism be held to be responsible for membership decline? This question will be addressed in Chapter Six.

Hybrid accounts

Bain (1970) argued that white-collar union membership was the product of the extent to which employers were willing to concede recognition and the degree to which the white-collar workforce were concentrated in large organisations. The extent to which employers were prepared to recognise unions was a function of existing union membership strength among white-collar workers and the extent to which Government action promoted union recognition. However, Bain's later advocacy of a business cycle approach to understanding union membership change suggests that he did not find this model a convincing explanation of aggregate union membership change.

Bain and Price (1983) offered a list of six factors, derived from the literature on union membership, which they argued explained change over time. These are: 1) the composition of the workforce, 2) the business cycle, 3) employer policies and Government action with regard to union recognition, 4) Personal and job related characteristics, 5) Industry structure and 6) union leadership. Of these, one, four and five can be thought of as different facets of the same phenomenon; some workers, for

reasons of path dependency are more likely to unionise than others. If the composition of the labour force changes so that the numbers of workers with a strong propensity to unionise increases or decreases, union membership is likely to change as well. Two has already been discussed above. Three is important, because union recognition at the workplace has a key role to play in determining whether it is feasible for a worker to unionise without going through a potentially costly union recognition campaign (Bain 1970, Green 1990). However, it would be useful conceptually to differentiate between state and employer policies towards union recognition while recognising that in practice, state policy is likely to have a considerable influence on employer policy.

Bain and Price dismissed the final point, union leadership. They argued that while union leadership might affect whether or not a particular union grows, leadership had little impact on aggregate union membership. They cited the union interventionist arguments of Undy et al. (1981) that the unions ASTMS and the TGWU grew through expansion into areas of non-unionism, but questioned whether the workers organised by these unions would have unionised anyway given the highly favourable (for unions) macro-economic conditions and state and employer policies. Therefore, to speak of the 'critical role of union leadership' in bringing about union growth, as Undy et al. did, dramatically overstated the case (Bain and Price 1983: 31). The experience of ASTMS in the 1980s, when the leadership stayed the same, but where membership plummeted as the wider environment changed, appears to buttress Bain and Price's argument.

Howell (1999) offered a comprehensive analysis of union decline in the 1980s and 1990s. He argued that unions were largely powerless to resist decline because of a combination of structural change and previous strategic choices made by unions in better times. For Howell, union growth in the 1970s rested on three factors; high levels of employment, the interests of large fordist firms in developing stable bargaining relationships with unions and the political context of state support for trade unionism. Because the interests of large fordist firms were best served by enterprise level bargaining, and because state policy supported this shift, there was a significant shift towards de-centralised bargaining³. This, combined with rank and file dissatisfaction over union behaviour towards state incomes policies in the mid and late 1970s (dissatisfaction with which would ultimately lead to the break down of these policies, the 1978/79 winter of discontent and the electoral victory of Margaret Thatcher)

³ It is also worth noting that the temperaments and experiences of union leaders like Jack Jones, Hugh Scanlon and Clive Jenkins also led them to champion de-centralised bargaining, although Howell does not make this point.

diminished the influence of union leaderships over their members, which made it more difficult for union leaders to implement alternative strategies in the 1980s.

Once elected in 1979, the Conservative Government began to reshape the conduct of industrial relations in revolutionary ways. The legal changes that were introduced to restrict union power and militancy were one element of a particular form of response to the crisis of fordism. Parallel changes to economic management, which accelerated the 'double shift'; that is de-centralisation of decision making from the state to the firm combined with the voluntary surrender of the state's power to intervene in the market to the international financial markets, had the effect of changing the economic interests of employers with the result that long established patterns of industrial relations were questioned. In particular there were moves away from union recognition and collective bargaining. At the same time, economic policy had the effect of accelerating compositional change unfavourable to trade unions (particularly the demise of large swathes of unionised manufacturing).

Howell argued that this led to a shift in union strategy from supporting voluntarism and free collective bargaining to supporting legal intervention in industrial relations and an enhanced role for the EU. But overall, unions failed to shape the workplace or to curb the ability of employers to shape the workplace in ways that were unfavourable to unions. For Howell, this failure was unsurprising given the weak position in which unions found themselves. Blaming union failure is a position which cannot easily be falsified, but in Howell's judgement, this is to blame the victim – unions declined because neither the state nor the majority of large and growing employers believed that unions performed a useful function. Alternative strategies or leadership would not have altered this reality.

Willman's (1989⁴, 2004) analyses of union strategy from an organisational behaviour perspective reinforced Howell's arguments. Willman (1989) showed how the tight financial margins under which trade unions operated made diverting resources to organising activity very difficult, if not impossible. Willman (2004) asked the question; why did British unions fail to adopt a more successful strategy in response to decline? He considered the argument that leadership failure may be responsible, but judged that this view is the result of attribution error. He cited evidence from the business strategy

⁴ Mason and Bain classify Willman (1989) as a 'union interventionist', presumably because he does not have an econometric model which he argues determines the level of union membership. I disagree with this classification. My reading is that Willman argues that unions have limited opportunities to make strategic choices due to environmental constraints – an argument made even more clearly in Willman (2004). For this reason I classify him as a structural determinist.

literature, which suggests that organisations find it extremely difficult to change strategy in response to an external crisis. Faced with crisis, alternative strategic options beyond trying to continue with what worked in the past rarely even occur to strategy makers. Path dependency and isomorphism are better guides to the behaviour of the organisation than any ideal strategy. Therefore it would be wrong to blame union leaders for reacting to crisis in the same way that most leaders of most organisations react most of the time.

To summarise and conclude this section, there are significant problems with accounts of union membership change that seek to explain changes in union density over time through a time series econometric model. However, the factors that researchers have attempted to incorporate into time-series models, namely macro-economic variables and legal changes loom large in those judgement based accounts of union membership change that explain union decline in the 1980s and 1990s in terms of structural determinants. However, they should not be viewed in isolation from compositional change, changes to the ideological terrain, and perhaps changes to worker attitudes and values. While there is agreement among all of the authors discussed above that structural determinants explain union decline, and the role of unions themselves in bringing membership change about is minimal, there are significant disagreements about the relative importance of business cycle factors, compared to legal changes, compared to changing employee attitudes.

1.3 Union interventionist accounts of union membership change

The original statement of a union interventionist position can be found in the work of Undy et al. (1981). Undy and his colleagues studied the role of union leadership in bringing about union growth in a sample of British unions during the 1970s. They differentiated between union leaders, like Clive Jenkins of ASTMS and Jack Jones of the TGWU, who used their power and influence within the unions that they led to promote expansion into areas of non-unionism, and leaders like Dave Bassnet of the GMWU who did not actively promote expansion. They found that the expansionist leaders led unions that increased membership, while the unions led by officials who did not promote expansion stagnated. Further, other factors like differences in job territories or organisational structures could not explain why some unions grew while others stagnated. From these findings, Undy et al. inferred that union growth at the aggregate level could be influenced by leadership – if all unions had been led by expansionists,

then all unions would have grown by similar amounts. This, they argued, was evidence that Bain and Elsheikh's structural determinist account was flawed.

Kelly and Heery (1989) were also critical of structural determinist analyses. They argued that a worker's propensity to unionise may be largely determined by structural factors, but actual joining behaviour is dependent upon the union being organised to detect propensity and convert a propensity to join into membership through persuasion⁵. Consequently union organisation and leadership is a critical determinant of union membership. Full-time union officials (FTOs) failed to prioritise recruitment – when Kelly and Heery asked how much time FTOs devoted to different activities, recruitment came sixth, with FTOs devoting more time to union committee meetings than to recruitment, while evidence from the 1984 WIRS showed that trade unions did not touch 85 per cent of non-union workplaces between 1979 and 1984. Kelly (1990) developed this point by arguing explicitly that union decline in the 1980s was the result of failure on the part of unions and their leaders to devote adequate resources to organising and recruitment, with the result that workers who may have wanted to unionise were not supplied with the opportunity to do so, this combined with increasing state and employer hostility to unions explained union membership decline during the 1980s. This argument was supported by the evidence of Beaumont and Harris (1990) who found limited evidence of union recruitment in Greenfield sites between 1980 and 1984. Although Mason and Bain (1991) found evidence that union leaderships were attaching increasing importance to recruitment by the end of the decade, as did Kelly and Heery (1994). However, this priority often failed to influence the behaviour of union officials on the frontline, who were subject to other competing claims on their time.

Metcalf (1991) argued that union membership changes and hence decline, is determined by the complex interaction of five factors; 1) macro-economic variables, 2) the composition of the workforce, 3) state policy towards industrial relations, 4) the policy and behaviour of employers and 5) what unions do themselves. However, he concluded by arguing that although unions 'got their act together' in the second half of the 1980s, this did not result in more members, so the actions of the state and employers appear to be more important than the actions of unions. Metcalf (2005) updated his earlier analysis, and concluded that while union decline was largely the result

⁵ Kelly and Heery made two further specific criticisms of Bain's work which are not discussed here because they are not relevant to the wider structuralist/ determinist debate.

of environmental problems, the problem of decline was compounded by unions' own structures and policies. He also argued that what unions do for members and potential members will be important determinants of whether unions are able to retain the members they have and of whether they will be able to attract fresh recruits.

Towers (1989) took a similarly catholic view of the causes of union growth and decline to Metcalf and was similarly pessimistic about the prospects for weighting the importance of the various factors given the complexity of the processes involved. He argued that while unions can influence their own membership levels, it was likely to be an 'uphill trudge' given the difficult conditions that unions faced at the time he was writing.

While Boxall and Haynes (1997) studied the relationship between trade union strategy and effectiveness in the context of New Zealand in the early to mid 1990s, their analysis and conclusions have important implications for the debate between structural determinists and union interventionists in Britain. They argued that given a neo-liberal environment, union effectiveness and consequently an ability to recruit and retain members rests on successful strategy making in the industrial (workplace) arena. However, they also found that given a harsh environment, the ability of unions to make effective strategic choices was reduced.

Fairbrother (2000) and Schenk (2003) were both of the opinion that the key to union renewal and membership growth lies in unions' own hands. They argued that union growth can be facilitated by reform of unions' own structures and policies such that unions become more open, democratic and participative organisations. Schenk's argument was essentially polemical, but Fairbrother's was made with reference to extensive workplace level case studies. However, a careful reading of the data provides little evidence to support Fairbrother's central renewal thesis (Kelly 2001, Charlwood 2002b). Consequently, the argument that reform of unions' internal structures on more democratic and participative lines will lead to renewal and growth appears to be an article of faith for Fairbrother and Schenk rather than a position grounded in social science theory or empirical evidence.

In summary, the failure of a union leader like Clive Jenkins, who Undy et al (1981) held to be at least partly responsible for union growth in the 1970s, to sustain that growth through the tougher economic and political climate of the 1980s undermines Undy et al.'s argument that union leadership can have an independent and positive effect on aggregate union membership. However, there remains a powerful

argument, articulated most convincingly by Kelly and Heery (1989) that unions can influence their own membership levels, and by extension, aggregate union membership. The relative importance of union intervention compared to other structurally determined factors remains an open question, particularly if, as Boxall and Haynes argued, unions are less able to exercise strategic choice when the environment is unforgiving.

1.4 Other accounts of union membership change; areas of consensus and disagreement

Brown and Wadwhani (1990), Brown et al., (1997) and Pencavel (2003) all considered the causes of union decline as part of a wider analysis of the consequences of the change in the system of industrial relations in Britain after 1979. Brown and Wadwhani (1990) and Brown et al. (1997) argued that union decline was facilitated by legislation which weakened unions, making it harder for unions to wield the strike weapon, harder to win recognition from employers and which outlawed the closed shop. These changes created an opportunity for employers to reform the conduct of workplace industrial relations. However, the incentive to do so came from economic changes, notably an increase in product market competition (imports as a proportion of domestic demand rose from 26 per cent in 1980 to 45 per cent in 1995), and the tough trading conditions that resulted from the recessions of the early 1980s and early 1990s. They argued that disentangling the relative importance of legal changes from the parallel economic changes is an impossible task.

Pencavel (2003) adopted a similar line to Phelps Brown in arguing that union decline was presaged by a loss of confidence in the post war industrial relations settlement. As a result, union popularity plummeted. Although union popularity soon bounced back (Edwards and Bain 1988), Margaret Thatcher had already exploited the window of opportunity to introduce radical changes to industrial relations law and economic management. Pencavel echoed Brown et al. (1997) and Metcalf (1991) in arguing that it was this combination of changes to the way in which the economy was organised and changes to the legal framework governing industrial relations which brought about union decline, although differentiating between the influence of the economic and the legal, for example in the case of the demise of the closed shop, is very difficult. These changes led to a situation where employers establishing new workplaces no longer felt that union recognition was useful or necessary. For Pencavel, there was

little evidence that workers miss unions, and he cited with approval the findings of Millward et al. (2000) that union decline can be attributed to a 'withering of enthusiasm' for unions on the part of the workforce.

Crouch (2001) considered the issue of union decline in Britain from a different perspective. His paper looked at the likely future prospects for trade unions in advanced industrial economies. He identified four problems, common to unions in all advanced industrial countries, that he argued were responsible for decline and that continue to pose a threat for the future. These were: 1) compositional change (the decline of unions core membership reserves). 2) The abandonment of Keynesian demand management. 3) The decentralisation of industrial relations activity to the enterprise and 4) the rise of non-standard forms of employment; part-time work, fixed term contracts and temporary and agency workers. He argued that compositional change and the shift in the locus of industrial relations activity have had only a moderate impact on British unions, while the abandonment of Keynesian economic management and the rise of non-standard employment affected British unions very severely. However, Crouch does not adequately explain why the rise of non-standard employment has had such deleterious effects.

Areas of consensus and disagreement

It is possible to construct a broad brush picture of the causes of union decline in Britain that is compatible with the positions of Brown et al., Crouch, Howell, Kelly, Metcalf, Pencavel, and Towers. After Margaret Thatcher's election victory in 1979, she began a major project to re-shape both the system of industrial relations and the nation. A series of laws were enacted to restrict the ability of trade unions to use the strike weapon. The closed shop was outlawed. The statutory procedure for trade union recognition introduced in the mid 1970s was abandoned. The state reversed a century long policy of endorsing and promoting collective bargaining. At the same time, there was a radical shift in economic policy. The goal of full employment was abandoned in favour of the goal of price stability. Attempts to achieve price stability through the negotiation of an incomes policy were abandoned in favour of the discipline of the market. Interest rates became the key weapon in the fight against inflation.

High interest rates contributed to a strong pound and made borrowing more expensive for industry. At the same time global demand dipped alarmingly in a severe global recession. The combined effect of these changes to the economic environment

wiped out large swathes of British industry, creating high levels of structural and long-term unemployment. This economic environment led to many workers leaving unions through unemployment, and made it harder for unions to grow through new organising and recruitment. At the same time, the state ceased to support loss-making industries, and industries that had been taken into national ownership over the previous forty years were privatised and forced to operate in a market environment. The state signalled to employers that unions could and should be taken on and defeated by employers through its conduct of industrial relations in the nationalised industries and the public sector.

This combination of changes in the statutory framework within which workplace industrial relations were conducted and changes in the economic environment faced by firms, created both the opportunity and incentive for firms to alter their industrial relations policies. In a minority of cases firms de-recognised unions and more commonly, chose to set up new, union-free establishments.

There remain a number of issues on which the authors cited above would disagree and a number of questions that remain open. How important was compositional change in bringing decline? Towers (1989) thought it important, while Kelly (1990) and Pencavel (2003) dismissed it. How important were shifts in employee attitudes, from collectivism to individualism in bringing union membership decline? For Phelps Brown they were central, a view which finds a degree of endorsement in the analyses of Pencavel (2003) and Millward et al. (2000). However, Kelly (1998) was highly critical of Phelps Brown's account and neither Millward et al. nor Pencavel were able to quantify the effect of change in employee attitudes. If we focus on the specific issue of declining union membership, are we able to weight the relative importance of legal and economic changes? Finally, to what extent can unions themselves be seen as the authors of their own decline? For Kelly (1990) and Kelly and Heery (1989), union failure to prioritise organising and recruitment was central to understanding decline, while Metcalf (1991, 2005) argued that while union actions are a determinant of union membership, they seem to have been secondary to structural factors throughout the period of union decline. Howell (1999) and Willman (2004) argued that unions had very limited room to exercise strategic choice so decline was essentially structurally determined.

I have begun to consider this last question in my own previously published work, but have not yet come to a firm conclusion. In Charlwood 2002a and 2003a, my argument was that demand for unionism among non-union workers meant that unions had an opportunity to bring about growth if they invested in organising. This could be

classified as a union interventionist approach (although my position had modified between 2002 and 2003: In 2002, my argument was that there was a large amount of scope for union growth, whereas by 2003 I was arguing that environmental constraints placed quite tight limits on what unions themselves could achieve). Similarly, the finding in Charlwood (2004b) that there is some evidence compatible with the idea that there is variation in organising effectiveness between trade unions suggests that unions may be able to intervene to influence their own membership by adopting the policies and tactics of the more successful unions. However, in reviews of the work of Fairbrother (2000; see Charlwood 2002b), Smith (2002; see Charlwood 2003b) and Fairbrother and Yates (2003) and Clawson (2003; see Charlwood 2004c) I was more sceptical of union interventionist arguments. This scepticism also permeated Charlwood (2004d), where I argued that the new generation of trade union leaders were likely to prove powerless to bring about growth given the environmental constraints faced by unions.

Conclusion

In this chapter, I have summarised trends in union membership density in Britain, and briefly placed these trends in some historical context. I have then summarised and evaluated some of the key arguments put forward to explain change over time in general, and the decline in union density since 1980 in particular. I have differentiated between authors who argued that union membership change was structurally determined and those who argued that unions themselves are partly responsible for their fortunes and I have drawn out areas of agreement and disagreement between those who argued that structural determinants are the key causes of union membership change. From this analysis I have identified two broad research questions: 1) To what extent was union membership decline since 1980 structurally determined and to what extent was it the result of union failure? 2) What were the relative importance of the different structural determinants of union membership decline? My aim in this thesis is to bring forward new empirical evidence on the micro-processes of union decline, which will inform my own judgements on the answers to these questions. My answers to these questions can be found in Chapter Seven. Before I introduce the empirical evidence which will inform my answers (in Chapters Three to Six) Chapter Two will consider methodological issues and existing empirical literature and from this develop an analytical framework for organising the micro-data.

Chapter 2. Theory and evidence on union membership change

The aim of this chapter is to develop a methodological strategy for investigating the micro-level processes of union decline in Britain between 1980 and 1998. I begin by considering debates about the appropriateness of different theories of theory and methodology within the field of industrial relations. A common criticism of much industrial relations research is that it is largely empiricist and lacks a theoretical basis (Capelli 1985, Kelly 1998). However there is a lack of consensus about the way in which theory should be used to inform and organise empirical research; what Hyman (1994) refers to as the ‘theory of theory’. I draw a distinction between a logical positivist approach, based on deduction and hypothesis testing, and a critical realist approach where the researcher adopts an a priori theoretical position, based on existing knowledge of the area of investigation, and uses this theoretical position to organise and make sense of the data. I argue that while there are clearly difficulties in applying a rigidly logical positivist theoretical and empirical framework to the analysis of union decline (Metcalf 1991, Freeman 1988), critical realism, which proponents have argued provide an alternative and superior analytical approach to logical positivism (Godard 1993) is at least as problematic. Consequently, I develop a ‘loosely’ logical positivist analytical framework, what Bain and Clegg (1974) describe as ‘theoretically informed empiricism’, where empirical evidence is used as the key basis for discriminating between alternative theoretical explanations of union decline set out in the previous chapter, but not based on narrow deductive reasoning and hypothesis testing.

I then consider the existing empirical evidence on union membership decline in the period 1980 – 1998, and argue that a key weakness of this work is its largely empiricist and a-theoretical character. Data limitations have prevented the implementation of a logical positivist analytical strategy. Although theoretically informed models of unionisation that provide a basis for examining change in unionisation over time have been developed (Booth 1984 & 1985, Klandermans 1986, Naylor and Cripps 1991), the available data are not able to operationalise and test these models. Given the difficulties of implementing a logical positivist analytical strategy and the lack of consensus within the field of industrial relations and within the discipline of economics (applied economists have conducted much of the empirical work into union membership decline) about alternative theories of theory, a-theoretical empiricism has

been adopted as a default position. After reviewing the empirical evidence, I develop a model for analysing the micro-processes of union decline at either the workplace or individual level based on Freeman's (1988) simple stocks and flows model for analysing changing union membership density in the USA.

2.1 Theories of theory in the field of industrial relations

The traditional perception is that social science theory has played a minimal role in the development of industrial relations as a field of academic study. The maxim, which has been attributed to various members of the 'Oxford school' of industrial relations scholars (e.g. Allan Flanders, W.E.J. McCarthy and Hugh Clegg), that 'an ounce of fact is worth a tonne of theory' is much quoted (Edwards 2003: 30). This perception is questionable. In their critical appraisal of the state of British industrial relations research up to the early 1970s, Bain and Clegg (1974) differentiated 'theoretically informed empiricism' from 'guide book' research. With theoretically informed empiricism, theory guides the research design, empirical evidence is used to assess the validity of theory and, if theory is found wanting, new theory of the middle range is developed which fits better with the empirical regularities, and which can be tested by future researchers (examples cited by Bain and Clegg include McCarthy 1964, Turner et al 1967 and Bain 1970. More recent examples would include Kelly and Heery 1994 and Heery et al. 2003). By contrast, 'guide book' research is a-theoretical empiricism, where the researcher does nothing more than survey and describe the landscape. Bain and Clegg concluded by urging industrial relations researchers to follow the model of theoretically informed empiricism.

More recently, industrial relations scholars in North America have attempted to develop a more explicitly scientific approach, based on deduction and hypothesis testing (e.g. Kochan 1980). By contrast, with a few exceptions, British industrial relations scholars have rarely acknowledged or discussed the role of theories of theory in framing their research⁶. However, Edwards (2003: 31) has argued that much recent British industrial relations research is compatible with a critical realist approach because it stresses the "interconnected nature of social phenomena.....refuse[s] to privilege structure over action, and....argue[s] that the causal powers of certain forces are not univariate but depend on their context." An explicitly realist model has been urged on

⁶ For example, Kelly (1998) strongly asserts the importance of theory in general and mobilisation theory in particular for industrial relations research. However, his book contains no discussion of the theory of theory which led him to champion mobilisation theory over other theoretical alternatives.

industrial relations researchers by Godard (1993) and Hyman (1994). Consequently, I shall evaluate logical positivism and critical realism as alternative theoretical-methodological approaches for investigating union decline⁷. My argument is that, in the light of some aspects of the realist critique, and given the available data, logical positivism does not provide the basis for a satisfactory analytical strategy. On the other hand, while some aspects of the critical realist approach have a superficial attraction, there are some fundamental problems with it (Brown et al. 2002), not least of which is the problem of how to differentiate between different theoretical alternatives which pass a test of ‘plausibility’. Consequently neither critical realism or logical positivism offer an entirely satisfactory way forward, so the theoretically informed empiricism urged by Bain and Clegg thirty years ago still provides the best way to proceed.

The critique of logical positivism (LP)

Vernon (2000) traced the arrival of the logical positivist approach to social science back to the seminal ‘positive economics’ framework of Friedman (1953). Friedman argued that the key test of a theoretical model should be the extent to which it corresponds with the observed reality, and that the method for adducing the fit between theory and reality should be the use of deductive reasoning to develop testable hypotheses. If the hypotheses cannot be falsified, then the plausibility of the theory is enhanced. Since the publication of Kochan’s (1980) ‘Collective Bargaining and Industrial Relations’, which urged industrial relations researchers to adopt positivist methodology, LP has become the dominant approach in North American industrial relations research, although its following in Britain has been more limited.

The LP approach to social science has been critiqued from a number of directions. The process of using deduction to generate testable hypotheses can be problematic. Sometimes what is presented as fact that follows from deductive logic may appear to be closer to a hypothesis that should be tested (Vernon 2000). For example, in their study of the determinants of individual union membership, Abowd and Farber (1982) used deductive reasoning to specify which workers they believed to be ‘queuing’ for a union job. However, whether or not these workers are actually queuing for union jobs should surely be a matter for empirical testing rather than something that is presented as ‘fact’ on the basis of questionable logic.

⁷ Post-modernist theories of theory have not found favour among the industrial relations research community (Godard 1993, Kelly 1998). Consequently I have chosen not to consider post-modernism as an alternative to my preferred theoretical-methodological approach.

Another common problem is that hypotheses may be presented as following from one theory, when they may also be compatible with an alternative theoretical explanation. For example, if a researcher were seeking to test the theory that union membership decline can be attributed to falling benefits and rising costs of unionisation for workers, deductive reasoning might lead the researcher to construct a hypothesis that rising costs and falling benefits would lead to increased free-riding (because if union membership is price sensitive, but the price that workers are willing to pay varies among workers, a rising price would be likely to increase the number of workers unwilling to pay the price, so increasing free-riding), so if there was no evidence of increased free-riding, this would constitute a disproof of the theory. However, increased free-riding might also be evidence of changing worker attitudes and values rather than (or at the same time as) a change in the cost of union membership. Therefore, an absence of disproof does not necessarily strengthen a theory because there are other alternative theoretical explanations equally compatible with the evidence. This problem can be quite common if analysis is based on secondary data that was not gathered explicitly to discriminate between alternative theories.

A more fundamental criticism of LP comes from researchers operating within the social action approach to social science (Godard 1993: 288). For proponents of the social action approach, LP is doomed to failure because people do not respond in a uniform way to external stimuli, in the way that, for example, an atom behaves when hit by a sub-atomic particle spinning off another atom. The actions of people are determined at least in part by the motives and meanings that they attach to an external event. For example, the way in which an individual reacts to seeing a comet will depend on whether they take the comet to be a sign from God that the end of the world is approaching, or a clump of rocks and ice being propelled around the solar system by the gravitational pull of the sun and the planets. Because there is a high degree of heterogeneity in the way in which individuals ascribe motives and meanings, attempts to measure and model human behaviour 'scientifically' will be at best flawed and at worst doomed to failure. This critique might explain another weakness of the LP approach – its failure to generate consistent, replicable findings in key areas of industrial relations where it has been applied (Godard 1993: 287). For researchers working within a social action framework, quantitative analysis does have a role to play, but it should be limited to measuring the incidence of the phenomena identified by qualitative, hermeneutic research rather than for modelling and prediction (Brown and Wright 1994: 162).

According to Godard (1993: 294), the critical realist (CR) critique of LP synthesises and transcends these criticisms. For the critical realist, the world is too complex to measure and model with the degree of precision claimed by LP; attempts to obtain precise empirical measures and to construct elaborate causal models represent both an exercise in futility and a misunderstanding of the subject matter. Causal models are at best a rough and ready representation of complex social processes. The empirical measures that are the basis of the models are little more than crude indicators of complex social phenomena. CR accepts that quantitative analysis has an important role to play in social science, but argues that the results need to be interpreted with a much greater degree of caution than is usual with LP. Interestingly, for the purposes of understanding union membership change, this critique appears to have been implicitly accepted by two distinguished academics, noted for their adherence to LP, Freeman (1988) and Metcalf (1991). Both argued that the complexity of the processes underlying union membership change mean that a rigidly LP approach is inappropriate.

Therefore there are significant problems for using an LP approach to analyse union membership decline. Some of these problems might be overcome by the development of better theory and the collection and analysis of better data designed to operationalise that theory. However, given the quantitative data available, and the impossibility of gathering better baseline data from the period before union membership decline got underway unless the laws of physics change to allow time travel, this is not an option. Even if it were, significant doubts would remain about the appropriateness of LP. Does CR offer a better framework for studying union decline?

The critique of critical realism (CR)

CR is a theory of theory that posits that to understand causes of events, it is necessary to look behind surface reality to identify the 'generative mechanisms'; the 'real' causes in the unobserved and unobservable 'deep structure' of societies. The CR social scientist starts with a problem or issue to be investigated, then proceeds through a process of abstraction to identify 'real' causes. These 'real' causes are then presented in the form of hypotheses. However, these hypotheses are not tested or testable in the way in which an LP hypothesis would be, because, for the critical realist, it is questionable whether data collected from observable 'surface' phenomena can adequately prove or disprove the existence and significance of elements of 'deep structure'. Instead, CR theories and

hypotheses are evaluated according to their general plausibility in explaining the observable surface events.

Godard⁸ (1993) argued that CR methodology offers industrial relations researchers a superior theoretical and methodological tool kit than that offered by the LP approach because of the greater sensitivity with which both theory and data are used to explain the causes of events. Theory that has a place for the unobservable and immeasurable is both richer and more plausible than theory drawn from that which can be directly observed. Testing theory on the basis of empiricism is unsatisfactory because the limitations and weaknesses of the data are rarely discussed or acknowledged. CR is also grounded in a more realistic judgement about the way in which social science research is actually carried out. The constructivist and gradualist pretensions of LP serve only to obscure the reality of social science practice. Hyman (1994) championed a realist approach to the theory of theory for similar reasons.

CR has not been an explicit influence on analyses of union decline in Britain. However, I would follow Edwards (2003) in arguing that there is a tendency for British industrial relations researchers to adopt an implicitly CR position. In particular, I would argue that the contrary positions of both Kelly (1990, 1998) and Phelps Brown (1990) owe something to the CR approach. The key generative mechanism identified and championed by Phelps Brown are the underlying values and attitudes of workers, which he categorises as being either ‘individualist’ or ‘collectivist’. Consequently, it was the shift from collectivism to individualism that he argues caused the ‘dissolutions of the labour movement’ and subsequent drop in union membership levels. By contrast, for Kelly, the key generative mechanisms are worker mobilisation and employer counter-mobilisation in response to Kondratiev waves of economic activity⁹. Both Kelly and Phelps Brown offer highly ‘plausible’ accounts of the means through which their favoured generative mechanisms caused union decline. CR offers no satisfactory way out of this impasse.

Therefore, while the CR critique of LP has a degree of force behind it, CR is unable to transcend LP in the way in which Godard (1993) argued that it can, because CR itself has a serious flaw; an inability to differentiate between alternative theories

⁸ Godard uses the terms ‘theoretical realism’ for CR and ‘logical deductivism’ for LP, but the terms are interchangeable.

⁹ Arguably, Kelly’s advocacy of Kondratiev waves is compatible with a LP approach because the existence of Kondratiev waves can be investigated empirically. However, given the long time periods involved, we would have to wait several hundred more years before we have enough observations to generate statistically robust results, so for all intents and purposes, the existence and impact of Kondratiev waves can only be assessed through the CR test of plausibility.

which both possess a high degree of plausibility. This task can only be accomplished through empiricism, LP offers the best available method for doing this, although it is important to include caveats that acknowledge the shortcomings of the LP approach. The problem with applying an LP approach to establish the causes of union decline in Britain in the 1980s and 1990s is that the available data were not collected for the purpose of testing theories of union decline. So while a number of good theories of individual unionisation exist (Booth 1984 & 1985, Naylor and Cripps 1991, Klandermans 1986) that could provide the theoretical basis of an LP analysis of union decline, the data are not able adequately to operationalise them. Consequently, the most satisfactory approach possible with the available data is that of theoretically informed empiricism advocated by Bain and Clegg (1974).

Theoretically informed empiricism

There are several plausible theoretically derived explanations of union decline and it is the task of the social scientist to try to weight the relative importance of these explanations and to differentiate between strong and weak theories on the basis of the empirical evidence. Although this approach has something in common with a critical realist methodology, notably a degree of caution in inferring causality from quantitative empirical analysis and a concern for theoretical pluralism, it also differs from the CR method in that it seeks to use empirical evidence as a means of discriminating between different theoretical explanations. This approach also has something in common with the way in which proponents of the more hermeneutically orientated social action approach in industrial relations research (e.g. Brown and Wright 1994) believe that quantitative data should be used in conjunction with qualitative case-study research. Qualitative research should be used to identify and explain phenomena, and quantitative analysis of survey data can then establish the incidence of particular phenomena among the general population.

Thirty years ago, Bain and Clegg (1974) echoed Dunlop (1958) in citing Julian Huxley's words that 'Great piles of facts are laying around unutilised, or utilised only in an occasional or partial manner'. These words apply today to the study of union membership decline in Britain in the 1980s and 1990s. In contrast to the period of which Dunlop, and to a lesser extent Bain and Clegg were writing, today there is no shortage of theory and analysis that has sought to explain union membership decline. There are however important differences of emphasis and opinion between these

accounts. At the same time, the growth of social survey research, notably the Workplace Employee Relations Survey series and the British Household Panel Survey, provide the 'great piles of facts' about union membership decline, which have been largely under utilised. The task of this thesis is to evaluate and if necessary re-theorise union decline on the basis of the empirical evidence of WERS and the BHPS. Before I do this (beginning in the next chapter) I shall summarise and evaluate the existing evidence on union decline. Because this literature is large, I shall consider the quantitative and qualitative evidence separately, beginning with the qualitative evidence.

2.2. Summary and evaluation of the empirical evidence 1; qualitative evidence

The Social Change and Economic Life Initiative (SCELI – see Gallie et al. 1996) provides a wealth of quantitative and qualitative data on the state of trade unionism in Britain in the mid to late 1980s. The SCELI conducted detailed case studies of six local labour markets, and conducted a number of employee and employer surveys across all localities. Looking first at the qualitative evidence, Rose (1996) focused on the health of workplace trade unionism in four organisations in Swindon, while Penn and Scattergood (1996) investigated the state of trade unionism in Rochdale.

Rose (1996) considered four organisations based in the 'sunrise' labour market of Swindon in more detail. 1) A manufacturing establishment with union recognition, but low union density amongst a predominantly female workforce. 2) A non-union manufacturing plant on a Greenfield site. 3) A unionised head office of a multi-national corporation with union recognition and moderate levels of union density; and 4) a highly unionised civil service scientific establishment. He found that the low and moderate levels of unionisation found in the manufacturing company and the head office could be explained by the absence of a social custom of union membership amongst the workforces, but there was little overt antagonism towards the union on the part of either management or non-union workers. There was little demand for union representation amongst the workers of the non union manufacturing plant, who were largely happy with the progressive human resources policies being pursued by management. Overall, Rose concluded that unions survived because management wanted them to survive, but that unions had been slow to react to changes in employee needs and attitudes.

Penn and Scattergood (1996) surveyed the state of trade unionism in Rochdale through a survey of 32 organisations and semi-structured interviews with union officials

responsible for supporting and representing union members in those organisations. They found a high degree of stability in union institutional arrangements and membership. There was little evidence of management attempts to de-recognise or delegitimise unions, but conversely there was little evidence of systematic union attempts to spread organisation to non-union workers or to boost membership amongst those already organised. However, it should be noted that many of the organisations surveyed might have been expected to shed labour over the course of the 1980s, and any net job loss would have resulted in a net loss of union membership.

Overall then, the picture that emerges from the qualitative SCCLI data is one of stability. There were few, if any, attempts by employers to roll back the institutional presence of trade unions and most unionised employers seemed accepting or supportive of the union role in the management of labour in their organisations (Gallie and Rose 1996).

Darlington (1994) conducted detailed case studies of shop steward organisation in three Merseyside factories from the 1970s to the early 1990s. While Darlington did not consider change in union density (union density in the factories remained high throughout the period studied), his analysis of changing union power and organisation may contain some findings that help to contextualise the wider decline of union membership during the period. He argued that the strength of workplace union organisation depends on the relative strength of material and ideological resources available to shop stewards. During the 1980s, shop floor union power was weakened by product market crises that were inextricably linked to a hostile economic and political climate, which in turn led some union officials to voluntarily surrender some of the ideological resources available to trade unions. Despite this loss of power, union organisation and membership density was maintained because of the traditions of collectivity in the factories. However, all the factories experienced job losses in the face of increased product market competition and technical change, resulting in an absolute loss of union members.

Darlington (1995) pursued the same themes in a study of shop steward and workplace union organisation amongst baggage handlers at Manchester Airport – a part of the public sector that began to operate increasingly like a private company as a result of political decisions taken by the Government in the mid 1980s. In the face of the threat of compulsory competitive tendering for baggage handling contracts, shop stewards became increasingly accommodating towards management's restructuring

agenda with the result that terms and conditions of employment deteriorated markedly. Once again, Darlington did not address the specific issue of union membership. However, given his overall findings it would not be surprising if free-riding among baggage handlers had increased because a 'substantial minority' of the workforce were disillusioned with the union position, and management made increasing use of temporary workers, who we might expect to be less likely to unionise, particularly if shop steward organisation was weak.

Fairbrother (2000) studied the impact of restructuring on workplace union organisation in 10 organisations in the West Midlands in the early and mid 1990s. Case studies included manufacturing plants, privatised utility companies and parts of the public sector. The case studies uncovered a picture of managerial attempts to restructure the employment relationship to increase the flexibility and effort required by the workforce. Restructuring often went hand in hand with devolution of industrial relations activity and managerial strategies aimed at the marginalisation or even removal of trade unions from the workplace. These management initiated changes created profound problems for trade unions. White-collar union organisation was particularly hard hit in the manufacturing case studies, leading to the demise of white-collar union organisation and membership. Manual unions fared somewhat better, but union organisation and membership did not always survive restructuring. In the utilities and public services, unions rarely faced the same risks of total obliteration. However, anti-union managerial strategies in particular sections and divisions dramatically reduced the coverage and effectiveness of shop steward organisation with subsequent detrimental effects on membership levels as free-riding increased. The overall picture that emerges from Fairbrother's case studies is of unions desperately trying to cling onto what they have in a harsh and unforgiving environment, with the threat of further collapse ever present.

Smith (2001) analysed the decline of union membership, coverage, power and influence in the road haulage industry. During this period, membership of the TGWU's Road Transport Group (RTG) declined dramatically, from 226,290 members in 1978 to 77,020 members in 1998. He found that the restructuring of the industry in the 1980s and 1990s, in which many large organisations contracted out road haulage to specialist logistics companies to cut costs in the face of intensifying product market competition, was the key factor in explaining decline. At the same time, union activists in the last bastions of union strength were demoralised by the failure of industrial action and a

decline in the effectiveness of sympathy action and secondary picketing, partly at least in response to legal changes which made such action illegal.

Brown et al. (1999) studied what they called the individualisation of employment contracts, but what might be more accurately described as the de-collectivisation of employment contracts, through case studies of 32 organisations during the 1990s. The majority of the organisations were selected because they had de-collectivised. A minority were chosen either because they had always determined employment contracts individually or because they continued to determine conditions of employment collectively, so provided a matched case study. Brown et al. found that union de-recognition was a hallmark of de-collectivisation. However, the extent and scope of de-recognition varied markedly between firms. Partial de-recognition, for example of managerial grades, while recognition continued for other groups of workers was common. At the same time, recognition might continue formally, while being dramatically circumscribed in practice, for example by removing pay determination from the bargaining agenda. Consequently, Brown et al. argued that union recognition is an amorphous concept, taking radically different forms in different organisations.

Brown et al. found that changes to union density often followed on from changes to the scope and coverage of union recognition. In some firms, drops in union density were substantial with unions losing over half of their members as workers left unions that they felt to be ineffective. In others, union membership decline was shallower, for example taking place over a longer period of time and through the gradual departure of union members and their replacement by new workers who chose not to join the union rather than through large-scale resignations.

This section has summarised the key case study evidence on union decline in the 1980s and 1990s. The pattern that emerges from this evidence is largely one of stability in continuing workplaces in the early and mid 1980s. Although unions were weakened by the recession of the early 1980s and subsequent legal restrictions on union power, there was little evidence of change in union institutional presence or membership as a result of this weakness. The evidence from the late 1980s and 1990s is very different. Union organisation and membership often came under sustained attack as a result of managerial restructuring in the face of intensifying product market competition or political pressures for public sector organisations to deliver more for less. This pressure resulted in a number of different managerial strategies which had negative consequences for union membership; partial de-recognition for particular occupational groups, the

continuance of union recognition, but with a radically reduced bargaining agenda, the exclusion of union representatives from decision making such that influence and ultimately union organisation collapsed, and in a small number of cases, total union exclusion from the workplace. However, what this case-study research is unable to tell us is the incidence of the social phenomena in the wider population and the importance and significance of these phenomena for explaining aggregate union membership decline. For this we need to turn to quantitative evidence, which will be considered in the following section.

2.3 Summary and evaluation of the empirical evidence 2; quantitative evidence

This section will consider quantitative evidence on union decline in three parts. First, evidence from the SCILL. Second, evidence from the WERS series. Third, evidence from social surveys of individual employees.

Studies based on the Social Change and Economic Life Initiative

Gallie (1996), when considering survey evidence from across the six labour markets studied, argued that there was little evidence that union decline in the 1980s was the result of increasingly hostile attitudes towards unions on the part of the workforce, because the proportion of the workforce with hostile views towards unions was small (of course, this is a rather bold claim to make given the cross-sectional nature of the data – but it is supported by evidence that public attitudes towards unions actually became more favourable in the 1980s; Edwards and Bain 1988). Gallie argued that while personal beliefs about unions are an independent influence on membership, the influence of personal beliefs is highly constrained by structural conditions, notably circumstances at the workplace.

It is also noteworthy that a significant minority of union members had joined the union because of the closed shop or other ‘social custom’ pressures to join from workmates. Once in membership, members soon came to value union membership, so the closed shop and social custom pressures were not usually the key reasons given for remaining. However, it might be supposed that the declining prevalence of the closed shop over the course of the 1980s, combined with weakening social custom pressures as union workplace organisation weakened, may have contributed to the decline of union membership because new workers entering union workplaces might be less likely to join than previous generations.

Elias (1996) used re-call data on the work histories of individuals from the six local labour markets studies by the SCEDI to create a quasi-panel of individual work and union membership histories. He used these data to estimate a fixed effects logit model of the determinants of joining and leaving union membership. He found that a comparatively small range of structural, workplace related variables were highly successful in predicting union membership status, and that changes to the rate of inflation over time were not good predictors of membership. Consequently, he concluded that 'business cycle' explanations of union membership change, derived from analysis of aggregate time-series data, were unsatisfactory because there seemed to be no obvious causal link between the macro-level economic changes and the micro-level behaviour of individuals.

Studies based on the Workplace Employee Relations Survey Series

Millward and Stevens (1986: 53 - 61) provided little in the way of analysis of the causes of declining union density between 1980 and 1984. They found that large, highly unionised establishments that remained in existence between 1980 and 1984 suffered a disproportionate loss of employment, and argue that this must be largely responsible for the drop in aggregate union density.

Gregg and Naylor (1993) studied the determinants of establishment level union density using the WIRS84 sample. One of their key motivations for doing this was to shed light on the reasons for declining union membership density during the 1980s. However, given the cross-sectional nature of the data, they were in fact able to say very little about this.

Andrews and Naylor (1994) re-analysed the panel element of the 1980 – 1984 WIRS panel study. Their study was concerned with two issues. First, the extent to which the micro-evidence from workplaces supported alternative theories advanced to explain union membership change in the early 1980s (specifically, whether the business cycle, legal changes or compositional change caused declining density). Second, to challenge the misconception which they alleged emerged from Millward and Stevens (1986) that union density within establishments was constant between 1980 and 1984. Andrews and Naylor argued that the evidence of the 1980 – 84 WERS panel suggests that union density fell in continuing establishments, and that this decline in large part explains declining aggregate density. This argument contrasts with that of Millward and Stevens (1986) that decline was attributable to the shrinking employment shares of large, highly

unionised establishments. There are several problems with Andrews and Naylor's analysis. I shall return to these in more detail in Chapter Three.

Millward et al. (1992: 58 - 67) examined the drop in union membership density between 1984 and 1990. They found that declining union density was apparent in all industrial sectors and all types of workplace. There was an increase in the proportion of workplaces with no union members, a point related to falling levels of union recognition (see also Disney et al. 1995 and 1996), and a fall in the proportion of workplaces with very high levels of union density, a finding which may be related to the decline of the closed shop. However, their analysis did not move beyond descriptive statistics.

Millward et al. (2000: 86 - 94) examined union membership decline in the 1990 – 1998 period. Their analysis is also notable for the way in which the public and private sectors were treated separately, reflecting their very different levels of union membership density. Looking at the private sector, Millward et al. noted that there were substantial falls in union membership density in continuing workplaces that recognised unions in both 1990 and 1998. On the basis of managerial responses to a question asking why union membership declined, Millward et al. attributed this decline to falling employee support for unionisation. However, the reasons for this apparent fall in support were not investigated. Was the fall because employees became disillusioned with unions, or because management increased the costs of unionisation while reducing the benefits by undermining union organisation and changing the coverage and nature of union recognition, as happened in many of the organisations studied by Brown et al. (1998) and Fairbrother (2000)? Neither is it clear the extent to which declining union density was the result of increased free-riding (which would be congruent with declining employee support for unions) compared to falling opportunities to unionise as a result of declining bargaining coverage.

Millward et al. concluded that there was a 'withering of enthusiasm' for union membership among large sections of the existing workforce. This argument appears to be at somewhat at odds with the results of Disney et al. (1998) and Bryson and Gomez (2005), which suggest that falling support for unions would be confined to new employees only, because union membership was highly persistent among individuals. Millward et al. also showed that aggregate density amongst new workplaces was lower than aggregate density among workplaces that left the WERS sample between 1990 and 1998 (either through closure or because they shrunk to less than 25 employees), but

argue that this had a minor impact on declining union density compared to changes in continuing workplaces.

In the public sector, change in union density in continuing workplaces was less apparent than in the private sector. Instead, Millward et al. argued that lower levels of membership amongst workers in new workplaces, compared to membership among workers in workplaces that fell out of the sample, were the main driver of union decline. Further, more favourable management attitudes towards unions moderated union decline in the public sector. Declining support for unions among employees was rarely cited by management as a reason for declining union density in public sector workplaces, compositional change was held to be more important.

Studies based on surveys of individual employees

Green (1992) studied decline in individual union membership between 1983 and 1989. He estimated linear probability models of individual union membership using data from the General Household Survey (GHS) of 1983 and the Labour Force Survey (LFS) of 1989, then used multi-variate shift-share analysis to calculate the extent to which the decline in union density between 1983 and 1989 was due to compositional changes compared to within group behavioural change. He concluded that compositional change explained rather less than a third of the overall decline in union density over this period. A key limitation of Green's study, and of most other studies of union membership decline based on surveys of individuals is that the surveys do not ask respondents if they are in a unionised job. This means that it is not possible to establish the extent to which membership decline is the result of increased free-riding compared to falling opportunities to unionise. This distinction is important because it has implications for the future of unions. If membership decline was primarily the result of declining opportunities to unionise, it suggests that union revival might be brought about by a combination of increased investment in organising by unions and increased state support for collective bargaining (which historically has helped to overcome employer hostility to union recognition, Bain 1967, 1970). However, if membership decline has been brought about by increased free-riding, it suggests that unions have also lost the support of employees, so rebuilding membership will be a more formidable task.

Disney et al. (1998) used re-call data from the Family and Working Lives Survey (FWLS) to investigate the union membership histories of around 8000 individuals. These data were used to separate out the relationships between age and union

membership and birth cohort and union membership. The most striking finding of the analysis was that successive birth cohorts had steadily declining probabilities of union membership, while there was little relationship between age and union membership. Once in unions, union members tended to remain in membership, while non-members tended to remain out of membership. While these findings are significant and interesting, they leave key questions unanswered. For example, to what extent do falling probabilities of membership among successive cohorts reflect falling demand for union jobs amongst newer labour market entrants compared to falling opportunities to unionise as employers offered fewer union jobs?

Arulampalam and Booth (2000) studied union membership decline between 1981 and 1991 using the National Child Development Survey, which provided a sample of 1361 men born between the 3rd and the 9th March 1958 who were in employment (so asked about union membership status) in 1981 and 1991. Union membership amongst this sample dropped by 12 percentage points over the period of the study. This mirrored the decline of union density across the whole workforce. Their results suggest that around one third of the decline in union density amongst their sample can be explained by compositional change, specifically the decline of large workplaces and the shrinking of the public sector. While this result is interesting, and the econometrics impressive, there are two key limitations to Arulampalam and Booth's study. First, the focus on one single sex cohort. Second, only one of the two waves of data contains information on whether respondents are in union jobs or not. Consequently, Arulampalam and Booth were unable to distinguish the extent to which union decline is the result of increased free-riding compared declining union coverage.

Machin (2004) compared union membership probabilities across two cross-sections of individuals, one from the National Training Survey of 1975 (previously analysed by Bain and Elias 1985 and Booth 1986) the other from the 2001 Labour Force Survey. He estimated linear probability models of the determinants of individual union membership, and compared the results using the Oaxaca decomposition technique. He found that compositional change played a minor role in explaining union membership decline. Of more significance was changing within group membership probabilities. For example, in 1975, the probability that a man would be a union member was much higher than the probability of a woman being a union member, but by 2001, there was no difference between the two probabilities. The value of Machin's study comes from the exceptionally long period between the two time periods, such that

the whole of union membership decline is captured by it. However, once again, the lack of measures of the opportunity to unionise means that it is unable to differentiate between falling membership due to free-riding and falling membership as a result of falling opportunities to unionise.

Bryson and Gomez (2005) used the time-series of repeated cross-sectional data on individual union membership status from the British Social Attitudes Survey (BSAS) to examine union decline between 1983 and 2001. They estimated linear probability models of the determinants of individual membership on the earlier and later years of the period. They then compare the results using multivariate shift-share analysis. Their key empirical finding is that union decline can mainly be explained by rising numbers of workers who have never been union members rather than existing members leaving unions. Like Disney et al. (1999) their findings suggest that union membership amongst individuals is highly persistent. In contrast to previous studies, Bryson and Gomez were able to include a measure of workplace union recognition in their models of the determinants of individual union density. However, because this measure examines whether the individual works in a workplace covered by union recognition rather than in a job covered by union recognition, they are also unable to examine the importance of increased free-riding in explaining union membership decline.

To summarise and conclude, there is a significant body of quantitative research into union decline in the 1980s and 1990s. However, this research offers only an incomplete picture of declining union density. The Workplace Employee Relations series sourcebooks (Millward and Stevens 1986, Millward et al. 1992, Millward et al. 2000) chart union membership decline at the level of the workplace, and offer some explanation and analysis of the possible causes of decline, but do this in a rather piecemeal and ad hoc way. A series of journal articles and reports by applied economists provide snapshots of decline over a particular period from a particular data source, but are of an essentially empiricist character; either they do not attempt to look at the broader picture that might emerge if their data were held alongside other qualitative and quantitative studies or they do not link their results to debates which emerge from theoretical debates on the causes of union decline (e.g. Andrews and Naylor 1994, Disney et al. 1999, Green 1992, Arulampalan and Booth 2000, Machin 2004, Bryson and Gomez 2005). These studies also lack adequate measures of whether or not respondents to the surveys are covered by union representational arrangements. This means that they are unable to tell us the extent to which membership decline was the result of increased

free-riding compared to falling opportunities to unionise. The answer to this question has important implications for the future of unions. These studies all share a common lineage to the path breaking research of Bain and Elias (1985) and Booth (1986) that examined the determinants of individual union membership and Bain and Elsheim (1980) that examined union density at the workplace (or establishment) level. However, these early studies confined themselves to cross-sectional analysis, so are of limited use for examining change over time.

The quantitative studies of Disney et al. (1995 and 1996), Machin (2000) and Beaumont and Harris (1995) are built on firmer theoretical foundations, but study the question of the causes of declining union recognition rather than declining union membership density. The quantitative studies that emerged from the SCEDI, notably Elias (1996), are an interesting exception to the a theoretical nature of much of the quantitative research, but are limited by the fact that they are unable to capture decline in the latter part of our period and by the fact that the data are not nationally representative. Having evaluated and critiqued the existing empirical evidence, I shall now outline my own analytical strategy for studying the decline of union density.

2.4 Analytical strategy

Union density is the product of the inter-related decisions of employees and employers. Employees will decide whether or not to unionise based on their assessment of the costs and benefits. Costs and benefits include direct individual and collective costs and benefits. For example, on the benefits side are the private goods provided by unions to their members and the union wage mark-up. On the cost side are union membership payments, lost earnings as a result of participation in collective action and potentially discrimination by employers. There is also the additional threat of social sanctions for not complying with group norms, and the benefits of group approval for conforming to those norms (Booth 1984 & 1985, Klandermans 1986 and Naylor and Cripps 1991). For the employer, costs and benefits are likely to be determined by the power of workers and their unions to impose costs on the employer, the level of demand in both product and labour markets and the wider ideological and public policy environments (Bryson et al. 2004, Charlwood 2004e).

The decisions of employers about whether to recognise unions are of critical importance to the individual in weighing up the costs and benefits of joining. If an employer is willing to recognise and bargain with a union, the benefits of membership

to the individual will be greater and the costs less (Bain 1967, Millward et al. 1992, Disney et al. 1995). However, the development and estimation of a single simultaneous equation that fully captures both the determinants of the employer decision and the determinants of the individual decision is a formidable task that is impossible given the data available for secondary analysis. Further, Freeman (1988) and Metcalf (1991) have argued that such an approach, even if it were possible, would not be appropriate for advancing causal understanding of the complex social processes that bring about union membership change.

Despite this problem, the micro-level processes of changing union density at a workplace and individual level can provide us with important evidence that can aid the development of causal understanding and allow the relative worth and importance of different theoretical explanations of union membership change to be evaluated. The key question is then how best to organise the analysis of the micro-data?

Freeman (1988: 72 - 73) proposed a simple model for understanding change in union density. He proposed that there is a stock of union membership, made up of existing union members in unionised jobs in unionised workplaces. Over time this stock will depreciate as union workplaces close or shed jobs and the workers move into jobs in other workplaces, some of which will be non-union. New workplaces are born non-union. The stock of union jobs can be replenished by successful union organising campaigns spreading unionisation to new non-union workplaces. Union density will fall if depreciation through the closure and contraction of union workplaces outstrips new organising activity and employment growth in the union sector.

This model, with some extensions to take into account what we already know about union decline in Britain between 1980 and 1998 can serve as the basis for analysis of changing union density at the level of workplaces and individuals. Extensions to the model are necessary to allow for compositional change (some industries, occupations and groups of workers have a lower propensity to unionise than others. If the employment shares of these groups grew, this would explain union decline). Changing levels of union coverage within the existing stock of unionised workplaces, for example because of full or partial de-recognition of unions by management and changing levels of union membership among the workers holding the stock of jobs covered by union representation (increased free-riding). Therefore, we can think of changing union density as the sum of the following factors: 1) Compositional change (in terms of the occupational and personal characteristics of the workforce) within continuing

workplaces. 2) Differences in the industrial, occupational and workforce characteristics of new workplaces compared to old workplaces. The findings of Green (1992), Machin (2004) and Bryson and Gomez (2005) suggest that compositional change played a relatively minor role in explaining union decline. 3) Changing patterns of union recognition and coverage in new workplaces compared to workplaces that closed. New workplaces are less likely to recognise unions than workplaces that closed (Disney et al. 1995, Machin 2000), and if they do have recognition arrangements, these arrangements may cover a smaller proportion of the workforce than was the case in workplaces that closed. 4) Changing patterns of union recognition and coverage in continuing workplaces. Management may fully or partially de-recognise unions by restricting union recognition to a smaller group of workers than was previously the case. The existing analyses of the survey data suggests that de-recognition played a relatively minor role in explaining decline in recognition levels, but do not consider the impact of de-recognition on aggregate union density (Disney et al. 1995, Machin 2000). However, partial de-recognitions are a significant feature of the case-study evidence on the processes of union decline (Fairbrother 2000, Brown et al. 1998). 5) Changing levels of membership (free-riding) among workers covered by union arrangements in continuing workplaces, possibly related to the decline of the closed shop 6) Changing levels of membership (free-riding) among workers covered by union arrangements in new workplaces compared to workplaces that closed. Millward and Stevens (1986), Millward et al. (1992) and Millward et al. (2000) all show that membership levels dropped in continuing workplaces with recognition and in new workplaces with recognition compared to workplaces with recognition that shut. However they do not establish whether this was due to increased free-riding or shrinking coverage of union arrangements within workplaces that continued to recognise unions.

This analysis can be developed into a formal econometric model for analysing change in union density among either workplaces or individuals between two time periods:

$$Union_{it} = \beta(Rec_{it} | Con_{it} == 1) + \beta(Bar_{it} | Con_{it} == 1) + \beta(Comp_{it} | Con_{it} == 1) + \beta(Rec_{it} | Con == 0) + \beta(Bar_{it} | Con_{it} == 0) + \beta(Comp_{it} | Con_{it} == 0) + \epsilon_{it} \quad (1)$$

Where *Union* is union density in workplace *i* at time *t*. *Con* is a 0/1 dummy variable with the value of unity if workplace *i* was operating in both time periods.

Therefore, the notation shows that separate coefficients can be estimated on the parameters for samples of workplaces that remained in operation in both periods and workplaces that closed compared to workplaces that opened. *Rec* is a 0/1 dummy variable with the value of unity if workplace *i* recognised unions at time *t*. *Bar* indicates the proportion of the workforce in workplace *I* covered by collective bargaining at time *t*. *Comp* indicates the composition of the workforce in workplace and related factors like workplace size in workplace *I* at time *t*. *E* is an error term.

Note that collective bargaining coverage and union recognition are included on the right hand side of the model. Arguably, union membership and changes to union membership may cause union recognition, de-recognition and changes in bargaining coverage as employers adjust their policies in the light of employee preferences (Beaumont and Harris 1995). My justification for treating these variables as determinants of union membership is that during the period being studied, there was no statutory mechanism that allowed employees to express their preference for union representation to their employers, so union recognition was in the gift of the employer. Further, there are many examples, both of failed organising campaigns where membership dwindled from initially high levels in the face of employer intransigence, and of managerial initiatives to change recognition arrangements, which then led to a change in membership (e.g. Brown et al. 1998, Fairbrother 2000).

An alternative model for individuals rather than workplaces would be:

$$Union_{it} = \beta(Ujob_{it} | Con_{it} = 1) + \beta(Comp_{it} | Con_{it} = 1) + \beta(Ujob_{it} | Con = 0) + \beta(Comp_{it} | Con_{it} = 0) + \varepsilon_{it} \quad (2)$$

Where *Union* is a 0/1 dummy with the value of unity if individual *i* is a union member at time *t*. *Ujob* is a 0/1 dummy with the value of unity if individual *i* was in a job covered by union representational arrangements at time *t*. *Comp* are the individual and job related characteristics of individual *i* at time *t*. *Con* is a 0/1 dummy with the value of unity if individual *i* is an employee in both time periods.

The coefficients from the multiple regression analysis used to operationalise the model can then be used in multi-variate shift share analysis:

$$\Delta U = (X^{t2} - X^{t1}) \beta^{t1} + (\beta^{t2} - \beta^{t1}) X^{t1} + (X^{t2} - X^{t1})(\beta^{t2} - \beta^{t1}) \quad (3)$$

Where U is union density, β is the vector of the coefficients from the regression models from each time period ($t1$ and $t2$ respectively) and X is the sample mean from each time period. The first term $(X^{t2} - X^{t1}) \beta^{t1}$ is the effect of compositional change if union membership behaviour is held constant at the levels of $t1$. The second term $(\beta^{t2} - \beta^{t1})X^{t1}$ is the effect of changing behaviour if the composition of the workforce is held constant at the levels of $t1$. Since, in reality neither union membership behaviour or composition are held at the level of the base year, the results of the two terms will not sum to the observed decline in union density, the third term $(X^{t2}-X^{t1})(\beta^{t2} - \beta^{t1})$ balances the equation so that the results are consistent with the observed decline in density in the samples (Green 1992: 454). I follow the standard assumption that the means of the error terms will be randomly distributed, so sum to zero. Therefore there is no need to allow for the error terms in the decomposition. This approach (or a variation on it based on the Oaxaca decomposition method) has been used to investigate union decline amongst individuals by Green (1992) Riddell and Riddell (2001) and Machin (2004). The results of this analysis give an indication of the extent to which declining union density can be attributed to the six processes outlined above.

Operationalising the model: Econometric issues

Previous analyses of change in union density over time using this methodology (e.g. Green 1992, Machin 2004, Bryson and Gomez 2005) have been based on samples of individuals, and have used a linear probability estimator. This estimation technique has the advantage of generating results that are ideally suited for use in shift-share analysis or Oaxaca de-composition of change over time. However the ordinary least squares/ linear probability estimation methodology is technically inappropriate for use with dependent variables like workplace union density or individual union membership that are not normally distributed (Kennedy 1998). For individuals, where union membership status is a binary variable, one solution would be to decompose the results of probit estimates using the methodology proposed by Doiron and Riddell (1994). However, Disney (1990) has demonstrated how both linear probability and logit and probit type estimates will produce biased results because they fail to account for the selection bias problem (that the union preferences of those unable to get union jobs remains unobserved – see also Abowd and Farber 1982, Farber 1983). A solution to both of these problems would be to estimate models using tobit or interval regression.

However, while technically appropriate, the results of these methods do not lend themselves for use in multi-variate shift share analysis.

Consequently, I operationalise the model using linear probability estimates despite the problems with the methodology identified by Disney. My justification for adopting this strategy follows from the CR critique of the LP approach to econometric modelling. The difficulties inherent in measuring and modelling complex social phenomena, plus the likely problems of omitted variable bias, mean that the results of any econometric analysis are likely to be subject to multiple sources of bias, so will be at best a rather crude representation of complex reality. The results reported in subsequent chapters will give an indication of the processes of union decline, but they are indicative of the broad trends rather than a precise measurement of exactly what happened.

The data that I will use to operationalise these models come from the Workplace Industrial/Employee Relations Survey Series (WERS)¹⁰ and the British Household Panel Survey (BHPS). The WERS series of surveys were conducted in 1980, 1984, 1990 and 1998 and investigated a range of issues related to industrial relations in successive cross-sectional representative samples of around 2000 British workplaces (excluding workplaces with fewer than 25 employees and workplaces in the agriculture, mining and extraction sectors) through interviews with the manager primarily responsible for industrial/employment relations issues.

The BHPS sample is made up of all individual adults resident in a representative sample of around 5000 British households, originally sampled in 1991. The survey questions these individuals on a broad range of subjects, including labour market participation and trade union membership. Questions are repeated annually (with some questions being rotated, so that they are only asked every two years), with the result that the survey provides rich longitudinal data. I shall explain the specific features of both data-sets in more detail in subsequent chapters.

Conclusion

This chapter began by considering theories of theory in the field of industrial relations. It argued that neither logical positivism nor critical realism offered entirely satisfactory methodologies for investigating union decline. An LP approach places too much

¹⁰ When referring to the whole series, I shall use the acronym WERS, individual year data-sets will be referred to by the acronym used at the time the data was first collected i.e. the 1980, 1984 and 1990 surveys will be referred to as WIRS80, WIRS84 and WIRS90 respectively, while the 1998 survey will be referred to as WERS98.

emphasis on the supposed accuracy and rigour of analyses based on data which are in reality likely to be at best crude representations of much more complex and difficult to measure social processes. The available data is not comprehensive enough to allow fully specified theoretically informed models of workplace and individual unionisation to be operationalised. On the other hand, the CR ‘test of plausibility’ does not provide an adequate mechanism for differentiating between alternative theoretical explanations. Consequently, the approach of ‘theoretically informed empiricism’ advocated by Bain and Clegg (1974) is preferred.

I then reviewed the existing empirical evidence on union decline. A range of qualitative studies provided an interesting insight into the social and managerial processes of union decline at a workplace level. However, case-study research is unable to tell us the incidence of the phenomena identified, or their relative importance in explaining overall union decline. While there is an extensive body of quantitative evidence on union decline, it is rare for this literature to be linked to either the wider theoretical debates about union decline or the case study based literature. Consequently, there are still many unanswered or only partially answered questions about the nature of union decline; what was the relative importance of compositional change compared to behavioural change? To what extent was behavioural change the result of increased free-riding compared to managerial action to restrict union coverage? How do the answers to these questions inform the wider debates about the nature of union decline? I shall return to these questions in the concluding chapter, after I have investigated the micro-level processes of union decline using the model that was set out in section 2.4. I shall begin this task in the next chapter, where I shall look at union decline between 1980 and 1984 using data from the WERS series.

Chapter 3. Union Membership Decline 1980 - 1984

According to Certification Officer data, trade union membership reached peak of a little over 13 million in 1980. Between 1980 and 1984, membership fell from 13,289,000 to 10,994,000 and membership density fell from 58 per cent to 53 percent (Charlwood and Metcalf 2005). The equivalent figures within the WERS samples (i.e. in workplaces with 25 or more employees) were 62 percent in 1980 and 58 percent in 1984¹¹. This chapter reports on the results of the analysis of micro-data on the workplace level processes of union decline for the period 1980 – 1984. It begins by summarising the economic, political and industrial context of the time, before considering the existing empirical evidence on union decline. I then describe the characteristics of the data used to carry out the analysis and explain the methodology in more detail before reporting the results of the empirical analysis and discussing the implications of the results for wider debates on union membership decline.

3.1 Union decline 1980 – 1984

This section will begin by considering the political, economic and industrial background against which union decline took place, before evaluating the existing empirical evidence on the causes and processes of union membership decline during the period.

3.1.1 Political, economic and industrial context

The political atmosphere of the 1980s is an important, yet curiously ignored, contextual variable in discussions of union decline in the 1980s. It is as if academic analysts have been unable to fully describe the attitudes and behaviour of Margaret Thatcher's Conservative Government within academic conventions of seemingly dispassionate and impartial analysis, so instead they have skirted around the issue (e.g. Brown and Wadhwani 1990, Brown et al. 1997, Dunn and Metcalf 1996, Howell 1999, Towers 1989, although Smith and Morton 1993 and McIlroy 1995 have communicated the scale and ambition of the Thatcher project). It is common for the following aspects of Conservative policy to be discussed: The change in the aim of economic policy from one primarily concerned with reducing unemployment to one primarily concerned with targeting inflation, which resulted in a large increase in unemployment. The hostility to trade unions based on Hayekian economic analysis and subsequent attempts to use the law to tame trade union power. A determination to 'get tough' with trade unions, for

¹¹ Although union density was measured differently in different years. See below.

example by resisting the demands of striking public sector workers and by de-recognising unions at the Government's GCHQ spy base. However, to mention these issues in this way is to miss the passionate totality of the Conservative Prime Minister's hostility towards trade unions, with the result that the extent to which the reduction in union power became a key objective of state policy is ignored. This section will briefly summarise the roots of this hostility and explain the rather cautious openings to Thatcher's decade long crusade against union power.

According to her biographer, Hugo Young the distinguished journalist and commentator, Margaret Thatcher was a Prime Minister like no other who held that office during the 20th century. She was marked out by her conviction-based approach to politics. She was driven by the belief that politics was a crusade of good against evil, and that her own personal views, (the rights of the individual, a belief in free enterprise) represented good, while those who opposed these views were at best misguided and at worst evil. In Young's judgement, she regarded trade unions, with their commitment to collectivism and hostility to free markets as the epitome of evil. This was particularly true for trade unions in the nationalised industries, which she regarded as engaged in a criminal conspiracy against taxpayer and consumer alike (Young 1990: 352 -3).

When Thatcher first came to office, she had no clear, pre-planned agenda for dealing with trade unions, but she did have an iron conviction that their power must be reduced. Early legal moves against the unions were rather limited – a reflection of Thatcher's own uncertain grasp on the levers of power at a time when many in her own party opposed her policies and approach. However, moves against unions on the economic front were more aggressive, and on the industrial frontline, tactical aggression was mixed with strategic caution.

The Economic Front

Thatcher's dislike of unions, corporatism and anything else that she perceived to interfere with free enterprise led her to adopt the neo-liberal economic analyses of Hayek and Friedman. The extent to which she and her party fully understood this analysis and its ensuing policy prescriptions is questionable, but it fitted with their beliefs and prejudices, and once adopted, the ideas took on a logic and dynamic of their own, to which, to coin a phrase, there was no alternative. This was particularly the case in the area of economic policy. Attempts to manage the economy using Keynesian economic theory with the aim of maintaining full employment were abandoned as futile

and ultimately self-defeating. The only way to secure full employment was to first defeat inflation (which was running at an annual rate of 13 per cent when the Conservatives took office, and which quickly rose to 18 per cent in 1980¹²). The only way to defeat inflation was through control of the growth in money supply and the only lever for controlling growth in the money supply was interest rate policy and an over valued exchange rate.

These policies caused immediate economic agony to large parts of Britain's industry. However, Howe and Thatcher were deaf to any criticism, and continued to apply monetarist prescriptions. The previous administration's monetary growth targets were reduced from a range of 8 to 12 per cent per annum to 9 per cent per annum despite advice from treasury officials and economists sympathetic to monetarism that the new target was both too tight and unrealistically precise. At a time when monetary policy was being tightened, the Bank of England loosened the 'corset', which had regulated the ability of banks to lend money. The result was a dramatic increase in the money supply, necessitating higher interest rates for a longer period.

Hard-hit manufacturers were already suffering the effects of a significant drop in demand for their products. Yet to control inflation, Howe raised interest rates from 12 per cent in May 1979 to a peak of 17 per cent by November 1979. They were to remain in the 12 to 16 percent range for most of the next four years. This had the effect of further reducing demand at home and abroad. For large swathes of British manufacturing industry, the side effects of this inflation-fighting medicine were to prove fatal. Consequently, unemployment shot up from around 5 per cent of the workforce in 1979, to 10 percent, eventually peaking at 12.5 per cent in 1983. According to Layard and Nickell's calculations, three quarters of the increase in unemployment during the early 1980s could be attributed to Government policies with just one quarter explained by the global downturn (Layard and Nickell 1985). Thatcher and Howe seemed largely impervious to the social costs of this economic dislocation. Indeed, for some Conservatives, there were considerable benefits to widespread unemployment. Nicholas Ridley, one of Thatcher's most loyal and doctrinaire ministers, had drawn up a secret 'battle plan' for confronting the unions, which saw mass unemployment as an important precursor to industrial showdown (Young 1990: 367 – 68).

¹² All figures on inflation, unemployment and GDP growth cited in this and subsequent chapters were obtained from the Office for National Statistics website; www.statistics.gov.uk. Figures on interest rates come from the Bank of England's website.

The legal front

The Conservatives were initially more cautious on the legal front. This caution reflected both an uncertainty about the practicality of using the law to tame trade unions and uncertainty about exactly how to proceed. It was also a symptom of the political divisions within Thatcher's own cabinet. Jim Prior, the Secretary of State for Employment, was an arch 'wet'; an opponent of Thatcher's who believed in the old style politics of consensus. Prior was initially unsure of how to proceed, and once he had decided what to do, moved forward with the objective of only legislating against the worst excesses of union power in the hope that moderate trade unions would acquiesce to the changes without putting up serious opposition. Prior was soon replaced by the loyal Thatcherite, Norman Tebbit. However, the legislation introduced by Tebbit in 1982, although mild by the standards of later legislation signalled a radical departure from Prior's consensus based approach. The aim during this period was to use the law to facilitate new balance between employers and unions. Over time, this aim was replaced with the more radical objective of making unions marginal to industrial relations (McIlroy 1995, Smith and Morton 1993).

The 1980 Act abolished the statutory trade union recognition procedure, made public funds available to pay for postal ballots for union leadership elections and strike ballots, outlawed coercive recruitment tactics, made it harder to establish closed shops (a new closed shop agreement could be established only if 80 per cent of the workforce voted for it), and after the 1982 Act, introduced compulsory re-balloting for workers in existing closed shops. Secondary picketing was outlawed. The 1982 Act ended trade union immunity from prosecution if an industrial dispute were declared unlawful and tightened the legal definition of what constituted an industrial dispute. This had the effect of bringing the law into collective bargaining to a degree unprecedented since 1906. That the Government were able to do this despite trade union opposition, so disproving Wedderburn's maxim that 'the spirit of voluntarism cannot be legislated against' (Dunn and Metcalf 1996, Brown and Wadwhani 1990, McIlroy 1995) taught important lessons. Unions learned the limits of their ability to oppose the Government's programs and the Government learnt the comparative ease with which it could legislate against trade unions, so laying the ground for future, more punitive legislation.

In addition to this legislative assault on trade unions, the Government took other non-statutory action. The fair wages resolution (which meant that firms bidding for Government contracts had to offer terms and conditions no less favourable than

those offered by firms covered by collective agreements) was rescinded in 1983. The Advisory and Conciliation Service (ACAS) was relieved of its duty to promote collective bargaining.

The industrial front

The industrial front chiefly comprised of the public sector and nationalised industries where Government played a direct role as employer and funder of the wage bill. During the 1980 – 1984 period, the Government maintained a fairly cautious approach here, although by 1984, they were becoming increasingly determined to take the fight to the unions, most notably in the 1984 – 85 miners strike, which will be discussed in Chapter Four. Even as early as 1980, they demonstrated their willingness to attack targets of opportunity if the price of doing so was not too high. The most notable example was the British Steel Corporation strike.

The Government's first action on the industrial front was one of tactical retreat. In the wake of widespread industrial unrest during the 'winter of discontent' of 1979, the previous Labour administration had appointed Hugh Clegg to lead a commission into public sector pay. Clegg recommended large pay rises across the board. Given the potentially inflationary impact of this settlement, and the impact on public spending at a time when the Government wanted to cut spending, it would not have been surprising if the Government had rejected Clegg's proposals out of hand. However, at this stage the embattled Prime Minister was keen to avoid provoking a damaging clash with the unions, so the proposals were accepted and the pay rise funded. An opportunity for an early showdown with the National Union of Mineworkers (the nemesis of the previous Conservative administration) over a 20 per cent pay claim was also passed up for similar reasons.

Despite this early caution, the Conservatives began to prepare the ground for later confrontation. Ridley's plan for confronting the unions and getting the nationalised industries into shape began to be rolled out. Hard-line managers who were prepared to confront the unions were appointed to key nationalised industries. These managers were set tough financial targets which necessitated closures and job cuts. The outbreak of strike in the nationalised British Steel Corporation in early 1980 was also treated as an opportunity to put the new doctrine of no compromise with the trade unions into effect. British Steel's management offered a pay rise of just two per cent (at a time when inflation was running at 20 per cent) tied to unpopular changes to working practices to

improve productivity. The union wanted a significantly higher pay rise and was opposed to many of the proposed changes in working practices. After a bitter 13 week strike, the union eventually settled for a pay rise of just six percent tied to acceptance of managerial proposals for changing working practices. This result was widely seen as a defeat for the union.

Although the Conservatives had not sought this strike, they were grateful for such a visible opportunity to display their new tough attitude. The steel workers were ideal for this purpose, because their withdrawal of labour had only a limited effect on the general public. The Conservative objective with the strike was to secure a 'demonstration effect' that would deter other groups of workers from striking because they believed that the Government would face them down.

To conclude, the Government that was elected in 1979 was arguably more hostile to trade unions than any previous twentieth century administration. However, initial moves against the unions on the legal front were fairly cautious, particularly when compared with later Conservative employment legislation. The Government was also wary of taking on public sector unions in industrial confrontation. The most serious likely threat to unions during this period came from the Government's economic policy, which resulted in the return of mass unemployment. Traditionally, it has been perceived that this level of unemployment weakens unions because the fear of job loss has a disciplining effect on the behaviour of workers and their unions. At least one minister (Ridley) saw mass unemployment as a desirable policy outcome precisely because it would facilitate confrontation with the unions on the Government's own terms.

3.1.2 Existing empirical evidence

The existing empirical evidence offers, at best, a rather partial and incomplete picture of union decline in the period 1980 – 84. Millward and Stevens (1986) cautiously attributed union membership decline to compositional changes, particularly the decline of employment in highly unionised workplaces and the growth of employment in non-union and loosely unionised workplaces. By contrast, Disney (1990) made the rather bold claim that the business cycle is able to satisfactorily explain most of union decline, and that composition had a negligible effect. Freeman and Pelletier (1990) took a contradictory position, arguing that decline was predominantly the result of legal changes. Finally, in a contribution that is notable for generating rather more heat than light, Andrews and Naylor (1992) took issue with both the business cycle and

compositional arguments, and championed declining union density in continuing workplaces as the key process of union decline without satisfactorily identifying the cause behind this process.

Writing in the official WIRS84 sourcebook, Millward and Stevens (1986) argued that the primary cause of union decline in the 1980 – 84 period was compositional change, specifically the declining employment shares of large highly unionised workplaces: “Those [workplaces] whose employment had shrunk by 20 per cent or more had an average union density of 60 percent, while those [workplaces] whose employment had grown by 20 per cent or more had an average density of only 21 per cent. This strong negative relationship between union density and employment growth must, of course, go a long way towards explaining the very substantial fall in union density....over the period 1980 – 1984.....The disproportionate loss of employment among highly unionised establishments that have remained in existence throughout the period must surely be largely responsible for the aggregate decline in union membership numbers.” (Millward and Stevens 1986: 60). Although careful not to imply causation, they went on to argue that their analysis pointed strongly to the decline of employment in large, highly unionised workplaces as a major factor behind the contraction of union membership since 1979 (1986: 302 – 3).

Millward and Stevens were cautious in using the panel to examine declining union density because of differences in the way in which union density is measured in 1980 and 1984. However, they did utilise the panel to look at change in union recognition status amongst continuing workplaces. They found that 93 per cent of continuing workplaces maintained the same union recognition arrangements in 1984 as they had in 1980. The number of cases of union de-recognition was very small. Cases of new recognition outnumbered cases of de-recognition. From this we can infer that union de-recognition played a minimal role in declining union density.

Another variable that might be expected to affect aggregate union membership is coverage of closed shop agreements (where union membership is a condition of employment). Overall, the cross-section surveys suggest that the proportion of workplaces with closed shop arrangements dropped by five percentage points between 1980 and 1984. There was also a very significant decline in the proportion of workers covered by the closed shop, particularly among manual workers. 40 per cent of manual workers were covered by closed shop arrangements in 1980 while just 30 per cent remained covered in 1984 (Millward and Stevens 1986: 103). There was a particularly

marked decline in the prevalence of the closed shop in private manufacturing industry. However, their analysis of the 1984 panel suggests that very few continuing workplaces abandoned closed shop arrangements, so the decline of the closed shop must have been driven by workplace births and deaths. Therefore the closure of large manufacturing establishments and the decline of employment in surviving establishments with closed shop arrangements is put forward as the most likely explanation of the decline of the closed shop between 1980 and 1984.

Freeman and Pelletier (1990) argued that changes in employment law were the main cause of union decline in the early 1980s. They based their argument on the evidence of a time-series econometric model that includes an index of the 'favourableness of labour law' to unions. The generally unconvincing nature of this evidence was discussed in Chapter Two above. To recap the key points, it is not clear how changes in labour law affect trade union joining behaviour. If there were a link between law and behaviour, we might expect it to take time to work through, but Freeman and Pelletier found a simultaneous correlation. This raises questions about causality – perhaps changes in labour law are a response to trade union strength or weakness, not a cause of it? It is also unclear the extent to which the labour law index might be acting as a proxy for other political variables, like the general attitude of the Government towards unions. Finally, there is the problem that it is not possible for both Freeman and Pelletier and Carruth and Disney (1988 – see next paragraph) to be right about the causes of union decline. Dunn and Metcalf (1996) argue that the weight of the evidence from WIRS micro-data presented by Millward and Stevens (1986) tends to support Carruth and Disney's position rather than that of Freeman and Pelletier.

Disney (1990) argued that the time-series econometric model developed by Carruth and Disney (1988) could satisfactorily explain declining union density in the period 1980 – 1984. This claim seems highly questionable, even leaving aside the questions about the appropriateness of time-series econometric models raised in Chapter Two, such as problems with omitted variable bias and the potentially endogenous nature of some of the business cycle variables used. Carruth and Disney's model appears to run into difficulties on empirical grounds because it over predicts membership density in 1984 by two percentage points (i.e. it fails to predict a third of the decline in density over the 1980 – 84 period). Despite these reservations about business cycle theory in its pure form, there is a wealth of anecdotal evidence that suggests that recession speeded union decline. The survey data presented by Millward

and Stevens would appear to buttress this evidence by showing how the closure and decline of highly unionised workplaces was a key variable in explaining both union membership decline and the decline of the closed shop.

Andrews and Naylor took a contrary view. They argued that the evidence from the WIRS84 panel supports neither Millward and Stevens' analysis of the importance of compositional change nor Disney's more extravagant claims about the importance of the business cycle. However, their article generated rather more heat than light. While Andrews and Naylor argued that neither composition nor the business cycle adequately explained union decline, they are unable to put forward any convincing causal explanation in place of the arguments they rejected. Their critique of Millward and Stevens was based, at least in part, on a misreading of the Millward and Stevens' position. Andrews and Naylor claimed that Millward and Stevens' argued that declining union density between 1980 and 1984 was the result of declining employment in highly unionised workplaces and not the result of declining union density in continuing workplaces. In fact, while Millward and Stevens suggest that declining density was likely to have been the result of declining employment in highly unionised workplaces compared to employment growth in non-union and lightly unionised workplaces, they did not claim that declining density in continuing workplaces played no role. Indeed, Millward and Stevens deliberately and explicitly avoided investigating declining union density within establishments because they were concerned that any results would be affected by the differences in the measures of union density used in 1980 and 1984 (see below for discussion on this difference).

Further, Andrews and Naylor's own empirical analysis of the panel hardly provided compelling evidence of the falseness of Millwards and Stevens' position. Andrews and Naylor estimated a series of univariate regression models on the determinants of a workplace having declining union density. They estimated separate models for 1980 and 1984. This seems a curious use for panel data. Why not estimate a change score analysis of the determinants of declining density using the full panel? Such an analysis would have told them if, for example, declining employment was associated with declining union density. Failure to perform such an analysis, combined with failure to carry out any sort of shift-share analysis meant that Andrews and Naylor were unable to mount a convincing challenge to Millward and Stevens' contention that the decline of employment in highly unionised establishments was a key cause of declining union density.

Andrews and Naylor's attack on business cycle theory is equally unconvincing. They demonstrated that there was no relationship between local unemployment rates and real earnings and change in union density in continuing workplaces. However, there remain other mechanisms through which the business cycle might affect union density. For example, the rate of workplace births and deaths, with older (often unionised) workplace dying and being replaced by new workplaces born non-union. Indeed, Disney et al.'s (1995) analysis of the determinants of union recognition suggests that product and labour market conditions at the time of a workplace's establishment were a critical influence on recognition and by extension membership. If this is the case, any analysis of continuing workplaces in the panel would fail to detect business cycle effects on density. Given the wealth of anecdotal evidence that suggests that unions were badly (and perhaps even disproportionately) affected by the dramatic rise in unemployment in the 1980s, it would seem premature to dismiss business cycle theory on the basis of the rather limited evidence presented by Andrews and Naylor.

Unfortunately, as a result of the limited nature of the 1984 panel, the available data are not comprehensive enough to provide a definitive answer to the questions posed by Andrews and Naylor because it is not possible to identify which workplaces in the 1980 sample had closed by 1984. However, the analysis to be presented will provide a more comprehensive test of Millward and Steven's contention that it was the decline of employment and closure of highly unionised establishments that was a primary cause of union decline. The evidence produced by the analysis can also contribute to some judgement about the relative importance of legal changes (anti-union legislation) compared to economic changes (the recession) in explaining union decline in this period.

3.2 Data and methodology

This section will begin by describing the characteristics of WIRS80 and WIRS84 before setting out the methodology used to analyse these data. Data limitations, notably the limited nature of the panel element of the surveys, mean that the full analytical model set out in chapter two above cannot be operationalised for this period, so an alternative reduced form model is specified.

3.2.1 Data

The 1980 and 1984 Workplace Industrial Relations Surveys were the first and second surveys of the WERS series (subsequent surveys have been carried out in 1990, 1998 and 2004). The aim of the surveys has been to provide authoritative, nationally representative survey data on industrial relations practices and policies at workplace level. There is a strong consensus within the industrial relations research community that this aim has been successfully achieved. All surveys in the series took the workplace (sometimes described as the establishment) as the unit of analysis. Only workplaces with 25 or more employees were eligible for inclusion in the surveys. The geographical coverage of the surveys was England, Wales and Scotland (not Northern Ireland) and they covered manufacturing and services workplaces (but not agriculture, forestry, fishing or mining and extraction) in both the public and private sectors. The main respondent to the surveys was the senior person at the workplace responsible for industrial/employment relations issues. The 1980 sample was drawn from the 1977 Census of Employment. 2040 interviews were successfully completed, a response rate of 75 percent. The 1984 sample was drawn from the 1981 census of employment. 2019 interviews were successfully completed. A response rate of 77 per cent. In both years the samples were stratified by size, and large workplaces over-sampled. Consequently, in order to get results that can be generalised to the population, it is necessary to use weights when analysing the data (Millward and Daniel 1983, Millward and Stevens 1986).

The 1984 survey included a panel element, where one in ten of the workplaces from the 1980 sample were revisited to establish if they still fell within the scope of the survey, and if they did, they were re-surveyed. The panel element of the survey could be used to identify 'leavers' from the 1980 sample. However, this would dramatically reduce the number of usable responses so increasing the size of the standard errors of any results. Consequently the panel element of the survey has not been used here.

3.2.2 Methodology

In chapter two, I proposed an analytical model for analysing the micro-processes of union membership decline at the level of the workplace or the individual. This model is able to differentiate between the decline due to behavioural change among workers compared to changing coverage of union organisation, changing workforce and workplace composition and differences between new workplaces and workplaces which

closed. The limitations of the data outlined in the preceding section mean that this model cannot be fully operationalised for the 1980 – 1984 period. There are two key problems. First, it is not possible to differentiate leavers and joiners. Second, the 1980 survey did not ask about the coverage of collective bargaining.

On the first of these problems, while both surveys ask if the workplace being surveyed was established within the last 5 years (which in the 1984 survey could be used as a reasonable indicator of workplaces established since 1980), the limited nature of the 1984 panel survey means that it is not possible to accurately identify leavers from among the 1980 sample. One alternative would be to confine analysis to the panel sample in 1980 compared to an equivalent random sample of ten per cent of workplaces that participated in the 1984 survey. However, the reduced sample sizes would result in much larger standard errors, indicating a potentially much greater gap between the results observed in the samples and the actual behaviour of the population. Therefore I prefer to base analysis on the entire usable samples for both years. The downside of this approach is that I am unable to differentiate clearly between the decline in continuing workplaces and the decline that occurred as a result of differences between leavers and joiners.

On the second problem, because the 1980 survey did not ask about the coverage of collective bargaining, it is not possible to include a measure of collective bargaining coverage in the analysis in order to establish the extent to which decline in union membership can be explained by decline in union bargaining coverage. There is a measure of whether or not the workplace is covered by a union recognition agreement, but there is no indication of the proportion of the workforce covered by this agreement.

There is also a further measure of union coverage, which was not included in the model set out in chapter two. That is whether or not the union recognition agreement includes a provision that requires workers in particular occupations to be union members in order to keep their job (a closed shop agreement). Over the 1980 – 1984 period, the proportion of workplaces with closed shop agreements declined from 36 per cent to twenty eight per cent. One interesting question that follows from this observation is to what extent the decline in union membership can be attributed to the decline in closed shop agreements? This question can be answered by including in the model a term for whether or not a workplace has a closed shop agreement. However, it is important to note the limitations of this question; it only asks if there is a closed shop

agreement, it does not ask what proportion of the workforce are covered by the agreement.

Consequently, the model to be estimated is as follows:

$$Union_{it} = \beta Rec_{it} + \beta Cs_{it} + \beta Comp_{it} + \varepsilon_{it} \quad (3)$$

Where *Union* is union density in workplace *i* at time *t*. *Rec* is a 0/1 dummy variable with the value of unity if workplace *i* recognised unions at time *t*. *Cs* is a 0/1 dummy variable with the value of unity if workplace *i* had a recognition agreement that included a closed shop at time *t*. *Comp* indicates the composition of the workforce in workplace and related factors like workplace size in workplace *i* at time *t*. *E* is an error term. Variables included in the model to capture the composition of the workforce and workplaces include the proportion of employees in non-manual occupations (it would be desirable to include more detailed occupational measures, but the 1980 and 1984 surveys did not include them), the proportion of the workforce who work part-time, whether or not the workforce is in the production sector (the inclusion of more detailed industry dummies do not substantially alter the results. The standard industrial classification was revised in 1990, making it difficult to make comparisons over the whole of the 1980 – 1998 period if more detailed industry variables were included in the model). Whether or not the workplace is in the private sector, dummy variable for workplace size (25 – 50 employees, 51 – 200 employees and over 500 employees, with 201 – 500 employees as the omitted reference category) and finally, whether or not the workplace was established within five years of the date at which the data were collected.

The model was operationalised using weighted linear probability regression analysis using the Huber-White method for calculating standard errors that are robust despite heteroscedasticity. The strengths and limitations of this methodological approach were discussed in chapter two. The results of models for 1980 and 1984 can then be decomposed thus:

$$\Delta U = (X^{84} - X^{80}) \beta^{80} + (\beta^{84} - \beta^{80}) X^{80} + (X^{84} - X^{80})(\beta^{84} - \beta^{80}) \quad (4)$$

The first term $(X^{t2} - X^{t1}) \beta^{t1}$ is the effect of compositional change if union membership behaviour is held constant at the levels of *t1*. The second term $(\beta^{t2} - \beta^{t1}) X^{t1}$ is the effect of changing behaviour if the composition of the workforce is held constant

at the levels of $t1$. Since, in reality neither union membership behaviour or composition are held at 1980 levels, the results of the two terms will not sum to the observed decline in union density, the third term $(X^{t2}-X^{t1})(\beta^{t2} - \beta^{t1})$ balances the equation so that the results are consistent with the observed decline in density in the samples (Green 1992: 454).

One final data issue to be aware of relates to differences in which the way in which union density can be calculated in 1980 and 1984. In the 1980 survey, respondents were only asked about union membership among full-time employees. Consequently, 1980 density is calculated by dividing union membership by the total number of full-time employees. In the 1984 survey, respondents were asked about the total number of union members amongst all employees. Therefore density is calculated by dividing union membership by the total number of employees, both full and part-time. As a result of this difference, the density figures for the two years are not directly comparable. Because union density is typically lower among part-time workers, we might expect the decline in union density between 1980 and 1984 to be overstated. There will also be implications for how we interpret change in the regression coefficients from the variable that measures the proportion of part-time workers at the establishment, which will be discussed in more detail in the results section below.

3.3 Results and discussion

This section will begin by considering regression and decomposition analysis results from the whole WIRS80 – 84 samples, before considering separate results for the public and private sectors in more detail. The implications of the results for wider debates on union decline over the period will then be discussed.

3.3.1 Results

All workplaces

Table 3.1 presents the mean values of the independent variables and the results of the regression analysis. Due to missing values, not all workplaces were included in the analysis. 1660 of the 2040 workplaces from the 1980 survey and 1598 of the 2019 workplaces from the 1984 survey were usable. As non-response is likely to be randomly distributed, this should not bias the results, but note that the mean values reported in table 3.1 may vary somewhat from mean values from all workplaces that provided information on that variable. A large change in the mean values between the two time periods is likely to indicate that structural or compositional change played a significant role in declining union density. A significant change in the coefficients between the two time periods is likely to be indicative of behavioural change. If behavioural change exerts a negative impact on membership density, it is likely to indicate that free-riding has increased. However, we cannot be certain that behavioural change is the result of increased free-riding, because a portion may be explained by declining union membership among workers who are not covered by union bargaining and representation.

Table 3.1 - Results of regression analysis on the determinants of union density in all workplaces in 1990 and 1998 and the mean values of variables used in the regressions

	Regression results 1980	Mean value 1980	Regression results 1984	Mean value 1984
Continuing workplaces				
% part-time	0.009 (0.045)	13.87	0.137 (0.033)***	15.47
% Non-manual	-0.098 (0.023)***	45.16	-0.079 (0.025)***	50.83
Production sector (ref. services)	-0.226 (2.027)	0.43	2.521 (2.199)	0.31
Private sector (ref. public sector)	-17.568 (2.175)***	0.65	-18.636 (2.172)***	0.57
Workplace size (ref. 201 – 499 employees)				
25 – 49 employees	-0.041 (2.188)	0.16	-3.070 (2.325)	0.19
50 – 199 employees	-1.777 (1.782)	0.30	-3.619 (2.175)	0.33
500+ employees	2.016 (1.805)	0.35	1.565 (2.268)	0.28
Workplace 5 years old or less	3.880 (2.941)	0.04	0.471 (2.148)	0.05
Union recognition	52.776 (2.071)***	0.82	50.679 (2.020)**	0.78
Closed shop agreement	16.591 (1.598)***	0.39	18.187 (1.702)**	0.28
Constant	32.617 (2.985)***		32.558 (3.312)**	
N	1660	1660	1598	1598
R²	0.64		0.71	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses

Mean values which were percentages were rounded to the nearest whole number, mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places.

Results are weighted by each workplace's employment share.

Source 1980 and 1984 Workplace Industrial Relations Surveys

Looking first at changes in the mean values, the proportion of part-time workers rose slightly, as did the proportion of employees in non-manual jobs. There was a significant fall in the proportion of workers in the production sector and a fall in the proportion of workers in the private sector. The share of employment in workplaces with more than 500 employees also shrank. The proportion of workers in workplaces with union recognition fell by four percentage points. The proportion of workers in workplaces with closed shop agreements fell by eleven percentage points.

Looking at the results of the regression analyses, there is a significant change in the coefficient for the percentage of part-time workers at the workplace. However, this difference is likely to be an artefact resulting from the fact that part-time workers were not included in the calculation of union density in 1980, rather than an indicator that union density declined because union membership among part-time workers declined. The only other worker or workplace characteristics coefficients that change significantly between the two periods are for workplaces employing less than 200 employees, where the coefficients suggest that workers became less likely to be union members.

The results reported in table 3.1 were then used in a multivariate shift-share analysis, the results of which are reported in table 3.2 (more detailed results are included in table A3.1 in the appendix). Compositional change can be interpreted as the decline in aggregate union density we would expect to see if union joining behaviour was held constant at 1980 levels, but the means changed in the way observed in the sample. Behavioural change can be interpreted as the decline in aggregate union density we would expect to see if workforce composition was held constant at 1980 levels and union membership behaviour changed as observed in the sample. As the sum of these two figures is greater than the observed decline in union density, the interaction term balances the results so that it equals the percentage point decline in union density observed in the sample.

Table 3.2 Decomposition of regression analysis results (all workplaces)

	Structural change $(X^{84} - X^{80})\beta^{80}$	Behavioural change $(\beta^{84} - \beta^{80})X^{80}$	Interaction term $(X^{84} - X^{80})(\beta^{84} - \beta^{80})$	Observed decline in Aggregate union density $(X^{84} - X^{80})\beta^{80} + (\beta^{84} - \beta^{80})X^{80} + (X^{84} - X^{80})(\beta^{84} - \beta^{80})$
Union coverage				
Union recognition	-2.03	-1.72	0.08	-3.67
Closed Shop	-1.82	0.62	-0.18	-1.38
Total	-3.85	-1.14	-0.10	-5.09
Worker and workplace characteristics				
	0.34	-2.02	-0.54	-2.22
Total	-3.51	-3.12	-0.64	-7.31

Results are rounded to 2 decimal places.

Calculated from the means and coefficients reported in table 3.1.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Compositional change appears to have played a minimal role in accounting for union membership decline between 1980 and 1984. At first glance, behavioural change, likely to be increased free-riding, accounted for a little under half of the decline. However, part of the decline attributable to behavioural change is likely to be an artefact of the differences in the way in which union density is measured across the two time periods. Once the effects of behavioural change among part-time workers is discounted, just a quarter of decline can be attributed to behavioural change, with change in union coverage accounting for the remaining three quarters. Behavioural change was mainly among workers in workplaces with union recognition, which suggests that it was the result of either increased free-riding, or possibly shrinking coverage of union bargaining. Looking at the union coverage variables in more details, the decline in coverage of closed shop agreements accounted for a little under half of the decline in density attributable to change in coverage, with the decline of union recognition accounting for the remainder.

This finding raises the question, what caused the decline of union recognition and the closed shop? To investigate this question, similar analyses to those reported above were performed, first with the closed shop as the dependent variable, then with union recognition as the dependent variable. The results of the analysis with the closed shop as the dependent variable suggest that the key factor explaining the decline of the closed shop was behavioural change among workplaces with union recognition. Millward and Stevens' analysis of the panel suggests that few workplace abandoned the closed shop, so this behavioural change is most likely to result from change in the population of workplaces caused by a lower incidence of the closed shop among new workplaces and a higher incidence of the closed shop among workplaces that closed.

The decline of union recognition can be partly accounted for by the decline of manual employment and the decline of employment in the production sector. However the influence of these variables is counteracted by the growth of the public sector's employment share. The dominant factor is behavioural change among private sector workplaces. Once again, the analysis of Millward and Stevens (1986) and of Disney et al. (1995, 1996) suggests that this was the result of differences between leavers and joiners, particularly the closure and contraction of workplaces with union recognition rather than de-recognition among continuing workplace. Do these findings hold if we analyse the public and private sectors separately?

Table 3.3 - Results of regression analysis on the determinants of union density in private sector workplaces in 1990 and 1998 and the mean values of variables used in the regressions

	Regression results 1980	Mean value 1980	Regression results 1984	Mean value 1984
Continuing workplaces				
% part-time	-0.053 (0.064)	12.87	-0.134 (0.041)***	13.46
% Non-manual	-0.151 (0.033)***	37.96	-0.098 (0.037)***	46.32
Production sector (ref. services)	-0.933 (1.950)	0.62	1.047 (2.677)	0.50
Workplace size (ref. 201 – 499 employees)				
25 – 49 employees	-0.020 (2.983)	0.18	-3.057 (3.509)	0.22
50 – 199 employees	-2.150 (2.488)	0.31	-3.880 (3.225)	0.37
500+ employees	5.266 (2.519)**	0.33	6.646 (3.228)**	0.23
Workplace 5 years old or less	4.910 (3.634)	0.04	-1.654 (2.665)	0.06
Union recognition	50.176 (2.159)***	0.74	47.599 (2.258)***	0.63
Closed shop agreement	21.014 (2.064)***	0.42	22.335 (2.496)***	0.25
Constant	17.336 (3.703)***		15.521 (5.441)***	
N	1094	1094	975	975
R²	0.68		0.69	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses

Mean values which were percentages were rounded to the nearest whole number, mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places.

Results are weighted by each workplace's employment share.

Table 3.4 Decomposition of regression analysis results (private sector workplaces)

	Structural change $(X^{84} - X^{80})\beta^{80}$	Behavioural change $(\beta^{84} - \beta^{80})X^{80}$	Interaction term $(X^{84} - X^{80})(\beta^{84} - \beta^{80})$	Observed decline in Aggregate union density $(X^{84} - X^{80})\beta^{80} + (\beta^{84} - \beta^{80})X^{80} + (X^{84} - X^{80})(\beta^{84} - \beta^{80})$
Union coverage				
Union recognition	-5.50	-1.91	0.28	-7.12
Closed Shop	-3.71	0.56	-0.23	-3.38
Total	-9.21	-1.35	0.05	-10.50
Worker and workplace characteristics				
	-1.75	-0.53	-0.32	-2.60
Total	-10.96	-1.88	-0.27	-13.10

Results are rounded to 2 decimal places.

Calculated from the means and coefficients reported in table 3.3.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table 3.5 - Results of regression analysis on the determinants of union density in private sector workplaces in 1990 and 1998 and the mean values of variables used in the regressions

	Regression results 1980	Mean value 1980	Regression results 1984	Mean value 1984
Continuing workplaces				
% part-time	0.016 (0.049)	15.68	-0.196 (0.059)***	18.3
% Non-manual	-0.093 (0.036)***	58.26	-0.070 (0.034)**	57.23
Production sector (ref. services)	-7.399 (6.790)	0.08	5.454 (2.545)**	0.04
Workplace size (ref. 201 – 499 employees)				
25 – 49 employees	-0.768 (2.833)	0.13	-3.587 (2.847)	0.16
50 – 199 employees	-1.732 (2.235)	0.28	-2.613 (2.622)	0.28
500+ employees	-4.659 (2.239)**	0.39	-3.930 (2.950)	0.35
Workplace 5 years old or less	1.550 (4.397)	0.04	7.932 (3.166)**	0.03
Union recognition	31.853 (9.506)***	0.97	77.473 (1.937)***	0.99
Closed shop agreement	7.787 (2.549)***	0.33	12.853 (1.968)***	0.32
Constant	58.693 (9.646)***		9.524 (4.196)**	
N	566	566	623	623
R²	0.18		0.26	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses

Mean values which were percentages were rounded to the nearest whole number, mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places.

Results are weighted by each workplace's employment share.

Table 3.6 Decomposition of regression analysis results (public sector workplaces)

	Structural change $(X^{84} - X^{80})\beta^{80}$	Behavioural change $(\beta^{84} - \beta^{80})X^{80}$	Interaction term $(X^{84} - X^{80})(\beta^{84} - \beta^{80})$	Observed decline in Aggregate union density $(X^{84} - X^{80})\beta^{80} + (\beta^{84} - \beta^{80})X^{80} + (X^{84} - X^{80})(\beta^{84} - \beta^{80})$
Union coverage				
Union recognition	1.37	44.16	1.37	46.90
Closed Shop	-0.01	1.65	-0.01	1.63
Total	1.36	45.81	1.36	48.53
Worker and workplace characteristics				
	0.59	-50.14	-1.31	-50.86
Total	1.95	-4.33	-0.05	-2.43

Results are rounded to 2 decimal places.

Calculated from the means and coefficients reported in table 3.3.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Private sector workplaces

The equivalent results for private sector only workplaces are reported in tables 3.3 and 3.4. The scale of union decline in the private sector was more dramatic than for all workplaces; density in the sample dropped by 13 percentage points. However, the processes of decline were similar. Once the effects of part-time workers was discounted, compositional change played a negligible role in explaining decline. Much more important were changes in the structure of union representation; that is the decline of the closed shop and the decline of union recognition, which explained a little under three quarters of the decline in density.

Public sector workplaces

The results for the public sector look rather different (tables 3.4 and 3.5). Aggregate density in the public sector decreased at a much slower rate. Aggregate density was just

2.3 percentage points lower in 1984 than it had been in 1980. Once the probable impact of the difference in the way union density is measured is taken into account, the decline in density becomes even smaller. Indeed, it may actually have risen slightly. If there was any decline in public sector union density, then it was the result of behavioural change, probably as a result of increased free-riding (virtually all public sector employees were covered by collective bargaining at this point) rather than changes in the structure of union coverage.

3.3.2 Discussion

How do these results relate back to the two key questions that were posed in chapter one, which this thesis seeks to address? The first question is to what extent was union decline structurally determined? The second question is if structural determinants were a key cause of union decline, which structural determinants were most important?

The results suggest that declining union membership density in the 1980 – 1984 period were primarily caused by structural determinants. The central importance of declining employment shares among highly unionised establishments, as a result of both plant closure and workforce contraction, has been confirmed. Of course, unions could have made up these losses by organising non-union and less well organised workplaces. Given the economic circumstances and political climate of the period, this does not seem a realistic option. In addition to the traditional problems that unions face in organising and recruiting the unorganised in a recession, (hostile employers who cannot afford to accede to union bargaining objectives, and who probably have sufficient stocks to weather any strike and who might well welcome the savings from non-payment of wages that a strike or lock out would bring. Employees fearful of losing their jobs so who are reluctant to antagonise their employer.) unions faced two additional serious problems in the early 1980s: Their own finances and the political climate.

Willman and Morris (1995) show how union finances became dangerously over-extended during the years of expansion in the 1970s. Therefore the rapid loss of membership as union members were made redundant, and stopped paying their dues, presaged a serious crisis in union finances. Cost cutting became the order of the day. Some unions were faced with the necessity of reducing their own workforces. Given this significant contraction of both financial and human resources, it is difficult to see how unions could have made resources available to invest in new organising.

It is also important to take into account the wider political climate, which was like none since 1945. It is impossible to quantify how the change in climate affected public perceptions of union efficacy (which are important if workers are to unionise, Charlwood 2002, 2003), but it would be surprising if it had had no effect at all (and Rose's (1996) case studies of non-union workplaces in Swindon during the mid 1980s provide some anecdotal evidence that suggests there was an effect).

Previous union revivals in the face of employer and state hostility (e.g. in the mid 1930s) had been critically dependent upon skilled craftsmen with hard to replace skills who were able to inflict disproportionate damage on employers by withdrawing their labour (Cronin 1984). Yet it was precisely this group who bore the brunt of job losses in the recession of the early 1980s, and who continued to suffer from the effects of technological change as the decade progressed. This would have had the effect both of making it easier for employers to replace skilled craftsmen and of deterring skilled workers from using their weakening industrial muscle. Therefore, given the economic, political and financial position of the unions in the early 1980s, it is hard to see how they could realistically have made up the losses of recession through new organising. Union decline during this period was overwhelmingly structurally determined. But which elements of structure were the most significant in explaining decline?

In their assessment of the relative claims of business cycle theory as championed by Carruth and Disney (1988) and Disney (1990) compared to the argument that union decline was due to changes in employment law (Freeman and Pelletier 1990), Dunn and Metcalf argued that the evidence from WIRS presented by Millward and Stevens (1986) favoured business cycle theory because it suggested that union decline was the result of the contraction of employment in the unionised sector as a result of the recession. The evidence presented above essentially supports this judgement.

The comparative mildness of changes in employment law during the 1980 – 84 period (at least until the 1984 Trade Union Act, which is likely to have come too late to affect union membership during the 1980 – 84 period) means that it is difficult to see how changes in the law could have caused changes in union membership. The one provision that might have exerted a profound effect, namely the requirement to ballot workers on closed shops was largely irrelevant. By 1986, just 30,000 of the 3 million or so workers covered by closed shop agreements had been balloted on their continuance (McIlroy 1995). By contrast, the evidence presented above illuminates very clearly how

the recession of the early 1980s impacted on union membership; by closing highly unionised plants and reducing employment amongst those that remained open.

However, to say that this was an effect of the business cycle is rather like saying that a hanged man died from asphyxiation. It is factually correct, but rather misses the point. The hanged man died from asphyxiation because some one took the decision to hang him. Similarly the 'business cycle' is not a neutral or natural process, but something that results from the decision making of policy makers. The severity of the recession of the 1980s was the direct result of the political decisions of the Conservative Government elected in 1979. Some members of this Government regarded the resulting high levels of unemployment as a welcome development because they would allow the Government to tackle trade union power head on (this point should not be overstated – the high levels of unemployment engendered a sense of disaster and panic among senior ministers and were certainly not welcomed by the Prime Minister or Chancellor. However, the Government persevered with the monetarist medicine for lack of a credible alternative policy, Young 1990).

By wiping out large swathes of manufacturing industry, which in previous, less severe recessions might have weathered the storm through contraction, while living to expand again once demand returned, the Conservatives changed forever the terrain on which industrial relations would be conducted. Many of the workplaces that closed had a culture of industrial relations of which high trade union density was an integral part, and this culture had evolved as a result of years of struggle and accommodation between workers and management. This culture was not something that transferred easily to newer workplaces without the same history (see Rose's 1996 discussion of the skilled craftsmen who had moved from the old style of British Rail Engineering to a new 'sunrise' engineering firm).

To argue over the relative importance of compositional change compared to legal change compared to the business cycle is to ignore the specific circumstances of the early 1980s. The Conservative Government engineered a particularly severe recession, one effect of which was to close down large swathes of British industry forever. Regardless of the narrow compositional effects of this change (which Carruth and Disney and Freeman and Pelletier both show to be slight), this had a profound effect on union membership, because heavily unionised establishments bore the brunt of the contraction.

Conclusions

In this chapter I have examined the workplace level processes of union decline in Britain between 1980 and 1984 by estimating models of the determinants of union membership and decomposing the results using shift-share analysis. The results suggest that the lion's share of union decline over this period can be explained by declining levels of union recognition and the decline of the closed shop. Overall, there was little evidence of an increase in free-riding, and change in the composition of the observable worker and workplace characteristics also played a minimal role. The pattern of union decline was markedly different in the public and private sectors. Union density declined much more steeply in the private sector. What little public sector decline there was is more likely to have been the result of an increase in free-riding than declining union coverage.

Given what we already know about the decline in the incidence of union recognition and of the closed shop from the work of Millward and Stevens (1986) and Disney et al. (1995, 1996), it is probable that the underlying cause of decline was the closure and contraction of large highly unionised workplaces. These workplaces were more likely to have both union recognition and a closed shop agreement than workplaces that remained in business, workplaces that expanded and new workplaces. This was not compositional change as it is conventionally understood (the shift from manufacturing to services and the decline of manual employment) but it was compositional change of a sort. It was a shift from workplaces with a strong culture of unionism based on a long history of struggle and accommodation to workplaces without such a history.

Consequently, it is hard to see much of a role for legal changes in bringing about the decline of union membership. Although the Employment Acts of 1980 and 1982 contained provisions which made it harder for unions to establish new closed shops and abolished the statutory recognition procedure, given the wider economic and political context of the period, and the financial problems that unions were experiencing, it is hard to see unions gaining enough new recognition or closed shop agreements to replace what was lost, even if the law had remained as it was in 1979.

By contrast, 'business cycle' arguments look more plausible, because employment contraction in a recession was the key mechanism that brought about declining density. However, the 'business cycle' label does not adequately explain what was going on in the early 1980s. The severity of the recession, and the consequent

knock on effects for union membership, were the result of a radical new economic policy pursued by Margaret Thatcher's Conservative Government. One of the motivating factors that lay behind this shift in policy was a desire to break the power of the trade unions. Therefore, a significant portion, perhaps the majority, of the decline in union membership between 1980 and 1984 must be attributed to political change.

Chapter 4. Union Membership Decline 1984 - 1990

The decline of union membership and membership density continued between 1984 and 1990. Certification Officer data suggests that membership of trade unions headquartered in Great Britain fell from 10,664,180 in 1984 to 9,648,590 in 1990. Membership density fell from 51 per cent to 43 per cent (Charlwood and Metcalf 2005). The equivalent figures within the WIRS samples (i.e. in workplaces with 25 or more employees) were 58 percent in 1984 and 48 percent in 1990. This chapter reports on the results of the analysis of micro-data on the workplace level processes of union decline for the period 1984 – 1990. It follows the pattern set in the previous chapter of first summarising the economic, political and industrial context of the period, before considering the existing empirical evidence on union decline. It then describes the characteristics of the WIRS90 data and recaps and extends the methodology set out in chapter three before reporting the results of the empirical analysis and discussing the implications of the results for wider debates on union membership decline.

4.1 Union decline 1984 – 1990

This section will begin by considering the political, economic and industrial background of the period before considering the existing empirical evidence on the causes and processes of union decline between 1984 and 1990.

4.1.1 Political, economic and industrial context

In the previous chapter, I identified the roots of the Thatcher Government's antipathy towards the unions and briefly examined the manifestations of this antipathy in three broad areas: the legal front, the economic front and the industrial front. Buoyed up by landslide victories in the general elections of 1983 and 1987, the Conservative assault on trade unions became more radical and daring in the years up to 1990. The most notable early manifestations of this anti-union zeal came on the industrial front, with the decision to ban trade unions from the GCHQ spy base, followed closely by confrontation with the National Union of Mineworkers (NUM) in 1984 – 85 and then the NUT in 1986 - 87. Legislation designed to restrict and re-shape trade unions was passed in 1984, 1988, 1989 and 1990 (the 1990 Act will be discussed in the following chapter). On the economic front, growth returned and unemployment began to fall. However, manufacturing jobs continued to be lost and recovery was concentrated in the midlands and south, leaving large areas of the industrial and increasingly post-industrial

north of England, central Scotland and south Wales behind. In contrast to previous recoveries, there was no upswing in union membership and recognition. There were several possible reasons for this: perhaps because strong real wage growth removed a key incentive to unionise (Disney 1990); perhaps because legal changes and changes to the political climate reduced the power of unions to recruit workers and win new recognition agreements; perhaps because unions themselves failed to accord a high enough priority to organising and recruitment (Kelly and Heery 1989, Kelly 1990). By 1990, economic boom in London and the southeast of England had caused inflation to rise to an annualised rate of seven per cent. Despite Margaret Thatcher's misgivings, Britain joined the fixed exchange rate system of the European Union's Exchange Rate Mechanism (ERM) in October 1990, presaging a further period of high interests rates, falling domestic demand and rising unemployment.

The industrial front

The first clear signal of a new hardening of Government attitudes towards trade unions came in January 1984, with the announcement to widespread outcry that trade union membership would no longer be allowed at the Government's GCHQ spy base. This move was a belated response to the fact that 10,000 working days had been lost at the establishment during days of action by the civil service unions between 1979 and 1981, but the form of this response and the single minded determination with which possible compromise solutions were brushed aside bore the hallmark of the Prime Minister's personal intervention (Young 1990).

GCHQ was just the opening salvo in a year of bitter industrial confrontation. On the 6th March 1984, the National Union of Mineworkers (NUM) began a strike against proposed pit closures as the National Coal Board (NCB) attempted to find ways of meeting the tough financial targets set by the Government. The Government had been making plans for the confrontation since it was forced to concede a 20 per cent pay rise to the miners in 1981. Subsidies encouraged the NCB to produce more coal than could be sold or burned and further subsidies encouraged the Central Electricity Generating Board (CEGB) both to stockpile much of this coal and to invest in new oil powered generating capacity. In a parallel move, the ability of the police to coordinate a response to the mass picketing and civil unrest likely to accompany any miners strike (in the strike of 1974 the Yorkshire miners, led by Arthur Scargill, now leader of the NUM, had pioneered mass picketing tactics designed to close down power stations before coal

stocks ran out) was dramatically enhanced by police reforms in the wake of the inner city riots of the summer of 1981.

The Government refused to allow the NCB to negotiate any compromise solution acceptable to the NUM. As the strike became more bitter and violence on picket lines spread, the Prime Minister stepped up her rhetorical assault on the miners. In a speech to Conservative MPs in July 1984, Thatcher described the violence on the picket lines as 'a scar across the country' and implied that the miners themselves were an 'enemy within' comparable to the external enemy of Argentina during the Falklands War. The Government and NCB were forced to make concessions to avoid the National Association of Colliery Overlookers and Deputies (NACODs) from joining the dispute in the autumn of 1984. But the NUM failed to take this opportunity to bring about a compromise settlement and there followed a gradual 'drift' back to work over the winter of 1984 – 85. The strike ended with defeat for the NUM in the spring of 1985. The miners' strike was not a public relations victory for the Government; their stance was seen as being too uncompromising and doctrinaire, but it was a very clear signal to trade unions in the nationalised industries that the Government would not give into their demands, regardless of cost.

While the Government pulled no punches in its use of the state's coercive power against the miners (20,000 police officers from 43 constabularies were deployed in the coal fields during the strike, and the Security Service was used to monitor the activities of the strikes leaders), the Government was curiously reticent in using the legal powers given to it by the Employment Acts of 1982 and 1984 (McIlroy 1995). This reticence was the result of a tactical desire to keep the miners isolated and to prevent sympathy industrial action from other groups of workers.

The next major set piece battle between Government and unions occurred over the course of 1986 – 87 against the teaching unions, most notably the National Union of Teachers (the teachers were weakened by political divisions between the various teaching unions, not all of which supported the industrial action). Once again the dispute ended in union defeat, with the Government enacting primary legislation to end collective bargaining for teachers and to set pay and other terms and conditions unilaterally. During this period there were also high profile industrial battles between unions and employers in the newspaper publishing industry that ended in union defeat (while also contributing to political divisions between trade unions).

The end of the period was marked by a 'summer of discontent' as railway workers and car workers engaged in largely successful industrial action. However, this spark of union activity failed to re-ignite union growth, and it seems to have encouraged the Government to introduce further laws restricting the use of the strike weapon.

The legal front

The 1984 Trade Union Act was a radical act of Government interference in the previously sovereign affairs of trade unions. It made it mandatory for the ruling executives of trade unions to be elected every five years. Industrial action would only be lawful if the union members affected approved it via a secret ballot. If unions wished to use funds for political purposes, this decision had to be ratified by members in a ballot once every ten years. Despite the radicalism of the 1984 Act, there was little in it that might be expected to directly influence trade union membership levels.

The 1988 Employment Act was concerned with strengthening some of the key provisions of the 1984 Act. Ballots for union internal elections and on the issue of political funds were made all postal (previously many unions had organised these at the workplace, where according to Conservative argument, members could be subjected to strong arm tactics and manipulation). Steps were also taken to strengthen the rights of individual trade union members to take action against their trade unions, and it was made illegal for unions to take disciplinary action against members who refused to participate in industrial action. Finally, the post-entry closed shop (where employment is conditional on union membership) was effectively outlawed by making it illegal to dismiss a worker for refusing to join a union. The Employment Act of 1989 ended the practice of giving lay union representatives time off for training paid for by their employer, so making it more difficult for shop stewards to organise multi-plant bargaining. Finally, the 1990 Employment Act (the intentions of which were signalled a year in advance by a Green Paper), banned all secondary strike action and made pre-entry closed shops (where employers agree only to hire union members) illegal (Brown and Wadhwani 1990, Dunn and Metcalf 1996, McIlroy 1995). The key effect of these legal changes on union membership might be expected to be felt through the outlawing of the closed shop. If the closed shop were illegal, we might expect more workers to choose to free-ride with the result that membership levels fell. Therefore the interesting empirical question is to what extent can the decline of aggregate union membership be attributed to the decline of the closed shop?

The economic front

In 1980 inflation stood at 18 per cent per annum. By 1984, it had fallen to the relatively acceptable level of 5 per cent per annum. This fall came about despite the failure of monetary targeting to produce the anticipated reductions in money supply and occurred in a period where the monetary supply was expanding because of the increasing availability of credit. As a consequence, Nigel Lawson, who succeeded Geoffrey Howe as Chancellor of the Exchequer in 1983, quietly dropped monetarist policies, replacing them with what one critic caustically dubbed 'closet Keynesianism' (Healy 1989). Consequently, economic growth returned averaging 3.8 per cent per annum between 1984 and 1990. Despite this economic growth, more than two million people remained unemployed throughout the period. Manufacturing redundancies averaged 65,000 a month and the fruits of growth were unevenly distributed with London and the South East of England benefiting most. Consequently, local labour market conditions remained unfavourable for union organising in large parts of the country, particularly areas of traditional union strength (Merseyside, Greater Manchester, West and South Yorkshire, the North East of England, Scotland's central belt and South Wales). In the wake of the 1987 election, economic growth spiralled out of control, resulting in an inflation rate of 7.8 per cent per annum by 1990. These problems were compounded by Chancellor Lawson's policy of surreptitiously linking the value of sterling in the international currency markets to the Deutsche Mark. As a result, interest rates were raised from a low of 7.5 percent in 1988 to a high of fifteen per cent in 1989, bringing economic growth to a halt in the first quarter of 1990 and increasing unemployment.

To conclude, Government action against trade unions on the economic and legal fronts intensified as the Government became more confident of success and consequently more willing to take risks to confront and restrict union power. The miners and teachers were taken on in industrial action and defeated, not through the use of earlier legislation designed to restrict industrial action, but through the use of the State's coercive power. The Government became increasingly willing to use legislation to dictate the way unions should be run, and the closed shop was made illegal. Although economic growth returned, it did not bring about conditions favourable to unions because structural unemployment persisted in large parts of the country and the spread of economic growth was uneven. Many of the unionised factories that previously would have expanded during a period of economic growth had closed in the previous

recession. When, in the summer of 1989, some workers took advantage of the economic boom to press their demands, the response from the Government was to further tighten restrictions on industrial action.

4.1.2 Existing evidence on union membership decline

Once again, the existing empirical evidence on declining union membership density offers only a partial and incomplete explanation of declining union density, although the addition of questions to capture collective bargaining coverage in both 1984 and 1990 and a more extensive panel survey in 1990 means that the data are richer than for the earlier period. Millward et al. (1992) analysed declining union density using the 1984 and 1990 WIRS data. They found that declining union density affected all industrial sectors and all types of workplace. They reported several different decline processes. First, the proportion of workplaces with no union members rose from 27 per cent of workplaces to 36 per cent of workplaces. Second, the proportion of workplaces with 100 per cent union membership declined from 18 per cent to 13 per cent of workplaces, possibly as a result of the decline of the closed shop. However, average density in workplaces that maintained union recognition remained largely constant, at 67 per cent in 1984 and 66 per cent in 1990. This suggests that declining density was the result of a declining proportion of workplaces with union recognition and/or declining employment shares of workplaces with union recognition, perhaps due to compositional change.

Millward et al. then went on to explore the processes of change in a sub-sample of continuing trading sector workplaces in more detail using the panel element of the 1990 survey. In over half of continuing workplaces there was no change in union density, and few of the workplaces where density rose or fell reported dramatic changes. However, workplaces where all union members were lost outnumbered workplaces where union membership rose from zero, by a ratio of two to one. Workplaces with low union density in 1984 were particularly likely to have lost all their union members by 1990. Behavioural change was considered to be a more important explanation of declining density than compositional change with in panel establishments.

So overall, from Millward et al.'s analysis, it seems likely that declining recognition levels was the predominant cause of declining density, with falling membership levels in continuing workplaces, perhaps partly due to the abolition of the closed shop in some workplaces, playing a secondary role, and with compositional change playing a minor but imprecisely specified part. Millward et al. also failed to

address the question of whether or not this behavioural change is the result of increased free-riding or declining union coverage. Therefore the question of the relative importance of these different processes remains open.

Beaumont and Harris (1995) asked what caused union de-recognition among the panel of continuing workplaces. They argued that declining union density, which would reduce the costs for management of de-recognition, is an important determinant of de-recognition, and demonstrated a statistically significant relationship. However, in my view, they did not adequately establish the causal nature of this relationship. It would also be possible for de-recognition to presage a decline in density. Indeed there is considerable case-study evidence from the late 1980s and 1990s that suggests that declining membership is more likely to follow de-recognition than to precede it. However, on the basis of the argument that de-recognition is caused by declining membership, Beaumont and Harris went on to investigate the determinants of declining density. This part of their analysis produced more plausible and interesting results. Declining density was found to be associated with a range of organisational change variables: international product markets (where competitive pressures might be assumed to be stronger), a move from stand alone status to be part of a multi-establishment organisation (which is likely to be an indicator of merger or acquisition), increased use of temporary labour and the introduction of new technology. All these variables are suggestive of management responding to intensifying competition by reforming employment relations to the detriment of unions.

Green (1992) examined declining union density between 1983 and 1989 using data from two nationally representative cross-sections of individuals. His aim was to establish the extent to which union decline could be considered the result of compositional change compared to within group behavioural change. To establish this, he estimated linear probability models on the determinants of individual union membership, including the following variables: the respondents age, gender, occupation, full or part-time employment status, and the industry and region in which their job was located on the right hand side of the equation. He decomposed the results using the same multivariate shift-share analysis method used here. On the basis of this analysis, he concluded that change in the composition of workforce and job characteristics explained around 30 per cent of union membership decline over the period. Green acknowledged that an important limitation of the study was the absence of any measure of union coverage, such as whether the worker works in a workplace with union

recognition and is covered by collective bargaining. This means that it was not possible to establish the extent to which behavioural change was the result of workers choosing not to join unions and free-riding, or having the option of joining a union taken away from them because there were fewer union jobs. The econometric results may also be subject to omitted variable bias because of the absence of this type of measure.

Gregg and Yates (1991) also examined union decline in Britain in the latter half of the 1980s, although their company level survey over-sampled large firms and suffered from a fairly low response rate, so the findings are unlikely to be as broadly representative and reliable as those of Millward et al. (1992) and Green (1990). Some of their findings echo those of Millward et al. Large drops in union density were rare, although smaller declines were commonplace. Total union de-recognition was also rare, although they found rather more evidence of partial de-recognition in multi-site establishments than Millward et al. There had been substantial decline in closed shop agreements, but around one quarter of companies still reported their existence.

Given the likely importance of changing patterns of recognition and the decline of the closed shop in explaining union decline, it is worthwhile to review briefly the evidence on the causes and processes of the decline of union recognition and the closed shop between 1984 and 1990. The proportion of workplaces with union recognition fell from 66 per cent in 1984 to 53 per cent in 1990. Nine percent of panel workplaces reported de-recognition, while four percent of panel workplace recognised unions when they had not in 1984. Consequently, Millward et al. (1992) judged that differences between leavers and joiners were of more significance in explaining declining recognition than de-recognition in continuing establishments. This fits with the evidence of Claydon (1989) and Gregg and Yates (1991) who both found limited evidence of de-recognition. Millward et al.'s judgement was confirmed by the more sophisticated analysis of Disney et al. (1995, 1996) who found that workplaces established after 1980 were much less likely to recognise unions than older workplaces, and that differences in the incidence of union recognition between workplaces that had closed since 1980 and new workplaces explained most of the decline in recognition between 1984 and 1990.

Collective bargaining coverage also dropped dramatically, from covering 74 per cent of the workforce in the WIRS84 sample to covering just 54 per cent in the WIRS90 sample. Decline was particularly noticeable in the engineering and vehicle building and printing and publishing industries. Claydon's (1989) evidence suggests that formal de-recognition was most common in the printing industry. Smith and Morton (1993) also

report substantial cases of de-recognition, albeit in companies and sectors that are likely to make a relatively minor contribution to aggregate employment. Few of the engineering workplaces that had abandoned collective bargaining between 1984 and 1990 reported formal de-recognition. Many of these were smaller and single site workplaces. Therefore, Millward et al. (1992) speculated that declining coverage in this sector was likely to be a result of the abandonment of industry wide collective bargaining by the Engineering Employers Federation in the wake of the 1989 engineering strike. However, the extent to which the decline of collective bargaining can be explained by compositional change, partial union de-recognition or a difference in the coverage of recognition between new and older workplaces has not been investigated.

Although Millward et al. (1992) judged that the impact of the decline in the closed shop had only a marginal role to play in the decline of union membership by comparison with declining union recognition between 1984 and 1990, there was a substantial drop in the proportion of workplaces with closed shop agreements. Decline was particularly noticeable in the public sector and nationalised industries, where the closed shop virtually disappeared.

To summarise, evidence suggests that the main factor behind declining union membership was declining union recognition. Decline in membership in continuing workplaces that retained recognition, perhaps as a result of the decline of the closed shop, perhaps as a result of union de-recognition was a secondary factor. Compositional change seems to have accounted for around one third of decline. The relative weight and importance of these different factors in explaining decline remains unclear.

4.2 Data and methodology

This section will describe the characteristics of the 1990 Workplace Industrial Relations Survey (the details of the 1984 survey were described in the previous chapter) before setting out the methodology used to analyse union membership decline over the 1984 – 1990 period. Once again, limitations in the 1990 panel survey mean that it is not possible to operationalise the full model set out in chapter two. Therefore I build on the reduced form model in the previous chapter. Because of improvements to the 1984 and 1990 surveys, I am able to develop the model used in the previous chapter by including a term for workplace collective bargaining coverage.

4.2.1. Data

The WIRS90 has similar characteristics to the earlier surveys in the series. It was a survey of workplaces (or establishments) with 25 or more employees, which were located in England, Scotland and Wales and in the production and service sectors. The main respondent to the survey was the senior person responsible for industrial and employment relations matters. The sample was drawn from the 1987 census of employment. The sample was stratified by workplace size with large workplaces being over-sampled. 2061 interviews were achieved, a response rate of 83 per cent. Encouraged by the success of the 1984 panel, the survey sponsors expanded the panel element of the 1990 survey. However, the 1990 panel was confined to trading sector workplaces. Once again, this means that it is not possible to use the panel element to identify 'leavers' from the 1984 survey without undesirable side effects, which in this case means being left with a sample that is unrepresentative of the wider population because it only includes trading sector workplaces.

From the perspective of this study, one major improvement in the 1984 and 1990 surveys compared to the 1980 survey is that questions were asked which allow us to identify the proportion of the workforce covered by collective bargaining. This is important, because as Bain's (1967, 1970) work on white-collar union membership makes clear, a union recognition agreement will not necessarily extend to cover all workers in an establishment. One possible factor underpinning union decline might be the decline of union coverage within workplaces that continue to recognise unions covering some groups of workers (Brown et al. 1999, Fairbrother 2000). The inclusion of a term for the proportion of workers covered by collective bargaining within the empirical model allows the extent and importance of this type of change to be evaluated.

The problem of slight differences in the way in which union density could be calculated, which existed in the 1980 – 1984 period is not an issue in the 1984 – 1990 period. Both union membership and total employees at the workplace include part-time workers. Union density has been calculated consistently for both years. Unfortunately there is one new problem in the 1990 data set. Because of a design error, questions about the closed shop were asked only in workplaces if the recognised manual unions formed part of a bargaining unit that was wholly or majority manual. 8.3 per cent of (weighted) establishments that recognise manual unions were in a bargaining unit where non-manual workers are in the majority, so were not asked about the closed shop

(Stewart 1995). This design fault presented a difficult choice. To include a closed shop variable in the analysis despite that fact that the design fault might lead to biased results, or to proceed without a closed shop variable, with the result that the impact of the outlawing of the closed shop (the 1988 and 1990 Employment Acts effectively outlawed the closed shop by making illegal to enforce) on union membership decline could not be investigated. I chose the latter option as the lesser of two evils, but the results of the analysis may be less representative of the population because of this decision.

4.2.2 Methodology

The model to be estimated is as follows:

$$Union_{it} = \beta Rec_{it} + \beta bar_{it} + \beta Cs_{it} + \beta Comp_{it} + \varepsilon_{it} \quad (5)$$

Where *Union* is union density in workplace *i* at time *t*. *Rec* is a 0/1 dummy variable with the value of unity if workplace *i* recognised unions at time *t*. *Bar* is the proportion of the workforce covered by collective bargaining arrangements in workplace *i* at time *t*. *Cs* is a 0/1 dummy variable with the value of unity if workplace *i* had a recognition agreement that included a closed shop at time *t*. *Comp* indicates the composition of the workforce in workplace and related factors like workplace size in workplace *i* at time *t*. *E* is an error term. Variables included in the model to capture the composition of the workforce and workplaces include: The proportion of employees in non-manual occupations (it would be desirable to include more detailed occupational measures, but the 1984 survey did not include them); the proportion of the workforce who work part-time; whether or not the workforce is in the production sector (the inclusion of more detailed industry dummies do not substantially alter the results. Because the standard industrial classification was revised in 1990, it would be difficult to make comparisons over the whole of the 1980 – 1998 period if more detailed industry variables were included in the model); whether or not the workplace is in the private sector, dummy variable for workplace size (25 – 50 employees, 51 – 200 employees and over 500 employees, with 201 – 500 employees as the omitted reference category); finally, whether or not the workplace was established within five years of the date at which the data were collected.

The model was operationalised using weighted linear probability regression analysis applying the Huber-White method for calculating standard errors that are

robust despite heteroscedasticity. The strengths and limitations of this methodological approach were discussed in chapter two above. The results of models for 1984 and 1990 can then be decomposed thus:

$$\Delta U = (X^{90} - X^{84}) \beta^{84} + (\beta^{90} - \beta^{84}) X^{84} + (X^{90} - X^{84})(\beta^{90} - \beta^{84}) \quad (6)$$

The first term $(X^{90} - X^{84}) \beta^{84}$ is the effect of compositional change if union membership behaviour is held constant at the levels of 1984. The second term $(\beta^{90} - \beta^{84}) X^{84}$ is the effect of changing behaviour if the composition of the workforce is held constant at the levels of 1984. Since, in reality neither union membership behaviour or composition are held at 1984 levels, the results of the two terms will not sum to the observed decline in union density, the third term $(X^{90} - X^{84})(\beta^{90} - \beta^{84})$ balances the equation so that the results are consistent with the observed decline in density in the samples (Green 1992: 454).

4.3 Results and discussion

This section will begin by considering regression and decomposition analysis results from the whole WIRS84 – 90 samples, before considering separate results for the public and private sectors in more detail. Finally, the implications of the results for wider debates on union decline over the period will be discussed.

4.3.1 Results

Table 4.1 presents the regression results for the determinants of union density for the years 1984 and 1990 along with the mean scores for the independent variables used in the regression analysis. It is apparent that compositional trends that were underway between 1980 and 1984 continued up until 1990, albeit at a much slower rate. The employment shares of manual workers, the production sector, full-time employees and workplaces employing 500 or more workers all continued to contract. The proportion of employees in workplaces less than five years old also more than doubled. An exception to these continuing trends was the employment share of the private sector, which after contracting markedly between 1980 and 1984 grew by ten percentage points between 1984 and 1990. The scale of the contraction of union coverage is also apparent from this table. The proportion of workers in workplaces with union recognition dropped by 15 percentage points. Collective bargaining coverage fell by 18 percentage

points and the proportion of workers in workplaces with closed shop agreements fell by 23 percentage points. Looking at the changes in the regression coefficients between the two years (which are likely to indicate behavioural change), there were significant drops in the size of the coefficients for the private sector, new workplaces and the proportion of workers covered by collective bargaining variables.

Table 4.1 - Results of regression analysis on the determinants of union density in all workplaces in 1990 and 1998 and the mean values of variables used in the regressions

	Regression results 1984	Mean value 1984	Regression results 1990	Mean value 1990
Continuing workplaces				
% part-time	-0.140 (0.029)***	15.51	-0.061 (0.029)**	17.74
% Non-manual	-0.067 (0.021)***	50.85	-0.084 (0.018)***	52.17
Production sector (ref. services)	2.431 (1.494)	0.31	3.100 (1.440)**	0.29
Private sector (ref. public sector)	-8.563 (1.556)***	0.59	-14.585 (1.967)***	0.69
Workplace size (ref. 201 – 499 employees)				
25 – 49 employees	-0.963 (1.649)	0.20	0.034 (1.983)	0.21
50 – 199 employees	-2.766 (1.479)*	0.33	0.227 (1.851)	0.35
500+ employees	-0.923 (1.527)	0.28	-1.890 (1.851)	0.24
Workplace 5 years old or less	-1.439 (1.883)	0.05	-2.771 (1.855)	0.12
Union recognition	-1.557 (2.528)	0.78	11.053 (2.867)***	0.63
Collective bargaining coverage	0.687 (0.029)***	69.24	0.558 (0.035)***	50.41
Closed shop agreement	12.879 (1.246)***	0.28	10.488 (1.614)***	0.05
Constant	21.055 (3.021)***		26.505 (3.373)***	
N	1581	1581	1734	1734
R²	0.80		0.76	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses.

Mean values which were percentages were rounded to the nearest whole number, mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places.

Results are weighted by each workplace's employment share.

Source: 1984 and 1990 Workplace Industrial Relations Surveys

Table 4.2 Decomposition of regression analysis results (all workplaces)

	Structural change $(X^{90} - X^{84})\beta^{84}$	Behavioural change $(\beta^{90} - \beta^{84})X^{84}$	Interaction term $(X^{90} - X^{84})(\beta^{90} - \beta^{84})$	Observed decline in Aggregate union density $(X^{90} - X^{84})\beta^{84} + (\beta^{90} - \beta^{84})X^{84} + (X^{90} - X^{84})(\beta^{90} - \beta^{84})$
Union coverage				
Union recognition	0.229	9.83	-1.85	8.21
Collective bargaining coverage	-12.95	-8.94	2.43	-19.46
Closed Shop	-3.03	-0.67	0.56	-3.14
Total	-15.75	-0.66	1.14	-15.27
Worker and workplace characteristics				
	-1.42	3.31	-0.46	1.43
Total	-17.17	2.65	0.68	-13.84

Results are rounded to 2 decimal places.

Calculated from the means and coefficients reported in table 4.1.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table 4.2 presents the results of the multi-variate shift share analysis. This shows that the overwhelming driver of membership change was the decline of union coverage. Compositional change explained a little under a tenth of overall decline (the major factor here was the growth of the employment share of the private sector). The net effect of behavioural change was actually positive. This suggests that the decline in union membership in highly unionised workplaces identified by Millward et al. (1990) was either the result of declining bargaining coverage (so not increased free-riding) or free-riding among workers previously covered by closed shop agreements.

Looking at the results for the union coverage variables, it is apparent that decline in collective bargaining coverage was more significant than decline in union recognition in accounting for declining union density. Almost three quarters of the

overall decline in density can be explained by declining bargaining coverage. However, further analysis suggests that around two thirds of the decline in collective bargaining coverage could be explained by falling levels of union recognition. Therefore, the decline of union recognition could be said to account for half of the decline in aggregate union density between 1984 and 1990. Disney et al. (1995, 1996) have demonstrated that this phenomena was mainly the result of lower probabilities of union recognition in workplaces established after 1980. Around a further quarter of the decline can be explained by declining collective bargaining coverage in workplaces that continued to recognise unions, either as a result of de-recognition or compositional change. The decline of the closed shop accounted for a little under one fifth of the overall decline in density. Looking behind this result, around five sixths of the decline of the closed shop could be explained by behavioural change in workplaces with union recognition with just a sixth accounted for by the decline in the coverage of union recognition. Compositional change explains virtually none of the decline in the coverage of the closed shop.

Table 4.3 - Results of regression analysis on the determinants of union density in private sector workplaces in 1990 and 1998 and the mean values of variables used in the regressions

	Regression results 1984	Mean value 1984	Regression results 1990	Mean value 1990
Continuing workplaces				
% part-time	-0.151 (0.035)***	13.55	-0.087 (0.026)***	15.44
% Non-manual	-0.060 (0.030)**	46.49	-0.108 (0.018)***	46.08
Production sector (ref. services)	1.732 (1.738)	0.50	0.080 (1.443)	0.42
Workplace size (ref. 201 – 499 employees)				
25 – 49 employees	-2.214 (2.149)	0.22	-1.819 (2.037)	0.22
50 – 199 employees	-3.904 (1.869)**	0.37	-0.553 (1.849)	0.39
500+ employees	-0.655 (1.920)	0.23	1.374 (1.729)	0.19
Workplace 5 years old or less	-4.466 (2.294)*	0.06	1.053 (1.510)	0.13
Union recognition	-3.181 (3.055)	0.63	1.874 (1.704)	0.50
Collective bargaining coverage	0.688 (0.037)***	51.23	0.754 (0.024)***	38.40
Closed shop agreement	15.770 (1.760)***	0.25	7.155 (1.781)***	0.05
Constant	13.762 (3.532)***		11.487 (3.162)***	
N	977	977	1255	1255
R²	0.80		0.85	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses.

Mean values which were percentages were rounded to the nearest whole number, mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places.

Results are weighted by each workplace's employment share.

Sources: 1984 and 1990 Workplace Industrial Relations Surveys

Table 4.4 Decomposition of regression analysis results (private sector workplaces)

	Structural change $(X^{90} - X^{84})\beta^{84}$	Behavioural change $(\beta^{90} - \beta^{84})X^{84}$	Interaction term $(X^{90} - X^{84})(\beta^{90} - \beta^{84})$	Observed decline in Aggregate union density $(X^{90} - X^{84})\beta^{84} + (\beta^{90} - \beta^{84})X^{90} + (X^{90} - X^{84})(\beta^{90} - \beta^{84})$
Union coverage				
Union recognition	0.40	3.17	0.63	4.2
Collective bargaining coverage	-8.82	3.38	-0.85	-6.29
Closed Shop	-3.08	-2.13	1.68	-3.53
Total	-11.5	4.42	0.20	-6.88
Worker and workplace characteristics				
	-0.78	-2.34	0.67	-6.88
Total	-12.28	2.22	0.87	-9.19

Results are rounded to 2 decimal places.

Calculated from the means and coefficients reported in table 4.3.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table 4.5 - Results of regression analysis on the determinants of union density in private sector workplaces in 1990 and 1998 and the mean values of variables used in the regressions

	Regression results 1984	Mean value 1984	Regression results 1990	Mean value 1990
Continuing workplaces				
% part-time	-0.160 (0.053)***	18.30	-0.115 (0.070)*	22.80
% Non-manual	-0.090 (0.030)***	57.05	-0.111 (0.045)**	65.48
Production sector (ref. services)	3.601 (2.024)*	0.04	11.653 (4.291)***	0.01
Workplace size (ref. 201 – 499 employees)				
25 – 49 employees	0.310 (2.657)	0.16	1.455 (4.403)	0.19
50 – 199 employees	-0.874 (2.379)	0.28	4.751 (4.199)	0.26
500+ employees	-1.344 (2.465)	0.35	-4.285 (3.466)	0.35
Workplace 5 years old or less	6.627 (2.456)***	0.03	-6.988 (5.509)	0.08
Union recognition	14.923 (5.717)***	0.99	-12.956 (8.310)	0.92
Collective bargaining coverage	0.655 (0.056)***	95.84	0.339 (0.078)***	76.65
Closed shop agreement	9.524 (1.835)***	0.33	10.308 (2.588)***	0.03
Constant	9.563 (4.209)**		68.056 (7.781)***	
N	614	614	479	479
R²	0.46		0.26	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses.

Mean values which were percentages were rounded to the nearest whole number, mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places.

Results are weighted by each workplace's employment share.

Sources: 1984 and 1990 Workplace Industrial Relations Surveys

Table 4.6 Decomposition of regression analysis results (public sector workplaces)

	Structural change $(X^{90} - X^{84})\beta^{84}$	Behavioural change $(\beta^{90} - \beta^{84})X^{84}$	Interaction term $(X^{90} - X^{84})(\beta^{90} - \beta^{84})$	Observed decline in Aggregate union density $(X^{90} - X^{84})\beta^{84} + (\beta^{90} - \beta^{84})X^{84} + (X^{90} - X^{84})(\beta^{90} - \beta^{84})$
Union coverage				
Union recognition	-1.17	-27.82	2.19	-26.8
Collective bargaining coverage	-11.91	-29.98	5.75	-36.14
Closed Shop	-2.81	0.26	-0.23	-2.78
Total	-15.90	-57.54	7.71	-65.73
Worker and workplace characteristics				
	-1.25	58.70	-0.98	56.47
Total	-17.15	1.16	6.73	-9.26

Results are rounded to 2 decimal places.

Calculated from the means and coefficients reported in table 4.5.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

In contrast to the 1980 – 1984 period, when the patterns of union decline differed markedly between the public and private sectors, there was very little difference in the pattern of union decline between the public and private sectors between 1984 and 1990. In both sectors, declining collective bargaining coverage accounted for the lion's share of the decline in union membership density. However, the underlying reasons for the decline of collective bargaining coverage are likely to have been very different in the public sector. In the private sector, around two thirds of the decline in collective bargaining coverage could be accounted for by declining union recognition, with just one third accounted for by behavioural change (i.e. the sum of partial de-recognition and lower levels of coverage in new workplaces with union recognition). In the public sector, these proportions are reversed.

We know that in the public sector, the main cause of declining bargaining coverage is likely to have been the introduction of pay review bodies in place of collective bargaining for nurses and professions allied to medicine and the formal abandonment of collective bargaining for teachers in 1987 (the pay review body that replaced collective bargaining was not established until 1991, Winchester and Bach 1995). It is interesting to note the extent to which this change was associated with declining union membership density, although it is difficult to make sense of this finding, because both teachers and nurses tend to have high levels of union membership because of the individual insurance and representation services that unions provide them with. It may be that both teachers and nurses tended to work in workplaces that were subject to compulsory competitive tendering (CCT), which affected both collective bargaining coverage and union density among ancillary staff in the health and education sector workplaces. Reductions in collective bargaining coverage may have acted as a proxy for this process. CCT may also have directly reduced bargaining coverage, although the extent to which this was the case cannot be observed with these data.

To conclude this section, declining collective bargaining coverage accounted for the lion's share of the decline in union density between 1984 and 1990. A little under a half of the decline in density was due to declining union recognition, a little under a quarter due to declining union coverage in workplaces that continued to recognise unions. The demise of the closed shop accounted for a little under a fifth of the decline in density, presumably through increased free-riding. Compositional change, predominantly the growth of the private sector's employment share, only accounted for a around one tenth of the decline in density.

4.3.2 Discussion

The overwhelming factor behind union membership decline between 1984 and 1990 was the decline of union coverage. Three processes stand out. First, the increase in workplaces with no union recognition agreements. The evidence of Disney et al. (1995, 1996) and Beaumont and Harris (1995) suggests that the main cause of declining recognition levels was lower levels of union recognition in workplaces established after 1980. Second, Millward et al. (1992) showed that some workplaces, especially in the engineering industry appeared to have abandoned collective bargaining without formally de-recognising unions, this de-facto union de-recognition combined with a much lower incidence of formal but partial de-recognition of some unions in particular workplaces (Beaumont and Harris 1995, Millward et al. 1992) accounts for around one quarter of the overall decline.

In cases of partial de-recognition, it is not possible to observe whether falling membership preceded de-recognition (as Beaumont and Harris contend) or was an effect of de-recognition (as the case studies of Fairbrother 2000 and Brown et al. 1999 suggest). Partial union de-recognition seems likely to have been a particularly important explanation of decline in the public sector, where Pay Review Bodies replaced collective bargaining for nurses and professions allied to medicine, the legislative withdrawal of collective bargaining for teachers and CCT all contributed to reducing collective bargaining coverage (Winchester and Bach 1995).

Finally, collective bargaining coverage may have been lower in new workplaces that recognised unions compared to workplaces that shut over the period. The extent to which this was the case cannot be observed given the data, but given the emphasis placed on single union agreements following 'beauty contests' between unions, which resulted in a form of weakened union organisation dependent upon management sponsorship (Metcalf 1991) in this period, it seems a plausible explanation of declining union coverage.

The decline of the closed shop accounted for around one fifth of the decline in union membership, and it seems likely that much of this change was the result of increased free-riding amongst workers who were 'free to choose' if they wished to be union members or not. As the majority of the decline in the closed shop was the result of behavioural change rather than compositional change, then membership decline

attributable to the closed shop must, in large part, be the result of the legislation which made it illegal to enforce closed shop agreements.

In his analysis of declining union membership based on two surveys of individuals, Green (1992) judged that compositional change accounted for around one third of union membership decline between 1983 and 1989. Similarly, Arulampalam and Booth (2000) found that around one third of the decline in union membership density between 1981 and 1991 among a panel of young men could be accounted for by compositional change, specifically the declining employment shares of large workplaces and the public sector. Both of these accounts suggest that compositional change played a larger role in explaining union membership decline than the results presented above. One obvious explanation for this discrepancy is that neither Green nor Arulampalam and Booth were able to include measures of union coverage in their analysis. Had they been able to do so, then the compositional effect would have been smaller. It is important to note that calculations about the role of compositional change in union decline are sensitive to the industrial and occupational classifications used, and differences here may also explain the discrepancy in the results (Waddington 1992).

The most significant cause of compositional change was the growth of the private sector's employment share. This compositional change can be attributed, at least in part, to deliberate acts of Government policy. Within the WIRS population of manufacturing and services workplaces with 25 or more employees, 500,000 workers shifted from the public sector to the private sector as a result of privatisation (Millward et al. 1992). CCT also resulted in the transfer of previously public sector workers to the private sector, and led to job losses and workforce contraction among groups of public sector workers forced to compete with private contractors. Finally, the capping of local Government expenditure and the imposition of tough cash limits on departmental spending also had the effect of constraining the growth of public sector employment.

How do these findings relate to the two questions posed in chapter one? To maintain membership, unions would have to have done three things. First, to have organised a greater proportion of new workplaces. Second, to have maintained closed shop agreements. Third, to have resisted de-recognition attempts by management. The first two would have made the greatest difference to membership levels; the effect of the third would have been more marginal. It is possible to detect a number of structural constraints placed by Government policy on unions' ability to do these things. First, statutory routes to union recognition were closed off. Second, methods traditionally

used by unions to force recalcitrant employers to the bargaining table and to concede recognition, for example, secondary action and wildcat strikes were made illegal. Third, the closed shop was made illegal, allowing the number of free-riders to increase. Fourth, employment growth in the traditionally highly unionised public sector was held back and collective bargaining undermined among key groups of public sector workers. Fifth, the Government strove to secure a 'demonstration effect' by defeating the claims of unions in the public sector and nationalised industries through long attritional battles, most notably in the cases of the miners and the teachers.

While the return of economic growth and falling unemployment might have been expected to bring about economic conditions favourable to union organising, intensifying product market competition as a result of de-regulation and increasingly international product markets would have had the effect of giving management in much of the private sector a stronger incentive to resist union claims. At the same time regional disparities cannot have made the union task any easier. These led to rapidly rising prosperity on the back of strong real wage growth for those in work, particularly in London and the southeast of England while leaving large pockets of unemployment and poverty in traditional union heartlands in the north of England, central Scotland and south Wales. In one part of the country, prosperity meant that there was little incentive to unionise to protect living standards from inflation, while in the other, fear of unemployment provided a powerful disincentive to challenge the power of employers.

However, despite these structural constraints, Kelly's (1990) charge, echoed by Mason and Bain (1994), that unions failed to respond adequately to the challenges of the 1980s still has some force. It seems apparent that many (most?) senior union leaders preferred inter-union squabbles to the harder challenge of trying to organise the unorganised. Metcalf (1991) attempted to exonerate unions from the charge of failure by pointing to the quality of leadership provided by the TUC at the end of the 1980s. However, it with the leadership of individual unions that much of the responsibility for the failures to get to grips with the problem of the 1980s must reside. Unions did belatedly get to grips with the challenge of recruiting and organising in new workplaces, in the TUC co-ordinated pilot recruitment projects in London's Docklands and Manchester's Trafford Park. However, the naivety of the tactics used (particularly by comparison with union organising tactics in countries like the USA with a history of fighting recognition battles against hostile employers) guaranteed disappointing results.

While it is relatively straightforward to identify union failure, it is still far from clear that if unions had responded better, they would have seriously affected the final outcome. For example, Undy et al. (1981) cited ASTMS (later MSF) as a key growth union, with growth bought about by aggressive expansion into the non-union sector. Yet, in the 1980s, despite having the same leadership, MSF was unable to hold onto the gains of the 1970s let alone bring about further membership growth. By the end of the decade the union had turned in on itself, expending more energy on factional disputes than on attempting to organise the unorganised. This change in the character of the union was a direct response to shifts in the wider environment.

Similarly, faced with comparable shifts in the economic and legal environment, US unions had similar problems coping, despite greater experience in dealing with a hostile environment than their British counterparts (Farber and Western 2002). Therefore, even if British unions had responded better to the circumstances of the 1980s, it is not clear that if their response had been more adequate they would have been able to have more than a marginal impact on membership.

Finally, to consider which elements of structure were more important in determining union membership decline? Given the importance of the decline of union recognition in explaining membership decline, it is possible to discern the impact of economic factors on union decline. The nature of economic policy and growth in the 1980s led to an economic environment in which unions were on the defensive. Strong economic growth in the context of a North/South divide, which led to prosperity in the South East of England created conditions in which non-union workers saw little benefit in unionisation (see for example Rose 1996). While the strength of sterling due to North Sea oil exports and high interest rates for much of the period caused problems for many manufacturers, particularly in traditional industries, with the result that unemployment and continued job losses caused union weakness in traditional union heartlands (see for example Penn and Scattergood 1996). At the same time, de-regulation, technological change and the increasing exposure of product markets to international competition increased the incentives for employers to reform industrial relations without trade unions. However, these economic factors owe more to secular changes in economic policy, in part, but not entirely the result of the change of Government in 1979 than they do to the business cycle.

Legislative changes are also clearly of importance, because they made it much harder for unions to secure recognition, either by a statutory route, or through the use

of industrial muscle. At the same time, a small portion of membership loss; around one fifth of the over all decline in density, can be more directly attributed to the law through the outlawing of the closed shop. Therefore the evidence presented here supports the judgements of Brown et al. (1998) and Dunn and Metcalf (1996) that it was the interaction of legislative changes and economic factors that brought about membership decline, but the economic factors were more complex than the 'simple' operation of the business cycle. There is little support in these results for those who have claimed that composition played a key role in union decline. Finally, to echo the point made in the preceding chapter, legislative changes and some changes to economic organisation, particularly those affecting the public sector and industries that were privatised, and at least part of the compositional change that resulted from the differential employment growth rates of the private and public sectors, were the result of political decisions taken with the purpose of reducing union power in mind. At the same time, economic changes also owed something to changes to the international economic environment, which helps to explain why union membership decline was a feature of most advanced industrial economies during this period. So when we consider union decline in the 1980s, it is very difficult to separate out the impact of economic and legal variables from the political climate and policies of the times.

Conclusion

In this chapter, I have examined the workplace level processes of union decline between 1984 and 1990. Around half of the decline in union density over this period can be attributed to the decline of union recognition. Declining collective bargaining coverage and de-recognition in continuing workplaces probably accounts for around one quarter of membership decline. The decline of the closed shop accounts for around one fifth of membership decline with just one tenth accounted for by compositional change, predominantly the growth of the private sector's employment share. There was little difference between patterns of decline in the public and private sectors, although in the public sector, the declining incidence of recognition accounted for rather less of the decline in membership with a corresponding increase in the share of membership decline accounted for by the decline of collective bargaining coverage in workplaces that retained union recognition.

In contrast to the 1980 – 84 period, when much of the decline in membership density could be attributed directly or indirectly to the closure and contraction of large

highly unionised workplaces, the failure of unions to gain recognition and membership in new workplaces combined with crumbling union coverage in workplaces that maintained recognition explains the majority of decline in the 1984 – 1990 period. The demise of the closed shop played a lesser but still significant role. Once again the reasons for the decline of the closed shop appear to be different in 1984 – 90 compared to 1980 – 84. In the earlier period, workplace closure explained much of the decline while in the later period the abandonment of the closed shop, probably in response to legal changes, was the dominant factor.

Consequently, while it is possible to see a role for economic factors in explaining union decline, these economic factors seem to be linked to secular changes in economic policy and organisation rather than the business cycle. The role of the law in restricting recognition and the closed shop also seems important. In practical terms, it is not really possible to separate out the relative influence of legal factors, economic factors and other expressions of Government hostility towards trade unions. In any case, a key underlying cause of all of these different variables was the same: the attitudes and policies of the Thatcher Government. While it is hard to dispute the charge that unions failed to respond adequately to the challenges of the 1980s, it is also difficult to see how an alternative approach from trade unions could have brought about a difference in outcomes given the constraints on a return to membership growth that the environment imposed.

Chapter 5. Union Membership Decline 1990 - 1998

Union membership and density declined in every year from 1990 to 1998. According to unions' own records (as supplied to the Certification Officer), membership in this period fell from 9,448,500 to 7,657,000 and membership density fell from 43 per cent to 31 per cent. Since 1989, the Labour Force Survey (LFS) has provided a more accurate data source on which to base estimates of union density. LFS figures suggest that density fell from 38 per cent in 1990 to 30 per cent by 1998. Amongst workplaces with 25 or more employees, WIRS/WERS data recorded a fall in density from 47 per cent to 36 per cent. Based on these data, Millward et al. (2000) calculated that the average annual decline in density was slightly greater between 1990 and 1998 than it had been between 1984 and 1990. This chapter reports on the analysis of micro-data on the workplace level processes of union decline for the period 1990 to 1998. It begins by summarising the economic, political and industrial context of the period before considering the existing empirical evidence on union decline. I then summarise the characteristics of the data and recap the methodology previously set out previously in chapter two. Finally, I present the results and discuss the implications for the wider debates on union decline discussed in chapter one.

5.1 Union decline 1990 – 1998

This section will first offer a brief summary of the political, industrial and economic context of the period before evaluating the existing empirical evidence on union decline in the 1990s.

5.1.1 Political, economic and industrial context

Margaret Thatcher was forced to resign from the office of Prime Minister in November 1990. John Major succeeded her. This transition brought a change in the style of Government, but there was no change in the substance of industrial relations policy. The Employment Acts of 1990 and 1993 imposed further legal restrictions on trade unions. The recession of 1990 – 1993 was made more severe by John Major's decision to take Britain into the Exchange Rate Mechanism (ERM) in October 1990. The recession led to rising unemployment and insecurity, never fertile conditions for trade union growth. The combined effect of the legal assault and the unfavourable economy appears to have made unions quiescent to an unprecedented degree; industrial action fell to levels previously without precedent in peacetime. This section will begin by reviewing

the economic context of the 1990s, before considering further Conservative legal moves against trade unions. It will then consider the industrial context that resulted from the legal and economic environment.

The economic context: recession and growth

The return of inflation during the boom years of the late 1980s provoked a tightening of monetary policy. Interest rates rose to a high of 15 percent in October 1990 in an attempt to get inflation back under control. Economic growth turned to contraction, with recession beginning in the first quarter of 1990. Economic growth returned in 1992, but the recovery did not start to gather any pace until 1993, when unemployment began to fall. The years 1989 – 1990 were also dogged by disagreement amongst policy makers about the best way to manage the economy. The Labour Party, much of the political and media establishment and senior Conservative politicians favoured entry into the ERM. By tying sterling to continental currencies, they hoped to increase the credibility of the UK Government's commitment to fighting inflation while providing stability for manufacturing industry. Margaret Thatcher, who was deeply suspicious of anything European, had expressed scepticism and hostility towards this policy and did her best to resist it. However, in the face of disappointing mid term election results, her own weakness within the Conservative Party meant that she was forced to acquiesce to the policy in October 1990.

The UK entered the ERM at an exchange rate of 2.95 Deutsch marks to the pound sterling. Sterling was widely perceived as being over-priced at this exchange rate, resulting in widespread hardship for UK exporters, who found themselves at a price disadvantage compared to their continental competitors. In order to maintain this exchange rate, interest rates had to stay at a higher level for longer than would have been the case if the sole aim of economic policy had been to restrain inflation. Consequently, unemployment rose from just over two million in the spring of 1990 to just over three million in the winter of 1992/93. The exchange rate of 2.95 DM to the pound proved unsustainable, and in a development that dealt a lasting blow to the credibility of the Conservative Government and cost the UK billions of pounds of its currency reserves, the UK was forced out of the ERM by currency speculators on 16th September 1992.

Once the UK was out of the ERM, interest rates could be cut to re-stimulate domestic demand. This, combined with the depreciation of sterling allowed export-led

growth to return in the spring of 1992, although growth remained anaemic until 1993. Growth was to be sustained for the rest of the period under investigation, with interest rates falling to a low of six and a quarter percent and unemployment to a low of 1.7 million by the end of 1998 (by which time a Labour Government had been elected). Once the bitter medicine of high interest rates had tamed inflation, it remained low throughout the 1990s. With the exception of 8 months during 1995, average earnings grew faster than inflation. This combination of low inflation and strong earnings growth might be expected to remove a key incentive for unionisation and collective action (Disney 1990).

The legal context

The Employment Act of 1990 represented a significant escalation of the Conservative attack on trade unions (Smith and Morton 1993). Trade Union immunity from prosecution was removed for any form of industrial action other than that conducted within the law (i.e. after balloting and adhering to restrictions on picketing activity) at the establishment at which the industrial dispute was taking place. Balloting procedures for industrial action were also tightened and the pre-entry closed shop was made illegal (McIlroy 1995, Dunn and Metcalf 1996, Brown et al. 1997). Following the Conservatives record fourth election victory in 1992, the 1993 Employment Act introduced further restrictions. Ballots for industrial action were to be conducted by post, not at the workplace as had been previous practice. Unions were required to give employers at least seven days notice of industrial action, depriving unions of any element of surprise. The Act also attempted to make it harder for unions to retain members by requiring workers who had their union subscriptions deducted from their wages at source by their employer (known as check off) to have to authorise this deduction once every three years (McIlroy 1995).

The cumulative effect of Conservative legislation, particularly the 1990 and 1993 Acts, was to seriously restrict the ability of unions to deploy workers' collective power in industrial disputes. The difficulties of balloting and the need to give seven days notice of industrial action handed important tactical advantages to employers. There is evidence that these changes resulted in a reluctance on the part of unions to threaten the strike weapon in negotiations with employers. McIlroy (1995) cited research by the Labour Research Department that suggested that 1 in 5 attempts to organise industrial action (during the late 1980s) were called off in the face of employer threats to use the law

against the union. Elgar and Simpson (1993) also found evidence of increased union caution in the face of the law.

In the General Election of 1997, the Conservatives were defeated and replaced by Tony Blair's New Labour Government. New Labour committed to maintain the majority of Conservative trade union laws, but to legislate to introduce a statutory recognition procedure. This commitment was not acted upon until 1999, but it might be expected that the imminent prospect of such legislation may have softened employer hostility to trade unions, creating a situation where it became easier for unions to persuade employers to sign recognition agreements, although the extent to which this was the case is very difficult to quantify (for details of new recognitions over this period see Gall and McKay 1999).

The industrial context

Industrial action remained at low levels throughout the 1990s. During the strike-prone 1970s, on average, 1.17 working days were lost to industrial action per union members per year. The equivalent figure for the 1980s was 0.7 (twice the level of the 1950s and 1960s) while in the 1990s, an average of just 0.06 working days were lost per union member. The interesting question here is, given that the period 1993 to 1998 was one of unbroken economic growth and declining unemployment, usually considered to be benign conditions for trade unions, why did unions fail to try to win back lost ground through militancy?

One possible answer to this question would be union failure (Kelly 1998). Another might be that strong real earnings growth meant that workers had little incentive to use the strike weapon (Disney 1990), but there were some periods (1995 stands out) when average earnings growth only just kept pace with inflation, yet there was no surge in union activity. For me, three factors help to explain the industrial peace and union quiescence of the 1990s. First, legal changes made the process of organising industrial action more difficult and costly, and stacked the odds in favour of employers. Second, secular economic changes increased the elasticity of demand for labour, such that for many workers, the benefits of militancy were likely to be less and the costs greater (Charlwood 2004d) The 'demonstration effect' secured by Government victories against striking workers in the 1980s may also have changed workers perceptions of the costs and benefits of striking. Third, the Conservatives rhetorical assault on collectivist and pluralist ideologies and their championing of a unitarist perspective may have

deprived trade unions of important ideological resources if workers ceased to believe in the legitimacy and utility of collective action. Overall then, the very low levels of strike activity point to union passivity; not conditions likely to be conducive to membership recovery.

5.1.2 Existing empirical evidence

Geroski et al. (1995) surveyed large UK public companies in 1990 and 1993. From the results, they were able to track changes in company level union recognition and membership density over the period of the 1990 to 1993 recession. They anticipated that the recession would have speeded union decline because companies faced with difficult trading conditions would have an incentive to change union status and industrial relations arrangement in order to survive. The evidence only partially supported this hypothesis. They found that instances of total de-recognition were comparatively rare and that companies that de-recognised unions were not necessarily those facing the most difficult trading conditions. They also found that union density declined quite sharply and that the majority of the decline in density happened in companies that continued to recognise unions. From their results, Geroski et al. concluded that the recession of the early 1990s had the effect of accelerating slightly the secular trends in union decline already underway during the 1980s, but it was not in itself a major contributor to speeding union decline.

These results, while interesting, suffer from a number of limitations. First, as a result of the nature of the sampling frame, the companies sampled were not nationally representative of the population of all UK companies. Second, the response rates to the postal surveys were rather low, certainly when compared to the response rates of the WERS surveys; around the 25 per cent mark in both years. Third, a company level survey may understate the level of change in union arrangements if subsidiary divisions within the company enjoy a high degree of autonomy in deciding industrial relations policy. Respondents at corporate HQ may not be fully aware of changes in the patterns of union coverage and membership in other parts of the organisation. For these reasons, the establishment level data from the WERS surveys is more likely to provide an accurate picture of the patterns of union decline.

Millward et al. (2000) examined the evidence of the WIRS90 and WERS98. They found that union decline was a feature of all industries and sectors, although miscellaneous manufacturing, construction, banking, financial and other business

services, and other services declined at a faster rate than other industries. There was a marked decline in the proportion of workplaces with 100 per cent union membership. This may be partly attributed to the decline in the proportion of workplaces where management encouraged workers to join unions, but even in workplaces where management still encouraged union membership, the proportion of union members declined. However, this is not necessarily because more workers were ignoring the managerial recommendation, as Millward et al. assumed, but possibly because the proportion of workers that management encouraged to unionise in a particular workplaces had declined.

In the private sector, the proportion of workplaces where density stood at 100 per cent dropped to zero. Just two percent of private sector workplaces had density of 90 per cent or more. Average density in workplaces without union recognition remained constant at four per cent. Average density in workplaces with union recognition dropped from 66 per cent to 53 per cent and the proportion of workplaces with union recognition dropped from 38 per cent to 25 per cent. Among continuing workplaces with union recognition, 43 per cent reported falls in union density of more than 10 percentage points. 17 per cent reported an increase in density of more than 10 percentage points and the remainder reported largely stable levels of density. Just five per cent of workplaces reported total union de-recognition. Union density declined steeply in all of these workplaces. Managers were asked to account for union decline in their workplace. About one third cited decline in employee support for the union(s) as the main reason, with staff turnover cited as the reason by a fifth, with just under a third citing compositional change in the workforce.

On the basis of this evidence, Millward et al. concluded that declining union density must have been, in part at least, attributable to a withering of enthusiasm for union membership amongst employees. However, the extent to which this judgement is credible depends on the faith placed in both the accuracy of the managerial responses and the assumptions underlying the original multiple choice question. Given the case study evidence (e.g. Brown et al. 1999, Fairbrother 2000), which suggests that in most cases, employees only stopped supporting unions when management took action that increased the costs and reduced the benefits of membership, I am inclined to be wary of taking managerial answers on the cause of decline at face value. Employee enthusiasm for unions may well have withered, but it is the reasons behind this drop in enthusiasm that matter. The WERS question brings us no nearer to understanding these reasons.

Millward et al. concluded that the major driver of change in the private sector was likely to have been declining density in continuing workplaces.

In the public sector membership decline in continuing workplaces was a less important component of decline than lower density in new workplaces compared to workplaces that closed or fell out of scope of the survey. Average density in continuing workplaces was 72 percent in 1990 and 66 per cent in 1998. There was little evidence of change in management attitudes, and in continuing workplaces where union density had fallen, management were inclined to attribute the change to changes in the composition of the workforce. Density among workplaces that left the sample through closure and contraction averaged 77 percent, while density among new and growing workplaces that joined the sample was just 52 percent.

Millward et al. went on to look at the factors associated with declining union recognition and collective bargaining coverage. They found that the proportion of workplaces with union recognition fell from 53 per cent in 1990 to 42 per cent in 1998, and that nine tenths of the drop in recognition was accounted for by differences between workplaces that closed or shrunk to below 25 employees and the new and growing workplaces that replaced them in the sample. There were also drops in collective bargaining coverage within workplaces that recognised trade unions; 75 per cent of workers were covered in 1990, compared to just 67 per cent in 1998. Much of this change seemed to be accounted for by the rise in workplaces with union recognition agreements but with zero coverage of union recognition. By 1998, 14 percent of workplaces that had a union recognition agreement were in this category. There was an association between low union density and zero collective bargaining coverage.

To summarise Millward et al.'s key arguments, the main cause of union membership decline, particularly in the private sector was decline in continuing workplaces that maintained union recognition. A lower incidence of union recognition in new workplaces played a secondary role, and was probably the main cause of decline in the public sector. While these findings are of great interest, the absence of a formal econometric model means that it is not possible to identify fully or weight the relative importance of the potential decline processes which were outlined in chapter two.

Machin (2000), following the contention of Disney et al. (1995, 1996) that union recognition is the key indicator of union presence in the labour market, analysed the relationship between establishment age and union recognition. He found that

workplaces established after 1980 were around 18 per cent less likely to recognise unions than workplaces established before this date and argued that this change explained the majority of the decline in union recognition over the 1980s and 1990s. Alternative explanations of declining union recognition, for example differential rates of closure between union and non-union establishment and union de-recognition in continuing workplaces were found to be unconvincing explanations of union decline. Following from the analysis of Disney et al. (1998) he also examined the relationship between age of worker and age of establishment on individual workers' probability of union membership. He found that age of establishment was a more important indicator of union status than age of worker. He argued that this finding suggested that the declining probabilities of union membership for successive birth cohorts that Disney et al. (1998) identified was attributable to younger workers working in newer workplaces.

There are two important limitations to Machin's work. First, his adherence to Disney et al.'s contention that recognition is the key indicator of union labour market presence leads him to ignore the arguably more important indicators of union coverage and union membership. Given the breadth of coverage implied by the title of the paper (Union Decline in Britain), this seems a major omission. Consequently, he does not relate how declining recognition has affected coverage and membership. Second, by treating union recognition as a binary variable, he ignores the important question of whether shrinking coverage and scope of recognition arrangements within workplaces that recognised unions contributed to union decline.

Brown et al. (2000) considered the contraction of collective bargaining coverage as part of their analysis of the place of the employment contract in British industrial relations. However, they did not move beyond mapping and description. Elsewhere (Charlwood 2004a), I explore the decline of collective bargaining coverage between 1990 and 1998 in more detail, utilising a similar methodology to that used here. I shall refer to this work in more detail in the results and discussion section below.

The analyses of union decline based on survey evidence that were discussed above are unable to illuminate some of the workplace level processes of decline. For example, while Millward et al. establish a relationship between low union density and zero union coverage in workplaces that have recognition agreements, they are unable to identify whether zero coverage was an effect of low membership levels, or whether low membership levels were a result of zero coverage. The case-study evidence of Brown et al. (1998) and Fairbrother (2000) can shed light on these processes. Essentially, what the

case study evidence suggests is that employers came under increasing pressure to improve labour productivity and financial performance in the latter half of the 1980s and throughout the 1990s. A range of strategies were adopted to deal with these pressures, with employers enjoying considerable strategic choice. While it was quite common for unions representing senior managerial and technical staff to be de-recognised and for such staff to be placed on personal contracts, wholesale union de-recognition was rare.

Union marginalisation was somewhat more common, particularly in organisations where unions were already weak or covered a small proportion of the enterprises total workforce, although marginalisation strategies were not confined to these organisations. Managerial strategies of marginalisation usually led to diminishing trade union influence and ultimately membership, although it was rare for membership to collapse altogether. The nature of marginalisation strategies varied from case to case, but common features included a move away from pay determination systems based on collective bargaining, although not formal union de-recognition, and attempts to confine the union role to consultation. The establishment of alternative ‘direct’ channels of communication with individual employees was also quite common. Of course, the major limitation of this case evidence is that we do not know the relative importance or incidence of the different processes and outcomes in the general population.

To conclude, the combined case and survey evidence suggest a variety of processes that are likely to have underpinned union membership decline in the 1990s. What is lacking is an analysis that seeks to systematically weight the importance of these various processes. That task is the key aim of this chapter.

5.2 Data and methodology

This section will begin by describing the characteristics of the 1998 Workplace Employee Relations Survey and explaining how it differs from the previous WIRS surveys. It will then recap the methodology used to analyse the data, which was previously set out in chapter two.

5.2.1 Data

The analysis to be presented below is based on data from the 1990 and 1998 Workplace Industrial/Employee Relations Surveys. The characteristics of the 1990 survey were set out in chapter four. The 1998 Survey followed in the pattern set by the preceding

surveys. It was a survey of workplace industrial relations. The principal respondent was the manager with primary responsibility for industrial/employment relations matters. The survey was representative of all British workplaces in the production and services sectors. The sample on which the survey was based was drawn from the Interdepartmental Business Register. The response rate for the 1998 survey was 82 per cent, maintaining the high levels of response set in the previous surveys.

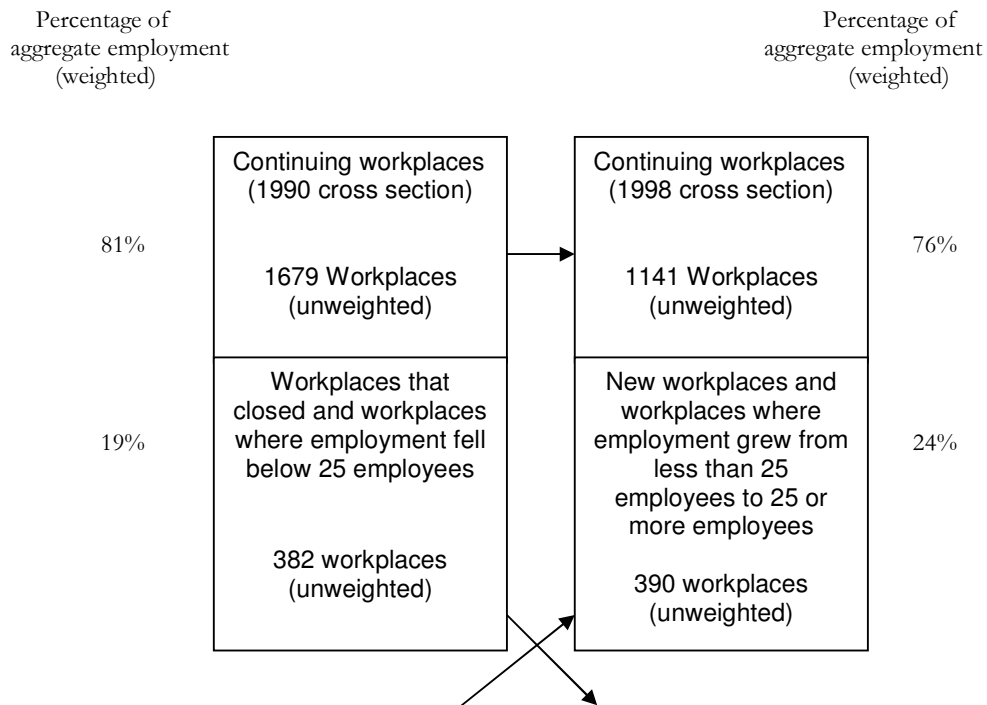
The 1998 survey contained a number of innovations, three of which merit comment. First, while previous surveys were confined to workplaces with 25 or more employees, the 1998 survey included workplaces with 10 or more employees. In order to maintain comparability with previous years, the analysis reported below is confined to workplaces with 25 or more employees, so data from workplaces with 10 – 24 employees is not used. Second, previous surveys were stratified according to workplace size. The 1998 survey was stratified by size and industry.

Finally, and most importantly for this chapter, the panel element of the survey was much more comprehensive than in previous years. While the 1984 panel re-sampled 10 per cent of workplaces from the 1980 survey and the 1990 panel re-sampled trading sector workplaces from the 1984 survey, the 1998 panel was drawn from a sub-sample of all workplaces that participated in the 1990 survey. In order to identify which of the 1990 workplaces were still in existence and still within the scope of the survey (i.e. employing 25 or more employees) in 1998, all workplaces that had participated in the 1990 survey were followed up. From this information, it is possible to identify which of the workplaces from the 1990 cross-section survey were still in existence in 1998 (continuing workplaces) and which had closed or fallen out of scope because they had shrunk to less than 25 employees (leavers). Conversely, the age of workplace and change in the number of employee variables in the 1998 cross-section survey allows those workplaces which were in existence and employing more than 25 employees in 1990 (continuing workplaces) to be separated out from workplaces that were established after 1990, or were in existence in 1990, but employed fewer than 25 employees (joiners).

Forth (2000) describes the procedure for identifying leaver, joiners and continuing workplaces in more detail. Note that the 1998 cross-section survey did not contain a question on employment eight years previously, so employment five years previously is used instead. There were also a relatively large number of missing values on the establishment age variables. However, Forth argued that these do not constitute

serious problems. Any missing values on the workplace age variable are likely to be randomly distributed.

Figure 5.1 - Structure of the data



The data were re-weighted so that the weight given to each workplace reflects its share of aggregate employment. Shares of aggregate employment were calculated using probability weights to correct the complex survey design of the WERS surveys.

The great advantage of treating the data in this way is that it then becomes possible to operationalise the full analytical model previously set out in chapter two.

In the last chapter, I mentioned that a design fault in the 1990 WIRS survey meant that the question on the closed shop was not asked in all workplaces. This left me with the choice of either leaving a closed shop variable out of the analysis, so missing the contribution of the demise of the closed shop to union membership decline, or confining the analysis to those workplaces that had been asked the closed shop question, with the possible result that this would bias the analysis. For the 1984 – 1990 period I chose the latter option as the lesser of two evils. For the 1990 – 1998 period I have reversed this choice because the comparatively low incidence of the closed shop in 1990 (just 4 per cent of workplaces had a closed shop agreement in 1990, falling to less

than one per cent by 1998) means that the further decline of the closed shop between 1990 and 1998 is likely to have had only a marginal effect on over all union density. However, the results of analyses that include closed shop variables are reported in the appendix, and I shall refer to these results in the discussion of the results below.

5.2.2 Methodology

In chapter two I argued that we can think of changing union density as the sum of the following six factors: 1) Compositional change (in terms of the occupational and personal characteristics of the workforce) within continuing workplaces. 2) Differences in the industrial, occupational and workforce characteristics of joiners compared to leavers. 3) Changing patterns of union recognition and coverage in joiners compared to leavers. 4) Changing patterns of union recognition and coverage in continuing workplaces. 5) Changing levels of membership (free-riding) among workers covered by union arrangements in continuing workplaces, 6) Changing levels of membership (free-riding) among workers covered by union arrangements in joiners compared to leavers. This argument can be developed into a formal econometric model for analysing change in union density among either workplaces or individuals between two time periods:

$$Union_{it} = \beta(Rec_{it} | Con_{it} == 1) + \beta(Bar_{it} | Con_{it} == 1) + \beta(Comp_{it} | Con_{it} == 1) + \beta(Rec_{it} | Con == 0) + \beta(Bar_{it} | Con_{it} == 0) + \beta(Comp_{it} | Con_{it} == 0) + \epsilon_{it} \quad (1)$$

Where *Union* is union density in workplace *i* at time *t*. *Con* is a 0/1 dummy variable with the value of unity if workplace *i* was operating in both time periods. Therefore, the notation shows that separate coefficients can be estimated on the parameters for samples of workplaces that remained in operation in both periods and workplaces that closed compared to workplaces that opened. *Rec* is a 0/1 dummy variable with the value of unity if workplace *i* recognised unions at time *t*. *Bar* indicates the proportion of the workforce in workplace *i* covered by collective bargaining at time *t*. *Comp* indicates the composition of the workforce in workplace and related factors like workplace size in workplace *i* at time *t*. *E* is an error term. Workforce composition variables include 1) the proportion of part-time workers, 2) the proportion of the workforce who were unskilled manual workers, semi-skilled manual workers, skilled manual workers and non-manual workers (with senior managers and professionals as the reference category), note this is a change in the way in which occupation is treated

compared to the two previous chapters, where data limitations meant that the only occupational variable that could be included was the proportion of non-manual workers. 3) Dummy variables for workplace size (25 – 49 employees, 50 – 199 employees and 500+ employees with 201 – 499 employees as the omitted reference category). 4) Whether or not the workplace is in the production sector and 5) whether or not the workplace is in the private sector.

This model was estimated for the 1990 and 1998 data using weighted linear probability regression analysis with the Huber-White method for calculating standard errors that are robust despite heteroscedasticity. The results of these models can then be decomposed thus:

$$\Delta U = (X^{98} - X^{90}) \beta^{90} + (\beta^{98} - \beta^{90}) X^{90} + (X^{98} - X^{90})(\beta^{98} - \beta^{90})$$

The first term $(X^{98} - X^{90}) \beta^{90}$ is the effect of compositional change if union membership behaviour is held constant at the levels of 1990. The second term $(\beta^{98} - \beta^{90}) X^{90}$ is the effect of changing behaviour if the composition of the workforce is held constant at the levels of 1990. Since, in reality neither union membership behaviour or composition are held at 1990 levels, the results of the two terms will not sum to the observed decline in union density, the third term $(X^{98} - X^{90})(\beta^{98} - \beta^{90})$ balances the equation so that the results are consistent with the observed decline in density in the samples (Green 1992: 454).

5.3 Results and discussion

This section will begin by considering the results from the decomposition analyses of decline in union membership density between 1990 and 1998 for all workplaces, and for public and private sector workplaces separately. It will then explain how these results relate to the six decline processes set out above, and in the light of the relative importance of these processes, it will consider the implications for wider debates on the nature of union membership decline in the 1990s.

5.3.1 Results

Table 5.1 - Results of regression analysis on the determinants of union density in all workplaces in 1990 and 1998 and the mean values of variables used in the regressions

	Regression results 1990	Mean value 1990	Regression results 1998	Mean value 1998
Continuing workplaces				
% part-time	-0.041 (0.038)	14	-0.186 (0.034)***	17
Occupation (ref. senior managers and professionals)				
% unskilled manual	0.071 (0.053)	16	-0.012 (0.054)	11
% semi-skilled manual	0.071 (0.059)	11	0.094 (0.051)*	12
% skilled manual	0.110 (0.056)	10	0.249 (0.083)***	9
% non-manual	0.012 (0.063)*	30	-0.047 (0.050)	29
% covered by collective bargaining	0.496 (0.046)***	42	0.068 (0.032)**	28
Workplace with union recognition	18.906 (3.633)***	0.52	42.329 (2.645)***	0.47
Production sector (ref. Services)	4.577 (1.436)***	0.26	-2.326 (2.138)	0.28
Workplace size (ref. 201 – 499 employees)				
25 – 49 employees	1.636 (2.234)*	0.14	-2.943 (2.309)	0.12
50 – 199 employees	0.606 (1.927)	0.29	-2.092 (1.999)	0.26
500+ employees	-1.269 (2.027)	0.21	0.623 (2.815)	0.24
Private sector (ref. Public sector)	-13.773 (2.072)***	0.5	-15.327 (2.678)**	0.54
Leavers and joiners				
% part-time	-0.069 (0.041)	3	-0.113 (0.044)***	7
% unskilled manual	-0.064 (0.060)	4	0.070 (0.078)	3
% semi-skilled manual	-0.022 (0.060)	3	0.201 (0.074)**	3

	β 1990	Mean 1990	β 1998	Mean 1998
% skilled manual	0.018 (0.074)	4	0.077 (0.083)	2
% non-manual	-0.162 (0.072)**	6	0.078 (0.073)	11
Production sector	-2.287 (2.273)	0.08	-3.602 (3.573)	0.04
25 – 49 employees	1.165 (3.337)	0.07	-0.852 (3.829)	0.08
50 – 199 employees	-0.312 (3.245)	0.07	-3.057 (3.924)	0.08
500+ employees	1.887 (3.691)	0.02	-6.685 (5.637)	0.03
% covered by collective bargaining	0.723 (0.056)***	9	0.088 (0.047)*	8
workplace with union recognition	14.251 (10.501)	0.12	25.522 (8.572)***	0.11
workplace with no union recognition	7.409 (7.947)	0.07	-12.775 (9.073)	0.13
private sector	-10.097 (2.795)***	0.15	-11.823 (4.825)**	0.18
Constant	13.381 (5.148)***		24.451 (4.287)***	
N	1631	1631	1403	1403
R ²	0.78		0.65	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses.

Mean values which were percentages were rounded to the nearest whole number, mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places.

Results are weighted by each workplace's employment share.

Sources: 1990 Workplace Industrial Relations Survey and 1998 Workplace Employment Relations Survey

Table 5.1 presents the results of the regression analyses of the determinants of union membership for 1990 and 1998 along with the mean values of the variables used in these analyses. Looking first at the mean values. The trend away from larger workplaces is no longer apparent, and the decline of manual employment is most apparent in joiners, although unskilled manual employment declined noticeably in continuing workplaces. There was a large increase in the employment share of part-time workers. Decline in bargaining coverage and the employment share of workplaces with union recognition were more marked in continuing workplaces than in leavers compared to joiners.

Table 5.2 Decomposition of regression analysis results (all workplaces)

	Structural change $(X^{98} - X^{90})\beta^{90}$	Behavioural change $(\beta^{98} - \beta^{90})X^{90}$	Interaction term $(X^{98} - X^{90})(\beta^{98} - \beta^{90})$	Observed decline in Aggregate union density $(X^{98} - X^{90})\beta^{90} + (\beta^{98} - \beta^{90})X^{90} + (X^{98} - X^{90})(\beta^{98} - \beta^{90})$
Continuing workplaces				
Union coverage				
Collective Bargaining coverage	-6.57	-17.81	5.66	-18.72
Union recognition	-0.97	12.19	-1.2	10.02
Worker and workplace characteristics	-1.17	3.91	0.07	2.81
Total	-8.7	-1.7	4.54	-5.87
Leavers cf. Joiners				
Union coverage				
Collective bargaining coverage	-0.71	-5.46	0.63	-5.55
Union recognition	0.31	-0.48	-0.31	-1.12
Worker and workplace characteristics	-0.988	1.85	0.67	1.54
Total	-1.37	-4.09	0.36	-5.13
TOTAL	-10.1	-5.8	4.9	-11

Results are rounded to 2 decimal places.

Calculated from the means and coefficients reported in table 5.1.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table 5.2 presents the results of the shift-share analyses of these results. The overall contribution of compositional change to membership decline is small; a little over one seventh of the overall decline in density is accounted for by compositional change. A little over half of the decline in union density due to compositional change is the result of compositional change in continuing workplaces, with the remainder accounted for by compositional differences between leavers and joiners. Amongst continuing workplaces, the key compositional changes were the growth of the private sector's employment share and the declining employment share of unskilled manual employment. The key compositional difference between joiners and leavers was the increasing share of non-manual employment.

Changes in union coverage accounted for around one half of the decline in union density. The overwhelming majority of this change happened in continuing workplaces. Just two percent of the overall decline in density can be explained by differences in union coverage between leavers and joiners. The dominant union coverage variable in accounting for membership decline in continuing workplaces was declining collective bargaining coverage, with declining union recognition playing a much smaller role. Charlwood (2004a) demonstrates that declining collective bargaining coverage in continuing workplaces was mainly due to the total abandonment of collective bargaining in workplaces that continued to formally recognise unions (which is suggestive of union marginalisation). Formal union de-recognition, whether partial or total, played a much smaller role.

Behavioural change accounted for a little over one third of the decline in union density. Over two thirds of behavioural change occurred in joiners compared to leavers, with less than one third in continuing workplaces. That the majority of behavioural change can be accounted for by change in the coefficients of the collective bargaining coverage variable suggests that behavioural change was indicative of an increase in free-riding. The scale of the change in this coefficient between 1990 and 1998 suggests that the close relationship that existed between collective bargaining coverage and union membership in 1990 had broken down by 1998. However, note also that in continuing workplaces, union decline amongst workers covered by collective bargaining was balanced by an increasing probability of union membership amongst workers in workplaces with union recognition but not covered by collective bargaining. This was an effect of the rise of workplaces with union recognition but without collective bargaining over pay. In some of these workplaces, membership collapsed, but in others, it held up

or only declined slightly. Consequently, membership amongst workers in workplaces with recognition but zero bargaining coverage increased dramatically.

Table 5.3 - Results of regression analysis on the determinants of union density in private sector workplaces in 1990 and 1998 and the mean values of variables used in the regressions

	Regression results 1990	Mean value 1990	Regression results 1998	Mean value 1998
Continuing workplaces				
% part-time	-0.062 (0.03)**	11	-0.087 (0.035)**	15
Occupation (ref. senior managers and professionals)				
% unskilled manual	0.103 (0.04)**	16	-0.039 (0.061)	11
% semi-skilled manual	0.128 (0.039)***	13	0.115 (0.058)**	16
% skilled manual	0.160 (0.044)***	12	0.318 (0.099)***	12
% non-manual	0.026 (0.045)	24	0.002 (0.058)	26
% covered by collective bargaining	0.760 (0.027)***	28	0.164 (0.045)***	21
Workplace with union recognition	2.212 (1.796)	0.4	37.125 (3.111)***	0.37
Production sector (ref. Services)	1.606 (1.237)	0.36	-1.200 (2.208)	0.38
Workplace size (ref. 201 – 499 employees)				
25 – 49 employees	-3.066 (1.570)	0.13	-5.111 (2.308)**	0.11
50 – 199 employees	-0.738 (1.430)	0.3	-4.423 (2.082)**	0.26
500+ employees	1.153 (1.629)	0.16	3.435 (2.988)	0.21
Leavers and joiners				
% part-time	-0.100 (0.043)**	4	-0.095 (0.041)**	7
% unskilled manual	0.029 (0.061)	6	-0.026 (0.058)	3
% semi-skilled manual	0.073 (0.061)	4	0.144 (0.052)**	4
% skilled manual	0.121 (0.084)	5 7	0.009 (0.062)	3

	β 1990	Mean 1990	β 1998	Mean 1990
% non-manual	-0.057 (0.076)	0.13	0.036 (0.053)	11
Production sector	-2.102 (2.451)	0.09	-3.714 (3.112)	0.06
25 – 49 employees	-0.517 (3.924)	0.09	-4.710 (3.807)	0.1
50 – 199 employees	-1.845 (3.923)	0.03	-4.292 (3.974)	0.09
500+ employees	1.544 (4.121)	10	6.133 (5.539)	0.01
% covered by collective bargaining	0.760 (0.049)***	0.13	0.163 (0.058)***	5
workplace with union recognition	8.480 (8.037)	0.12	35.365 (7.842)***	0.07
workplace with no union recognition	7.470 (7.293)		0.899 (6.807)	0.18
Constant	-2.398 (3.342)		3.996 (4.573)	
N	1139	1139	1009	1009
R ²	0.87		0.71	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses.

Mean values which were percentages were rounded to the nearest whole number, mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places.

Results are weighted by each workplace's employment share.

Sources: 1990 Workplace Industrial Relations Survey and 1998 Workplace Employment Relations Survey

Table 5.4 - Decomposition of regression analysis results (private sector workplaces)

	Structural change $(X^{98} - X^{90})\beta^{90}$	Behavioural change $(\beta^{98} - \beta^{90})X^{90}$	Interaction term $(X^{98} - X^{90})(\beta^{98} - \beta^{90})$	Observed decline in Aggregate union density $(X^{98} - X^{90})\beta^{90} + (\beta^{98} - \beta^{90})X^{90} + (X^{98} - X^{90})(\beta^{98} - \beta^{90})$
Continuing workplaces				
Union coverage				
Collective Bargaining coverage	-5.3	-16.93	4.09	-18.14
Union recognition	-0.01	12.94	-0.07	12.86
Worker and workplace characteristics	-0.11	2.94	0.78	3.61
Total	-5.42	-1.05	4.87	-1.58
Leavers cf. Joiners				
Union coverage				
Collective bargaining coverage	-3.73	-5.94	2.93	-6.74
Union recognition	-0.08	2.62	-1.96	0.58
Worker and workplace characteristics	-0.78	-0.52	0.73	-0.58
Total	-4.59	-3.84	1.69	-6.74
TOTAL	-10	-4.89	6.57	-8.32

Results are rounded to 2 decimal places.

Calculated from the means and coefficients reported in table 5.3.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table 5.5 - Results of regression analysis on the determinants of union density in public sector workplaces in 1990 and 1998 and the mean values of variables used in the regressions

	Regression results 1990	Mean value 1990	Regression results 1998	Mean value 1998
Continuing workplaces				
% part-time	-0.131 (0.075)*	21	-0.419 (0.087)***	23
Occupation (ref. senior managers and professionals)				
% unskilled manual	0.056 (0.090)	17	0.161 (0.083)*	11
% semi-skilled manual	0.031 (0.126)	8	0.097 (0.087)	2
% skilled manual	0.184 (0.093)**	7	0.012 (0.108)	3
% non-manual	0.017 (0.090)	40	-0.042 (0.069)	37
% covered by collective bargaining	0.286 (0.08)***	67	-0.063 (0.043)	46
Workplace with union recognition	15.637* (8.487)	0.81	29.224 (6.978)***	0.72
Production sector (ref. Services)	-1.402 (3.914)	0.06	-15.655 (6.789)**	0.03
Workplace size (ref. 201 – 499 employees)				
25 – 49 employees	7.954 (4.905)	0.17	2.187 (6.045)	0.15
50 – 199 employees	5.596 (4.452)	0.27	5.116 (4.624)	0.23
500+ employees	-0.470 (3.772)	0.29	-0.444 (5.251)	0.3
Leavers and joiners				
% part-time	-0.061 (0.116)	2	-0.194 (0.154)	7
% unskilled manual	-0.409 (0.169)**	2	0.347 (0.149)**	2
% semi-skilled manual	-0.222 (0.098)**	0.61	0.442 (0.179)**	0.9
% skilled manual	-0.271 (0.133)*	0.99	0.560 (0.138)***	1
% non-manual	0.377 (0.13)***	4	0.135 (0.129)	11

	β 1990	Mean 1990	β 1998	Mean 1998
Production sector	2.191 (4.846)	0.01	18.341 (14.012)	0.003
25 – 49 employees	8.555 (6.916)	0.04	13.196 (8.652)	0.05
50 – 199 employees	0.059 (5.557)	0.03	-4.568 (7.595)	0.06
500+ employees	-1.463 (10.331)	0.004	-16.245 (7.349)**	0.06
% covered by collective bargaining	0.620 (0.13)***	11	-0.078 (0.067)	14
workplace with union recognition	23.990 (18.937)	0.08	5.399 (15.162)	0.21
workplace with no union recognition	-11.353 (11.936)	0.01	-12.161 (15.202)	0.01
Constant	31.404 (9.28)***		47.464 (9.180)***	
N	492	492	394	394
R²	0.41		0.27	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses.

Mean values which were percentages were rounded to the nearest whole number, mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places.

Results are weighted by each workplace's employment share.

Sources: 1990 Workplace Industrial Relations Survey and 1998 Workplace Employment Relations Survey

Table 5.6 - Decomposition of regression analysis results (public sector workplaces)

	Structural change $(X^{98} - X^{90})\beta^{90}$	Behavioural change $(\beta^{98} - \beta^{90})X^{90}$	Interaction term $(X^{98} - X^{90})(\beta^{98} - \beta^{90})$	Observed decline in Aggregate union density $(X^{98} - X^{90})\beta^{90} + (\beta^{98} - \beta^{90})X^{90} + (X^{98} - X^{90})(\beta^{98} - \beta^{90})$
Continuing workplaces				
Union coverage				
Collective Bargaining coverage	-6.12	-23.54	7.46	-22.2
Union recognition	-1.37	11.04	-1.2	8.45
Worker and workplace characteristics	-1.86	6.88	-0.38	4.65
Total	-9.35	-5.62	5.89	-9.09
Leavers cf. Joiners				
Union coverage				
Collective bargaining coverage	5.05	-4.15	-5.69	-4.78
Union recognition	3.23	-1.47	-2.47	-0.71
Worker and workplace characteristics	-3.2	4.49	2.39	3.67
Total	5.07	-1.12	-5.76	-1.81
TOTAL	-4.28	-6.74	0.12	-10.9

Results are rounded to 2 decimal places.

Calculated from the means and coefficients reported in table 5.4.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

The private sector

The role of compositional change in private sector membership decline was small; a little under one sixteenth of the decline in density could be accounted for by composition, mainly as a result of compositional differences between joiners and leavers. Change in coverage accounted for three fifths of decline. Three fifths of the decline attributable to change in coverage was the result of changing coverage (the decline of collective bargaining coverage) in continuing workplaces with the remainder the result of the decline of bargaining coverage in joiners compared to leavers. The remaining one third or so of the decline in density could be accounted for by behavioural change. One fifth of behavioural change happened in continuing

workplaces with the remaining four fifths due to behavioural differences between workers in joiners compared to leavers.

The public sector

In the public sector, compositional change played a much larger role in membership decline, accounting for a little under half of overall membership decline. Just over one third of the total decline attributable to compositional change occurred in continuing workplaces with the remainder explained by compositional differences between leavers and joiners. The dominant factors behind the decline attributable to compositional change in continuing workplaces were the decline of manual employment, particularly the decline of skilled manual employment and the growth of part-timers. In joiners compared to leavers, the dominant factor was the growth of non-manual employment.

The net effect of change in union coverage meant that density in 1998 was actually slightly higher than it would have been if coverage had remained at 1990 levels, because the effect of declining coverage in continuing workplaces were balanced out by higher levels of coverage in joiners compared to leavers. Behavioural change (likely to indicate increased free-riding) accounted for around half of the decline in density. A little over four fifths of behavioural change happened in continuing workplaces.

The effect of the demise of the closed shop

Although variables measuring the incidence of the closed shop were not included in the analyses for reasons outlined above, tables A5.4 – A5.12 in the appendix report the results for a similar set of analyses that include closed shop variables. The results of these analyses suggest that the further demise of the closed shop between 1990 and 1998 had a minimal effect on aggregate union membership density; less than one twenty fifth of the decline in density between 1990 and 1998 could be attributed to the demise of the closed shop.

Summary

To restate the key results; compositional change played a minimal role in accounting for union membership decline between 1990 and 1998 in both the whole sample and the private sector, although this factor accounted for half of the decline in public sector density. The contribution of the decline of the closed shop to membership decline was also small. Declining union coverage, particularly the disappearance of collective

bargaining in continuing workplaces that recognised unions (suggestive of union marginalisation policies on the part of management) accounted for around half of the decline in the whole sample, and rather more in the private sector. Declining union coverage was not a factor in the public sector. Behavioural change, likely to indicate a growth in free-riding accounted for a little over a third of the decline in density in the whole sample and in the private sector, but around half of the decline in density in the public sector. Behavioural change was most pronounced in joiners compared to leavers. Overall, the aggregate decline in density was split fairly evenly between decline in continuing workplaces and lower levels of membership in joiners compared to leavers.

5.3.2 Discussion

Millward et al (2000) analysed union membership decline separately in the public and private sectors. In the private sector, they argued that the majority of the decline in union membership could be attributed to declining membership in continuing workplaces. These results suggest that this was not the case: the sum of compositional change, change in union coverage and behavioural change in continuing workplace only accounts for around one fifth of the decline in membership in the private sector. They then suggested that declining membership was the result of both declining managerial support for unions and a withering of enthusiasm for unions amongst workers. These results suggest a more complex picture. Declining membership is strongly associated with declining collective bargaining coverage. In Charlwood (2004a), I demonstrated that the overwhelming majority of the decline in bargaining coverage in continuing workplaces was the result of the total abandonment of collective bargaining in workplaces that did not formally de-recognise or exclude unions and that union de-recognition played a minimal role in accounting for the decline of collective bargaining coverage.

Therefore the collapse of collective bargaining in continuing workplaces is likely to be symptomatic of management policies of union marginalisation. The case evidence on the de-collectivisation of pay determination (Brown et al. 1998) suggests several different processes underlying the decline in membership associated with union marginalisation. 1) Union membership may have fallen gently in response to marginalisation policies as union activism declined and the social custom of membership withered. 2) It was not uncommon for marginalisation to be a response on the part of management to existing union weakness. 3) In a small number of cases, marginalisation

was associated with a total collapse in union membership, although in these cases, the collapse in membership could not be solely attributed to the marginalisation policy. Overall though, the major cause of decline in collective bargaining coverage was lower levels of coverage in joiners compared to leavers. Therefore, the processes underpinning the decline of collective bargaining coverage are similar to those underpinning the decline of union recognition (Machin 2000). So in the private sector, the results suggests that withering enthusiasm for union membership was specific to particular groups of workers; those working in new workplaces with union recognition and those working in continuing workplaces where managerial enthusiasm for unions withered such that they pursued a policy of abandoning collective bargaining for pay determination.

In the public sector, Millward et al. attributed the majority of membership decline to differences between leavers and joiners. On the basis of managerial responses, they attribute decline in continuing workplaces to compositional change. These judgements stand up rather better. A little over four fifths of the decline in public sector membership density could be accounted for by differences between leavers and joiners. Compositional change accounted for around half of the decline. However, behavioural change, probably increased free-riding (or, put another way, withering enthusiasm for union membership on the part of the workforce) accounted for the other half of decline and was a marked feature of decline in both new and continuing workplaces.

What implications do these results have for the two key questions that this thesis is seeking to answer? Was membership decline structurally determined or the result of union failure? Which elements of structure were more important? First, much of the decline in union coverage in continuing workplaces seems to stem from an inability of unions to resist managerial policies designed to marginalize workplace union organisation. This failure is likely to reflect a range of factors. First, the recession of the early 1990s created widespread perceptions of economic insecurity. This will have made workers less inclined to support their unions. Second, one of the lessons that the Government worked hard to teach workers during the 1980s was that strikes were rarely successful. Therefore it is perhaps unsurprising if, in contrast to the 1970s, when the strike weapon often appeared instrumental in winning advances for workers, workers in the 1990s shied away from supporting industrial action. In any case, if unions had used the strike weapon, changes to the legal regulation of industrial action would have made it much more difficult for unions to win, and this may have deterred union officials

from calling for militancy, because they felt that given the legal constraints under which they were forced to operate, victory would be at best a remote possibility. Finally, secular changes to economic organisation, the cyclical effects of the 1990 – 1993 recession and the normative values being promulgated by the Government all converged to encourage employers to take action to marginalize unions. Given this convergence of factors it is perhaps surprising that union marginalisation and membership decline were not more widespread.

Could unions have done more to resist marginalisation and decline? Kelly and Heery (1994) differentiated between union officials with a 'leaderist' orientation and compare them with a 'proceduralist' orientation. Perhaps if unions had had more 'leaderist' officials at their disposal, they would have been able to inspire more members to resist management plans to marginalize unions. However, the ability of any union official to influence members and activists is mediated by the quality of workplace organisation and the attitudes and behaviour of management. Fisher (1996) pointed to the difficulty that even high quality shop stewards have in opposing creatively packaged managerial initiatives that will marginalize unions. While Darlington's case study of shop steward organisation at the Ford plant at Halewood demonstrated vividly how management were able to change the agenda in a plant with a history of militancy because they were aided by the wider environment. Consequently, in Kelly and Heery's (1994: 122) words, the task of trying to sustain workplace union organisation became a labour of Sisyphus for full-time union officials.

Essentially, unions were prisoners of their own history. Trends towards decentralised collective bargaining in the 1960s and 1970s, combined with the emphasis placed on leadership at a local level by lay activists and shop stewards meant that unions found it extremely difficult to create or free-up resources for new organising. Changes to the wider industrial relations environment were forcing union officials to devote increasing amounts of time to servicing the needs of members as it became harder to sustain autonomous, lay activist led workplace organisation (Kelly and Heery 1994). Even if unions had been able to devote greater resources to organising, given the environment that they were operating in, it is not at all clear that increased investment would have resulted in extra members. It is also possible to argue that unions could have done more to resist managerial agendas based on union marginalisation, and by doing so have held onto more of their members, but it is hard to see how, given the resources available and wider environment.

In trying to weight the relative importance of the different structural factors in causing decline, I echo the conclusions of the previous chapter. The toughening up of the law in relation to industrial action in 1990 and 1993 seems to have had an inhibiting effect on unions, such that they were less willing or able to wield the strike weapon to try to hold what they had. Similarly, they were unable to expand into new workplaces, except at the invitation of management. When footholds were secured in new workplaces, the relative weakness of union organisation and the absence of a social custom of union membership developed through previous periods of struggle and accommodation with management meant that unions were unable to achieve the high levels of density that had been common in older workplaces. But the effects of the law cannot be disentangled from secular (but not cyclical) changes to economic organisation and changes to the ideological resources available to unions. Secular changes to economic organisation were partly and increasingly rooted in changes to the international economic order, particularly development in technology and trade, that made the 1990s a decade of strong growth and low inflation. All of the other factors had common roots in the attitudes, policies and actions of the Conservative Government.

Conclusions

In this chapter I have examined the workplace level processes of union decline between 1990 and 1998. The ability to examine the relative importance of decline in continuing workplaces compared to decline which results from differences between new workplaces and workplaces that closed or shrunk to below 25 employees has added an extra dimension to the analysis. During this period, compositional change played a minimal role in union decline. The decline of union coverage accounted for around half of the decline, with the remainder explained by behavioural change, likely to indicate increased free-riding. The decline in union coverage was attributable both to a lower incidence of union recognition in new workplaces compared to workplaces that closed or fell out of the scope of the WERS survey and the abandonment of collective bargaining in continuing workplaces that recognised unions. The latter is likely to be indicative of union marginalisation policies on the part of management. Behavioural change among workers was particularly apparent in new workplaces. In the private sector, the decline of union coverage was the more important decline process, while in the public sector, compositional change and free-riding, particularly in new workplaces

were more significant. Overall, the majority of decline in membership density was attributable to differences between leavers and joiners rather than declining density in continuing workplaces. However, there were sector differences, with decline in continuing workplaces more important in the private sector and decline in leavers compared to joiners more important in the public sector.

Once again, the failure to gain a foothold in new workplaces explains much of union decline, but there was also widespread failure to hold onto what unions had at the start of the decade. Over one third of decline was attributable to workplaces where collective bargaining was abandoned but 'hollow shell' recognition agreements were maintained. Even when they were able to gain recognition in new workplaces, unions struggled to build membership levels; lower levels of membership in new workplaces with recognition were another key cause of decline. Therefore the challenge unions face is not simply one of extending recognition, but also of building effective workplace organisation in workplaces where they are able to gain recognition such that membership levels can be built up to levels comparable with older workplaces. This may only come about through union mobilisation in the context of collective struggle, resulting in the establishment of a strong social custom of membership. The industrial passivity and strong real wage growth of the 1990s did not provide conditions that encouraged the establishment of strong social customs of membership in newer workplaces.

At the root of many of these problems were the difficulties that unions faced in mobilising workers to challenge the managerial agenda during the 1990s. These difficulties can be attributed to the effects of secular economic change, legal restrictions on the use of industrial action and possibly changes to the way workers and employers thought about the employment relationship as a result of the narrowing of ideological resources available to trade unions. Given the scale of the setbacks suffered by unions, it is difficult to see what unions themselves could have done to make the situation better. The problem was not simply one of how to organise new workplaces, where national union leaderships might be able to exert influence through their management of union resources and priorities, but of how to hold onto membership and organisation in union workplaces where management wanted to marginalize unions. The ability of unions to resist this agenda rested not on the policies and leaderships of the unions, but on the ability of workplace union representatives to articulate an alternative to the management agenda and to inspire their fellow workers to stand behind the alternative. This is a

formidable task at the best of times, but is particularly difficult if the actions of management appear legitimate, workers feel insecure and the ability of workers to deploy what power they have is restricted by the law. It is therefore unsurprising that so many failed.

Chapter 6. Union Membership Decline 1991 – 1997: Evidence From a Panel of Individuals

The previous three chapters have examined union decline at the level of the workplace. In this chapter, I shift the unit of analysis from the workplace to the individual. There are several reasons for doing this. First, data from individuals provides a check on the data from workplaces. If the results from individuals are in line with the results from workplaces, we can have greater confidence in the accuracy of both. Alternatively, if there are large discrepancies between the account that emerges from workplace level data and the account that comes from individuals, it suggests that either the managerial respondents to the WIRS/WERS surveys or the individual respondents to the BHPS have been providing inaccurate information. Second, one problem with the WERS data is that it is difficult to be sure of the extent to which behavioural change is related to an increase in free-riding. Behavioural change may indicate workers who are covered by collective bargaining leaving unions, but it could also be indicative of falling levels of membership among workers who were never covered by collective bargaining. For example if 50 per cent of workers in a workplace are covered by collective bargaining and 45 per cent of workers at the same establishment are union members, it seems likely that the majority of members are among those covered by collective bargaining, but we cannot be certain of this fact. With data from individuals, we can be confident of the relationship between collective bargaining coverage and union membership. Third, the BHPS allows us to examine the extent to which change in employee attitudes towards unions explains membership decline. Fourth, the panel nature of BHPS allows us to examine the flows in and out of union membership. To what extent was union decline the result of workers leaving unions compared to union workers leaving the workforce without being replaced by new members from among new workers?

The rest of this chapter is organised as follows. I begin by considering in more detail the existing evidence on union decline at the level of the individual. I then explain the data and methodology before considering the results.

6.1 Studies of union decline at the level of the individual

Green's (1992) study of individual membership decline between 1983 and 1989 was discussed previously in chapter four. To re-cap briefly, Green (1992) studied declining union density using data from two cross-sections of individuals. He employed the same

multi-variate shift-share methodology used here and found that around one third of union membership decline between 1983 and 1989 could be attributed to compositional change, with the remainder explained by within group behavioural change. The major limitation of this study is the absence of any measure of the coverage of unionisation, which means that Green was unable to assess the extent to which membership decline was the result of declining opportunities to unionise as a result of the decline of union recognition compared to increased free-riding among those in jobs covered by union representation.

Arulampalam and Booth (2000) examined union membership decline between 1981 and 1991 among a cohort of men born in 1958. They found that compositional change accounted for around one third of the decline in unionisation among this subsection of the workforce. Once again, this study lacked a measure of union coverage, so the relative importance of declining opportunities to unionise compared to declining propensities to unionise amongst those with the opportunities to do so could not be investigated.

Disney et al. 1998 used work history data from the Family and Working Lives Survey (FWLS) to study union membership decline. They found that union decline was largely explained by declining propensities to unionise among successive birth cohorts, with workers in birth cohorts that entered the labour market after 1980 being much less likely to unionise than older workers. Disney et al. argue that the main reason for this is likely to be the reduced availability of union jobs due to declining establishment level union recognition identified by Disney et al. (1995, 1996). However, they were unable to test this contention because, like the studies of Green and Arulampalam and Booth, the FWLS lacks a measure of whether or not a worker worked in a union job or establishment. Disney et al. also found that union membership was highly persistent within individuals, and that transitions out of union membership were usually associated with a job change.

The BHPS has several interesting aspects that this chapter will build on. First, rather than examining the relationship between age and union membership, it will examine the relationship between date of labour market entry by cohort and union membership. Second, it will examine the extent to which transitions out of union membership are associated with job change compared to leaving a union while remaining in the same job. One important advantage of the BHPS over the FWLS is that it contains a measure of whether a job is covered by union representation

arrangements. This means that I can test Disney et al.'s contention that falling unionisation is mainly a result of falling opportunities to unionise.

Machin (2004) investigated individual level union membership decline over a 25 year period, between 1976 and 2001, using data from the National Training Survey (NTS) of 1976 and the 2001 Labour Force Survey. He found that around one fifth of the decline in union density over the period could be explained by changes in the composition of the workforce with the remainder explained by within group behavioural change. The value of Machin's work comes from the exceptionally long time-period studied, which encompasses the entire period of union membership decline between 1980 and 1998. However, there are also several drawbacks. First, the NTS lacks a measure of union coverage. Second, Machin used the Oaxaca decomposition method to estimate the relative importance of compositional change compared to within group behavioural change. The problem with this methodology compared with the multi-variate shift share method employed here and by Green (1992), Disney et al. (1998) and Bryson and Gomez (2005) is that the estimate of the importance of compositional change will vary depending on whether the 2001 results are decomposed against the 1976 results or vice versa. Machin also acknowledged that further research is needed to answer the question of why within group behaviour changed such that membership density declined.

Bryson and Gomez (2005) examined union membership decline using the British Social Attitudes Survey (BSAS). One interesting feature of this data set is that it divides employees between union members, ex-union members and those who have never been union members. Bryson and Gomez showed that nineteen twentieths of the decline in union membership between 1983 and 2001 can be explained by the rise of 'never membership', employees who had never joined a union. While there is some reason to doubt the magnitude of this finding (the more detailed work history data of the FWLS reported by Disney et al. 1998 suggests that the number of ex-union members did rise during the 1980s and early 1990s, with ex-membership rising the most among employees born between 1950 and 1959. If this is the case, Bryson and Gomez's results will overstate the importance of ex-membership in explaining union decline); their story is broadly compatible with Disney et al.'s finding that unionisation fell because new workers were less likely to unionise than previous birth cohorts and that union membership is highly persistent within individuals.

Bryson and Gomez then went onto investigate the extent to which union membership decline was the result of compositional change compared to within group behavioural change. They found that around half of the rise of never membership was due to compositional change. This estimate is considerably higher than that found by comparable analyses by Green (1992), Disney et al. (1998) and Machin (2004). One possible explanation for this discrepancy is differences in the variables used in the decomposition analysis (Waddington 1992). The BSAS sample is also considerably smaller than the samples used in other comparable analyses, so the discrepancy may also be an artefact of the sample size.

Two aspects of Bryson and Gomez's work offered significant improvements on other comparable studies of union membership decline at the individual level. First, it contained a measure of whether or not there is a recognised trade union at the respondent's place of work. Therefore Bryson and Gomez were able to estimate the extent to which union decline was the result of the decline of employment in unionised workplaces as fewer workplaces have recognised unions compared to the decline of union membership in workplaces with union recognition. However, not all employees in workplace with union recognition will be covered by union representational arrangement, and evidence from both the WIRS/WERS series and case studies suggests that the coverage of collective bargaining fell in many workplaces that continued to recognise unions over the period that Bryson and Gomez studied. Therefore the BSAS data does not allow them to say whether decline of membership in unionised workplaces is the result of declining union coverage within those workplaces or the growth of free-riding.

Second, The British Social Attitudes Survey contains a 'left-right' index that tracks the political views of respondents over time. Therefore, they are able to investigate the extent to which changing political attitudes (which we might expect to be related to attitudes towards unions; those with left wing attitudes are likely to be more collectivist, so pro-union in outlook, Charlwood 2002a) explain changing union membership patterns. Bryson and Gomez found that a slight rightward shift in the attitudes of the workforce explained only a very small proportion of overall union decline. However, none of the existing studies of union decline at the level of the individual contain any specific measures of employee attitudes towards unions. This is an important omission because the work of Phelps Brown (1990) in particular attributed a significant portion of union decline to change in employee attitudes towards unions.

Bryson and Gomez (2005) also discussed changing employee ‘tastes’ and ‘preferences’ for union membership, the implication being that employees no longer want to join unions rather than union membership decline being the result of restricted opportunities to unionise (as Disney et al. argue) and it seems reasonable to assume that any change in taste or preference will be linked to an underlying change in attitudes. Yet, time-series econometric studies of union membership change have found no significant relationship between the general popularity of unions and union membership (see Bain and Edwards 1988 for a discussion).

One reason for the absence of such a relationship might be the type of question asked. General questions about the popularity of trade unions may fail to capture the extent to which employees think that unions will benefit them at work, and it is these attitudes towards the utility of unions that studies of union joining intentions (e.g. Kochan 1979, Charlwood 2002a, 2003a) have shown to be significant predictors of an intention or willingness to unionise. This raises the question, have employee attitudes about the utility and effectiveness of unions changed, and do these changes explain union membership decline?

To conclude and summarise, an analysis of union membership decline at the level of the individual offers three key advances over the existing literature. First, the BHPS is the only data set covering the period of union decline in the 1990s that includes a measure of whether the respondent’s job (as opposed to the respondent’s workplace) is unionised. Second, the panel nature of the BHPS allows me to investigate the extent to which decline was the result of union workers exiting the workforce compared to continuing employees leaving unions (probably as a result of job change). Third, because the BHPS asks respondents about their attitudes towards trade unions, the role of changing attitudes towards unions in union membership decline can be investigated.

6.2 Data and methodology

This section will begin by describing the characteristics of the BHPS and explaining how these data, based on individuals rather than workplaces, differs from WERS. Specifically, there are differences in the way that union coverage is measured, richer data on individual characteristics, but less data on workplace characteristics. It will then set out the methodology used to analyse the data, again explaining how the methodology

used to analyse declining membership amongst individuals differs from that used to analyse the same question at the workplace level.

6.2.1 Data

The BHPS is a longitudinal survey of individual adult respondents (aged 16 and over) who lived in stratified random sample of 5,538 households in 1991. The fieldwork was carried out by NOP in conjunction with the ESRC Longitudinal Studies Centre at the University of Essex. If individuals leave a household, they are followed to their new household and all adults resident in the new household join the sample. Children join the sample when they reach the age of 16. At wave one, interviews were achieved in 74 per cent of eligible households, and 92 per cent of eligible individuals were interviewed. 69.6 per cent of wave one respondents were still participating in the survey at wave seven. Wave one fieldwork was carried out from September to December 1991, with a small number of hard to reach individuals being interviewed in the early months of 1992¹³. The majority of the field work for wave seven was carried out between September and December 1997, with interviews continuing until June 1998. The BHPS questions individuals on a broad range of subjects. Topics of particular interest for the purposes of analyzing union decline include current employment status and job information, work histories, individual demographics and values and opinions. Questions are rotated, so not all questions are asked in every wave. Some union membership questions and a question on attitudes towards unions are only asked in the odd waves (i.e. 1, 3, 5 etc.). For this reason, the analyses reported here focus on waves one and seven (1991 – 1997) rather than waves one and eight (1991 – 1998)¹⁴. The subsequent analyses are based on those individuals who responded at waves one and seven and are weighted in order to correct for differential selection probabilities, household and individual non-response and sample attrition. Further details of the survey and weighting methods can be found in Taylor *et al.* (2001). The data were divided between continuing employees, respondents who were employees in 1991 but not 1997 (leavers) and respondents who were employees in 1997 but not in 1991 (joiners). A fourth category of

¹³This contrasts with WERS98, where interviewing actually got underway in the last two months of 1997, but the majority of interviews were conducted in the first six months of 1998, with all interviews completed by September 1998.

¹⁴Questions on workplace trade unions were asked in every wave. However, the question on union membership was only asked of those employees who held a unionised job. Odd waves (i.e. 1, 3, 5 and 7) asked all respondents about union membership.

‘switchers’ – continuing employees who moved between the public and private sectors – was also created to allow for separate analysis of the public and private sectors. The resulting data structure is set out in figure 6.1. The post-employment activities of leavers and the pre-employment activities of joiners are set out in table 6.1.

Figure 6.1 - Structure of the Data

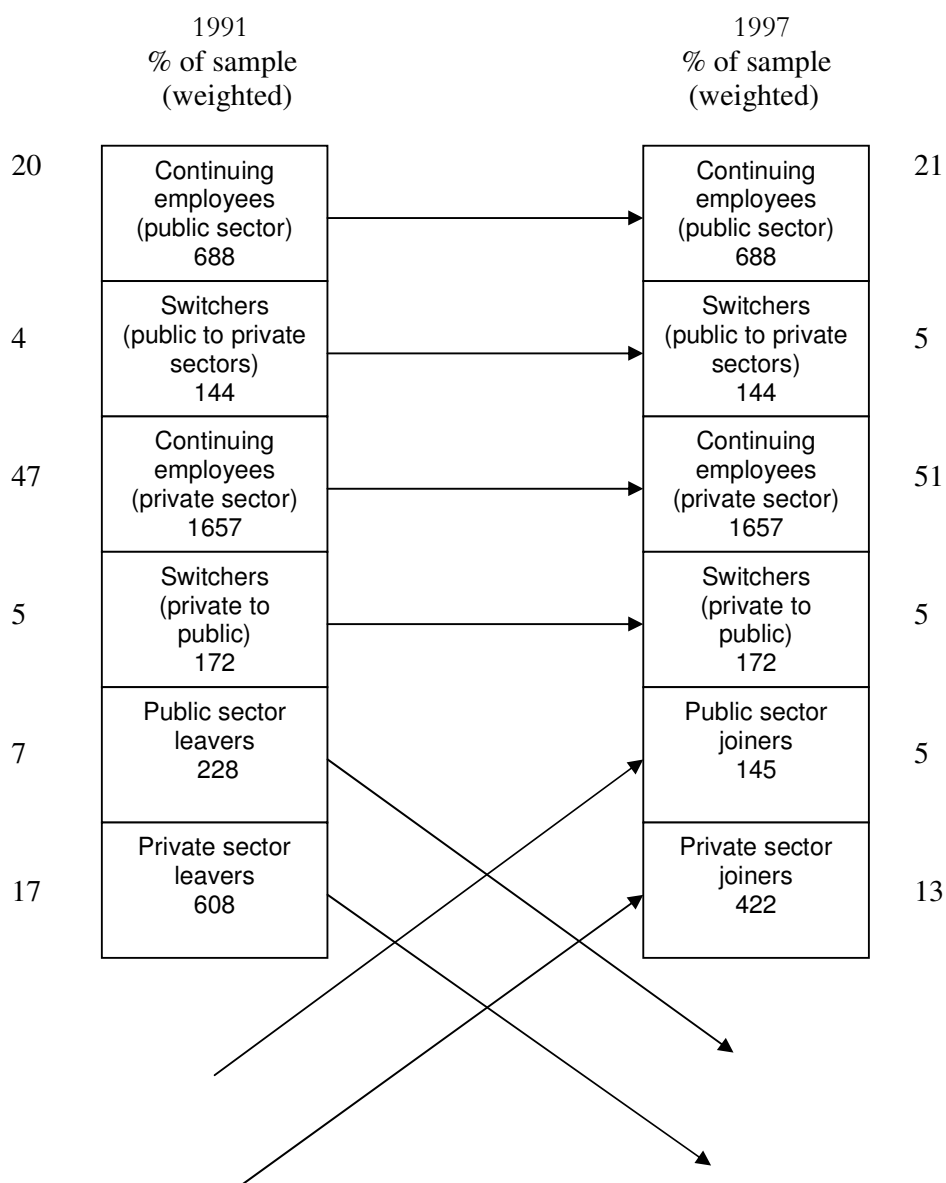


Table 6.1 - Activities of leavers and joiners

	Joiners activity at wave 1 (%)	Leavers activity at wave 7 (%)
Self-employed	19	18
Unemployed	24	11
Retired	2	38
Family care/ maternity leave	26	11
Full-time education/ training	26	17
Other	3	5

Source: British Household Panel Survey

Weighted base: 538 (joiners) and 787 (leavers).

One important issue to bear in mind, particularly when interpreting the results, is that the BHPS fails to capture the fact that the private sector's relative employment share grew, while the relative employment share of the public sector shrank. The analysis of union membership decline over a similar period, based on data from workplaces, presented in the previous chapter found that the decline of the public sector's employment share accounted for around one twentieth of the decline in membership density. As the BHPS will not capture this change, the results are likely to underplay the importance of compositional change. Also in the BHPS, there are a larger number of 1991 employees who left employment by 1997 than there are 1997 employees who were not in employment in 1991. This is at odds with what was actually going on in the population over this period; overall employment in Britain grew by 1.5 per cent (Insalaco 2002:83), which means that joiners must have outnumbered leavers. Therefore, the BHPS will overstate the importance of change in continuing employees compared to differences between leavers and joiners.

There are a number of important differences that arise from studying union membership at the level of the individual rather than the level of the workplace. Most obviously, the dependent variable under consideration is different. When looking at workplaces, the dependent variable was workplace union density weighted for each workplaces employment share. With individuals, it is the individual's probability of union membership. One drawback of the workplace level study is that we cannot directly observe the extent to which decline in membership is the result of increased free-riding. Behavioural change is likely to be evidence of increased free-riding, but it may also be evidence of declining propensities to unionise amongst workers who had

previously been union members, but who had not been covered by union representational arrangements. A study based on individuals avoids this problem, because it allows us to identify the union status of the job done by each individual, so allowing a more precise measure of free-riding. In the BHPS, the specific question asked is: 'is there a trade union or similar body such as a staff association, recognized by your management for negotiating pay or conditions for people doing your sort of job in your workplace?' At the same time, this approach may understate free-riding if there are individuals who incorrectly believe that they are in a job that is not covered by union representation because the union presence at their workplace is weak or non-existent. The specific question may also lead to small-scale discrepancies with the WERS data. For example, in the WERS data, teachers would be classified as not being covered by collective bargaining because their pay is determined by pay review body, but particular teachers who are BHPS respondents may feel that their union has a role in regulating their conditions of employment so answer that they are in a job covered by union recognition.

The BHPS also provides more detail on individual characteristics, but less detail on workplace characteristics. For example, this means that variables like the age of the workplace, which Disney et al. (1995, 1996) have shown to be an important determinant of the union status of workplace, are missing from the BHPS. However, variables like the age at which the worker entered the labour market, which Disney et al (1998) have shown to be an important determinant of individual union status, are included as a result of the detailed work history data collected in wave 2. The BHPS also questions individuals on their wider political attitudes, and on their specific attitudes towards trade unions. The question on attitudes towards unions asks workers to rate the extent to which they agree with the statement 'strong trade unions protect employees' on a five-point scale. The inclusion of this question allows some sort of empirical assessment of the extent to which changes in employee attitudes towards trade unions can explain trade union membership decline.

6.2.2 Methodology

Given the richness of the BHPS data, for example the panel element and the individual work history data, there are many different ways in which it could be used to analyse union decline and many different methodological and econometric approaches that could be taken. For the sake of simplicity and to maintain direct comparability with the

analyses from workplace data for a similar period, I have utilised a comparable methodology to that used in chapter five. Essentially, this means estimating cross-sectional models on waves one (1991) and seven (1997) of the BHPS (which incorporate data on work histories from wave 2) then comparing the results through shift-share analysis. The panel element of the data can then be used to identify those individuals who had left employment between 1991 and 1997 and those who had entered employment over the same period. The model to be estimated is set out below:

$$Union_{it} = \beta(Ujob_{it} | Con_{it} = 1) + \beta(Comp_{it} | Con_{it} = 1) + \beta(Ujob_{it} | Con = 0) + \beta(Comp_{it} | Con_{it} = 0) + \epsilon_{it}$$

Where *Union* is a 0/1 dummy with the value of unity if individual *i* is a union member at time *t*. *Ujob* is a 0/1 dummy with the value of unity if individual *i* was in a job covered by union representational arrangements at time *t*. *Comp* are the individual and job related characteristics of individual *i* at time *t*. *Con* is a 0/1 dummy with the value of unity if individual *i* is an employee in both time periods. Individual and job related characteristics include whether the individual works in the public or private sector. Whether they work in the production sector. Whether their workplace employs more than 100 people. Whether they work part-time or have a permanent employment contract, their occupation and gender. Whether or not they are members of a non-white ethnic minority (note that because of the small number of ethnic minority respondents, this variable is not included in the separate analyses of public and private sector employees). Highest educational qualification (whether they have higher education or no formal qualifications compared to those who completed school with some form of qualifications) and the approximate date of entry into the labour market, banded into those who entered the labour market between 1968 and 1979 and those who entered the labour market after 1979 with reference to those who entered the labour market before 1968. Following the work of Disney et al. (1998) these variables are used as an alternative to the employees' age. Note that the approximate date of labour market entry cohort variables used here differ slightly from the age of worker cohort variables used by Disney et al. because the approximate date of labour market entry is calculated from both the employee's date of birth and the time spent in full-time education.

When analysing the public and private sectors separately, we encounter one difficulty that was less of an issue when the workplace was the unit of analysis. Over a

six-year period, a significant number of individuals will switch jobs between the public and private sectors¹⁵. Therefore, a worker in employment in both 1991 and 1997 may not be in the same sector in both time periods. In fact, amongst the BHPS sample, 144 number of workers switched from the public sector to the private sector and 172 moved the other way. To deal with this problem, for analyses of the public and private sectors, the sample was split three ways between workers continuing in employment in the same sector (continuing employees), workers continuing in employment but switching sectors (switchers) and leavers and joiners, so the following model was estimated:

$$\begin{aligned} Union_{it} = & \beta(Ujob_{it} | Con_{it} = 1) + \beta(Comp_{it} | Con_{it} = 1) + \\ & \beta(Ujob_{it} | Con_{it} = 0) + \beta(Comp_{it} | Con_{it} = 0) \\ & + \beta(Ujob_{it} | Switch_{it} = 1) + \beta(Comp_{it} | Switch_{it} = 1) + \varepsilon_{it} \end{aligned}$$

As mentioned previously, the BHPS also contains a measure of employee attitudes towards trade unions. If variables that capture attitudes towards trade unions are included in the models, it allows an estimate to be made of the extent to which change in attitudes accounts for change in membership. However, variables that measure employee attitudes towards unions are arguably endogenous, so may bias estimates of the determinants of union membership. Note that this potential pitfall has not prevented this type of attitudes variable being used extensively in studies of individual willingness to unionise, where the same problems with potentially endogenous variables might be expected to arise (see for example Kochan 1979 and Charlwood 2002a). Consequently, I estimate a set of models without the employee attitudes variables included and a set of models with the employee attitudes variables. The employee attitudes variables take the form of two dummy variables, one for those respondents who agreed with the statement that strong union protect employees, and another for those respondents who disagreed. Those respondents who neither agreed nor disagreed were the omitted reference category.

6.3 Results and discussion

This section will begin by considering the results of the regression analysis on the determinants of individual union membership in 1991 and 1997 before considering in

¹⁵ When workplaces were the unit of analysis, a small number of workplaces may have shifted from the public sector to the private sector as a result of the Government's privatisation program

more detail the decomposition results that were generated from these results. The relationship between these results and the comparable results from workplaces, presented previously in chapter five, will then be discussed. Finally, the implications of the results for wider debates on the nature of union decline will be considered.

Although the results of the regression analysis presented in tables 6.2, 6.5 and 6.8 include the results of models estimated with and without variables that capture employee attitudes towards trade unions, the discussion below will focus on the results that include the employee attitudes variables. The regression results show a close correspondence between the results with and without the attitudes variables, which suggests that endogenous variable bias is not a serious problem, while the explanatory power of the models, measured by the R^2 statistic, is slightly improved by the inclusion of the attitudes variables.

6.3.1. Results

Table 6.2 presents the results of the regression analyses and the mean values of the independent variables. These show a high degree of stability in the means amongst continuing workers. Most change in the mean values happened in joiners compared to leavers. For example, the proportion of continuing workers in union jobs remained constant, but the proportion of joiners in union jobs was less than half the level of leavers. As the BHPS fails to adequately capture the growth in employment between 1991 and 1997, so, even after weighting, there are fewer joiners in the BHPS sample than there would be in the population as a whole so it is likely to underestimate the impact of compositional change. One area where the mean values amongst continuing employees did change between 1991 and 1997 was in attitudes towards unions. The proportion of continuing employees who agreed that strong unions protect employees increased slightly. Compared to leavers, joiners were more likely to be undecided on the question of whether or not strong unions protected workers and were less likely both to agree and to disagree with the statement.

Table 6.2 - Results of regression analysis on the determinants of union membership among all employees in 1991 and 1997 and the mean values of variables used in the regressions

	Regression results 1991 (1)	Regression results 1991 (2)	Mean value 1991	Regression results 1997 (1)	Regression results 1997 (2)	Mean value 1997
Continuing Employees						
Unionised job	0.593 (0.020)***	0.575 (0.020)***	0.42	0.555 (0.020)***	0.525 (0.020)***	0.43
Workplace characteristics						
Public Sector	0.083 (0.024)***	0.075 (0.023)***	0.23	0.086 (0.024)***	0.064 (0.023)***	0.27
Production sector	-0.061 (0.019)***	-0.060 (0.019)***	0.24	-0.024 (0.019)	-0.027 (0.018)	0.24
Workplace employs more than 100	0.044 (0.018)**	0.046 (0.018)***	0.31	0.056 (0.018)***	0.051 (0.017)***	0.36
Job characteristics						
Part-time employee	-0.071 (0.020)***	-0.070 (0.021)***	0.17	-0.053 (0.021)**	-0.052 (0.021)**	0.19
Permanent contract	0.108 (0.031)***	0.120 (0.030)***	0.7	0.120 (0.038)***	0.132 (0.037)***	0.78
Occupation (ref. managerial and professional)						
Non-manual	-0.010 (0.021)	-0.018 (0.021)	0.36	-0.026 (0.020)	-0.041 (0.019)**	0.38
Skilled	0.066 (0.029)**	0.040 (0.030)	0.1	0.071 (0.030)**	0.031 (0.030)	0.09
Semi-skilled	0.156 (0.031)***	0.132 (0.031)***	0.08	0.061 (0.033)*	0.015 (0.032)	0.08
Unskilled	0.001 (0.035)	-0.022 (0.035)	0.06	-0.002 (0.036)	-0.035 (0.036)	0.06
Individual characteristics						
Male	0.033 (0.017)*	0.038 (0.017)**	0.41	0.019 (0.019)	0.025 (0.018)	0.44

	β 1991	β 1991	Mean 1991	β 1997	β 1997	Mean 1997
Highest educational qualification (ref. any school qualifications)						
None	-0.026 (0.021)	-0.036 (0.021)*	0.13	0.006 (0.023)	-0.008 (0.023)	0.12
Higher education	0.027 (0.019)	0.028 (0.019)	0.23	0.020 (0.018)	0.020 (0.017)	0.35
Ethnic minority	0.049 (0.042)	0.020 (0.043)	0.02	0.031 (0.050)	0.008 (0.047)	0.02
Approximate date of labour market entry (ref. before 1968)						
1968 – 1979	-0.005 (0.018)	-0.010 (0.018)	0.26	0.011 (0.018)	0.008 (0.018)	0.28
Post 1980	-0.053 (0.020)***	-0.070 (0.020)***	0.24	-0.056 (0.021)***	-0.068 (0.020)***	0.27
Attitudes towards unions						
Believes strong unions protect workers		0.103 (0.020)***	0.37		0.166 (0.019)***	0.41
Does not believe that strong unions protect workers		-0.018 (0.021)	0.24		-0.018 (0.020)	0.20
Leavers/Joiners						
Unionised job	0.584 (0.054)***	0.582 (0.055)***	0.13	0.490 (0.071)***	0.491 (0.072)***	0.05
Non-union job	0.007 (0.042)	0.029 (0.044)	0.11	-0.001 (0.054)	0.004 (0.055)	0.12
Workplace characteristics						
Public Sector	0.112 (0.041)***	0.092 (0.040)**	0.07	0.098 (0.050)*	0.089 (0.048)*	0.04

	β 1991	β 1991	Mean 1991	β 1997	β 1997	Mean 1997
Production sector	0.013 (0.033)	0.008 (0.033)	0.08	-0.068 (0.036)*	-0.058 (0.037)	0.04
Workplace employs more than 100	0.042 (0.034)	0.035 (0.032)	0.09	-0.007 (0.040)	-0.019 (0.039)	0.05
Job characteristics						
Part-time employee	-0.077 (0.034)**	-0.086 (0.033)***	0.08	-0.041 (0.037)	-0.051 (0.038)	0.07
Permanent contract	0.131 (0.038)***	0.137 (0.037)***	0.22	0.117 (0.043)***	0.104 (0.043)**	0.15
Occupation (ref. managerial and professional)						
Non-manual	0.011 (0.040)	-0.004 (0.040)	0.12	-0.011 (0.042)	-0.012 (0.041)	0.09
Skilled	0.031 (0.051)	-0.009 (0.051)	0.03	0.026 (0.049)	0.005 (0.049)	0.02
Semi-skilled	0.140 (0.049)***	0.103 (0.051)**	0.03	0.069 (0.076)	0.052 (0.077)	0.01
Unskilled	0.018 (0.053)	-0.011 (0.053)	0.03	-0.005 (0.047)	-0.012 (0.049)	0.02
Individual characteristics						
Male	0.025 (0.032)	0.013 (0.031)	0.12	0.030 (0.038)	0.028 (0.038)	0.09
Highest educational qualification (ref. any school qualifications)						
None	-0.006 (0.033)	-0.032 (0.032)	0.08	0.030 (0.032)	0.020 (0.033)	0.03
Higher education	0.017 (0.039)	0.009 (0.037)	0.05	0.037 (0.034)	0.035 (0.033)	0.08
Ethnic minority	-0.035 (0.078)	-0.070 (0.075)	0.01	0.085 (0.094)	0.070 (0.092)	0.01

Approximate date of labour market entry (ref. before 1968)	β 1991	β 1991	Mean 1991	β 1997	β 1997	Mean 1991
1968 – 1979	-0.102 (0.037)***	-0.109 (0.036)***	0.04	-0.017 (0.038)	-0.006 (0.038)	0.05
Post 1980	-0.063 (0.035)*	-0.105 (0.035)***	0.05	-0.000 (0.035)	-0.015 (0.036)	0.09
Attitudes towards unions		0.155 (0.034)***	0.13		0.116 (0.037)***	0.1
Believes strong unions protect workers		-0.021 (0.037)	0.07		0.029 (0.039)	0.04
Does not believe that strong unions protect workers						
Constant	-0.068 (0.038)*	-0.095 (0.040)**		-0.078 (0.046)*	-0.120 (0.045)***	
N	3226	3208	3208	3062	3054	3054
R ²	0.50	0.52		0.44	0.47	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses.

Mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places. Results are weighted to correct for differential selection probabilities, household and individual non-response and sample attrition.

Source: British Household Panel Survey

Table 6.3 – Decomposition of regression analysis results for model one (all employees)

	Structural change $(X^{97} - X^{91})\beta^{91}$	Behavioural change $(\beta^{97} - \beta^{91})X^{91}$	Interaction term $(X^{97} - X^{91})(\beta^{97} - \beta^{91})$	Observed decline in Aggregate union density $(X^{97} - X^{91})\beta^{91} + (\beta^{97} - \beta^{91})X^{91} + (X^{97} - X^{91})(\beta^{97} - \beta^{91})$
Continuing employees				
Union coverage	0.011	-0.016	-0.001	-0.006
Worker and workplace characteristics	0.014	0.002	<0.001	0.016
Total	0.025	-0.014	-0.001	0.01
Leavers cf. Joiners				
Union coverage	-0.043	-0.013	0.006	-0.05
Worker and workplace characteristics	-0.018	-0.005	0.009	-0.14
Total	-0.061	-0.018	0.015	-0.064
TOTAL	-0.036	-0.032	0.014	0.054

Results are rounded to 3 decimal places.

Calculated from the means and coefficients reported in table 6.2.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table 6.4 – Decomposition of regression analysis results for model two (all employees)

	Structural change $(X^{97} - X^{91})\beta^{91}$	Behavioural change $(\beta^{97} - \beta^{91})X^{91}$	Interaction term $(X^{97} - X^{91})(\beta^{97} - \beta^{91})$	Observed decline in Aggregate union density $(X^{97} - X^{91})\beta^{91} + (\beta^{97} - \beta^{91})X^{91} + (X^{97} - X^{91})(\beta^{97} - \beta^{91})$
Continuing employees				
Union coverage	0.01	-0.021	-0.001	-0.012
Worker and workplace characteristics	0.015	-0.024	-0.001	-0.01
Attitudes towards unions	0.005	0.023	0.002	0.03
Total	0.03	-0.022	0.000	0.008
Leavers cf. Joiners				
Union coverage	-0.043	-0.014	0.007	-0.05
Worker and workplace characteristics	-0.016	0.001	0.009	-0.06
Attitudes towards unions	-0.004	-0.001	-0.001	-0.002
Total	-0.063	-0.014	0.016	-0.061
TOTAL	-0.036	-0.036	0.016	-0.056

Results are rounded to 3 decimal places.

Calculated from the means and coefficients reported in table 6.2.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Looking at the decomposition results in table 6.3, the decline in the proportion of workers in union jobs explains just under half of the overall decline in membership. This entire decline is attributable to a lower incidence of union jobs amongst joiners compared to leavers. Behavioural change, overwhelmingly the growth of free-riding, explains most of the other half. Two thirds of the growth in free-riding was among continuing employees, while one third could be attributed to differences between leavers and joiners. The effects of compositional change and change in attitudes towards unions were both broadly neutral. The effects of more favourable attitudes among continuing employees balanced out the effects of greater indifference among joiners when compared to leavers. However, it is important to bear in mind the caveat that the BHPS under samples joiners. Therefore, the effects of both compositional change and change in attitudes towards unions is likely to be understated by these results.

Private Sector

Table 6.5 - Results of regression analysis on the determinants of union membership among private sector employees in 1991 and 1997 and the mean values of variables used in the regressions

	Regression results 1991 (1)	Regression results 1991 (2)	Mean value 1991	Regression results 1997 (1)	Regression results 1997 (2)	Mean value 1997
Continuing Employees						
Unionised job	0.593 (0.023)***	0.573 (0.024)***	0.26	0.540 (0.025)***	0.514 (0.025)***	0.26
Workplace characteristics						
Production sector	-0.056 (0.020)***	-0.060 (0.020)***	0.3	-0.018 (0.020)	-0.023 (0.019)	0.32
Workplace employs more than 100	0.054 (0.021)**	0.055 (0.021)***	0.27	0.070 (0.021)***	0.062 (0.021)***	0.31
Job characteristics						
Part-time employee	-0.012 (0.023)	-0.014 (0.023)	0.12	0.018 (0.024)	0.012 (0.023)	0.13
Permanent contract	0.040 (0.035)	0.053 (0.034)	0.63	0.020 (0.049)	0.027 (0.048)	0.72
Occupation (ref. managerial and professional)						
Non-manual	-0.011 (0.024)	-0.025 (0.024)	0.29	0.008 (0.022)	-0.011 (0.022)	0.32
Skilled	0.070 (0.032)**	0.043 (0.032)	0.13	0.095 (0.031)***	0.053 (0.031)*	0.12
Semi-skilled	0.147 (0.034)***	0.123 (0.034)***	0.1	0.085 (0.035)**	0.044 (0.035)	0.1
Unskilled	-0.072 (0.043)*	-0.100 (0.043)**	0.04	-0.033 (0.042)	-0.085 (0.044)*	0.04
Individual characteristics						
Male	0.033 (0.020)	0.037 (0.020)*	0.42	0.039 (0.021)*	0.043 (0.021)**	0.46

Highest educational qualification (ref. any school qualifications)	β 1991	β 1991	Mean 1991	β 1997	β 1997	Mean 1997
None	-0.012 (0.023)	-0.025 (0.022)	0.13	0.016 (0.025)	-0.001 (0.024)	0.13
Higher education	-0.004 (0.023)	-0.000 (0.023)	0.16	-0.001 (0.020)	-0.000 (0.020)	0.26
Approximate date of labour market entry (ref. before 1968)						
1968 – 1979	0.029 (0.021)	0.028 (0.021)	0.22	0.039 (0.020)*	0.036 (0.020)*	0.24
Post 1980	-0.062 (0.022)***	-0.076 (0.023)***	0.23	-0.049 (0.023)**	-0.061 (0.023)***	0.27
Attitudes towards unions						
Believes strong unions protect workers		0.110 (0.023)***	0.30		0.145 (0.023)**	0.32
Does not believe that strong unions protect workers		-0.003 (0.023)	0.23		-0.007 (0.021)	0.22
Leavers/Joiners						
Unionised job	0.560 (0.057)***	0.550 (0.059)***	0.1	0.470 (0.090)***	0.498 (0.092)***	0.04
Non-union job	-0.029 (0.041)	-0.024 (0.044)	0.15	-0.079 (0.068)	-0.048 (0.071)	0.15
Workplace characteristics						
Production sector	0.021 (0.034)	0.017 (0.033)	0.1	-0.049 (0.034)	-0.042 (0.035)	0.06
Workplace employs more	0.039 (0.038)	0.033 (0.037)	0.09	-0.009 (0.038)	-0.012 (0.037)	0.05

than 100	β 1991	β 1991	Mean 1991	β 1997	β 1997	Mean 1997
Job characteristics						
Part-time employee	-0.068 (0.036)*	-0.075 (0.036)**	0.08	0.038 (0.032)	0.041 (0.032)	0.07
Permanent contract	0.089 (0.040)**	0.110 (0.040)***	0.23	0.103 (0.046)**	0.105 (0.046)**	0.17
Occupation (ref. managerial and professional)						
Non-manual	0.062 (0.045)	0.044 (0.046)	0.12	0.025 (0.033)	0.022 (0.033)	0.1
Skilled	0.092 (0.050)*	0.056 (0.050)	0.04	0.028 (0.043)	0.019 (0.044)	0.02
Semi-skilled	0.168 (0.054)***	0.142 (0.055)**	0.04	0.072 (0.073)	0.056 (0.073)	0.02
Unskilled	0.045 (0.059)	0.017 (0.059)	0.03	0.021 (0.039)	0.014 (0.040)	0.02
Individual characteristics						
Male	0.034 (0.035)	0.024 (0.034)	0.13	0.075 (0.033)**	0.080 (0.034)**	0.11
Highest educational qualification (ref. any school qualifications)						
None	-0.036 (0.035)	-0.049 (0.035)	0.08	0.003 (0.032)	-0.001 (0.033)	0.04
Higher education	-0.035 (0.043)	-0.042 (0.042)	0.05	-0.003 (0.031)	0.001 (0.031)	0.07
Approximate date of labour market entry (ref. before 1968)						
1968 – 1979	-0.120 (0.041)***	-0.130 (0.041)***	0.05	-0.031 (0.035)	-0.028 (0.035)	0.05

	β 1991	β 1991	Mean 1991	β 1997	β 1997	Mean 1997
Post 1980	-0.079 (0.037)**	-0.108 (0.038)***	0.07	-0.024 (0.031)	-0.030 (0.033)	0.1
Attitudes towards unions						
Believes strong unions protect workers		0.120 (0.037)***	0.13		0.013 (0.035)	0.1
Does not believe that strong unions protect workers		0.006 (0.040)	0.08		-0.052 (0.038)	0.05
Switchers (between public and private sectors)						
Unionised job	0.638 (0.108)***	0.626 (0.109)***	0.02	0.614 (0.091)***	0.579 (0.101)***	0.03
Non-union job	-0.078 (0.097)	-0.076 (0.096)	0.05	0.013 (0.075)	0.007 (0.080)	0.04
Workplace characteristics						
Production sector	0.006 (0.082)	0.024 (0.085)	0.02	-0.022 (0.085)	-0.016 (0.084)	0.02
Workplace employs more than 100	-0.057 (0.078)	-0.066 (0.080)	0.02	0.028 (0.078)	0.032 (0.077)	0.03
Job characteristics						
Part-time employee	0.048 (0.056)	0.049 (0.058)	0.03	-0.061 (0.087)	-0.096 (0.082)	0.02
Permanent contract	0.112 (0.059)*	0.121 (0.061)**	0.06	0.158 (0.070)**	0.152 (0.077)**	0.06
Occupation (ref. managerial and						

professional)	β 1991	β 1991	Mean 1991	β 1997	β 1997	Mean 97
Non-manual	-0.016 (0.071)	-0.024 (0.074)	0.04	0.003 (0.099)	-0.009 (0.095)	0.03
Skilled	0.023 (0.155)	-0.008 (0.156)	0.01	0.189 (0.096)**	0.171 (0.096)	0.01
Semi-skilled	0.067 (0.105)	0.046 (0.108)	0.01	0.167 (0.104)	0.139 (0.102)	0.01
Unskilled	0.034 (0.085)	0.019 (0.087)	0.01	0.111 (0.143)	0.107 (0.141)	0.01
Individual characteristics						
Male	0.033 (0.067)	0.038 (0.068)	0.02	0.031 (0.072)	0.016 (0.069)	0.04
Highest educational qualification (ref. any school qualifications)						
None	0.046 (0.049)	0.036 (0.051)	0.01	-0.160 (0.108)	-0.138 (0.110)	0.01
Higher education	0.009 (0.074)	0.006 (0.073)	0.02	0.030 (0.058)	0.031 (0.057)	0.03
Approximate date of labour market entry (ref. before 1968)						
1968 – 1979	0.022 (0.056)	0.015 (0.056)	0.02	-0.039 (0.097)	-0.033 (0.100)	0.02
Post 1980	0.014 (0.059)	-0.013 (0.059)	0.03	-0.164 (0.092)*	-0.185 (0.092)**	0.03
Attitudes towards unions						
Believes strong unions protect workers		0.088 (0.065)	0.04		0.127 (0.075)	0.04
Does not believe that strong unions protect		0.009 (0.067)	0.02		0.038 (0.090)	0.01

workers						
Constant	-0.025 (0.042)	-0.057 (0.045)		-0.042 (0.055)	-0.066 (0.054)	
N	2219	2208	2208	2068	2063	2063
R²	0.53	0.55		0.47	0.49	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses.

Mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places. Results are weighted to correct for differential selection probabilities, household and individual non-response and sample attrition.

Source: British Household Panel Survey

Table 6.6 – Decomposition of regression analysis results for model one (Private sector employees)

	Structural change $(X^{97} - X^{91})\beta^{91}$	Behavioural change $(\beta^{97} - \beta^{91})X^{91}$	Interaction term $(X^{97} - X^{91})(\beta^{97} - \beta^{91})$	Observed decline in Aggregate union density $(X^{97} - X^{91})\beta^{91} + (\beta^{97} - \beta^{91})X^{91} + (X^{97} - X^{91})(\beta^{97} - \beta^{91})$
Continuing employees				
Union coverage	-0.015	-0.014	<0.000	-0.029
Worker and workplace characteristics	0.003	0.006	0.001	0.01
Total	-0.012	-0.008	0.001	-0.019
Leavers cf. Joiners				
Union coverage	-0.037	-0.016	-0.006	-0.059
Worker and workplace characteristics	-0.016	0.007	0.007	-0.002
Total	-0.053	-0.009	0.001	-0.051
Switchers				
Union coverage	-0.002	0.003	-0.001	0
Worker and workplace characteristics	<0.001	-0.005	<0.001	-0.005
Total	-0.002	0.002	<0.001	-0.005
TOTAL	-0.067	-0.015	0.002	-0.07

Results are rounded to 3 decimal places.

Calculated from the means and coefficients reported in table 6.5.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table 6.7 – Decomposition of regression analysis results for model two (private sector employees)

	Structural change $(X^{97} - X^{91})\beta^{91}$	Behavioural change $(\beta^{97} - \beta^{91})X^{91}$	Interaction term $(X^{97} - X^{91})(\beta^{97} - \beta^{91})$	Observed decline in Aggregate union density $(X^{97} - X^{91})\beta^{91} + (\beta^{97} - \beta^{91})X^{91} + (X^{97} - X^{91})(\beta^{97} - \beta^{91})$
Continuing employees				
Union coverage	-0.002	-0.016	<0.001	-0.018
Worker and workplace characteristics	0.005	<-0.001	-0.001	0.004
Attitudes towards unions	0.002	0.01	0.001	0.013
Total	0.005	-0.015	<0.001	-0.01
Leavers cf. Joiners				
Union coverage	-0.037	-0.009	0.003	-0.043
Worker and workplace characteristics	-0.016	0.014	0.006	0.004
Attitudes towards unions	-0.004	-0.018	0.005	-0.017
Total	-0.057	-0.013	0.014	-0.056
Switchers				
Union coverage	0.002	0.003	-0.001	0.004
Worker and workplace characteristics	<0.001	-0.007	0.005	-0.002
Attitudes towards unions	-0.001	0.002	<-0.001	0.001
Total	0.001	-0.002	0.004	0.003
TOTAL	-0.051	-0.03	0.018	-0.063

Results are rounded to 3 decimal places.

Calculated from the means and coefficients reported in table 6.6.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Looking now at the results for private sector employees only (in tables 6.4 and 6.6). Just under half of the decline in union density was attributable to a reduction in the number of union jobs. Nineteen twentieths of this reduction took place among joiners compared to leavers with just one twentieth due to a reduction in the proportion of continuing employees with union jobs. Behavioural change accounted for just under two fifths of the decline. Five sixths of the decline that was attributable to behavioural

change was the result of increased free-riding. One third of the increase in free-riding took place among joiners compared to leavers while two thirds took place among continuing employees. Compositional change explained a little under one eighth of the decline in union density. The main underlying factors here was the growth in workers who were not on permanent contracts among joiners compared to leavers and the growth of workers whose date of first entry to the labour market was after 1979. Only a very small proportion (around one twenty eighth) of decline was attributable to changes in attitudes towards unions. Increasingly positive attitudes towards unions among continuing employees partially mitigated the effects of less favourable attitudes among joiners. The effects of compositional change, change in attitudes, change in union coverage and behavioural change among workers who moved into the public sector from the private sector compared to those that moved the other way was minimal.

Public Sector

Table 6.8 - Results of regression analysis on the determinants of union membership among public sector employees in 1991 and 1997 and the mean values of variables used in the regressions

	Regression results 1991 (1)	Regression results 1991 (2)	Mean value 1991	Regression results 1997 (1)	Regression results 1997 (2)	Mean value 1997
Continuing Employees						
Unionised job	0.565 (0.042)***	0.576 (0.042)***	0.59	0.554 (0.048)***	0.533 (0.048)***	0.61
Workplace characteristics						
Production sector	-0.068 (0.099)	-0.039 (0.097)	0.02	0.100 (0.121)	0.067 (0.104)	0.02
Workplace employs more than 100	0.016 (0.036)	0.021 (0.036)	0.29	0.032 (0.036)	0.033 (0.034)	0.32
Job characteristics						
Part-time employee	-0.185 (0.043)***	-0.176 (0.043)***	0.19	-0.120 (0.043)***	-0.106 (0.041)**	0.21
Permanent contract	0.258 (0.066)***	0.271 (0.067)***	0.59	0.157 (0.076)**	0.159 (0.073)**	0.64
Occupation (ref. managerial and professional)						
Non-manual	-0.007 (0.045)	-0.010 (0.045)	0.37	-0.062 (0.042)	-0.063 (0.040)	0.37
Skilled	0.011 (0.106)	-0.014 (0.107)	0.03	-0.114 (0.142)	-0.102 (0.115)	0.02
Semi-skilled	0.060 (0.133)	0.028 (0.144)	0.01	-0.162 (0.218)	-0.207 (0.221)	0.01
Unskilled	0.144 (0.078)*	0.123 (0.080)	0.06	0.066 (0.076)	0.048 (0.070)	0.05
Individual characteristics						
Male	0.022 (0.039)	0.024 (0.039)	0.26	-0.026 (0.040)	-0.020 (0.039)	0.27

	β 1991	β 1991	Mean 1991	β 1997	β 1997	Mean 1997
Highest educational qualification (ref. any school qualifications)						
None	-0.111 (0.067)*	-0.116 (0.069)	0.08	0.003 (0.065)*	-0.003 (0.064)	0.07
Higher education	0.078 (0.042)*	0.074 (0.041)	0.29	0.030 (0.041)*	0.035 (0.040)	0.38
Approximate date of labour market entry (ref. before 1968)						
1968 – 1979	-0.045 (0.037)	-0.054 (0.037)	0.26	0.029 (0.040)	0.021 (0.038)	0.27
Post 1980	0.010 (0.052)	-0.002 (0.053)	0.13	0.083 (0.048)*	0.063 (0.045)	0.14
Attitudes towards unions						
Believes strong unions protect workers		0.044 (0.049)	0.37		0.195 (0.045)***	0.42
Does not believe that strong unions protect workers		-0.078 (0.056)	0.18		-0.084 (0.059)	0.12
Leavers/Joiners						
Unionised job	0.634 (0.128)***	0.685 (0.125)***	0.18	0.389 (0.116)***	0.324 (0.131)**	0.09
Non-union job	0.114 (0.135)	0.215 (0.129)	0.04	0.073 (0.100)*	0.002 (0.112)	0.05
Workplace characteristics						
Production sector	-0.034 (0.182)	-0.047 (0.182)	0.01	-0.654 (0.175)***	-0.484 (0.161)***	<0.01
Workplace employs more	0.047 (0.066)	0.037 (0.061)	0.09	-0.097 (0.096)	-0.103 (0.088)	0.04

than 100	β 1991	β 1991	Mean 1991	β 1997	β 1997	Mean 1997
Job characteristics	-0.139 (0.079)*	-0.154 (0.075)**	0.07	-0.245 (0.088)***	-0.260 (0.085)***	0.07
Part-time employee	0.206 (0.091)**	0.109 (0.085)	0.19	0.117 (0.091)	0.097 (0.088)	0.11
Permanent contract						
Occupation (ref. managerial and professional)						
Non-manual	-0.088 (0.072)	-0.085 (0.071)	0.12	-0.032 (0.098)	-0.033 (0.092)	0.08
Skilled	-0.315 (0.177)*	-0.322 (0.167)	0.01	0.414 (0.156)***	0.265 (0.149)*	<0.01
Semi-skilled	0.087 (0.084)	0.027 (0.091)	0.01	0.578 (0.181)***	0.464 (0.182)**	<0.01
Unskilled	-0.023 (0.100)	-0.056 (0.105)	0.03	-0.056 (0.133)	-0.112 (0.145)	0.01
Individual characteristics						
Male	0.014 (0.069)	-0.007 (0.066)	0.1	-0.030 (0.101)	-0.016 (0.089)	0.04
Highest educational qualification (ref. any school qualifications)						
None	0.101 (0.082)	0.020 (0.079)	0.06	0.040 (0.090)	-0.014 (0.096)	0.01
Higher education	0.131 (0.076)*	0.097 (0.072)	0.07	0.199 (0.105)*	0.111 (0.107)	0.09
Approximate date of labour market entry (ref. before 1968)						
1968 – 1979	-0.054 (0.084)	-0.039 (0.078)	0.03	0.085 (0.093)	0.140 (0.097)	0.04

	β 1991	β 1991	Mean 1991	β 1997	β 1997	Mean 1997
Post 1980	-0.004 (0.091)	-0.103 (0.091)	0.03	0.067 (0.091)	0.046 (0.092)	0.08
Attitudes towards unions						
Believes strong unions protect workers		0.231 (0.079)***	0.13		0.327 (0.084)***	0.09
Does not believe that strong unions protect workers		-0.085 (0.088)	0.05		0.276 (0.138)**	0.02
Switchers (between public and private sectors)						
Unionised job	0.448 (0.112)***	0.412 (0.121)***	0.11	0.399 (0.129)***	0.411 (0.133)***	0.14
Non-union job	-0.016 (0.133)	-0.040 (0.145)	0.01	0.023 (0.124)	0.034 (0.130)	0.03
Workplace characteristics						
Production sector	0.033 (0.101)	0.009 (0.098)	0.03	-0.052 (0.246)	-0.026 (0.237)	0.01
Workplace employs more than 100	0.129 (0.087)	0.124 (0.085)	0.07	0.036 (0.084)	0.057 (0.089)	0.08
Job characteristics						
Part-time employee	-0.120 (0.089)	-0.117 (0.089)	0.07	-0.188 (0.074)**	-0.175 (0.075)**	0.06
Permanent contract	0.252 (0.096)***	0.249 (0.101)**	0.12	0.151 (0.085)*	0.163 (0.084)*	0.15
Occupation (ref. managerial and professional)						

	β 1991	β 1991	Mean 1991	β 1997	β 1997	Mean 1997
Non-manual	-0.073 (0.085)	-0.057 (0.086)	0.06	-0.116 (0.103)	-0.097 (0.105)	0.09
Skilled	0.070 (0.144)	0.049 (0.128)	0.01	-0.129 (0.233)	-0.120 (0.237)	0.01
Semi-skilled	0.121 (0.116)	0.086 (0.114)	0.01	-0.249 (0.239)	-0.248 (0.237)	0.01
Unskilled	-0.137 (0.138)	-0.137 (0.130)	0.03	0.024 (0.136)	0.040 (0.136)	0.03
Individual characteristics						
Male	0.139 (0.111)	0.151 (0.107)	0.07	0.139 (0.105)	0.131 (0.110)	0.05
Highest educational qualification (ref. any school qualifications)						
None	0.055 (0.102)	0.062 (0.099)	0.03	0.090 (0.112)	0.067 (0.109)	0.02
Higher education	0.170 (0.087)*	0.178 (0.083)**	0.04	0.096 (0.084)	0.109 (0.087)	0.08
Approximate date of labour market entry (ref. before 1968)						
1968 – 1979	-0.054 (0.090)	-0.059 (0.094)	0.03	-0.118 (0.094)	-0.130 (0.093)	0.05
Post 1980	-0.110 (0.077)	-0.115 (0.075)	0.05	-0.115 (0.098)	-0.141 (0.102)	0.08
Attitudes towards unions						
Believes strong unions protect workers		0.115 (0.082)	0.07		0.096 (0.079)	0.1
Does not believe that strong unions protect		-0.040 (0.103)	0.04		-0.083 (0.129)	0.02

workers						
Constant	-0.064 (0.078)	-0.081 (0.082)		0.043 (0.088)	-0.042 (0.087)	
N	1023	1016	1016	1007	1005	1005
R²	0.30	0.32		0.29	0.34	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses.

Mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places. Results are weighted to correct for differential selection probabilities, household and individual non-response and sample attrition.

Source: British Household Panel Survey

Table 6.9 – Decomposition of regression analysis results for model two (public sector employees)

	Structural change $(X^{97} - X^{91})\beta^{91}$	Behavioural change $(\beta^{97} - \beta^{91})X^{91}$	Interaction term $(X^{97} - X^{91})(\beta^{97} - \beta^{91})$	Observed decline in Aggregate union density $(X^{97} - X^{91})\beta^{91} + (\beta^{97} - \beta^{91})X^{91} + (X^{97} - X^{91})(\beta^{97} - \beta^{91})$
Continuing employees				
Union coverage	0.013	-0.007	<0.001	0.006
Worker and workplace characteristics	0.016	0.049	-0.006	0.059
Total	0.029	0.042	-0.006	0.065
Leavers cf. Joiners				
Union coverage	-0.057	-0.045	0.022	-0.072
Worker and workplace characteristics	-0.015	-0.024	0.022	-0.017
Total	-0.072	-0.069	0.044	-0.097
Switchers				
Union coverage	0.01	-0.005	<0.001	0.005
Worker and workplace characteristics	<0.001	-0.032	-0.007	-0.039
Total	0.01	-0.037	-0.007	-0.033
TOTAL	-0.042	0.064	0.031	-0.075

Results are rounded to 3 decimal places.

Calculated from the means and coefficients reported in table 6.8.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table 6.10 – Decomposition of regression analysis results for model two (public sector employees)

	Structural change $(X^{97} - X^{91})\beta^{91}$	Behavioural change $(\beta^{97} - \beta^{91})X^{91}$	Interaction term $(X^{97} - X^{91})(\beta^{97} - \beta^{91})$	Observed decline in Aggregate union density $(X^{97} - X^{91})\beta^{91} + (\beta^{97} - \beta^{91})X^{91} + (X^{97} - X^{91})(\beta^{97} - \beta^{91})$
Continuing employees				
Union coverage	0.014	-0.025	-0.001	-0.012
Worker and workplace characteristics	0.017	-0.022	-0.06	-0.011
Attitudes towards unions	0.007	0.054	0.008	0.69
Total	0.038	0.007	0.001	0.046
Leavers cf. Joiners				
Union coverage	-0.061	-0.072	0.031	-0.102
Worker and workplace characteristics	-0.006	-0.006	0.002	-0.01
Attitudes towards unions	-0.006	0.031	-0.017	0.008
Total	-0.073	-0.047	0.016	0.104
Switchers				
Union coverage	0.008	0.001	0.002	0.011
Worker and workplace characteristics	<-0.001	-0.029	-0.007	-0.036
Attitudes towards unions	0.005	-0.003	<0.001	0.002
Total	0.012	-0.031	-0.005	0.023
TOTAL	-0.023	-0.071	0.021	-0.072

Results are rounded to 3 decimal places.

Calculated from the means and coefficients reported in table 6.2.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

The results for public sector employees (see tables 6.7, 6.7 and 6.9) are quite different from the results for the whole sample and for private sector employees. Decline in the number of union jobs explains just one quarter of the decline in density. This change was exclusively among joiners compared to leavers. Behavioural change, almost entirely due to the growth of free-riding, explained around three quarters of

decline. Three quarters of the growth of free-riding was among joiners compared to leavers with the remaining quarter among continuing employees. Employees who had entered the public sector from the private sector were also less likely to be union members if not covered by collective bargaining than those who had made the journey the other way. Compositional change and changes in employee attitudes resulted in a level of union density which was slightly higher in 1997 than it would have been if composition and attitudes had remained as they had been in 1991.

Why did workers leave unions?

Overall, differences between leavers and joiners accounted for the entire decline in union density between 1991 and 1997. Although declining coverage and increased free-riding did reduce membership density among continuing employees, the effects of this decline were netted out by an increased propensity to join unions among workers with pro-union views who were not covered by union representational arrangements and compositional change. However, if free-riding among continuing employees had not become more common, aggregate union density would have been 2.1 percentage points higher than it actually was while public sector union density would have been 2.5 percentage points higher. This raises the question of why continuing workers left unions. Table 6.11, which summarises some of the behaviours associated with flows in and out of union membership, can shed some light on the answers to this question. It is apparent that very few workers left unions while remaining in the same unionised job. It is also clear that very few workers left union membership as a result of union de-recognition, findings which are congruent with the data from workplaces reported in the previous chapter. It therefore seems most likely that free-riding grew among continuing workers because a minority of union members left their union membership behind when they moved jobs, even if they moved into a job covered by union representation they did not rejoin.

Table 6.11 also provides information on how unions acquired new members. Among continuing employees, most new membership arose as workers were recruited after moving into a union job. Just two percent of new members came about through new recognition agreements, while 15 per cent can be attributed to in-fill recruitment among free-riders.

Table 6.11 - Factors associated with changes in union membership status among continuing employees

	%
<i>Flows out of union membership</i>	
Change jobs to a non union job	63.7
Change jobs to a different union job	30.2
Same job but union status of job changes	2.4
Same job, same union status of job	3.7
<i>Flows into membership</i>	
Change jobs to a union job	83
Same job but union status of job changes	2
Same union (union) job, join union	15

Source: British Household Panel Survey, waves one and seven
Weighted base: 147 (outflows) 118 (inflows).

Summary

To conclude this section by re-stating the key results. Membership density declined because new workers were less likely to work in union jobs and less likely to be union members if they were in union jobs than the workers that they replaced. Although free-riding increased and the number of union jobs fell among continuing employees, the effects of these changes on overall density was cancelled out by compositional change and more favourable attitudes towards unions. Increased free-riding and fewer opportunities to join unions as a result in a decline in the number of unionised jobs both explain around half of the overall decline in membership density. Compositional change and change in employee attitudes towards unions played a minimal role in accounting for membership decline, although the relatively small proportion of joiners in the BHPS when compared to the general population may mean that the effects of these factors is understated.

6.3.2 Discussion

Are the results from individuals reported above compatible with the results from workplaces over a similar time period reported in the previous chapter and elsewhere in the literature? Results of both this chapter and the last suggest that compositional change played a minimal role in union membership decline in the 1990s. The role of compositional change is even smaller in the BHPS than the WERS results suggest. This difference is likely to be the result of the fact that employees who entered employment between 1991 and 1997 seem to be under sampled in the BHPS. The WERS results suggest that rather more of the decline can be attributed to the decline of union

coverage and rather less to behavioural change than the BHPS results, but the difference is not large. The BHPS results suggest that most of the behavioural changes underlying decline in the WERS based analysis was the result of increased free-riding.

This finding is at dramatic variance with the findings of Bryson and Gomez (2005) who attributed around 50 per cent of the growth of never membership, and by extension, almost 50 per cent of the decline in union membership density to compositional change. However, as has already been discussed, Bryson and Gomez's finding is itself at variance with the rest of the literature on individual union membership decline (e.g. Green 1992, Disney et al. 1998 and Machin 2004) which attributed a much smaller percentage of the decline in density to compositional change and a correspondingly larger proportion to within group behavioural change. It therefore seems likely that both the results reported above and the results of Bryson and Gomez (2005) represent outlier estimates of the influence of compositional change, with compositional change actually explaining somewhere between one fifth and one third of over all membership decline.

Overall, the results from this chapter and the last complement each other well, providing a picture of both the workplace and individual level processes of membership decline. This suggests that both data sets provide reasonably accurate accounts of union membership decline, a reassuring result. Together, they allow us to say with a greater degree of precision among which workers enthusiasm for union membership withered. New workers were less likely to unionise because they were less likely to get union jobs, but even when they got union jobs, they were less likely to unionise and more likely to free-ride than the workers that they replaced. Continuing workers moving into union jobs were also more likely to free-ride if they moved jobs. At a workplace level, free-riding was most likely to be found in new workplaces and in workplaces where union recognition continued, but where pay bargaining had ceased to operate. In these workplaces, the social custom of union membership either broke down or was never established such that workers joining the workplace did not join unions. However, it seems likely that instances of union members resigning their membership but remaining in the same job were rare.

This finding suggests that Disney et al (1998) were wrong to believe that the declining unionisation rates of successive birth cohorts was primarily due to declining opportunities to unionise. Even when they had the opportunity to unionise, new workers were more likely to free-ride than the workers that they replaced. In the light of

the findings of the previous chapter, this may be because they were in new workplaces that lacked a social custom of union membership, or continuing workplaces where managerial strategies to marginalize unions eroded the social custom of membership. However, most of those employees who were union members in 1991 and were still in union jobs in 1998 retained membership, a finding that supports theories that posit that workers 'like what they have' (Freeman and Diamond 2003) or that union membership is an 'experience good' (Bryson and Gomez 2003).

The overwhelming majority of union membership decline between 1991 and 1997 was explained by differences between employees who joined the workforce between 1991 and 1997 and ex-employees who left the workforce over the same period. Because these new employees are unlikely to have been union members before (although we cannot be sure of this because the BHPS does not contain data on union membership histories) this finding is in line with the finding of Bryson and Gomez that union decline in the 1980s and 1990s was predominantly accounted for by the rise in never membership. Similarly, because few continuing employees left union membership and those that did were most likely to leave when they changed jobs, the results are in line with the findings of Disney et al. (1998) that union membership among individuals was highly persistent and that changes in union status were associated with a change of employment.

How do these findings relate to the two questions about the nature of union membership change posed in Chapter One? There is little here that would make me change my earlier judgement that it was structural variables rather than union failure that brought about membership decline. Although the finding that new workers were less likely to unionise even if they had the opportunity to do so could be interpreted as a sign of union failure because union recruitment was ineffective, I prefer to interpret it as evidence of the difficulty of mobilising workers to maintain a social custom of union membership given the conditions of the 1990s. Of course, some new workers did join unions, and if the evidence of this chapter is combined with the evidence of the last chapter, it seems likely that the new workers who became free-riders were probably located in new workplaces or workplaces where unions suffered the consequences of managerial policies that marginalized unions.

Mobilising workers in these workplaces was difficult because widespread perceptions of economic insecurity in the first half of the decade inhibited workers demands. At the same time, the absence of inflation and positive real wage growth for

most workers for most of the decade will have removed a key incentive for workers to unionise and mobilise. Unions were forced on the defensive by managerial restructuring in response to an economic environment that had undergone dramatic change as a result of Thatcherism. At the same time resources of ideology and class solidarity that had sustained unions and facilitated mobilisation in earlier periods had been lost or weakened by the ascendancy of neo-liberal ideas, changes to material living conditions and the bitter industrial defeats of the 1980s.

It is possible to make a case that unions should have invested more in organising, and if they had, modest gains in a small proportion of workplaces may have resulted, but given the size of the in-fill recruitment and new organising tasks facing unions as a result of changes over the 1990s, and the available resources for organising, and the difficulties involved in mobilising workers given the environment, it is difficult to see how increased organising activity could have had anything other than a marginal effect. Having said that, it is also important to note that union recruitment efforts over the course of the decade are likely to have resulted in higher levels of membership than if no recruitment and organising activity had taken place. For example, unions became more effective at recruiting public sector workers with favourable attitudes towards unions and this raised the over all level of public sector union density by around three percentage points.

The results presented in this chapter allow a judgement to be made about the relative importance of changing employee attitudes towards unions in explaining union decline. While some authors, notably Phelps Brown (1990) have accorded central importance to changing attitudes in explaining union decline (although not necessarily in explaining the decline of union membership), others have argued that changing employee attitudes did not explain membership decline, notably Kelly (1990) who argued that the magnitude of changes in the political attitudes of employees were simply not great enough to explain union membership decline. These results support this argument. Changing attitudes towards unions can explain only a very small proportion of the decline in union density in the 1990s. Therefore it was the economic, legal and political changes previously discussed in previous chapters that explained union decline in the 1990s. It was the declining instrumentality of union membership as a result of these factors that explains the drift away from union membership on the part of the workforce rather than an underlying shift in values.

Conclusions

In this chapter, I have investigated the individual level processes of union membership decline during the 1990s. The novel aspects of this analysis compared to previous work on union membership decline at the level of the individual were, first, the ability to differentiate between decline due to increased free-riding and decline due to the reduction in the number of union jobs. Around half of the decline in membership density over the period was attributable to increased free-riding, so union membership decline was not just because of falling levels of union recognition and coverage resulting in fewer union jobs. Increased free-riding was most notable among new employees compared to those who left the workforce, and among those continuing workers who changed jobs. Very few continuing employees who stayed in the same union job changed union status.

Second, The panel nature of the BHPS meant that I was able to differentiate between decline as a result of differences between ex-employees who left employment over the course of the 1990s and the new employees who replaced them. Differences between new employees and the employees that they replaced were the dominant cause of decline over the period. New workers were less likely to gain a union job and less likely to join a union even if in a union job than the workers that they replaced.

Third, I was also able to investigate the extent to which decline in union membership could be accounted for by employee attitudes towards unions becoming less favourable. Changing employee attitudes account for only a very small proportion of union decline. Attitudes towards unions among continuing employees actually became more favourable and union decline would have been even steeper had this not happened. Therefore, it was political, legal and economic changes that caused union membership decline rather than an underlying shift in employee attitudes towards unions.

Once again, these results point to the difficulties that unions faced in mobilising workers during the 1990s. In the absence of collective mobilisation, the social custom of membership withered, so new workers did not join unions. Therefore, it was not just the failure of unions to organise new workplaces, but also to organise new workers in union jobs that accounted for union decline.

Chapter 7. Conclusions

The aim of this thesis is to investigate the causes of union membership decline in Britain between 1980 and 1998. I have sought to answer two key questions. First, to what extent was union membership decline the result of structural factors (i.e. economic, political, legal, attitudinal and compositional changes) compared to the failure of unions to cope with a changing environment? Second, if structural determinants were important, what was the relative importance of each in accounting for membership decline? The methodology chosen to answer these questions was analysis of micro-data from workplaces and individuals. For reasons of expediency and convenience, the period was split into three time periods: 1980 to 1984, 1984 to 1990 and 1990 to 1998, and the workplace level processes of decline were investigated for each period in turn. Finally, the individual level processes of decline were analysed over the period 1991 to 1997. By investigating the individual and workplace level processes of decline, I hoped to make more informed judgements about the causes of membership decline. Finally, I intend to consider the implications of the results for the future of trade unions.

This concluding chapter is organised as follows. I begin by summarising the results across the entire period of decline while clarifying what my results add to the existing literature and explaining the limitations of the results. I will then consider the answers to the two questions before re-theorising the determinants of union membership in the light of my answers. I shall then consider the implications of this analysis for the future prospects for union membership in Britain. Finally, I will consider some possible avenues for future research that might further test my arguments and advance causal understanding of union membership change.

7.1 Summary and evaluation of the results

The key empirical contribution of this thesis has been to analyse the workplace and individual level processes of union decline between 1980 and 1998. It has moved beyond previous analyses of union membership decline at the level of the workplace, based on the same data-sources (e.g. Millward and Stevens 1986, Millward et al. 1992 and Millward et al. 2000) by employing a formal econometric model of the determinants of union membership in combination with multi-variate shift share analysis to estimate

the extent to which union decline was the result of the following three factors. First, change in the characteristics of workplaces and the workforce (compositional change). Second, change in the coverage of union representation (the incidence of union recognition agreements, the coverage of collective bargaining and the incidence of closed shop agreements). Third, behavioural change, likely to be indicative of increased free-riding on the part of employees. For the period 1990 – 98, I exploited the panel element of the WERS data to estimate the extent that these decline processes took place in continuing workplaces compared to new workplaces compared to workplaces that closed or contracted to employ less than 25 people.

The thesis has also provided the first analysis of union membership decline based on the BHPS. This data set offers three advances over other individual level data used to study union membership decline over a similar period: for example the British Social Attitudes Survey (Bryson and Gomez 2005), the Family and Working Lives Survey (Disney et al. 1999), the National Child Development Survey (Arulampalam and Booth 2000), the National Training Survey (Machin 2004), the General Household Survey (Green 1992) and the Labour Force Survey (Green 1992 and Machin 2004). First, it contained a measure of whether the individual respondent worked in a job covered by union representation. Second, it contained measures of individual perceptions of the efficacy of strong trade unions. Third, the panel nature of the data allowed the extent to which decline was the result of continuing workers leaving unions compared to new workers not replacing union members who left the workforce to be estimated. These features of the data meant that a comparable methodology to that used to analyse decline at the workplace level could be employed.

It is important to be aware of the potential short-comings and weaknesses of the analysis. First, Disney (1990) showed that unless econometric methods that account for the unobservable preferences of workers and employers that lead workers to be sorted into union and non-union jobs (e.g. tobit or interval regression) are used when estimating the determinants of union membership, results will be biased. However, the results of interval regression do not lend themselves to use in de-composition analysis, so I have used the simpler, but strictly technically inappropriate weighted least squares/linear probability regression.

My justifications for adopting this approach were twofold. First, others have done the same thing (Green 1992, Machin 2004, Bryson and Gomez 2005). Second, even if the technically correct econometric methodology had been employed, the results

may still be biased by omitted variables that are not randomly distributed. The work of Arulampalam and Booth (2000) suggests that omitted variables that are correlated with the individual fixed effects do bias estimates of the determinants of union membership. In any case, following from the critical realist critique of quantitative methodologies in positivist research, survey data, like those analysed here present at best crude approximations of complex underlying social processes and realities, so any results, regardless of the ‘correctness’ of the methodology would need to be treated with caution. They represent the best available estimates of the micro-processes of union decline, but there will be some margin of error. The results should be read as indicators of underlying trends in the general population rather than a precise diagram of exactly how union membership decline happened.

I believe this approach is legitimate because this thesis has not primarily been an exercise in econometrics. The purpose of the econometrics has been to shed new light on the theoretical debates about the causes of union membership change and decline. As such, presentation of the results has been preceded by discussions of the wider economic, political, legal and industrial context, and has been followed by discussions which have sought to relate them to the wider debates on union decline. For convenience, analysis of decline has been grouped into four chapters covering different periods and data sets. I shall now briefly recap the key results.

1980 – 1984

Between 1980 and 1984, the lion’s share of union decline was attributable to the declining proportion of workers working in workplaces with union recognition and closed shop agreements. These changes were most likely the result of the closure of large, highly unionised workplaces in the production sector during the recession of the early 1980s. As such, union decline in this period can be traced back to the consequences of the macro-economic and industrial policies of Margaret Thatcher’s Conservative Government.

1984 – 1990

Around half of the decline in this period can be attributed to the decline of union recognition. The decline in union recognition was mainly the result of lower levels of recognition amongst workplaces established after 1980. This can partly be attributed to the abolition of the statutory recognition procedure and the withdrawal of other state

supports for collective bargaining, combined with other legislative changes that restricted the ability of trade unions to coerce employers into recognition. However, it is difficult to disentangle the impact of the law from the impact of secular economic changes: increasingly international product markets, technological change, de-regulation and privatisation. Union failure to invest in new organising may also have played a role. Declining collective bargaining coverage and union de-recognition probably accounted for one quarter of the decline. The decline of the closed shop, predominantly the result of legislation, accounted for around one fifth of the decline. Compositional change, predominantly the decline of the public sector's employment share, accounted for around one tenth of the decline. This compositional change can partly be attributed to Government policies of privatisation and cuts to public sector budgets.

1990 – 1998

Decline of union coverage explained around half of the decline in union membership over this period. This was a result of a lower incidence of union recognition in workplaces established after 1980 and the abandonment of collective bargaining in continuing workplaces that recognised unions (likely to be indicative of managerial policies of union marginalisation). Once again, this change is likely to have been the result both of legislative restrictions on trade unions and secular economic changes that changed the costs and benefits of union recognition and collective bargaining for firms. Behavioural change, likely to indicate increased free-riding, accounted for most of the remainder. Behavioural change was most noticeable in new workplaces with union recognition compared to equivalent workplaces that closed or fell out of the WERS sample. Compositional change played a minor role (although it was a more important explanation of decline in the public sector) as did the decline of the closed shop.

The importance of behavioural change over this period (in contrast to the 1980s, when behavioural change accounted for a minimal amount of the decline in density) can probably be attributed to two factors. First, declining union effectiveness in workplaces where management chose to pursue union marginalisation strategies with the result that the social custom of union membership broke down. Managers had an increased incentive to pursue union marginalisation strategies because they faced more intense product market competition and more demanding shareholders. The secular economic changes that created this incentive also provided the means to weaken unions, for example through labour-saving new technologies and the threat of moving production

overseas. Legal restrictions on the trade unions also helped to facilitate marginalisation. Workers and their unions often lacked the ideological resources that would have allowed them to challenge union marginalisation and work restructuring. The generally low level of inflation and positive wage growth also lessened the incentive to challenge management for higher pay. Second, in new workplaces with union recognition, low levels of density suggest that unions struggled to establish the social custom of union membership. As the social custom of membership is likely to arise through collective struggle, the absence of this social custom in new workplaces is likely to be a function of legal restrictions on collective action, the weak bargaining position of workers as a result of secular economic changes, the lack of ideological resources that would allow issues of grievance to be framed in a way that would promote collective action, and the low inflationary environment.

1991 – 1997 (individuals)

Results from a panel of individuals were reassuringly similar to results from workplaces over a similar period. Around half of the decline in union density was attributable to the decline of union coverage with most of the remainder attributable to increased free-riding. Changes in perceptions of the efficacy of strong unions accounted for a minimal amount of the decline in membership. New workers were less likely to work in a union job and more likely to free-ride than the workers that they replaced, but continuing workers also became more likely to free-ride. Most continuing workers who left union membership did so when they changed jobs.

Summary

Overall then, union membership decline can be attributed to the following six factors. First, Government economic and industrial policy, which brought about the demise of many large highly unionised workplaces, increased product market competition through a more open and less regulated economy, so increasing the costs and reducing the benefits to firms of union recognition and collective bargaining. Government policy also reduced the size of the public sector through privatisation, competitive tendering and budget cuts.

Second, changes to the legal regulation of industrial relations made it harder for unions to achieve recognition or undertake successful collective action, so changing the balance of costs and benefits to individuals in seeking union recognition or joining

unions if in workplaces with union recognition. Legal changes also outlawed the closed shop, causing an increase in free-riding during the 1980s.

Third, the ideology of unitarism promulgated through Government rhetoric strengthened the position of employers and weakened the countervailing ideological resources available to workers and their unions.

Fourth, Government action in opposing union demands and refusing to give in to industrial action may have deterred workers from unionising and from participating in collective action. This undermined the social custom of union membership.

Fifth, secular economic changes, which affected all advanced industrial economies, namely technological change and increased trade with the developing world, weakened the bargaining position of less skilled workers and robbed the union movement of what was once a key weapon: The possession of hard to replace craft skills. However, countries enjoyed a degree of strategic choice in how to respond to these secular economic changes. While some countries took decisions that insulated their trade union movements from these changes (Ebbinghaus and Visser 1999, Western 1995, 1997), the British Government embraced them as a way of weakening trade union power (Turner 2003, Howell 1999).

Finally, unions themselves may have contributed to their own decline by failing to invest in organising new workers and new workplaces. As a result of these changes, one half of the workforce have never been union members. This represents a dramatic change from thirty years ago when only one quarter of the workforce had never been union members. I shall now return to the two questions about the nature of union membership decline posed in the first chapter, and seek to answer them in the light of the evidence presented above.

7.2 What caused union decline: Structural change or union failure?

The charge that unions themselves were at least partly responsible for union membership decline has been made most clearly by Kelly and Heery (1989) and Kelly (1990). The central charge was that unions failed to invest sufficient resources in organising and recruiting non-members, and when investment was made, union tactics were poor so the campaigns were ineffectual. Evidence cited in support of this charge included the minimal amounts of time devoted to organising activity by union full-time officials; the minimal resources devoted to organising and recruitment activity by most unions; the lack of tactical sophistication displayed by unions in high profile recruitment

projects during the 1980s (most notably at the TUC initiated recruitment campaigns at Trafford Park in Manchester and London Docklands); and the small proportion of non-union workplaces that reported having experienced union attempts to recruit amongst their workforce. While this evidence is undisputable, what matters when deciding the accuracy of the charge is how this evidence should be interpreted.

To maintain the number of members that they had in 1980, unions would have had to recruit an extra 293,000 members per year between 1980 and 1998 (they would have had to have recruited rather more than this to maintain membership density, because the number of employees increased over this period). Of course, if unions had been better at retention, they would not have had to recruit as many new members. As the results of Chapter 7 suggest that most employees who left unions did so when they left a union job, the key to retention would have been to organise more non-union jobs. To achieve this, growth would have had to come from both in-fill recruitment and new organising. Given the environment they were operating in, to what extent did unions enjoy the strategic choice to take an alternative path that would have resulted in the loss of fewer members? To what extent would greater investment in more and more effective organising activity have made a difference to union membership?

In the Appendix (Section A7) I have estimated the number of campaigns needed to achieve this level of membership increase each year and the financial resources needed to finance these campaigns. The numbers are necessarily rather arbitrary and imprecise, but they suggest that unions would need to increase organising activity by at least a factor of ten, with at least ten per cent of union income from members needing to be spent on organising. Current union organising activity (Gall and McKay 1999, Heery et al. 2003) will have at best only a marginal impact on membership levels. Is it realistic to expect unions to divert resources into organising on this scale? Theory suggests not. Willman (2001) argued that unions can be thought of as portfolios of bargaining units and that because unions' organisational interests lie in developing a portfolio of self-sustaining bargaining units, they will be biased towards policies of co-operation with employers. Militant organising campaigns on a large scale would therefore run counter to union interests.

Of course, ideology also plays an important role in union behaviour, and ideology may predispose union officials to a course of action, like greenfield organising, which runs counter to any 'rational' calculation of interests (Kelly and Heery 1994). However, even if union officials have an ideological predisposition that leads them to

champion organising, the democratic and bureaucratic realities of unions may stymie organising activity because existing members will not vote for representatives who want to divert resources away from servicing them on such a massive scale, while senior officials may be wary of the loss of control that an expansion of militant organising activity may bring. Conversely, attempts to manage organising by senior union officials may be resisted by more junior officials and lay activists alike if they interpret the organising activity as an attempt to centralise power within the organisation (Carter 2000). Heery et al.'s (2003) findings suggest that only two UK unions have been able to divert significant resources into organising, and these have both been small unions in declining industries who realised that they needed to change to survive. One of these unions (the GPMU) has subsequently merged with a large general union that does not place such a high priority on organising. This finding can be explained with reference to Cornfield's (1993) status conflict theory of union leadership change, which suggests that radical, organising leaderships will only emerge in very specific circumstances that do not exist in most British trade unions.

Even if it were possible to divert union resources into union organising on the scale needed to rebuild membership, there must still be serious doubts over whether such an effort would achieve results. Heery et al. (2003) differentiated between theories which argue that union organising can be managed by professional union officials and theories which argue that change and renewal can only come from the bottom up. The empirical evidence suggests that bottom up renewal has been rather more common than revival from the top down. Freeman (1997) argued that the empirical record shows that union growth comes in spurts as a result of 'defining moments' that are often largely exogenous to the union movement, resulting from economic, social and political changes in wider society. Kelly's (1998) argument that peaks and troughs of industrial action, which are associated with periods of membership growth and decline, were attributable to long waves of economic activity points in a similar direction. Similarly, Turner's (2003) analysis of union growth in Britain in the 1960s and 1970s pointed to the role of wider social change in bringing about change in trade unions, which then brought about union growth. The growth orientated unions of the 1960s and 1970s became growth orientated because of political changes that resulted from an influx of new, more radical activists who were spurred on by wider social and political changes. Turner's analysis also suggested that cross-country variation in union responses to these wider economic and social circumstances can influence the outcomes that result,

but ultimately, it is the wider economic and social conditions that matter. The implication of this argument is that increased union investment in organising in unfavourable conditions is unlikely to yield results. This point is reinforced by Clawson's (2003) argument that while US unions can and should be looking for new and better ways of organising workers, a breakthrough will only be possible if the wider environment changes (Charlwood 2004c).

Therefore it is difficult to attribute union membership decline to union failure. To hold on to their members, unions would have had to organise new workplaces on a very large scale. When they attempted to organise new workplaces in the 1980s, as many as 80 per cent of campaigns ended in failure. Better tactics may have delivered better results, but even if they had, the scale of new organising needed would simply not have been possible given the structural constraints under which unions operated. Existing members would not have been willing to subsidise new organising activity on a scale that would have made a difference. The need to support and service members at a time when lay activist led workplace organisation was being weakened by changes to the wider environment also made it harder to divert resources into new organising (Kelly and Heery 1994). Even if such an investment could have been made, it is not at all clear that it would have produced results. In the past, union renewal has tended to come from the bottom up rather than from the top down. Therefore it would be wrong to label the absence of investment in organising during the 1980s and 1990s as failure because to do so implies that unions enjoyed the freedom to choose an alternative and better course of action. The union response was a largely inevitable outcome of the nature and structure of trade unionism in Britain. Consequently, the answer to the first question must be that union decline was largely the result of structural change rather than union failure.

7.3 How important were the different elements of structural change?

I now turn to the question of which elements of structural change (workforce composition, the business cycle, secular changes to economic organisation, the legal regulation of industrial relations, the wider political climate and employee attitudes and values) best explain membership change? What relative weight should be attached to each of these factors? First, I shall cover those elements of structural change that can be dealt with in a relatively straightforward manner: composition, attitudinal change, and the business cycle. I shall then consider the more complex relationship between the legal

regulation of industrial relations, secular changes to economic organisation and changes to the political climate.

The element of structure that can be dismissed most easily is the business cycle. Purely on empirical grounds, business cycle models failed to predict the severity and extent of the down turn in union membership. Union membership decline continued through recession (which we would expect) and through periods of strong growth and inflation, which, other things being equal, we would expect to be associated with union growth. Carruth and Disney (1988) and Disney (1990) attempted to save business cycle theory by arguing that the business cycle label was a misnomer, because the key influence on employee desire for unionisation was the level of real wage growth, so 'macro-economic conditions' would be a better label for the approach. Guided by economic theory, Disney (1988) argued that if real wage growth averaged three per cent per annum, 'steady state' union density would be 27 per cent because there would be little demand for union membership amongst workers largely satisfied with their economic progress. As the 1980s and 1990s were a period of positive real wage growth, the 29 per cent membership density reached in 1998 may well represent Disney's 'steady state'.

The key problem with this argument is a theoretical one. Disney argues that strong real wage growth 'causes' union membership decline because workers no longer desire union membership. However, real wage growth is ultimately dependent on productivity growth, and economic theory posits that unions will affect productivity; strong unions will lower productivity growth by choking off investment and implementing restrictive practices. Therefore strong real wage growth may be a symptom of union weakness and decline rather than a cause of it. The interesting question then is what has caused strong real wage growth, and how is it related to union decline? My argument is that both strong real wage growth and union decline are bound up with secular changes to economic organisation and wider political and legal changes which resulted in radical alterations in the system of industrial relations. I will develop this point below. Therefore, while change in real wage growth may successfully predict change in union membership, it is not the cause of union membership change.

It is also relatively straightforward to dismiss attitudinal change as a cause of decline. The British Social Attitudes Survey has charted changes in the wider political attitudes of the workforce since 1983 and the British Household Panel Survey has charted perceptions of the efficacy of strong trade unions since 1991. The BSAS shows

a small 'rightwards' shift in attitudes, with workers becoming slightly less collectivist in outlook. However, Bryson and Gomez (2005) have shown that the impact of this change on union membership has been minimal. Since 1991, perceptions of the efficacy of strong trade unions actually increased among continuing employees. Employees who joined the workforce between 1991 and 1997 were less likely to have positive perceptions of the efficacy of strong unions, but also less likely to have negative perceptions. This greater indifference to unions among new workers does explain a proportion of union decline, but only a small proportion.

Therefore we can say with a degree of confidence that the attitudinal shifts put forward by Phelps Brown (1990) to explain the decline of the labour movement were not a major cause of union membership decline. Rather, the uncommitted majority of workers who had no strong views for or against unions, and who probably join for instrumental reasons, became less likely to unionise as the benefits of union membership became less and the social custom of union membership withered. The workforce became marginally less collectivist and slightly more indifferent to unions, but the scale of these changes was not enough to account for decline. If a similar proportion of employees continued to believe in the efficacy of strong unions, then presumably the reason they became less likely to unionise was that they did not have the opportunity to do so, or because the unions that represented them were weak. Meanwhile the significant proportion of workers who had no strong views on the efficacy of unions became less likely to unionise, partly as a result of lower levels of union coverage, partly because free-riding became more common. The growth of free-riding amongst this group is likely to be attributable to the absence or breakdown of a social custom of union membership in a growing proportion of workplaces, particularly new workplaces and workplaces where unions were marginalized. However, while a shift in the attitudes of the workforce cannot explain the decline of trade union membership in the 1980s and 1990s, longer run shifts in attitudes like those posited by Phelps Brown may well make the task of union recovery much more difficult. I will develop this point in the section on the future of unions below.

Crouch (2001) and Towers (1989) both argued that compositional change was an important contributory factor in explaining union membership decline, because the decline of manufacturing industry in particular, depleted unions 'core membership reserves' (Crouch 2001). Previous empirical analyses of the decline of union density in the 1980s and 1990s have typically attributed around one-third of the decline in

membership density over this period (or specific part of the period) to compositional change (e.g. Arulampalam and Booth (2000), Green (1992), Machin (2004). Bryson and Gomez's (2005) estimate that 50 per cent of the decline could be attributable to compositional change is very much an outlier). However, all of these studies lacked measures of union coverage (i.e. of the opportunity to unionise) and this deficiency may have biased their results. The results reported in chapters three to five of this thesis, which come from workplaces rather than individuals and include measures of union coverage, typically find that a much smaller proportion of decline was attributable to compositional change. Just one tenth of the overall decline in union density between 1980 and 1998 in workplaces with more than 25 employees could be attributed to compositional change. The decline of employment in manufacturing industry had a minimal effect on union decline because density also declined among those still employed in manufacturing. Some groups of workers, for example public sector professionals, became more likely to unionise over the period, so mitigating the impact of compositional change. The key compositional changes that did help to explain decline were the decline of the public sector's employment share and changes to the occupational structure, notably the decline of skilled and unskilled manual employment.

So if attitudinal shifts, compositional change and the business cycle cannot adequately account for union decline, what structural factors were important? My explanation of union membership decline rests on three factors. First, secular changes to the economic environment, partly related to changing trade patterns, partly the result of technological change (Freeman 1995). Second, political changes that de-legitimised trade unions, stripped them of ideological resources, made the workforce more pessimistic about the prospects of effective collective action and exposed unions to the full force of secular economic change. Third, legal changes that were the result of political change, that restricted the ability of trade unions to mobilise their members and use the strike weapon. All of these changes are attributable, at least in part, to the agency of Margaret Thatcher's Conservative Government. I shall now consider how these changes affected union membership in more detail and whether it is possible to weight the relative importance of these three factors.

Secular economic change

Over the last 30 years, increased trade with the developing world and rapid technological change as a result of advances in information and communications

technology have wrought far reaching changes on the economies of advanced capitalist economies like Great Britain. Disentangling the relative importance of growing north/south trade and developing technology in bringing about these changes is a difficult and controversial task that lies beyond the bounds of this thesis (but see Freeman 1995 for a discussion). Whether these changes are attributed to trade or technology, the impact on labour markets and by extension trade unions have been far reaching. Manufacturing capacity expanded, both as a result of industrialisation in southern countries and technological changes that mean firms can make more with less. This change had the following effects for trade unions.

First, because product markets became more competitive, so firms became less able to pass on increases in labour costs to consumers so the wage elasticity of demand for labour must have increased. This made it harder for workers and their unions to win concessions from employers, so reducing the benefits and increasing the costs of unionisation for workers. At the same time, the costs and benefits of union recognition for firms changed. It was no longer viable for wages to be taken out of competition through collective bargaining and the risks associated with unions raising labour costs became greater. Consequently, the incentives for firms to exclude unions from the workplace increased. At the same time, it has become easier for firms to relocate production to lower cost non-union locations, so putting pressure of unionised workers to make concessions.

Second, technological change has made it easier and cheaper for firms to replace labour with capital. These technological changes have impacted disproportionately on workers performing routine but skilled jobs (Autor, Levy and Murnane 2003, Manning and Goos 2003), for example, skilled machinists in the engineering industry, who have been replaced by computer controlled robots, and possibly on lower skilled workers (Machin 2001). The impact of these changes has been disastrous for trade unions because it was precisely the skilled manual workers whose bargaining position has been most weakened by these changes who once formed the vanguard of the labour movement, able to win advances through possession of hard to replace skills and traditions of collectivism learned through the apprenticeship system.

Third, the resulting shift from manufacturing employment to employment in the service sector is likely to have increased the proportion of workers employed in organisations where labour costs represented a high proportion of total costs. This shift

will have increased the elasticity of demand for labour, weakening the bargaining position of workers and their unions.

Fourth, the resulting environment of low inflation has removed one of the key collective grievances that acted as a spur to unionisation throughout the twentieth century: the threat of real wages being eroded by inflation.

Finally, these economic changes have made the economic interests of the working class more heterogeneous, a change that reinforced and was reinforced by a revolution in political and economic ideas that, and which discredited and de-legitimised ideas of Marxism, socialism and social democracy that once provided space for trade unions to operate in and equipped workers and their unions with the ideological resources to mount a challenge to managerial authority. Although underlying attitudes towards collectivism and the efficacy of strong trade unions did not change dramatically, this shift in ideological resources deprived workers of the means to operationalise their beliefs.

These changes have affected unions in all advanced capitalist economies. However, British unions suffered more severely than most other union movements for two reasons. First, the traditions of voluntarist, de-centralised collective bargaining left British unions peculiarly exposed to political and economic changes. Second, the Conservative Government, elected in 1979, rushed to embrace economic change as a way of weakening trade unions and making the British economy more competitive (Western 1995, Ebbinghaus and Visser 1999, Turner 2003).

Political change

Political change affected unions in four ways. First, as has already been discussed, changes to economic policy initiated by the Thatcher Government exposed the UK economy, labour market and unions to the full force of secular economic change. Second, changes to the way in which the public sector was managed impacted negatively on unions. The size of the public sector shrunk as a result of budget cuts, compulsory competitive tendering and privatisation. Budget cuts led to the erosion of terms and conditions and work intensification. When workers sought to rebel against these changes through industrial action, the Government resolved to face down demands in order to secure 'demonstration effects' that would deter other groups of workers from striking. Significant numbers of public sector workers were taken out of collective bargaining as pay review bodies and individual contracts were introduced. Consequently,

by the 1990s public sector workers were largely resigned to their fate. Union attempts to mobilise workers against collective grievances became fewer, leading to the corrosion of the social custom of membership, with the result that free-riding increased.

Third, the Government changed the terms of ideological debate, undermining and discrediting political ideas based on collectivism and social democracy and seeking to set in their place a neo-liberal consensus which deprived workers and their unions of the ideological resources to challenge management. This was important because mobilisation theory demonstrates that workers will only be willing to act collectively if they have a strong group identity and possess the ideological resources that will allow them to frame issues of grievance in such a way that promote collective action. Changes to the ideological terrain (and parallel economic changes which made workers economic interests more heterogeneous) undermined collective identities based on class. The triumph of neo-liberal ideas dis-empowered workers because “attributions for injustice which focus on impersonal forces such as ‘the market’ or ‘global competition’ are disabling (regardless of their validity)” (Kelly and Badigannavar 2004). Fourth, radical changes to labour law were introduced, which placed serious restrictions on the ability of unions to mobilise workers.

Legal change

It is difficult to disentangle the effects of changes to the legal regulation of industrial relations from the wider aspects of Government hostility to trade unions of which the legal changes were an integral part. However, it is apparent that restrictions on the ability of unions to wield the strike weapon that increased the bureaucratic hurdles that unions had to jump through before calling a strike, and which deprived workers of any element of surprise, so handing tactical advantage to the employer did make union officials less willing to resort to industrial action and workers less willing to vote for it or participate. This will have contributed to the erosion of the social custom of membership, causing free-riding to increase. The outlawing of the closed shop will also have contributed to this increase.

However, attempts by previous Governments to ‘legislate against the tradition of voluntarism’ by limiting the right to strike ended in failure due to union resistance. The success of the Conservative’s programs must in part at least have depended on the ruthless determination with which it was pushed through as part of a package of

measures that signalled Government hostility to unions and the parallel economic changes that weakened the bargaining power of unions.

Summary

Towers (1989) argued that weighting the relative importance of economic, legal and political changes in bringing about union decline is a devilishly difficult job. One way of trying to weight the relative importance of the economic compared to the political and legal is to compare events in Britain with events in other western European countries. Mean union membership decline across western Europe could be attributed to common economic changes, with Britain's divergence from this mean being explained by the political and legal changes. Such a calculation would suggest that around 45 per cent¹⁶ of British union decline was explained by secular economic changes common to all countries, with the remainder attributable to peculiarly British political and legal changes. However, I believe that to make such a calculation is to miss the point.

Dunlop (1958) developed the idea of the system of industrial relations. Dunlop's industrial relations system comprised of actors (the state, employers, workers and their representatives), contexts (technology, the social organisation of production, product markets, labour markets), the locus and distribution of power, a set of rules and a binding ideology. In Britain after 1980, the entire system changed, partly as a result of secular and global economic changes, but mainly as a result of the agency of the Conservative Government. Changes in one part of the system reinforced and were reinforced by changes elsewhere, so trying to isolate and measure the effects of individual elements of change is a futile task that will produce misleading results. As it was systemic change that caused the decline of trade union membership, it follows that systemic change on a similar scale, either as a result of exogenous shocks to the system or through the agency of one or more of the actors, will be required if union membership is to revive. I will consider the prospects for such a change in the final section below, but first I shall consider the implications of the results and analysis so far for theories of union membership change.

7.4 Re-theorising union membership change

Existing theories of union membership change take two forms. First, catholic theories, such as Metcalfe's (1991) five factor approach, which argues that union membership

¹⁶ Calculated from data contained in Ebbinghaus and Visser (1999: 147).

change is the result of macro-economic variables, composition, state industrial relations policy, the policy and behaviour of employers and what unions themselves do. Second, more parsimonious theories that have sought to privilege particular variables, but which lend themselves more easily to empirical testing through a positivist framework (e.g. Bain and Elsheikh, 1976, Carruth and Disney 1988, Freeman and Pelletier 1990). Neither of these approaches is entirely satisfactory. The limitations of positivist methodology mean that studies that follow the latter approach can generate econometrically plausible results that are nevertheless at odds with other studies testing alternative theories that produce results that are equally robust econometrically. By contrast, the former approach, while useful as an organising framework for thinking about and evaluating the causes of union membership change, does little to help us understand how and why union membership change might come about and it does not allow testable predictions about the future prospects of trade union membership to be developed.

Kelly (1998) and Kelly and Badigannavar (2004) have argued that mobilisation theory and other social movement theories provides an alternative framework for understanding the prospects of trade unions:

“The logic of social movement theory is that the fortunes of labour movements rest inter alia on the scale of injustice at the workplace, the attitudes of employees towards management and the effectiveness of union organisation and action. People’s beliefs about these issues will in turn depend on the actions and rhetoric of union leaders and their opponents. The will also be influenced by the structural conditions that shape union power, in particular the state of labour and product markets and the forms of legal regulation of union activity.”

Kelly and Badigannavar 2004: 33 – 34

More specifically, mobilisation theory holds that participation in collective action will rest on a grievance or sense of injustice, the possession of a collective identity, an attribution of the cause of the grievance that facilitates collective action and an expectation that collective action will result in the grievance being remedied (Kelly 1998). However, mobilisation theory does not provide an explanation of how wider environmental factors mediate the stages of the mobilisation process. Therefore, while it is a useful analytical tool, it is in itself of limited use for understanding union membership change at the macro level.

What is needed is a theoretical model of membership change that incorporates the insights of mobilisation theory, but links them to wider contextual variables. Such a theory would necessarily be more catholic in its approach than the parsimonious but flawed theoretical models of Bain and Elsheikh, Carruth and Disney and Freeman and Pelletier. However, it would be more strongly grounded in social science theory and the empirical evidence on the nature of union membership decline than Metcalf's five factors. Bain's (1970) model of the determinants of white-collar union membership provides a useful example of the approach that I believe is needed if theory is to enhance causal understanding of union membership change. Bain (1970) proposed a two stage descriptive model of the determinants of white-collar union membership. White-collar union density depended on employment concentration and the decisions of employers on whether or not to grant union recognition. Union recognition depended on union density and the level of support for collective bargaining provided by the State.

My argument is that an updated version of this model that describes the determinants of density for the whole workforce would be:

$$D = f(R, E, I, G) \quad (1)$$

$$R = f(C, E, I, G, S) \quad (2)$$

Where D = union density;

R = union recognition;

E = the elasticity of demand for labour;

I = the ideological resources available to workers, unions and employers;

G = the nature and stock of grievances;

C = the level and nature of product market competition and the degree of collusion between firms;

S = the level of state support for collective bargaining.

Therefore, union density is determined by 1) employer decisions to recognise unions. 2) The elasticity of demand for labour. 3) The ideological resources available to workers, unions and employers and 4) the nature and stock of grievances amongst the workforce (low or negative real wage growth being the key collective grievance). Union recognition is determined by 1) the degree of product market competition and collusion between employers. 2) The elasticity of demand for labour. 3) The ideological resources

available to workers, unions and employers. 4) State support and encouragement of collective bargaining.

Employer decisions to recognise unions are a key determinant of the costs and benefits of unionisation for workers. If employers do not agree to recognition, the benefits of membership will be minimal. The elasticity of demand for labour determines the bargaining strength of workers, although the possession of bargaining strength is not in itself enough to bring workers gains or to cause them to unionise. Ideological resources which provide workers with a group identity and frame grievances in ways that promote collective action are of critical importance. The nature of grievances also matters. Kelly (1998) has demonstrated that despite (or perhaps because of) the decline of unionisation, there is still a large stock of grievances among the workforce. However, this stock of grievances has not led to an upsurge in worker demand for unionisation. This may be because the grievances are seen as individual matters rather than collective issues. By contrast, in the late 1960s and 1970s, workers' sense of grievance was often focused around the effects of Government incomes policies in a period when real wages were stagnant or falling; this type of grievance is much more clearly a collective grievance attributable to a party (the Government) that can be challenged through collective action. The ideological resources available to workers and the nature and stock of grievances will in large part determine the supply of lay activists to unions. As such, union policies towards recruitment and organising, as created democratically by activist bodies within unions, are likely to be a function of ideology and grievance rather than an exogenous independent variable that should be included in the model.

The employer decision on whether to recognise unions is also determined by the elasticity of demand for labour, the available ideological resources and the nature and stock of grievances, because these factors determine the degree of worker militancy and the underlying coercive power of workers, the degree and nature of product market competition and the degree of collusion between employers. If product markets are relatively uncompetitive and collusive, then it is possible for firms to use collective bargaining to take wages out of competition and to pass on any increased costs associated with union recognition to consumers without having to worry about loss of market share. By contrast, the costs to employers may be greater if collective bargaining imposes, or is perceived to impose, costs that will make a firm uncompetitive compared to non-union or overseas counterparts. The actions of the State are also pertinent here as they can either bestow legitimacy on collective bargaining, so encouraging firms to

recognise unions, or use the law and the coercive power of the State to restrict the ability of unions to deploy the coercive power of workers against their employers (for an extended discussion of these issues see Charlwood 2004e).

As Bain (1970) noted, the purpose of this sort of model is not to explain completely union membership density. Other variables not included in the model (for example unions own actions and policies) may play a role, but the effect of these variables is either small or a function of the variables that are listed above, so they are not included. Although the ultimate purpose of this type of model is to determine quantitative values of the variables, this is not a practical task given the available data. Nevertheless the model is testable in two ways. First, it can be used to develop predictions about the future trajectory of trade union membership. Second, future research can test some of the assumptions and processes that the model hypothesises determine union membership. In the next section I shall use the model to make some predictions about the future of union membership, and in the conclusion I shall suggest some further avenues for research that could test some of the assumptions of the model.

7.5 Implications for future union membership and the future of trade unions

The arguments advanced so far are that union decline was largely the result of structural change and that unions themselves were largely powerless to prevent decline. Consequently, I have argued that union membership density is determined by structural factors. However, the actors within the industrial relations system are able to alter the structure of the system: union membership decline in Britain in the 1980s and 1990s was in large part the result of the agency of the State altering the system of industrial relations in a way that had negative consequences for trade unions. It therefore follows that any revival in membership will be dependent upon one of two factors. First, an exogenous shock to the system that reduces the elasticity of demand for labour by changing the nature of product markets so that the costs and benefits of unionisation change for both firms and workers. Second, a change in the system of industrial relations initiated by the state or unions themselves.

It is impossible to predict exogenous shocks, but it is possible to make some judgements about the likelihood of either the State or unions changing the system of industrial relations in more union friendly ways. There seems to be little immediate prospect of the state reviving unions. Although unions do a number of things that the

State might consider desirable - for example improving health and safety and reducing income inequality and pay discrimination (Metcalf et al 2001) - the ascendancy of neo-liberal ideas means that even the Labour Party is wary of reinstating unions for reasons both of political strategy and economic management (Charlwood 2004d). Even if a shift in the centre of gravity within the Labour Party were to bring a more union friendly leadership, it is not clear what a union friendly agenda would be or if such an agenda would find favour with the electorate. Even Communication Workers Union General Secretary Billy Hayes, one of the more optimistic left-critics of New Labour within the union movement, has described the task of building a left-wing political alternative to New Labour as a decade-long project¹⁷.

So if the State is unlikely to help unions, can unions regenerate themselves? In the past, unions have succeeded in rebuilding their membership and influence after periods of setback and defeat. However, in previous periods of union growth, unions have enjoyed resources that are not available to them to day. Cronin (1984) recounted how union growth in the 1930s was dependent partly on changes in the composition of the workforce (the expansion of engineering and aircraft building due to rearmament) and partly on unions' own organising efforts, for example in the automotive industry. Union organising was often a tortuous and painful process for those concerned, and union success was usually dependent on possession of two of the three following resources: first, craft skills at a strategic point of the production process; second, socialist or communist activists prepared to lead the campaign who were able to frame issues in such a way as to promote collective action amongst their co-workers; third, organising campaigns rooted in closely knit working class communities.

Unions today simply do not have these resources at their disposal. Technical change has taken from unions the industrial muscle once possessed by the skilled craftsman. The secular decline of Marxism and socialism has starved unions of activists able to offer ideologically based explanations for grievances that promote collective action. The proportion of the population living in what might be termed working class communities has declined, and the character of these communities has changed in response to changes in the labour market, changing social attitudes and the increasing privatisation of social life. Consequently, the strong 'us and them' attitudes that, in the middle of the twentieth century divided workers from employers and encouraged class

¹⁷ See www.billyhayes.com

solidarity, so allowing the transmission of 'labourist' ideology that promoted union membership have dissolved (Hoggart 1957, Cronin 1984). In the US context, Clawson (2003) has argued that unions can find new ideological resources through fusion with other social movements and faith based groups. However, these potential solutions, even if they were to work in the US (and even the optimistic Clawson is not sure that they will) are less applicable to Britain where the welfare state has played a larger role and where church attendance and religious belief are at much lower levels.

An alternative strategy for unions would be to concentrate on advancing a more union friendly political agenda through engagement with the political process. However, while it is political change that has tended to secure union advance in the past (for example, though the establishment of the welfare state and a political economy based on full employment) it is by no means clear that it was the agency of unions that brought about this political change. Bain (1970) has argued that previous union revivals owed more to state support introduced as a way of coping with the demands of world war than to successful union intervention in the political process. Therefore, if unions are to revive membership through their own agency, they will have to succeed in doing something entirely novel.

If a revival in union membership is unlikely without some exogenous shock to the system of industrial relations, what are the future prospects for unions and union membership? I would predict a gradual dwindling of union membership as fewer and fewer employers recognise unions as older unionised workplaces die out, while most new workplaces stay union free. In those workplaces that do recognise unions, free-riding is likely to increase as fewer and fewer workplaces retain a social custom of union membership as collective bargaining dwindles in coverage and importance. As unions become less and less concerned with 'joint regulation' of the employment relationship, the 'mutual assistance' function of unions will come to dominate. Workers will increasingly see union membership as a form of insurance policy, and only purchase it if they feel the need for the insurance. Consequently the union influence on labour market outcomes will also diminish.

Conclusions

This thesis has investigated the micro-level processes of union membership decline in Great Britain between 1980 and 1998 amongst workplaces and individuals. The results

suggest that in the 1980s, decline was primarily the result of changes in the coverage of union representation while in the 1990s, around half of the decline was explained by increased free-riding. The main causes of declining union coverage were lower levels of recognition in new workplaces, with the decline of the closed shop and partial de-recognition in workplaces that continued to recognise unions secondary factors. In the 1990s, free-riding grew most strongly among new workers and amongst those working in new workplaces with union recognition and continuing workplaces where there was evidence that management had marginalized the union while maintaining a recognition agreement.

When the results have been related back to wider debates about the nature and causes of union decline, it is apparent that some explanations do not tally with the evidence. Compositional change, change in employee attitudes towards unions, and the business cycle all offer unconvincing explanations of decline. Instead, unions were weakened by systemic change across the entire system of industrial relations in Britain, with change in one part of the system reinforcing and being reinforced by changes elsewhere. This systemic change was partly attributable to secular changes to economic organisation that affected all advanced industrial economies. These changes affected the technology of production and the structure of labour markets, making the demand for labour more elastic, so weakening the bargaining position of workers and unions. However, the impact of these changes on Great Britain was magnified by the policies of successive Conservative Governments in the areas of macro-economic management, competition policy, management of the public sector, the legal regulation of industrial relations and the binding (or dividing) ideology of the system.

I have attempted to re-theorise the determinants of trade union membership in the light of the results and analysis. I argued that trade union membership is determined by employer decisions on recognition, the elasticity of demand for labour, the ideological resources available to workers and unions and the nature and stock of grievances. The elasticity of demand for labour, ideological resources, grievances, the nature of product markets, and the level of state support for collective bargaining determine union recognition. This theory does not lend itself to testing against quantitative data; as a result of this thesis there is little quantitative data on union decline in the 1980s and 1990s lying around unexamined, and the data that exists is not up to the task of operationalising the model (which would be difficult to operationalise in any case). Instead, future research that seeks to advance our understanding of the

determinants of union membership and union membership change should focus on the qualitative.

One rich avenue of enquiry would be to revisit local labour markets where, as a result of mid twentieth century social science (e.g. Goldthorpe et al. 1968, Zweig 1961), we have good historical data on attitudes towards work and trade unions and to interview today's workers on their attitudes towards and experience of work and trade unions to measure what has changed. Another field of enquiry would be to collect and analyse the oral work histories of workers and personnel managers to gain an understanding of how and why attitudes to work and trade unions have changed over the last 30 years. These data could then be used to examine the robustness of the assumptions embodied in the model, for example about the role of ideological resources in determining union membership.

Finally, I have considered the future prospects for trade union membership in Britain. Unless there is a significant change to the system of industrial relations, brought about either by an exogenous shock to the system, that might either radically alter the technology of production, re-awaken inflation or cause a breakdown in international trade, or by the agency of one or more of the actors, union membership is unlikely to revive. Predicting a future exogenous shock is an impossible task and even if a such a shock were to occur it is not at all clear that it would lead to an environment that favoured trade unions. In the absence of such a shock, it seems unlikely that the agency of the either state or of unions themselves will revive trade unions. Consequently, union membership will probably continue to dwindle as fewer workplaces recognise unions and, as long established social customs of union membership are eroded by workplace change and the birth and deaths of workplaces, fewer workers unionise even if they have the opportunity to do so.

Bibliography

- Abowd, J. and Farber, H. (1982) 'Job queues and the union status of workers' *Industrial and Labor Relations Review*, 35: 354 – 67.
- Addison, J. and Belfield, C. (2001) 'Updating the determinants of firm performance: estimation using the 1998 UK workplace employee relations survey' *British Journal of Industrial Relations* 39(3): 341 – 66.
- Andrews, M. and Naylor, R. (1994) 'Declining union density in the 1980s: What do Panel Data Tell Us?' *British Journal of Industrial Relations* 32(3): 413 – 31.
- Arulampalam, W. and Booth, A. (2000) 'Persistence in union status: A longitudinal study of young men in Britain' *Journal of Applied Econometrics*, 15 (August): 289-310.
- Ashenfelter, O. and Pencavel, J., (1969) 'American trade union growth 1900 – 1960' *Quarterly Journal of Economics*, 83: 434 – 48.
- Autor, D., Levy, F. and Murnane, R. (2003) 'The skill content of recent technical change: an empirical investigation' *Quarterly Journal of Economics*, 118 (1): 273 – 333.
- Bain, G.S. (1967) *Trade Union Growth and Recognition*, Royal Commission on Trade Unions and Employers Associations Research Papers no. 6, London: HM Stationary Office.
- Bain, G. S. (1970) *The Growth of White-Collar Unionism*, Oxford: Clarendon.
- Bain and Clegg 1974 'A strategy for industrial relations research in Great Britain' *British Journal of Industrial Relations* 12(1): 91 – 113.
- Bain, G.S. and Elias, P. (1985) 'Trade union membership in Great Britain: An individual level analysis' *British Journal of Industrial Relations*, 23(1): 71 – 92.
- Bain, G. S. and Elsheikh, F. (1976) *Union Growth and the Business Cycle*, Oxford: Blackwell.
- Bain, G.S. and Elsheikh, F. (1980) 'Unionisation in Britain: An inter-establishment analysis based on survey data' *British Journal of Industrial Relations* 18(2): 169 – 78.
- Bain, G.S. and Price, R. (1983) 'Union growth: Dimensions, determinants and destiny' in G.S. Bain (ed) *Industrial Relations in Britain*, Oxford: Blackwell.
- Beaumont, P. and Harris, R. (1990) 'Union recruitment and organizing attempts in Britain in the 1980s' *Industrial Relations Journal* 21(4): 274 – 86.
- Beaumont, P. and Harris, R. (1995) 'Union de-recognition and declining union density in Britain' *Industrial and Labor Relations Review* 48(3), pp. 389 – 402.
- Booth, A. (1983) 'A reconsideration of trade union growth in the United Kingdom' *British Journal of Industrial Relations*, 21(3): 379 – 93.

- Booth, A. (1984) 'A public choice model of trade union behaviour and membership' *Economic Journal* 94: 883 – 98.
- Booth, A. (1985) 'The free rider problem and a social custom theory of trade union membership' *Quarterly Journal of Economics*, 100 (February): 253 – 61.
- Booth, A. (1986) 'Estimating the probability of trade union membership: A study of men and women in Britain' *Economica*, 53(1): 41 – 61.
- Boxall, P. and Haynes, P. (1997) 'Strategy and effectiveness in a neo-liberal environment' *British Journal of Industrial Relations* 35(4): 567 – 91.
- Brown, A., Slater, G. and Spencer, D. (2002) 'Driven to abstraction? Critical realism and the search for the 'inner connection' of social phenomena' *Cambridge Journal of Economics* 26(5): 773 – 738.
- Brown, E.H. Phelps (1990) 'The counter-revolution of our time' *Industrial Relations* 29(1): 1 – 14.
- Brown, W. and Wadhwani, S. (1990) 'The economic effects of industrial relations legislation since 1979' *National Institute Economic Review*, 131:
- Brown, W. and Wright, M. (1994) 'The empirical tradition in workplace bargaining research' *British Journal of Industrial Relations* 32(2): 153 – 64.
- Brown, W., Deakin, S. and Ryan, P. (1997) 'The effects of British industrial relations legislation 1979 – 97' *National Institute Economic Review*, 161 (April): 69 – 83.
- Brown, W., Deakin, S., Hudson, M., Pratten, C. and Ryan, P. (1999) *The Individualisation of Employment Contracts in Britain*, DTI Employment Relations Research Series 5, Department of Trade and Industry, London.
- Brown, W., Deakin, S. Nash, D. and Oxenbridge, S. (2000) 'The employment contract: From collective procedures to individual rights' *British Journal of Industrial Relations*, 38(4): 611 – 629.
- Bryson, A. and Gomez, R. (2003) *Segmentation, switching costs and the demand for unionization in Britain* Centre for Economic Performance Discussion Paper no. 568, London: London School of Economics.
- Bryson, A. and Gomez, R. (2005) 'Why have workers stopped joining unions? Accounting for the rise of never-membership in Britain' *British Journal of Industrial Relations* 43(1): 67 – 92.
- Bryson, A., Gomez, R. and Willman, P. (2004) 'The end of the affair: The decline in employers' propensity to unionize' in J. Kelly and P. Willman (eds) *Union Organization and Activity*, London: Routledge, pp. 129 – 149.

- Burgess, S., Propper, C and Wilson, D. (2001) *Explaining the growth in the number of applications to industrial tribunals 1972 – 1997* Employment Relations Research Series, Number 10, London: Department of Trade and Industry.
- Capelli, P. (1985) 'Theory construction in industrial relations and some implications for research' *Industrial Relations* 24(1): 90 – 112.
- Carruth, A. and Disney, R. (1988) 'Where have two million trade union members Gone?' *Economica* 55(1): 1 – 19.
- Carter, B. (2000) 'Adoption of the organizing model in British trade unions: Some evidence from MSF' *Work, Employment and Society* 14(1): 117 – 136.
- Charlwood, A. (2002a) 'Why do non-union employees want to unionize?' *British Journal of Industrial Relations* 40(3): 463 – 92.
- Charlwood, A. (2002b) 'Review of *Trade Unions at the Cross Roads* by Peter Fairbrother' *British Journal of Industrial Relations* 40(2): 343 – 45.
- Charlwood, A. (2003a) 'Willingness to unionize amongst non-union workers' in Howard Gospel and Stephen Wood (eds.) *Representing Workers: Trade Union Membership and Recognition in Britain*, London: Routledge.
- Charlwood, A. (2003b) 'Review of *Unionization and Union Leadership: The Road Haulage Industry* by Paul Smith' *British Journal of Industrial Relations* 41(2): 381 – 82.
- Charlwood, A. (2004a) *The de-collectivisation of pay determination in British establishments 1990 – 1998: Incidents, determinants and impact* Mimeo, Leeds University Business School.
- Charlwood, A. (2004b) 'Influences on trade union organising effectiveness' *British Journal of Industrial Relations* 42(1): 69 – 94.
- Charlwood, A. (2004c) 'Review of P. Fairbrother and C. Yates (eds.) *Trade Unions in Renewal* and D. Clawson *The Next Upsurge: Labor and the New Social Movements*', *British Journal of Industrial Relations* 43(3): 565 – 67.
- Charlwood, A. (2004d) 'Annual review article 2003: The new generation of trade union leaders and prospects for union revitalisation' *British Journal of Industrial Relations* 42(2): 379 – 97.
- Charlwood, A. (2004e) 'What determined employer voice choice in 20th century Britain? A critique of Bryson, Gomez and Willman's model' Mimeo, Leeds University Business School.
- Charlwood, A. and Metcalf, D. (2005) 'Appendix: Union membership' in David Metcalf and Sue Fernie (eds) *British Unions: Resurgence or Perdition?* London: Routledge pp. 231 - 239
- Clawson, D. (2003) *The Next Upsurge: Labour and the New Social Movements*, Ithaca NY: ILR Press.

- Cornfield, D. (1993) 'Integrating US labor leadership: union democracy and the ascent of ethnic and racial minorities and women in national union offices' in S.Bacharach, R. Seeber and D. Walsh (eds) *Research in the Sociology of Organisations* vol 12: 51 – 74. Greenwich CT: JAL.
- Crafts, N (1991) 'Reversing relative economic decline? The 1980s in historical perspective' *Oxford Review of Economic Policy*, 4(1): i – xxi.
- Cronin, J. (1984) *Labour and Society in Britain 1918 – 1979*, London: Batsford
- Crouch, C. (2001) 'The snakes and ladders of twenty first century trade unionism' *Oxford Review of Economic Policy* 16(1): 70 – 83.
- Cully, M., Woodland, S. O'Reilly, A. and Dix, G. (1999) *Britain at Work*, London: Routledge.
- Darlington, R. (1994) *The dynamics of workplace trade unionism*, London: Mansell.
- Darlington, R. (1995) 'Restructuring and workplace unionism at Manchester Airport' *British Journal of Industrial Relations*, 33(1): 93 – 115.
- Diamond, W. and Freeman, R. (2003) 'Young workers and trade unions' in Howard Gospel and Stephen Wood (eds.) *Representing Workers: Trade Union Membership and Recognition in Britain*, London: Routledge.
- Disney, R. (1990) 'Explanations of the decline in trade union density in Britain: An appraisal' *British Journal of Industrial Relations* 28(2): 165 – 77.
- Disney, R., Gosling, A. and Machin, S. (1995) 'British unions in decline: An examination of the 1980's fall in trade union recognition' *Industrial and Labor Relations Review*, 48(3), pp. 403 – 419.
- Disney, R., Gosling, A. and Machin, S. (1996) 'What has happened to union recognition in Britain?' *Economica* 63(1): 1 – 18.
- Disney, R., Macrae, J., Gosling, A. and Machin, S. (1999) *The Dynamics of Union Membership in Britain – A Study using the Family and Working Lives Survey* Employment Relations Research Paper no 3: London: Department of Trade and Industry.
- Doiron, D. J. and W. C. Riddell. 'The impact of unionization on male-female earnings differences in Canada' *Journal of Human Resources* 29(4): 504-534.
- Dunlop, J. T. (1958) *Industrial Relations Systems*, New York: Holt.
- Dunn, S. and Metcalf, D. (1996) 'Trade Union Law Since 1979' in Ian Beardwell (ed) *Contemporary Industrial Relations: A Critical Analysis*, Oxford: Oxford University Press: 66- 98

- Ebbinghaus, B. and Visser, J. (1999) 'When institutions matter: union growth and decline in Western Europe' *European Sociological Review* 15(2): 135 – 158.
- Edwards, P. (2003) 'The employment relationship and the field of industrial relations' in Paul Edwards (ed.) *Industrial Relations: Theory and Practice 2nd Edition*, Oxford: Blackwell, pp. 1 – 36.
- Edwards, P and Bain, G.S. (1988) 'Why are unions becoming more popular? Trade unions and public opinion in Britain' *British Journal of Industrial Relations*, 26(2): 311 – 326.
- Elgar, J and Simpson, R. (1993) 'The impact of the law on industrial disputes' in D. Metcalf and S. Milner (eds.) *New Perspectives on Industrial Disputes*, London: Routledge, pp. 70 – 114.
- Elias, P. (1996) 'Growth and decline in trade union membership in Great Britain: Evidence from work histories' in D. Gallie, R. Penn and M. Rose (eds.) *Trade Unionism in Recession*, Oxford: Oxford University Press, pp. 175 – 215.
- Farber, H. (1983) 'The determination of the union status of workers' *Econometrica* 51(5): 1417 – 37.
- Farber, H. and Western, B. (2002) 'Ronald Reagan and the politics of declining union organisation' *British Journal of Industrial Relations*, 40(3): 385 – 401.
- Fairbrother, P. (2000) *Trade Unions at the Crossroads*, London: Mansell.
- Fernie, S. and Metcalf, D. (1999) '(Not) hanging on the telephone: Payment systems in the new sweatshops' In *Advances in Industrial and Labour Relations*. Vol. 9. Edited by D. Lewin, D and B. Kaufman, JAI Press.
- Fisher, J. (1997) 'The challenge of change: the positive agenda of the TGWU' *International Journal of Human Resource Management*, 8(6): 797 – 806.
- Forth, J. (2000) *Compositional versus behavioural change: Combined analysis of the WERS98 panel survey, closures and new workplaces* Paper prepared for the 1st Meeting of the WER98 User Group, London: National Institute of Economic and Social Research.
- Freeman, R. (1988) 'Contraction and expansion: The divergence of private sector and public sector unionism in the United States' *Journal of Economic Perspectives*, 2(2): 63 – 88.
- Freeman R. (1995) 'Are your wages set in Beijing?' *The Journal of Economic Perspectives* 9(3): 15 – 32.
- Freeman, R. (1997) *Spurts in union growth: Defining moments and social processes* Working Paper 6012, National Bureau of Economic Research: Cambridge MA.

- Freeman, R. and Medoff, J. (1984) *What do Unions Do?* New York: Basic Books.
- Freeman, R. and Pelletier, J. (1990) 'The impact of industrial relations legislation on British trade union density' *British Journal of Industrial Relations*, 28(2): 141 – 64.
- Frege, C. and Toth, A. (1999) 'Institutions matter: Union Solidarity in Hungary and East Germany, *British Journal of Industrial Relations* 37(1): 117 – 140.
- Friedman, M. (1953) 'The methodology of positive economics' in *Essays in Positive Economics*, Chicago: University of Chicago Press.
- Gall, G. and McKay, S. (1999) 'Developments in union recognition and de-recognition in Britain 1994 – 1998' *British Journal of Industrial Relations* 37(3): 601- 614.
- Gallie, D. (1996) 'Trade union allegiance and decline in British urban labour markets' in D. Gallie, R. Penn and M. Rose (eds.) *Trade Unionism in Recession*, Oxford: Oxford University Press, pp. 140 – 74.
- Gallie, D., Penn, R. and Rose, M. (1996) *Trade Unionism in Recession*, Oxford: Oxford University Press.
- Gallie, D. and Rose, M. (1996) 'Employer policies and trade union influence' in D. Gallie, R. Penn and M. Rose (eds.) *Trade Unionism in Recession*, Oxford: Oxford University Press, pp. 33 – 64.
- Geroski, P., Gregg, P. and Desjonquieres, T. (1995) 'Did the retreat of UK trade unionism accelerate during the 1990 – 1993 recession?' *British Journal of Industrial Relations* 33(1): 39 – 54.
- Godard, J. (1993) 'Theory and method in industrial relations: Modernist and post-modernist alternatives' in R. Adams and N. Meltz (eds.) *Industrial Relations Theory: It's Nature, Scope and Pedagogy* Metchuen, New Jersey: Scarecrow Press.
- Goos, M. and Manning, A. (2003) *Lousy jobs and lovely jobs: the rising polarization of work in Britain* Centre for Economic Performance Discussion Paper 604, London: London School of Economics.
- Goldthorpe, J., Bechhoffer, F., Lockwood, D. and Platt, J. (1968) *The Affluent Worker: Industrial Attitudes and Behaviour*, Cambridge: Cambridge University Press
- Gosling, A. and Machin, S. (1995) 'Trade Unions and the Dispersion of Earnings in British Establishments 1980 – 1990' *Oxford Bulletin of Economics and Statistics* 52(2): 167 – 84.
- Gospel, H. (1992) *Markets, Firms and the Management of Labour in Modern Britain*, Cambridge: Cambridge University Press.
- Gospel, H. (2005) 'Markets, firms and unions: Historical and institutional perspectives on the Future of Unions' in D. Metcalf. And S. Fernie (eds.) *British Unions: Resurgence or Perdition?* London: Routledge (forthcoming)

- Green, F. (1990) 'Trade union availability and trade union membership in Britain' *The Manchester School* LVIII(4): 378 – 94.
- Green, F. (1992) 'Recent trends in British trade union density: How much of a compositional effect?' *British Journal of Industrial Relations* 30(3): 445 -458.
- Green, F. (2001) 'It's been a hard days night: The concentration and intensification of work in late twentieth century Britain' *British Journal of Industrial Relations* 39(1): 53 – 80.
- Gregg, P. and Naylor, R. (1993) 'An inter-establishment study of union recognition and membership in Britain' *The Manchester School* LXI(4) : 367 – 85.
- Gregg, P. and Yates, A. (1991) 'Changes in wage setting arrangements and trade union presence in the 1980s' *British Journal of Industrial Relations*, 29 (2) : 361 – 76.
- Healey, D. (1989) *The Time of My Life*, London: Penguin.
- Heery, E., Delbridge, R., Simms, M., Salmon, J. and Simpson, D. (2003) 'Organising for renewal: a case study of the UK's organising academy' in D. Cornfield and H. McCammon (eds.) *Labor Revitalization: Global Perspective and New Initiatives: Research in the Sociology of Work* vol. 11: 79 – 110. Greenwich CT: JAL.
- Hines, A. (1964) 'Trade unions and wage inflation in the United Kingdom, 1893 – 1961' *Review of Economic Studies* 31: 221 – 52.
- Howell, C. (1999) 'Unforgiven: British trade unionism in crisis' in A. Martin and G. Ross (eds) *The Brave New World of European Labor: European Trade Unions at the Millennium*, New York: Berhahn, pp. 26 – 74.
- Hoggart, R. (1957) *The Uses of Literacy: Aspects of Working Class Life*, London: Chatto and Windus
- Hyman, R. (1994) 'Theory and industrial relations' *British Journal of Industrial Relations* 32(2): 165 – 80.
- Insalaco, R. (2002) *Annual Abstract of Statistics*, London, The Stationary Office.
- Johansen. S. (1988) 'Statistical analysis of co-integration vectors' *Journal of Economic Dynamics and Control*, 12: 231 – 54.
- Johansen, S. (1991) 'Estimation and hypothesis testing of co-integration vectors in Gaussian vector auto-regressive models' *Econometrica*, 59: 1551- 1580.
- Kelly, J. (1990) 'British trade unionism 1979 – 89: Change, continuity and contradictions' *Work, Employment and Society*, (May), pp. 29 – 65.
- Kelly, J (1998) *Rethinking Industrial Relations*, London: Routledge.

- Kelly, J. (2001) 'Review of *Trade Unions at the Cross Roads* by Peter Fairbrother', *International Journal of Human Resource Management*, 12(1) :146 – 49.
- Kelly, J. and Badigannavar, V. (2004) 'Union organizing' in J. Kelly and P. Willman (eds.) *Union Organization and Activity* London: Routledge: pp. 31 – 50.
- Kelly, J. and Heery, E. (1989) 'Full-time officers and trade union recruitment' *British Journal of Industrial Relations* 27(2): 196 – 213.
- Kelly, J. and Heery, E. (1994) *Working for the Union*, Cambridge: Cambridge University Press.
- Kennedy, P (1998) *A Guide to Econometrics*, Oxford: Blackwell.
- Klandermans, B. (1986) 'Psychology and trade union participation; Joining, acting, quitting' *Journal of Occupational Psychology*, 59, pp. 189 – 204.
- Kochan, T. (1979) 'How American workers view labor unions' *Monthly Labor Review*, 104(4): 21 – 31.
- Kochan, T. (1980) *Collective Bargaining and Industrial Relations: From theory to policy and practice*, Irwin, Ill: Irwin.
- Layard, R. and Nickell, S. (1985) 'The causes of British unemployment' *National Institute Economic Review* 145, April.
- Machin, S. (2000) 'Union decline in Britain' *British Journal of Industrial Relations*, 38(4): 631 – 45.
- Machin, S. (2001) 'The labour market consequences of technological and structural change' *Oxford Bulletin of Economics and Statistics*, 63(5): 753 – 766.
- Machin, S. (2004) 'Factors of convergence and divergence in union membership' *British Journal of Industrial Relations* 42(3): 423 – 38.
- Mason, R. and Bain, P. (1991) 'Trade union recruitment strategies: facing the 1990s' *Industrial Relations Journal* 22(1): 36 – 45.
- Mason, R. and Bain, P. (1993) 'The determinants of trade union membership in Britain: A survey of the literature.' *Industrial and Labor Relations Review* 46(2): 232 – 51.
- McCarthy, W.E.J. (1964) *The Closed Shop in Britain* Berkeley: University of California Press.
- McIlroy, J. (1995) *Trade Unions in Britain Today*, Manchester: Manchester University Press.
- Metcalf, D. (1989) 'Water Notes Dry Up: The impact of the Donovan reform proposals and Thatcherism at work on labour productivity in British manufacturing industry' *British Journal of Industrial Relations*, 27(1): 1 – 31.

- Metcalf, D. (1991) 'British unions: Dissolution or resurgence?' *Oxford Review of Economic Policy*, 7(1): 18 – 32.
- Metcalf, D. (2003) 'Unions and productivity, financial performance and investment' in J. Addison and C. Schnabel (eds.) *International Handbook of Trade Unions*, Cheltenham: Edward Elgar, pp. 118 – 171.
- Metcalf, D. (2005) 'Trade Unions: Resurgence of perdition? An economic analysis' in David Metcalf and Sue Fernie (eds) *Trade Unions: Resurgence or Demise?* London: Routledge, pp.83 - 117
- Metcalf, D., Hansen, K and Charlwood, A. (2001) 'Unions and the sword of justice: Unions and pay systems, pay inequality, pay discrimination and low pay' *National Institute Economic Review*, 176(April): 61 - 75
- Millward, N. and Daniel, W. (1983) *Workplace Industrial Relations in Great Britain*, London: Heinemann.
- Millward, N. and Stevens, M. (1986) *British Workplace Industrial Relations*, Aldershot: Gower.
- Millward, N., Stevens, M., Smart, D. and Hawes, W.R. (1992) *Workplace Industrial Relations in Transition*, Aldershot: Dartmouth.
- Millward, N., Bryson, A. and Forth, J. (2000) *All Change at Work: British employment relations 1980 – 1998 as portrayed by the Workplace Industrial Relations Survey series*, London: Routledge.
- Moore, S. (2004) 'Union mobilization and employer counter mobilization in the statutory recognition process' in J. Kelly and P. Willman (eds) *Union Organization and Activity*, London: Routledge pp.7 – 31.
- Naylor, R. and Cripps, M. (1991) 'An economic theory of the open shop trade union' *European Economic Review* 37 (8): 1599 – 1620.
- Nickel, S and Van Ours, J. (2000) 'The Netherlands and the UK: A European employment miracle' *Economic Policy* 30: 135 – 180.
- Nolan, P. and Marginson, P. (1990) 'Skating on thin ice? David Metcalf on unions and productivity' *British Journal of Industrial Relations* 28(2): 227 – 47.
- Oaxaca, R. (1973) 'Male – female wage differentials in urban labor markets' *International Economic Review*, 14 (October): 693 – 709.
- Pencavel, J. (2003) *The surprising retreat of union Britain* National Bureau for Economic Research Working Paper 9564, Cambridge MA: NBER.
- Penn, R. and Scattergood, H. (1996) 'The experience of trade unions in Rochdale during the 1980s in D. Gallie, R. Penn and M. Rose (eds.) *Trade Unionism in Recession*, Oxford: Oxford University Press, pp. 244 – 85.

- Prais, S. J. (1981) *Productivity and Industrial Structure* Cambridge: Cambridge University Press.
- Price, R. and Bain, G.S. (1983) 'Union growth in Britain: Retrospect and prospect' *British Journal of Industrial Relations* 21(1): 46 – 68.
- Riddell, C. and Riddell, W.C.. (2001) 'Changing patterns of unionization; The North American experience, 1984 – 1998' Discussion Paper, Department of Economics, University of British Columbia, <http://www.econ.ubc.ca/discpapers/dp0123.pdf> .
- Richardson, R. (1977) 'Trade union growth' *British Journal of Industrial Relations* 15 (2): 279 – 92.
- Rose, M. (1996) 'Still life in Swindon: Case-studies in union survival and employer policy in a 'sunrise' labour market' in D. Gallie, R. Penn and M. Rose (eds.) *Trade Unionism in Recession*, Oxford: Oxford University Press, pp. 65 – 139.
- Schenk, C. (2003) 'Social movement unionism; beyond the organizing model' in P. Fairbrother and C. Yates (eds.) *Trade Unions in Renewal: A Comparative Study*, London: Continuum, pp. 244 – 62.
- Sharpe, I. (1971) 'The growth of Australian trade unions 1907 – 1969' *Journal of Industrial Relations* 13(2): 144 – 53.
- Smith, P. (2001) *Unionization and Union Leadership: The Road Haulage Industry*, London: Continuum.
- Smith, P. and Morton, G. (1993) 'Union exclusion and the de-collectivism of industrial relations in contemporary Britain' *British Journal of Industrial Relations* 31(1): 365 – 382.
- Stewart, M. (1995) 'Union wage differentials in a time of declining unionisation' *Oxford Bulletin of Economics and Statistics* 57(1): 143 – 166.
- Taylor, M. F. (ed). With Brice, J., Buck, N. and Prentice-Lane, E. (2001) *British Household Panel Survey User Manual Vol. A*, Colchester: University of Essex.
- Towers, B. (1989). 'Running the Gauntlet: British Trade Unions Under Thatcherism, 1979 – 1988' *Industrial and Labor Relations Review* 42(2): 163 – 88.
- Turner, H.A., Clack, G. and Roberts, G. (1967) *Labour Relations in the Motor Industry*, London: George Allan and Unwin.
- Turner, L. (2003) 'Reviving the labor movement: A comparative perspective' in D. Cornfield and H. McCammon (eds.) *Labor Revitalization: Global Perspective and New Initiatives: Research in the Sociology of Work* vol. 11: 23 - 58. Greenwich CT: JAL.
- Undy, R., Ellis, V., McCarthy, W.E.J. and Halmos, A.M. (1981) *Change in Trade Unions*, London: Hutchinson.

- Vernon, G. (2000) *Issues of Method in Research in Employment Relations*, Skope Research Paper no. 9, Oxford: Skope.
- Visser, J. (2002) 'Why fewer workers join unions in Europe' *British Journal of Industrial Relations* 40(3): 403 – 431.
- Waddington, J. (1992) 'Trade union membership in Britain, 1980 – 87: unemployment and restructuring' *British Journal of Industrial Relations* 30(2): 287 – 324.
- Western, B. (1997) *Between Class and Market: postwar unionization in the capitalist democracies*, Princeton NJ: Princeton University Press.
- Western, B. (1995) 'A comparative study of working class disorganization: union decline in eighteen advanced capitalist countries' *American Sociological Review* 60(2): 179 – 201.
- Willman, P. (1989) 'The logic of 'market share' trade unionism: Is membership decline inevitable?' *Industrial Relations Journal* 20(1): 260 – 70.
- Willman, P. (2001) 'The viability of trade union organization: a bargaining unit analysis' *British Journal of Industrial Relations* 39(1): 97 – 117.
- Willman, P. (2004) 'Structuring union; the administrative rationality of collective action' in J. Kelly and P. Willman (eds) *Union Organization and Activity*, London: Routledge, pp. 73 – 88.
- Willman, P. and Morris, T. (1995) 'Financial management and financial performance in British trade unions', *British Journal of Industrial Relations*, 33(2): 289 – 98
- Winchester, D. and Bach, S. (1995) 'The State: The Public Sector' in P. Edwards (ed.) *Industrial Relations; theory and practice in Britain*, Oxford: Blackwell, pp. 204 - 336
- Young, H. (1990) *One of Us*, Macmillan, London
- Zweig, F. (1961) *The Worker in an Affluent Society: Family life and Industry*, London: Heinemann

Table A1
Trade Union Density in the United Kingdom and Great Britain 1893 - 2003

	UK Trade Union Density	GB Trade Union Density	GB Trade Union Density from the Labour Force Survey
1893	12.3		
1894	11.6		
1895	11.1		
1896	11.5		
1897	12.2		
1898	12.2		
1899	13		
1900	13.8		
1901	13.8		
1902	13.7		
1903	13.4		
1904	13.3		
1905	13.3		
1906	14.3		
1907	16.2		
1908	16.5		
1909	16.3		
1910	16.2		
1911	19.4		
1912	20.9		
1913	24.8		
1914	25.5		
1915	28.3		
1916	31.4		
1917	38.4		
1918	45.8		
1919	45.7		
1920	47.9		
1921	42.7		
1922	36.1		
1923	34.3		
1924	34.5		
1925	33.9		
1926	32.1		
1927	29.4		
1928	28.6		
1929	28.5		
1930	28.9		
1931	30.1		
1932	27.1		
1933	26.2		
1934	26.6		
1935	27.7		
1936	29.2		
1937	31.2		
1938	32.4		
1939	32.4		
1940	35.7		
1941	39		
1942	48.8		
1943	51.4		
1944	46.1		
1945	46.3		
1946	48.7		
1947	47.5		
1948	47.5		

1949	46.9	
1950	46.2	43.8
1951		44.7
1952		44.7
1953		44.5
1954		44.5
1955		44.2
1956		43.8
1957		43.7
1958		43.0
1959		44.5
1960		44.5
1961		44.1
1962		44.1
1963		44.3
1964		44.3
1965		44.3
1966		43.6
1967		44.2
1968		44.6
1969		45.9
1970		49.3
1971		49.9
1972		50.9
1973		50.1
1974		51.2
1975		53.2
1976		54.5
1977		56.3
1978		57.2
1979		57.0
1980		57.5
1981		55.0
1982		53.8
1983		53.0
1984		51.4
1985		50.2
1986		49.0
1987		48.2
1988		46.3
1989		44.5
1990		39.0
1991		38.1
1992		37.5
1993		35.8
1994		35.1
1995		33.6
1996		32.1
1997		31.2
1998		30.2
1999		29.6
2000		29.5
2001		29.4
2002		28.8
2003		29.9

Sources: Milner and Metcalf (1993) and Charlwood and Metcalf (2005).

Trade union density is the number of union members divided by total employees, multiplied by one hundred.

Table A3.1 Decomposition results for all workplaces

	Structural change $(X^{84} - X^{80})\beta^{80}$	Behavioural change $(\beta^{84} - \beta^{80})X^{80}$	Interaction term $(X^{84} - X^{80})(\beta^{84} - \beta^{80})$	Observed decline in Aggregate union density $(X^{84} - X^{80})\beta^{80} + (\beta^{84} - \beta^{80})X^{80} + (X^{84} - X^{80})(\beta^{84} - \beta^{80})$
Composition				
% Part-time	0.013659	-2.01311	-0.232575	-2.232
% Non-manual occupations	-0.55796	0.891566	0.1119901	0.44559
Production Sector	0.027594	1.186805	-0.335614	0.87879
Private Sector	1.04061	-0.68914	0.0632393	0.41471
25 - 49 Employees	-0.00148	-0.48098	-0.109668	-0.5921
50 - 199 Employees	-0.05387	-0.55652	-0.055849	-0.6662
500+ employees	-0.14366	-0.15824	0.0321488	-0.2698
Workplace <6 years old	0.018589	-0.14155	-0.016331	-0.1393
Constant		-0.05889		-0.0589
Total	0.34348	-2.0201	-0.542658	-2.2192
Union coverage				
Union recognition	-2.02557	-1.72165	0.0804828	-3.6667
Closed Shop agreement	-1.81806	0.619215	-0.174954	-1.3738
Total Union Coverage	-3.8436	-1.1024	-0.09447	-5.0405
Total	-3.5002	-3.1225	-0.63713	-7.2598

Calculated from means and coefficients reported in table 3.1.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A3.2 Decomposition results for private sector workplaces

	Structural change $(X^{84} - X^{80})\beta^{80}$	Behavioural change $(\beta^{84} - \beta^{80})X^{80}$	Interaction term $(X^{84} - X^{80})(\beta^{84} - \beta^{80})$	Observed decline in Aggregate union density $(X^{84} - X^{80})\beta^{80} + (\beta^{84} - \beta^{80})X^{80} + (X^{84} - X^{80})(\beta^{84} - \beta^{80})$
Composition				
% Part-time	-0.03155	-1.04085	-0.048043	-1.1204
% Non-manual occupations	-1.26015	1.988063	0.437638	1.16555
Production Sector	0.115859	1.236395	-0.245896	1.10636
25 - 49 Employees	-0.00084	-0.53612	-0.130198	-0.6672
50 - 199 Employees	-0.11766	-0.54405	-0.094699	-0.7564
500+ employees	-0.52765	0.452384	-0.138272	-0.2135
Workplace <6 years old	0.074914	-0.27269	-0.100158	-0.2979
Constant		-1.81545		-1.8154
Total	-1.7471	-0.5323	-0.319629	-2.599
Union coverage				
Union recognition	-5.50269	-1.90743	0.2825692	-7.1276
Closed Shop agreement	-3.707	0.557809	-0.233028	-3.3822
Total Union Coverage	-9.2097	-1.3496	0.049541	-10.51
Total	-10.957	-1.8819	-0.27009	-13.109

Calculated from means and coefficients reported in table 3.3.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A3.3 Decomposition results for public sector workplaces

	Structural change $(X^{84} - X^{80})\beta^{80}$	Behavioural change $(\beta^{84} - \beta^{80})X^{80}$	Interaction term $(X^{84} - X^{80})(\beta^{84} - \beta^{80})$	Observed decline in Aggregate union density $(X^{84} - X^{80})\beta^{80} + (\beta^{84} - \beta^{80})X^{80} + (X^{84} - X^{80})(\beta^{84} - \beta^{80})$
Continuing workplaces				
Composition				
% Part-time	0.042755	-3.3342	-0.558541	-3.85
% Non-manual occupations	0.096583	1.35824	-0.024168	1.43066
Production Sector	0.309158	1.05586	-0.537071	0.82795
25 - 49 Employees	-0.02604	-0.35678	-0.095659	-0.4785
50 - 199 Employees	-0.00122	-0.24657	-0.000619	-0.2484
500+ employees	0.183754	0.285892	-0.028746	0.4409
Workplace <6 years old	-0.01555	0.264742	-0.064025	0.18517
Constant		-49.1688		-49.169
Total	0.58945	-50.142	-1.30883	-50.861
Union coverage				
Union recognition	1.369828	44.16024	1.369828	46.8999
Closed Shop agreement	-0.00516	1.647357	-0.005159	1.63704
Total Union Coverage	1.36467	45.8076	1.364669	48.5369
Total	1.95411	-4.334	0.055839	-2.324

Calculated from means and coefficients reported in table 3.5.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A4.1 Decomposition results for all workplaces

	Structural change $(X^{90} - X^{84})\beta^{84}$	Behavioural change $(\beta^{90} - \beta^{84})X^{84}$	Interaction term $(X^{90}-X^{84})(\beta^{90} - \beta^{84})$	Observed decline in Aggregate union density $(X^{90}-X^{84})\beta^{84} + (\beta^{90} - \beta^{84})X^{84}$ $+ (X^{90}-X^{84})(\beta^{90} - \beta^{84})$
Composition				
% Part-time	-0.313	1.21668	0.1755	1.0792
% Non-manual Occupations	-0.0884	-0.8912	-0.0232	-1.0027
Production Sector	-0.0549	0.20788	-0.0151	0.1379
Private Sector	-0.8508	-3.5334	-0.5983	-4.9825
25 - 49 employees	-0.0127	0.19547	0.0132	0.19592
50 - 199 employees	-0.0369	0.99974	0.03998	1.00278
500+ employees	0.03753	-0.2691	0.0393	-0.1923
Workplace < 6 years old	-0.1021	-0.0624	-0.0945	-0.2591
Constant		5.44995		5.44995
Total	-1.4213	3.31358	-0.4631	1.42922
Union Coverage				
Union recognition	0.229	9.83632	-1.8542	8.21108
Collective bargaining coverage	-12.949	-8.9391	2.43158	-19.457
Closed shop agreement	-3.0254	-0.669	0.56158	-3.1328
Total Union Coverage	-15.746	0.22821	1.13891	-14.379
Total	-17.167	3.5418	0.67584	-12.949

Calculated from means and coefficients reported in table 4.1.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A4.2 Decomposition results for private sector workplaces

	Structural change $(X^{90} - X^{84})\beta^{84}$	Behavioural change $(\beta^{90} - \beta^{84})X^{84}$	Interaction term $(X^{90}-X^{84})(\beta^{90} - \beta^{84})$	Observed decline in Aggregate union density $(X^{90}-X^{84})\beta^{84} + (\beta^{90} - \beta^{84})X^{84} + (X^{90}-X^{84})(\beta^{90} - \beta^{84})$
Composition				
% Part-time	-0.2865	0.87844	0.1227	0.71464
% Non-manual Occupations	0.02433	-2.2194	0.01932	-2.1758
Production Sector	-0.1449	-0.8266	0.13824	-0.8333
25 - 49 employees	0.00588	0.08745	-0.001	0.09229
50 - 199 employees	-0.0543	1.24449	0.04657	1.23681
500+ employees	0.02553	0.45863	-0.0791	0.40507
Workplace < 6 years old	-0.3449	0.31695	0.42622	0.39829
Constant		-2.2754		
Total	-0.7748	-2.3355	0.6729	-0.162
Union Coverage				
Union recognition	0.39624	3.16747	-0.6297	2.93405
Collective bargaining coverage	-8.8221	3.38047	-0.8459	-6.2876
Closed shop agreement	-3.0824	-2.1269	1.68386	-3.5254
Total Union Coverage	-11.508	4.42107	0.20826	-6.879
Total	-12.283	2.08556	0.88116	-7.041

Calculated from means and coefficients reported in table 4.3.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A4.3 Decomposition results for public sector workplaces

	Structural change $(X^{90} - X^{84})\beta^{84}$	Behavioural change $(\beta^{90} - \beta^{84})X^{84}$	Interaction term $(X^{90} - X^{84})(\beta^{90} - \beta^{84})$	Observed decline in Aggregate union density $(X^{90} - X^{84})\beta^{84} + (\beta^{90} - \beta^{84})X^{84} + (X^{90} - X^{84})(\beta^{90} - \beta^{84})$
Composition				
% Part-time	-0.7206	0.81972	0.20141	0.3005
% Non-manual Occupations	-0.7567	-1.2323	-0.1823	-2.1713
Production Sector	-0.124	0.32933	-0.2773	-0.072
25 - 49 employees	0.00874	0.18255	0.03233	0.22362
50 - 199 employees	0.01438	1.58009	-0.0926	1.50188
500+ employees	0.0056	-1.0378	0.01227	-1.0199
Workplace < 6 years old	0.32599	-0.434	-0.6697	-0.7777
Constant		58.4929		58.4929
Total	-1.2467	58.7005	-0.9759	56.4779
Union Coverage				
Union recognition	-1.1735	-27.823	2.1923	-26.804
Collective bargaining coverage	-11.912	-29.978	5.74838	-36.142
Closed shop agreement	-2.8183	0.25603	-0.2319	-2.7942
Total Union Coverage	-15.904	-57.545	7.70875	-65.74
Total	-17.15	1.15508	6.73286	-9.2626

Calculated from means and coefficients reported in table 4.5.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A5.1 – Decomposition results for all workplaces

	(X98 – X90)B90 (1)	(B98 – B90)X90 (2)	(X98 – X90) (B98 – B90) (3)	Observed decline (1+2+3)
Continuing workplaces				
Composition				
% part-time	-0.112	-2.0955	-0.399	-2.6065
% unskilled	-0.3791	-1.343	0.44405	-1.2781
% semiskilled	0.06192	0.26561	0.02055	0.34808
% skilled	-0.0923	1.39209	-0.1169	1.18293
% non-manual	-0.0085	-1.7511	0.04155	-1.718
Production sector	0.0636	-1.8218	-0.0959	-1.8542
Private sector	-0.6061	-0.7714	-0.0684	-1.4459
25 - 49 employees	-0.0379	-0.6499	0.10618	-0.5816
200 - 499 employees	-0.0183	-0.7688	0.08141	-0.7057
500 + employees	-0.0404	0.3874	0.06024	0.40725
Constant		11.0706		11.0706
Total	-1.169	3.91415	0.07376	2.81891
Union				
Union recognition	-0.9677	12.1876	-1.1988	10.0211
Collective bargaining coverage	-6.566	-17.81	5.66314	-18.712
Total continuing	-8.7027	-1.7078	4.53809	-5.8724
Leavers cf. joiners				
Composition				
% part-time	-0.2422	-0.1476	-0.1578	-0.5476
% unskilled	0.10422	0.57696	-0.2174	0.46377
% semiskilled	0.00823	0.69101	-0.0846	0.61467
% skilled	-0.0214	0.20838	-0.0722	0.11471
% non-manual	-0.8532	1.43271	1.26373	1.84325
Production sector	0.11428	-0.1198	0.06572	0.06025
Private sector	-0.1204	-0.2848	-0.0206	-0.4257
25 - 49 employees	0.01368	-0.1438	-0.0237	-0.1538
200 - 499 employees	-0.0033	-0.1909	-0.0286	-0.2228
500 + employees	0.01157	-0.1675	-0.0526	-0.2085
Constant				
Total	-0.9884	1.85463	0.67195	1.53813
Union				
Union recognition	0.3057	-0.483	-0.9409	-1.1182
Collective bargaining coverage	-0.714	-5.4588	0.6272	-5.5456
total leavers/ joiners	-1.3967	-4.0872	0.35822	-5.1257
Total	-10.099	-5.795	4.89631	-10.998

Calculated from means and coefficients reported in table 5.1.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union

density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A5.2 – Decomposition results for private sector workplaces

Private	(X98 – X90)B90 (1)	(B98 – B90)X90 (2)	(X98 – X90) (B98 – B90) (3)	Observed decline (1+2+3)
Continuing workplaces				
Workplace and workforce characteristics				
% Part time	-0.22548554	-0.27351814	-0.08943779	-0.5884415
% Unskilled	-0.50167754	-2.2081721	0.69235188	-2.0174978
% Semiskilled	0.42099478	-0.17249598	-0.04363542	0.2048634
% Skilled	-0.00434731	1.8155086	-0.00429585	1.8068654
% Non-manual	0.03723306	-0.59310261	-0.03442328	-0.5902928
Production sector	0.01280144	-1.0339904	-0.02236523	-1.0435542
25 - 49 employees	0.07149942	-0.26520512	0.04766689	-0.1460388
200 - 499 employees	0.02410911	-1.0885018	0.12040591	-0.9439868
500 + employees	0.05930496	0.368693	0.11737164	0.5453696
constant		6.3945602		6.3945602
Total	-0.1055676	2.9437757	0.7836388	3.6218468
Union coverage				
Union recognitions	-0.00463901	12.938843	-0.07322947	12.860975
Collective bargaining coverage	-5.3019006	-16.92516	4.1604489	-18.066612
Total continuing	-5.4121072	-1.0425414	4.8708582	-1.5837904
Leavers cf. joiners				
Workforce and workplace characteristics				
% Part time	-0.28708085	0.01931314	0.01469982	-0.2530679
% Unskilled	-0.07503044	-0.29802723	0.14176871	-0.231289
% Semiskilled	-0.06861618	0.30907078	-0.06593644	0.1745182
% Skilled	-0.24227928	-0.53887189	0.22442139	-0.5567298
% Non-manual	-0.2394243	0.666243	0.38905233	0.815871
Production sector	0.15652594	-0.21034723	0.12004499	0.0662237
25 - 49 employees	-0.00276304	-0.37697383	-0.02242945	-0.4021663
200 - 499 employees	0.00173377	-0.2207231	0.0022988	-0.2166905
500 + employees	-0.02610354	0.12713461	-0.07761261	0.0234185
constant				
Total	-0.7830379	-0.5231818	0.7263075	-0.5799121
Union coverage				
Union recognitions	-0.08095457	2.62296407	-1.96163948	0.58037
Collective bargaining coverage	-3.7265371	-5.9436111	2.9294654	-6.7406828
total leavers/ joiners	-4.5905296	-3.8438288	1.6941335	-6.7402249
Total	-10.002637	-4.8863701	6.5649916	-8.3240153

Calculated from means and coefficients reported in table 5.3.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A5.3 – Decomposition results for public sector workplaces

Public	(X98 – X90)/B90 (1)	(B98 – B90)/X90 (2)	(X98 – X90) (B98 – B90) (3)	Observed decline (1+2+3)
Continuing workplaces				
Workplace and workforce characteristics	-0.3260724	-6.0257071	-0.714032	-7.0658115
% Part time	-0.3445501	1.7955444	-0.6426047	0.8083896
% Unskilled	-0.1916648	0.5312485	-0.4101037	-0.0705201
% Semiskilled	-0.6922112	-1.2191261	0.6482333	-1.263104
% Skilled	-0.049818	-2.3347292	0.176682	-2.2078651
% Non-manual	0.0451885	-0.847718	0.4593759	-0.3431536
Production sector	-0.1251592	-0.9560031	0.090752	-0.9904103
25 - 49 Employees	-0.1673079	-0.1270686	0.0143479	-0.2800287
200 - 499 Employees	-0.0034438	0.0076306	0.0001933	0.0043801
500+ Employees		16.05913		16.05913
Constant	-1.8550388	6.8832013	-0.377156	4.6510066
Total				
Union coverage				
Union recognition	-1.3799257	11.043584	-1.1990351	8.4646232
Collective bargaining coverage	-6.1198411	-23.543769	7.4617599	-22.20185
Total continuing	-9.3548056	-5.6169837	5.8855688	-9.0862204
Leavers cf. joiners				
Workplace and workforce characteristics	-0.3009687	-0.3144701	-0.6509681	-1.2664069
% Part time	-0.0836775	1.4807451	0.154675	1.5517426
% Unskilled	-0.0626711	0.4069894	0.1874024	0.5317207
% Semiskilled	-0.0044871	0.8205878	0.0137525	0.8298531
% Skilled	-2.7872304	1.8973442	3.7874217	2.8975355
% Non-manual	-0.0237718	0.2261723	-0.1751991	0.0272014
Production sector	0.1464435	0.1621836	0.0794614	0.3880885
25 - 49 Employees	0.0015924	-0.1351216	-0.1258549	-0.2593842
200 - 499 Employees	-0.0875543	-0.0534709	-0.8847838	-1.0258089
500 + Employees				
Total	-3.202325	4.4909598	2.385907	3.6745418
Union coverage	3.2272124	-1.4659581	-2.4665739	-0.7053196
Union recognition	5.0536446	-4.1468056	-5.6884179	-4.7815789
Collective bargaining coverage	8.280857	-5.6127637	-8.1549918	-5.4868985
Total	5.0785319	-1.1218039	-	-1.8123568
			5.7690848	
total leavers/ joiners	-4.2762736	-	0.116484	-10.898577
		6.7387876		

Calculated from means and coefficients reported in table 5.5.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A5.4 - Results of regression analysis on the determinants of union density in all workplaces in 1990 and 1998 and the mean values of variables used in the regressions

	Regression results 1990	Mean value 1990	Regression results 1998	Mean value 1998
Continuing workplaces				
% part-time	-0.035 (0.037)	14	-0.185 (0.034)**	17
Occupation (ref. senior managers and professionals)				
% unskilled manual	0.024 (0.052)	18	-0.011 (0.054)	11
% semi-skilled manual	0.017 (0.056)	13	0.094 (0.051)	12
% skilled manual	0.048 (0.054)	11	0.250 (0.083)**	9
% non-manual	-0.012 (0.066)	25	-0.046 (0.050)	29
% covered by collective bargaining	0.558 (2.074)**	38	0.068 (0.031)*	28
Workplace with union recognition	15.462 (3.614)**	0.47	42.005 (2.645)**	0.47
Workplace with closed shop agreement	6.644 (2.074)**	0.04	10.719 (5.713)	0.01
Production sector (ref. Services)	4.544 (1.448)**	0.29	-2.233 (2.114)	0.28
Private Sector (ref. public sector)	-14.525 (2.264)**	0.53	-15.525 (2.656)**	0.54
Workplace size (ref. 201 – 499 employees)				
25 – 49 employees	2.554 (2.066)	0.14	-3.006 (2.287)	0.12
50 – 199 employees	1.168 (1.617)	0.28	-2.230 (1.975)	0.26
500+ employees	-2.118 (1.929)	0.21	0.691 (2.791)	0.24
Leavers and joiners				
% part-time	-0.048 (0.033)	3	-0.110 (0.043)*	7
% unskilled manual	-0.088 (0.064)	5	0.065 (0.078)	3

% semi-skilled manual	-0.036 (0.064)	4	0.201 (0.073)**	3
% skilled manual	-0.011 (0.079)	3	0.080 (0.082)	2
% non-manual	-0.165 (0.082)*	5	0.080 (0.072)	11
Production sector	-1.528 (2.226)	0.1	-3.408 (3.535)	0.04
Private sector	-10.307 (2.910)**	0.18	-11.650 (4.781)*	0.18
25 – 49 employees	1.573 (3.189)	0.07	-1.067 (3.777)	0.08
50 – 199 employees	-0.326 (3.152)	0.07	-3.139 (3.884)	0.08
500+ employees	2.305 (3.546)	0.02	-6.495 (5.574)	0.03
% covered by collective bargaining	0.724 (0.060)**	8	0.090 (0.046)*	8
workplace with union recognition	10.869 (10.996)	0.11	24.792 (8.434)**	0.11
workplace with no union recognition	4.505 (8.163)	0.1	-13.159 (8.950)	0.13
Closed Shop	6.231 (3.944)	0.01	11.330 (15.841)	0.001
Constant	16.816 (5.047)**		24.543 (4.240)**	
N	1427		1403	1403
R²	0.81		0.65	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses

The results differ from those reported in table 5.1 because of the inclusion of a closed shop variable, which reduced the sample size in 1990.

Mean values which were percentages were rounded to the nearest whole number, mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places.

Results are weighted by each workplace's employment share

Source: 1990 Workplace Industrial Relations Survey and 1998 Workplace Employment Relations Survey

Table A5.5 - Decomposition of regression analysis results (closed shop)

	(X98 – X90)B90 (1)	(B98 – B90)X90 (2)	(X98 – X90) (B98 – B90) (3)	Observed decline (1+2+3)
Continuing workplaces				
Composition				
% part-time	-0.09515	-2.16467	-0.40679	-2.66661
% unskilled	-0.16979	-0.62539	0.247861	-0.54732
% semiskilled	-0.01087	0.986179	-0.0493	0.926011
% skilled	-0.10356	2.289658	-0.43886	1.747235
% non-manual	-0.04756	-0.8382	-0.12881	-1.01457
Production sector	-0.07663	-1.99677	0.114294	-1.95911
Private sector	-0.11507	-0.5326	-0.00792	-0.6556
25 - 49 employees	-0.06064	-0.79219	0.132019	-0.72081
200 - 499 employees	-0.0305	-0.95455	0.08875	-0.89631
500 + employees	-0.04824	0.600439	0.063975	0.616175
Total	-0.75803	7.726154	-0.38478	6.583345
Union				
Union recognition	-0.05178	12.54175	-0.0889	12.40107
Collective bargaining coverage	-5.14112	-18.4146	4.513019	-19.0427
Closed Shop	-0.1962	0.171633	-0.12032	-0.14489
Total	-5.3891	-5.70126	4.303802	-6.78656
Total continuing	-6.14713	2.024898	3.91902	-0.20321
Leavers cf. joiners				
Composition				
% part-time	-0.16756	-0.20815	-0.21358	-0.58929
% unskilled	0.191184	0.742045	-0.33275	0.600482
% semiskilled	0.028795	0.838548	-0.19189	0.675448
% skilled	0.019161	0.364246	-0.15569	0.227721
% non-manual	-1.00177	1.266718	1.488188	1.753141
Production sector	0.092885	-0.19149	0.11427	0.015669
Private sector	-0.01837	-0.23523	-0.00239	-0.256
25 - 49 employees	0.02275	-0.18109	-0.03818	-0.19652
200 - 499 employees	-0.00195	-0.20816	-0.01686	-0.22698
500 + employees	0.008634	-0.19305	-0.03296	-0.21737
Constant				
Total	-0.82624	1.994397	0.618153	1.786306
Union				
Union recognition	0.02599	1.478502	0.033294	1.537787
no union recognition	0.149731	-1.7304	-0.58707	-2.16774
Collective bargaining coverage	-0.30692	-5.08781	0.268743	-5.12598
Closed Shop	-0.04904	0.047346	-0.04012	-0.04181
Total	-0.18024	-5.29236	-0.32516	-5.79775
total leavers/ joiners	-1.00648	-3.29796	0.292996	-4.01145
Total	-7.15361	-1.27306	3.91902	-4.50766

Calculated from means and coefficients reported in table A5.1.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A5.6 - Decomposition of regression analysis results (all workplaces)

	Structural change $(X^{98} - X^{90})\beta^{90}$	Behavioural change $(\beta^{98} - \beta^{90})X^{90}$	Interaction term $(X^{98} - X^{90})(\beta^{98} - \beta^{90})$	Observed decline in Aggregate union density $(X^{98} - X^{90})\beta^{90} + (\beta^{98} - \beta^{90})X^{90} + (X^{98} - X^{90})(\beta^{98} - \beta^{90})$
Continuing workplaces				
Union coverage				
Collective Bargaining coverage	-5.14	-18.41	4.51	-19.04
Union recognition	-0.05	12.54	-0.09	12.4
Closed Shop	-0.2	0.17	-0.12	-0.15
Worker and workplace characteristics	-0.76	7.73	-0.39	6.58
Total	-6.15	2.02	3.92	-0.21
Leavers cf. Joiners				
Union coverage				
Collective bargaining coverage	-0.31	-5.09	0.27	-5.13
Union recognition	0.18	-0.25	-0.56	-0.63
Closed Shop	-0.05	0.05	-0.04	-0.04
Worker and workplace characteristics	-0.83	1.99	0.06	1.1
Total	-1.01	-3.3	-0.27	-4.7
TOTAL	-7.16	-1.28	3.65	-4.79

Results are rounded to 2 decimal places

Calculated from means and coefficients reported in table A5.1.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A5.7 Results of regression analysis on the determinants of union density in private sector workplaces in 1990 and 1998 and the mean values of variables used in the regressions

	Regression results 1990	Mean value 1990	Regression results 1998	Mean value 1998
Continuing workplaces % part-time	-0.071 (0.026)**	11	-0.086 (0.034)*	15
Occupation (ref. senior managers and professionals)				
% unskilled manual	0.112 (0.040)**	17	-0.031 (0.059)	11
% semi-skilled manual	0.136 (0.038)**	14	0.121 (0.056)*	16
% skilled manual	0.167 (0.044)**	12	0.326 (0.099)**	12
% non-manual	0.060 (0.041)	22	0.012 (0.056)	26
Workplace with union recognition	1.271 (1.817)	0.35	17.166 (6.540)**	0.37
% Covered by collective bargaining	0.780 (0.028)**	26	36.318 (3.158)**	21
Workplace with closed shop agreement	2.562 (2.343)	0.05	0.167 (0.045)**	0.01
Production sector (ref. Services)	0.929 (1.198)	0.39	-1.117 (2.171)	0.38
Workplace size (ref. 201 – 499 employees)				
25 – 49 employees	-3.930 (1.515)**	0.13	-5.266 (2.259)*	0.11
50 – 199 employees	-1.215 (1.364)	0.3	-4.697 (2.043)*	0.26
500+ employees	0.627 (1.662)	0.16	3.660 (2.956)	0.21
Leavers and joiners % part-time	-0.065 (0.032)*	4	-0.089 (0.040)*	7

% unskilled manual	0.027 (0.063)	6	-0.035 (0.057)	3
% semi-skilled manual	0.090 (0.063)	5	0.141 (0.051)**	4
% skilled manual	0.129 (0.089)	5	0.008 (0.061)	3
% non-manual	-0.027 (0.082)	6	0.033 (0.053)	11
Production sector	-1.099 (2.402)	0.14	-3.452 (3.076)	0.06
25 – 49 employees	-0.378 (3.641)	0.08	-4.642 (3.753)	0.1
50 – 199 employees	-2.386 (3.681)	0.09	-4.095 (3.909)	0.09
500+ employees	1.882 (3.920)	0.03	6.443 (5.488)	0.01
% covered by collective bargaining	0.757 (0.053)**	9	0.160 (0.057)**	5
workplace with union recognition	6.007 (8.331)	0.12	35.978 (7.675)**	0.07
workplace with no union recognition	5.930 (7.338)	0.13	1.550 (6.631)	0.18
Workplace with closed shop agreement	11.239 (3.992)**	0.01	12.574 (11.143)	0.001
Constant	-3.104 (3.125)		3.280 (4.382)	
N	1064	1064	1009	1009
R²	0.89		0.71	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses

These results differ from those reported in table 5.3 above because of the inclusion of a closed shop variable, which reduced the sample size for 1990.

Mean values which were percentages were rounded to the nearest whole number, mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places.

Results are weighted by each workplace's employment share

Sources: 1990 Workplace Industrial Relations Survey and 1998 Workplace Employment Relations Survey

Table A5.8 Decomposition results for private sector workplaces (closed shop)

	(X98 – X90)B90 (1)	(B98 – B90)X90 (2)	(X98 – X90) (B98 – B90) (3)	Observed decline (1+2+3)
Continuing workplaces				
Composition				
% part-time	-0.26976	-0.16526	-0.05815	-0.49316
% unskilled	-0.65063	-2.36267	0.829253	-2.18404
% semiskilled	0.332036	-0.20718	-0.03656	0.088297
% skilled	-0.12601	1.940327	-0.11984	1.694482
% non-manual	0.207441	-1.06688	-0.16453	-1.02397
Production sector	-0.00746	12.16006	0.01643	12.16903
25 - 49 employees	0.094354	-16.1291	0.032069	-16.0027
200 - 499 employees	0.043619	0.739853	0.12498	0.908452
500 + employees	0.031158	-0.78704	0.150694	-0.60518
Total	-0.34525	-5.87785	0.774351	-5.44875
Union				
Union recognition	0.027372	12.16006	0.754846	12.94228
Collective bargaining coverage	-3.82007	-16.1291	3.002606	-16.9465
Closed Shop	-0.09702	0.739853	-0.55292	0.089913
Total	-3.88972	-3.22916	3.204535	-3.91435
Total continuing	-4.23498	-9.10701	3.978886	-9.3631
Leavers cf. joiners				
Composition				
% part-time	-0.18714	-0.09233	-0.0709	-0.35037
% unskilled	-0.07858	-0.35828	0.180926	-0.25593
% semiskilled	-0.10943	0.239377	-0.06252	0.067433
% skilled	-0.30112	-0.62246	0.282124	-0.64145
% non-manual	-0.13892	0.368575	0.31252	0.542179
Production sector	0.088255	-0.32063	0.188849	-0.04352
25 - 49 employees	-0.00485	-0.35132	-0.05476	-0.41093
200 - 499 employees	0.00897	-0.15903	0.006427	-0.14363
500 + employees	-0.03431	0.132385	-0.08317	0.014906
Constant		6.383591		6.383591
Total	-0.75712	5.219879	0.699504	5.162264
Union				
Union recognition	-0.29432	3.512574	-1.46835	1.749902
no union recognition	0.285402	-0.57082	-0.21082	-0.49624
Collective bargaining coverage	-2.99857	-5.37868	2.365738	-6.01151
Closed Shop	-0.12915	0.016272	-0.01534	-0.12822
Total	-3.13664	-2.42065	0.671225	-4.88606
total leavers/ joiners	-3.89376	2.799231	1.370729	0.276204
Total	-8.12873	-6.30778	5.349616	-9.0869

Calculated from means and coefficients reported in table A5.8.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A5.9 Decomposition of regression analysis results (private sector workplaces)

	Structural change $(X^{98} - X^{90})\beta^{90}$	Behavioural change $(\beta^{98} - \beta^{90})X^{90}$	Interaction term $(X^{98} - X^{90})(\beta^{98} - \beta^{90})$	Observed decline in Aggregate union density $(X^{98} - X^{90})\beta^{90} + (\beta^{98} - \beta^{90})X^{90} + (X^{98} - X^{90})(\beta^{98} - \beta^{90})$
Continuing workplaces				
Union coverage				
Collective Bargaining coverage	-3.82	-16.13	3.00	-16.95
Union recognition	0.03	12.16	0.75	12.94
Closed Shop	-0.10	0.74	-0.55	0.19
Worker and workplace characteristics	-0.35	-5.88	0.77	-5.46
Total	-4.24	-9.16	3.97	-9.28
Leavers cf. Joiners				
Union coverage				
Collective bargaining coverage	-3.00	-5.38	2.37	-6.01
Union recognition	0.00	2.94	-1.68	1.26
Closed Shop	-0.13	0.02	-0.02	-0.13
Worker and workplace characteristics	-0.76	5.22	0.7	5.16
Total	-3.89	2.8	1.37	0.28
TOTAL	-8.13	-6.36	5.34	-9.15

Results are rounded to 2 decimal places

Calculated from means and coefficients reported in table A5.8.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A5.10 Results of regression analysis on the determinants of union density in public sector workplaces in 1990 and 1998 and the mean values of variables used in the regressions

	Regression results 1990	Mean value 1990	Regression results 1998	Mean value 1998
Continuing workplaces				
% part-time	-0.123 (0.081)	23	-0.419 (0.084)**	23
Occupation (ref. senior managers and professionals)				
% unskilled manual	-0.050 (0.092)	21	0.161 (0.081)*	11
% semi-skilled manual	-0.086 (0.121)	10	0.094 (0.085)	2
% skilled manual	0.061 (0.091)	9	0.012 (0.105)	3
% non-manual	-0.025 (0.102)	32	-0.043 (0.067)	37
Workplace with union recognition	15.374 (8.847)	0.78	29.210 (6.771)**	0.72
% Covered by collective bargaining	0.359 (0.084)**	65	-0.063 (0.042)	46
Workplace with closed shop agreement	7.371 (3.400)*	0.02	2.634 (5.609)	0.01
Production sector (ref. Services)	-0.534 (3.996)	0.08	-15.618 (6.590)*	0.03
Workplace size (ref. 201 – 499 employees)				
25 – 49 employees	14.167 (5.058)**	0.17	2.180 (5.865)	0.15
50 – 199 employees	8.671 (4.424)	0.24	5.101 (4.484)	0.23
500+ employees	-0.784 (3.735)	0.34	-0.424 (5.093)	0.3
Leavers and joiners				
% part-time	-0.114 (0.163)	2	-0.193 (0.150)	7
% unskilled manual	-0.438 (0.174)*	3	0.347 (0.145)*	2
% semi-skilled manual	-0.232 (0.109)*	1	0.442 (0.174)*	1

	β 1990	Mean 1990	β 1998	Mean 1998
% skilled manual	-0.384 (0.148)**	1	0.560 (0.134)**	1
% non-manual	-0.361 (0.168)*	3	0.136 (0.125)	11
Production sector	4.199 (5.868)	0.02	18.442 (13.580)	0.003
25 – 49 employees	14.352 (7.281)*	0.04	13.091 (8.403)	0.05
50 – 199 employees	2.518 (5.799)	0.03	-4.629 (7.383)	0.06
500+ employees	-1.825 (11.857)	0.04	-16.250 (7.131)*	0.06
% covered by collective bargaining	0.647 (0.124)**	6	-0.077 (0.065)	14
workplace with union recognition	22.033 (18.874)	0.08	5.227 (14.732)	0.21
workplace with no union recognition	-13.775 (13.663)	0.02	-12.250 (14.761)	0.01
Constant	32.476 (9.126)**		47.500 (8.909)**	
N	363	363	394	394
R²	0.50		0.27	

* = Statistically significant at the 10% level

** = statistically significant at the 5% level

*** = statistically significant at the 1% level

Robust standard errors in parentheses

These results differ from those reported in table 5.5 because a variable for the closed shop is included, which reduces the sample size for 1990.

Mean values which were percentages were rounded to the nearest whole number, mean values which were probabilities were rounded to two decimal places. Regression coefficients and standard errors were rounded to three decimal places.

Results are weighted by each workplace's employment share

Sources: 1990 Workplace Industrial Relations Survey and 1998 Workplace Employment Relations Survey

Table A5.11 Decomposition results for public sector workplaces (closed shop)

	(X98 – X90)B90 (1)	(B98 – B90)X90 (2)	(X98 – X90) (B98 – B90) (3)	Observed decline (1+2+3)
Continuing workplaces				
Composition				
% part-time	-0.03959	-6.85188	-0.09582	-6.98729
% unskilled	0.506817	4.471263	-2.15088	2.827202
% semiskilled	0.738029	1.877665	-1.54666	1.069036
% skilled	-0.35554	-0.44969	0.287252	-0.51798
% non-manual	-0.13082	-0.54766	-0.09	-0.76847
Production sector	0.026611	-1.16298	0.751994	-0.38437
25 - 49 employees	-0.30683	-2.05792	0.259623	-2.10513
200 - 499 employees	-0.02931	-0.85061	0.012066	-0.86785
500 + employees	0.031014	0.120696	-0.01422	0.137492
Total	0.440389	-5.45111	-2.58664	-7.59736
Union				
Union recognition	-0.79585	10.74175	-0.71629	9.229611
Collective bargaining coverage	-6.75537	-27.3851	7.948935	-26.1915
Closed Shop	-0.06915	-0.10159	0.044442	-0.12631
Total	-7.62038	-16.7449	7.27709	-17.0882
Total continuing	-7.17999	-22.196	4.690446	-24.6856
Leavers cf. joiners				
Composition				
% part-time	-0.55523	-0.19216	-0.38526	-1.13264
% unskilled	0.156395	1.976126	-0.28011	1.852411
% semiskilled	-0.02276	0.537204	0.066132	0.580572
% skilled	0.112768	1.226064	-0.2773	1.061531
% non-manual	-2.97092	1.431724	4.092849	2.553652
Production sector	-0.06453	0.26379	-0.21884	-0.01957
25 - 49 employees	0.24306	-0.04429	-0.02136	0.177414
200 - 499 employees	0.071793	-0.19945	-0.02136	-0.14901
500 + employees	-0.1071	-0.06901	-0.84658	-1.0227
Constant		15.02454		15.02454
Total	-3.13652	19.95453	2.108181	18.92619
Union				
Union recognition	2.897404	-1.3367	-2.21005	-0.64934
no union recognition	0.11524	0.029977	-0.01276	0.132455
Collective bargaining coverage	5.456167	-4.10062	-6.10364	-4.74809
Closed Shop				
Total	8.468811	-5.40735	-8.32645	-5.26498
total leavers/ joiners	5.332287	14.54719	-6.21827	13.66121
Total	-1.84771	-7.64886	-1.52782	-11.0244

Calculated from means and coefficients reported in table A5.10.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A5.12 Decomposition of regression analysis results (public sector workplaces)

	Structural change $(X^{98} - X^{90})\beta^{90}$	Behavioural change $(\beta^{98} - \beta^{90})X^{90}$	Interaction term $(X^{98} - X^{90})(\beta^{98} - \beta^{90})$	Observed decline in Aggregate union density $(X^{98} - X^{90})\beta^{90} + (\beta^{98} - \beta^{90})X^{90} + (X^{98} - X^{90})(\beta^{98} - \beta^{90})$
Continuing workplaces				
Union coverage				
Collective Bargaining coverage	-6.76	-27.39	7.95	-26.20
Union recognition	-0.80	10.74	-0.72	9.22
Closed Shop	-0.07	-0.10	0.04	0.13
Worker and workplace characteristics	0.03	0.12	-0.01	
Total	-7.60	-16.63	7.26	-16.71
Leavers cf. Joiners				
Union coverage*				
Collective bargaining coverage	5.46	-4.10	-6.10	-5.74
Union recognition	3.02	-1.30	-2.22	-0.30
Worker and workplace characteristics	-3.14	19.95	2.10	18.91
Total	5.34	14.55	-6.22	12.87
TOTAL	-2.26	-2.08	1.04	3.84

Results are rounded to 2 decimal places

Calculated from means and coefficients reported in table A5.10.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

* There was only one workplace with a closed shop among leavers and joiners so the variable was not included in the regression analysis.

Table A6.1 – Decomposition results for all employees

All	Structure	Behaviour	Interaction	Observed
Continuing workers				
Coverage of union job	0.0109234	-0.01604987	-0.00071178	-0.0058382
Worker, job and workplace characteristics				
Public Sector	0.0028271	0.00072206	0.00010526	0.0036544
Production Sector	-0.0003278	0.00864212	0.00019799	0.0085123
Workplace employs more than 100	0.0018602	0.00355689	0.00047933	0.0058964
Part-time job	-0.0010616	0.00313759	0.00027188	0.0023479
Permanent contract	0.0089443	0.00887421	0.00105384	0.0188724
Non-manual occupation	-0.0002247	-0.00572351	-0.00034897	-0.0062972
Skilled manual occupation	-0.000883	0.00044362	-0.0000572	-0.0004966
Semi-skilled manual occupation	0.0005247	-0.00736618	-0.00032083	-0.0071623
Unskilled manual occupations	-3.08E-06	-0.00018213	6.58E-06	-0.0001786
Male	0.0009923	-0.00535067	-0.00040081	-0.0047592
No educational qualifications	0.0002376	0.00436491	-0.00029323	0.0043093
Higher education	0.0032084	-0.00169519	-0.00088798	0.0006252
Ethnic minority	7.902E-05	-0.00040004	-0.00002891	-0.0003499
Entered workforce before 1968	-8.342E-05	0.00423378	0.00026981	0.0044202
Entered workforce between 1968 & 1980	-0.0016455	-0.00066696	-0.00008744	-0.0023999
Constant		-0.01067626		-0.0106763
Total composition	0.0144444	0.00191424	-4.0683E-05	0.016318
Total continuing workers	0.0253679	-0.01413563	-0.000752463	0.0104798
Leavers cf. joiners				
Coverage of union job	-0.043042	-0.01261387	0.00689528	-0.0487606
Worker, job and workplace characteristics				
Public Sector	-0.0024082	-0.00092154	0.00030265	-0.0030271
Production Sector	-0.0005048	-0.00652041	0.00323487	-0.0037904
Workplace employs more than 100	-0.0016899	-0.00440631	0.00199062	-0.0041056
Part-time job	0.0009904	0.00294992	-0.00046584	0.0034745
Permanent contract	-0.0089293	-0.00306003	0.00096039	-0.011029
Non-manual occupation	-0.0002601	-0.00258286	0.00053152	-0.0023114
Skilled manual occupation	-0.0005757	-0.00015736	0.00008685	-0.0006462
Semi-skilled manual occupation	-0.0019163	-0.0019697	0.00096662	-0.0029194
Unskilled manual occupations	-0.0001679	-0.00061955	0.00021059	-0.0005769
Male	-0.000896	0.00059379	-0.00017407	-0.0004763
No educational qualifications	0.0003076	0.0028309	-0.00180183	0.0013367
Higher education	0.0004364	0.00106109	0.0005251	0.0020226
Ethnic minority	2.952E-05	0.00103469	-0.00010006	0.0009642
Entered workforce before 1968	-0.000393	0.00369247	0.00032804	0.0036275
Entered workforce between 1968 & 1980	-0.0024093	0.00337547	0.00240844	0.0033746
Total composition	-0.0183865	-0.00469943	0.00900389	-0.014082
Total leavers/joiners workers	-0.0614285	-0.0173133	0.01589917	-0.0628426
Total union coverage	-0.0321186	-0.02866374	0.0061835	-0.0545988
Total composition	-0.003942	-0.00278519	0.008963207	0.002236
Total	-0.0360606	-0.03144893	0.015146707	-0.0523628

Calculated from means and coefficients reported in table 6.2.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A6.2 Decomposition results for all employees with attitudes towards unions variables

Private sector	Structure	Behaviour	Interaction	Observed
Continuing workers				
Coverage of union job	-0.0014731	-0.0137644	0.0001298	-0.0151077
Worker, job and workplace characteristics				
Production Sector	-0.0011467	0.0114329	0.0007836	0.0110698
Workplace employs more than 100	0.0021567	0.0045408	0.000682	0.0073795
Part-time job	-0.0001473	0.0035152	0.0003738	0.0037417
Permanent contract	0.0033415	-0.0124989	-0.0016585	-0.0108158
Non-manual occupation	-0.000269	0.0055931	0.0004606	0.0057847
Skilled manual occupation	-0.0011207	0.0030268	-0.0003867	0.0015194
Semi-skilled manual occupation	0.0010545	-0.0059421	-0.0004453	-0.0053329
Unskilled manual occupations	9.352E-05	0.0014962	-5.069E-05	0.001539
Male	0.0012896	0.0026995	0.0002555	0.0042445
No educational qualifications	0.0001003	0.0037254	-0.0002337	0.0035919
Higher education	-0.0003525	0.0004446	0.0002741	0.0003661
Entered the workforce between 1968 and 1980	0.0005002	0.0023052	0.0001796	0.0029849
Entered the workforce after 1980	-0.0021009	0.003053	0.000444	0.0013961
Constant		-0.0172997		-0.0172997
Total composition	0.0033991	0.0060918	0.0006782	0.0101691
Total continuing workers	0.001926	-0.0076725	0.000808	-0.0049386
Leavers cf. joiners				
Coverage of union job	-0.0374625	-0.0164318	0.0057774	-0.0481169
Worker, job and workplace characteristics				
Production Sector	-0.0011019	-0.0077497	0.0036656	-0.005186
Workplace employs more than 100	-0.0014542	-0.0042423	0.0017891	-0.0039074
Part-time job	0.0009482	0.0087855	-0.0014767	0.0082571
Permanent contract	-0.0053546	0.0031855	-0.0008409	-0.0030101
Non-manual occupation	-0.0010686	-0.0043592	0.0006401	-0.0047877
Skilled manual occupation	-0.0020794	-0.002803	0.0014509	-0.0034315
Semi-skilled manual occupation	-0.0026913	-0.0035049	0.0015475	-0.0046487
Unskilled manual occupations	-0.0002606	-0.0006404	0.0001364	-0.0007645
Male	-0.00093	0.0053688	-0.0011062	0.0033325
No educational qualifications	0.0017474	0.0032774	-0.0018871	0.0031377
Higher education	-0.0009611	0.0014264	0.0008739	0.0013391
Entered workforce between 1968 & 1980	-0.0002218	0.0041599	0.0001649	0.004103
Entered workforce after 1980	-0.0027364	0.003638	0.0019173	0.002819
Total composition	-0.0161643	0.006542	0.0068747	-0.0027477
Total leavers/joiners	-0.0536269	-0.0098899	0.0126521	-0.0508646
Switchers				
Coverage of union job	0.0017188	0.0034647	-0.0007246	0.004459
Worker, job and workplace characteristics				
Production Sector	1.453E-05	-0.000562	-6.398E-05	-0.0006115
Workplace employs more than 100	-0.0002628	0.002065	0.0003932	0.0021954
Part-time job	-0.0006843	-0.0034434	0.0015406	-0.0025871
Permanent contract	0.0003738	0.0027025	0.0001557	0.0032319
Non-manual occupation	0.0002324	0.0008241	-0.0002827	0.0007739
Skilled manual occupation	0.0001015	0.0008953	0.0007429	0.0017396
Semi-skilled manual occupation	9.358E-05	0.0006405	0.0001406	0.0008746

Unskilled manual occupations	-0.0000151	0.0006913	-3.365E-05	6.43E-04
Male	0.0003923	-4.652E-05	-2.449E-05	0.0003213
No educational qualifications	-0.0000921	-0.0024933	0.0004129	-0.0021725
Higher education	0.0001191	0.0003477	0.0002619	0.0007287
Entered workforce 1968 to 1980	-0.0001717	-0.001365	0.0004766	-0.00106
Entered workforce after 1980	-9.747E-05	-0.0057038	0.0012761	-0.0045252
Total composition	3.64E-06	-0.0054475	0.0049956	-0.0004483
Total switchers	0.0017225	-0.0019828	0.004271	0.0040107
Total composition	-0.0127616	0.0071863	0.0125484	0.0069731
Total coverage	-0.0372168	-0.0267315	0.0051827	-0.0587656
Total	-0.0499784	-0.0195452	0.0177311	-0.0517925

Calculated from means and coefficients reported in table 6.2.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A6.3 – Decomposition results for private sector employees

Public sector	Structure	Behaviour	Interaction	Observed
Continuing workers				
Coverage of union job	0.0128891	-0.0066533	-0.0002568	0.005979
Worker, job and workplace characteristics				
Production Sector	0.0002504	0.0036459	-0.0006204	0.0032759
Workplace employs more than 100	0.0004635	0.0047951	0.000491	0.0057496
Part-time job	-0.0025083	0.0127468	0.0008872	0.0111256
Permanent contract	0.013054	-0.0600277	-0.0051157	-0.0520893
Non-manual occupation	-8.616E-05	-0.0196588	-0.0006615	-0.0204065
Skilled manual occupation	-6.233E-05	-0.003347	0.0007329	-0.0026764
Semi-skilled manual occupation	-0.0002247	-0.0022502	0.0008297	-0.0016452
Unskilled manual occupations	-0.0014493	-0.0046121	0.0007902	-0.0052711
Male	0.0002721	-0.0121055	-0.0005924	-0.0124258
No educational qualifications	2.766E-05	0.0087288	-0.0000283	0.0087281
Higher education	0.0068715	-0.0140885	-0.0042268	-0.0114439
Entered the workforce between 1968 and 1980	-0.0004511	0.0194125	0.0007442	0.0197057
Entered the workforce after 1980	0.0001099	0.0096011	0.0007801	0.010491
Constant		0.1065855		0.1065855
Total composition	0.0160168	0.0494259	-0.0059898	0.0594529
Total continuing workers	0.0289059	0.0427727	-0.0062467	0.0654318
Leavers cf. joiners				
Coverage of union job	-0.0565796	-0.0445943	0.0218683	-0.0793056
Worker, job and workplace characteristics				
Production Sector	0.0003204	-0.0069604	0.0059001	-0.0007399
Workplace employs more than 100	-0.0022293	-0.0130489	0.0067759	-0.0085022
Part-time job	0.0012947	-0.0078794	0.0009874	-0.0055973
Permanent contract	-0.0171135	-0.0170134	0.0074153	-0.0267115
Non-manual occupation	0.0033873	0.0064425	-0.0021478	0.0076819
Skilled manual occupation	0.0027544	0.007564	-0.0063778	0.0039406
Semi-skilled manual occupation	-0.0006386	0.0040582	-0.0036097	-0.0001901
Unskilled manual occupations	0.0004004	-0.0009447	0.0005727	2.851E-05
Male	-0.0007029	-0.0041496	0.0022593	-0.0025932
No educational qualifications	-0.0051004	-0.0037803	0.0030786	-0.0058021
Higher education	0.0028895	0.0046945	0.0015057	0.0090896
Entered workforce between 1968 & 1980	-0.0004732	0.0047991	0.0012173	0.0055433
Entered workforce after 1980	-0.0002198	0.0018275	0.0034841	0.0050918
Total composition	-0.0154309	-0.0243908	0.021061	-0.0187607
Total leavers/joiners	-0.0720105	-0.0689852	0.0429293	-0.0980663
Switchers				
Coverage of union job	0.0099173	-0.0049875	-0.0002963	0.0046336
Worker, job and workplace characteristics				
Production Sector	-0.0005722	-0.0020734	0.0014703	-0.0011753
Workplace employs more than 100	0.0008678	-0.0064359	-0.0006278	-0.0061959
Part-time job	-0.0033968	-0.002484	-0.0019267	-0.0078074
Permanent contract	0.007145	-0.0119453	-0.0028623	-0.0076627
Non-manual occupation	-0.0021802	-0.0027413	-0.0012922	-0.0062138
Skilled manual occupation	-0.0003362	-0.0026284	0.0009549	-0.0020097
Semi-skilled manual occupation	-0.0002554	-0.003345	0.0007814	-0.0028191
Unskilled manual occupations	-0.0006637	0.0040162	0.0007793	4.13E-03

Male	-0.0022487	3.871E-05	-8.93E-06	-0.0022189
No educational qualifications	-0.0002175	0.000892	-0.0001377	0.0005368
Higher education	0.0066677	-0.0029982	-0.0029025	0.0007669
Entered workforce 1968 to 1980	-0.0012084	-0.0020016	-0.0014523	-0.0046624
Entered workforce after 1980	-0.0033311	-0.0002281	-0.0001466	-0.0037057
Total composition	0.0002703	-0.0319343	-0.0073712	-0.0390352
Total switchers	0.0101876	-0.0369217	-0.0076675	-0.0344016
Total composition	0.0008562	-0.0068992	0.0077	0.001657
Total coverage	-0.0337732	-0.056235	0.0213152	-0.068693
Total	-0.032917	-0.0631342	0.0290151	-0.0670361

Calculated from means and coefficients reported in table 6.5.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A6.4 Decomposition results for private sector employees with attitudes towards unions variables

All	Structure	Behaviour	Interaction	Observed
Continuing workers				
Coverage of union job	0.010363	-0.02066567	-0.00089642	-0.0111991
Worker, job and workplace characteristics				
Public Sector	0.0025806	-0.00255162	-0.00037467	-0.0003457
Production Sector	-0.0003716	0.00784562	0.0002057	0.0076797
Workplace employs more than 100	0.0019027	0.00163643	0.00021465	0.0037538
Part-time job	-0.0010999	0.00306962	0.00028187	0.0022516
Permanent contract	0.0100949	0.00838665	0.00100639	0.0194879
Non-manual occupation	-0.0003917	-0.00816373	-0.00050868	-0.0090641
Skilled manual occupation	-0.0005426	-0.00091998	0.00012097	-0.0013416
Semi-skilled manual occupation	0.0005177	-0.00893501	-0.0004571	-0.0088744
Unskilled manual occupations	5.163E-05	-0.00079489	0.00003288	-0.0007104
Male	0.0011671	-0.00528664	-0.00039735	-0.0045169
No educational qualifications	0.00033	0.00372416	-0.00025417	0.0038
Higher education	0.0032825	-0.00180085	-0.0009464	0.0005353
Ethnic minority	3.489E-05	-0.0002609	-0.00002107	-0.0002471
Entered workforce before 1968	-0.0001646	0.00462878	0.00029874	0.0047629
Entered workforce between 1968 & 1980	-0.0022121	0.00040856	0.00005474	-0.0017488
Pro-union attitudes	0.003792	0.02339618	0.00230179	0.02949
Anti-union attitudes	0.0007387	0.00001651	-2.73E-06	0.0007525
Constant		-0.02449006		-0.0244901
Total composition	0.0197103	-9.117E-05	0.001555556	0.0211747
Total continuing workers	0.0300733	-0.02075684	0.000659136	0.0099756
Leavers cf. joiners				
Coverage of union job	-0.0432644	-0.01417038	0.00661596	-0.0508188
Worker, job and workplace characteristics				
Public Sector	0.0001523	-0.00017749	0.00005864	3.341E-05
Production Sector	-0.0020103	-0.00537964	0.00267691	-0.004713
Workplace employs more than 100	-0.0014355	-0.0048742	0.00220987	-0.0040998
Part-time job	0.0011313	0.00287281	-0.00046079	0.0035433
Permanent contract	-0.0094609	-0.00714409	0.00225662	-0.0143483
Non-manual occupation	0.000106	-0.00088318	0.00018382	-0.0005934
Skilled manual occupation	0.0001737	0.00047511	-0.00026283	0.000386
Semi-skilled manual occupation	-0.0014184	-0.00140724	0.00069271	-0.0021329
Unskilled manual occupations	0.0001079	-0.00002565	8.77E-06	0.000091
Male	-0.0004596	0.00186963	-0.00055199	0.000858
No educational qualifications	0.0015842	0.00405977	-0.00258833	0.0030557
Higher education	0.000228	0.00135491	0.00066453	0.0022474
Ethnic minority	6.064E-05	0.00121886	-0.00012112	0.0011584
Entered workforce before 1968	-0.0004047	0.00444505	0.00038064	0.004421
Entered workforce between 1968 & 1980	-0.0040576	0.00488928	0.00346389	0.0042956
Pro-union attitudes	-0.0048237	-0.00485736	0.0011885	-0.0084925
Anti-union attitudes	0.0007311	0.00361294	-0.00171779	0.0026262
Total composition	-0.0197955	4.951E-05	0.00808205	-0.0116639
Total leavers/joiners workers	-0.0630599	-0.01412087	0.01469801	-0.0624827
Total union coverage	-0.0329014	-0.03483605	0.00571954	-0.0620179

Total composition	-8.522E-05	-4.166E-05	0.009637606	0.0095107
Total	-0.0329866	-0.03487771	0.015357146	-0.0525072

Calculated from means and coefficients reported in table 6.5.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A6.5 – Decomposition results for public sector employees

Private sector	Structure	Behaviour	Interaction	Observed
Continuing workers				
Coverage of union job	-0.0018904	-0.0155971	0.0001944	-0.0172931
Worker, job and workplace characteristics				
Production Sector	-0.0012717	0.0109459	0.0007847	0.0104589
Workplace employs more than 100	0.0021419	0.0018733	0.0002716	0.0042868
Part-time job	-0.000191	0.0030462	0.0003503	0.0032055
Permanent contract	0.0045514	-0.016363	-0.0022122	-0.0140239
Non-manual occupation	-0.0006183	0.0040934	0.0003508	0.003826
Skilled manual occupation	-0.0007016	0.0012922	-0.0001686	0.000422
Semi-skilled manual occupation	0.0009811	-0.007488	-0.0006311	-0.0071379
Unskilled manual occupations	9.989E-05	0.000567	-1.505E-05	0.0006519
Male	0.0014842	0.002597	0.0002497	0.0043308
No educational qualifications	0.0001935	0.0032113	-0.0001874	0.0032174
Higher education	-2.968E-05	1.726E-05	0.0000106	-1.82E-06
Entered the workforce between 1968 and 1980	0.0004941	0.0017184	0.000137	0.0023495
Entered the workforce after 1980	-0.0026447	0.0034617	0.0005202	0.0013372
Pro-union attitudes	0.0019369	0.0107042	0.0006209	0.0132619
Anti-union attitudes	5.409E-05	-0.000821	5.793E-05	-0.000709
Constant		-0.0089829		-0.0089829
Total composition	0.0064799	0.0098728	0.0001395	0.0164923
Total continuing workers	0.0045896	-0.0057243	0.0003339	-0.0008009
Leavers cf. joiners				
Coverage of union job	-0.0370156	-0.0089366	0.0033607	-0.0425915
Worker, job and workplace characteristics				
Production Sector	-0.0008862	-0.0065591	0.0031131	-0.0043323
Workplace employs more than 100	-0.0012481	-0.0039871	0.0016885	-0.0035467
Part-time job	0.0010738	0.0096885	-0.0016532	0.0091091
Permanent contract	-0.0067002	-0.0011138	0.0002965	-0.0075174
Non-manual occupation	-0.0007755	-0.0026093	0.00039	-0.0029948
Skilled manual occupation	-0.0012846	-0.0016334	0.0008479	-0.0020701
Semi-skilled manual occupation	-0.002283	-0.0031217	0.0013837	-0.004021
Unskilled manual occupations	-0.0001035	-0.0001042	2.246E-05	-0.0001852
Male	-0.0006779	0.0074361	-0.0015503	0.0052079
No educational qualifications	0.0023868	0.0040375	-0.00233	0.0040943
Higher education	-0.001147	0.0019119	0.0011619	0.0019268
Entered workforce between 1968 & 1980	-0.0002214	0.0047529	0.0001733	0.0047048
Entered workforce after 1980	-0.0037177	0.0051341	0.0026817	0.004098
Pro-union attitudes	-0.0033439	-0.0136938	0.0029859	-0.0140518
Anti-union attitudes	-0.0001865	-0.004665	0.0018915	-0.00296
Total composition	-0.0191148	-0.0045265	0.0111028	-0.0125385
Total leavers/joiners	-0.0561304	-0.0134631	0.0144635	-0.05513
Switchers				
Coverage of union job	0.0016507	0.0025682	-0.0007162	0.0035027
Worker, job and workplace characteristics				
Production Sector	5.367E-05	-0.000801	-8.845E-05	-0.0008358
Workplace employs more than 100	-0.0002998	0.0023827	0.000445	0.0025279
Part-time job	-0.0006925	-0.0045826	0.0020581	-0.0032171
Permanent contract	0.0003837	0.0017945	9.753E-05	0.0022758

Non-manual occupation	0.0003643	0.0006529	-0.0002253	0.0007919
Skilled manual occupation	-3.493E-05	0.0009665	0.0007966	0.0017283
Semi-skilled manual occupation	6.308E-05	0.0006004	0.0001295	0.0007929
Unskilled manual occupations	-8.66E-06	0.0007992	-4.122E-05	7.49E-04
Male	0.0004443	-0.0004808	-0.0002508	-0.0002873
No educational qualifications	-7.473E-05	-0.0021199	0.0003565	-0.0018382
Higher education	7.265E-05	0.0004321	0.0003232	0.0008279
Entered workforce 1968 to 1980	-0.0001143	-0.0010684	0.0003752	-0.0008075
Entered workforce after 1980	9.479E-05	-0.0055749	0.0012605	-0.0042196
Pro-union attitudes	-0.0005222	0.0015879	-0.0002317	0.000834
Anti-union attitudes	-0.0000492	0.0005466	-0.0001522	0.0003452
Total composition	-0.0003199	-0.0048648	0.0048524	-0.0003323
Total switchers	0.0013307	-0.0022966	0.0041363	0.0031704
Total composition	-0.0129548	0.0004815	0.0160948	0.0036214
Total coverage	-0.0372553	-0.0219655	0.0028389	-0.0563819
Total	-0.0502101	-0.021484	0.0189337	-0.0527604

Calculated from means and coefficients reported in table 6.8.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Table A6.6 Decomposition results for public sector employees with attitudes towards unions variables

Public sector	Structure	Behaviour	Interaction	Observed
Continuing workers				
Coverage of union job	0.014046	-0.0253719	-0.0010495	-0.0123754
Worker, job and workplace characteristics				
Production Sector	0.0001209	0.0022585	-0.0003303	0.0020491
Workplace employs more than 100	0.0006255	0.0033096	0.0003343	0.0042694
Part-time job	-0.0024988	0.0135129	0.000997	0.0120111
Permanent contract	0.0137818	-0.0660162	-0.0056704	-0.0579048
Non-manual occupation	-0.0001272	-0.0188058	-0.0006609	-0.019594
Skilled manual occupation	8.692E-05	-0.0023752	0.0005268	-0.0017615
Semi-skilled manual occupation	-0.0001053	-0.0023913	0.0008872	-0.0016094
Unskilled manual occupations	-0.0014301	-0.0044447	0.0008749	-0.0049999
Male	0.0002774	-0.0113825	-0.0005136	-0.0116186
No educational qualifications	0.0002185	0.0085799	-0.0002123	0.008586
Higher education	0.0066111	-0.0112999	-0.0034562	-0.008145
Entered the workforce between 1968 and 1980	-0.0005341	0.0198203	0.0007407	0.0200269
Entered the workforce after 1980	-2.304E-05	0.0085049	0.000745	0.0092269
Pro-union attitudes	0.0022647	0.0553794	0.0077181	0.0653622
Anti-union attitudes	0.0047153	-0.0011111	0.0003715	0.0039757
Constant		0.0389253		0.0389253
Total composition	0.0239836	0.0324643	0.0023517	0.0587995
Total continuing workers	0.0380296	0.0070923	0.0013022	0.0464241
Leavers cf. joiners				
Coverage of union job	-0.0606912	-0.072118	0.0307439	-0.1020653
Worker, job and workplace characteristics				
Production Sector	0.000455	-0.0049287	0.0041806	-0.0002931
Workplace employs more than 100	-0.0017606	-0.0127529	0.0066446	-0.0078689
Part-time job	0.0014822	-0.0079681	0.0010239	-0.0054619
Permanent contract	-0.0091263	-0.0022246	0.0009742	-0.0103768
Non-manual occupation	0.0033438	0.0061711	-0.0020723	0.0074426
Skilled manual occupation	0.002833	0.0061217	-0.0051652	0.0037895
Semi-skilled manual occupation	-0.0001996	0.0036366	-0.0032362	0.0002008
Unskilled manual occupations	0.0009711	-0.0016025	0.0009739	0.0003424
Male	0.0003675	-0.0008678	0.0004739	-2.639E-05
No educational qualifications	-0.0010353	-0.0021761	0.0017737	-0.0014378
Higher education	0.0021261	0.0009304	0.0002939	0.0033504
Entered workforce between 1968 & 1980	-0.0003365	0.0062394	0.0015541	0.007457
Entered workforce after 1980	-0.0050188	0.0038338	0.0072685	0.0060834
Pro-union attitudes	-0.0088643	0.0119037	-0.0036476	-0.0006082
Anti-union attitudes	0.003041	0.0189498	-0.0129611	0.0090297
Total composition	-0.011722	0.0252657	-0.0019211	0.0116227
Total leavers/joiners	-0.0724131	-0.0468523	0.0288228	-0.0904426
Switchers				
Coverage of union job	0.0084531	0.0008837	0.0015244	0.0108612
Worker, job and workplace characteristics				
Production Sector	-0.0001634	-0.0008626	0.0006126	-0.0004134
Workplace employs more than 100	-0.0001996	-0.0047019	-0.0004399	-0.0053414
Part-time job	-0.003312	-0.0021168	-0.0016282	-0.0070571

Permanent contract	0.0069686	-0.0102012	-0.0023984	-0.005631
Non-manual occupation	-0.0017137	-0.0025301	-0.0011791	-0.0054228
Skilled manual occupation	-0.0002396	-0.0022419	0.0008197	-0.0016618
Semi-skilled manual occupation	-0.000185	-0.0030407	0.0007188	-0.002507
Unskilled manual occupations	-0.000652	0.0044357	0.0008414	4.63E-03
Male	-0.0024986	-0.0014005	0.0003269	-0.0035722
No educational qualifications	-0.0002516	0.0001329	-2.092E-05	-0.0001396
Higher education	0.0069671	-0.0028028	-0.0026932	0.001471
Entered workforce 1968 to 1980	-0.0013221	-0.0022249	-0.0016004	-0.0051474
Entered workforce after 1980	-0.0034501	-0.0012387	-0.0007886	-0.0054775
Pro-union attitudes	0.0038274	-0.0012787	-0.0006057	0.001943
Anti-union attitudes	0.000773	-0.0016676	0.0008331	-6.158E-05
Total composition	0.0045483	-0.0317399	-0.0072021	-0.0343937
Total switchers	0.0130014	-0.0308562	-0.0056777	-0.0235325
Total composition	0.01681	0.0259901	-0.0067715	0.0360286
Total coverage	-0.0381921	-0.0966062	0.0312187	-0.1035795
Total	-0.0213821	-0.0706161	0.0244473	-0.067551

Calculated from means and coefficients reported in table 6.8.

Results can be interpreted as the percentage point change in union density i.e. the first column (structural change) can be interpreted as the percentage point decline in union density that resulted from structural change, the second column the percentage point change in union density that resulted from behavioural change. Since the sum of these columns is likely to sum to a figure greater than the observed change in union density, the interaction term (column 3) balances the equation so that the total in the fourth column sum to the observed change in union density in the sample.

Appendix to Chapter 7: What resources would unions have needed to allocate to organising to have prevented membership decline?

Unions lost around 5.3 million members between 1980 and 1998, an average of around 290,000 per year. Therefore, to prevent decline, unions would have needed to recruit around 290,000 additional members per year. What scale of organising activity would have been needed to secure these members? Some of the required membership growth could come through in-fill organising, but a significant proportion would need to come through organising non-union establishments. Table A7.1 provides information on the distribution of workers in non-union establishments in 1998. This information can be used to estimate the scale of investment in organising that would be needed to regain the lost members.

Table A7.1 Non-union workplaces with more than 25 employees by size and distribution of employment in 1998

<i>Workplace size band</i>	<i>Approximate number of workplaces in size band</i>	<i>Approximate number of workplaces in the size band that are non-union</i>	<i>Mean size of non-union workplaces in size band</i>	<i>Approximate number of employees employed in non-union workplaces in size band</i>
25 – 49 employees	76,000	49,400	35	1,729,000
50 – 99 employees	36,000	21,600	71	1,533,600
100 – 199 employees	19,000	8,550	145	1,239,570
200 – 499 employees	9,000	3,060	309	945,540
500+ employees	3,250	585	1320	772,200
Total	134,250	83,195	-	6,219,910

Source: Millward et al. 2000 and own calculations from the 1998 Workplace Employment Relations Survey

Assume unions need to organise and recruit 210,000 workers per year through Greenfield organising. Assume 70,000 members from each of the 100+ employee size bands. Assume that density will average around 60 per cent in each workplace organised. Therefore, unions would need to organise workplaces employing around 117,000 workers in each size band. To achieve these numbers, unions would need to organise around 807 workplaces employing 100 – 199 employees (9 per cent of non-union workplaces in this size band), 379 workplaces employing 200 – 499 employees (12

per cent of non-union workplaces in this size band) and 200 workplaces employing 500 or more employees (34 per cent of workplaces in this size band).

Therefore unions would need to win 940 organising campaigns a year and the number of organising campaigns would need to rise each year as the number of large workplaces that were either unorganised or had not been the subject of failed organising campaigns dwindled. This would represent a huge increase on the number of organising campaigns won by unions in recent years. Between 1995 and 1998, unions averaged just 80 successful campaigns a year, organising an average of just 2,524 workers per year (Gall and McKay 1999, note these figures may not fully capture all organising activity).

The actual number of campaigns that unions would need to contest would be larger than this, because unions do not win every campaign. It is difficult to estimate the union win rate in Britain. Moore (2005) found that unions won two thirds of cases that went through the statutory recognition procedure, but these cases represent just a small proportion of total organising activity. Between 1976 and 1980, unions won just one third of cases that went through the statutory recognition procedure and 43 per cent of cases that went to voluntary conciliation. Union win rates decline in the 1980s. The 1988 ACAS annual report suggested that just 18 per cent of union recognition claims resulted in recognition. All of these win rates will understate the level of organising activity because they do not include campaigns which failed to make it to a point where a claim for recognition could be justified. Current and previous win rates may also be a poor guide to future win rates if there is a dramatic expansion of organising activity. If we make the rather arbitrary assumption that unions would win around one fifth of campaigns, they would need to be targeting around 7000 workplaces a year. What resources would they need to devote to organising to achieve this level of activity?

Once again, it is difficult to estimate the number of campaigns per year that a union organiser could work on given the available data. From talking to senior union organisers in unions that currently place a high priority on greenfield organising, it seems that typically, a regional team of 4 or 5 organisers may work on up to 20 campaigns a year, so averaging 5 per organiser. So for 7000 campaigns, unions would need to employ around 1400 organisers (Melanie Simms, who has carried out extensive research into union organising estimates that there are currently around 100 dedicated organising staff employed by UK trade unions). It costs a union somewhere in the region of £55,000 a year to employ an organiser (including labour costs and overheads – figure supplied by Amicus research department), so unions would need to invest an

aggregate total of £7,770,000 in organising to have even the slightest hope of replacing the lost members. This represents eleven and a half per cent of unions' total annual income from members.