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## **Making Sense of Official Estimates of Trade Union Membership**

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Different sources of data provide a generally consistent picture of downward trends in rates of trade union density, presence and coverage. Analysis however raises cause for concern regarding official estimates derived from the Labour Force Survey which underestimate the true extent to which unions are both present in the workplace and recognised by employers in negotiations over the pay and conditions of employees. Whilst the presence of downward trends in union membership is not open to debate, there are many more workers affected by unionisation than one might think based upon a casual glance at the official statistics.

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## 1. Introduction<sup>1</sup>

The main source of data regarding union membership within the UK is the Labour Force Survey (LFS) and official government statistics on trade union membership are based on this source. The LFS is the largest regular household survey conducted in the UK. Face to face interviews are conducted quarterly in some 45 thousand households, with information being collected from approximately 100 thousand individuals. Households remain in the LFS for five successive quarters (referred to as Waves). An annual question on trade union membership was introduced into the LFS in 1989 and it has been asked in the fourth quarter (Q4) every year since 1992. Questions on trade union presence and recognition were added in 1993, and a question on collective agreements was introduced in 1996. The union questions were revised substantially from 1999 affecting the consistency of time-series data for trade union presence and collective agreements.

The Department for Business, Innovation & Skills (BIS) is responsible for publishing official statistics on trade union membership via its annual Statistical Bulletin 'Trade Union Membership'<sup>2</sup> and accompanying Tables. Estimates of trade union membership within the statistical releases produced by BIS focus on 3 key measures:

- Union density: The percentage of those in employment who are a trade union member.
- Union presence: Whether or not a trade union or staff association is present within a workplace.
- Union coverage: Whether the pay and conditions of employees are agreed in negotiations between the employer and a trade union.

This Research Note compares estimates of trade union membership derived from the LFS with those from three other nationally representative surveys that have been conducted in Britain over recent years; namely the Workplace Employment Relations Survey (WERS), the Skills and Employment Survey (SES), the British Household Panel Survey (BHPS) and the replacement for the BHPS - Understanding Society (USoc)<sup>3</sup>. A brief description of these

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<sup>1</sup> This report may be cited as: Davies R. (2016) *Making Sense of Official Estimates of Trade Union Membership*, Cardiff: *Wales Institute of Social & Economic Research, Data & Methods (WISERD)*, Cardiff University. This report, along with other titles in this series is downloadable free from WISERD at [www.wiserd.ac.uk/unions](http://www.wiserd.ac.uk/unions)

<sup>2</sup> <https://www.gov.uk/government/collections/trade-union-statistics>

<sup>3</sup> The Labour Force Survey is produced by the Office for National Statistics. The Workplace Employment Relations Survey is sponsored by BIS, ACAS, ESRC and NIESR. The British Household Panel Survey data were *originally collected by the ESRC Research Centre on Micro-social Change at the University of Essex (now incorporated within the Institute for Social and Economic Research)*. Understanding Society is an initiative by the Economic and Social Research Council, with scientific leadership by the Institute for Social and Economic Research, University of Essex, and survey delivery by the National Centre for Social Research and TNS BRMB. The *Skills and Employment Surveys were funded jointly by the Economic and Social Research Council and the UK Commission for Employment and Skills through the ESRC Centre for Learning and Life Chances in Knowledge Economies and Societies (LLAKES)*.

surveys is provided in the Annex. The analysis demonstrates that the exact wording and sequence of questions can have significant effects on the measures of trade union membership derived from these sources. Whilst these data sets provide a generally consistent picture of falling levels of trade union density, presence and coverage, the analysis raises cause for concern regarding official estimates of the levels of trade union presence and coverage which significantly underestimate the true extent to which unions are both present in the workplace and recognised by employers in negotiations over the pay and conditions of employees.

## **2. Measuring Trade Union Membership: Harder than it may seem?**

One might expect that it is relatively straightforward to derive estimates of trade union membership from survey sources. Table 1 however demonstrates the differences that emerge in how questions on trade union membership are asked within different surveys. In terms of deriving whether or not a respondent to these surveys is a member of a trade union, it can be seen that each of these surveys use identical wording; “Are you a member of a trade union or staff association?” More significant differences begin to emerge in terms of questions capturing trade union presence. Within the LFS, the question that asks whether any of the people at the respondent’s place of work are members of a trade union or staff association is designed to measure trade union presence. This question is only asked of people who reported that they themselves were not members of trade unions, as it is assumed that if the respondent is a member then unions must be present at their workplace. A different approach is taken within the SES and WERS, which both ask employees whether or not there are unions or staff associations at their place of work, irrespective of whether the individual respondent is a union member. In addition to the Employee Questionnaire, the WERS survey can also draw upon responses to a survey of managers in order to assess whether unions are present at the workplace. Managers are asked ‘How many employees at this workplace are members of a trade union or independent staff association - whether recognised by management or not?’ Furthermore, those managers who do not know how many employees are members of a union or staff association are forced to confirm whether or not anyone at the workplace is a member of a union or staff association. The WERS Managerial Questionnaire therefore provides a complete assessment of union presence. The BHPS and USoc do not contain questions relating to union presence. In the analysis that follows, we utilise a measure of union coverage as a proxy for presence for these data sets.

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The data sets have been accessed via the UK Data Archive, University of Essex, Colchester. None of these organisations bears any responsibility for the analysis or interpretations presented here.



Table 1: Questions Used for Trade Union Membership<sup>4</sup>

	Membership	Presence	Coverage
<b>Labour Force Survey</b>			
	1) Are you a member of a trade union or staff association?	2) Are any of the people at your place of work members of a trade union or staff association?	3) Are your pay and conditions of employment directly affected by agreements between your employer and any trade union(s) or staff association(s)?
	<b>Ask All</b>	<b>If No to 1)</b>	<b>Ask All</b>
<b>Skills and Employment Survey</b>			
	3) Are you a member of a trade union or staff association?	1) At your place of work, are there unions or staff associations?	2) Is any union or staff association recognised by management for negotiating pay and/or conditions of employment?
	<b>Ask All</b>	<b>Ask All</b>	<b>If Yes to 1)</b>
<b>BHPS/Understanding Society</b>			
	2) Are you a member of this trade union/association?		1) Is there a trade union, or a similar body such as a staff association, recognised by your management for negotiating pay or conditions for the people doing your sort of job in your workplace?
	<b>If Yes to 1)</b>		<b>Ask All</b>
<b>Workplace Employment Relations Survey</b>			
<b>Employee Questionnaire</b>			
	1) Are you a member of a trade union or staff association?	2) Is there a trade union or staff association at this workplace?	
	<b>Ask All</b>	<b>Ask All</b>	
<b>Manager Questionnaire</b>			
		1) How many employees at this workplace are members of a trade union or independent staff association - whether recognised by management or not?	2a) Earlier, you said there X trade union[s]/staff association[s] with members at this workplace. Is this/are these recognised by management for negotiating pay and conditions for any sections of the workforce in this workplace?  2b) You said that none of the workforce at this workplace are members of trade unions. Nevertheless, are any trade unions or staff associations recognised by management for negotiating pay and conditions for any sections of the workforce here?
		<b>Ask All</b>	<b>Ask All</b>

<sup>4</sup> The question numbering in Table 1 refers to the order in the survey in which these questions are asked.

Finally, official statistics produced by BIS provide an estimate the coverage of collective agreements derived from the LFS. Collective agreement coverage is defined as the proportion of employees in the labour force whose pay and conditions are agreed in negotiations between the employer and a trade union. However, there is a difference in the wording of the question used in the LFS compared to the other surveys. Whilst the LFS asks whether the pay and conditions of the respondents are 'directly affected' by agreements between employers and trade unions, the other surveys simply ask whether or not unions and staff associations are 'recognised' by management for the purposes of negotiation. The wording of the LFS question therefore not only asks respondents to consider the involvement of trade unions and staff associations in negotiations over pay and conditions, but it also implicitly asks the respondents for an assessment of the effectiveness of such bodies in affecting pay and conditions.

The problem of under-reporting of trade union coverage within official statistics has recently been explored by BIS<sup>5</sup> in its own analysis of potential bias in trade union membership statistics. Their analysis explores potential reasons as to why estimates of union coverage derived from the LFS (approximately 31% in 2011) are considerably lower than those derived from the Annual Survey of Hours and Earnings (approximately 47% in 2011). ASHE is based on a 1% sample of employee jobs selected from HM Revenue and Customs (HMRC) records. Although it only collects limited information about the background characteristics of employees (e.g. detailed personal circumstances are not covered by the survey), the main advantage of the survey is that information is obtained directly from the employers. Combined with its large sample size, ASHE is therefore regarded as an accurate source of data.

Within ASHE, employers are asked 'Was the employee's pay set with reference to an agreement affecting more than one employee (for example, pay may be agreed collectively by a trade union or workers' committee)?' The ASHE question seemingly provides a wider definition of pay agreements as the question does not explicitly refer to 'collective agreement' or the involvement of 'trade unions', although the guidance notes do define collective agreement as 'an agreement between one or more employers and one or more trade unions/workers' committees concerning aspects of employment such as pay and conditions'. The ASHE survey would also allow employers to refer to agreements where they have not been directly involved in negotiations over pay but where they make use of these agreements to provide a reference for negotiations taking place locally. Rates of reporting are also likely to be higher as the question is directed to employers who are more likely than their employees

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<sup>5</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/184693/13-733-Measuring-bias-in-the-LFS-for-Trade-Union-Membership.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/184693/13-733-Measuring-bias-in-the-LFS-for-Trade-Union-Membership.pdf)

to know whether or not their pay is set with reference to an agreement. The analysis of this Research Note builds upon the analysis undertaken by BIS by making further comparisons of trade union coverage utilising other nationally representative surveys.

### 3. Alternative Estimates of Trade Union Membership.

Table 2 presents estimates of trade union membership derived from the LFS, SES, BHPS, USoc and WERS. The SES and WERS surveys are only conducted intermittently and so the selection of years reflects the availability of data from those sources. All figures relate to employees aged 16 and over. Firstly, considering the official source of data on trade union membership, levels of trade union density derived from the LFS (26-27%) are the lowest across all surveys. Levels of trade union presence are also estimated to be relatively low (45-46%). These low rates of membership could be related to a variety of factors including who responds to the survey, the exclusion of some home workers from the question on union presence and the treatment of respondents with missing data in estimates for union density and union presence. These issues are discussed in turn below.

- **Proxy Response:** Approximately a third of LFS interviews are conducted through a proxy respondent. A proxy respondent is typically a spouse or partner (usually female) responding on behalf of the intended survey respondent who is absent from the household at the time of the interview. Previous analyses have demonstrated lower levels of reporting among proxy respondents across a variety of questions within the LFS including trade union membership<sup>6</sup>. For some questions this may be attributed to lower levels of recall among proxy respondents (e.g. training occurring in the last 3 months) or proxy respondents simply not knowing certain details about the intended respondent. Such issues will be magnified further in the context of questions relating to the membership status of other employees at their partner's workplace, as is demonstrated by the relatively high proportion of employees in the LFS for whom the presence of trade unions at the workplace cannot be established (9-10%)<sup>7</sup>.
- **Home Workers:** Table 2 also alludes to a further subtlety surrounding LFS data that may contribute to a downward bias in estimates of union presence. Within the LFS, the union presence questions are not asked of those who usually work from home or at a site on the same grounds as their home. Whilst this may be appropriate in the case of those employees who *always* work from home and who have no other employees working at the same site, it is less clear as to why either those who also have a workplace that is

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<sup>6</sup>[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/184693/13-733-Measuring-bias-in-the-LFS-for-Trade-Union-Membership.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/184693/13-733-Measuring-bias-in-the-LFS-for-Trade-Union-Membership.pdf)

<sup>7</sup> Response bias in the LFS is to be considered separately in this series of Research Notes.



separate from their home (i.e. an office where they also work from time to time) or those who work in the same grounds or buildings as their home (e.g. in an adjoining property, surrounding land or where their home is provided as part of their job) should be excluded from questions surrounding union presence. The SES does not exclude home workers from questions of union presence. Similarly, WERS also captures the experiences of those employees who work from home. For example, the Employee Survey asks whether or not respondents have worked at or from home in normal working hours in the last 12 months. Likewise, respondents to the Management Questionnaire are asked whether any employees at the workplace are able to work at home in normal working hours and, if yes, “What proportion of employees at this workplace, if any, spend all or most of their working hours working from home?”. Whilst the Management Questionnaire of WERS would mean that this group of employees would be included in any employee level estimates of union presence, such workers would be excluded in the LFS.

- **Missing Data:** It can be seen from Table 2 that within the LFS, responses to the union presence question are not available for approximately 15% of employees (14.5% in 2006 increasing to 16.4% in 2012). This group comprises those respondents who do not provide a response to the union membership question and who therefore do not get ‘passported’ on to the follow-up question on union presence; those respondents who normally work from home (and who therefore again do not get asked the union presence question) and those who are asked the union presence question but who do not provide a valid response. Despite these groups not responding to the union presence question, homeworkers and those who do not provide a valid response for union presence are still included in the population of employees upon which estimates of union presence are based. In other words, official estimates treat these two groups of respondents as if they would have said that no other employees at their workplace were members of trade unions or staff associations. If these 2 groups of employees were excluded from calculations, estimates of trade union presence would rise to 53% during both 2006 and 2012; an increase of approximately 7-8 percentage points and more in line with those derived from the SES.

Considering the remaining surveys, as noted above, the BHPS/USoc studies do not include questions of union presence that are comparable to those within the other studies. Table 2 therefore uses the union coverage variable to act as a proxy for union presence so that the indicative estimates of ‘Free Riding’ (Non-Member – Union Present) can at least be derived. Estimates of union presence and union coverage derived for BHPS/USoc at the base of Table 2 are therefore identical. Reflecting on the measures derived from the other studies, it would be expected that rates of union presence would exceed rates of union coverage.

Analysis of the WERS data reveals very high levels of missing data for union presence at the workplace when utilising data from the Employee Questionnaire. This missing data

contributes to relatively low estimates of 'Free Riding' (Non-Member – Union Present) based upon information from the Employee Questionnaire. The utilisation of responses from the Management Questionnaire regarding union presence however reduces the number of missing cases for union presence to zero as managers are 'forced' to report whether there are any members of trade unions at their workplace. As a result, the WERS data produces the highest estimates of the incidence of 'Free Riding' (28-29%). Estimates of union presence derived from the WERS data are approximately 13-14 percentage points higher than those derived from the LFS.

The analysis reveals that a majority of the difference in estimates of union presence derived from the LFS and WERS could possibly be accounted for by the treatment of missing cases in the LFS and the absence of missing data in WERS. However, differences in the sampling frames of these two surveys make it difficult to make 'like for like' comparisons. The most important difference is that whilst the LFS is a survey of all individuals residing in private households, the WERS survey covers workplaces with at least five employees, (see Data Annex). As unions are more likely to be present in larger workplaces, the omission of workers who are based at the smallest workplaces within WERS may contribute to an upward bias in the rates of membership and presence derived from this source compared to the LFS. Additional analysis (not presented) reveals that when restricting the analysis to employees based in workplaces with more than 10 employees, estimates of union presence derived from the WERS data (65% in 2004 and 61% in 2011) remain 10-13 percentage points higher than those derived from the LFS (52% in 2006 and 51% in 2012). The exclusion of home workers and missing cases of union presence from the LFS estimates lead to an increase in the estimated rate of union presence to approximately 60% during both 2006 and 2012. Therefore, taking into account the different sampling frames of the two surveys confirms that the lower levels of union presence derived from the LFS can be attributed to the treatment of missing cases within official statistics.

The final row of Table 2 presents estimates of union coverage. The analysis suggests that the official measures of trade union coverage based upon the LFS deviate significantly from those based on other sources. The LFS reveals that that approximately 30% of employees are based at workplaces where trade unions and staff associations *affect* pay and conditions. Both the individual based SES and BHPS/USoc studies reveal that almost 50% of employees are based at workplaces where trade unions and staff associations are *recognised* by management for negotiating pay and conditions. These figures are very similar to the BIS derived estimates based on ASHE data.

Like ASHE, within WERS questions of union coverage are addressed to all managers via the Management Questionnaire. Managers are asked about the recognition of trade unions at the



workplace, irrespective of whether or not those unions have members on site and to include agreements that are negotiated with the union at a higher level in the organisation or by an employers association that apply to staff at their workplace. The absence of missing responses suggests that WERS arguably provides the most accurate account of trade union coverage. WERS also suggests that almost half of employees are based at workplaces where unions and staff associations are *recognised* by management for negotiating pay and conditions. This represents a differential of between 16 and 20 percentage points compared to estimates derived from the LFS. Once again, these comparisons may be confounded by the different coverage of the LFS and WERS surveys, with employees from the smallest workplaces being excluded from WERS. However, when restricting the analysis of trade union coverage to employees based in workplaces with more than 10 employees, the size of this differential remains relatively unchanged. These comparisons suggest that it is the wording of the LFS union coverage question in terms of its emphasis upon pay being 'directly affected' which is contributing to the estimation of relatively low levels of trade union coverage among employees from this source.

The WERS Employee Questionnaire may also provide additional insight. Employees are asked a set of questions regarding their opinions of unions and staff associations at their workplace, including whether they agree or disagree with the statement that 'unions and staff associations make a difference to what it is like to work here'. Combining responses to the 2004 and 2011 Employee Questionnaires, less than a third (33%) agreed or strongly agreed with this statement. Any question of union coverage that implicitly embodies an assessment from respondents of whether or not unions 'effect' pay and conditions at their workplace could significantly under-estimate the true level of involvement of unions and staff associations in negotiations over pay and conditions.

Declining levels of trade union membership is often cited as evidence that trade unions have become less relevant. In 2012, particular attention was given this issue as levels of union membership among TUC affiliated unions fell to beneath 6 million members for the first time<sup>8</sup>. The analysis raises cause for concern regarding official estimates of the levels of trade union presence and coverage which significantly underestimate the true extent to which unions are both present in the workplace and recognised by employers in negotiations over the pay and conditions of employees. Whilst the presence of downward trends in union membership is not open to debate, there are many more workers affected by unionisation than one might think based upon a casual glance at the official statistics.

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<sup>8</sup> <http://www.bbc.co.uk/news/business-19521535>

**Table 2: Estimates of Trade Union Membership, Presence and Coverage**

	Labour Force Survey		Skills and Employment Survey		BHPS / USOC		Workplace Employment Relations Survey			
							Employee Questionnaire		Employee + Management Questionnaires	
	2006	2012	2006	2012	2006	2012	2004	2011	2004	2011
<b>Membership/Presence</b>										
1. Member	26.8	25.7	31.2	28.9	28.0	26.0	31.4	29.2	31.4	29.2
2. Non Member - Presence	18.4	18.3	24.3	24.7	19.8	19.0	16.7	18.6	28.7	27.8
3. Non Member - No Presence	40.4	39.7	42.3	42.7	48.2	52.4	30.9	27.2	39.3	42.4
4. Non Member - Home Worker	4.1	5.4								
5. Non Member – Presence DK	9.1	9.7	2.0	3.2			20.4	24.4		
6. Membership Not Reported	1.3	1.3	0.2	0.6	4.0	2.5	0.6	0.6	0.6	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Coverage</b>										
<b>Whether agreements between trade union and employer affect pay and conditions</b>										
7. Yes	28.6	26.0								
8. No	61.3	63.0								
9. No Answer	10.1	11.0								
Total	100.0	100.0								
<b>Is any union or staff association recognised by management for negotiating pay and/or conditions of employment</b>										
7. Yes			46.8	43.4	47.8	45.1			47.7	49.0
8. No			43.8	44.2	48.2	52.4			52.3	51.0
9. No Answer			9.4	12.4	4.0	2.5				
Total			100.0	100.0	100.0	100.0			100.0	100.0
<b>Official Statistics</b>										
Membership (% excl 6)	27.1	26.0	31.3	29.1	29.1	26.7	31.6	29.4	31.6	29.4
Presence (% 1+2, excl 6))	45.8	44.5	55.6	53.9	49.8	46.2	48.4	48.1	60.5	57.4
Coverage (% excl 9)	31.8	29.2	51.7	49.5	49.8	46.2			47.7	49.0

### **Data Annex: Overview of Data Sets**

**Labour Force Survey:** The main source of data regarding union membership within the UK is the Labour Force Survey (LFS). The LFS is the largest regular household survey conducted in the UK. Face to face interviews being conducted quarterly in approximately 45 thousand households, with information being collected from over 100 thousand individuals. Households remain in the LFS for five successive quarters (referred to as Waves). Questions regarding trade union membership are included within the fourth quarter (October-December) of the LFS.

**Workplace Employment Relations Survey:** The WERS survey provides a detailed picture of worker representation within the UK. The first of the Workplace Employment Relations Surveys (WERS) was conducted in 1980, followed by further surveys in 1984, 1990, 1998, 2004 and most recently 2011. The survey population for these studies are workplaces with at least five employees, excluding those in agriculture, hunting and forestry, fishing, mining and quarrying, private households with employed persons, and extra-territorial organizations. A majority of information is collected via the main face to face management interview. Interviews are also conducted with employee representatives; employees (conducted with up to 25 randomly selected employees at surveyed workplaces).and with the financial manager of these establishment.

**British Household Panel Survey/Understanding Society:** The BHPS is a panel survey which tracks individuals and households over time. The first wave, 1991, contained information on approximately 5,500 households and interviewed 10,300 adults. A major development at Wave 9 (1999) was the recruitment of two additional samples to the BHPS in Scotland and Wales that facilitate independent country level analysis and comparisons with England post devolution. The BHPS has now been replaced and incorporated in to Understanding Society, the new UK Household Longitudinal Study. The transition from the BHPS towards Understanding Society has resulted in an interruption in the availability of annually updated panel data, with the BHPS sample first being interviewed in 2010/2011 (Wave 2) of Understanding Society.

**Skills and Employment Survey:** The overarching aim of the 2012 Skills and Employment Survey is to collect survey data on the skills and employment experiences of those working in Britain, thereby making it a key and distinctive resource for research on contemporary working life. It also provides continuity with and builds on previous surveys on working life in Britain, including Social Change and Economic Life Initiative (SCELI) in 1986, Employment in Britain (EIB) in 1992, Working in Britain (WIB) in 2000 and the 1997, 2001 and 2006 Skill Surveys.