

Appendix A : Statistical methods and sources

This appendix sets out the detailed methods and data sources used to generate the estimates of hidden and real unemployment presented in the report. The methods use a combination of administrative, survey and Census of Population data. The availability of results from the 2001 Census of Population, from late 2002 onwards, will simplify the estimation procedures and enable greater accuracy at the local scale. The 2001 Census of Population should therefore be used as the starting point for any subsequent up-date.

ECONOMICALLY ACTIVE POPULATION OF WORKING AGE

This variable is required for the calculation of claimant, hidden and real unemployment rates. The working age and economically active populations are also required at several intermediate steps in the calculations.

Data specification and sources:

- (1) Mid-year working age population estimates by sex by district for 2000 (most recent available), from ONS via NOMIS
- (2) Working age economic activity rates by sex by district, for 2000/01, from the Local Area Database (LADB) - which is annual Labour Force Survey (LFS) data - obtained direct from ONS
- (3) Population by age and sex, by district for 1991, from Census of Population via NOMIS

The mid-year working age population estimates are for 15-64 (men) and 15-59 (women). These are adjusted to 16-64 and 16-59 on the basis of the proportion of 15 year olds in each district in 1991. To produce estimates of the economically active population, the revised working age population estimates are multiplied by the economic activity rates from the LFS. To calculate hidden and real unemployment rates, the 'excess' sick and 'excess' retired are added into the denominator.

CLAIMANT UNEMPLOYMENT

Data specification and source:

- (1) Claimant unemployment numbers by sex by district for January 2002, from ONS via NOMIS. (Also published monthly in *Labour Market Trends*).

EXTRA ILO UNEMPLOYED

Data specification and sources:

- (1) ILO unemployment rates by sex for the region as a whole for winter 2001/02, from ONS via NOMIS. (Also published in *Labour Market Trends*).

Detailed examination of ILO unemployment rates at district and county level indicates that because of the small sample size neither is sufficiently reliable for this part of the exercise, which is therefore carried out at the regional level.

The claimant unemployment rate for the region is deducted from the ILO rate and the difference is treated as hidden unemployment. This flat-rate percentage figure, by sex, is converted into absolute numbers for each district using the economically active population of working age.

GOVERNMENT SCHEMES

Data specification and sources:

- (1) Number of government-supported trainees without a contract of employment, by sex and TEC area, July 2000 (the most recent date available), from DfES.
- (2) Change in number of government-supported trainees without a contract of employment, Great Britain, July 2000 – December 2001, from *Labour Market Trends*.

The figures by TEC area are allocated to constituent districts on the basis of each district's share of 2000 working age population. A proportional adjustment is made to the figure for all districts to allow for national change in the numbers in this group between July 2000 and December 2001.

EXCESS SICKNESS CLAIMANTS

Data specification and sources:

- (1) Number of IB and SDA claimants of working age (including NI credits-only claimants) by sex by district, August 2001, from DWP Analytical Services Division, Newcastle. The figures are based on a 5 per cent sample of claimants and are produced annually.
- (2) 'Permanently sick' aged 16+, by sex by district, from the 1981 Census of Population, via NOMIS.
- (3) Working age population by sex by district 1981, from the Census of Population, via NOMIS.
- (4) Residents of psychiatric hospitals by sex by district 1981, from the Census of Population, via NOMIS.

DWP sickness claimant numbers are converted into rates using the 2000 working age population as a base. The 1981 sickness figures are also converted into rates using 1981 working age population.

For each district the benchmark against which 'excess' sickness is measured comprises two elements:

- The 2001 sickness claimant rate in seven fully-employed counties in South East England (see main text).

- The percentage point deviation in the rate of permanent sickness in each district in 1981 from the average rate of permanent sickness in the seven South East counties in 1981.

The 1981 deviation in each district from the average rate in the seven counties in 1981 is added to the average 2001 rate in the seven counties to produce the benchmark for each district. The excess sickness rate is the difference between this benchmark and the actual rate in each district in 2001. Negative values are treated as zero.

A final adjustment is made for residents of psychiatric hospitals who inflate the 'permanently sick' data for a small number of districts in 1981 but not for 2001 when these institutions had mostly closed. Where the number of these residents exceeded 1 per cent of the working age population in 1981, the excess over 1 per cent is deducted from the 1981 permanent sickness data used to derive the local benchmark.

The excess sickness claimant rate is converted back into absolute numbers using the 2000 working age population figures.

EXCESS EARLY RETIRED

There are no comprehensive and up-to-date figures on the scale of early retirement, particularly at the local scale. LFS data on retirement among people of working age is partial, covering only those who are not seeking work and would not like a job – the largest group among the early retired but one that excludes retired men and women who would like to work. LFS data for this population group is also unreliable at the local and regional scale. A detailed picture of early retirement at the local scale therefore relies on Census data.

Data specification and sources:

- (1) Retired of working age, by sex by district, from the 1991 Census of Population, via NOMIS.
- (2) Retired of working age, by sex by district, from the 1981 Census of Population county reports.
- (3) Working age population, by sex by district, from the 1981 and 1991 Censuses of Population, via NOMIS.
- (4) Number 'inactive, not seeking work, not wanting job, retired' of working age, by sex, for 2000/01 from the LADB of the LFS, and for spring 1993 from the LFS, both obtained direct from ONS.

The 1981 and 1991 early retirement numbers are converted into rates using the working age population for the relevant year.

For each district the benchmark against which 'excess' early retirement is measured comprises two elements and follows fundamentally the same procedure as for excess sickness claimants:

- The 1991 early retirement rate in 20 districts in the fully-employed part of South East England (see notes).

- The percentage point deviation in the rate of early retirement in each district in 1981 from the average rate of early retirement in the 20 districts in 1981.

The 1991 estimates of excess early retired are up-dated to January 2002 in proportion to the annual growth in the numbers of early retired for Britain as a whole, from the available LFS data. This adds 32 per cent to the 1991 estimates of excess early retired. This adjustment assumes that hidden unemployment among the early retired has grown in proportion to early retirement since 1991, and that the geographical distribution remains the same.

In the absence of more satisfactory data, the limitations of the estimates of excess early retired need emphasis.

Appendix B: Unemployment figures by district, January 2002

	Claimant Count (%)			Real Unemployment (%)		
	Male	Female	Total	Male	Female	Total
EAST MIDLANDS	4.2	1.8	3.2	8.8	8.8	8.8
Derbyshire	4.5	1.9	3.4	9.9	8.9	9.5
Amber Valley	3.6	1.5	2.7	8.0	8.8	8.3
Bolsover	5.7	2.4	4.3	17.5	12.7	15.4
Chesterfield	7.5	2.7	5.3	16.3	11.7	14.2
Derby	5.9	2.4	4.5	11.3	9.1	10.4
Derbyshire Dales	2.1	0.9	1.6	4.2	5.3	4.6
Erewash	3.8	1.8	3.0	6.9	7.4	7.1
High Peak	2.6	1.3	2.0	5.4	5.9	5.6
North East Derbyshire	5.1	1.9	3.6	11.2	9.8	10.6
South Derbyshire	2.3	1.3	1.9	7.6	8.9	8.2
Leicestershire	4.0	1.9	3.1	7.0	7.8	7.4
Blaby	2.1	0.9	1.6	3.9	5.8	4.8
Charnwood	3.1	1.5	2.4	4.2	5.7	4.9
Harborough	1.6	0.8	1.3	2.4	4.5	3.4
Hinckley and Bosworth	2.2	1.2	1.8	3.6	5.2	4.4
Leicester	7.8	3.8	6.2	13.1	12.8	13.0
Melton	1.8	0.9	1.4	3.9	5.7	4.7
North West Leicestershire	2.4	1.4	2.0	7.0	8.5	7.6
Oadby and Wigston	3.1	1.3	2.3	4.8	6.2	5.5
Rutland	0.8	0.4	0.6	2.4	4.1	3.1
Lincolnshire	3.7	1.9	2.9	8.8	9.4	9.1
Boston	2.9	1.9	2.5	8.0	11.7	9.4
East Lindsey	5.6	2.6	4.2	13.8	12.5	13.2
Lincoln	5.7	2.3	4.3	13.3	9.8	11.9
North Kesteven	2.1	1.2	1.7	4.8	7.9	6.2
South Holland	2.1	1.6	1.9	5.6	8.8	6.9
South Kesteven	2.4	1.4	2.0	4.7	6.7	5.6
West Lindsey	4.5	2.2	3.5	11.0	9.4	10.3
Northamptonshire	2.9	1.3	2.2	5.0	6.1	5.5
Corby	4.5	2.0	3.4	10.8	10.9	10.8
Daventry	1.8	1.2	1.6	3.6	6.5	4.9
East Northamptonshire	2.2	1.2	1.8	3.3	5.3	4.2
Kettering	2.5	1.0	1.8	6.1	6.2	6.2
Northampton	4.0	1.7	3.0	5.6	5.7	5.6
South Northamptonshire	1.1	0.6	0.9	1.8	3.8	2.7
Wellingborough	3.3	1.5	2.5	4.6	7.0	5.7
Nottinghamshire	5.2	2.1	3.9	12.0	11.0	11.5
Ashfield	5.4	2.3	4.1	13.5	12.7	13.1
Bassetlaw	5.7	3.5	4.8	15.4	12.4	14.2
Broxtowe	3.2	1.5	2.4	7.2	8.2	7.7
Gedling	3.5	1.1	2.4	7.8	9.2	8.5
Mansfield	5.7	2.8	4.5	16.5	14.6	15.7
Newark and Sherwood	3.4	1.6	2.7	10.8	10.9	10.8
Nottingham	8.6	2.9	6.1	15.6	12.6	14.3
Rushcliffe	2.0	0.8	1.5	4.5	5.8	5.1

	Claimant Count			Real Unemployment		
	Male	Female	Total	Male	Female	Total
EAST MIDLANDS	48,488	16,467	64,955	106,800	81,700	188,500
Derbyshire	12,246	3,930	16,176	28,300	19,300	47,600
Amber Valley	1,196	394	1,590	2,800	2,400	5,200
Bolsover	1,026	355	1,381	3,500	2,000	5,500
Chesterfield	2,004	605	2,609	4,700	2,800	7,500
Derby	3,815	1,122	4,937	7,600	4,400	12,000
Derbyshire Dales	431	137	568	900	800	1,700
Erewash	1,165	412	1,577	2,100	1,700	3,900
High Peak	696	261	957	1,500	1,300	2,700
North East Derbyshire	1,343	408	1,751	3,200	2,200	5,400
South Derbyshire	570	236	806	2,000	1,700	3,700
Leicestershire	10,147	3,649	13,796	18,000	15,600	33,700
Blaby	529	195	724	1,000	1,300	2,200
Charnwood	1,440	535	1,975	2,000	2,100	4,100
Harborough	350	148	498	500	800	1,300
Hinckley and Bosworth	658	300	958	1,100	1,300	2,400
Leicester	5,858	1,970	7,828	10,300	7,100	17,500
Melton	263	97	360	600	700	1,200
North West Leicestershire	604	254	858	1,800	1,600	3,500
Oadby and Wigston	445	150	595	700	800	1,500
Rutland	91	37	128	300	400	600
Lincolnshire	6,198	2,426	8,624	15,600	12,600	28,200
Boston	449	188	637	1,300	1,200	2,500
East Lindsey	1,660	654	2,314	4,400	3,300	7,800
Lincoln	1,363	368	1,731	3,400	1,700	5,100
North Kesteven	537	240	777	1,200	1,600	2,900
South Holland	419	235	654	1,100	1,400	2,500
South Kesteven	818	390	1,208	1,600	1,900	3,500
West Lindsey	952	351	1,303	2,400	1,600	4,000
Northamptonshire	5,482	1,923	7,405	9,500	9,100	18,500
Corby	670	221	891	1,700	1,300	3,000
Daventry	389	190	579	800	1,000	1,800
East Northamptonshire	493	199	692	700	900	1,700
Kettering	594	215	809	1,500	1,400	2,900
Northampton	2,365	741	3,106	3,300	2,500	5,800
South Northamptonshire	275	121	396	500	800	1,200
Wellingborough	696	236	932	1,000	1,100	2,100
Nottinghamshire	14,324	4,502	18,826	35,100	24,700	59,800
Ashfield	1,659	553	2,212	4,400	3,300	7,700
Bassetlaw	1,628	690	2,318	4,800	2,600	7,400
Broxtowe	970	364	1,334	2,300	2,100	4,400
Gedling	1,072	299	1,371	2,500	2,600	5,100
Mansfield	1,423	511	1,934	4,600	3,000	7,500
Newark and Sherwood	991	335	1,326	3,400	2,400	5,700
Nottingham	5,963	1,552	7,515	11,600	7,400	19,000
Rushcliffe	618	198	816	1,400	1,400	2,800

APPENDIX C

