Jobs densities for local areas: a new indicator

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Key points

- The first annual estimates of jobs density were published on 16 July for 2000 and 2001 on the National Statistics website and the Nomis® on-line service.
- Jobs density is defined as the number of filled jobs in an area divided by the number of working-age people resident in that area.
- There were over 0.8 jobs per person of working age in the United Kingdom in 2001.
- Around 40 local authorities have at least one job per person of working age. But only three have more than one and a half jobs per person – City of London, Westminster and Camden.

An introduction to a new local area labour market indicator developed by ONS as part of the framework for local labour market statistics.

Introduction

STATISTICS OF jobs density, a new local area labour market indicator, were published on 16 July. Annual estimates, for 2000 and 2001, have been produced for all local authorities in the UK. This article presents data and information about the methodology and background to the development of this new indicator as well as future plans.

Jobs density is defined in *Box 1* below. It is an indicator of labour demand and has been introduced as part of the framework for local area labour market statistics being developed by ONS. This framework comprises statistics of labour supply, working-age benefits, labour demand and labour costs.

A blueprint for the local area framework is contained within the *Labour Market Statistics Concepts, Sources, Methods and Dissemination* web-based manual accessible from the National Statistics website (to be announced).

Ideally, local area indicators of job vacancies might be compiled in the same way as jobs densities in order to give a more complete picture of labour demand. However, at present, comprehensive vacancies data are available only at a national level.

The jobs density indicator will augment the residence-based claimant count proportion, which has recently been introduced as a more appropriate indicator (for local areas) than the workplace-based claimant count rate. Both the jobs density and the claimant count proportion are residence based. More details on the background are provided in the *technical note*.

Box 1 Jobs density

Jobs density = the total number of filled jobs in an area divided by the resident population of working age in that area.

The total number of jobs is a workplace-based measure of jobs and comprises employees, self-employment jobs, government-supported trainees and HM Forces (see *Box 2* for details of sources).

The number of jobs in an area is composed of jobs done by residents (of any age) and jobs done by workers (of any age) who commute into the area.

The working-age population comprises residents of working age who work in the area plus workers of working age who commute out of the area to work in other areas and those who are unemployed or economically inactive of working age.

Data

Annual estimates of jobs densities have been produced for unitary authorities and local authority districts (UA/LADs) and most NUTS3 areas for 2000 and 2001. They are available on the National Statistics website (*www.statistics.gov.uk*) and from the Nomis® on-line service accessed from www.nomisweb.co.uk.

Estimates for 2001, are also published in new tables alongside other labour market indicators in the monthly Regional First Releases which are available from the National Statistics website (*www.statistics.gov.uk/onlineproducts/lms_regional.asp*). See also Table A.12 in this issue.

Figure 1 shows jobs densities for all UA/LADs in the UK outside London. *Figure 2* shows job densities for boroughs in London. The overall UK figure is just over 0.8 jobs per person of working age. Around 50 authorities have a jobs density of 1.00 or more, that is, at least one job for every resident of working age, but all bar three are below 1.4. These three authorities are all in Central London – City of London (61.9), Westminster (4.7) and Camden (2.1).

East Renfrewshire has the lowest jobs density of 0.4 jobs per person of working age which may be explained by high outward commuting to nearby Glasgow.

Table 1 shows the UA/LADs with the highest and lowest jobs densities within each government office region for the latest available year. London has the highest regional estimate of jobs density and the North East the lowest, but the variation within regions is greater than between regions.

Inner London has a jobs density twice that of outer London. The only outer London boroughs with more jobs than residents of working age are Hillingdon and Hounslow – both in the vicinity of Heathrow Airport. Large airports provide much employment, both directly and indirectly, for local residents. Crawley, which has the highest jobs density in the South East, contains Gatwick Airport.

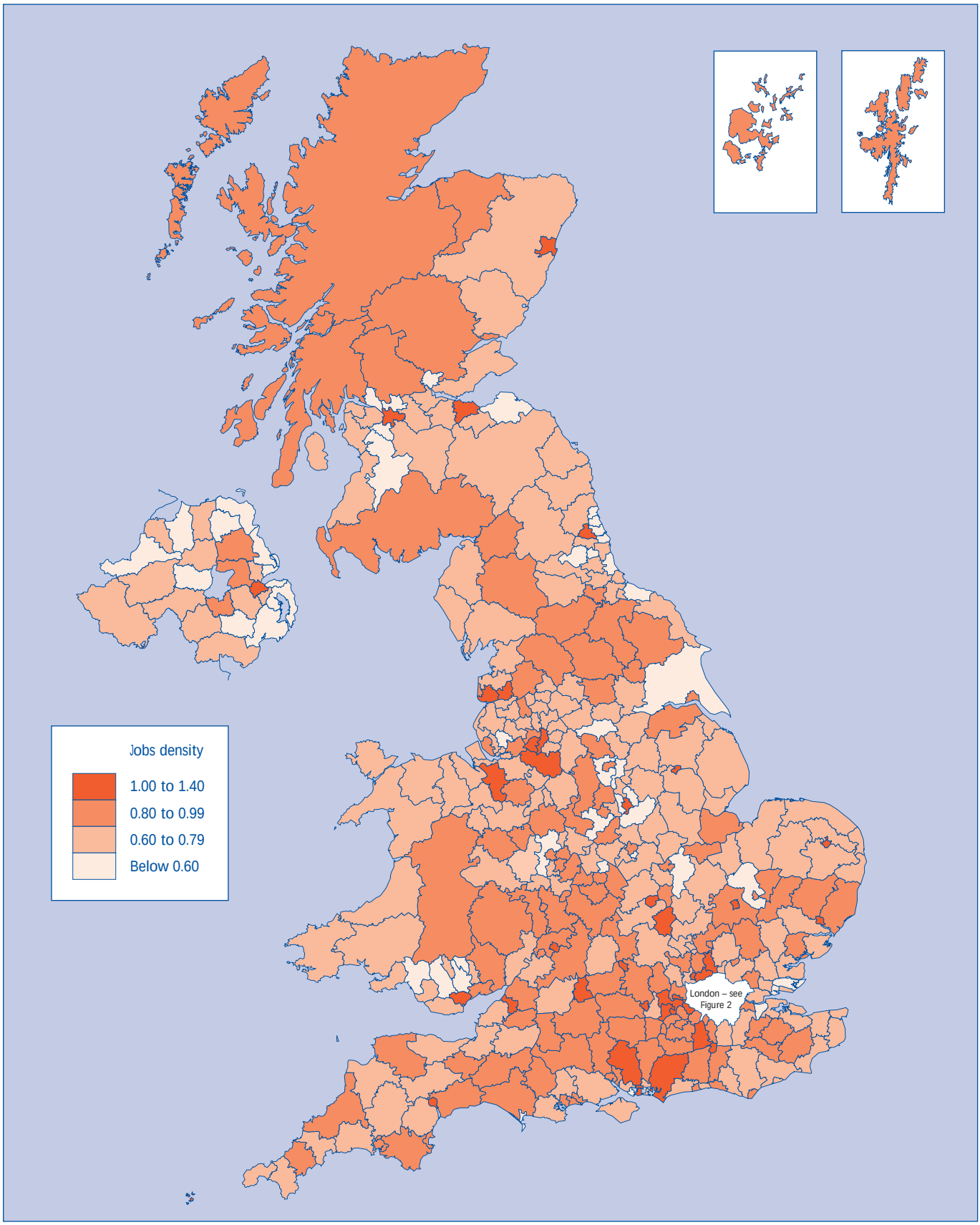
Other localised effects can be identified. Aberdeen City's high estimate is influenced by the oil industry. Richmondshire, in North Yorkshire, has a high estimate of nearly one, which could be due to a high concentration of HM Forces in the area. Large isolated rural areas such as the highlands and islands of Scotland tend

Table 1 Jobs density by region and highest and lowest jobs densities by unitary authority/local authority district; United Kingdom; 2001

Region	Jobs density	Highest UA/LAD	Jobs density	Lowest UA/LAD	Jobs density
North East	0.70	Newcastle upon Tyne	1.08	Chester-le-Street	0.40
North West	0.79	Manchester	1.30	St. Helens	0.59
Yorkshire and the Humber	0.78	York	0.99	East Riding of Yorkshire	0.57
East Midlands	0.78	Nottingham	1.15	South Derbyshire	0.49
West Midlands	0.82	Warwick	0.97	South Staffordshire	0.50
East	0.81	Norwich	1.32	Castle Point	0.43
London	0.98				
Inner London	1.39	City of London	61.89	Lewisham	0.46
Outer London	0.70	Hillingdon	1.22	Waltham Forest	0.48
South East	0.87	Crawley	1.30	Gosport	0.57
South West	0.86	Exeter	1.13	Weymouth and Portland	0.56
Wales	0.73	Cardiff	1.02	Caerphilly	0.50
Scotland	0.82	Aberdeen City	1.26	East Renfrewshire	0.39
Northern Ireland	0.75	Belfast	1.25	Carrickfergus	0.41

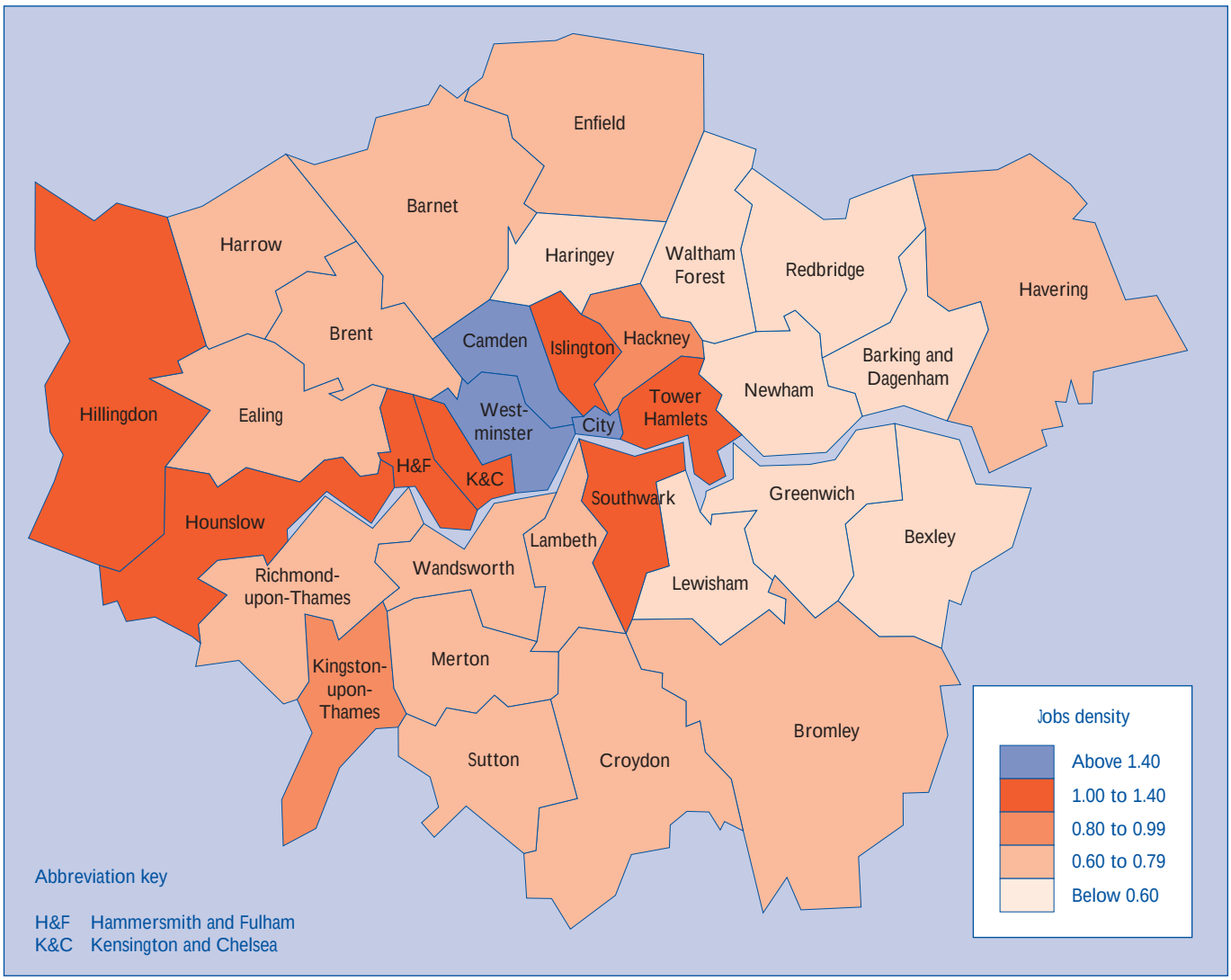
Source: Office for National Statistics

Figure 1 **Jobs density for unitary authorities and local authority districts; United Kingdom; 2001**



Source: **Office for National Statistics**

Figure 2 **Jobs density for London boroughs; 2001**



to have relatively high jobs densities, as workers are less likely to travel outside the area.

Jobs density and other indicators

Jobs density is just one of a set of local area labour market indicators, and thus can be used in conjunction with these other indicators to describe the labour market in local areas. *Table 2* shows different indicators for four London boroughs: Bromley, Lewisham, Southwark and Tower Hamlets.

Tower Hamlets has a very high jobs density due to the Docklands business district but a very low employment rate and a very high unemployment rate and the highest claimant count proportion in the country. Thus, the high labour demand within the borough is not being satisfied by residents. This may possibly be because the skills required for the jobs on offer are not possessed by sufficient numbers of residents. The imbalance between supply and demand is met by a high level of inward commuting.

In contrast, the Outer London borough of Bromley has a jobs density about half that of Tower Hamlets but has a much higher employment rate and considerably lower unemployment rate and claimant count proportion. Thus, there seems to be more labour supply than demand within the area, which results in a relatively high level of outward commuting.

Jobs density can provide additional information about local area labour markets. Lewisham and Southwark have similar employment and unemployment rates and claimant count proportions and one could conclude that the labour markets were fairly similar yet the jobs density indicator shows that Southwark has two and a half times more jobs per working-age resident than Lewisham.

Commuting effects can also be identified in other parts of the country. The city of Norwich has the highest estimate of jobs density outside London (see *Table 1*) but has a lower employment rate and a higher claimant count proportion than the surrounding rural areas of Broadland and South Norfolk (see *Table 3*).

Box 2 Data sources

Employee jobs

By far the largest component, employee jobs accounts for 87 per cent of the total number of jobs at a Great Britain level, although it varies between local authorities from just over 50 per cent to over 95 per cent. Estimates of employee jobs are from the Annual Business Inquiry (ABI). Data are for December of each year and are published a year later.

Northern Ireland estimates were obtained from the Quarterly Employment Survey. Data are for December of each year.

Agricultural employees

Estimates are obtained separately from the Department for Environment, Food and Rural Affairs, the Scottish Executive (SE) and the National Assembly for Wales (NAW) from June Agricultural Censuses.

Northern Ireland estimates for agricultural jobs (employee and self-employed) were obtained separately from the Agricultural Census, which is carried out by the Department of Agriculture and Rural Development. Data are for June of each year.

Self-employment jobs

The second largest component accounting for 12 per cent of the Great Britain total although it accounts for up to 30 per cent in individual local authorities. Self-employment data are from the annual local area Labour Force Survey (LFS). The time period is March to February of each year. The LFS is a household survey and thus estimates are subject to sampling variability. From March 2000 there was a boost to the sample in England and, from March 2001, in Wales. For further details on annual local area LFS data see pp29-36, *Labour Market Trends*, January 2003. Information on the local authority where the person is employed (main and second job), rather than the local authority where the person lives, is available only from March 2000, and hence job densities for 2000 and 2001 only have been published.

Annual LFS data for 2000 and 2001 are not consistent with the results of the 2001 Census. The annual local area LFS data will be reweighted (to be in line with the latest official population estimates based on the 2001 Census) and published in autumn 2003.

Northern Ireland estimates were obtained from the Labour Force Survey. Data are for the summer period of each year.

Government-supported trainees

Data are provided by the Department for Education and Skills and the Department for Work and Pensions, SE and NAW as at 30 June of each year. Northern Ireland data are provided by the Department of Employment and Learning. Data are for June of each year.

HM Forces

Accounts for less than 1 per cent of the Great Britain total, but in a few areas constitutes a significant part of the total number of jobs (for example Richmondshire, where a quarter of the jobs are HM Forces).

Estimates of armed forces personnel are produced by the Ministry of Defence as at 1 July of each year. Adjustments are made for military personnel serving overseas or whose location is unknown.

Population estimates

Official mid-year population estimates, for persons of working age, produced by ONS, for England and Wales, and the General Register Office for Scotland, and the Northern Ireland Statistical & Research Agency are used as the denominator.

Data sources

Official data sources are used to compile the total number of jobs in an area (see *Box 2* for details). The best annual estimates were chosen. For example, estimates of employees jobs are available for the mid-year from the quarterly Short Term Employers Surveys (STES), whereas the Annual Business Inquiry (ABI) refers to December of each year. However, the STES has a smaller sample than the ABI, and is not available for smaller areas than regions. Scaling the ABI figures for UA/LADs to less reliable STES regional estimates, to adjust for the time period, could introduce unnecessary biases into the data. Hence, unadjusted ABI figures are used in the estimates of jobs densities.

User guidance

As several different official sources are used to derive estimates of jobs densities, data quality issues regarding any of the components may affect the estimates of jobs density. Estimates of employee jobs are derived from the ABI. The ABI is a survey and there are sampling errors associated with the estimates derived from the survey.

ONS is currently carrying out a quality review of employment and jobs data. This review is examining each of the key sources of employment and jobs data (including the ABI) with a view to improving their quality, where this is needed, as well as their coherence.

Estimates of the total number of jobs in an area used to calculate the jobs density are published on the National Statistics and Nomis® websites rounded to the nearest thousand alongside the jobs densities. This rounding reflects that although these are the best sources for the data they are subject to sampling and non-sampling error. However, maximum precision has been used at each stage of the compilation of the data, including the calculation of

estimates of jobs densities from unrounded numbers of total jobs.

Future plans

Other geographies

It is expected that jobs densities for parliamentary constituencies and Travel-to-Work Areas will be published in September using estimates of the working-age population for these areas based on 2001 Census data.

Revisions

Estimates of jobs densities will be subject to revisions as the components are subject to revisions. In a normal year, jobs densities will be revised for the preceding year and published in spring with the latest year's data. But in exceptional years, there may be more revisions. For example, the self-employment component, from the LFS, will be revised in autumn 2003 when all LFS data are reweighted to be in line with the latest official population estimates based on the 2001 Census.

In spring 2004 jobs density estimates for 2002 will be published for the first time as well as revisions to 2001 (due to revised ABI and self-employment) and to 2000 (revised self-employment). In spring 2005 job densities for 2003 and revised 2002 data are scheduled for publication.

Table 2 Comparison of labour market indicators; selected London boroughs; 2001

	Working-age employment rate (%)[a]	16 and over unemployment rate (%)[a]	Claimant count proportion (%)[b]	Jobs density[c]
Bromley	77.8	3.9	1.8	0.64
Lewisham	66.1	10.3	4.8	0.46
Southwark	69.9	10.7	5.4	1.14
Tower Hamlets	54.3	12.3	6.2	1.25

Source: Labour Force Survey; Jobcentre Plus administrative system; ONS

a Labour Force Survey data for March 2001 to February 2002.
b Proportion of working-age population. Average for January 2001 to December 2001.
c Data are for 2001.
c Sample size too small for reliable estimates.

Table 3 Comparison of labour market indicators; Norwich and surrounding areas; 2001

	Working-age employment rate (%)[a]	16 and over unemployment rate (%)[a]	Claimant count proportion (%)[a]b	Jobs density[c]
Norwich	72.5	*	3.5	1.32
Broadland	84.4	*	1.2	0.66
South Norfolk	81.4	*	1.2	0.60

Source: Labour Force Survey; Jobcentre Plus administrative system; ONS

a Labour Force Survey data for March 2001 to February 2002.
b Proportion of working-age population. Average for January 2001 to December 2001.
c Data are for 2001.

Commuting article

Data on location of workplace are available from the annual local area LFS and also from the 2001 Census. ONS is planning to produce an article on commuting and travel to work in the near future.

Further information

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Technical note

Background

The report of the Quality Review of the Framework for Labour Market Statistics was published on the National Statistics website on 5 August 2002. The review made 28 recommendations which were summarised on pp485-92 in the September 2002 issue of *Labour Market Trends*.

The review recommended that an explicit framework for labour market statistics should be introduced using a type of supply-demand model called a labour accounting system. Such an approach has wide international acceptance. Two of the specific recommendations related to the new jobs density indicator.

Recommendation 11 was that "ONS should develop an initial set of local labour market indicators at local authority level (in the first place), with other geographies to follow ..." This set of indicators would bring together the concepts of labour market supply and demand.

Recommendation 12 was that ONS should consult as necessary on "... replacement of (workplace-based claimant count rates for local areas below regional level) by residence based measures of both claimant count rates and jobs density".

Labour supply and demand in a local area

On the demand side of the labour market are the numbers of jobs and vacancies in an area. Hence, jobs density is a labour demand indicator; employment and unemployment rates are measures of actual labour supply. The category of economically inactive people is considered to be a potential source of labour supply in the labour market framework, and it is a future aim to identify stable subcategories of the category that identify people with different likelihoods of becoming active in the future. Some benefit measures (for example claimant count proportions) are included in the labour market framework as recognition of their relationship with the labour market (as well as providing important information on benefit dependency in an area).

In areas with high jobs densities the demand exceeds the supply, and the imbalance may be satisfied by workers who live outside the area (inward commuting). In areas with low jobs densities the supply exceeds the demand, and often residents will have to work in other areas (outward commuting) or be unemployed or economically inactive. It should be recognised, of course, that there may not be a match between the jobs on offer in a given local area and the skills possessed by the resident working-age population in that area. In such cases both inward and outward commuting may occur.