

Cities Outlook 2011: Methodological note

Section 2 of **Cities Outlook 2011** sets out the implications of the public spending cuts for Great Britain's cities. This supporting methodological note provides additional information on how the total welfare bill and cuts to welfare and public sector jobs were calculated for each city.

The analysis undertaken in Cities Outlook compares cities' Primary Urban Areas (PUAs) – a measure of the built-up areas of a city, rather than individual local authority districts. A PUA is the city-level definition used in the Department for Communities and Local Government's State of the Cities Report.¹ It is useful as a consistent measure to compare cities across the country and we have used it since the first edition of Cities Outlook in 2008.

It is worth noting that, as is the case with almost every definition of geographic units, PUAs fit some areas better than others. Hull and Cambridge PUAs, for example, are slightly under-bounded. And some cities with substantial populations, such as Colchester, never made it into the PUA definition.

PUA data only exists for English cities; for Welsh and Scottish cities we have used local authority data with the exception of tightly-bounded Glasgow, where we have defined the city as an aggregate of five Local Authorities: Glasgow City, West Dunbartonshire, East Dunbartonshire, East Renfrewshire and Renfrewshire. Belfast is defined as the aggregate of Belfast City, Carrickfergus, Castlereagh, Lisburn, Newtownabbey and North Down.

1. Welfare benefit bill per city

We looked at seventeen different benefits and their average payment across cities. These benefits are shown in Table 1.

Table 1: Benefits included in the total welfare bill

	Benefit	Source
1	Jobseekers Allowance	NOMIS 2010, Claimant Count; DirectGov, Jobseekers Allowance
2	Incapacity Benefit	NOMIS 2010, DWP Benefits
3	Employment Support Allowance	NOMIS 2010, DWP Benefits
4	Carers' Allowance	NOMIS 2010, DWP Benefits
5	Disability Living Allowance	NOMIS 2010, DWP Benefits
6	Widows' Benefit	NOMIS 2010, DWP Benefits
7	Income Support	NOMIS 2010, DWP Benefits
8	Severe Disability Allowance	NOMIS 2010, DWP Benefits
9	State Pension	NOMIS 2010, DWP Benefits
10	Housing Benefit	DWP 2010, Impacts of Housing Benefit proposals: Changes to the Local Housing Allowance to be introduced in 2011/12; DWP 2010, Housing Benefit recipients by Region and Local Authority
11	Council Tax Benefit	DWP 2010, Council Tax Benefit recipients by Region and Local Authority
12	Working Tax Credits	HMRC 2010, Child and Working Tax Credit Geographical Statistics
13	Child Tax Credits	HMRC 2010, Child and Working Tax Credit Geographical Statistics
14	Child Benefit	HMRC 2010, Child Benefit Statistics; DirectGov, Child Benefit rates
15	Health in Pregnancy	ONS 2010, Births in England and Wales; Scottish Government 2010, Births, Marriages and Deaths; DirectGov, Help with the Health in Pregnancy Grant
16	Attendance Allowance	DWP 2010, Statistical Tabulator
17	Winter Fuel Allowance	DWP 2010, Statistical and Accounting Data

1. Department for Communities and Local Government (2005), *State of the English Cities*, London: Department for Communities and Local Government

For each benefit, the number of claimants was multiplied by the average payment for that benefit.² Where an average city level payment was not available, a national level payment was used instead.

Sources and methodology

1. Jobseekers' Allowance

The number of claimants for those under and over the age of 25 was sourced from NOMIS and multiplied by the payment for those two age groups (under 25s receive a smaller payment) according to payment data from DirectGov.

2-9. Incapacity Benefit/Employment Support Allowance, Carers' Allowance, Disability Living Allowance, Widows' Benefit, Income Support, State Pension and Severe Disability Allowance

The number of claimants by PUA and the average benefit payment by PUA was sourced from NOMIS, aggregated using our preset PUA definitions.

10. Housing Benefit

Housing benefit was split into:

- Those renting from the private sector; and
- Those living in social housing.

All claimant data by local authority was sourced from the Department for Work and Pensions (DWP). Data on the average benefit for the private rented sector was also sourced from DWP. Unfortunately, the average payment in the social rented sector was not available. Subtracting the national private sector housing benefit bill from the total annual national housing benefit bill of £20 billion and dividing by the total number of claimants living in local authority housing gave an estimated weekly payment of £74.67. The total bills at a local authority level were then aggregated up to a PUA level.

11. Council Tax Benefit

Data on the number of claimants and average payment by local authority were sourced from DWP and aggregated to PUA level.

12-13. Working Tax Credits and Child Tax Credits

Data on the number of claimants and average payment by local authority from sourced from HM Revenue and Customs and aggregated to PUA level.

14. Child Benefit

Data on family composition by local authority from HM Revenue and Customs was multiplied by average payment data obtained from DirectGov and aggregated to PUA level.

15. Health in pregnancy

The number of births by local authority (sourced from the ONS for England and Wales and the Scottish Government for Scotland) was multiplied by the flat £190 payment that a mother receives for pregnancy and aggregated to PUA level. Due to data restrictions it was assumed that only one child was born for each pregnancy. This will slightly over estimate the welfare bill for health in pregnancy as the mother receives no further payment if she is expecting more than one child.³

16. Attendance Allowance

Data on the number of claimants and average payment by local authority was sourced from DWP and aggregated to PUA level.

17. Winter Fuel Allowance

The total winter fuel allowance bill per local authority for the fiscal year 2009/10 was sourced from DWP and aggregated to PUA level. Data for the calendar year 2009 was not publically available.

2. Except for Winter Fuel Allowance – see below.

3. For example, this methodology would give a mother expecting twins $£190 \times 2 = £380$ when she would only receive one payment of £190 in reality.

2. Cuts to the welfare bill

Policy announcements both in the March and June Budgets and October's Spending Review have set out that welfare spending will be cut by around £18 billion per year by 2014/15. Not all of these cuts could be modelled spatially.⁴ This means that our calculations provide lower bound estimates of the size of the cuts in welfare for city economies. But we were able to model two-thirds of the overall welfare cuts set out by the Government to date. Table 2 lists the cuts that we were able to allocate spatially.

Table 2: Announced cuts included in total welfare cut estimates

Cut	National saving by 2014/15	Source & date announced
1 Withdrawal of the £15 excess in Housing Benefit	Not stated ⁵	March 2010 Budget
2 Local Housing Allowance: set at the 30 th percentile of local rents from 2011/12	£425m	June 2010 Budget
3 Local Housing Allowance: caps on maximum rates for each property size, with 4-bed limit from 2011/12	£65m	June 2010 Budget
4 Additional bedroom for carers from 2011/12	-£15m	June 2010 Budget
5 Benefits, tax credits and public service pensions: switch to consumer price indexation from 2011/12	£5,840m	June 2010 Budget
6 Abolish the Health in Pregnancy Grant	£150m	June 2010 Budget
7 Withdrawing Child Benefit from families with a higher rate taxpayer from January 2013	£2,500m	Spending Review 2010
8 Reducing the percentage of childcare costs that parents can claim through the childcare element of the Working Tax Credit (WTC) from 80 percent to its previous 70 percent level in April 2011	£385m	Spending Review 2010
9 Freezing the basic element of the WTC for three years from 2011/12	<£625m ⁶	Spending Review 2010
10 Increasing the child element above indexation by a further £30 in 2011/12 and £50 in 2012/13, in addition to the £150 and £60 increases provided at the June Budget	-£560m	Spending Review 2010
11 Time limiting contributory Employment and Support Allowance for those in the Work Related Activity Group to one year	£2,010m	Spending Review 2010
12 Reducing spending on Council Tax Benefits by 10 percent and localising it	£490m	Spending Review 2010
13 Up-rating the basic State Pension by a triple guarantee of earnings, prices, or 2.5 percent, whichever is highest	-£300m	Spending Review 2010
Total	£11,615	

Methodology of applying the cut to each benefit and sources

This methodology is a static rather than a dynamic analysis as it assumes that the number of people claiming individual benefits does not change to 2014/15. This is because it was not possible to accurately forecast the number of claimants of each benefit in 2014/15.

1-4. Cuts to housing benefit

All housing benefit cuts were calculated for each local authority by DWP for 2010/11 in response to the June 2010 Budget.⁷ We then aggregated these cuts to PUA level. No upward adjustment was made

4. An example of this is the increase in the working hours requirement for couples with children to 24 hours as data was not available at a local authority level.

5. Although the total saving was not explicitly stated in the March 2010 Budget, modelling by DWP at a local authority level allowed this cut to be modelled spatially.

6. This figure also includes estimates of savings resulting from freezing the 30 hour element of the Working Tax Credit for three years from 2011/12 which was not possible to map spatially.

7. Although the cuts will not come into effect in 2010/11, DWP did the calculations to make an estimate on the spatial implications of the policy.

for changes in payments in future years to match estimates of the saving in 2014/15 in the Spending Review due to the difficulty in modelling behavioural change. This means that our estimates of the cut to housing benefit are lower bound estimates.

5. Re-indexation of benefits

Where re-indexation applies, all current welfare bills were updated by both the retail price index (RPI) and consumer price index (CPI) according to forecasts by the Office for Budget Responsibility (OBR) for each city. The difference between these two welfare bills gave the estimated saving as a result of reindexation.

6. Abolition of Health in Pregnancy Benefit

A 100 percent cut was applied to our estimated health in pregnancy total bill.

7. Withdrawal of Child Benefit from higher-rate tax payers

In order to estimate the number of residents who earn over £44,000 in cities we used data on earnings from the Annual Survey of Hours and Earnings (ASHE). As well as giving the mean and median earnings for local authorities, ASHE also publishes data for the 10th, 20th, 25th, 30th, 40th, 60th, 75th, 80th and 90th percentiles where possible.

Assuming that the £44,000 threshold for higher-rate tax payers is not adjusted for earnings growth (a process known as ‘fiscal drag’), the earnings data was adjusted to assume that earnings grow by four percent⁸ per annum to 2014.

The adjusted earnings data was then extrapolated or interpolated, assuming the income distribution is linear, using the following formula to estimate the number of people who earn over £44,000 for each local authority:

$$£(80^{\text{th}} \text{ percentile earnings})X + £(90^{\text{th}} \text{ percentile earnings})(1-X) = £44,000$$

where X is the estimated number of people earning over £44,000 per year.

In cases where the 90th percentile for a local authority was not available, the 75th and 80th deciles were used in the formula.

Dividing the estimated number of people who are above the threshold by the total number of earners in a local authority gave a percentage of people who would be ineligible for Child Benefit. Assuming that family composition does not alter across the earnings distribution, an estimate of the cut to Child Benefit by local authority could be made. This was then aggregated to PUA level.

8. Reducing the percentage of childcare costs that parents can claim through the childcare element of the Working Tax Credit

A 12.5 percent cut was applied to the total bill for the childcare element to capture the policy change from 80 percent to 70 percent of childcare costs.

9. Freezing the basic element of the WTC for three years from 2011/12

The cut was calculated as the increase that would have been applied to the basic element if it was to be indexed to the OBR’s forecasts for RPI.

10. Increasing the child element of Child Tax Credits above indexation

An extra £290 was added to the payment received by those families claiming more than the basic family element of Child Tax Credits.

8. ONS 2010, *Employment and Earnings, Average Weekly Earnings Regular Pay Whole Economy 2001-2007*. Data points after 2007 were not included to exclude the impact of the recession.

11. Time limiting contributory Employment and Support Allowance for those in the Work Related Activity Group to one year

The migration of Incapacity Benefit claimants to Employment and Support Allowance (ESA) will be completed in March 2014. During this migration claimants will be reassessed in the Work Capability Assessment. Those that are deemed fit to work will be moved into the 'Work Related Activity Group' (WRAG) and will be expected to undergo training to re-enter work. Claimants put into the WRAG will only be allowed to claim ESA for a maximum of one year.

In order to get an estimate of how many current long term claimants of Incapacity Benefit will be moved into the WRAG, the Treasury's estimates for total savings as a result of this policy were back engineered. Using this estimate of the number of claimants divided by the total number of long term claimants of Incapacity Benefit and ESA gave a percentage estimate of the number of claimants impacted by the policy change.

Assuming that the proportion of claimants that will lose their ESA benefit will be the same across all cities, the number of affected claimants was multiplied by the estimated average 2014/15 payment⁹ to calculate the total saving.¹⁰

This methodology assumes that all claimants deemed fit to work will find employment. In reality a proportion of them are likely to claim Jobseekers' Allowance once their time in the Work Related Activity Group expires.

12. Reducing spending on Council Tax Benefits by 10 percent and localising it

A reduction of 10 percent was applied to the council tax bill used to calculate the total welfare bill.

13. Uprating the basic State Pension by a triple guarantee of earnings, prices, or 2.5 percent, whichever is highest

Taking the total pension bill used to calculate the total welfare bill, using the lower bound of 2.5 percent as set out in the policy change and removing CPI gave an estimate of the real increase in pension costs.

3. Public sector job losses

In order to model potential job losses in the public sector¹¹, employment was split into six different streams:

- Civil Service
- Local Government
- Health
- Education (excluding universities)
- Universities
- Quangos

Civil Service

Employment data for each Government department was sourced from the ONS' Civil Service Statistics publication and aggregated to PUA level. The real cuts announced to departmental public administration and capital budgets in the Comprehensive Spending Review were then applied to employment for each department for each PUA where applicable. Two exceptions to this were HM Treasury and the Department for Health, where the administration cut of 33 percent was applied.

9. This payment was uprated by the OBR's forecast of CPI. See Office for Budget Responsibility (2010), *Economic and fiscal outlook November 2010*. London: Office for Budget Responsibility

10. This will mean that areas where the proportion of is people who will lose their ESA payment is higher than the proportion assumed here will have their cut underestimated and visa versa.

11. Estimates are workplace based i.e. jobs that are located within a city. Not everyone who is employed in these jobs will live in the city.

This was because the 50 percent real cut announced to the Treasury's budget would likely overstate the potential job losses in the department, while the real increase in the NHS' budget is unlikely to spare the Department for Health from job losses due to the administrative savings that the Treasury is seeking from all departments.¹²

Local Government

Data on local government employment was sourced from the Local Government Association for England and Wales and the Scottish Government for Scottish local authorities. For English and Welsh local authorities some local authorities may have reported some of their employment in education. Unfortunately a breakdown of this top line figure was not available. This means that there may have been some degree of overlap between the local authority figures and education figures (see below) used in the calculations which would overstate the job losses in local government.

A further issue with the data was the allocation of employment in a county council. For example, as well as having employment numbers for Cambridge local authority, the data also had employment for Cambridgeshire County Council. This means that local government employment in Cambridge is larger than just those people employed by Cambridge local authority. But it is smaller than those employed by both the district and county council, as the county council has employment sites outside of Cambridge local authority. To account for this, employment by the county council was allocated to district local authorities within the county weighted by their population.

A cut of 14 percent was then applied to employment in line with the 14 percent cut to local authority budgets stated in the Spending Review.

Health and Education

Data for health and education was sourced from the Annual Business Inquiry. Primary, secondary and adult and other education were used to define employment in education.¹³ Human health activities was used to define employment in health.¹⁴ This assumes that all employment in these sub sectors is in the public sector. In reality this definition will also include the employment of private schools and hospitals, and so will overestimate job losses in health and job increases in education.

In the spending review settlement, both health and education received a real increase to their budgets to 2014/15. For education, a 1.1 percent increase was applied to employment in each PUA as set out in the Spending Review. However, prices in healthcare tend to rise more quickly than the consumer price index. Using the Hospital & Community Health Services Pay and Prices Index,¹⁵ an average inflation rate of four percent was calculated for the NHS. Adjusting the nominal increase in the NHS budget to account for this meant that a cut of 4.9 percent was applied to employment in health.

Universities

Each university was given a score based on its research assessment exercise score, which judges the quality of research undertaken by universities.¹⁶ Using the number of academic staff in a university relative to all academic staff in the PUA that the university is located in to weight the scores, a hypothesised PUA research assessment exercise score was calculated to account for cities that have more than one university within their boundaries.

12. It is not necessarily the case that the percentage cut to employment will be the same as the cuts to overall departmental budgets. However, the cut could equally be greater than as well as less than the departmental budget cuts. That said, recalibrating job losses to the 330,000 estimated by the OBR at a national level (see below) suppresses the job losses estimated using this methodology. This means that percentage job losses estimated are lower than the percentage cuts to departmental budgets set out in the Spending Review.

13. The 2003 SIC codes for these categories are 80.1, 80.2 and 80.4.

14. The 2003 SIC code for this category is 85.1.

15. Personal Social Services Research Unit (2009), *Unit Costs of Health & Social Care*. Canterbury: The University of Kent www.pssru.ac.uk/pdf/uc/uc2009/uc2009.pdf pg 175

16. The scores were sourced from Times Higher Education, and the data can be found at www.timeshighereducation.co.uk/Journals/THE/THE/18_December_2008/attachments/THE_Table_of_Excellence.xls. Those universities that were not listed in the data were assigned the minimum research score.

Those cities with universities with stronger research scores are likely to be less vulnerable to university employment cuts as their institutions will be able to charge higher tuition fees. An average cut to university budgets of 25 percent was assumed to match the cut assigned to the Department of Business, Innovation and Skills.¹⁷ The cuts to higher education employment for each PUA, sourced from the Annual Business Inquiry, were then distributed around the central 25 percent figure. Cities with high scoring institutions had a cut less than 25 percent applied, while cities with low scoring institutions had a cut greater than 25 percent applied. The highest performing PUA had the lowest cut, while the worst performing PUA had the highest cut.

Quangos

Employment data for quangos was not publically available and so was not included in the cuts. As noted in Cities Outlook 2011, job losses from the cuts to quangos are not expected to be very large.

Calibrating job losses to the OBR's estimates

Summing together the job losses for each type of public sector employment above gave an overall public sector job loss figure for each PUA. However, applying the same methodology to national employment figures gave a figure higher than the OBR's forecast for public sector job losses. In order to calibrate our projections, the OBR's forecasts of 490,000 and 330,000 job losses in the public sector by 2014/15 were divided by our forecast for job losses at the national level. This percentage was then applied to the estimated job losses for each PUA in order for it to match the OBR's projections.

NB. Employment in universities is not included in the OBR's definition of the public sector. For this reason job losses in universities were not recalibrated to fall within the national level estimate of public sector job losses estimated by the OBR.

17. The teaching budget for universities was cut by 40 percent in the spending review. However, the teaching budget only forms part of the income of universities. The science budget, for example, will have a real terms cut of less than 10 percent, while changes to tuition fee payments will reduce the impact of the cut to teaching budgets.

Cities Outlook 2011 is available to download at www.centreforcities.org/outlook11

For more information, please contact:

Paul Swinney

020 7803 4305 / p.swinney@centreforcities.org