

## **Overview of the different methodologies for calculating the Labour Cost Adjustment**

### **Introduction**

This is the second of a series of papers, which are part of the ongoing review of the Area Cost Adjustment (ACA). The first paper outlined CLG's current thinking and research on various aspects of the ACA that may be up for review. The review was announced by the Minister for Local Government, John Healey, during the provisional announcement of the first three-year Local Government Finance Settlement on 6 December 2007.

The Minister announced a full review of the ACA, and therefore we intend to take advantage of the next two years to look at many aspects of the ACA, including fundamentals. This paper gives an overview of the methodologies that have been considered in the past for the calculation of the Labour Cost Adjustment (LCA), the element of the ACA that takes account of differences in labour costs (this is the most significant element of the ACA).

The General Labour Market (GLM) approach that is currently used continues to be CLG's preferred approach. However, before other aspects of the ACA are reviewed in more detail, it is useful to give an overview of the different methodologies for calculating the LCA that have been considered in the past, in order to discuss whether there are aspects of any methodology that Local Authorities still want to explore.

### **The General Labour Market approach**

The GLM approach makes the fundamental assumption that local authority employees are part of a broader labour market, which includes other public sector and private sector jobs (this labour market has a geographical dimension, and this is an issue that will be addressed by research on the geography of the ACA). Therefore the wages that local authorities need to pay to recruit and retain labour need to be comparable to those for an equivalent occupation in the general labour market. As the Elliott report put it,<sup>1</sup>

The method rests "implicitly on the presumption that local authority workers are not fundamentally different from workers in other sectors of the economy in terms of the pattern of preferences they exhibit as to either where they wish to live or the characteristics of jobs they regard as desirable. Moreover, [the approach proposes] that some among the existing workforce are sufficiently mobile, or are believed to be sufficiently mobile, that they will respond to changes in the relative attractiveness of jobs in different sectors of the economy. Through this process of actual or threatened mobility, a 'going rate' will be established".

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<sup>1</sup> Elliott, R.F. (1996), 'Review of the Area Cost Adjustment', Local Government Finance, p.40

Both the current methodology for calculating the LCA, and the methodology taken before this one was adopted, take the GLM approach. The previous method only used wages in a small number of professions to compute the LCA. These professions were seen to represent the types of professions employed by local authorities. A weighted average of these professions' wages was calculated for different geographical areas.

The current methodology, on the other hand, uses all wages of all professions in the economy in the context of an ordinary linear regression (OLS) model. This allows the use of a larger dataset, while remaining relevant to local authority employment by controlling for different occupations and industries, such that the differences in wages that are due to these factors are not reflected in the ACA (gender, age, part time work and public sector employment are also controlled for). The OLS regression identifies the statistical determinants of the level of wages, including the area in which an employee lives; the coefficients on the latter are used to compute the ACA. This approach implicitly assumes that opportunities for local authority staff are not limited to the few occupational groups used in the previous methodology; and/or that the 'going wage' for a given area is statistically related to all jobs in that area, such that labour markets for different jobs overlap and are not distinct.

The main criticism of the GLM approach is the argument that for some professions, the job market is not in fact part of the general labour market, but rather is closed.<sup>2</sup> Typically, this is argued for professions such as police officers, teachers and fire-fighters, but the argument has been made to a greater or lesser degree about other local authority employees as well. The arguments that have been proposed as to why these occupations' labour markets are 'closed' are the following:

- The public sector is the predominant employer for these professions;
- The wages are set under national pay scales and are not allowed to vary across different areas according to general labour market pressures;
- Wages paid to these occupations can diverge for a significant length of time from those in the general labour market, without there being significant mobility out of the sector;
- In general, there is low mobility out of the sector.
- In some cases (fire-fighters) there are several applicants for every post.

However, as the Elliott report points out, all of the above characteristics lie on a continuum and are empirical matters.

### **The Specific Cost Approach**

The Specific Cost Approach is a 'bottom up' approach that seeks to calculate, for every profession and ACA area, the direct and indirect costs of labour.

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<sup>2</sup> See for example Elliott (1996), p. 44-47 and 52-61.

The direct costs are the salary costs; the indirect costs include recruitment and retention costs, such as additional benefits received by employees.

Indirect costs include:

- Costs associated with staff turnover, for instance training costs;
- Use of agency staff, who are not covered by national pay scales;
- Recruitment bonuses (eg 'golden hellos');
- Retention bonuses or performance-related pay, which may be necessary to make salaries competitive with those in the general labour market;
- Opportunity and necessity for overtime pay: in areas with higher costs, staff may be given the opportunity to work longer hours to achieve a comparable salary to the general labour market;
- Benefits in kind, such as health care, housing, transport, time off.

All of the costs listed above would be paid over and above basic salaries, and therefore may result in significant geographical variations in overall pay and hence local authority costs, even with national pay scales.

The most significant problem with the specific cost approach is the calculation of indirect costs. In particular, it is difficult to calculate to what extent recruitment and retention difficulties lead to higher costs. On the other hand, it can be argued that using a GLM approach for professions that operate under a national pay scale simply assumes that additional indirect costs 'close the gap' with earnings in the wider labour market, and this assumption is unlikely to be exactly correct.

There exist data and surveys on labour costs incurred by local government, for instance the RO returns, though most of the existing data does not go to the required level of depth to construct a robust specific cost approach. There may also be data from Local Government Analysis and Research (LGAR) and Local Government Employers (LGE) on employees covered by the National Joint Council (NJC). Extensive data gathering exercises on top of what is already carried out are costly for both central and local government, and would be subject to the same accuracy caveats as existing data.

Another problem with the specific cost approach is that it may give rise to circularity or perverse incentives. This is because it will be in the interest of local authorities to pay higher wages to their employees, as these wages will feed directly into the ACA. An ACA calculated under the specific cost approach can therefore be influenced by local authorities. There is also an element of circularity in this methodology; for instance, if a London weighting is being paid to a certain group of workers, this information will lead to a higher ACA for London, and therefore to the policy conclusion that a London weighting should indeed be paid.

## Hybrid systems

It is of course possible – and has been suggested - to have an ACA calculated on the basis of a GLM approach for some professions (typically accountants, managerial and office staff, manual workers), and one calculated by means of a specific cost approach for other professions (eg teachers, police, or fire-fighters).

It may also be possible to use local authority labour cost data to some extent to sense check the ACA derived with a GLM approach, even if this data is not in itself robust enough to be used in isolation. However this data will also not reflect all of the employment related costs incurred by authorities, for example in contracted out services.

## Cost of living approaches

For some professions (in particular teachers) another approach that has been suggested is to use the cost of living in an area – and in particular the cost of housing – to construct the ACA. This approach is free from perverse incentives and there are no doubts that costs of living do vary across the country.

However, the ‘going wage’ in an area is not only related to the cost of living, but also to the amenity or disamenity of living in an area. Moreover, house prices can be volatile, and are not directly related to the costs faced by a local authority. Also, employees do not necessarily live in the local authority where they work.

## Evidence

### *Geographical variations in wages of local authority employees*

SWG paper (02) 92 cites a 1998 PriceWaterhouse report on specific cost approaches (‘A Specific Cost Approach to Area Cost Adjustments’). They suggest that there is little difference in firefighter salaries outside of London.<sup>3</sup> However, other studies (cited in Wilson et al 2002, p. 110<sup>4</sup>) on the pay of police and teachers, find that ‘even in an environment where regional pay variation is deliberately suppressed through a rigid national pay scale, there still remains evidence of police authorities in some areas paying more for a comparable worker than in others’. The pay premia found by these studies are lower than an ACA regression analysis on the general labour market would suggest, eg 9.8% in the City of London for the police and 16% in Inner London for teachers. However this does not take into account indirect costs

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<sup>3</sup> The data sources considered by Pricewaterhouse (for different services) were the Database of Teacher Records; the Revenue Outturn Data; CIPFA statistics; Police GAD survey; LGMB Staffing Returns; LGMB/NJC- Firefighters/C.Room; LGMB – APT&C Survey; LGMB – Manual and Craft Worker Surveys; LGMB Regional Pay Surveys; LGMB Single Status Surveys; Inland Revenue; CPX/CGX – Pension Data; New Earnings Survey; Base Estimate Returns; Census; Income Data Services.

<sup>4</sup> Wilson et al (2002), ‘Spatial variations in labour costs: 2001 review of the staff market forces factor’, Department of Health and Institute for Employment Research University of Warwick.

and housing allowances – eg housing allowances would raise the City and Metropolitan Police premia to around 14%<sup>5</sup>).

To calculate an ACA for firefighters, the PriceWaterhouse study suggested running a regression only on a database of firefighter pay. Data on firefighter pay does exist; however at this stage it is not detailed enough to control for individual characteristics, and there may be accuracy problems.

The Local Government Pay Commission uses data from the NES (now ASHE), as it contains a variable (colag) identifying whether the individual's wage has been set with reference to a collective agreement.<sup>6</sup> Observations identified by colag value 448 are determined by the Local Authority Single Status National Agreement. This does not include all local authority employees (eg it does not include Police, Fire and the highest paid posts). There are around 11,000 observations in the ASHE sample that fall under this category. Unfortunately only 2004 data could be analysed in this manner, as after 2004 the colag variable was merged into 7 categories only, and local authority wages set nationally could not be identified. The 11000 observations mean that for some ACA areas there are several hundreds observations, while for others less than 100. As the ACA regression includes over 100 variables, there are not enough degrees of freedom for the estimation of LCA factors to be robust.

Nonetheless, we have run the ACA regression on the above data. The LCA factors derived from this regression can be found at Annex 1. Only 19 out of 52 ACA areas had significant coefficients, so the LCA factors are clearly not robust, as for most of them the hypothesis cannot be rejected that they are equal to 1. Also, there are clearly some significant differences between these LCA factors and those calculated with the complete, larger, more robust ASHE sample. However, the differences are not systematic; for instance, it is not the case that the LCA factors calculated only on the nationally agreed local authority wages are smaller and less variable than those calculated with the overall sample. There are no clear patterns in the differences and they seem as likely to be negative as positive. Though the estimation is not robust, this analysis suggests that there are significant geographic variations in wages even when they are set with reference to national agreements, and even when controlling for industry and occupation.

A similar analysis was carried out for wages covered by police service national agreements (colag=456) and fire services agreements (colag=457, 458, 459). There were only around 1300 observations covered by police agreements and 400 covered by fire agreements so the analysis is not robust: in the police regression, only 8 ACA areas are significant at the 5% level, and 6 ACA areas are dropped out of the regression because there are not enough observations; for the fire regression only 5 ACA areas are significant at the 5% level and 4 ACA areas are dropped out of the regression. On the basis of

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<sup>5</sup> Maxwell Stamp plc (1999) *Review of geographical and Institutional factors: Staffing costs*, A report prepared for the Further Education Funding Council

<sup>6</sup> Report of the Local Government Pay Commission, October 2003, Chapter 3.  
<http://www.lgpay.org.uk/Documents/lgpayreportoct03.pdf>

this preliminary analysis there would seem to be substantial variation in police and firefighter wages across ACA areas, even when individual and occupational characteristics are controlled for. However, as this analysis is based on a small number of observations and standard errors are large, the results are not robust. The LCA factors derived from these regressions can also be found at Annex 1; for the regressions based on fire service and police wages, only the coefficients that are significant are shown.

#### *Extra payments/benefits to staff*

The 1996 Elliott report found that teachers were paid housing subsidies in various forms, and police officers received housing allowances, which may well lead to total pay displaying significant variations across the country. Moreover, it was found that police officers in the Metropolitan police worked more overtime hours than other police officers. The question is whether such overtime is considered an increase in salary – and as such should be taken into account in the ACA – or whether it is a reflection of greater needs in London, and therefore should be taken into account by the funding formula.

#### *Proportion of staff subject to national pay scales*

The Elliott report found that teachers, police officers and fire-fighters (those professions which traditionally are subject to national pay scales) account for a minority (29%) of local authority employment. FRG paper (02) 94 finds that 82% of fire service employees are whole time uniformed staff. 11% are civilians and 7% are retained fire-fighters; the latter two groups are not subject to national pay scales.

#### *Recruitment and retention problems*

There is some evidence that vacancy rates for teachers are high, which could be an indirect labour cost incurred when salaries are constrained by a national pay scale.<sup>7</sup> On the other hand, Elliott and SWG paper (02) 94 report evidence that there are several applicants for each fire-fighter job, and that the vacancy rates in the police force are also low. This would suggest that salaries in these occupations do not need to be following the ‘going wage’ in the general labour market in order to recruit and retain workers.

#### *Mobility*

Submissions received by Elliott reported that there is little mobility between the police and fire service and the private sector. The evidence for teachers is mixed. Elliott makes the point that the absence of mobility on its own is not enough to conclude that a profession is part of a ‘closed’ labour market.

## **Conclusion**

At this stage there does not seem to be enough evidence to abandon the GLM approach. We welcome views on the desirability of using the above approaches for different sub-blocks of formula grant. We also welcome

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<sup>7</sup> Vacancy rates for teachers have significantly dropped in the last few years; however they are still much higher in London than they are in England as a whole (in 2006, 1.2% versus 0.6%). Source: DCSF, [http://www.dcsf.gov.uk/rsgateway/DB/SFR/s000743/SFR29\\_2007\\_FinalTables18-25.xls](http://www.dcsf.gov.uk/rsgateway/DB/SFR/s000743/SFR29_2007_FinalTables18-25.xls).

suggestions of where up-to-date data on the evidence categories outlined above can be obtained.

## Annex 1

	LCA factors for the general labour market (2004)	LCA factors based on local authority collective agreements	LCA factors based on observations subject to police agreements	LCA factors based on observations subject to fire-fighter agreements
City of London	1.594161456	1.483534952	1.150836543	
Inner London	1.329868212	1.355839099	1.223533681	
West London	1.185181894	1.253287922	1.183190840	
Berks nf	1.168843849	1.090591770	1.146798432	
Surrey, WSussex & Berks fringe	1.164800144	1.100783099		
Bucks nf	1.125421920	1.159224278		0.579972550
Herts & Bucks fringe	1.124191596	1.075331788		
Rest London	1.100135063	1.243440978	1.198831242	
Kent & Essex Fringe	1.097808336	1.104550196		
Oxfordshire	1.090967944	1.058762769		0.642393254
Cambridgeshire	1.067568371	1.049313186		
Beds & Herts nf	1.064872063	1.020156411		
Hampshire & IoW	1.054616665	1.007421519		
Avon	1.052170599	1.097518902		
Wiltshire	1.040372433	1.031105388		
Essex nf	1.027462094	1.087899124		
Greater Manchester	1.026266959	1.058423347		
Northamptonshire	1.022464158	0.974121424		
Gloucestershire	1.020857042	1.093461986		
Cheshire	1.018962334	1.048078406		
Kent nf	1.018077832	1.043912599	1.264261592	0.738714738
Warwickshire	1.017365092	0.984698364		
South Wales Police	1.013039447	1.028777524		
West Midlands	1.012376826	1.080928698		
Merseyside	1.008723325	1.027992021		
East Sussex	1.008509658	1.020340231	1.142300826	
Leicestershire	1.007958978	0.969737458		
West Sussex nf	1.007088721	1.009297514		
West Yorkshire	1.005511347	1.040022647		
Tyne & Wear	1.001039855	1.033115262		
Nottinghamshire	1.000291004	1.032761677		
North Yorkshire	0.996588336	0.997403114		1.756595590
Gwent Police	0.994125558	1.021191260		
Cleveland	0.991092626	1.044718676		
Northumberland	0.988856867	1.010555968		
Lancashire	0.984406403	0.991325305		
Suffolk	0.983793566	1.004806707		
North Wales Police	0.980176201	0.990635852		
Derbyshire	0.978222215	1.026716275		1.418112357
Hereford & Worcester	0.977862399	0.945125577		
Durham	0.976551690	1.029214440		
Dorset	0.975679142	0.955410112		
Norfolk	0.973330920	1.028541843		
Devon	0.972537319	1.003929282		
Staffordshire	0.970593080	0.987582122		
Cumbria	0.966691450	0.980987224		
Shropshire	0.966543406	0.920629691		
Somerset	0.963493185	0.957774830		
Humberside	0.962089762	0.957896211		
Lincolnshire	0.946675435	0.923966158		
DyfedPows Police	0.944174667	1.072989773	0.912958107	
Cornwall	0.942597181	0.867861698		
maximum	1.594161456	1.483534952		
minimum	0.942597181	0.867861698		
10th percentile	0.966558210	0.957786968		
25th percentile	0.978132261	0.991152942		
75th percentile	1.052782115	1.073575277		
90th percentile	1.125298888	1.104173487		