Local Government Association

Title:	**Needs & Redistribution Technical Working Group**
Paper:	NR TWG 18-09: Discussion paper regarding the divergence of relative needs over time by the University of Essex / LGA
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POLICY DEVELOPMENT: NOT A STATEMENT OF GOVERNMENT POLICY

Introduction

1. This paper provides members of the technical working group with a summary of work carried out by the University of Essex, advised by the LGA, on the divergence of relative needs over time. It is related to one of the items in the expanded LGA work programme on the Fair Funding Review, set out in Appendix A.

Background

2. One of the key questions for the Fair Funding Review is how often the new needs assessment should be reset. The longer the periods between resets the greater the chance for authorities to keep any growth generated. This could be considered the main way to include stronger rewards in the system. However, this potentially leads to a greater divergence between needs and resources.

3. There is clearly a need to balance needs and rewards. In order to set that balance it is important to understand potential implications of design choices, including the impact this has on individual councils' relative needs positions and the impact not updating data has on funding levels between resets.

4. As one part of this, the LGA was interested to see the extent to which relative needs could change over time and to use this to help the LGA develop its policy in relation to what population data should be used in the needs baseline. The [Government's most recent consultation document](#) asked for views on whether population projections should be used in the formulae.

5. One way of doing so is to look at the formulae used to establish the 2013/14 baselines and see how much the relative needs assessments would have diverged over time, if the underlying data used in the formulae was updated, but with no change to weightings between different variables.

Analysis

6. With input from the LGA, the University of Essex reviewed the data that was used in the funding formula system in 2013/14, the point at which it was used to determine tariffs and top-ups. Colleagues from the University examined the potential to update the underlying data without changing the weightings in the formulae.

7. The University of Essex will publish a working paper setting out in more detail the analysis, the results and their recommendations. These are summarised in this report.

8. The primary purpose of the analysis is to estimate how much the relative needs assessments of local authorities can change over a period of time if the formula, and its weightings, are kept constant.

9. There were significant constraints on availability of data. In particular, much of the information in the 2013 formulae came from sources that no longer exist, or were based on one-off modelled datasets which had not been refreshed by the Government since. One example would be the welfare statistics which are no longer collected due to the introduction of Universal Credit. Many variables also flow from the Census, meaning they could not be updated until data from the next Census is available.

10. As a result, the main focus was on refreshing population data - the full list of indicators updated is below. Arguably, population forms the most significant part of the relative needs assessment and is likely to do so again in the new system. So this still means that if a high divergence of relative population numbers between areas can be observed, this would make it likely that we see a high divergence in assessed relative needs.

TABLE 1. Full list of indicators updated as part of University of Essex analysis

Variable code	Variable long name	Formulae in which the variable was used
PROJALL	Projected population in 2013	Police, fire, EPCS
PROJ0TO17_12	Projected population Aged 0 to 17	Children's services
PROJ13TO19_12	Projected population Aged 13 to 19 in 2010	Children's services
PROJ18TO64_12	Projected population Aged 18 to 64 in 2011	Adult social care
PROJ65PLHHSR12	Projected Household and Supported Residents Aged 65	Adult social care

Variable code	Variable long name	Formulae in which the variable was used
	and Over in 2011	
MIDPOP	Resident population at 30 June 2011	Fire
OTHERETH	People in Other Ethnic Groups	Children's services
MIXETH	People in Mixed Ethnic Groups	Children's services
KIDBLACKETH	Children in Black Ethnic Groups	Children's services
OASPAR	Population Sparsity	Police, fire, EPCS
LNOASPAR	Log of Population Sparsity	Police
OPRENTED	Older People in Rented Accommodation	Adult social care
NOFAMILY	Households with No Family	Adult social care
SINGLEPAR	Single Parent Households	Police
ETHSEC.NEW	Secondary Low Achieving Ethnic Groups	Children's services (youth and community)
PUP3TO18_J10	Pupils aged 3 to 18	Children's services (local authority central education functions)
RESPUPALL	Resident pupils aged 3 to 18	Children's services (local authority central education functions)

11. There are other important caveats to this analysis:

   a. As the analysis is limited to mostly population indicators, it is impossible to tell whether updating the data for other indicators would have mitigated the divergence in population, or strengthened it further. So the results should not be taken to mean that this is how allocations would have actually changed.

   b. Implicit in the analysis is also that the needs assessment would look similar following the Fair Funding Review. That is not what officers suggest is going to be the case. But there is value in using an existing framework for a 'worked example' to identify risks and stress tests that the process of building the new system should be mindful of.

   c. Finally, the analysis did not attempt to refresh the adjustment for taking into account council tax. This could have a mitigating effect as extra population growth could result in extra taxbase growth and, by extension, more council tax income to fund services for an increased population. This would reduce the requirement for extra resources to fund the additional need. The results focus on the changes to the relative needs assessment and not the resources adjustment. They also do not assess growth in business rates income over the period.

Results

12. Within the context above, the results of the University of Essex analysis suggest that updating the population indicators in the old formulae would have delivered a change in relative needs shares (prior to adjusting for council tax / transition / damping) for individual councils within a range of an increase of 27 per cent, and a drop of up to 19 per cent. For 52 per cent of authorities, the change would have been within plus or minus 4 per cent. For 38 per cent of authorities the change is greater than 5 per cent in either direction.

13. This suggests if the assessment was fixed for five years and then reset, individual council allocations would potentially have to shift by a considerable margin to match the new needs profile. This is a significant variation which would deliver a 'cliff edge' for councils, especially those that would see their funding reduce if their relative needs fall over the period.

14. However, as mentioned earlier, it is also possible that updating all factors would result in a smoother distribution of changes. The Institute for Fiscal Studies recently published analysis which showed that over the last 7 years of the pre-2013 formula grant system, the aggregated relative needs funding shares of regions did not change by more than 3 per cent in either direction.

15. That is a smoother profile, but not too different from the conclusions as presented in Table 1. It is not entirely clear if the analysis was done on the same basis as the University of Essex work (except being backward- rather than forward-looking) as the formula were updated more often in the period but it is possible that this is indicative of the potential smoothing effects of updating more indicators.

Mitigating the risk of divergence

16. The LGA used the results of this analysis to consider with the LGA's Task and Finish Group on Business Rates Retention and the Fair Funding Review[1] and the LGA's Leadership Board what population data should be used in the needs assessment.

17. Three options were considered:

   a. **The needs assessment could be refreshed on an annual basis, using the most up-to-date data available.** This would mean that the assessment reflects relative needs better over time and would avoid cliff edges in allocations at the time of resets. However, it would make fixed, multi-year settlements impossible, and dilute rewards of increased business rates. The top-up and tariff amounts would shift in an unpredictable fashion on an annual basis. It would not be fully predictable to what extent individual local authorities could benefit from additional savings or income over time. It would also mean that population data used is backward- rather than forward-looking.

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[1] This group consists of 13 councillors from the LGA's relevant policy boards and represents the political balance of the LGA.

b. **Use data projections wherever possible (such as with population).** This would mean that the path of top-up and tariff changes could be set ahead of time and fixed for a number of years. If projections turned out to be accurate, it would provide a prediction of how relative needs diverge over time and would provide certainty over rewards and future top-up and tariff levels. However, if projections turned out to be inaccurate, it would not accurately reflect a changing needs profile between resets and still result in some cliff edges at a point of reset.

c. **Finally, a 'do nothing' option is possible, where the top-ups and tariffs are set on the basis of data as it is at a point in time and then not revisited during the period between resets.** This is in effect the basis of the 50 per cent retention system, where the needs assessment is frozen and top-ups and tariffs only change due to a revaluation and otherwise are only adjusted for inflation. The only source of extra income is through additional growth in business rates or council tax and not through increased allocations due to higher relative needs. It could increase rewards but the potential level of 'cliffedge' due to changing allocations at a point of reset is the highest under this scenario.

18. All of the suggestions above do not take into account the length of time between resets – annual resets, for example, would maximise the frequency at which the values of the formulae are updated, but would minimise the amount of business rates that individual local authorities retain between resets. So the length of the time between resets is just as important as the considerations above.

19. Having taken the information above into account, members of the LGA Business Rates Retention and Fair Funding Review Task and Finish Group and the LGA Leadership Board have expressed a preference for using population projections wherever possible.

Other proposals in the University of Essex work

20. In addition to analysing the sensitivity of the formulae to changes in data, the University of Essex looked at other technical aspects of the workings of the 2013/14 relative needs assessment. This resulted in the University of Essex making a number of other recommendations related to updating of the formulae:

a. The workings of the model should be configured so that it does not deliver counterintuitive results when the amount of funding being distributed changes. This is a reference to the four-block model which was introduced in the mid-2000s and underpins the 2013/14 funding baseline which led to some extremely counterintuitive results, such as the effect of using a 'threshold authority' in the allocations.

b. When adopting a new funding formula, it should be run with several years of historical data and the degree of deviation between authorities over the

period analysed. Results should not vary disproportionately to underlying changes reflected in data from different years.

c. Data should be updated with a frequency that reflects the tendency for assessed allocations to vary over time.

d. Funding mechanisms should be based on data that will continue to be published reliably in the future or where current estimates are expected to remain relevant for several years.

e. When calculating correlations between each of the variables that are proposed to be used in the dataset, high correlation should be assessed while any correlated pairs that are retained in the final dataset should be justified.

f. The single best dataset estimating each underlying construct should be used consistently throughout. For example, the old model used different sources for population data (projections, mid-year estimates, Census) where the same source could have potentially been used.

g. Adopted practices should minimise chances of error and/or maximise chances of errors being detected prior to final deployment. The old model had some inconsistencies which had no impact on final allocations – but this risk should be minimised.

Discussion questions

21. Member views are invited on the content of the paper.

22. Members are also asked to consider the University of Essex's technical recommendations about general formula design principles (paragraph 20).

Appendix A. Outline of the additional LGA Fair Funding Review work programme

Project	Purpose and description
Key criteria for assessing proposed distribution models and methodologies	To give the LGA a structured and consistent way to assess new distribution models.
Formula grant: update the data	Update the data in the current distribution model (where updated data is available) to see the impact of this on individual allocations separate to any methodology changes. In effect this would provide an updated baseline to inform a discussion on how long the formulae remain 'future proof' without any review of weightings. To help the LGA and member authorities form policy on the data used in the formulae and the frequency of distribution resets, or other ways to 'future proof' the mechanism.
Relative needs assessment model: develop a relative needs assessment model	A model to allow local authorities to see the impact of different key cost drivers and differential weightings. To help the LGA and member councils evaluate the impact of various Government and stakeholder proposals on their council and to allow them to put forward their own proposals
Council tax equalisation: develop an equalisation model	A model to identify the impact of adjustments for council tax and council tax support on individual authorities. To inform LGA policy and to help individual member councils evaluate Government proposals.

Project	Purpose and description
Transition mechanisms	An analysis of historic damping / transition mechanisms and a model to inform discussions on the guiding principles of transition. To inform LGA and member authorities' policy.