

Technical explanation for CBGS LA priority list – March 2018

1. This note provides a brief explanation for deriving the prioritisation for allocating childminder business grant funding.
2. The following criteria was initially agreed for consideration of how to allocate the funding by local authority:
 - a. The rurality of the local authority
 - b. The amount of disadvantage in a local authority
 - c. The number of childminders as a rate against an agreed criteria
3. To define these criteria the following data was used:
 - a. The rural population of a local authority district including hub towns from the 2011 census, aggregated to LA level.
 - b. The number of registered free school meal children (FSM) according the 2017 schools census
 - c. The rate per 1000 of the number childminders in a local authority compared to number of 30 hours eligible codes issued for Spring 2018, where the childminder is registered with Ofsted on the early years register in August 2017.
4. Sources of information:

Rural population by LA district 2011 census:
<https://www.gov.uk/government/statistics/2011-rural-urban-classification-of-local-authority-and-other-higher-level-geographies-for-statistical-purposes>

Free school meals from school census
2017: <https://www.gov.uk/government/statistics/schools-pupils-and-their-characteristics-january-2017>

Registered early years childminders from August 2017:
<https://www.gov.uk/government/statistics/childcare-providers-and-inspections-as-at-31-august-2017>

30 hours codes issued from Spring 2018 release:
<https://www.gov.uk/government/statistics/30-hours-free-childcare-spring-term-2018>
5. To create the weighting for the overall indices first each local authority was giving a weighting as follows.
 - a. The absolute proportion of rural residents in a local authority compared to all other local authorities. Rural population / total rural population.
 - b. The absolute proportion of FSM children compared to all other local authorities. FSM population / total FSM population.

- c. The rate of childminders per 1000 eligible codes issued inversed. This is achieved by dividing the rate by 1. So $1 / (\text{childminders} / 30 \text{ hour codes issued} * 1000)$ as this would give a higher weighting to local authorities with fewer childminders.
6. The final step to create an overall index uses a mean composite method where for each criteria, a score is derived by dividing an observation against the mean of that criteria and multiplying by 100. This gives each observation a score / weight. The scores for each criteria are added together and divided by the number of criteria to give an overall mean index. This can be written as follows where K is a criteria:

$$\sum_{i=1}^k \frac{x_i}{\bar{x}} * 100 / k$$

So if one criteria was 50% above the mean (150), one 10% below the mean (90) and the final criteria 20% above (120), the composite score would be $(150+90+120) / 3 = 120$.