

## 10.0 UK Measures of Multiple Deprivation

Multiple Deprivation Measures exist in each of the four countries of the UK. At the time of publication of the NIMDM 2010 the most recent deprivation measures in each country were;

Scottish Index of Multiple Deprivation (SIMD) 2009  
Welsh Index of Multiple Deprivation (WIMD) 2008  
English Indices of Deprivation (ID) 2007.

A number of similarities and differences exist between the four multiple deprivation measures.

Each multiple deprivation measure is based on the '**domain**' methodology, where a number of different types of deprivation are measured for small areas and combined to form an overall multiple deprivation measure. In addition, all measure **relative** deprivation, showing how deprived small areas are relative to other small areas within their country. In each multiple deprivation measure rank 1 is assigned to the most deprived area in that country.

Although the measures follow a similar methodology a number of differences exist in the **component indicators** collected and **weights** assigned to domains, reflecting user consultation, local priorities and data availability within countries. The **time period** to which the multiple deprivation measures relate also differs, as well as the size of **geographical units** at which the results are reported.

### 10.1 Comparing Deprivation Levels across UK

Due to the differences described above, it is not possible to directly compare deprivation indices across nations, using deprivation ranks, scores, or otherwise.

Furthermore, as each index of multiple deprivation is dependent upon the levels of deprivation in that particular country i.e. small areas are ranked relative to each other, **it is not correct to assume that ranks are equivalent between countries.**

For example, the SIMD 2009 results show that an area within Parkhead / Barrowfield in East Glasgow is the most deprived small area in Scotland, while the NIMDM 2010 reports that Whiterock 2 SOA in Belfast is the most deprived small area in NI. It is **not** possible to conclude that levels of deprivation in Parkhead/Barrowfield are equivalent to that in Whiterock 2.

Similarly it is not possible to combine the 4 indices to form a UK index.

### 10.2 Options for using four Indices of deprivation

There may be occasions when resources are allocated across the UK based on deprivation levels.

A number of options should be considered as below<sup>1</sup>. The associated strengths and weaknesses of each are also given.

When choosing a suitable option, the impact of differing reference years, differing geographies and differing indicators should be taken into account. It is strongly recommended however that guidance is sought from those responsible for the relevant indices of multiple deprivation before implementing such a policy.

#### *Option 1 – Allocate funds by country, then by inequality*

Step 1 – Use macro information to allocate funds to each country

Acquire a national indicator that covers each UK country that can be used to allocate funding and that is relevant to the policy.

For example, it may be sensible to obtain the number of unemployed in each country and allocate funds based on the share of unemployment each country has. If possible, try to choose macro variables that are related to deprivation rather than those inversely related to deprivation (such as Gross Value Added data).

Step 2 – Allocate the funds allocated to each country to the local level

Select the most deprived areas in each country to target funds towards. The deprivation in each area is defined by the overall multiple deprivation measure rank. Decide the percentage of areas to target funds towards e.g. select areas below a certain multiple deprivation measure rank. Decide whether a fixed percentage of the most deprived areas are selected in each country or whether this percentage is varied in each country. Consult with each country (section 5) to help define the best percentage of areas to select in order to target the deprived areas. As the distribution of deprivation differs in each country (i.e. some countries will have a higher proportion of areas that have a given level of deprivation compared to others), the percentage of selected areas may vary in each country.

#### Strengths/weaknesses

Strengths of this method:

- Simple to implement
- Avoids the issue of different area sizes used in each country and the influence that this can have on how funds are allocated between countries.
- Avoids the issue of the different reference years used in each country's multiple deprivation measure.

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<sup>1</sup> This section is taken from :  
[http://www.neighbourhood.statistics.gov.uk/HTMLDocs/images/Comparing-IMDs-across-countries-v06\\_tcm97-93502.pdf](http://www.neighbourhood.statistics.gov.uk/HTMLDocs/images/Comparing-IMDs-across-countries-v06_tcm97-93502.pdf)

#### Weaknesses:

- Difficulty in choosing the macro variable. The macro variable used should reflect the level of deprivation experienced in each country, and should therefore be chosen carefully
- The varied levels of deprivation in each country will also impact the threshold or the percentage of areas to direct funds towards. There is no set formula for determining these levels.

#### *Option 2 – Allocate funds using comparator regions*

##### Step 1 – Identify the threshold for use in England

For example you might choose to select the 15% most multiply deprived areas across the whole of England. The actual percentage of areas selected in each region will vary depending on the level of deprivation in each region.

##### Step 2 – Identify comparator region

Acquire a macro indicator or a number of indicators which are relevant to the policy and available at a regional level e.g. number of people on income benefits. Using the indicator(s) identify the regions that are closest to country in question i.e. which English region has levels similar to Wales, Scotland or Northern Ireland. If no region appears similar to the country then this is unlikely to be an appropriate option to follow.

##### Step 3 – Implementation

Use the percentage of areas selected in the comparator region to select a percentage of the most multiply deprived areas in the country linked to that comparator region. Use the multiple deprivation measure from each country in turn to select these areas where the funding will be allocated. Distribute the funding to each area either equally to each selected area or an amount based on population in the selected areas.

#### Strengths/weaknesses

##### Strengths:

- Avoids the issue of the different reference years used in each country's multiple deprivation measure.
- Avoids the issue of differences between area sizes and the influence that this can have on how funds are allocated between countries, if the funds are allocated the population size of each area.

##### Weaknesses:

- The macro indicators which lead to assigning the comparator region do not reflect the extent of inequality which should be driving these policies.
- The comparator region would need to be reviewed periodically to make sure the link between the region and country is current.

- Does not allow for the different area sizes used in each countries multiple deprivation measure if the funding is distributed so that each area receives an equal amount.
- To ensure the policy reaches the right areas it would be important to have the results reviewed and agreed by National multiple deprivation measure experts.

*Option 3 – Allocate funds via a UK comparison of income or employment domains*

Step 1 – Choose a domain most relevant to the policy

There are a limited number of domains that can be compared across different countries as different countries have different types of domains and use different indicators. The two domains that all the indices of deprivation have in common are the Income and Employment domains. Each of these domains uses the same or very similar indicators. Income and employment are known to be major drivers of deprivation. These two domains account for about 50 per cent of the multiple deprivation measure. The untransformed scores of these domains are a simple percentage of people in on one or more income/employment-based benefits, and as such, can be compared across countries. If either of the domains is a focus of the policy, then consider using this option.

Step 2 – Acquire domain information for each country and combine

Domain information is available from each countries website that hosts the multiple deprivation measure.

Step 3 – Select a percentage of areas or select areas below threshold

Select the areas that are the most deprived across the UK according to the combined domain information. Either select a percentage of the most deprived areas or select areas below a threshold of deprivation. Distribute the funding to each area either equally to each selected area or an amount based on population in the selected areas.

Strengths/weaknesses

- Simple to implement
- Incorporates the extent of inequality in the domain

Weaknesses:

- Makes no allowance for different area sizes used in different countries. England, Wales and Northern Ireland use areas that have roughly the same average population (1,500) whilst Scotland uses areas that contain roughly half this population (750). The difference in area size will influence the number of areas and population selected. This effect can be minimised by:

- Selecting a percentage of areas that does not only target the most extremely deprived areas. Selecting above approximately 15% reduces the impact of different area sizes.
- Using this option when population is the focus of the policy rather than number of areas and allocate funds to the selected areas on a per head basis.
- Makes no allowance for the different years to which the multiple deprivation measures relate. E.g. no allowance for changes in income deprivation rates between the years – so would not be good now comparing the recession years of 2009 with 2007. Although the multiple deprivation measures themselves are produced on different timetables there is an intention to publish the current data for these domains annually in the future.
- There may be some differences between the indicators used in the income and employment domains across the nations. Understand the impact that these differences may have on the domain scores.
- Has no input from the other deprivation domains and hence only relevant for income or employment policy areas.

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