

Monitoring Brief

Monitoring Brief 6/11
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The demand for, and feasibility of, a UK-wide index of multiple deprivation

1. Issue

- 1.1 Each of the four UK administrations produces an index of multiple deprivation¹ (IMD) – a ranking of small areas from the most to the least deprived, based on a range of statistical data about domains – such as income, employment, health, housing, education, access to services, and crime. However, there is no corresponding IMD covering the UK as a whole, so areas in different countries of the UK cannot be compared. This Brief reports the UK Statistics Authority's views about the demand for, and feasibility of producing, a UK-wide index of multiple deprivation.
- 1.2 In December 2010, the Authority published three Assessment Reports² on the measures of multiple deprivation produced by the Welsh Government, Scottish Government and the Northern Ireland Statistics and Research Agency (NISRA)³, describing the extent to which these statistics complied with the *Code of Practice for Official Statistics*⁴. Amongst other requirements and suggestions, the Authority suggested that the producers of these statistics work with colleagues in the other UK administrations to:
- investigate and more fully explore the user need, data availability and options for a common geographical basis for an experimental UK-wide index;
 - review the feasibility of providing documentation and data in a common format for each of the country-specific indices; and
 - develop consistent advice and guidance.
- 1.3 In part, these suggestions were driven by the views of some users, received as part of the assessment process; they also reflected the following practices in the *Code*:
- Investigate and document the needs of users of official statistics, the use made of existing statistics and the types of decisions they inform (Principle 1, Practice 2).
 - Take account of users' views on the presentation of the statistics, and associated commentary, datasets and metadata (Protocol 1, Practice 3).
 - Promote comparability within the UK and internationally by, for example, adopting common standards and concepts, sampling frames, questions, definitions, statistical units and classification (including common geographic

¹ The index published in Northern Ireland is referred to as the Northern Ireland Multiple Deprivation Measure (NIMDM). We use the term 'IMDs' to refer to the UK country specific measures which are produced separately in England, Wales, Scotland and Northern Ireland.

² <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html>

³ The assessment of the multiple deprivation index for England has been postponed pending further consideration of the future of these statistics by the Department for Communities and Local Government (DCLG)

⁴ <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>

referencing and coding standards). Make the reasons for any deviations from standard models publicly available (Principle 4, Practice 6).

- 1.4 The Authority has a role to promote the comparability of statistics within the UK⁵, and this Brief investigates further the issues which need to be considered to develop an IMD which could be used to compare areas of the UK.

2. Findings

- 2.1 Based upon its discussions with the producers of the country-specific IMDs, and with users, the Authority has identified the following sets of issues:

- **Demand:** There is a clear interest from some users of the country-specific IMDs in being able to analyse deprivation across the whole of the UK. This interest seems to be primarily amongst academic and commercial (rather than government) users.
- **Resource pressures:** The individual producers are not planning to allocate resources to the development of a UK-wide IMD because they see other, more pressing, demands at a time of downward pressure on budgets. Some users also expressed concern that the diversion of resources into the development of a UK-wide IMD could have a detrimental effect on the existing indices and other statistical activity.
- **Ownership:** The individual producers would be stakeholders in the development of a UK-wide IMD but it is not clear who should produce, own and champion such an index.
- **Presentation:** Producers and (some) users noted that the existence of two sets of ranks for a particular area (those derived from a UK-wide IMD, and from the relevant country-specific IMD) might cause presentational difficulties.
- **Components of a UK-wide IMD:** Producers and users believe that it would be difficult to reach agreement on the factors that should contribute to an overall UK-wide IMD. There is also little comparable data available to use in a UK index, so the resulting index would reflect a less complete picture of multiple deprivation. This would compound the 'presentation' issue.
- **Geographies:** The development of a UK-wide IMD would require a consistently defined set of geographical areas in order to allow valid comparisons to be made.
- **Alternative sources of related information:** Some users' needs are at least partially met by alternative data sources - for example Census data and administrative sources such as the claimant count, as well as commercial products such as Experian's Mosaic classification⁶ and CACI PayCheck⁷.

- 2.2 At the current time, the Authority does not see a sufficiently strong case for the development of a UK-wide IMD by government to justify the additional resources needed, but we have concluded nonetheless that some further steps would help meet the needs of users with an interest in deprivation across the UK.

3. Suggestions

- 3.1 In the light of these findings, the Authority suggests that the producers of the four country-specific IMDs – the Department for Communities and Local Government; the Welsh Government; the Scottish Government; and NISRA – consider the following:

Suggestion 1 Work with the Office for National Statistics (ONS) to extend the scope of the published guidance about comparing IMDs between

⁵ In accordance with Principle 4, Practice 6 of *the Code of Practice*

⁶ <http://publicsector.experian.co.uk/Products/Mosaic%20Public%20Sector.aspx>

⁷ <http://www.caci.co.uk/paycheck.aspx>

administrations to be applicable to a wide range of potential uses (para 5.3).

Suggestion 2 Provide access to high-level guidance and metadata on existing sources of data available across the UK that might be used as indicators of multiple deprivation (para 5.18).

Suggestion 3 The Welsh Government, the Scottish Government and NISRA should consult users about the demand for more comparable statistical information on multiple deprivation – including a ‘poverty index’ - in the UK, and publish the results (para 5.23).

4. The Statistics Authority’s perspective

- 4.1 The Authority wants to see government bodies enhance the value of official statistics by increasing their utility, wherever this can be done cost effectively. One way utility can be increased is by producers adapting outputs to meet the needs of a broader range of users. A clearer understanding of the use made of statistics will enable the producer bodies to improve the presentation and explanation of the statistics to better support these uses.
- 4.2 The Authority recognises that limited statistical resources need to be used as effectively as possible. This places a premium on maximising the potential for the use and re-use of existing data.
- 4.3 There is some, though not overwhelming, demand for consistent statistics on multiple deprivation for small areas across the UK. However, there are also obstacles to the production of a UK index.
- 4.4 While it may not be feasible in the short term to produce a fully consistent UK-wide index of multiple deprivation, the Authority considers that more could be done by the relevant producer bodies to maximise the value and use of existing (published and unpublished) statistical data relating to deprivation, supplemented by forthcoming Census data. This would include making more data and new statistics available, and extending existing guidance material.
- 4.5 The Authority will draw the arguments in this Brief to the attention of appropriate academic bodies and funding bodies and encourage them to consider whether the best way forward for a UK index of deprivation might be via a research project rather than a government initiative. To the extent that an academic body wishes to take up this suggestion, the Authority will encourage maximum support from government producer bodies.

5. Evidence and analysis

Development of the country-specific measures of multiple deprivation

- 5.1 The country-specific IMDs were originally developed using a standard methodology devised by the Department of Social Policy and Social Work, University of Oxford (now the Social Disadvantage Research Centre⁸). The first country specific indices of multiple deprivation to be produced using this method were for England and Wales in 2000. The methods now used by each administration differ slightly, following individual reviews of methods, data sources, timing and so on. The inclusion of country-specific elements – such as measures of mental health in Northern Ireland, to capture the effects of the ‘Troubles’ – is a clear strength of the current approach.

⁸ <http://www.spsw.ox.ac.uk/fileadmin/static/sdrc/media/OCSI.html>

- 5.2 The Four Nations Deprivation Working Group comprises producers and representatives from ONS's Population Health and Regional Analysis Directorate. It meets periodically to share best practice and to discuss issues in measuring multiple deprivation - for example, comparability across the UK.
- 5.3 The Four Nations Deprivation Working Group was commissioned by the Four Nations Group to consider the need for a UK index of deprivation. The Four Nations Group has now been replaced by the Inter Administration Committee⁹ (IAC) of the Government Statistical Service (GSS) as the body responsible for ensuring effective liaison between the administrations of the UK. The working group concluded that there was little user demand for a UK index but that there was a need for guidance for policy users responsible for allocating resources consistently across the UK. Consequently, ONS has published a guidance paper, *Comparing across Countries' Indices of Deprivation*¹⁰, about using country-specific indices of multiple deprivation for the allocation of resources across the UK as a whole. This paper states that there is little user demand for a UK index.

Suggestion 1 Work with ONS to extend the scope of the published guidance about comparing IMDs between administrations – which is about resource allocation - to be applicable to a wide range of potential uses.

Uses of IMDs

- 5.4 The country-specific IMDs are used by a wide range of organisations including central and local government, the NHS, charitable trusts, academic researchers and community groups. Uses include: supporting bids for European funding and the Lottery Fund; targeting local services; public health research; and local area profiling.
- 5.5 The main users of a UK-wide measure are likely to be academics for researching deprivation, commercial enterprises for market analysis and customer profiling, and policy makers and politicians for use in understanding the outcomes of different approaches to social policy.

External views

User views

- 5.6 The Authority carried out a short consultation with users as part of gathering information for this Brief. This was separate to the user consultation carried out in summer 2010 as part of the formal assessments, although some of these earlier responses have also informed this Brief. We received 17 responses:

Private sector	4
Local government	4
NHS	2
Academia	3
Devolved Administrations	3
Government agencies	1

- 5.7 Of these, 12 users said that they would welcome a UK index of multiple deprivation, one user said they would not see any benefit to this and expressed concern it would

⁹ The Inter Administration Committee (IAC) of the GSS comprises the National Statistician and the Chief Statisticians in each devolved administration, and is the main GSS body responsible for ensuring effective liaison <http://www.statisticsauthority.gov.uk/about-the-authority/uk-statistical-system/history/key-documents-about-the-uk-system/inter-administration-working-agreement-on-statistics.pdf>

¹⁰ http://www.neighbourhood.statistics.gov.uk/HTMLDocs/images/Comparing-IMDs-across-countries-v06_tcm97-93502.pdf

cause confusion, and four users discussed the matter without stating their position clearly one way or the other¹¹.

Arguments presented by users in favour of a UK index

5.8 Our research has identified the following types of uses for a UK-wide index:

- Allocation of funding

There have been some instances when there is a need for a common measure of area multiple deprivation for the purpose of informing the allocation of funding across the UK. An example of this was a scheme introduced in the 2001 UK budget to remove stamp duty on properties below a threshold in 'deprived' areas. In response to this and anticipating future need, ONS (in conjunction with the producers in the four countries) provided options for how the country-specific measures of multiple deprivation could be used to inform decisions about the allocation of funding across the UK. This was documented within the *Comparing across Countries' Indices of Deprivation* guidance paper. However, this requires additional analytical work to be carried out by users, some of whom may not have the resources to do so.

- Policy analysis and monitoring

The need for comparable information across the UK was identified by users who want to understand the outcome of different policy approaches across the UK. As policies diverge between countries of the UK, the opportunity to compare outcomes is lost in the absence of information available on a comparable basis across the UK.

- Comparisons across country borders

Some users identified the need to study areas in different parts of the UK. For example, in understanding the trends in the economic and social development of a region of the UK, there may be value in making comparisons with neighbouring areas across a national border.

Other users said that they require a UK measure in order to be able to benchmark the performance of their area of interest against that of similar areas in other parts of the UK. This is particularly the case for some UK cities, where there may not be a comparable city within the same country. For example, one academic user told us that for his purposes there are no comparable authorities in Scotland to Glasgow, and therefore that it would be useful to be able to make comparisons with other similar UK cities.

- Market research

Commercial organisations require deprivation information at the UK level for use in customer profiling, market analysis, the examination of business markets across the UK, and understanding variation in customer behaviour and values.

Arguments presented by users against a UK wide index

5.9 Our research identified the following challenges in producing a UK wide index:

¹¹ We do not interpret these results as implying that 12/13 or 12/17 of users favour the development of a UK-wide IMD, because it is likely that such users were more motivated to respond to our consultation, which was itself primarily intended to identify the underlying issues, rather than to measure the strength of views about a UK wide IMD – that is, it was qualitative rather than quantitative. Nevertheless, it is reasonable to conclude that there is some evidence of interest in the development of a UK-wide index.

- The timing of the availability of data differs within each UK country

Since data become available at different times within each UK country, it might be difficult to produce an up-to-date index to meet the needs of users within all UK countries. Therefore, there would need to be a compromise on timing across the UK countries.

- Problems with geography

Data used to produce the country-specific measures of multiple deprivation are at Lower Layer Super Output Areas¹² (LSOA) for England and Wales, data zones¹³ for Scotland, and Super Output Areas¹⁴ (SOA) for Northern Ireland. These geographical areas use different criteria for aggregating 2001 Census Output Area, and also have different population sizes – for example, the average size of an LSOA is 1500, whilst the average datazone is 750 and the average SOA contains 2000 people. A consistent geography would be required for a genuinely comparable UK-wide IMD – the smaller the geography (that is, the more areas that are included in the index) the greater the ability of the index to identify small pockets of deprivation. If a UK-wide IMD was constructed using a variety of geographies, it would present inappropriate comparisons of small pockets of deprivation (or affluence) with larger areas in which the deprivation / affluence had been ‘averaged out’.

Some of the administrative data used in the country specific measures are available at Output Area¹⁵ for the whole of the UK and these have been used to create simple measures of multiple deprivation. However, producers consider that administrative data available at Output Area level are not sufficiently detailed to create a measure of multiple deprivation that would meet users’ needs (see para 5.19).

- Resource limitations

Each of the four producers told us that there are insufficient resources to increase the comparability of the UK indices since they have prioritised other development work more highly, in accordance with perceived user needs.

- Quality issues

It would be difficult to produce a UK-wide index of the same quality as the country-specific indices, given the constraints of data availability and comparability in statistical domains (such as crime and education) where policy responsibility is devolved or where administrative arrangements otherwise differ, and hence the available statistics are not comparable.

- The risk of undermining the existing country-specific indices

If a UK-wide index existed as well as country-specific indices, some users may be confused about apparently conflicting messages about the extent of multiple deprivation in particular areas; this may lead to a lack of trust in one (or both) of the sources. Users may also be confused about which index would be most appropriate to use for which purpose.

¹² <http://www.neighbourhood.statistics.gov.uk/dissemination/Info.do?page=aboutneighbourhood/geography/superoutputareas/soa-intro.htm>

¹³ <http://www.scotland.gov.uk/Publications/2004/02/18917/33243>

¹⁴ http://www.nisra.gov.uk/deprivation/super_output_areas.htm

¹⁵ http://www.statistics.gov.uk/geography/census_geog.asp#oa

- UK vs. Europe demand

Some UK users prioritise comparability with European countries rather than other UK countries. Indeed, in Northern Ireland we saw evidence that some users of the NIMDM would prefer to make comparisons with the Republic of Ireland than other UK countries, due to their economic and social links.

Producer views

- 5.10 Producers consider that country-specific measures are required in order to identify areas of multiple deprivation accurately. This is because they use the best available data for that country. Producers consider that a UK index would be a poor compromise between the different sets of data available in each country – a ‘lowest common denominator’ – and would therefore be unlikely to provide a good measure of multiple deprivation in any part of the UK. They see problems resulting from differences between the UK countries in: population sizes of the small area geographies used; publication timetables; data availability; and, policy focus. Producers also voiced concern that a UK measure might rank the level of deprivation of particular areas differently than in the country-specific index, and that users may use the measure which best suited their interests rather than the one which was most appropriate.
- 5.11 DCLG carried out a consultation on the future of the English Indices of Multiple Deprivation in 2010 and the outcome of this consultation¹⁶ has recently been published on DCLG’s website. As part of this consultation, users were asked whether there was a need, post-2010, for a comparable set of indices of multiple deprivation across England, Wales, Scotland and Northern Ireland. DCLG received 68 responses to this question, and 41 per cent of respondents felt that there was a clear need. Of those in favour, the majority wanted the economic domains (income and employment) to be the basis of the index. However, 18 per cent of respondents commented that the production of the best possible indices for England should be a priority over the production of comparable indices across the UK.
- 5.12 DCLG stated that work on the next update for the English indices will focus on producing the best possible indices for England but that it will continue to work with the devolved administrations to investigate the feasibility of producing UK indicators.
- 5.13 The Welsh Government suggested that existing UK-wide indicators such as unemployment or income benefit claimant rates might be a better source of data for monitoring service delivery and policy implementation.
- 5.14 However, the Welsh Government suggested that, if a UK wide index is to be developed in addition to country-specific indices, it might focus on the income and employment domains, which contribute about 50 per cent weight to the overall index for each UK country index and which might form the basis of a ‘poverty index’. This was also suggested by some users responding to the consultation exercise for this Brief (as well as some of the DCLG consultation respondents). While there are currently differences in the benefit system across the UK countries, the Welsh Government pointed out that if a Universal Credit¹⁷ system is introduced in the UK, as proposed by the current government, this would eliminate some of the current barriers that exist to producing consistent deprivation measures for UK income and employment domains.
- 5.15 The Scottish Government pointed out that Eurostat’s Urban Audit¹⁸ allows for comparisons between the UK and European cities and that this may satisfy some of the user demand that exists for a UK index.

¹⁶ <http://www.communities.gov.uk/publications/communities/indicesdeprivation07responses>

¹⁷ <http://www.dwp.gov.uk/policy/welfare-reform/legislation-and-key-documents/universal-credit>

¹⁸ http://epp.eurostat.ec.europa.eu/portal/page/portal/region_cities/city_urban/urban_audit_data_collections

Other sources of deprivation data used

5.16 As part of the consultation exercise, users identified that they use the following data sources to provide useful information on multiple deprivation:

- Small area statistics – through developments such as Neighbourhood Statistics and other portals, users can access a range of official statistics published for small areas. Examples mentioned were unemployment data and other sources of out-of-work benefits data.
- Commercial products derived from combining official sources including Census data and marketing information e.g. Experian's Mosaic classification and CACI Paycheck income profiles.
- Proxy measures of area multiple deprivation e.g. Council Tax Valuation Bands
- Eurostat's Urban Audit.

5.17 In addition, users also reported using the following research resources:

- An annual report, produced by the Joseph Rowntree Foundation, monitoring poverty and social exclusion¹⁹.
- Centre for Analysis of Social Exclusion (CASE) reports²⁰.
- Reports by the Organisation for Economic Co-operation and Development (OECD) for example *What Works Best in Reducing Child Poverty: A Benefit or Work Strategy?*²¹.

5.18 Information about other sources of data that are useful for understanding multiple deprivation across the UK is not published by the producers of the UK country-specific indices. The Authority considers that this would be helpful information for users who need to investigate multiple deprivation across the UK as it would assist them in finding the most appropriate data source to meet their needs.

Suggestion 2 Provide access to high-level guidance and metadata on existing sources of data available across the UK that might be used as indicators of multiple deprivation.

Census data

5.19 Users highlighted that Census data are available consistently across the UK at Output Area level, which is a lower geographic level than is used for the measures of multiple deprivation. Disadvantages in using Census data for measuring multiple deprivation at this small area level include the lack of direct measures of some aspects of deprivation, and the fact that the data are updated only every 10 years.

5.20 Deprivation measures derived using Census data include those produced by Carstairs & Morris²², and the Townsend Index of Disadvantage and Deprivation (1988)²³. In addition, the Census 2001 outputs included a household measure of deprivation, which was available for England and Wales at Output Area level. Government departments responsible for publishing Census 2011 results (ONS, National Records of Scotland²⁴ and NISRA) are consulting on the outputs that they will publish. They are considering whether to include a comparable household measure of deprivation in the outputs. The Authority considers that there is scope for Census 2011 data to be used to provide information about deprivation, as it has the advantage of being available consistently across the UK.

¹⁹ <http://www.jrf.org.uk/publications/monitoring-poverty-2010>

²⁰ http://sticerd.lse.ac.uk/case/_new/publications/series.asp?prog=CR

²¹ <http://www.oecd.org/dataoecd/30/44/38227981.pdf>

²² Carstairs, V. & Morris, R. (1989) Deprivation, mortality and resource allocation. *Community medicine*, **11** (4), 364-372.

²³ Townsend, P., Phillimore, P. & Beattie, A. (1988) Health and Deprivation: Inequality in the North Croom Helm: London.

²⁴ <http://www.gro-scotland.gov.uk/>

5.21 The producers of the current country-specific measures of multiple deprivation have told us that they are considering reviewing the indices of multiple deprivation when Census 2011 data are available. A review would include considering the use of Census data where administrative data are currently not available, and carrying out analyses to understand the relationship between the indices and other area-based measures available from the Census.

Actions following assessment

5.22 At a Four Nations Working Group meeting in December 2010, producers of the four UK country-specific indices of multiple deprivation discussed the suggestions made in the assessment reports, which are outlined in section 1 of this Brief. Due to the perceived lack of demand for a UK index, in addition to the challenges associated with creating such an index, the Group decided that there was no reason to create an experimental UK index, particularly since resources were limited. Furthermore, the Group decided that each country would retain its own format for outputs since it is not possible to compare multiple deprivation across the four countries using the four measures, and as the format of multiple deprivation outputs is consistent over time within countries.

5.23 As explained in para 5.11, DCLG has recently consulted its users about whether a comparable set of indices across the UK should be produced. Given the results of the user consultation carried out by the Authority for the purposes of this Brief and by DCLG, the Authority considers that it would be helpful for the Welsh Government, the Scottish Government and NISRA to consult with users of their national indices on their needs for comparable indices of multiple deprivation, or other information about deprivation, across the UK. The consultation carried out as part of this research suggests that there is some demand for UK comparable information about multiple deprivation, which might be met by the production of information based on the employment and income domains – such as a ‘poverty index’. This consultation could also explore the demand for the consistent presentation of metadata and data associated with country-specific indices and the need for comparable information about deprivation based on Census 2011 data.

Suggestion 3 The Welsh Government, the Scottish Government and NISRA should consult users about the demand for more comparable statistical information on multiple deprivation – including a ‘poverty index’ - in the UK, and publish the results.

Annex 1: Research undertaken

The Monitoring and Assessment team:

- revisited and reviewed the user feedback received via the user consultation exercise carried out as part of the assessments of the country-specific indices in summer 2010;
- reviewed feedback received by DCLG as part of its user consultation on the English Indices of Deprivation; and
- carried out a separate user consultation process for the purpose of this Brief. The following email was sent to academics involved in development of the IMDs, producers of the IMDs, methodological experts within ONS, individuals involved in the development of a UK-wide measure based on Census data, and producers and users of commercial measures of deprivation:

In summer 2010, you may have received some questions about your use of the measures of multiple deprivation produced by the Welsh Assembly Government, Scottish Government and the Northern Ireland Statistics and Research Agency as part of the user consultation process we ran in order to assist us with our assessment of these statistics.

The UK Statistics Authority is now conducting some research into the demand for, and feasibility of, producing a UK wide index of multiple deprivation. The aim of this research is to investigate

- the **extent and nature of user interest** in a UK index of multiple deprivation (UK IMD)
- the **practicality** of producing a UK IMD
- **presentational issues** of a UK IMD alongside country specific indices

Summary of evidence gathered via assessment user consultation

Nature and extent of use

From the evidence we have gathered so far, we understand that a UK wide index would be useful for the following reasons.

- To be able to make comparisons between UK cities and at regional level in both academic research and for analysis of service delivery and policy implementation across borders.
- Resource allocation across UK for departments with reserved powers e.g. changes to stamp duty.
- Use by commercial organisations with a UK focus in market analysis or design of products and services.

Practicalities and presentation

We understand there may be the following challenges in producing a UK wide index:

- Resource limitations in being able to carry out the additional work required to produce a UK wide index.
- Producing a UK wide index of sufficient quality, as required by those users who have a need for a UK wide index, given constraints of data availability and other compromises required.
- The need for consistency of:
 - geographical areas;
 - methodology; and
 - data sources used to construct the domains, which is a challenge for devolved issues such as crime and education.
- Timing of updates in relation to the country specific indices.

- The use may be limited as some users would prefer to make comparisons with other parts of Europe, rather than other parts of the UK.
- There would be potential confusion with users caused by the availability of more than one official index for each country.

YOUR RESPONSE

We would be grateful if you could inform us of any further challenges, practical considerations, issues, benefits and uses you foresee in producing a UK wide index of multiple deprivation which we have not covered above.

In addition to this, it would be very helpful if you could respond to the following questions:

1. Do you use any other data sources to obtain the information you require about deprivation? If so, which ones and why are they useful to you?
2. How well do the data sources you use meet your needs?
3. If you have not already informed us - would a UK wide index of multiple deprivation be of use to you? If so, why?

We are aware that the issue of developing a UK IMD was covered in the recent consultation carried out by the Department of Communities and Local Government on the English Indices of Deprivation, and that you may have responded to it. As part of our evidence gathering, we will draw on the outcome of this consultation once it is published.

We would be very grateful for any response you are able to provide to these questions. Please send your response by 11 March 2011.

We look forward to hearing from you.