

Institution: University of Oxford, Department of Social Policy and Intervention
Unit of Assessment 22: Social Work and Social Policy
Title of case study: Targeting resources and interventions in deprived areas using small area level indices of deprivation in the UK and South Africa
<p>1. Summary of the impact</p> <p>Since 1999, researchers at the Department of Social Policy and Intervention (DSPI) have undertaken a programme of research to produce small area level indices of deprivation, in the UK and South Africa. These indices are widely used in these nations by central and local government, regional bodies, civil society, academics and others, to analyse patterns of deprivation, to identify areas that would benefit from special initiatives or programmes, and as a tool to determine eligibility for specific funding, enabling governments and other bodies to target their resources more effectively. The methodology developed for England was subsequently used to produce indices for the other countries in the UK, as well as South Africa, and is increasingly being applied elsewhere in Africa and Asia.</p>
<p>2. Underpinning research</p> <p>This research has been led by Professor Michael Noble, Director of the Social Disadvantage Research Centre (SDRC) and the Centre for the Analysis of South African Social Policy (CASASP) at DSPI. Other researchers involved in the Oxford team include:</p> <ul style="list-style-type: none"> • George Smith (Senior Research Fellow, 1999-2010) • Dr Gemma Wright (Senior Research Fellow, 1999 to date) • David McLennan (Senior Research Fellow, 2002 to date) • Dr Helen Barnes (Research Fellow, 2003 to date) <p>In England, a new methodology for the creation of small area deprivation indices was developed in 1999 by SDRC. The work was commissioned by the Department of the Environment, Transport and the Regions for the purpose of distributing regeneration funds. The new conceptual model of multiple deprivation developed by SDRC is based on the idea of distinct uni-dimensional domains of deprivation (e.g. income, employment, health, education, housing and crime) that are recognised and measured separately. The domains are combined, with appropriate weighting, into a single measure of multiple deprivation: a weighted area level aggregation [Section 3: R1, R2]. The index differed markedly from previous measures that had been in existence since 1981 not only because of the methodological innovations but also because of the use of administrative data rather than Census data, including a ground-breaking administrative resource of recorded crime data from all police forces in the country (data that no other researcher has been granted access to before or since) [R1, R2]. SDRC was also commissioned to produce the first indices of deprivation in each other country in the UK (2000-2003). These were updated on several occasions and SDRC was either commissioned to do the work or acted in an advisory capacity (2003-2011). SDRC (with the University of York) also produced a child well-being index for England (2008), describing patterns of child well-being across England [R3]. In each of these cases, the datasets providing a ranking of small areas on the separate domains and overall indices are the main tools utilised by users of the research for targeting resources and interventions, as detailed in the next section.</p> <p>The methodology and outputs of the programme of research have been subjected to intense scrutiny. The English Indices of Deprivation 2004 and 2007 were peer-reviewed by Professor Bradshaw (University of York) and Professor Alcock (University of Birmingham) respectively, while independent analysis relating to particular elements of the methodology (e.g. the weightings) has been undertaken and has broadly confirmed the methodology. The most recent versions of the UK indices have been designated as either official or national statistics. This involves a rigorous quality assurance process (see http://www.statisticsauthority.gov.uk/national-statistician/types-of-official-statistics).</p> <p>This methodology was subsequently used internationally by CASASP. The first indices of deprivation for South Africa were developed in collaboration with Statistics South Africa and the Human Sciences Research Council (HSRC) (2006) [R4]. An index of multiple deprivation for</p>

Impact case study (REF3b)

children was also undertaken with HSRC (2007) [R5]. Updates of the South African indices were commissioned by the South African Department of Social Development. CASASP developed a new small area statistical geography for South Africa, similar to the geographical units used latterly in the UK index work. Both total population and child indices were produced at this spatial scale (2009), allowing for a more fine-grained analysis of deprivation, exposing high levels of deprivation in the former homelands [R6].

In addition to the above indices, CASASP has recently been commissioned to produce indices of deprivation for Oman and Namibia. Other Southern African countries – Zambia and Mozambique – have also expressed an interest. This research is still quite recent and has not yet had a chance to have impact, however both CASASP and SDRC take a partnership approach to their research and regularly work with external policymaking bodies, providing an opportunity for co-designed and produced research.

3. References to the research

This programme of research has produced 17 reports and accompanying datasets for government and other organisations.

Key outputs:

[R1] Noble, M., McLennan, D., Wilkinson, K., Whitworth, A., Exley, S., Barnes, H. and Dibben, C. (2008) *The English Indices of Deprivation 2007*, London: Department for Communities and Local Government.

[R2] McLennan, D., Barnes, H., Noble, M., Davies, J., Garratt, E. and Dibben, C. (2011) *The English Indices of Deprivation 2010*, London: Department for Communities and Local Government.

Key publications:

[R3] Bradshaw, J., Noble, M., Bloor, K., Huby, M., McLennan, D., Rhodes, D., Sinclair, I. and Wilkinson, K. (2009) A Child Well-Being Index at Small Area Level in England, *Child Indicators Research*, 2(2): pp.201-219.

[R4] Noble, M., Barnes, H., Wright, G. and Roberts, B. (2009) Small area indices of multiple deprivation in South Africa, *Social Indicators Research*, 95(2): 281-297. doi: 10.1007/s11205-009-9460-7.

[R5] Barnes, H., Noble, M., Wright, G. and Dawes, A. (2009) A Geographical Profile of Child Deprivation in South Africa, *Child Indicators Research*, 2(2), pp.181-199.

[R6] Noble, M. and Wright, G. (2013) Using indicators of multiple deprivation to demonstrate the spatial legacy of Apartheid in South Africa, *Social Indicators Research*, 112(1), pp.187-201.

Key grants awarded to Professor Noble in the REF period include:

- *English Indices of Deprivation 2007* (2007-2008, £157,150) [R1]
- *English Indices of Deprivation 2010* (2009-2010, £205,160) [R2]
- *Local Index of Child Well-being* (2006-2008, £28,240 out of total project budget of £98,670) [R3]

(all above projects were funded by the UK Department for Communities and Local Government)

- *South African Indices of Multiple Deprivation* (2007-2009, £176,520) funded by DFID for the South African Department of Social Development [R6]
- *City of Johannesburg poverty analysis* with HSRC (2007-2010, R472,900) funded by the South African Department for Science and Technology
- *Namibian Indices of Multiple Deprivation 2001* (2010-2011, US\$83,400) funded by UNDP Namibia.
- *Omani Child Well-being Index* (2011-2014, £151,740) funded by UNICEF Oman (awarded to McLennan).

4. Details of the impact

The research of Noble and his team has informed policymaking and practice in a number of

Impact case study (REF3b)

countries, however, it has been of particular value in helping governments and other organisations in the UK and South Africa to target resources and improve living conditions in deprived areas.

UK Policy

Each of the UK indices was initially commissioned by central government for a particular purpose, e.g. the first English Indices of Deprivation (2000, 2004 and 2007) were developed to identify the most deprived areas of England to inform targeting of regeneration programmes such as the Single Regeneration Budget and the Neighbourhood Renewal Fund.

The following are selected examples of uses of the indices:

- **Targeting funding:** £1.5 billion (2008-09 to 2010-11) Working Neighbourhoods Fund (WNF) was allocated to local authorities on the basis of levels of deprivation in their constituent neighbourhoods, as determined by the 2007 Indices **[R1; Section 5: C1]**; £30 million (2011) of Community First funding was allocated to the most deprived neighbourhoods identified using the 2010 Indices and other sources **[R2; C2]**; the 2007 Indices and the Local Index of Child Well-being are being used to estimate the number of troubled families in each local authority for the allocation of £450 million (2012-2015) of funding **[R1, R3; C3]**.
- **Funding formulae:** the NHS has used the English Indices as part of its weighted capitation funding formulae to calculate allocations of funding to primary care trusts and deprivation-weighted additions to GP salaries e.g. £85 billion was allocated in 2011-12 **[e.g. R1; C4]**; the disadvantage uplift in 16-19 education funding is calculated using the 2010 Indices **[R2; C5]**; the Local Index of Child Well-being is used in a funding formula for allocating £25.4 million (2010-11) for under-18s drug and alcohol treatment **[R3; C6]**.
- **Targeting programmes:** the Community Energy Saving Programme (2009-2012) contributes to the government's Fuel Poverty Strategy by targeting geographical areas selected using the income domain of the indices. **[R1; C7]**.
- **Further impacts:** the indices appeal broadly to charities, voluntary organisations, businesses and the general public. For example, many National Lottery grants are targeted at deprived areas using the indices, as are other charitable funds, such as the Church and Community Fund (<http://www.ccfund.org.uk/apply/index-of-multiple-deprivation>) **[R1, R2; C9]**.

Public consultations on methodology, data sources and outputs were held for each of the UK indices to ensure that the outputs met the needs of the user. The indices attract media attention (e.g. <http://www.guardian.co.uk/society/2011/mar/29/jaywick-esssex-resort-most-deprived>). The English Indices 2007 report was the most downloaded document from the Department of Communities and Local Government's website from 1 April to 8 December 2008 with 182,000 downloads

(<http://webarchive.nationalarchives.gov.uk/20120919132719/http://www.communities.gov.uk/documents/localgovernment/pdf/1415647.pdf>, p17).

Building on recognition afforded to the research by Universities UK (as one of the top 100 discoveries and developments in UK universities), in 2008, the UK government gave formal recognition of the impact of SDRC's various UK indices by awarding Professor Noble a CBE for services to research on poverty and deprivation, in particular his work on the English Indices 2007. A University of Oxford spin-out company called Oxford Consultants for Social Inclusion (www.ocsocialinclusion.co.uk) was established in 2003, amongst other things to assist local government and voluntary organisations with the analysis of deprivation in their local areas using the indices; they have worked with over a hundred public sector organisations.

South African Policy

CASASP's South African indices were undertaken in collaboration with stakeholders in South Africa (Human Sciences Research Council, Statistics South Africa, and the national Department of Social Development) who contributed to the development of the research. These indices were promoted widely by the Department of Social Development, which, in recognition of their value, provided financial support to update the work. The indices have been used to inform and target a range of strategies and programmes, including:

- The government's anti-poverty strategy (2009 onwards) <http://www.pmg.org.za/docs/2009/091013waronpoverty-edit.pdf>, p19 **[R4; C10]**

Impact case study (REF3b)

- The City of Johannesburg's programme of subsidies for the poor (2008 onwards) [R6; C8, C11]
- The Social Grants Outreach Programme (2007-2010) (improving take-up of social assistance in deprived rural areas) [R4; C10]
- The National Development Plan (2013)
<http://www.info.gov.za/view/DownloadFileAction?id=154434>, p237 [R5; C10]

5. Sources to corroborate the impact

Documentary evidence:

[C1] Use of the English Indices of Deprivation 2007 to allocate Working Neighbourhoods Fund:

<http://webarchive.nationalarchives.gov.uk/20120919132719/http://www.communities.gov.uk/documents/communities/pdf/703719.pdf>

<http://webarchive.nationalarchives.gov.uk/20120919132719/http://www.communities.gov.uk/documents/communities/pdf/566881.pdf>, p14.

[C2] Use of the English Indices of Deprivation 2010 to determine Community First funding:
<http://www.cdf.org.uk/wp-content/uploads/2011/12/Community-First-NMF-allocation-rationale.pdf>.

[C3] Use of the English Indices of Deprivation 2010 to calculate local authority financial support for troubled families:

<http://webarchive.nationalarchives.gov.uk/20120919132719/http://www.communities.gov.uk/documents/newsroom/pdf/2053538.pdf>, p1.

[C4] Use of the English Indices 2004 and 2007 as part of funding formula to calculate NHS Primary Care Trust funding and GP salaries (2011-12):

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216320/dh_124947.pdf see especially pp. 36-9, 64, 72,

[C5] Use of the English Indices 2010 to calculate the disadvantage uplift funding for 16-19 education: <http://media.education.gov.uk/assets/files/pdf/e/explanatory%20note.pdf>, p4.

[C6] Use of the Local Index of Child Well-being in a funding formula for under-18s drug and alcohol treatment: <http://www.nta.nhs.uk/news-under18s-funding.aspx>.

[C7] Use of the English Indices to inform the Community Energy Saving Programme (2009-2012): <https://www.ofgem.gov.uk/ofgem-publications/58763/cesp-final-report-2013final-300413.pdf> p6.

[C8] Use of the South African Index of Multiple Deprivation as part of funding formula to calculate the City of Johannesburg's programme of subsidies for the poor: http://www.joburg-archive.co.za/2009/pdfs/soc_assistance_poverty_index.pdf and Integrated Development Plan (2012 - 2016) (<http://www.joburg-archive.co.za/2012/pdfs/idp/idp201216.pdf>, pp 14, 47, 62, 66, 221).

Informants:

[C9] Department of Communities and Local Government, UK (English Indices of Deprivation).

[C10] Department of Social Development, Republic of South Africa (South African Indices of Multiple Deprivation - see also the statement in Oxford Impacts:

http://www.ox.ac.uk/research/research_impact/oxford_impacts/mapping_deprivation.html).

[C11] Department of Health and Social Development, City of Johannesburg (South African Indices of Multiple Deprivation).