

Scottish Index of Multiple Deprivation 2009 Technical Report

Office of the Chief Statistician
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1. Summary of the Scottish Index of Multiple Deprivation (SIMD)

The Scottish Index of Multiple Deprivation (SIMD) 2009 identifies small area concentrations of multiple deprivation across Scotland in a consistent manner. The SIMD combines data from seven distinct domains or topic areas all of which are considered to be important contributors to deprivation levels. These domains have remained the same as in the previous version of the index, published in 2006, and the data used in compiling each one is the most appropriate and up to date that was available at the time of constructing the index. The seven domains are:

- Current Income
- Employment
- Health
- Education, Skills and Training
- Geographic Access to Services
- Housing
- Crime

The SIMD is a **relative** measure of deprivation that uses 6,505 datazones across Scotland as its unit of comparison. The rank applied to each of these datazones identifies each as being more or less deprived than all the others in the country. The rankings run from 1 being the most deprived to 6505 being the least deprived. Therefore the smaller the ranking the more deprived the datazone. As the SIMD is a relative measure it cannot show how much more deprived one datazone is than another, e.g. that a datazone ranked 5 is twice as deprived as a datazone ranked 10. In the same way the distance between each ranking can vary - so the gap between the datazones ranked 16 and 17 could be very small while the gap between those ranked 17 and 18 could be much bigger.

The SIMD can be used to identify the small areas with the highest concentrations of multiple deprivation in Scotland using either the overall index or the individual domains. The most commonly used cut off levels are 10%, 15% or 20% - although different cut offs may be required depending on individual policy or organisational focus.

1.2. Geography and Population

The datazone boundaries have remained the same across the three versions of the index to date. However the populations within these datazones may have changed either in size, gender, age distribution or a combination of all three. The SIMD 2009 uses mostly data from 2007/2008 therefore 2007 small area population estimates provided by the General Register Office for Scotland are used as the population denominator. The index takes into account the effect of change in population size and also takes into account population structure through the use of working age population in the Employment Domain, young people in the Education Domain and age – sex standardisation in the Health Domain.

1.3. Creation of the 2009 SIMD

The SIMD 2009 is a National Statistics product and as such it is free from any political influence. Any changes made to the methodology used in the creation of the SIMD have been made through consultation between the analysts working on the SIMD, the data providers and the SCOTSTAT Measuring Deprivation Advisory Group (MDAG). The MDAG is made up from users and analysts in local authority areas and other bodies, experts in particular issues (e.g. access) and analysts within the Scottish Government. The MDAG provides the Scottish Government with advice on measuring deprivation as it works to implement the long term strategy for measuring deprivation. Advice covers: the needs of

users; development priorities; methodological options; quality of outputs; dissemination and guidance on the use of outputs. Minutes and papers from all meetings with the MDAG are published on the Scottish Government's website.

1.4. Changes to the SIMD

There have been limited changes to the methodology used to construct the SIMD 2009 and this means that care needs to be taken when making comparisons between the 2006 and 2009 results. Data for some of the 38 indicators that have been used to make up the individual domains is available publicly through the Scottish Neighbourhood Statistics website or other similar sources. Some of these, such as the claimant count used for the employment domain can be used as an absolute measure. However others, such as those that contribute to the current income domain, are not available individually because small numbers at datazone level could have issues for confidentiality.

1.5. Use of the SIMD

Of the seven domains only four, the current income, employment, housing and crime domains, are based on absolute values and these can therefore be used to identify the proportion of the population affected by that particular type of deprivation. The remaining domains are not straightforward counts but are constructed using weighted scores and as a result these can only be used in the same way as the overall SIMD ranking – to compare relative levels of deprivation i.e. datazone X is more or less deprived than datazone Y.

1.6. National Share

The SIMD can determine the national spread of deprived areas by showing the proportion of the most deprived data zones in Scotland which are in each local authority area. So for example; the national share of the 15% most deprived data zones by local authority area is the number of data zones in the 15% most deprived in Scotland in the local authority area as a proportion of the total number of data zones in the 15% most deprived in Scotland in total. So if Local Authority A had 20 of its datazones in the 15% most deprived in Scotland this would equate to 2% of the national share.

1.7. Local Share

The SIMD can also be used as a measure of concentration of deprivation in a local authority area by showing the proportion of an authority's areas which are in the most deprived data zones in Scotland. So for example; the local share of the 15% most deprived data zones in Scotland is the number of data zones in the 15% most deprived in Scotland in the local authority area as a proportion of the total number of data zones in the local authority area. So if Local Authority A consists of a total of 240 datazones and 20 are in the 15% most deprived then 8.3% of the Local Authority's datazones are in the 15% most deprived.

The concepts of local and national share can be applied to the individual domains as well as to the SIMD as a whole. It can also be applied to other geographical areas, eg Health Boards, Police Force Areas, Parliamentary Constituencies or Intermediate zones.

1.8. Dissemination of the SIMD

As well as this technical report the Scottish Government has also published:

- A general report with summary analysis which will be available from the SIMD website and in hard copy.
- A guidance leaflet showing how the SIMD can and cannot be used.

- Maps for each local authority showing the change in relative deprivation between SIMD 2006 and SIMD 2009.
- An interactive mapping website.
- Statistical analysis of SIMD 2009 showing breakdowns of the overall SIMD and each of the individual domains at local authority and national levels.
- Analysis of the change over time between SIMD 2006 and SIMD 2009.
- Where possible the data underlying the indicators used in the SIMD 2009.

2. Methodology

2.1. Overall methodology

The overall methodology for the 2009 SIMD remains the same as the 2006 index. The full technical reports for both SIMD 2004 and 2006 were published in October 2003 and 2006 respectively (see Annex A). The individual methods for creating the domains and overall index are described fully in the 2004 technical report.

The statistical techniques used to compile the SIMD were carried out using SAS statistical software. Codes to run the programmes were adapted from those created by the Scottish Executive in the calculation of previous versions of the SIMD.

The indicators contained in each domain are:

- 'domain specific' and appropriate for the purpose (as direct as possible measures for that type of deprivation)
- measuring major features of that deprivation (not conditions just experienced by a very small number of people or areas)
- up to date
- capable of being updated on a regular basis
- statistically robust
- available for the whole of Scotland at a small area level in a consistent form.

Within some of the domains namely Income, Health, Education and Access to Services, the data source or methodology for creating some of the individual indicators has changed. These changes have been kept to a minimum, however some changes are inevitable due to improvements in data quality or indicator availability. Descriptions of the changes are outlined below with full explanations in the Technical Notes for each indicator.

3. Changes in SIMD 2009 Domains and Indicators

The most recent SIMD 2009 indicators are based on mainly 2008 data, for the income and employment domains, averages over a number of years up to 2007 or 2008 for the majority of the health and education data, 2001 for housing, 2008 data for the access to services data and 2007/08 data for the crime data. Unless otherwise stated in the technical notes for each indicator, population denominators are based on the 2007 mid-year small area population estimates published by the General Register Office for Scotland.

Changes and additions are explained in full in the relevant sections for each domain; however the main changes are briefly described here.

3.1. Overview of changes to existing domains

- *Current Income*

The availability of data has changed since the 2006 SIMD and as a result it was possible to include Working and Child Tax Credit data in the domain. The most recent tax credit data that was available was from 2006. The data available on dependants (i.e. children in Income Support and Jobseekers Allowance households) was only available up to 2007.

- *Employment*

All indicators in the SIMD 2009 employment domain are the same as in both the 2004 and 2006 domains. The domain scores and ranks from 2004, 2006 and 2009 are, therefore, directly comparable and can be used for analysis of both relative and absolute change over time.

- *Health*

Two of the indicators in the health domain have seen changes and, as such, it is not directly comparable with the health domain from SIMD 2006. On the advice of colleagues from ISD changes were made to the codes used within both the 'Hospital episodes related to alcohol use' and 'Hospital episodes related to drug use'. These changes will ensure that the data used more accurately reflects both coding practices and conditions directly attributable to both drugs and alcohol.

- *Education*

The only change made in the Education Domain relates to the 'Not in Education, Employment or Training' indicator. Data showing negative destinations of school leavers was combined with workless benefits data for 18 and 19 year olds. Consultation with experts in education supported this change as being a better measure than the data used previously, which counted people aged 16-18 not in full time education.

- *Geographic Access*

The calculation of both drive times and public transport travel times has been carried out by GIS analysts in Scottish Government. The computer program used to run the calculations has changed which means the times used for SIMD 2009 are not comparable with those used for SIMD 2006. Journey times may have increased or decreased due to the calculation process as well as due to actual change. The new software has also enabled some changes to be made to the methodology to better reflect access to services:

- Ferry timetables have been incorporated into the drive time sub-domain of the Geographic Access Domain. This means that the actual ability to get to a service while using a ferry will be reflected in the drive times.
- Changes in the post office network have also necessitated a change in how this data is represented in both the drive time and public transport sub-domains. For the purposes of the index it has been decided that a post office needs to be open for a minimum of 6 hours at a fixed location to be included in the analysis.

- *Housing*

The housing domain remains exactly the same as that in the SIMD 2004 and 2006, which used 2001 Census data. Suitable housing data to replace Census indicators have not yet been developed. The housing domain has been retained, as it is felt that housing does have a role to play in deprivation. Work is continuing to identify and develop suitable data to be used in future domains.

- *Crime*

The SIMD Crime domain contains the same indicators as the 2006 domain. The only change made to this domain has been to use data from the financial rather than the calendar year. This change brings the data used in this domain more in line with the data used in the remaining domains.

4. SIMD 2009 Domains And Indicators

4.1. Overall SIMD

The procedure for combining the final domains is described only briefly here. A full description of the procedure and all of the techniques involved can be found in the SIMD 2004 technical report (see Annex A).

The overall index is a weighted sum of the seven domain scores. Prior to weighting, the domains are standardised by ranking the scores. The ranks then undergo exponential transformation to avoid high ranks in one domain ‘cancelling out’ low ranks in another.

Weights applied to each of the domains in SIMD 2004, SIMD 2006 and SIMD 2009

Domain	2004	% of overall weight 2004	2006	% of overall weight 2006	2009	% of overall weight 2009
Current Income	6	29	12	28	12	28
Employment	6	29	12	28	12	28
Health	3	14	6	14	6	14
Education	3	14	6	14	6	14
Geographic Access	2	10	4	9	4	9
Housing	1	5	1	2	1	2
SIMD Crime	-	-	2	5	2	5

The weighting for each domain or sub domain is based on the robustness of the data, the time lag between data collection and the production of the SIMD and the relative importance of the domain in measuring multiple deprivation. The domain weightings are subject to sensitivity analysis to assess the effects of any changes in weights on the overall index ranks. The domain weights to be used in the SIMD 2009 are the same as those used in the SIMD 2006. The housing domain will be retained at a lower weight in anticipation of improved data sources in the future. The weighting of the 2006 SIMD crime domain was selected after sensitivity analysis of the effect of adding the new domain into the SIMD and reflects data quality. This weight has been retained for SIMD 2009 as it is only the second time that recorded crime data has been available at small area level.

The following section details each domain, its construction and the methodology and data behind each indicator. Where changes have been made to data sources and methodology, these are detailed under the relevant domain and indicator in the following sections.

4.2. Current Income Domain

SIMD 2006 income indicators	SIMD 2009 income indicators
<i>Number of Adults (aged 16-59) receiving Income Support (Department for Work and Pensions (DWP) April 2005)</i>	<i>No change from SIMD 2006 (Department for Work and Pensions (DWP) August 2008)</i>
<i>Number of Adults (aged 60 plus) receiving Guaranteed Pension Credit (DWP May 2005)</i>	<i>No change from SIMD 2006 (DWP August 2008)</i>
<i>Number of Children (aged 0-15) dependent on a recipient of Income Support (DWP April 2005)</i>	<i>No change from SIMD 2006 (DWP August 2007)</i>
<i>Number of Adults receiving (all) Job Seekers Allowance (DWP April 2005)</i>	<i>No change from SIMD 2006 (DWP August 2008)</i>
<i>Number of Children (aged 0-15) dependent on a recipient of Job Seekers Allowance (all) (DWP April 2005)</i>	<i>No change from SIMD 2006 (DWP August 2007)</i>

NEW INDICATOR

Number of Adults and Children in Tax Credit Families on low incomes (HMRC August 2006)

The current income domain is a simple sum of the indicator counts divided by the total population. If data was taken from the same year, there would be no overlap between the indicators. Due to differing time periods, there will be some overlap in the indicators used in SIMD 2009. This will be small so the resulting domain score is still calculated as the percentage of the total population affected by current income deprivation.

The only change to the income domain is the re-introduction of tax credit data, which ensures that the domain now identifies individuals and families on low incomes and not claiming benefits. A brief history of tax credit data is outlined below.

- Working Families Tax Credit data from 2002 used in the SIMD 2004
- In April 2003 the Working Tax Credit and Child Tax Credit replaced the Disability Tax Credit and Working Families' Tax Credit. HM Revenues and Customs were unable to provide data zone level data for either of the new tax credits so it was not possible to include this in 2006 SIMD.
- This data became available in time for the 2009 SIMD but only for August 2006, however it was decided that this data still added value to the domain and so it was included.

Child premiums paid to recipients of Income Support and Job Seekers Allowance are paid through the Child Tax Credit system. Consequently the Department for Work and Pensions (DWP) do not hold complete data on the number of dependants of Income Support and Job Seekers Allowance claimants. To create the indicators used in the 2009 income domain DWP matched claimants of these benefits to their dependants using information from the Child Benefit system. At the time of compiling the index data relating to dependants was only available for August 2007. As in the 2006 index in order to allow DWP to match the data, claimants of both income based and contributions based Job Seekers Allowance had to be

included. The age range of dependants has remained as 0 to 15 (inclusive) in the 2009 income domain due to inconsistencies in the way dependents aged 16 to 19 are counted.

Despite the addition of the tax credit data to the 2009 income domain the correlation between the 2006 and 2009 domains remains high with a Pearson's correlation coefficient of 0.97. This indicates that although the indicators used are not identical the distribution of income deprived people in the two indices is very similar. However, the number of income deprived people within a data zone may be quite different.

Due to the changes to the indicators used, absolute counts of income deprived people from the SIMD 2006 and SIMD 2009 cannot be fairly compared and only change in rank between the SIMD 2006 and SIMD 2009 income domains, which measures relative change, should be examined. It is possible to analyse change over time for some individual indicators used in the 2009 income domain using data available from Scottish Neighbourhood Statistics.

4.2.1. Adults receiving Guarantee Pension Credit (DWP 2008)

General description of indicator	The number of adults aged 60 and over receiving Guarantee Pension Credit
Indicator type	Count
Time period	August 2008
Data source	DWP
Denominator used	N/A
Data source of denominator	N/A
Method of construction of indicator	The Department for Work and Pensions (DWP), Work and Pensions Longitudinal Study (WPLS) which is a 100% data source that is not subject to any sampling error.
Key decisions on methodology	Indicator remains the same as SIMD 2006
Comparison with 2006 indicator	This indicator remains the same as in the 2006 income domain.
Implications of comparing this indicator with the one used in SIMD 2006	This indicator is comparable with SIMD 2006.
Other data quality issues	N/A
Disclosure control	The data publicly available has been adjusted using probabilistic rounding to base 5. Any counts that are shown as zero may have been rounded. Unprotected data were used to construct the domain.
Geo-referencing	See SIMD 2006 technical report Annex B for explanation of geo-referencing of DWP data.
Availability of data	Data zone level data is available from Scottish Neighbourhood Statistics (www.sns.gov.uk) and the DWP tabulation tool (www.dwp.gov.uk/asd/tabtool.asp).

4.2.2. Job Seekers Allowance Claimants (DWP 2008)

General description of indicator	The number of people receiving Job Seekers Allowance.
Indicator type	Count
Time period	August 2008
Data source	The Department for Work and Pensions (DWP), WPLS
Denominator used	N/A
Data source of denominator	N/A
Method of construction of indicator	The data were extracted from the WPLS data set and the domain constructed at DWP.
Key decisions on methodology	Indicator remains the same as SIMD 2006
Comparison with 2006 indicator	This indicator remains the same as in the 2006 income domain.
Implications of comparing this indicator with the one used in SIMD 2006	This indicator is comparable with SIMD 2006.
Other data quality issues	N/A
Disclosure control	The data publicly available has been adjusted using probabilistic rounding to base 5. Any counts that are shown as zero may have been rounded. Unprotected data were used to construct the domain.
Geo-referencing	See SIMD 2006 technical report Annex B for explanation of geo-referencing of DWP data.
Availability of data	Counts of all Job Seekers Allowance claimants are available at data zones level on the Scottish Neighbourhood Statistics (www.sns.gov.uk) and the DWP tabulation tool (www.dwp.gov.uk/asd/tabtool.asp).

4.2.3. Dependants of Job Seekers Allowance Claimants (DWP 2007)

General description of indicator	The number of children (aged 0-15) dependent on a claimant of Job Seekers Allowance.
Indicator type	Count
Time period	August 2007
Data source	The Department for Work and Pensions (DWP), 100% Sure Start data set and Child Benefit Scan.
Denominator used	N/A
Data source of denominator	N/A
Method of construction of indicator	JSA claimants taken from 100% Sure Start data set and dependants matched from the Child Benefit Scan
Key decisions on methodology	<p>Indicator remains the same as SIMD 2006</p> <p>Accurate data on dependants of JSA claimants are no longer available. DWP matched claimants of JSA to Child Benefit claimants to provide a count of dependent children for each claimant. The dependant age range was lowered to 15 as child benefit is only paid out for children aged 16 and over who are in full time further education (or approved training).</p> <p>The most recent child benefit data available from HMRC to calculate the domain data was from 2007. The decision was taken to use this alongside benefits data for 2008 as the most up to date information for each of the indicators.</p>
Comparison with 2006 indicator	This indicator remains the same as the 2006 income domain.
Implications of comparing this indicator with the one used in SIMD 2006	This indicator is comparable with SIMD 2006. No dependants data is publicly available at data zone level for either indicator.
Other data quality issues	N/A
Disclosure control	The data publicly available has been adjusted using probabilistic rounding to base 5. Any counts that are shown as zero may have been rounded. Unprotected data were used to construct the domain.
Geo-referencing	See SIMD 2006 technical report Annex B for explanation of geo-referencing of DWP data.
Availability of data	This indicator is not available at data zone level. A limited amount of data on dependants is available at Local Authority level from the DWP tabulation tool (www.dwp.gov.uk/asd/tabtool.asp). This data is from a different source (the WPLS) to the data used to construct the income domain.

4.2.4. Adults (aged 16-59) receiving Income Support (DWP 2008)

General description of indicator	The number of people aged 16 to 59 receiving Income Support.
Indicator type	Count
Time period	August 2008
Data source	The Department for Work and Pensions (DWP).
Denominator used	N/A
Data source of denominator	N/A
Method of construction of indicator	The data were extracted from the Work and Pensions Longitudinal Study and the domain constructed at DWP.
Key decisions on methodology	Indicator remains the same as SIMD 2006
Comparison with 2006 indicator	This indicator remains the same as the 2006 income domain.
Implications of comparing this indicator with the one used in SIMD 2006	This indicator is comparable with SIMD 2006.
Other data quality issues	N/A
Disclosure control	The data publicly available has been adjusted using probabilistic rounding to base 5. Any counts that are shown as zero may have been rounded. Unprotected data were used to construct the domain.
Geo-referencing	See SIMD 2006 technical report Annex B for explanation of geo-referencing of DWP data.
Availability of data	The data used to construct the domain are not available, however, counts of income support claimants are available at data zone level on the Scottish Neighbourhood Statistics (www.sns.gov.uk) and the DWP tabulation tool (www.dwp.gov.uk/asd/tabtool.asp).

4.2.5. Dependants of Income Support (IS) Claimants(DWP 2007)

General description of indicator	The number of dependants (aged 0 -15) of claimants of Income Support.
Indicator type	Count
Time period	August 2007
Data source	The Department for Work and Pensions (DWP), 100% Sure Start data set and Child Benefit Scan.
Denominator used	N/A
Data source of denominator	N/A
Method of construction of indicator	Income Support claimants were taken from 100% Sure Start data set and dependants were matched to claimants from the Child Benefit Scan
Key decisions on methodology	<p>Indicator remains the same as SIMD 2006</p> <p>Accurate data on dependants of Income Support claimants are no longer available. DWP matched claimants of Income Support to Child Benefit claimants to provide a count of dependent children for each claimant.</p> <p>The most recent child benefit data available from HMRC to calculate the domain data was from 2007. The decision was taken to use this alongside benefits data for 2008 as the most up to date information for each of the indicators.</p>
Comparison with 2006 indicator	This indicator remains the same as the 2006 income domain.
Implications of comparing this indicator with the one used in SIMD 2006	No dependants data are publicly available at data zone level for either indicator.
Other data quality issues	N/A
Disclosure control	N/A
Geo-referencing	See SIMD 2006 technical report Annex B for explanation of geo-referencing of DWP data.
Availability of data	This indicator is not available at data zone level. A limited amount of data on dependants are available at Local Authority level from the DWP tabulation tool (www.dwp.gov.uk/asd/tabtool.asp).

4.2.6. Number of Adults and Children in Tax Credit Families on Low Incomes (HMRC 2006)

General description of indicator	The number of adults and children (aged 0 -15) in in-work families claiming Working or Child Tax Credit with an income of less than £220 per week.
Indicator type	Count
Time period	August 2006
Data source	HM Revenue and Customs.
Denominator used	N/A
Data source of denominator	N/A
Method of construction of indicator	The data were extracted from the HMRC Tax Credit system and supplied to DWP where the domain was constructed.
Key decisions on methodology	<p>The most recent tax credit data available from HMRC at small area level was from 2006 as the publication date for the 2007 data was delayed. The decision was taken to use this alongside benefits data for 2007 and 2008 as the most up to date information for each of the indicators available at the time of publication.</p> <p>Only those with an income of less than 60% of the median i.e. £220 were included in the indicator as this cut off is used to identify those on low incomes.</p>
Comparison with 2006 indicator	Data for this indicator was unavailable for the 2006 SIMD. SIMD 2004 used Working Families Tax Credit data for this domain.
Implications of comparing this indicator with the one used in SIMD 2006	N/A
Other data quality issues	N/A
Disclosure control	N/A
Geo-referencing	
Availability of data	This indicator is not available at data zone level. A limited amount of data on Child and Working Tax Credits are available at from the Scottish Neighbourhood Statistics site (www.sns.gov.uk) and from the HMRC website (www.hmrc.gov.uk)

4.3. Employment Domain

<i>SIMD 2006 employment indicators</i>	<i>SIMD 2009 employment indicators</i>
<i>Working Age Unemployment Claimant Count averaged over 12 months (NOMIS 2005)</i>	<i>No change from SIMD 2006 (NOMIS 2008)</i>
<i>Working Age Incapacity Benefit recipients, men aged under 65 and women aged under 60 (DWP August 2005)</i>	<i>No change from SIMD 2006 (DWP August 2008)</i>
<i>Working Age Severe Disablement Allowance recipients (August 2005 DWP)</i>	<i>No change from SIMD 2006 (DWP August 2008)</i>
<i>Working Age Compulsory New Deal participants — New Deal for the under 25s and New Deal for the 25+ not included in the unemployment claimant count (DWP August 2005).</i>	<i>No change from SIMD 2006 (DWP August 2008).</i>

The employment domain is a simple sum of the indicator counts divided by the working age population. The working age population includes men aged 16 to 64 (inclusive) and women aged 16 to 59 (inclusive). There is no overlap between the indicators and so the resulting domain score is the percentage of the working age population affected by employment deprivation.

There have been no changes to the indicators used in the employment domain.

4.3.1. Unemployment Claimant Count averaged over 12 months of those men aged under 65 and women aged under 60 (NOMIS 2008)

General description of indicator	The Unemployment Claimant Count records the number of people claiming Jobseekers Allowance (JSA) and National Insurance credits at Jobcentre Plus local offices. This includes working age people only (men 16 to 64 and women 16 to 59). This is not an official measure of unemployment, but is the only indicative statistic available for areas smaller than Local Authorities.
Indicator type	Count
Time period	Jan 2008 – Dec 2008 averaged
Data source	NOMIS (a web-based database of labour market statistics, managed by Durham University on behalf of the Office for National Statistics. www.nomisweb.co.uk)
Denominator used	N/A
Data source of denominator	N/A
Method of construction of indicator	The Office for National Statistics provided data averaged over 12 months using the unrounded data behind the NOMIS website.
Key decisions on methodology	The same method was used to calculate the 2009 indicator as was used in 2006.
Comparison with 2006 indicator	This indicator remains the same as in the 2006 employment domain.
Implications of comparing this indicator with the one used in SIMD 2006	This indicator is comparable with the SIMD 2006.
Other data quality issues	N/A
Disclosure control	The data publicly available has been adjusted using suppression; any values below 3 are suppressed. Any counts that are shown as zero may have been rounded. Unprotected data were used to construct the domain.
Geo-referencing	
Availability of data	Monthly data zone level counts are available from NOMIS www.nomisweb.co.uk/

4.3.2. Incapacity Benefit recipients, men aged under 65 and women aged under 60 (DWP 2008)

General description of indicator	The number of working age Incapacity Benefit (IB) recipients.
Indicator type	Count
Time period	August 2008
Data source	The Department for Work and Pensions (DWP), Work and Pensions Longitudinal Study (WPLS) which is a 100% data source that is not subject to any sampling error.
Denominator used	N/A
Data source of denominator	N/A
Method of construction of indicator	The data were extracted from the WPLS and the domain was constructed at DWP.
Key decisions on methodology	Indicator remains the same as SIMD 2006
Comparison with 2006 indicator	This indicator remains the same as in the 2006 employment domain.
Implications of comparing this indicator with the one used in SIMD 2006	This indicator is comparable with the SIMD 2006.
Other data quality issues	N/A
Disclosure control	For data available publicly all counts have been adjusted using probabilistic rounding to base 5. Any counts that are shown as zero may not be a real zero. Unprotected data were used to construct the domain.
Geo-referencing	See SIMD 2006 technical report Annex B for explanation of geo-referencing of DWP data.
Availability of data	Data zone level data are available from Scottish Neighbourhood Statistics (www.sns.gov.uk) and the DWP tabulation tool (www.dwp.gov.uk/asd/tabtool.asp).

4.3.3. Severe Disablement Allowance recipients, men aged under 65 and women aged under 60 (DWP 2008)

General description of indicator	The number of working age Severe Disablement Allowance (SDA) recipients.
Indicator type	Count
Time period	August 2008
Data source	The Department for Work and Pensions (DWP), Work and Pensions Longitudinal Study (WPLS) which is a 100% data source that is not subject to any sampling error.
Denominator used	N/A
Data source of denominator	N/A
Method of construction of indicator	The data were extracted from the WPLS and the domain constructed at DWP.
Key decisions on methodology	Indicator remains the same as SIMD 2006
Comparison with 2006 indicator	This indicator remains the same as in the 2006 employment domain.
Implications of comparing this indicator with the one used in SIMD 2006	The data for this indicator has not been published.
Other data quality issues	N/A
Disclosure control	N/A
Geo-referencing	See SIMD 2006 technical report Annex B for explanation of geo-referencing of DWP data.
Availability of data	Data are not available for this subset. The total number of SDA claimants aged 16 and over is available at data zone level from Scottish Neighbourhood Statistics (www.sns.gov.uk) and the DWP tabulation tool (www.dwp.gov.uk/asd/tabtool.asp). Data are available at data zone level for all working age recipients of both incapacity benefits (incapacity benefit or severe disablement allowance) from the above sources.

4.3.4. Compulsory New Deal participants — New Deal for the under 25s and New Deal for the 25+ not included in the unemployment claimant count (DWP 2008).

General description of indicator	Includes a small number of New Deal claimants who are not already counted in the employment domain under the claimant count.
Indicator type	Count
Time period	August 2008
Data source	Department for Work and Pensions (DWP)
Denominator used	N/A
Data source of denominator	N/A
Method of construction of indicator	Data are extracted at an individual level by DWP and used at DWP to construct the overall employment domain.
Key decisions on methodology	Indicator remains the same as SIMD 2006
Comparison with 2006 indicator	This indicator is the same indicator as used in the 2006 index.
Implications of comparing this indicator with the one used in SIMD 2006	The data used to construct the 2006 and 2009 domain have not been published.
Other data quality issues	N/A
Disclosure control	N/A
Geo-referencing	See SIMD 2006 technical report Annex B for explanation of geo-referencing of DWP data.
Availability of data	Data for this particular subset are not available. Counts of people on the new deal scheme at data zone level are available from the Scottish Neighbourhood Statistics (www.sns.gov.uk) and the DWP tabulation tool (www.dwp.gov.uk/asd/tabtool.asp).

4.4. Health Domain

2006 Weight	SIMD 2006 Health Indicator	2009 Weight	SIMD 2009 Health Indicator
0.08	<i>Standardised Mortality Ratio (ISD, 2001-2004)</i>	0.08	<i>No change from SIMD 2006 (ISD, 2004-2007)</i>
0.14	<i>Hospital Episodes Related to alcohol use (ISD, 2001-2004)</i>	0.14	<i>Same indicator as SIMD 2006 but with minor change to coding (ISD, 2004-2007)</i>
0.06	<i>Hospital Episodes Related to drug use (ISD, 2001-2004)</i>	0.06	<i>Same indicator as SIMD 2006 but with minor change to coding (ISD, 2004-2007)</i>
0.33	<i>Comparative Illness Factor (DWP, 2005)</i>	0.32	<i>No change from SIMD 2006 (DWP, 2008)</i>
0.32	<i>Emergency admissions to hospital (ISD, 2001-2004)</i>	0.33	<i>No change from SIMD 2006 (ISD, 2004-2007)</i>
0.05	<i>Proportion of population being prescribed drugs for anxiety, depression or psychosis (ISD, 2004)</i>	0.05	<i>No change from SIMD 2006 (ISD, 2007)</i>
0.02	<i>Proportion of live singleton births of low birth weight (ISD, 2001-2004)</i>	0.02	<i>No change from SIMD 2006 (ISD, 2004-2007)</i>

The 2009 health domain was constructed using the same methodology as the 2006 health domain. Indicators were ranked, transformed to a normal distribution and then combined using weights generated by factor analysis. The derived weights are shown in the table above.

It is important to note that, although the list of indicators remains unchanged, due to changes in the coding used for two of the indicators, the SIMD 2006 and SIMD 2009 health domains and these specific indicators are not directly comparable. Analysis shows the impact of the change to be minimal when compared to the actual change through variation over time, though the impact will vary by datazone.

- The indicators that have changed are Hospital admissions due to alcohol use, and Hospital admissions due to drug use. These Indicators now use a revised set of codes that capture conditions wholly attributable to either alcohol or drugs and which are currently used by NHS Scotland's Information Services Division (ISD). The change was implemented following consultation with ISD and the Measuring Deprivation Advisory Group.

4.4.1 *Standardised Mortality Ratio (ISD, 2004-2007)*

General description of indicator	Indirectly standardised ratio of deaths registered from all causes between 2004 and 2007. Data standardised by 5 year age band and sex.
Indicator type	Indirectly standardised ratio: four year period
Time period	2004-2007
Data source	General Register Office for Scotland
Denominator used	Expected Events (calculated from indirect standardisation)
Data source of denominator	General Register Office for Scotland 2007 mid-year population estimates, GROS mortality information
Method of construction of indicator	Observed all cause deaths per data zone were divided by expected all cause deaths per data zone (summary over sex and 5-year age band). For calculation method of the observed and expected frequencies, please see methodology section of SIMD 2006 technical report.
Key decisions on methodology	Indicator remains the same as SIMD 2006
Comparison with 2006 indicator	This indicator is the same indicator as used in the 2006 index.
Implications of comparing this indicator with the one used in SIMD 2006	The data used to construct the 2006 and 2009 domain have not been published.
Other data quality issues	N/A
Disclosure control	N/A
Geo-referencing	All postcodes are validated at source. Data excludes people where no match to a data zone was possible e.g. homeless, incomplete postcode information.
Availability of data	The data are not published but the ratio is available on the SIMD website (www.scoland.gov.uk/Topics/Statistics/SIMD) .

4.4.2. Hospital Episodes Related to alcohol use (ISD, 2004-2007)

General description of indicator	Indirectly standardised ratio of observed to expected admissions to acute and psychiatric hospitals in Scotland with a diagnosis of alcohol related conditions both sexes, all ages. Excludes discharges relating to transfers within hospital and to other hospitals. The year shown refers to the year of discharge from hospital.
Indicator type	Indirectly standardised ratio: four year period
Time period	2004-2007
Data source	NHS Scotland Information Services Directorate (ISD), Scottish Morbidity Record (SMR)01
Denominator used	Expected Events – calculated by indirect standardisation (see SIMD 2006 technical report)
Data source of denominator	SMR01 and General Register Office for Scotland
Method of construction of indicator	Observed episodes related to alcohol use per datazone were divided by expected episodes related to alcohol use per datazone (by sex and 5 year age band). For calculation method of the observed and expected frequencies, see SIMD 2006 technical report. Alcohol related conditions are defined using the <i>International Classification of Diseases Volume 10 (World Health Organisation)</i> (E244, E512, F10, R780, Y90, Y91, Z714, Z502, Y573, T510, T511, T519, X45, X65, Y15, O354, Q860, P043, Z721, G621, G721, K860, I426, K70, K292, G312).
Key decisions on methodology	A revised set of ICD10 codes that best capture those conditions that are wholly attributable to alcohol, and which ISD now adopt, have been used in this SIMD 2009 indicator. Details of this change in coding can be viewed by clicking on the following link and going to Appendix 1 on page 11. http://www.alcoholinformation.isdscotland.org/alcohol_misuse/files/ICD10_codes_final_report.pdf SMR04 data were not included in SIMD 09 indicator.
Comparison with 2006 indicator	This indicator is slightly different to that used in 2006. A paper analysing the impact of the change is available on the SIMD website. There is good correlation between SIMD 2006 and SIMD 2009 (Pearson correlation of 0.87) Trends in the 15% most deprived datazones by Local Authority and Urban Rural Classification are similar.
Implications of comparing this indicator with the one used in SIMD 2006	Not directly comparable, due to the change in codes used. Although general trends may be compared with caution.
Other data quality issues	There were 44 datazones with no hospital admissions related to alcohol misuse and therefore the rates and ranks will be identical in these cases. Caution is necessary when interpreting these figures. Recording of alcohol use may vary from hospital to hospital. Where alcohol use is suspected but unconfirmed it may not be recorded.
Disclosure control	No
Geo-referencing	All postcodes are validated at source. Data excludes people where no match to a data zone was possible e.g. homeless, incomplete postcode information.
Availability of data	The data are not published using this standardisation method but other counts and rates are available on the Scottish

Neighbourhood Statistics website (www.sns.gov.uk). The ratio used in the SIMD is available on the SIMD website (www.scotland.gov.uk/Topics/Statistics/SIMD)

4.4.3. Hospital episodes related to drug use (ISD, 2004-2007)

General description of indicator	Indirectly standardised ratio of observed to expected admissions to acute and psychiatric hospitals in Scotland with a diagnosis of drugs misuse conditions (based on all 6 diagnoses) both sexes, all ages. Excludes discharges relating to transfers within hospital and to other hospitals. The year shown refers to the year of discharge from hospital.
Indicator type	Ratio
Time period	2004-2007
Data source	ISD, Scottish Morbidity Record (SMR)01
Denominator used	Expected events - calculated during the age-sex standardisation (see SIMD 2006 technical report for further details)
Data source of denominator	SMR01 and GROS mid year estimates
Method of construction of indicator	Observed episodes relating to drugs misuse per data zone were divided by expected episodes relating to drugs misuse per data zone summary over sex and 5 year age band. For calculation method of the observed and expected frequencies, please see SIMD 2006 technical report. Drug related conditions are defined using the International Classification of Diseases Volume 10 (F11, F12, F13, F14, F15, F16, F18 and F19).
Key decisions on methodology	The same list of drugs as was used for SIMD 2006 except that F17 has been excluded. SMR04 not included in SIMD09 indicator as investigation showed that it did not add to the indicator.
Comparison with 2006 indicator	This indicator is slightly different to that used in 2006. A paper analysing the impact of the change is available on the SIMD website. There is good correlation between SIMD 2009 rates and SIMD 2006 rates (Pearson correlation of 0.72) Comparison of 15% most deprived data zones by council area and urban rural indicator shows similar trends between SIMD 2006 indicator and SIMD 2009 indicator.
Implications of comparing this indicator with the one used in SIMD 2006	Not directly comparable, due to the change in codes used. Although general trends may be compared with caution.
Other data quality issues	Caution is necessary when interpreting these figures. Recording of drug misuse may vary from hospital to hospital. Where drug misuse is suspected but unconfirmed it may not be recorded by the hospital. Further, where drug misuse is recorded, it may not be possible to identify which drugs were involved.
Disclosure control	No
Geo-referencing	All postcodes are validated at source. Data excludes people where no match to a data zone was possible e.g. homeless, incomplete postcode information.
Availability of data	The data are not published using this standardisation method but other counts and rates are available on the Scottish Neighbourhood Statistics website (www.sns.gov.uk). The ratio used in the SIMD is available on the SIMD website (www.scotland.gov.uk/Topics/Statistics/SIMD)

4.4.4. Comparative Illness Factor (DWP, 2008)

General description of indicator	The CIF is a combined count of recipients of the following benefits: Disability Living Allowance (DLA); Attendance Allowance (AA); Incapacity Benefit (IB) (not also receiving DLA); and Severe Disablement Allowance (SDA).
Indicator type	Ratio
Time period	August 2008
Data source	Department for Work and Pensions (DWP), Work and Pensions Longitudinal Study (WPLS).
Denominator used	Expected frequency of claiming the selected benefits, calculated during age-sex standardisation (see SIMD 2006 technical report for details)
Data source of denominator	GRO(S) Small Area Population Estimates 2007, DWP and WPLS
Method of construction of indicator	The observed number of benefit recipients was divided by the expected number for each data zone to provide a ratio. For further details of the standardisation method see the SIMD 2006 technical report.
Key decisions on methodology	Indicator remains the same as SIMD 2006
Comparison with 2006 indicator	This indicator is the same indicator as used in the 2006 index.
Implications of comparing this indicator with the one used in SIMD 2006	The data being used to construct the 2009 CIF will not be published but the CIF will be. Comparisons can be made.
Other data quality issues	N/A
Disclosure control	N/A
Geo-referencing	See SIMD 2006 technical report for explanation of geo-referencing of DWP data.
Availability of data	Combined counts are available on Scottish Neighbourhood Statistics (www.sns.gov.uk) and individual benefits data are available from the DWP tabulation tool (www.dwp.gov.uk/asd/tabtool.asp).

4.4.5. Emergency admissions to hospital (ISD, 2004-2007)

General description of indicator	Indirectly standardised ratio of observed to expected emergency admissions to non-psychiatric/non-obstetric hospitals in Scotland, both sexes and all ages. Information presented is for patients treated as inpatients or day cases only. Excludes discharges relating to transfers within hospital and to other hospitals. The year shown refers to the year of discharge from hospital.
Indicator type	Ratio
Time period	2004-2007
Data source	ISD, Scottish Morbidity Record (SMR)01
Denominator used	Expected Events
Data source of denominator	SMR01 and GROS mid year population estimates
Method of construction of indicator	Observed emergency admissions per data zone were divided by expected emergency admissions per data zone (summary over sex and 5 year age band). For calculation method of the observed and expected frequencies, please see SIMD 2006 technical report.
Key decisions on methodology	Indicator remains the same as SIMD 2006
Comparison with 2006 indicator	There is a good correlation between the SIMD 2006 and SIMD 2009 indicators (Pearson correlation of 0.92). Comparison of 15% most deprived data zones by council area and urban-rural areas show similar trends between the two SIMD indicators.
Implications of comparing this indicator with the one used in SIMD 2006	The data used to construct the 2006 and 2009 domain have not been published.
Other data quality issues	
Disclosure control	No
Geo-referencing	All postcodes are validated at source. Data excludes people where no match to a data zone was possible e.g. homeless, incomplete postcode information.
Availability of data	The data are not published using this standardisation method but other counts and rates are available on the Scottish Neighbourhood Statistics website (www.sns.gov.uk). The ratio used in the SIMD is available on the SIMD website (www.scotland.gov.uk/Topics/Statistics/SIMD)

4.4.6. Estimated proportion of population being prescribed drugs for anxiety, depression or psychosis (ISD, 2007)

General description of indicator	This indicator is the estimated proportion of patients being prescribed anxiolytic, antipsychotic or antidepressant drugs in 2007 This is derived from prescriptions data at practice level (by patient postcode).
Indicator type	Proportion
Time period	2007
Data source	ISD General Practitioner Prescription data, CHI extract
Denominator used	Data zone population (estimated from the CHI extract)
Data source of denominator	CHI extract and GP Prescription data
Method of construction of indicator	The Prescribing Team within ISD maintains a detailed database of all NHS prescriptions dispensed in the community in Scotland. Anxiolytic, antipsychotic and antidepressant drugs can be identified through the British National Formulary (BNF) Codes: BNF 4.1.2 is Anxiolytics, BNF 4.2 is Antipsychotics, BNF 4.3 is Antidepressants. An average daily quantity (Defined Daily Doses - a World Health Organisation standard) for each drug was used to calculate, from the weight of the total prescriptions, an average count of people being prescribed any one of these drugs. The one year of data was treated as a sample from time. If, for example, a person was given a daily prescription by their GP they should appear 365 times within the year. Each prescription would therefore be counted as 1/365 of a person. By summing the whole year one person would be counted. In this way the number of patients being prescribed anxiolytic, antipsychotic or antidepressant drugs for each practice can be calculated along with the rate. The number of patients in each data zone being prescribed anxiolytic, antipsychotic or antidepressant drugs can be estimated using the practice rates and the population of each practice living in each data zone. The source for this data is an extract from the CHI. The final indicator is calculated by summing the estimated number of patients being prescribed the various drugs and presenting this as a proportion of the data zone population estimated from the CHI extract. Therefore it is not possible to calculate the number of people being prescribed these drugs from the estimated proportion presented.
Key decisions on methodology	Indicator remains the same as SIMD 2006
Comparison with 2006 indicator	There is strong correlation between SIMD 2009 rates and SIMD 2006 rates (Pearson correlation of 0.94) Comparison of 15% most deprived data zones by Local Authority and Urban Rural classification show similar trends.
Implications of comparing this indicator with the one used in SIMD 2006	The data used to construct the 2006 and 2009 domain have not been published.
Other data quality issues	N/A
Disclosure control	N/A
Geo-referencing	All postcodes are validated at source. Data excludes people where no match to a data zone was possible e.g. homeless, incomplete postcode information.
Availability of data	This data is available on the Scottish Neighbourhood Statistics website (www.sns.gov.uk) The rate is also available

on the SIMD website
(www.scotland.gov.uk/Topics/Statistics/SIMD)

4.4.7. Proportion of live singleton births of low birth weight (<2,500g)(ISD, 2004-2007)

General description of indicator	Proportion of live singleton births of low birth weight (Low birth weight is defined as a birth weight of less than 2,500 grams), where birth figures exclude home births and births at non-NHS hospitals and a singleton is a baby from a pregnancy resulting in only one live or still birth. The year shown refers to the year of discharge from hospital
Indicator type	Proportion
Time period	2004-2007 (four year average)
Data source	ISD SMR02
Denominator used	All live singleton births
Data source of denominator	SMR02
Method of construction of indicator	Low birth weight singleton live births per data zone / singleton live births per data zone.
Key decisions on methodology	This is the same indicator as used in SIMD 2006
Comparison with 2006 indicator	There is poor correlation between SIMD 2009 rates and SIMD 2006 rates (Pearson correlation of 0.36) Comparison of 15% most deprived data zones by Local Authority and Urban Rural Classification show similar trends between the two SIMD indicators. Poor correlation could be the effect of small numbers over small-level geography. Stronger correlations are indicated at higher geography levels (i.e. intermediate geography and council areas).
Implications of comparing this indicator with the one used in SIMD 2006	The data used to construct the 2006 and 2009 domain have not been published.
Other data quality issues	N/A
Disclosure control	No
Geo-referencing	All postcodes are validated at source. Data excludes births where no match to a data zone was possible e.g. homeless, incomplete postcode information.
Availability of data	The data are not published using this standardisation method but other counts and rates are available on the Scottish Neighbourhood Statistics website (www.sns.gov.uk). The ratio used in the SIMD is available on the SIMD website (www.scotland.gov.uk/Topics/Statistics/SIMD)

4.5. Education Skills and Training Domain

2006 Weight	SIMD 2006 Education Indicator	2009 Weight	SIMD 2009 Education Indicator
0.21	School pupil absences (SG 2003/4-2004/5)	0.24	No change from SIMD 2006 (SG 2006/7-2007/8)
0.31	Pupil performance on SQA at stage 4 (SG 2002/3-2004/5)	0.25	No change from SIMD 2006 (SG 2005/6-2007/8)
0.24	Working age people with no qualifications (2001 Census)	0.26	No change in indicator or data from SIMD 2006 (2001 Census)
0.16	17-21 year olds enrolling into higher education (HESA 2002/3-2004/5)	0.15	No change from SIMD 2006 (HESA 2005/6-2007/8)
0.07	People aged 16-18 not in full time education (DWP 2005, HESA 2004/5)	0.09	<u>CHANGED INDICATOR</u> People aged 16-19 not in full time education, employment or training (School Leavers 2006/7-2007-8, DWP 2007 and 2008)

The 2009 education domain was constructed using the same methodology as the 2006 education domain apart from the change to the indicator shown above. Indicators were ranked, transformed to a normal distribution and then combined using weights generated by factor analysis. The derived weights are shown in the table above.

Improvements made to the data and methodology used to construct one indicator mean that the SIMD 2006 and SIMD 2009 education domains and that one indicator are not directly comparable. However comparisons can be made using the remaining indicators, which have remained the same.

The detail of the change is described in the technical note for the indicator. The main difference is:

- The 2006 indicator only accounted for those 16 – 18 not in full time education while the 2009 indicator has a wider age range and also combines benefits data and data on school leaver destinations to give a broader picture of those not in education, employment or training.

4.5.1. School pupil absences (2006/7-2007/8)

General description of indicator	This indicator provides the average absence rate of pupils who attend publicly funded primary, secondary and special schools, for each data zone in Scotland.
Indicator type	Percentage of half days absence over a two year period.
Time period	School years 2006/07 and 2007/08.
Data source	Data are provided to the Scottish Government by the local authorities and managers of mainstream grant-aided schools.
Denominator used	Number of half days possible attendance.
Data source of denominator	Data are provided to the Scottish Government by the local authorities and managers of mainstream grant-aided schools.
Method of construction of indicator	Information is received at pupil level. Data is aggregated over two years, with the intention of reducing the impact of fluctuations from one year to the next due to a small number of pupils per data zone.
Key decisions on methodology	The methodology used by OCS to construct the indicator was the same as that used for SIMD 2006. This is to help maintain consistency and better measure change over time.
Comparison with 2006 indicator	The 2006 and 2009 indicators are comparable.
Implications of comparing this indicator with the one used in SIMD 2006	The 2006 and 2009 indicators are comparable.
Other data quality issues	N/A
Disclosure control	Disclosure control has been applied to the data published on the SIMD website by swapping the data zones for a small percentage of records before producing the aggregate results. This has a negligible effect on the overall trends, but ensures that the confidentiality of individual records are maintained. Unadjusted data were used in the calculation of the SIMD.
Geo-referencing	Pupil home postcode is one of the indicators collected for each pupil in the annual pupil census. Postcodes were known for about 99% of pupils in publicly funded schools. Data used in the formulation of this indicator do not include pupils with a missing or invalid postcode.
Availability of data	Disclosure controlled counts are available on the SIMD website (www.scotland.gov.uk/Topics/Statistics/SIMD) Separate primary and secondary school absence rates are also available on the Scottish Neighbourhood Statistics website (www.sns.gov.uk) National data is published in the Scottish Government statistical publication: http://www.scotland.gov.uk/Topics/Statistics/Browse/School-Education/PubAttendanceAbsence

4.5.2. Pupil performance at SQA Stage 4 (2005/6-2007/8)

General description of indicator	This indicator provides the average tariff score of S4 pupils who attend publicly funded secondary schools, for each data zone in Scotland. S4 pupils would be expected to sit Standard Grade or equivalent exams.
Indicator type	Average score (three year average)
Time period	School years 2005/06 to 2007/08
Data source	Attainment data from Scottish Qualifications Authority (SQA), pupil numbers from the pupil census.
Denominator used	Total number of pupils in S4, as at September each year.
Data source of denominator	Pupil census.
Method of construction of indicator	Individual level data zone information was obtained for S4 pupils in Scotland. These data were linked with attainment data from the SQA using the Scottish candidate number to obtain a total tariff score per pupil. The total scores were averaged for each data zone to create average tariff scores. Data are aggregated over three years, with the intention of reducing the impact of fluctuations from one year to the next due to a small number of pupils per data zone.
Key decisions on methodology	Data is based on the last 3 years and includes S4 pupils in secondary schools plus 15 year olds in Special Schools. Data from independent schools have been excluded for a number of reasons. There is a lack of datazone level information and independent schools may choose to sit GCSE's or other English qualifications for which we have no information. The same methodology was used in 2006.
Comparison with 2006 indicator	The 2006 and 2009 indicators are comparable as the methodology hasn't changed.
Implications of comparing this indicator with the one used in SIMD 2006	N/A
Other data quality issues	N/A
Disclosure control	Disclosure control has been applied to the data published on the SIMD website by swapping the data zones for a small percentage of records before producing the aggregate results. This has a negligible effect on the overall trends, but ensures that the confidentiality of individual records are maintained. Unadjusted data were used in the calculation of the SIMD.
Geo-referencing	Pupil home post code is one of the indicators collected for each pupil in the annual school census. Valid postcodes were submitted for about 99% of S4 pupils in publicly funded secondary schools. Data used in the formulation of this indicator do not include pupils with a missing or invalid postcode.
Availability of data	National data is published in the Scottish Government statistical publication http://www.scotland.gov.uk/Publications/2009/03/09154229/0 , however this data only includes S4 pupils and not those in special schools. The data is also available on the Scottish Neighbourhood Statistics website (www.sns.gov.uk) and the SIMD website (www.scotland.gov.uk/Topics/Statistics/SIMD)

4.5.3. Working age adults with no qualifications (2001 Census)

General description of indicator	The indicator shows the proportion of working age adults (males aged 25-64 and females aged 25-59) that claimed in the 2001 Census not to have any of the qualifications listed on the form.
Indicator type	Ratio (indirectly standardised)
Time period	2001
Data source	General Register Office for Scotland, 2001 Census
Denominator used	Expected number of people with no qualifications (calculated during indirect age-sex standardisation)
Data source of denominator	General Register Office for Scotland, 2001 Census
Method of construction of indicator	The observed number of people with no qualifications was divided by the expected number for each data zone to provide a ratio. For further details of the standardisation method see the general methodology chapter.
Key decisions on methodology	The official source for data on the proportion of people with no qualifications is the Labour Force Survey (LFS). As the LFS is a survey, reliable data are not available at data zone level. For this reason the only viable source for this indicator at data zone level is the 2001 Census. Using the 2001 Census data does not take into account the changes in the proportion of people with no qualifications which national data indicates. However by investigating trend data at a Local Authority level we see that the proportion with no qualifications has reduced in 19 out of 32 local authorities between 2005 and 2008. Although the data showed the change had happened at different rates for each LA it is uncertain whether these different rates are significant as they are based on relatively small sample sizes. The Scottish Government has decided, therefore, to continue to use 2001 Census data in the education domain as this indicator is a key measure for this domain. Although there are some concerns that there may have been differing shifts in this indicator for different geographies the evidence is not strong enough to justify removing the indicator and there are no better alternatives.
Comparison with 2006 indicator	The same data and methodology was used.
Implications of comparing this indicator with the one used in SIMD 2006	As above.
Other data quality issues	
Disclosure control	There has been no disclosure control applied to this indicator
Geo-referencing	No geo-referencing issues
Availability of data	Data are published by GROS

4.5.4. Proportion of 17-21 year olds not entering in to full time higher education (HESA 2005/6 to 2007/8)

General description of indicator	The indicator considers the number of 17-21 entrants to first degree courses domiciled before the start of their course in each data zone and the total number of 17-21 year olds resident in the data zone over the same period. This allows the percentage of 17-21 year olds who enrolled on a first degree course to be established for each data zone.
Indicator type	Percentage (over three years)
Time period	2005-06 to 2007-08
Data source	Higher Education Statistics Agency (HESA), Scottish Further Education Funding Council (SFEFC), now Scottish Funding Council (SFC)
Denominator used	Small Area Population Estimates of 17-21 year olds, adjusted to account for large student populations (see methodology)
Data source of denominator	General Register Office for Scotland
Method of construction of indicator	The number of 17-21 year olds who entered a first degree programme between 2005-06 and 2007-08 from each data zone was divided by the total population estimate of 17-21 year olds in the data zone in the same time period. This gives a percentage of 17-21 year olds in each data zone that entered a first degree course.
Key decisions on methodology	Actual enrolments to first degree courses using data supplied to HESA was used as the numerator for SIMD 2009. This is same methodology as in SIMD 2006. Study at degree level has been chosen as this level provides the highest gains in future earning potential and reduces double counting of students that progress from HND to degree.
Comparison with 2006 indicator	The 2006 and 2009 indicators are directly comparable.
Implications of comparing this indicator with the one used in SIMD 2006	See above.
Other data quality issues	The count of students relates to home address before study, the denominator population includes students at their term-time address which affects a small number of data zones, eg. those containing student halls. These data zones were adjusted to take account of large numbers of 17-21 year olds.
Disclosure control	Values of less than 3% have been suppressed with an asterisk (*) and values of greater than 95% have been left blank.
Geo-referencing	Not every postcode could be matched. 99% of Scottish records had a valid postcode.
Availability of data	This data is not published but similar data relating to attendance at higher education institutions are available on the Scottish Neighbourhood Statistics website (www.sns.gov.uk) The percentage is available from the SIMD website (www.scotland.gov.uk/Topics/Statistics/SIMD)

4.5.5. People aged 16-19 not in education, employment or training (DWP 2007 and 2008 / School Leavers 2006/7 and 2007/8)

General description of indicator	The indicator shows the proportion of 16, 17,18 and 19 year olds who are not in full-time education, employment or training.
Indicator type	Percentage (over 2 years)
Time period	2006/7-2007/8
Data source	DWP Careers Scotland ScotXed
Denominator used	Small Area Population Estimates of 16-19 year olds
Data source of denominator	General Register Office for Scotland
Method of construction of indicator	DWP took snapshots of all 18 and 19 year olds claiming NEET benefits (i.e. the workless client group - combined count of people on the following benefits: Jobseekers Allowance; Income Support; Incapacity Benefit (excluding claimants on Severe Disability Allowance unless they are also claiming income support)) at November 2007 and November 2008 and added these figures together. These were then added to the school leavers to negative destinations data supplied by Education Department Analytical Services Division. The total was divided by 2 to create the numerator. The numerator for each data zone was divided by the 2007 SAPE population figures for 16-19 year olds to calculate a rate.
Key decisions on methodology	OCS consulted with experts in education sector and decided these two new data sources would provide a better measure of NEET than those used in SIMD 2006. In addition to this CB data was not available from HMRC Data were aggregated over two years, with the intention of reducing the impact of fluctuations from one year to the next due to small numbers per data zone. The 2006 indicator was calculated as the remainder of the population when those remaining in education had been subtracted. This methodology meant that areas with high proportions of students were showing up as being deprived as applications for enrolment were made from parents addresses. To correct for this the denominator was adjusted in student areas. As the new methodology counts those not in Education, Employment or training, no adjustment is made to the denominator for the 2009 indicator.
Comparison with 2006 indicator	Not comparable. The 2009 indicator measures young people not in education, employment and training whereas the 2006 indicator counts people not in full time education.
Implications of comparing this indicator with the one used in SIMD 2006	It is not possible to directly compare the 2009 indicator with the SIMD 2006 indicator as the two indicators are defining different things.
Other data quality issues	
Disclosure control	Counts have been adjusted using probabilistic rounding to base 5. Any counts that are shown as zero may not be a real zero. Unrounded data used in calculation of indicator.
Geo-referencing	Data on leavers destinations is matched to data from the pupil census on the basis of combinations of Scottish Candidate

	<p>Number, School, gender, date of birth and post code (see http://www.scotland.gov.uk/Publications/2007/12/07093501/26 for details of the 2006/07 exercise, which was repeated for 2007/08 data). Data zones are derived from pupil's home post codes.</p>
Availability of data	<p>The data are not published but the percentage is available on the SIMD website (www.scotland.gov.uk/Topics/Statistics/SIMD) For further information on leaver destinations, see http://www.scotland.gov.uk/Topics/Statistics/Browse/School-Education/PubDestinationLeavers</p>

4.6. Geographic Access Domain

2006 Weights		SIMD 2006 Access Indicators	2009 Weights		SIMD 2009 Access Indicators
Drive time sub-domain. Weight in Access domain = 0.75	0.21	to a GP	Drive time sub-domain. Weight in Access domain = 2/3	0.22	No change from SIMD 2006
	0.13	to a Petrol Station		0.15	No change from SIMD 2006
	0.13	to a Post Office		0.14	No change from SIMD 2006
	0.27	to Shopping facilities		0.24	No change from SIMD 2006
	0.12	to a Primary School		0.09	No change from SIMD 2006
	0.14	to a Secondary School		0.15	No change from SIMD 2006
	<u>Total: 1.00</u>			<u>1.00</u>	
Public transport sub-domain. Weight in Access domain = 0.25	0.56	to a GP	Public transport sub-domain. Weight in Access domain = 1/3	0.51	No change from SIMD 2006
	0.25	to a Post Office		0.25	No change from SIMD 2006
	0.19	to Shopping Facilities		0.24	No change from SIMD 2006
	<u>Total: 1.00</u>			<u>1.00</u>	

The 2009 access domain was constructed using a similar methodology as the 2006 access domain. Each sub-domain was created independently and then the two sub-domains were combined to create the access domain. To create the sub-domains the indicators for were ranked, transformed to a normal distribution and then combined using weights generated by factor analysis. The derived weights are shown in the table above.

The two sub-domains were combined by transforming the sub-domain scores to an exponential distribution and then creating an access domain score using 2/3 of the drive-time sub domain transformed score and 1/3 of public transport sub-domain transformed scores. These new scores were then ranked.

The drive time sub-domain scores received a higher weight in the overall access domain because the data is more robust and consistent across Scotland and the domain takes into account access to 6 services whereas the public transport sub-domain only takes into account 3 different services. Weights have been revised to reflect this and the results of the sensitivity analysis are available on the SIMD website. As with SIMD 2006, it was not possible to include public transport times to primary and secondary schools as there is not consistent time table information available on school buses.

Several improvements have been made to the data and methodology and, as a result, the SIMD 2009 and SIMD 2006 access domains and indicators are not directly comparable. Specific differences are noted in the technical notes for each indicator below, but the main differences are:

- New computer model used to calculate drive times and public transport times.

- In the drive-time sub-domain where ferries form part of a journey ferry timetables have been taken into account.
- Changes to the structure of the Post Office network has meant that a minimum level of service provision was needed to include an outlet in the dataset used.

4.6.1. Drive time sub-domain

- *Average drive time to a primary school*
- *Average drive time to a secondary school*
- *Average drive time to a GP*
- *Average drive time to a post office*
- *Average drive time to shopping facilities*
- *Average drive time to a fuel station*

General description of indicator	Population weighted average time taken to reach key services by driving
Indicator type	Population weighted average drive time - minutes
Time period	2008-2009
Data source	<ul style="list-style-type: none"> • Road network – Ordnance Survey Integrated Transport Network 2009. • Public Transport timetable/route data (Ferry data) – National Public Transport Data Repository 2008 • Service locations: Secondary schools, Primary schools and GPs - PointX 2008. Shopping Facilities – CACI Retail Footprint 2009. Petrol stations – Experian Catalist 2009. Post Offices – Royal Mail 2009. • Census output area population weighted grid references – General Register Office for Scotland 2001. COA populations are not available for 2009. • Census output areas population figures - General Register Office for Scotland 2001 • Number of students per census output area for Primary and Secondary school – Scottish Government 2008.
Denominator used	<ul style="list-style-type: none"> • 2001 Total population: GP, Petrol Station, Post Office, Shopping Facilities • 2006-2008 average primary school population: Primary school • 2006-2008 average Secondary school population: Secondary School
Data source of denominator	<ul style="list-style-type: none"> • Census output areas (COA) population figures - General Register Office for Scotland 2001. COA populations are not available for 2009. • Number of students per census output area for Primary and Secondary school – Scottish Government 2006-08.
Method of construction of indicator	See GI-SAT (Geographic Information - Science & Analysis Team) report on construction of the SIMD 2009 geographic access domain.
Key decisions on methodology	Geographic Access domain constructed entirely within Scottish Government. Drive times and Public Transport times calculated by GI-SAT using a single software environment (Citilabs 'Accession') to produce more integrated indicator. Drive times calculated using OS ITN road grid, using default Department for Transport Accession speed profile. Where drive times may include a ferry journey, calculation was schedule-based (same day/times as public transport times) and averaged in order to take account of actual ferry timetable data and variability of services throughout the day. 30 min wait times at ferry terminals were again included where journeys included a ferry trip.

	<p>Census Output Area origins for drive times same as SIMD 2006. Methodology for constructing datazone average drive times from census output area calculated drive times is the same as SIMD 2006.</p> <p>The same data sources as SIMD 2006 were used for the location of Primary Schools, Secondary Schools, GP surgeries, Fuel Stations and Shopping Facilities.</p> <p>Due to changes in the post office network in 2007/08 where a number of post offices were closed or replaced with reduced services, post office service locations were obtained directly from the royal mail's network change division, along with type of service and opening hours. This was done in order to achieve an up to date picture of the post office network in 2009. After consultation with the Measuring Deprivation Advisory Group a time based measure was agreed upon to represent a minimal post office service. Post Office locations therefore reflect post office services available for 6 hours or more per week.</p> <p>To relate the services better to their users, primary and secondary school populations were again used to weight primary and secondary school drive times, respectively.</p> <p>Further information is available from the GI-SAT report on geographic access domain methodology.</p>
Comparison with 2006 indicator	The services used are the same as for SIMD 2006, however changes in the software used for the calculations mean the times are not comparable.
Implications of comparing this indicator with the one used in SIMD 2006	Differences in road network, speed profile, calculation environment and changes to calculation method for ferry trips mean drive times may not be directly comparable to SIMD 2006.
Other data quality issues	
Disclosure control	No disclosure control was applied to the drive time data.
Geo-referencing	There are no geo-referencing issues – all service locations were geo-referenced.
Availability of data	Data are available on the Scottish Neighbourhood Statistics website (www.sns.gov.uk) and the SIMD website (www.scotland.gov.uk/Topics/Statistics/SIMD)

4.6.2. Public transport sub-domain

- *Public transport travel time to Shopping Facilities*
- *Public transport travel time to a GP*
- *Public transport travel time to a post office*

General description of indicator	Population weighted average travel times to selected services using public transport (bus, train, underground, ferries) and/or walking.
Indicator type	Population weighted average public transport travel time - minutes
Time period	2008-2009
Data sources	<ul style="list-style-type: none"> • Service locations: GP surgeries – PointX 2008. Shopping facilities – CACI Retail Centre database 2009. Post Office services – Royal Mail 2009. • Census output area population weighted grid references – General Register Office for Scotland 2001 • Census output areas population figures - General Register Office for Scotland 2001 • Public transport network stops/timetable data (Bus, Coach, Ferry, Metro, Train) – National Public Transport Data Repository 2008. • Road Network – Ordnance Survey Integrated Transport Network (ITN) 2009
Denominator used	2001 Total population
Data source of denominator	Census output areas (COA) population figures - General Register Office for Scotland 2001. COA populations are not available for 2009.
Method of construction of indicator	See GI-SAT (Geographic Information - Science & Analysis Team) report on construction of the SIMD 2009 geographic access domain.
Key decisions on methodology	<p>Geographic Access domain constructed entirely within Scottish Government. Drive times and Public Transport times calculated by GI-SAT using a single software environment (Citilabs 'Accession') to produce more integrated indicator.</p> <p>As in SIMD 2006, average public transport travel time calculated at COA level from 4 trips (2 outbound/2 inbound) throughout the day in order to reflect changes in public transport availability throughout the day. Changes were however necessary in time windows due to change in software. Outbound times calculated for Tuesday 7am - 11am & 12noon - 4pm. Inbound times calculated for 12noon – 4pm & 5pm – 9pm. 3 hour maximum journey time cut off applied to all trips.</p> <p>20 min wait times at ferry terminals were included where journeys included a ferry trip.</p> <p>Census Output Area origins for public transport times same as SIMD 2006. Methodology for constructing datazone average public transport times from census output area calculated drive times is the same as SIMD 2006.</p> <p>The same data sources as SIMD 2006 were used for the</p>

	<p>location of Primary Schools, Secondary Schools, GP surgeries, Fuel Stations and Shopping Facilities.</p> <p>Due to changes in the post office network in 2007/08 where a number of post offices were closed or replaced with reduced services, post office service locations were obtained directly from the royal mail's network change division, along with type of service and opening hours. This was done in order to achieve an up to date picture of the post office network in 2009. After consultation with the Measuring Deprivation Advisory Group a time based measure was agreed upon to represent a minimal post office service. Post Office locations therefore reflect post office services available for 6 hours or more per week.</p> <p>Further information is available from the GI-SAT report on geographic access domain methodology.</p>
Comparison with 2004 & 2006 indicator	The services used are the same as for SIMD 2006, however changes in the software used for the calculations mean the times are not comparable.
Implications of comparing this indicator with the one used in SIMD 2006	Differences in calculation environment and changes to time periods of calculation mean public transport times may not be directly comparable to SIMD 2006.
Other data quality issues	For some data zones where a public transport time could not be calculated for all COA areas within the data zone travel times were estimated using drive times.
Disclosure control	No disclosure control has been applied to the public transport indicators.
Geo-referencing	There are no geo-referencing issues – all service locations were geo-referenced.
Availability of data	Data are available on the Scottish Neighbourhood Statistics website (www.sns.gov.uk) and the SIMD website (www.scotland.gov.uk/Topics/Statistics/SIMD)

4.7. Housing Domain

<i>SIMD 2006 housing indicators</i>	<i>SIMD 2009 housing indicators</i>
<i>Persons in households that are overcrowded (2001 Census)</i>	<i>No change in indicator or data from SIMD 2006 (2001 Census)</i>
<i>Persons in households without central heating (2001 Census)</i>	<i>No change in indicator or data from SIMD 2006 (2001 Census)</i>

The SIMD 2009 housing domain remains unchanged from the SIMD 2004 and 2006, which used 2001 Census data. Suitable housing data to replace Census indicators have not yet been developed. The housing domain has been retained, as it is considered a relevant aspect of multiple deprivation. The housing domain is expected to be updated in future indices.

The housing domain is constructed by simply summing the two indicators together. There is a chance of some overlap between indicators, however, this has been accepted as it was thought that people living in a household with both attributes are more deprived than those with only one.

4.7.1. Persons in households that are overcrowded

General description of indicator	This indicator provides a measure of material living standards and gives the proportion of household population that live in overcrowded housing based on the occupancy rating. This compares the actual number of rooms in the house to the number of rooms which are required by the household, based on the relationships between them and their ages. Overcrowding is defined to mean households with an occupancy rating of -1 or -2 i.e. that there is either 1 or 2 rooms too few in the household.
Indicator type	Percentage of household population
Time period	2001
Data source	General Register Office for Scotland, 2001 Census
Denominator used	2001 Census population of people living in households
Data source of denominator	General Register Office for Scotland, 2001 Census
Method of construction of indicator	The indicator is a simple proportion of the number of people living in overcrowded households, divided by the 2001 household population.
Key decisions on methodology	The indicator is identical to the indicator used in the 2004 and 2006 SIMD but the indicator has still been retained in the housing domain as the best available.
Comparison with 2006 indicator	The indicator is identical to the indicator used in the 2004 and 2006 SIMD.
Implications of comparing this indicator with the one used in SIMD 2006	Not applicable – see above
Other data quality issues	There has been some criticism that the Census measure of overcrowding (the occupancy rating) is not as sophisticated as the 'bedroom standard' which is generally used to assess overcrowding, and tends to overstate. For example, on the Census definition a one person household can have an occupancy rating of -1.
Disclosure control	No disclosure control has been applied to this indicator.
Geo-referencing	No geo-referencing issues
Availability of data	The data are available on the Scottish Neighbourhood Statistics website (www.sns.gov.uk) and on the SIMD website (www.scotland.gov.uk/Topics/Statistics/SIMD) The Scottish Census Results Online (www.scrol.gov.uk) also contains overcrowding cross-tabulations.

4.7.2. Persons in households without central heating

General description of indicator	This indicator provides a measure of material living standards and gives the proportion of household population that live in a house that is centrally heated. A household's accommodation is described as 'with central heating' if it has central heating in some or all rooms (whether used or not). Central heating includes gas, oil or solid fuel central heating, night storage heaters, warm air heating and under-floor heating.
Indicator type	Percentage of household population
Time period	2001
Data source	General Register Office for Scotland, 2001 Census
Denominator used	2001 Census population of people living in households
Data source of denominator	General Register Office for Scotland, 2001 Census
Method of construction of indicator	The indicator is a simple proportion of the number of people living in households without central heating, divided by the 2001 household population.
Key decisions on methodology	The indicator is identical to the indicator used in the 2004 and 2006 SIMD but the indicator has still been retained in the housing domain as the best available.
Comparison with 2006 indicator	The indicator is identical to the indicator used in the 2004 and 2006 SIMD.
Implications of comparing this indicator with the one used in SIMD 2006	Not applicable – see above
Other data quality issues	The census question on central heating does not distinguish between whole and partial house central heating.
Disclosure control	No disclosure control has been applied to this indicator.
Geo-referencing	No geo-referencing issues
Availability of data	The data are available on the Scottish Neighbourhood Statistics website (www.sns.gov.uk) and on the SIMD website (www.scotland.gov.uk/Topics/Statistics/SIMD) The Scottish Census Results Online (www.scrol.gov.uk) also contains central heating cross-tabulations.

4.8. SIMD Crime Domain

SIMD 2006 crime indicators:	SIMD 2009 crime indicators:
<i>Recorded Crimes of Violence (2005)</i>	<i>No change from SIMD 2006 (2007-08)</i>
<i>Recorded Domestic housebreaking (2005)</i>	<i>No change from SIMD 2006 (2007-08)</i>
<i>Recorded Vandalism (2005)</i>	<i>No change from SIMD 2006 (2007-08)</i>
<i>Recorded Drugs Offences (2005)</i>	<i>No change from SIMD 2006 (2007-08)</i>
<i>Recorded Minor Assault (2005)</i>	<i>No change from SIMD 2006 (2007-08)</i>

The SIMD 2009 crime domain remains unchanged from the SIMD 2006. The SIMD Crime domain score is constructed as a simple sum of the selected SIMD crime indicator counts divided by the total population and multiplied by 10,000 to create a total SIMD crime rate per 10,000 people.

Issues in the Construction of the Crime Domain

Consistency with published sources

The chosen methodology involves calculating a rate of total SIMD crime (by summing the crimes included in the indicators) per 10,000 of population. Total SIMD crimes are based on geo-referenced data provided by police forces grossed up to local authority level based on the 2007-08 recorded crime totals held by the Scottish Executive Justice Department.

Police station bias

In order to reduce bias against areas that contain a police station, crimes that have been identified as being recorded within 50 metres of the centre of a police station have been excluded.

Weighting of crime types

There is no official methodology to differentiate between the severity of different types of crimes, therefore, we have not applied weights and have added SIMD crimes together for each data zone and divided by the total population.

Crimes excluded from the crime domain

The SIMD crime domain does not include all types of crime or offence recorded by the police. Certain crimes have been excluded because of data quality issues, or because they are less meaningful in terms of deprivation at a neighbourhood level.

For example, some crime types were excluded because they are directed at businesses and/or concentrated in centres of retail activity rather than neighbourhoods – examples include shoplifting and non-domestic housebreaking. Other crime types are harder to locate geographically – examples include fraud and speeding offences.

Other crimes might be thought suitable for exclusion, but where such crimes formed part of a recognised group (e.g. violence, vandalism) and accounted for very small numbers, they were not explicitly excluded.

Geographical coverage

Police forces were requested to provide all available geographical/ address information, in particular postcodes for each crime recorded. Where possible, forces provided postcodes plus map references and address details. The exact postcode is not necessarily required to geo-reference a crime as long as there is sufficient information to allocate the crime to a data zone. Where a force could only provide address details, the Scottish Government imputed postcodes and/ or map references so that data zones could be identified for the majority of the crimes.

Population denominators

There may be some bias in data zones that fall in town centres, where the resident population may be small compared with the daytime or nighttime populations. Day and night populations are not available at the small area level and so total resident population was used for the construction of these indicators. Also special events such as music festivals or sporting events may occur in an area with the accompanying temporary increase in population, which is not reflected in the small area resident population estimates. Such changes to the population of a data zone should be considered when comparing SIMD crime rates in different areas.

4.8.1. Recorded SIMD Crime Rate:

Recorded Crimes of Violence
Recorded Domestic housebreaking
Recorded Vandalism
Recorded Drugs Offences
Recorded Minor Assault

General description of indicator	Recorded SIMD crime rate of selected crimes of violence, domestic housebreaking, vandalism, drug offences and minor assault. The overall indicator is a sum of each SIMD crime divided by the total population.
Indicator type	Rate per 10,000 population
Time period	2007/2008
Data source	Scottish Police Forces: Central, Dumfries & Galloway, Fife, Grampian, Lothian & Borders, Northern, Strathclyde and Tayside.
Denominator used	Total Population 2007
Data source of denominator	General Register Office for Scotland 2007 mid year population estimates.
Method of construction of indicator	As with SIMD 2006, crimes happening within 50 metres of a police station were removed from the data. This was to ensure that crimes recorded as happening in a police station did not mask the level of crime happening in the neighbourhood of the police station. The total SIMD crime rate was constructed by summing the selected crime counts and dividing the total by the total data zone population.
Key decisions on methodology	The indicators remain the same as those used in SIMD 2006, though there has been a move from a single calendar year to a single financial year. It was intended that SIMD 2009 would use three years of data in the crime domain to reduce the impact of fluctuations in numbers of crimes at datazone levels. Due to problems with geo-referencing it has only been possible to use one year of data in the crime domain.
Comparison with 2006 indicator	The 2006 and 2009 indicators are comparable.
Implications of comparing this indicator with the one used in SIMD 2006	The 2006 and 2009 indicators are comparable.
Other data quality issues	When looking at crime domain ranks and rates of SIMD crimes, the type of area and resident population should be considered. Some areas such as town centres, areas around football stadia, or music festivals will see large numbers of people in an area at a particular time of day or day of the week or year and an associate increase in crime.
Disclosure control	Hierarchical disclosure control has been applied to the published data after calculation of the crime domain. Data zones with total SIMD crime count of 5 or less were suppressed along with secondary suppressions.
Geo-referencing	There was a lack of full address information for some crimes/offences. In these cases, partial addresses were matched to postcodes or data zone using MatchCode. Address

	information was available for 91% of SIMD crimes. Crimes that could not be geo-referenced were allocated to a data zone within the police force based on the information provided. The remaining SIMD crime count was grossed up to the published LA total.
Availability of data	Data are available on the Scottish Neighbourhood Statistics website (www.sns.gov.uk) and on the SIMD website (www.scotland.gov.uk/Topics/Statistics/SIMD)

Annex A. References

SIMD website (including links to reports, data, mapping and SIMD 2004 and SIMD 2006 outputs) www.scotland.gov.uk/simd

SIMD 2009 General Report www.scotland.gov.uk/simd2009report

SIMD 2009 Guidance Leaflet www.scotland.gov.uk/simd2009leaflet

SIMD 2006 General Report www.scotland.gov.uk/simd2006report

SIMD 2006 Statistical Compendium www.scotland.gov.uk/simd2006compendium

SIMD 2006 Guidance Leaflet www.scotland.gov.uk/simd2006leaflet

SIMD 2006 Technical Report www.scotland.gov.uk/simd2004technical

SIMD 2004 Technical Report www.scotland.gov.uk/simd2004technical

Measuring Deprivation Advisory Group
www.scotland.gov.uk/Topics/Statistics/scotstat/snsgroup/IndexDeprivation

Calculation of Scottish Public Transport Accessibility Indicators
www.scotland.gov.uk/simdpublictransport

Scottish Executive report on construction of the SIMD drive times
www.scotland.gov.uk/simd2006drivetimes

Scottish Executive report on construction of the retail centre data
www.scotland.gov.uk/simd2006retaildata

Scottish Indices of Deprivation 2003, Social Disadvantage Research Centre, University of Oxford
www.scotland.gov.uk/library5/social/siod-00.asp

Measuring Deprivation in Scotland: Developing a Long-Term Strategy, Scottish Centre for Research on Social Justice
www.scotland.gov.uk/Topics/Statistics/17814/10179

Evaluation of SIMD 2004 methodology by Glasgow University
www.scotland.gov.uk/SIMD2004evaluation

Evaluation of SIMD 2006 SAS codes by Glasgow University
www.scotland.gov.uk/simd2006SASEvaluation

Social Focus on Deprived Areas 2005
www.scotland.gov.uk/SocialFocusOnDeprivedAreas

Indices of deprivation across the UK
www.neighbourhood.statistics.gov.uk/dissemination/Info.do?page=aboutneighbourhood/indicesofdeprivation/indices-of-deprivation.htm

Scottish Neighbourhood Statistics (SNS) website www.sns.gov.uk

Scottish Neighbourhood Statistics (SNS) User Forum (includes reference material, guidance and geography look up tables) www.scotland.gov.uk/Topics/Statistics/sns

Scottish Government Urban Rural Classification
<http://www.scotland.gov.uk/Topics/Statistics/About/Methodology/UrbanRuralClassification>

Datazone population estimates www.gro-scotland.gov.uk/statistics/publications-and-data/small-area-population-estimates/index.html

NOMIS www.nomisweb.co.uk

Department for Work and Pensions www.DWP.gov.uk