



2011 Census Reconciliation Report - Households

Comparison of the 2011 Census household results and the Household Estimates and Projections for Scotland

**Published on 27 June 2013
Revised on 17 January 2014**

An Official Statistics publication for Scotland

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Revision

Small errors were found in [Table 5](#), affecting the number of residents in communal establishments (CEs) in the 2011 CE estimates for Scotland and the City of Edinburgh, a small change to the text in [Section 3.3](#) was also made to reflect this. In addition, [Figure 8](#) has been altered due to incorrect labelling.

Main Points

The main points in this report are:

- The 2011 household estimates published prior to the release of the 2011 Census were within one per cent of the 2011 Census estimates both for Scotland as a whole, and for the majority of local authorities. These estimates have been revised for the 'Estimates of Households and Dwellings in Scotland, 2012' publication, to take into account the 2011 Census. The revised estimates are within 0.4 per cent of the 2011 Census estimates for all local authorities.
- Estimates of the percentage change in household numbers between 2001 and 2011, from the 2011 household estimates published prior to the release of the 2011 Census, were also consistent with estimates of the change between the 2001 and 2011 Censuses. The percentage changes for Scotland, and the majority of its local authorities, were within one percentage point of the percentage change between the 2001 and 2011 Censuses. The change in the revised household estimates are within 0.4 percentage points of the change between censuses.
- Estimates of average household size¹ and the estimates of the people resident in communal establishments² were also close to the 2011 Census estimates.
- The greatest difference from the Census is in the projections of household type, which are included in '[Household Projections for Scotland, 2010-based](#)' publication on the National Records of Scotland (NRS) website. The household projections over-project the increase in the proportion of smaller households and the decrease in the proportion of larger households. The 2011 Census suggests that between 2001 and 2011, the changes in the types of households that people live in were not as great as between 1991 and 2001. As the household projections are based on projecting the 1991 and 2001 data forward to 2011 and beyond, this caused the over-projection. The alternative headship projection, published alongside the principal household projection, produced better projections of household type than the principal projection because it assumes slower changes in the types of households that people live in than the principal projection.

Footnotes

1) Published in 'Estimates of Households and Dwellings in Scotland, 2012'

2) From administrative data using the methodology described in '[Household Projections for Scotland, 2010-based](#)' publication on the NRS website.

1. Purpose

The purpose of this report is to compare the data on households and communal establishments that was published in [Scotland's Census 2011, release 1B](#) (on the Scotland's Census website) with household estimates and projections data published regularly by National Records of Scotland (NRS).

The 2011 Census is considered the most reliable source of statistics about the population and households in Scotland, as it is designed solely for the purpose of collecting these statistics and aims to collect data from every household in Scotland. The scale of the collection, however, means that data is collected only once every ten years. In order to produce statistics more regularly, NRS uses data from a range of administrative sources, such as Council Tax and NHS databases, to produce the household estimates and projections. However, as this data is not collected specifically for producing these estimates it is important to compare them to the census to confirm that these statistics are of sufficient quality to be of use.

The statistics that are compared in this report are the household estimates and estimates of average household size, published in ['Estimates of Households and Dwellings in Scotland'](#), and estimates of the different sizes of household and residents in communal establishments, published in ['Household Projections for Scotland'](#) (both available on the NRS website). Additional comparisons, covering a wider range of household estimates and projections data, will be published following further releases of data from Scotland's 2011 Census.

The household estimates and projections are used in a wide range of ways, mainly to inform local authority decisions about housing need and the provision of services (including housing, planning waste collections, community care and school provision). The statistics feed into the local authorities' development plans, including assessments of housing need and demand for the future. The statistics are also employed in land use allocation and planning, in land use and transport models and are used to help inform policy development.

The household estimates and projections are used directly and indirectly in the productions of certain statistics within the Scottish Government's Annual Government Expenditure and Revenues Scotland (GERS) publication and the quarterly Scottish National Accounts Project releases. They are also used to estimate the expected distribution of Council Tax income.

2. Household estimates

2.1 Household estimates methodology

Household estimates for Scotland are produced annually, based on data from local authority Council Tax records. Households are considered to be those occupied dwellings for which Council Tax is paid, or which are occupied but exempt from Council Tax. They exclude dwellings which are vacant or second homes.

Extracts of the Council Tax databases are taken at September each year. The number of occupied dwellings is then adjusted to 30 June to produce mid-year estimates that correspond to the mid-year population estimates. They are adjusted by taking different proportions of the Council Tax data from the relevant years³.

In order to improve comparability between data sources, and because the census is the most reliable source of household estimates available, the Council Tax data for each local authority in each year is adjusted to take account of the differences between it and the census estimates in each census year. Prior to the release of the 2011 Census, the household estimates for each year were adjusted by the difference between the number of households recorded in the 2001 Census and the 2001 Council Tax figures (this includes the publication '[Estimates of Households and Dwellings in Scotland, 2011](#)' on the NRS website). This was done by producing a census-based estimate for June 2001 using a methodology similar to that of the household projections⁴ and calculating the difference in the number of households between this estimate and the household estimate from the Council Tax data. This difference was then added to each subsequent year's household estimate.

In the latest publication ([Estimates of Households and Dwellings in Scotland, 2012](#) available on the NRS website), the adjustments are updated to incorporate 2011 Census information. The 2001 and 2011 estimates are adjusted by the percentage difference between the number of households recorded in the relevant census (adjusted to June), and the Council Tax data for that year. The census estimates are adjusted to June by adding the relevant proportion of the change in the unadjusted household estimates between 2001 and 2002, or 2011 and 2012, respectively. The adjustments to the household estimates from 2002 to 2010 incorporate both the 2001 and 2011 Census estimates (adjusted to June) by taking a part of the percentage adjustment from the 2001 year and a part from the 2011 year.

Footnotes

3) For example the household estimate for June 2012 uses $(0.2 * \text{September 2011}) + (0.8 * \text{September 2012})$.

4) Details of this method can be found in '[Household Estimates for Scotland by Local Authority 1991 to 2004](#)' section of the NRS website.

In this section, several datasets are compared, each giving an estimate of the number of households for 2011, and an estimate of the change in the number of households between 2001 and 2011. These datasets are described below, and at [Table A](#). The data sets are:

- **Census estimates** – as at April 2001 and March 2011
- **Household estimates** – as at June 2001 and June 2011
 - **Unadjusted** – This estimate is based on Council Tax data, and is adjusted to June, but with no adjustment made to account for the census.
 - **Adjusted to the 2001 Census** – These are the annual household estimates published before the 2011 Census results became available (as published in '[Estimates of Households and Dwellings in Scotland, 2011](#)' on the NRS website). They are based on the unadjusted household estimates but also include an adjustment to reflect the difference between the 2001 Census and the 2001 Council Tax information.
 - **Adjusted to the 2011 Census** – These are the latest annual household estimates (as published in '[Estimates of Households and Dwellings in Scotland, 2012](#)' on the NRS website). They are based on the unadjusted household estimates but include adjustments to reflect the 2001 and the 2011 Censuses. For 2011, there are small differences between these figures and the Census results for 2011, as they refer to different dates (March vs June).

Two sets of comparisons are presented below. Firstly, 2011 Census estimates are compared to the 2011-adjusted household estimates. This comparison shows the estimated effect of the household estimate referring to a date three months later than the census (June rather than March).

The second set of comparisons compares the unadjusted and the 2001-adjusted household estimates to the 2011 Census and the 2011-adjusted household estimates. These comparisons are used to assess the performance of the methodology used for the household estimates up to 2011 and in particular whether the adjustment to the 2001 Census improved the quality of the household estimates.

2.2 Comparison of household numbers

Scotland

The 2011 Census estimate of the number of households in Scotland, at March 2011, is 2,372,780. The 2011-adjusted household estimate, at June 2011, is 2,375,430.

In comparison, the unadjusted household estimate is 2,391,022:

- 0.8 per cent above the census estimate and;
- 0.7 per cent above the 2011-adjusted household estimate.

The 2001-adjusted household estimate is 2,368,034 households:

- 0.2 per cent below the census estimate and;
- 0.3 per cent below the 2011-adjusted household estimate.

A quick reference guide to the origins of the different estimates can be found at [Table A](#).

The 2001-adjusted estimate is closer to both the census estimate and the 2011-adjusted estimate than the unadjusted estimate. This suggests that, during the period when the 2001 Census estimate was the most recent census data available, using it to adjust the household estimates for Scotland improved the quality of the household estimate for Scotland.

Local Authorities

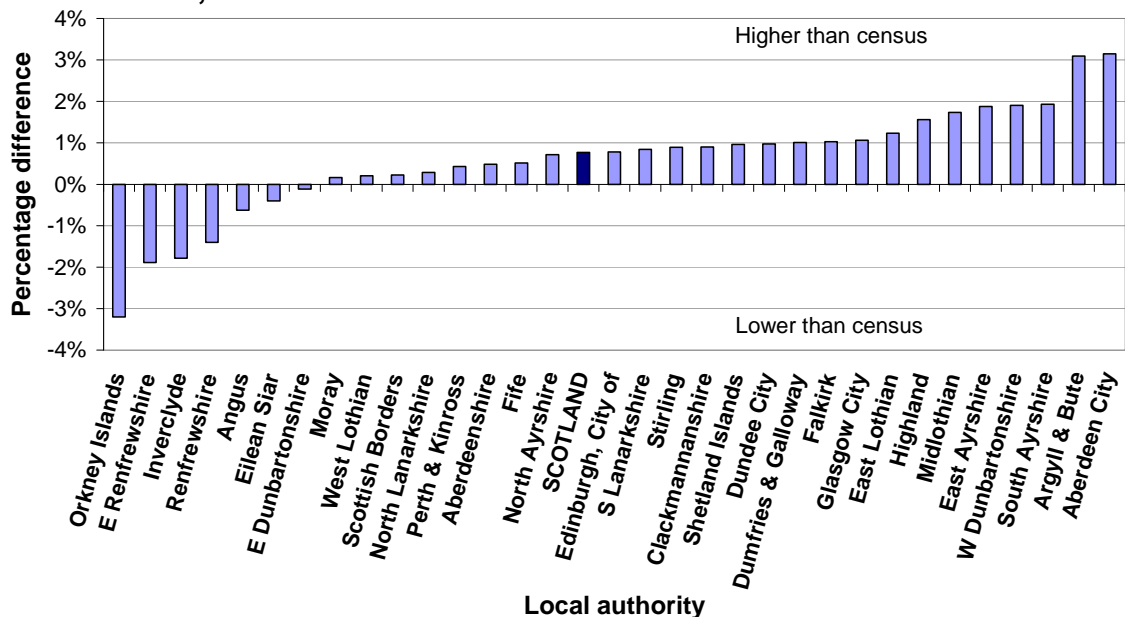
[Table 1](#) compares the same four sets of numbers for 2011. The 2011-adjusted household estimate for each local authority varies from a difference of less than 0.05 per cent in seven local authorities (Aberdeen City, Clackmannanshire, Glasgow City, Inverclyde, North Ayrshire, Renfrewshire and West Dunbartonshire) to being 0.4 per cent above the census estimate in Eilean Siar. It is not surprising that these differences are fairly small as the 2011-adjusted household estimate incorporates 2011 Census estimate, meaning that these differences represent the change in household number over just three months.

The unadjusted household estimates for local authorities were between:

- 3.2 per cent below (Orkney) and 3.1 per cent above (Aberdeen City, Argyll and Bute) the census estimate and;
- 3.4 per cent below (Orkney) and 3.1 per cent above (Aberdeen City) the 2011-adjusted household estimate.

The majority of local authorities were within one per cent of both the census estimate (19 local authorities) and the 2011-adjusted household estimate (21 local authorities). The difference between the unadjusted household estimate and the census estimate for each local authority can be seen in Figure 1.

Figure 1: Difference between the unadjusted household estimate and the Census estimate, 2011

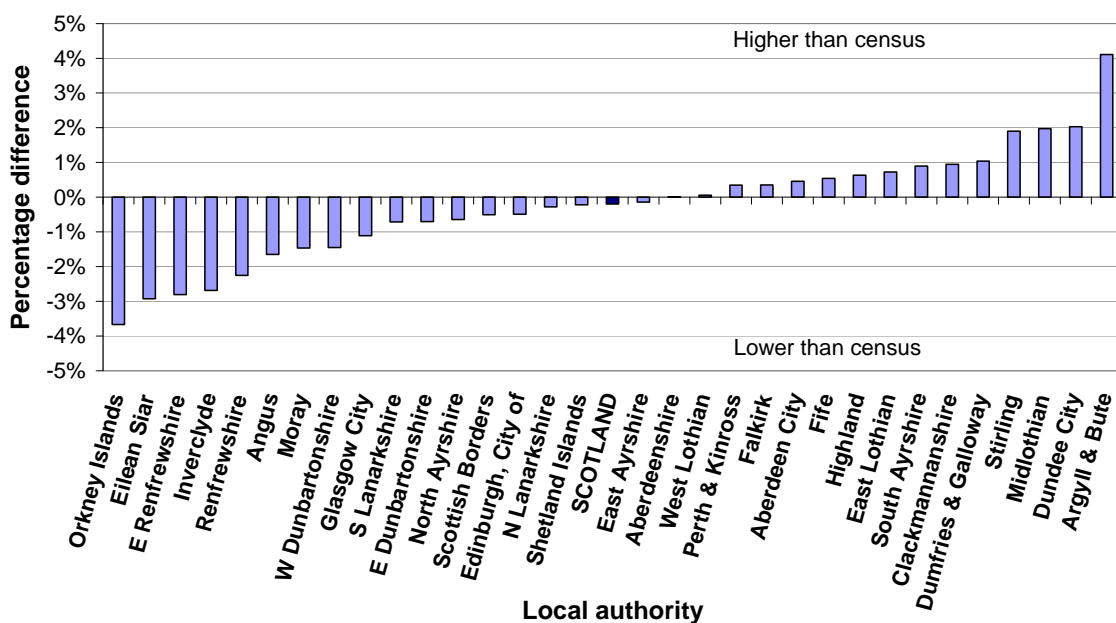


In comparison, 2011-adjusted household estimates for local authorities were between:

- 3.7 per cent below (Orkney) and 4.1 per cent above (Argyll and Bute) the census estimate and;
- 3.8 per cent below (Orkney) and 4.0 per cent above (Argyll and Bute) the 2011-adjusted household estimate.

Again, the majority of the local authorities were within one per cent of both the census estimate and the 2011-adjusted household estimate (19 in both cases). The difference between the 2011-adjusted household estimates and the census estimates can be seen in Figure 2.

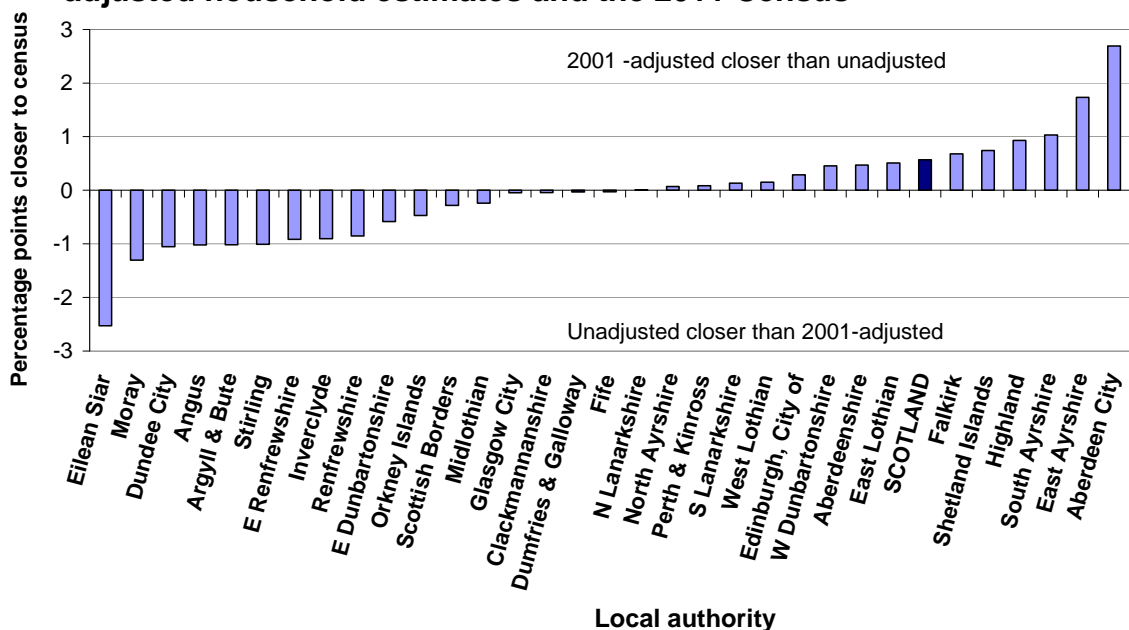
Figure 2: Difference between the 2011-adjusted household estimate and the Census estimate, 2011



In the year that the census is collected there is a clear benefit of adjusting the Council Tax derived estimates to take account of the census estimate, to reduce any large discrepancies between the household estimates and the census estimates. The figures above, however, indicate that the benefit of adjusting the household estimates to the previous census is less clear-cut by the time a decade has passed since that census. Compared to the unadjusted household estimate, including the adjustment to the 2001 Census increased the range of the differences between the household estimate and both the census estimates and the 2011-adjusted household estimates. However, it meant that a local authority was almost as likely to be above the 2011 Census estimate as below, which was not the case in the unadjusted household estimates. In the unadjusted household estimates seven local authorities were found to be below the census estimate, and the rest above, whereas in the 2001-adjusted household estimate 17 local authorities were below the census estimate and 15 above. For Scotland as a whole, both figures differ from the 2011 Census estimate by less than one per cent, but the 2001-adjusted household estimate was closer than the unadjusted household estimate (-0.2 per cent vs +0.8 per cent).

Simply looking at the range of differences from the census and 2011-adjusted household estimates can disguise the effects on individual local authorities. In Figure 3 the size of difference between the 2001-adjusted household estimate and the 2011 Census estimate (Table 1, column 6) has been subtracted from the size of the difference between the unadjusted household estimate and the 2011 Census estimate (Table 1 column 7), for each authority. This gives a measure of whether the 2001-adjusted estimate or the unadjusted estimate was closer to the Census. Where the resulting difference is a positive number the 2001-adjusted household estimate was closer to the census estimate than the unadjusted estimate and where the difference is a negative number the reverse is true. The size of the bar shows the scale of the difference for each local authority.

Figure 3: Comparison of the differences between the unadjusted and 2001-adjusted household estimates and the 2011 Census



The 2001-adjusted household estimate was closer to the census estimate than the unadjusted household estimate in 14 local authorities and very similar (within 0.05 percentage points) in a further five. Again, this suggests that adjusting to the census estimates does not significantly improve the estimates a decade after the census. On the other hand, including the adjustment does not introduce major errors, as the unadjusted household estimate is only more than one percentage point better than the 2001-adjusted household estimates in three local authorities. In the authorities where the 2001-adjusted estimate for 2011 is further away from the census estimate than the unadjusted estimate it is possible that it has been affected by undercounting or overcounting of households in that authority in the 2001 Census, rather than differences between the Council Tax and Census data. Including the adjustment still improves the household estimate at the Scotland level, as the 2001-adjusted estimate for Scotland is 0.6 percentage points closer to the census estimate than the unadjusted household estimate.

Conclusion

Estimates of the number of households in Scotland and its local authorities, using the households estimates methodology, are highly consistent with the numbers estimated in the 2011 Census. The 2001-adjusted household estimate, published prior to the release of 2011 Census, was within one per cent of the 2011 Census estimate both for Scotland as a whole, and for the majority of its local authorities. Fundamentally, the household estimates and the census come from different data sources, each with inherent levels of uncertainty in the underlying data, therefore the numbers would not be expected to be identical⁵. Both the census and the Council-Tax based methodologies aim to estimate the true number of households in Scotland. The fact that the two estimates are close to each other suggests that both the 2001-adjusted household estimates, based on Council Tax data, and the 2011 Census produce close estimates of the true number of households in Scotland.

There are several possible explanations for any differences between the census estimates and the Council Tax-based estimates. Discussed above are three reasons for differences between the 2011 figures; (1) that the estimates refer to different dates, (2) that the 2001 Census adjustments made to the household estimates published prior to the release of the 2011 Census are based on data that by 2011 was a decade old, and (3) that there may have been undercounting or overcounting in individual local authorities in the 2001 Census. Other causes of difference between the census estimates and the Council Tax-based estimates are thought to be that:

- some occupied dwellings are shared by more than one household. Each household is counted separately by the census, but together in Council Tax data;
- certain types of communal establishments, such as groups of separate student flats contained within the same building, may be included in the count of occupied dwellings from Council Tax systems but counted as communal establishments (i.e. not as households) in the census;
- not all data on the Council Tax system is up-to-date. For example, due to the local authority not being notified immediately of changes in circumstances or demolitions/new builds;

Footnotes

5) Further information about uncertainty in the 2011 Census can be found in ['2011 Census Release 1B - How the 2011 Census population estimates were obtained'](#) on the Scotland's Census website.

- there are differences in the definition of vacant dwellings, holiday lets and caravans between the census and Council Tax.
- adjustments are sometimes made to Council Tax data to account for exemptions not yet in place at the time of the return (for example, adjusting for occupied exemptions for students if their applications for exemptions were not yet registered). The adjustments attempt to make the data more robust, however they may not correspond exactly to census counts.

Part of the household estimates methodology adjusts the estimate to take into account the difference between the census and Council Tax data in the year of the latest census. This is done because the census is designed to count households, whereas an administrative data source, such as the Council Tax data, is not designed specifically to count households. The household estimates based on Council Tax data therefore use occupied dwellings as a proxy measure of households. Adjusting the household estimates to take into account the census helps to take account of any differences between the definitions of household and occupied dwellings described above.

The adjustment of the household estimates to the census is clearly beneficial in the initial year of adjustment, however by the time the census estimate is a decade old the adjustment, while still improving the quality of the data for Scotland as a whole, may or may not benefit individual local authorities. This is to be expected as the factors influencing the difference between the household estimate and the census estimate may have changed between 2001 and 2011. The method for the adjustment has been modified slightly following the release of the 2011 Census and it will be important to continue to monitor the benefit of the adjustment.

2.3 Comparison of the change in household numbers between 2001 and 2011

An alternative comparison between the census and the household estimates is to compare the change in each dataset between 2001 and 2011. [Table 2](#) presents these figures.

A quick reference guide to the origins of the different estimates can be found at [Table A](#).

Scotland

According to the 2011 Census there were 180,530 more households in Scotland in 2011 than in 2001, an 8.2 per cent increase. The 2011-adjusted household estimates show an increase of 179,723 households (8.2 per cent) between 2001 and 2011. This change is very close to the change between the censuses because, in the 2011-adjusted household estimates, the 2001 estimate is adjusted to the 2001 Census and the 2011 estimate is adjusted to the 2011 Census.

According to the 2001-adjusted household estimates there were 173,001 more households in 2011 than in 2001, an increase of 7.9 per cent. The 2001-adjusted household estimates are adjusted by the same number of households in 2001 and 2011 therefore the change in the number of households is identical in the unadjusted and 2001-adjusted estimates.

Local Authorities

The changes in household number between 2001 and 2011, from census estimates, range from a 2.0 per cent increase in Inverclyde, to a 15.4 per cent increase in Aberdeenshire and a 16.6 per cent increase in the Orkney Islands. In the 2011-adjusted household estimates the changes in household number vary from a 1.9 per cent increase in Inverclyde, to a 15.5 per cent increase in Aberdeenshire and a 16.7 per cent increase in the Orkney Islands. As with Scotland, the changes seen in the 2011-adjusted household estimates are close to those seen on census day.

[Figure 4](#) shows the difference in the 2001 to 2011 change in household numbers between the Census and the 2011-adjusted household estimates. The differences in the percentage change between 2001 and 2011 are small, ranging from 0.2 percentage points lower in West Lothian to 0.3 percentage points higher in Eilean Siar.

The changes in the number of households between 2001 and 2011 in the 2001-adjusted household estimates range from a 0.7 per cent decrease in Inverclyde to a 14.6 per cent increase in Highland and a 15.2 per cent increase in Aberdeenshire. Like Scotland, the changes in number in the unadjusted and 2001-adjusted household estimates are the same for all local authorities.

[Figure 5](#) shows the difference in the 2001 to 2011 change in household numbers between the census and the 2001-adjusted household estimates. The differences between the percentage change between 2001 and 2011 range from 4.3 percentage points lower in the Orkney Islands to 4.0 percentage points higher in Argyll and Bute. The difference in the percentage change from 2001 to 2011 between the 2001-adjusted household estimate and the Census is less than one percentage point for the majority of the local authorities (19).

Figure 4: Difference in the 2001 to 2011 percentage change in household numbers between the Census and the 2011-adjusted household estimates

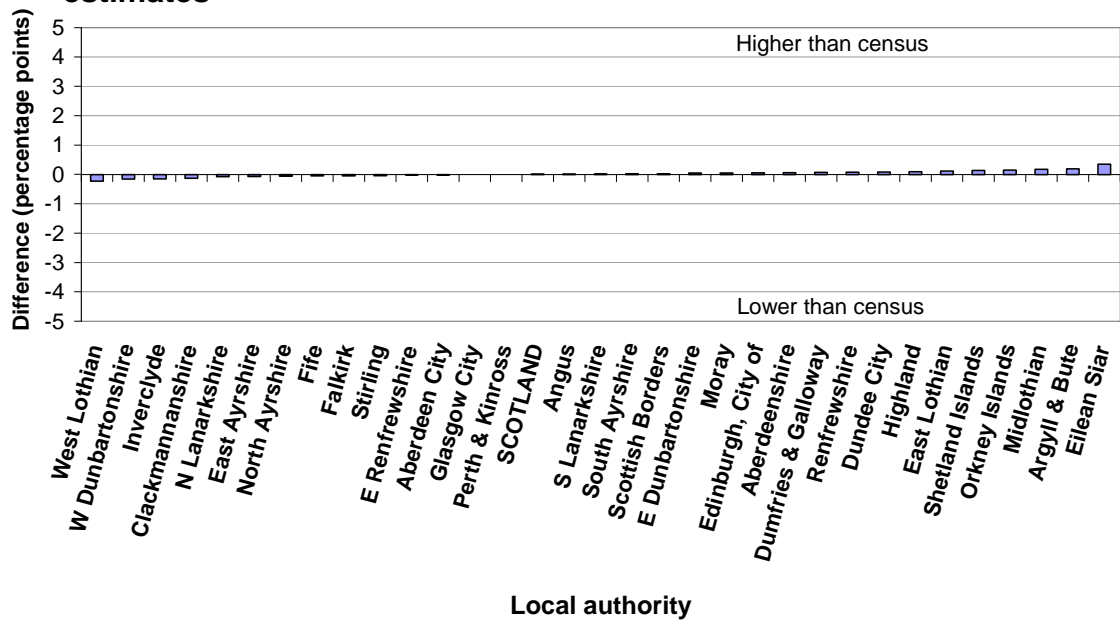
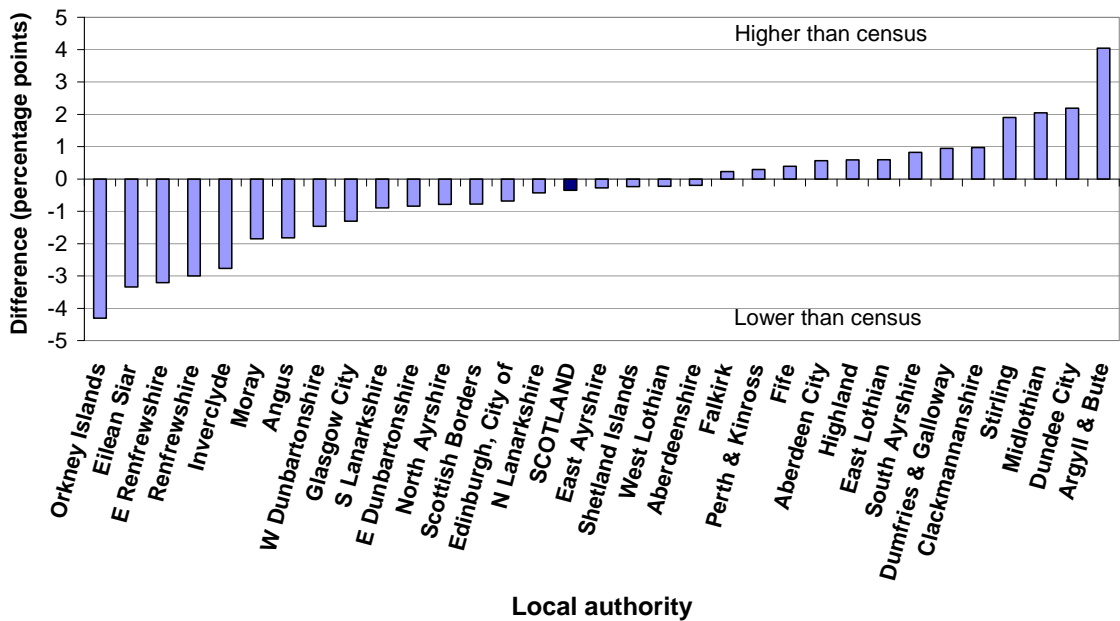


Figure 5: Difference in the 2001 to 2011 percentage change in household numbers between the Census and the 2011-adjusted household estimates



Conclusion

The performance of the household estimates methodology in estimating the change in the number of households between 2001 and 2011, in Scotland and its local authorities, as compared to the 2011 Census, is good. The change in the 2001-adjusted household estimates, published prior to the release of 2011 Census, was within one percentage point of the change between the 2001 and 2011 Census estimates both for Scotland as a whole, and for the majority of its local authorities.

The publication of the 2011-adjusted household estimates, incorporating 2011 Census data, brings the 2001 to 2011 change much closer to that between the 2001 and 2011 Censuses, with the change being within 0.4 percentage points of the census estimate in all local authorities.

The factors contributing to the differences in household numbers between the household estimates and census estimates, described in [Section 2.2](#), are also those that impact on the change in household numbers described in this section.

2.4 Comparison of average household size

Average household size is calculated using the household estimates, the mid-year population estimates⁶, and communal establishment rates from the 2001 and 2011 Censuses. The first step in calculating average household size is to calculate the number of people living in private households ('private household population') rather than in communal establishments, such as student halls of residence, prisons or care homes. This is done by applying the communal establishment rates to the mid-year population estimates to estimate the communal establishment population, and subtracting these people from the mid-year population estimate. Communal establishment rates for 2002 to 2010 were estimated from the 2001 and 2011 Census rates. The second step was to estimate average household size by dividing the private household population by the household estimate. Average household size was included in the 'Estimates of Households and Dwellings in Scotland' for the first time for 2012.

Scotland

According to the 2011 Census, the average household size in Scotland in 2011 was 2.19 people per household, a decrease from 2.27 people per household in 2001. In the 2011-adjusted household estimates, average household size in 2011 is 2.17 people per household, a decrease from 2.27 people per household in 2001. The difference in average household size between the census and the 2011-adjusted household estimates in 2011 is just 0.02 people per household.

Local Authorities

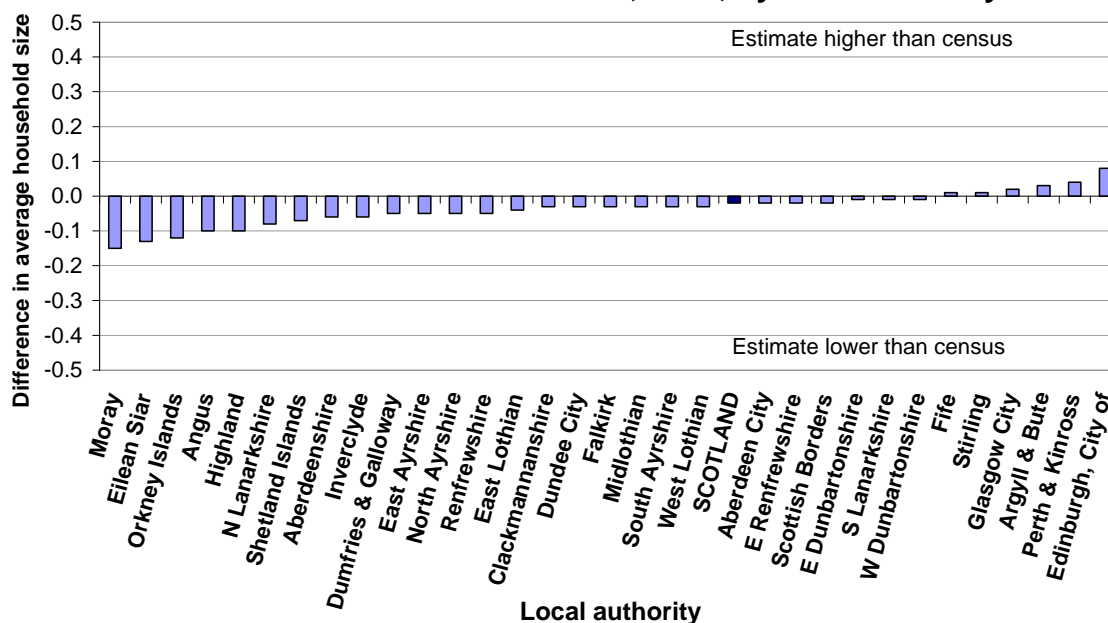
Table 3 compares average household size in 2001 and 2011 between the census and the 2011-adjusted household estimates for each local authority. According to the 2011 Census, average household size ranged from 2.02 people per household in Glasgow City to 2.42 people per household in East Renfrewshire. The census reports decreases in average household size between 2001 and 2011 in all local authorities, with the largest decrease seen in Eilean Siar (-0.15 people per household) and the smallest in Falkirk (-0.05 people per household). In the 2011-adjusted household estimates, average household size ranged from between 2.03 people per household in Dundee City to 2.40 in East Renfrewshire. The 2011-adjusted household estimates report decreases in average household size in almost all authorities, with the largest decrease seen in Eilean Siar (-0.28 people per household). The only exception to this is in the City of Edinburgh where the 2011-adjusted household estimates show an increase in average household size of 0.01 people per household between 2001 and 2011.

Figure 6 shows the difference in average household size between the census and the 2011-adjusted household estimates in 2011. The differences range from that of Moray, where the average household size from the 2011-adjusted household estimate is 0.15 people per household lower than the 2011 Census, to the City of Edinburgh where the average household size from the household estimate is 0.08 people per household more than the 2011 Census. In 2011 almost all average household sizes were within 0.1 people per household of the census estimate.

Footnote

6) [Mid-2011 Population Estimates Scotland](#) (available on the NRS website)

Figure 6: Difference in average household size between the 2011-adjusted household estimates and the Census, 2011, by local authority



Conclusion

The 2011 average household sizes, from the 2011-adjusted household estimates, were close to the average household sizes estimated in the 2011 Census, although for the majority of local authorities the average household size from the household estimates was lower than that from the 2011 Census. While the differences between the household estimates from the data sources described earlier will have affected the average household size, much of the difference in average household size is likely to be driven by differences between the mid-year population estimates and the population estimates from the census, as the mid-year population estimates have not yet been revised to take into account the 2011 Census⁷. As the population estimate from the census was above the mid-year population estimate for 2011, it is likely that estimates of average household size based on the mid-year estimates would be higher, and therefore closer to the census estimates, if the mid-year population estimates took into account the 2011 Census.

Footnote

7) Publication dates for the revised mid-year population estimates can be found in the [future publications](#) section of the NRS website

3. Household Projections

3.1 Methodology

Household projections for Scotland are produced biennially. The household projections are based on the population projections produced by National Records of Scotland (NRS). The number of people living in private households is estimated by taking the population projections for each year and subtracting the people living in communal establishments, such as student halls of residence, care homes or prisons. To estimate the number of households of each type, information on household formation, from the 1991 and 2001 Censuses, is projected forward for each household type, age group and local authority. This information is in the form of headship rates, which are the proportion of the private household population that head a household. These household projections are controlled to the household estimates for the first two projection years.

The latest household projections, available on the National Records of Scotland website, are the '[Household Projections for Scotland, 2010-based](#)'⁸. As these projections are controlled to the 2001-adjusted household estimates for 2010 and 2011 the comparison of total household numbers for Scotland and its local authorities in 2011 is the same as already described for the 2001-adjusted household estimates. Additional information is available from the household projections on the number of households of different sizes and the communal establishment population. This section compares this information to information published in the 2011 Census.

3.2 Type of household

[Scotland's Census 2011 Release 1B](#), available on the Scotland's Census website, contains information about the number of people in each household, from one-person households to households containing five or more people. These household sizes do not completely correspond to the household types used in the household projections, but three common household sizes can be distinguished: one-, two- and three-or-more-person households. These can also be compared to the estimates of households by household type published in 'Estimates of Households and Dwellings in Scotland, 2012' and which are based on Scottish Household Survey (SHS) data. Similarly to the 2001-adjusted household estimates, the SHS data is adjusted to the 2001 Census for the 2001 year, and these adjustments are applied to every subsequent year, to take into account any differences in 2001 that are introduced because the SHS is a voluntary survey.

In the 2010-based household projections, a principal projection was produced, based on the principal population projection, and a principal projection of headship rates. Several alternative projections were also produced, based on alternative assumptions about the population, future household estimates and headship rates. In this section we use the principal projection and the alternative headship rate projection. The latter projection assumes that the headship rates change at half the rate given by the principal projection. This changes the proportion of households in each household type. The changes to the assumptions on population and future household estimates only have minor effects on the proportion of households in

Footnote

8) Further details of the methodology can be found in section 5, '[Household Projections for Scotland, 2010-based](#)' publication on the NRS website.

each household type, therefore these variant projections are not considered in this section.

Scotland

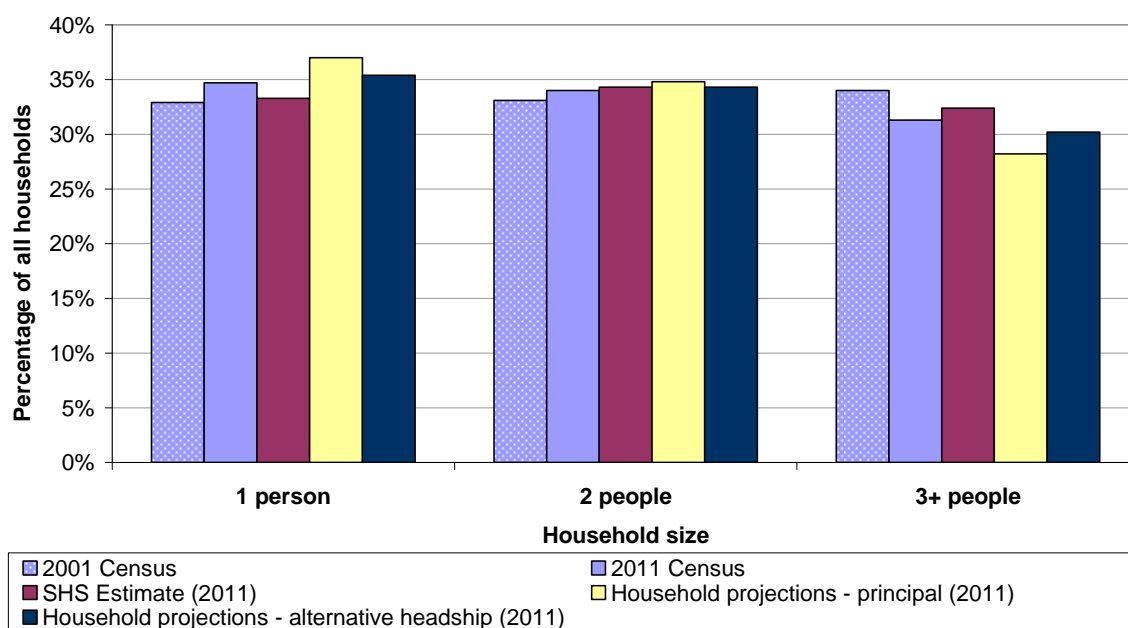
Previous comparison of the household projections and SHS-based estimates⁹ has suggested that the projections may have been over-estimating increases in smaller households (one- and two-person households) and decreases in large households. We believe that this is because since 2001, and particularly since the start of the economic downturn in 2007, fewer people have been choosing to live alone or in small households, particularly amongst young adults, than would have been predicted from the changes between 1991 and 2001. This has resulted in there being fewer smaller households and more large adult households reported in the SHS, for example because young people are choosing to stay with their parents or live in shared households of three or more people.

Figure 7 shows a comparison of the proportions of households in each household type from the three data sources, along with the equivalent data from the 2001 Census. This data confirms that the household projections have been overestimating small households and underestimating large households:

- In the 2011 Census, there is a larger proportion of households that contain only one person than in the SHS-based estimates, but the SHS-based estimate (33.3 per cent) is closer to the census proportion (34.7 per cent) than the principal household projection proportion (37.0 per cent). The proportion of households containing only one person in the alternative headship projection is closer to the census estimate than the principal projection, at 35.4 per cent.
- The proportion of two-person households is similar across all the data sources. The SHS-based estimate and the alternative headship projection proportion (both 34.3 per cent) are higher than that in the Census (34.0 per cent) and lower than the principal household projection proportion (34.8 per cent), but the proportions are all within one percentage point of each other.
- The proportion of households containing three or more people is much lower in the principal household projection (28.2 per cent) than either the SHS-based estimate (32.4 per cent) or the census estimate (31.3 per cent). The Census estimate is slightly lower than the SHS-based estimate. The proportion of households containing three or more people in the alternative headship projection (30.2 per cent) is closer to the census estimate than the principal projection.

9) PDF documents Paper 4 [HARG 2011\(4\)](#) and paper 5 [HARG 2012\(5\)](#) are available on the NRS website.

Figure 7: Comparison of different estimates of the distribution of household sizes in Scotland



Local Authorities

Table 4 compares the proportion of households in each household type for the Census estimates and household projections for each local authority in 2011. At local authority level, SHS-based estimates have previously been shown to have a lot of year on year variation so are not considered reliable¹⁰. In most local authorities, the household projections overestimate the proportions of one- and two-person households and underestimate the proportion of three-person households;

- One person households.** In the principal projection, almost all local authorities are overestimated, with just two local authorities underestimated (East Renfrewshire and Renfrewshire). In the alternative household projection, the majority of local authorities (23) are overestimated, but closer to the census estimate than the principal projection. In seven local authorities (Argyll and Bute, East Ayrshire, City of Edinburgh, Inverclyde, Scottish Borders, South Lanarkshire and West Dunbartonshire) the alternative headship projection underestimates the proportion of one person households, however, in all but the Scottish Borders, the alternative headship projection is closer to the census estimate than the principal projection. In the two local authorities that are underestimated by the principal projection (East Renfrewshire and Renfrewshire) the underestimation is greater in the alternative headship projection.

Footnotes

10) PDF document Paper 5 [HARG 2012 \(5\)](#) is available on the NRS website.

- **Two person households.** In the principal projection, six local authorities are underestimated (Aberdeen City, Clackmannanshire, Dundee City, City of Edinburgh, Falkirk and Glasgow City), while the rest are overestimated. In the alternative headship projection, 8 local authorities are underestimated (the six underestimated in the principal projection as well as Eilean Siar and Fife). In all but three local authorities (Clackmannanshire, Falkirk and Fife), the alternative headship projection is closer to the census estimate than the principal projection.
- **Three-or-more-person households.** The proportion of three-or-more-person households is underestimated in all local authorities in the principal household projection. In the alternative headship projection the majority of local authorities are underestimated (29) and only three (Dundee City, City of Edinburgh and Glasgow City) overestimated. In all local authorities, apart from City of Edinburgh, the alternative headship projection is closer to the census estimate than the principal projection.

Conclusion

The household projections have been over-projecting the increase in smaller households and the decrease in larger households. This is because the breakdown by household type is calculated using headship rate information from the 1991 and 2001 Censuses that is then projected forward to 2011 and beyond. Since the release of the 2011 Census it has become clear that there was less change in the types of household that people in Scotland live in between 2001 and 2011 than there was between 1991 and 2001. This continues the trend towards smaller changes seen when comparing the 1981 and 1991 Censuses and the 1991 and 2001 Censuses¹¹. An alternative headship projection was published alongside the 2010-based principal household projection, which assumes slower changes in headship rates than the principal projection. As a result, the estimates of the proportion of households of each household type in the alternative headship projection are closer to the census estimates than those in the principal projection, both for Scotland and the majority of its local authorities.

NRS have previously investigated incorporating survey data into the projections¹²; however, suitable data is not available at local authority level. It will be important to continue to monitor the data that is available, and investigate new methodologies to incorporate it into the projections, as these results show that the SHS performed better than the household projections in estimating the types of household that people are living in for Scotland as a whole. Incorporating more than two census points into the projection methodology, in order to improve the capture of more long-term changes in trends, will also be considered.

11) Figure 16 and table A19, '[2011 Census in Scotland – Release 1B](#)' (Scotland's Census website)

12) PDF document Paper 5 [HARG 2012 \(5\)](#) is available on the NRS website

3.3 Communal establishments

Communal establishments provide managed residential accommodation, where people live in groups that can't be considered households, for example student halls of residence, prisons and care homes. Communal establishment estimates are produced as part of the household projection process. The proportion of the total population that are resident in communal establishments, by age and gender, is used to estimate the population that are resident in private households from the mid-year population estimates and projections.

The latest communal establishment estimates from the household projections are for 2010. These estimates are produced using a range of administrative data sources to update the communal establishment data from the 2001 Census¹³. They have been updated to use data from 2011 wherever possible so that they provide a better basis for comparison to the 2011 Census¹⁴. The population used to calculate the communal establishment rates using the administrative data is the mid-year population estimate for 2011.

Scotland

In 2011, the administrative data estimated that there were 100,200 communal establishment residents in Scotland, while the 2011 Census estimated that there were 99,000 (a difference of just over one per cent). The number of communal establishment residents has increased from 86,000 in the 2001 Census, an increase of 15.1 per cent between censuses.

Another way of comparing the figures is to compare the proportion of the total population that is resident in a communal establishment (the communal establishment rate). This takes into account the fact that the total population is also increasing. In both the 2011 communal establishment estimates and the 2011 Census, the proportion of the Scottish population that is resident in a communal establishment is 1.9 per cent, up from 1.7 per cent in the 2001 Census.

Local Authorities

Table 5 shows the total population, the number of communal establishment residents and the proportion of the population that is resident in a communal establishment for each local authority. The proportion of the population that was resident in communal establishments was between 0.6 per cent (East Dunbartonshire) and 4.8 per cent (Stirling) in the 2011 Census and 0.5 per cent (East Dunbartonshire) and 4.9 per cent (Stirling) in 2011 estimate.

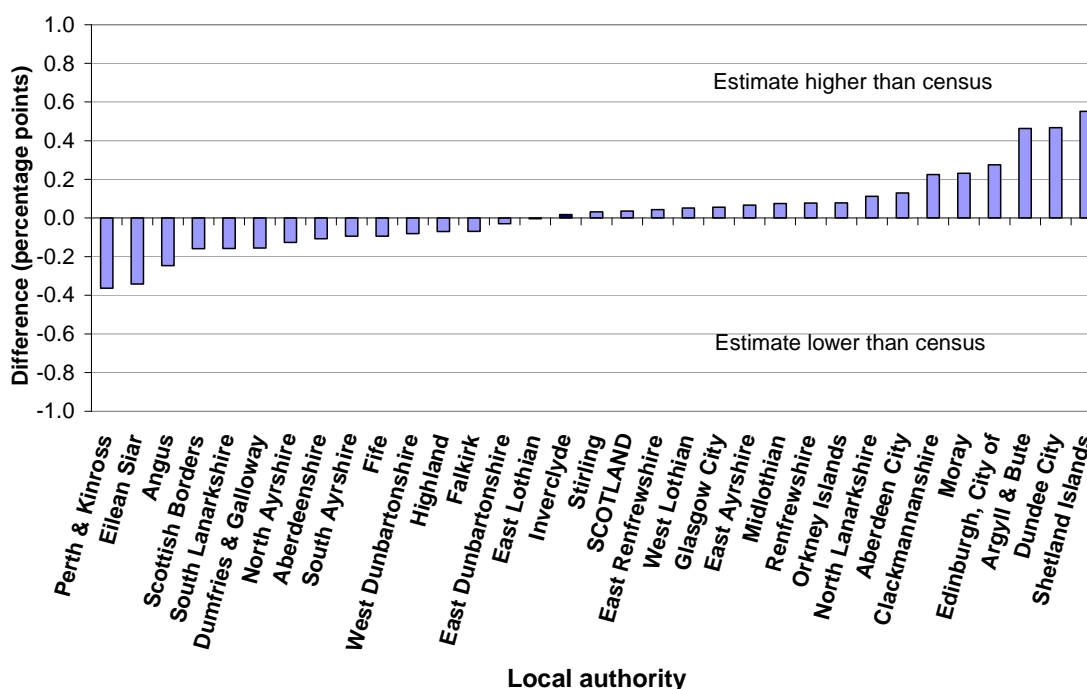
Figure 8 shows the percentage point difference in the proportion of the population in communal establishments between the 2011 estimates and the 2011 Census. The differences range between 0.4 percentage points lower than the census in Perth & Kinross to 0.6 percentage points higher in the Shetland Islands. Sixteen local authorities had proportions from the census and the estimates within 0.1 percentage point of each other.

Footnotes

13) Details of these data sources can be found in table B '[Household Projections of Scotland, 2010-based](#)' publication available on the NRS website

14) All data sources have been updated apart from the data from the 2001 Census, the Higher Education Statistics Agency data and the residential schools data regarding independent schools.

Figure 8: Comparison of the proportion of the population in communal establishments between the 2011 communal establishment estimates and the 2011 Census



Conclusion

Overall, the proportion of the total population that is resident in communal establishments in the 2011 estimates is close to the proportion from the 2011 Census, both for Scotland and its local authorities. It is communal establishment rates, rather than the absolute number of communal establishment residents, which are used in the household projections. As with average household size, the estimates of the proportion of the population living in communal establishments will have been affected by differences between the mid-year population estimates and the population estimates from the census.

In the census quality assurance process, NRS also looked at differences between the type of communal establishment the residents were living in; however this data will not be published until a later release of census data (Scotland's Census 2011, Release 2). Additional analysis will be published once further census data is available.

4. Conclusion

Overall, the household estimates, household projections and communal establishment estimates and the 2011 Census estimates are close to each other.

The 2001-adjusted household estimates for 2011, published prior to the release of the 2011 Census, were within one per cent of the 2011 Census estimates, both for Scotland as a whole and for the majority of local authorities. The percentage change in household numbers between 2001 and 2011, from the 2001-adjusted household estimates, was also within one percentage point of the change between the 2001 and 2011 Censuses, for Scotland and the majority of local authorities. Revised estimates, published in 'Estimates of Households and Dwellings in Scotland 2012', that incorporate the 2011 Census are within 0.4 per cent of the 2011 Census estimates for all local authorities, and part of the difference between the revised estimates and the census is likely to be because of the three months between the March census estimates and the June household estimates.

Estimates of average household size have been published for the first time in 'Estimates of Households and Dwellings in Scotland 2012'. These estimates are close to the census estimates, both for Scotland and its local authorities, although the household estimates tended to underestimate average household size in 2011. The estimates of average household size are likely to have been affected by being based on mid-year population estimates which have not yet been revised to take into account the 2011 Census.

The greatest difference from the census is in the projections of household type from the 2010-based household projections. The household projections over-projected the increases in the proportion of smaller households and the decreases in the proportion of larger households. The household projections are based on projecting the change between the 1991 and 2011 Censuses forward. However, the 2011 Census suggests that between 2001 and 2011, the change in the types of households that people live in were not as great as between the 1991 and 2001 Censuses. This change in trend caused the overprojection seen in the 2010-based household projections. The alternative headship projection, published alongside the principal household projection, produced better projections of household type than the principal projection because it assumed slower changes in headship rates than the principal projection. The household projections methodology will be revised to incorporate 2011 Census and a methodology that incorporates more than two census points will be considered, in order to capture more long-term changes in trends.

Table A: Datasets used in the report

Estimate Name	Data Source	Date of the estimate	Description
2001 Census estimate	2001 Census	April 2001	Estimate published in the 2001 Census
2011 Census estimate	2011 Census	March 2011	Estimate published in the 2011 Census
Unadjusted household estimate	Council Tax data	June 2001 or June 2011	Estimate from Council Tax data, adjusted to June, but with no adjustment made to account for census
2001-adjusted household estimate	Estimates of Households and Dwellings in Scotland, 2011	June 2001 or June 2011	Estimate based on the unadjusted household estimate, but also including an adjustment to the 2001 Census
2011-adjusted household estimate	Estimates of Households and Dwellings in Scotland, 2012	June 2001 or June 2011	Estimate based on the unadjusted household estimate, but also including an adjustment to the 2001 and 2011 Censuses

Table 1: Comparing household numbers, 2011, by local authority

Local authority	2011 Census Estimate ¹	2011 Household Estimate ²			Difference from the 2011 Census ⁵			Difference from the 2011-adjusted household estimate ⁵	
		Unadjusted	Adjusted to 2001 census ³	Adjusted to 2011 census ⁴	Unadjusted	Adjusted to 2001 census	Adjusted to 2011 census	Unadjusted	Adjusted to 2001 census
SCOTLAND	2,372,780	2,391,022	2,368,034	2,375,430	0.8%	-0.2%	0.1%	0.7%	-0.3%
Aberdeen City	103,370	106,624	103,843	103,413	3.1%	0.5%	0.0%	3.1%	0.4%
Aberdeenshire	104,710	105,217	104,724	104,952	0.5%	0.0%	0.2%	0.3%	-0.2%
Angus	51,620	51,294	50,766	51,666	-0.6%	-1.6%	0.1%	-0.7%	-1.7%
Argyll & Bute	40,130	41,367	41,775	40,167	3.1%	4.1%	0.1%	3.0%	4.0%
Clackmannanshire	22,730	22,939	22,949	22,733	0.9%	0.9%	0.0%	0.9%	0.9%
Dumfries & Galloway	67,980	68,663	68,685	68,049	1.0%	1.0%	0.1%	0.9%	0.9%
Dundee City	69,190	69,868	70,596	69,242	1.0%	2.0%	0.1%	0.9%	2.0%
East Ayrshire	53,920	54,930	53,841	53,948	1.9%	-0.1%	0.1%	1.8%	-0.2%
East Dunbartonshire	43,480	43,424	43,171	43,516	-0.1%	-0.7%	0.1%	-0.2%	-0.8%
East Lothian	42,910	43,434	43,215	43,009	1.2%	0.7%	0.2%	1.0%	0.5%
East Renfrewshire	37,210	36,506	36,166	37,253	-1.9%	-2.8%	0.1%	-2.0%	-2.9%
Edinburgh, City of	223,050	224,794	221,954	223,491	0.8%	-0.5%	0.2%	0.6%	-0.7%
Eilean Siar	12,580	12,525	12,208	12,624	-0.4%	-2.9%	0.4%	-0.8%	-3.3%
Falkirk	68,730	69,441	68,974	68,812	1.0%	0.4%	0.1%	0.9%	0.2%
Fife	160,950	161,776	161,820	161,088	0.5%	0.5%	0.1%	0.4%	0.5%
Glasgow City	285,690	288,729	282,522	285,774	1.1%	-1.1%	0.0%	1.0%	-1.1%
Highland	102,090	103,683	102,736	102,317	1.6%	0.6%	0.2%	1.3%	0.4%
Inverclyde	37,440	36,770	36,431	37,420	-1.8%	-2.7%	0.0%	-1.7%	-2.6%
Midlothian	34,980	35,584	35,668	35,078	1.7%	2.0%	0.3%	1.4%	1.7%
Moray	40,060	40,128	39,474	40,129	0.2%	-1.5%	0.2%	0.0%	-1.6%
North Ayrshire	62,500	62,946	62,097	62,523	0.7%	-0.6%	0.0%	0.7%	-0.7%
North Lanarkshire	146,000	146,418	145,589	146,179	0.3%	-0.3%	0.1%	0.2%	-0.4%
Orkney Islands	9,730	9,414	9,368	9,740	-3.2%	-3.7%	0.2%	-3.4%	-3.8%
Perth & Kinross	64,780	65,057	65,001	64,832	0.4%	0.3%	0.1%	0.3%	0.3%
Renfrewshire	80,910	79,772	79,083	80,914	-1.4%	-2.3%	0.0%	-1.4%	-2.3%
Scottish Borders	52,500	52,615	52,233	52,561	0.2%	-0.5%	0.1%	0.1%	-0.6%
Shetland Islands	9,950	10,046	9,928	9,975	1.0%	-0.2%	0.2%	0.7%	-0.5%
South Ayrshire	51,290	52,275	51,745	51,340	1.9%	0.9%	0.1%	1.8%	0.8%
South Lanarkshire	139,190	140,360	138,196	139,429	0.8%	-0.7%	0.2%	0.7%	-0.9%
Stirling	37,570	37,901	38,280	37,624	0.9%	1.9%	0.2%	0.7%	1.7%
West Dunbartonshire	42,170	42,974	41,558	42,165	1.9%	-1.5%	0.0%	1.9%	-1.4%
West Lothian	73,400	73,549	73,439	73,469	0.2%	0.1%	0.1%	0.1%	0.0%

Footnotes

- 1) Household data from the 2011 Census are rounded to the nearest ten. Figures are taken from release 1B.
- 2) Data from the household estimates are rounded to the nearest whole number. Local authority figures may not add up to the Scotland total due to rounding.
- 3) These figures were published in 'Estimates of Households and Dwellings in Scotland, 2011'
- 4) These figures are published in 'Estimates of Households and Dwellings in Scotland, 2012'
- 5) Percentages are calculated from unrounded data and are rounded to one decimal place

Table 2: Comparing change in household numbers, 2001 to 2011, by local authority

Local authority	Census Estimate ¹				Unadjusted household estimate				2001-adjusted household estimate ^{2,3}				2011-adjusted household estimate ^{2,4}			
	2001	2011	Change Number	% ⁶	2001	2011	Change Number	% ⁶	2001	2011	Change Number	% ⁶	2001 ⁵	2011	Change Number	% ⁶
SCOTLAND	2,192,250	2,372,780	180,530	8.2%	2,218,021	2,391,022	173,001	7.8%	2,195,033	2,368,034	173,001	7.9%	2,194,553	2,375,430	180,876	8.2%
Aberdeen City	97,010	103,370	6,360	6.6%	99,724	106,624	6,899	6.9%	96,944	103,843	6,899	7.1%	97,066	103,413	6,346	6.5%
Aberdeenshire	90,740	104,710	13,980	15.4%	91,395	105,217	13,822	15.1%	90,902	104,724	13,822	15.2%	90,892	104,952	14,061	15.5%
Angus	46,950	51,620	4,670	9.9%	47,476	51,294	3,818	8.0%	46,948	50,766	3,818	8.1%	46,986	51,666	4,680	10.0%
Argyll & Bute	38,970	40,130	1,160	3.0%	38,628	41,367	2,738	7.1%	39,037	41,775	2,738	7.0%	38,937	40,167	1,230	3.2%
Clackmannanshire	20,560	22,730	2,180	10.6%	20,563	22,939	2,376	11.6%	20,572	22,949	2,376	11.6%	20,582	22,733	2,151	10.4%
Dumfries & Galloway	63,810	67,980	4,170	6.5%	63,877	68,663	4,786	7.5%	63,899	68,685	4,786	7.5%	63,831	68,049	4,218	6.6%
Dundee City	66,910	69,190	2,290	3.4%	66,123	69,868	3,745	5.7%	66,851	70,596	3,745	5.6%	66,901	69,242	2,341	3.5%
East Ayrshire	50,350	53,920	3,570	7.1%	51,493	54,930	3,437	6.7%	50,404	53,841	3,437	6.8%	50,405	53,948	3,542	7.0%
East Dunbartonshire	42,210	43,480	1,270	3.0%	42,507	43,424	917	2.2%	42,254	43,171	917	2.2%	42,226	43,516	1,290	3.1%
East Lothian	38,160	42,910	4,750	12.4%	38,451	43,434	4,984	13.0%	38,232	43,215	4,984	13.0%	38,210	43,009	4,799	12.6%
East Renfrewshire	34,950	37,210	2,260	6.5%	35,364	36,506	1,142	3.2%	35,024	36,166	1,142	3.3%	34,996	37,253	2,257	6.4%
Edinburgh, City of	204,680	223,050	18,370	9.0%	207,796	224,794	16,998	8.2%	204,956	221,954	16,998	8.3%	204,981	223,491	18,510	9.0%
Eilean Siar	11,280	12,580	1,300	11.5%	11,601	12,525	924	8.0%	11,283	12,208	924	8.2%	11,282	12,624	1,341	11.9%
Falkirk	62,600	68,730	6,130	9.8%	63,156	69,441	6,285	10.0%	62,689	68,974	6,285	10.0%	62,697	68,812	6,115	9.8%
Fife	150,270	160,950	10,680	7.1%	150,486	161,776	11,290	7.5%	150,530	161,820	11,290	7.5%	150,472	161,088	10,617	7.1%
Glasgow City	271,600	285,690	14,100	5.2%	278,160	288,729	10,569	3.8%	271,953	282,522	10,569	3.9%	271,687	285,774	14,088	5.2%
Highland	89,530	102,090	12,560	14.0%	90,583	103,683	13,099	14.5%	89,637	102,736	13,099	14.6%	89,655	102,317	12,661	14.1%
Inverclyde	36,690	37,440	750	2.0%	37,037	36,770	-267	-0.7%	36,698	36,431	-267	-0.7%	36,729	37,420	692	1.9%
Midlothian	32,920	34,980	2,060	6.2%	32,854	35,584	2,730	8.3%	32,939	35,668	2,730	8.3%	32,962	35,078	2,116	6.4%
Moray	35,800	40,060	4,260	11.9%	36,524	40,128	3,604	9.9%	35,870	39,474	3,604	10.0%	35,847	40,129	4,282	11.9%
North Ayrshire	58,730	62,500	3,770	6.4%	59,630	62,946	3,316	5.6%	58,781	62,097	3,316	5.6%	58,780	62,523	3,743	6.4%
North Lanarkshire	132,620	146,000	13,380	10.1%	133,594	146,418	12,824	9.6%	132,765	145,589	12,824	9.7%	132,871	146,179	13,308	10.0%
Orkney Islands	8,340	9,730	1,380	16.6%	8,390	9,414	1,024	12.2%	8,344	9,368	1,024	12.3%	8,344	9,740	1,396	16.7%
Perth & Kinross	58,320	64,780	6,450	11.1%	58,427	65,057	6,630	11.3%	58,370	65,001	6,630	11.4%	58,374	64,832	6,458	11.1%
Renfrewshire	75,360	80,910	5,550	7.4%	76,463	79,772	3,310	4.3%	75,773	79,083	3,310	4.4%	75,310	80,914	5,604	7.4%
Scottish Borders	47,370	52,500	5,130	10.8%	47,845	52,615	4,770	10.0%	47,463	52,233	4,770	10.0%	47,419	52,561	5,142	10.8%
Shetland Islands	9,110	9,950	840	9.2%	9,229	10,046	817	8.9%	9,111	9,928	817	9.0%	9,123	9,975	852	9.3%
South Ayrshire	48,750	51,290	2,540	5.2%	49,334	52,275	2,941	6.0%	48,804	51,745	2,941	6.0%	48,791	51,340	2,549	5.2%
South Lanarkshire	126,500	139,190	12,690	10.0%	128,790	140,360	11,570	9.0%	126,626	138,196	11,570	9.1%	126,694	139,429	12,735	10.1%
Stirling	35,510	37,570	2,060	5.8%	35,165	37,901	2,736	7.8%	35,544	38,280	2,736	7.7%	35,577	37,624	2,047	5.8%
West Dunbartonshire	40,780	42,170	1,390	3.4%	42,184	42,974	790	1.9%	40,768	41,558	790	1.9%	40,838	42,165	1,327	3.2%
West Lothian	64,900	73,400	8,500	13.1%	65,172	73,549	8,377	12.9%	65,062	73,439	8,377	12.9%	65,089	73,469	8,380	12.9%

Footnotes

- 1) Household data from the census are rounded to the nearest ten. 2011 figures are taken from release 1B.
- 2) Data from the household estimates are rounded to the nearest whole number. Local authority figures may not add up to the Scotland total due to rounding.
- 3) These figures were published in 'Estimates of Households and Dwellings in Scotland, 2011'.
- 4) These figures are published in 'Estimates of Households and Dwellings in Scotland, 2012'.
- 5) There is a difference between this figure and the 2001-adjusted household estimate due to a revised methodology of adjustment.
- 6) Percentages are calculated from unrounded data and are rounded to one decimal place.

Table 3: Comparing average household size, 2001 and 2011, by local authority

Local authority	2011-adjusted household estimates ¹			Census estimate ²			Difference	
	2001	2011	Change	2001	2011	Change	2011	Change
SCOTLAND	2.27	2.17	-0.10	2.27	2.19	-0.08	-0.02	-0.02
Aberdeen City	2.13	2.05	-0.08	2.13	2.07	-0.06	-0.02	-0.02
Aberdeenshire	2.46	2.34	-0.13	2.47	2.39	-0.08	-0.06	-0.05
Angus	2.26	2.11	-0.15	2.27	2.22	-0.05	-0.10	-0.10
Argyll & Bute	2.24	2.17	-0.08	2.24	2.14	-0.11	0.03	0.03
Clackmannanshire	2.29	2.19	-0.10	2.29	2.22	-0.07	-0.03	-0.03
Dumfries & Galloway	2.28	2.15	-0.14	2.28	2.20	-0.09	-0.05	-0.05
Dundee City	2.13	2.03	-0.10	2.13	2.05	-0.08	-0.03	-0.02
East Ayrshire	2.35	2.20	-0.15	2.36	2.25	-0.11	-0.05	-0.05
East Dunbartonshire	2.53	2.39	-0.14	2.53	2.40	-0.13	-0.01	-0.01
East Lothian	2.33	2.24	-0.09	2.33	2.28	-0.05	-0.04	-0.04
East Renfrewshire	2.54	2.40	-0.14	2.54	2.42	-0.12	-0.02	-0.02
Edinburgh, City of	2.14	2.15	0.01	2.14	2.07	-0.07	0.08	0.08
Eilean Siar	2.31	2.04	-0.28	2.32	2.17	-0.15	-0.13	-0.13
Falkirk	2.29	2.22	-0.07	2.29	2.24	-0.05	-0.03	-0.02
Fife	2.28	2.23	-0.05	2.28	2.22	-0.06	0.01	0.01
Glasgow City	2.09	2.04	-0.04	2.08	2.02	-0.06	0.02	0.02
Highland	2.29	2.14	-0.15	2.29	2.24	-0.06	-0.10	-0.10
Inverclyde	2.26	2.09	-0.17	2.26	2.14	-0.12	-0.06	-0.06
Midlothian	2.43	2.32	-0.11	2.43	2.35	-0.08	-0.03	-0.03
Moray	2.37	2.13	-0.24	2.37	2.28	-0.09	-0.15	-0.15
North Ayrshire	2.29	2.14	-0.15	2.29	2.19	-0.10	-0.05	-0.05
North Lanarkshire	2.40	2.22	-0.18	2.40	2.30	-0.10	-0.08	-0.07
Orkney Islands	2.28	2.05	-0.23	2.28	2.18	-0.11	-0.12	-0.12
Perth & Kinross	2.24	2.24	-0.01	2.24	2.19	-0.05	0.04	0.04
Renfrewshire	2.27	2.08	-0.18	2.27	2.13	-0.13	-0.05	-0.05
Scottish Borders	2.23	2.13	-0.10	2.22	2.14	-0.08	-0.02	-0.02
Shetland Islands	2.37	2.24	-0.14	2.38	2.31	-0.07	-0.07	-0.07
South Ayrshire	2.26	2.14	-0.12	2.27	2.17	-0.10	-0.03	-0.03
South Lanarkshire	2.36	2.22	-0.14	2.36	2.23	-0.13	-0.01	-0.01
Stirling	2.35	2.30	-0.06	2.36	2.29	-0.07	0.01	0.01
West Dunbartonshire	2.27	2.13	-0.14	2.27	2.14	-0.14	-0.01	0.00
West Lothian	2.43	2.33	-0.10	2.43	2.36	-0.07	-0.03	-0.03

Footnotes

1) These figures are published in 'Estimates of Households and Dwellings in Scotland, 2012'.

2) Figures are taken from release 1B.

Figures are calculated from unrounded data and rounded to two decimal places.

Table 4: Comparing the distribution of household types, 2001 and 2011, by local authority

Local authority	2001			2011								
	Census estimate			Census estimate ¹			Household projections - principal			Household projections - alternative headship		
	1 person	2 people	3+ people	1 person	2 people	3+ people	1 person	2 people	3+ people	1 person	2 people	3+ people
SCOTLAND	32.9%	33.1%	34.0%	34.7%	34.0%	31.3%	37.0%	34.8%	28.2%	35.4%	34.3%	30.2%
Aberdeen City	37.6%	32.9%	29.5%	37.9%	34.8%	27.3%	42.1%	33.1%	24.8%	40.0%	33.1%	27.0%
Aberdeenshire	25.3%	34.8%	39.8%	26.5%	36.4%	37.1%	28.8%	38.8%	32.4%	27.9%	37.7%	34.3%
Angus	30.9%	35.8%	33.2%	32.1%	36.6%	31.3%	34.6%	38.7%	26.7%	33.5%	38.0%	28.0%
Argyll & Bute	32.8%	35.4%	31.7%	35.6%	36.4%	28.0%	36.4%	39.2%	24.4%	35.6%	38.1%	27.4%
Clackmannanshire	31.3%	33.5%	35.1%	32.2%	35.8%	32.0%	36.1%	35.6%	28.3%	34.2%	35.2%	30.9%
Dumfries & Galloway	30.0%	36.6%	33.4%	32.5%	37.5%	30.0%	33.9%	39.7%	26.4%	32.9%	38.9%	28.4%
Dundee City	38.3%	31.9%	29.8%	40.4%	32.4%	27.2%	42.5%	31.5%	25.9%	41.3%	31.6%	27.7%
East Ayrshire	29.1%	33.7%	37.2%	31.8%	34.7%	33.5%	32.6%	36.3%	31.1%	31.5%	35.4%	33.0%
East Dunbartonshire	25.1%	32.5%	42.4%	28.4%	32.8%	38.8%	29.8%	35.6%	34.6%	28.7%	34.9%	36.1%
East Lothian	29.5%	34.9%	35.6%	30.6%	35.4%	34.0%	32.9%	36.5%	30.6%	31.7%	36.3%	32.2%
East Renfrewshire	25.7%	31.9%	42.4%	30.2%	30.8%	39.0%	29.5%	34.3%	36.2%	28.7%	33.8%	36.4%
Edinburgh, City of	37.5%	33.0%	29.5%	39.1%	33.5%	27.4%	40.2%	32.7%	27.1%	38.8%	32.8%	28.1%
Eilean Siar	33.5%	30.6%	35.9%	37.2%	32.2%	30.6%	38.8%	33.3%	27.9%	38.3%	31.7%	29.0%
Falkirk	31.4%	33.4%	35.3%	31.7%	35.1%	33.2%	35.8%	34.7%	29.5%	34.0%	34.3%	31.8%
Fife	31.1%	34.7%	34.1%	31.8%	36.6%	31.6%	35.2%	36.8%	28.0%	33.7%	36.3%	30.2%
Glasgow City	41.9%	29.5%	28.6%	43.1%	30.3%	26.5%	46.3%	29.1%	24.6%	43.8%	29.3%	26.6%
Highland	31.3%	34.8%	34.0%	31.7%	36.7%	31.6%	35.6%	37.5%	26.9%	34.1%	36.7%	29.3%
Inverclyde	34.6%	30.7%	34.6%	38.5%	30.2%	31.4%	40.0%	32.0%	28.0%	38.0%	31.8%	29.5%
Midlothian	26.0%	34.7%	39.3%	27.4%	36.3%	36.3%	30.4%	37.4%	32.1%	29.2%	36.8%	34.6%
Moray	28.5%	35.1%	36.4%	30.1%	37.2%	32.7%	32.4%	38.7%	28.9%	31.5%	37.7%	30.4%
North Ayrshire	31.4%	33.7%	34.9%	34.6%	34.4%	31.0%	36.4%	36.3%	27.3%	34.8%	35.6%	29.4%
North Lanarkshire	29.5%	31.2%	39.2%	32.1%	32.0%	36.0%	34.9%	33.3%	31.8%	32.8%	32.5%	34.6%
Orkney Islands	32.2%	34.7%	33.2%	34.4%	36.2%	29.3%	35.8%	37.9%	26.3%	34.7%	36.8%	27.4%
Perth & Kinross	31.6%	36.2%	32.2%	32.2%	37.7%	30.0%	35.5%	38.3%	26.2%	34.1%	37.8%	28.1%
Renfrewshire	33.3%	32.0%	34.8%	38.6%	30.5%	30.9%	38.3%	33.2%	28.5%	36.3%	33.0%	30.0%
Scottish Borders	32.3%	36.7%	31.1%	34.4%	37.2%	28.4%	34.7%	40.3%	25.0%	33.9%	39.2%	26.7%
Shetland Islands	31.0%	32.8%	36.2%	32.0%	34.5%	33.5%	35.6%	36.3%	28.2%	33.9%	35.3%	30.7%
South Ayrshire	31.4%	34.9%	33.7%	33.9%	36.1%	30.0%	35.3%	37.6%	27.1%	34.1%	36.9%	29.3%
South Lanarkshire	30.0%	32.2%	37.8%	33.5%	33.1%	33.4%	34.9%	34.3%	30.8%	33.1%	33.6%	33.0%
Stirling	29.0%	34.9%	36.0%	30.6%	35.4%	34.0%	32.1%	37.5%	30.4%	31.3%	36.7%	32.5%
West Dunbartonshire	34.2%	30.8%	34.9%	38.3%	30.7%	31.0%	39.6%	32.5%	27.9%	37.4%	32.0%	30.1%
West Lothian	27.1%	32.8%	40.0%	28.5%	34.0%	37.5%	32.1%	35.0%	32.8%	30.4%	34.5%	35.1%

Footnotes

1) 2011 census figures are taken from release 1B.

Figures are percentages of all households. They are calculated from unrounded data and are rounded to one decimal place.

Table 5: Comparing residents in communal establishments, 2001 and 2011, by local authority

Local authority	2001 Census			2011 CE estimates ¹			2011 Census ²			Difference between 2001 and 2011 Census estimates		Difference between 2011 CE estimates and 2011 Census estimates	
	Total population	Residents in communal establishments		Mid-year population (2011)	Residents in communal establishments		Total population	Residents in communal establishments		Number	% of population (% points)	Number	% of population (% points)
		Number	% of population		Number	% of population		Number	% of population				
SCOTLAND	5,062,000	86,000	1.7%	5,254,800	100,200	1.9%	5,295,400	99,000	1.9%	13,000	0.2	-1,200	0.0
Aberdeen City	212,100	5,600	2.6%	220,400	8,700	4.0%	222,800	8,600	3.8%	2,900	1.2	-200	-0.1
Aberdeenshire	226,900	2,900	1.3%	247,600	2,200	0.9%	253,000	2,500	1.0%	-400	-0.3	300	0.1
Angus	108,400	2,000	1.8%	110,600	1,200	1.1%	116,000	1,500	1.3%	-400	-0.5	300	0.2
Argyll & Bute	91,300	3,900	4.3%	89,600	2,900	3.3%	88,200	2,500	2.8%	-1,400	-1.5	-500	-0.5
Clackmannanshire	48,100	1,000	2.0%	50,800	1,100	2.2%	51,400	1,000	1.9%	100	0.0	-100	-0.2
Dumfries & Galloway	147,800	2,000	1.3%	148,100	1,700	1.2%	151,300	2,000	1.3%	0	0.0	300	0.2
Dundee City	145,700	3,200	2.2%	145,600	5,800	4.0%	147,300	5,200	3.5%	2,000	1.3	-600	-0.5
East Ayrshire	120,200	1,600	1.4%	120,200	1,500	1.3%	122,700	1,500	1.2%	-200	-0.2	-100	-0.1
East Dunbartonshire	108,200	1,300	1.2%	104,600	600	0.5%	105,000	600	0.6%	-700	-0.6	0	0.0
East Lothian	90,100	1,100	1.3%	98,200	1,900	1.9%	99,700	1,900	1.9%	800	0.6	0	0.0
East Renfrewshire	89,300	700	0.7%	89,900	600	0.7%	90,600	600	0.6%	-100	-0.1	0	0.0
Edinburgh, City of	448,600	10,800	2.4%	495,400	16,200	3.3%	476,600	14,300	3.0%	3,500	0.6	-1,900	-0.3
Eilean Siar	26,500	300	1.3%	26,100	300	1.0%	27,700	400	1.3%	0	0.1	100	0.3
Falkirk	145,200	1,700	1.2%	154,400	1,700	1.1%	156,000	1,800	1.2%	100	0.0	100	0.1
Fife	349,400	6,400	1.8%	367,400	7,500	2.0%	365,200	7,800	2.1%	1,300	0.3	300	0.1
Glasgow City	577,900	11,900	2.1%	598,800	15,500	2.6%	593,200	15,000	2.5%	3,100	0.5	-500	-0.1
Highland	208,900	3,600	1.7%	222,400	3,500	1.6%	232,100	3,800	1.6%	200	-0.1	300	0.1
Inverclyde	84,200	1,100	1.4%	79,200	1,200	1.5%	81,500	1,200	1.5%	100	0.1	0	0.0
Midlothian	80,900	900	1.1%	82,400	1,000	1.2%	83,200	900	1.1%	0	0.0	-100	-0.1
Moray	86,900	2,100	2.4%	87,300	2,200	2.5%	93,300	2,100	2.2%	0	-0.1	-100	-0.2
North Ayrshire	135,800	1,400	1.0%	135,100	1,300	1.0%	138,200	1,500	1.1%	100	0.1	200	0.1
North Lanarkshire	321,100	2,900	0.9%	326,700	2,700	0.8%	337,800	2,400	0.7%	-500	-0.2	-300	-0.1
Orkney Islands	19,200	200	1.1%	20,200	200	1.0%	21,400	200	0.9%	0	-0.2	0	-0.1
Perth & Kinross	134,900	4,100	3.0%	149,500	4,100	2.7%	146,700	4,500	3.1%	400	0.0	500	0.4
Renfrewshire	172,900	2,200	1.2%	170,700	2,300	1.3%	174,900	2,200	1.3%	0	0.0	-100	-0.1
Scottish Borders	106,800	1,400	1.3%	113,200	1,100	1.0%	113,900	1,300	1.1%	-100	-0.2	200	0.2
Shetland Islands	22,000	300	1.4%	22,500	300	1.4%	23,200	200	0.8%	-100	-0.6	-100	-0.6
South Ayrshire	112,100	1,700	1.5%	111,600	1,400	1.3%	112,800	1,500	1.4%	-100	-0.1	100	0.1
South Lanarkshire	302,200	3,400	1.1%	312,700	2,800	0.9%	313,800	3,300	1.1%	-100	-0.1	500	0.2
Stirling	86,200	2,500	2.9%	90,800	4,400	4.9%	90,200	4,400	4.8%	1,900	2.0	-100	0.0
West Dunbartonshire	93,400	800	0.8%	90,400	600	0.7%	90,700	700	0.8%	-100	0.0	100	0.1
West Lothian	158,700	1,100	0.7%	173,000	1,900	1.1%	175,100	1,800	1.0%	700	0.3	-100	-0.1

Footnotes

1) Communal establishment estimates for 2010 were used to derive the communal establishment rates that are part of the 2010-based household projections calculations. The data in this table is produced using the same methodology, but updated to include 2011 data where available.

2) 2011 Census figures are taken from release 1B.

Population and communal establishment data is rounded to the nearest hundred.

Percentages are calculated from unrounded data and are rounded to one decimal place.

Source: National Records of Scotland

5. Notes on statistical publications

An Official Statistics publication for Scotland

Official and National Statistics are produced to high professional standards set out in the [Code of Practice for Official Statistics](#), and are produced free from any political interference.

This can be broadly interpreted to mean that the statistics:

- meet identified needs of users;
- are well explained and readily accessible;
- are produced according to reliable methods, and
- are managed in a fair, independent and unbiased way in the public interest.

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You can get other detailed statistics that we have produced from the [Statistics](#) section of our website. Statistics from the 2001 Census are on [Scotland’s Census Results On-Line \(SCROL\)](#) website and the 2011 Census results are held on the [Scotland’s Census](#) website.

We provide information about [future publications](#) on our website. If you would like us to tell you about future statistical publications, you can register your interest on the Scottish Government [ScotStat](#) website.

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6. Related organisations

Organisation	Contact
<p>The Scottish Government (SG) forms the bulk of the devolved Scottish Administration. The aim of the statistical service in the SG is to provide relevant and reliable statistical information, analysis and advice that meets the needs of government, business and the people of Scotland.</p>	<p>Office of the Chief Statistician Scottish Government 3WR, St Andrews House Edinburgh EH1 3DG Phone: 0131 244 0442</p> <p>Email: statistics.enquiries@scotland.gsi.gov.uk</p> <p>Website: www.scotland.gov.uk/Topics/Statistics</p>
<p>The Office for National Statistics (ONS) is responsible for producing a wide range of economic and social statistics. It also carries out the Census of Population for England and Wales</p>	<p>Customer Contact Centre Office for National Statistics Room 1.101 Government Buildings Cardiff Road Newport NP10 8XG Phone: 0845 601 3034 Minicom: 01633 815044</p> <p>Email: info@statistics.gsi.gov.uk</p> <p>Website: www.ons.gov.uk/</p>
<p>The Northern Ireland Statistics and Research Agency (NISRA) is Northern Ireland's official statistics organisation. The agency is also responsible for registering births, marriages, adoptions and deaths in Northern Ireland, and the Census of Population.</p>	<p>Northern Ireland Statistics and Research Agency McAuley House 2-14 Castle Street Belfast BT1 1SA Phone: 028 9034 8100</p> <p>Email: info.nisra@dfpni.gov.uk</p> <p>Website: www.nisra.gov.uk</p>

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