

Relative poverty across Scottish Local Authorities

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An Official Statistics Publication for Scotland



Relative poverty across Scottish Local Authorities

Key points

This publication presents, for the first time, official figures about the distribution of income and relative poverty across Scotland at local authority area level. It is the result of analytical work which has estimated relative poverty at an LA level by combining data from the Scottish Household Survey and Family Resources Survey.

The new figures show that:

- Across Scotland the percentage of households in relative poverty at LA level ranges from around 14 percent to around 25 percent.
- East Renfrewshire; Aberdeen City; East Dunbartonshire; Perth and Kinross; and Aberdeenshire were among the LAs with the lowest estimated relative poverty rates.
- Dundee City, Inverclyde, Glasgow City, Eilean Siar and North Ayrshire were among the LAs with the highest rates in the country.

Introduction

This publication presents, for the first time, official figures about the distribution of income and relative poverty across Scotland at local authority area level.

These figures have been produced from the Scottish Household Survey (SHS) and are the result of work which has been carried out within the Scottish Government on this survey. The SHS collects information about a range of topics from households across Scotland, including household income. Until now however, the SHS has been of limited use for the study of income and poverty across Scotland as it does not record complete household information for all household types. This work attempted to overcome this issue by combining SHS data with data from the Family Resources Survey, a UK wide survey of household incomes run by the Department for Work and Pensions. Readers interested in the methodology used to combine these data sources should see the methodology section at the end of this report for more details.

Relative poverty estimates for Scotland are presented and compared to estimates from the Family Resources Survey. The main reason for this is to validate the new SHS income figures by showing that the two surveys produce comparable estimates of relative poverty at Scotland level. The Family Resources Survey is the primary official source of income information at Scotland and UK level and it is the FRS figures which will continue to be used to monitor UK and Scottish Government income inequality and poverty targets within Scotland.

Box 1 - Relative poverty

There are several official indicators which are used to monitor poverty in the UK and Scotland however **Relative poverty before housing costs** is the most commonly quoted. This is reported by the Scottish Government as National Indicator 14: “To decrease the proportion of individuals living in poverty” it is also one of the indicators which the UK Child Poverty Act requires the UK government to report on although most of the figures presented in this report are for poverty among all individuals, not just children.

In the SHS figures presented here households are defined as being in relative poverty if their equivalised net income before housing costs is less than sixty percent of the median Scottish household equivalised income. In 2008 this corresponded to a household of two adults without children living on of £248 per week or less. There are some differences between the way that the SHS and FRS define relative poverty however the figures in the following section show that the estimates of the proportion of households in relative poverty in Scotland from the two sources are comparable. See the publication “Poverty and income inequality in Scotland: 2008/09” for more detail about the relative poverty definitions used in the FRS:

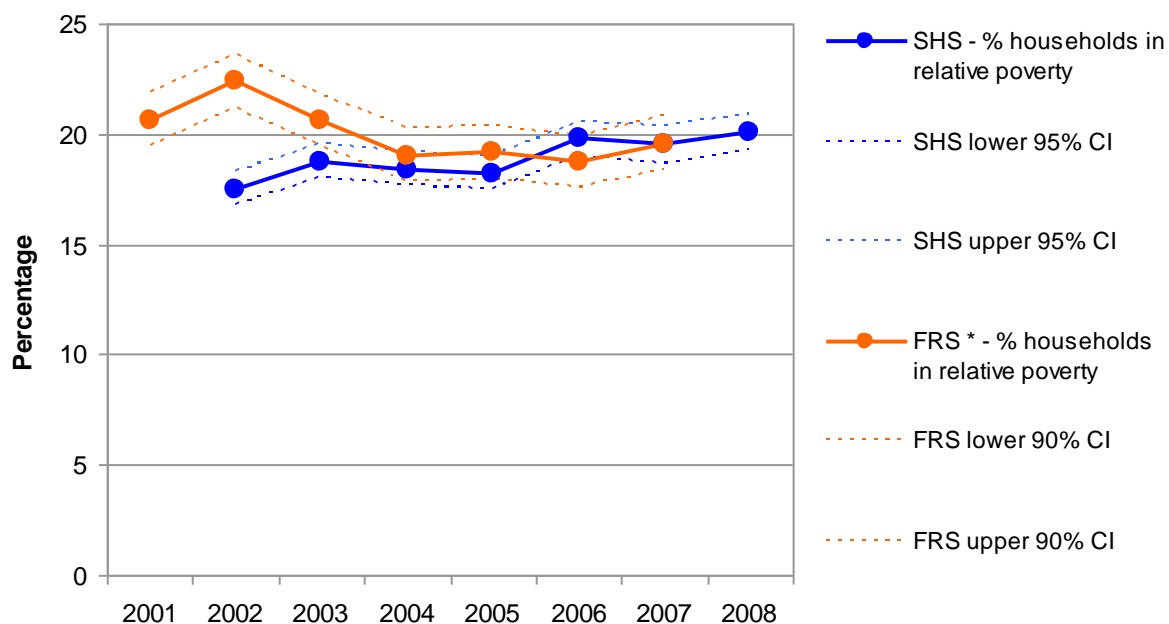
<http://www.scotland.gov.uk/Publications/2010/05/povertystats0809>

National figures

From the Scottish Household Survey estimates were produced for the proportion of households in relative poverty between 2002 and 2008. The following chart presents these estimates and compares them to estimates from the Family Resources Survey.

- Between 2004 and 2008 between 18 and 20 percent of Scottish households were in relative poverty.
- For most years the two surveys produce estimates which are close to one another and for every year after 2002 the 95% confidence intervals for the two estimates were overlapping. This indicates that the estimates from the two surveys are not statistically different from one another.
- In 2002 there was a 5 percentage point difference between the estimates from the two surveys. Scottish Government analysts have not looked into this difference in great detail however, one potential reason for this difference is that the process used to produce these figures does not work as well for early years as the models involved were “fitted” on 2007 data.

Figure 1 - Relative poverty in Scotland: Estimates from the SHS and FRS 2001 to 2008



* Family Resources Survey figures are for financial not calendar years i.e. 2006 = 2006/07

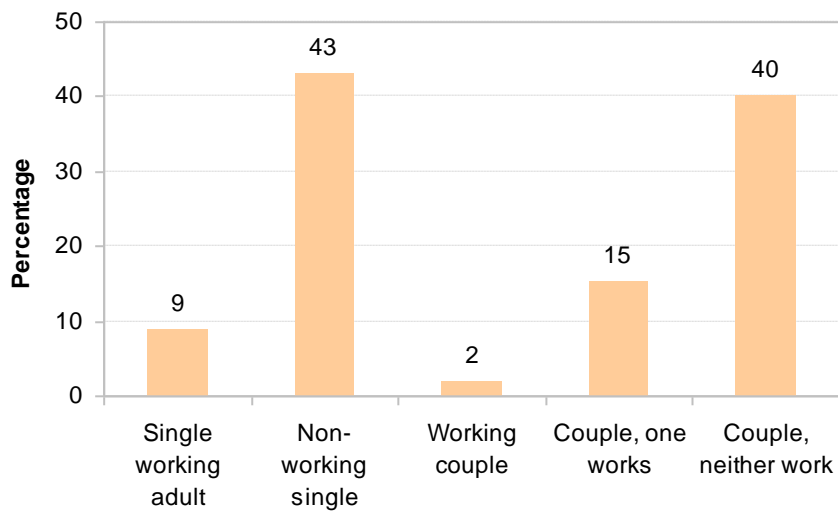
Table 1 compares the most recent figures which are available from the two surveys. Those from the 2008 SHS and the 2007/08 FRS. They show good consistency between the two sources.

Table 1- Percentage of households, people and children in relative poverty: FRS 2007/08 and SHS 2008

	Households in relative poverty		People in relative poverty		Children in relative poverty	
	%	000s	%	000s	%	000s
SHS 2008	20	450	17	860	20	180
FRS 2007/08	20	450	17	860	20	200

The following chart examines the proportion of different family types that are in relative poverty according to the SHS. In line with other sources such as the Family Resources Survey this shows that the prevalence of relative poverty is much higher among families where no-one is working. Forty percent of families headed by a couple where no-one is working are in relative poverty compared with only two percent of those families headed by a couple where both adults work.

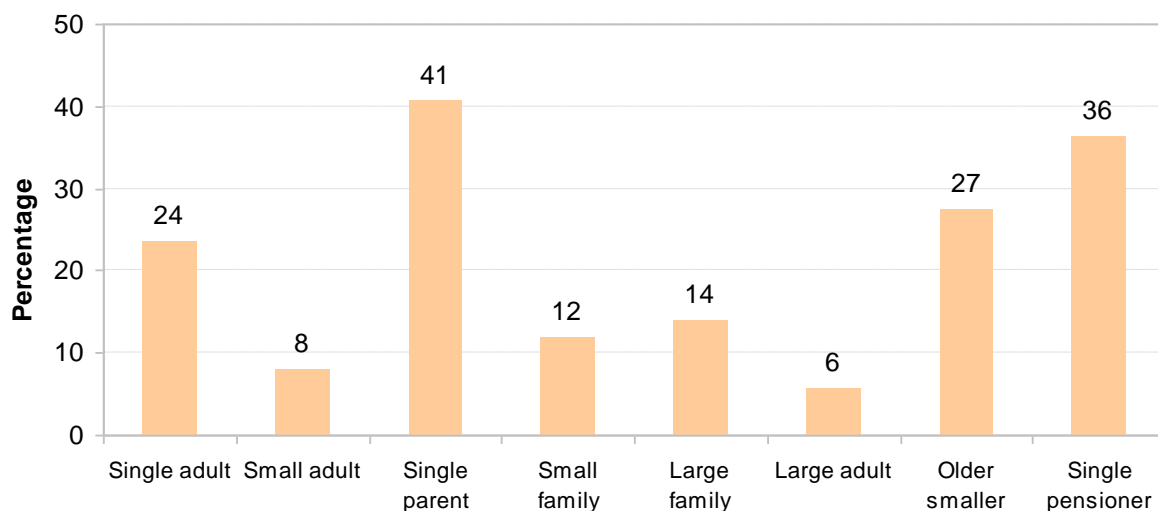
Figure 2 - Relative poverty by number of workers in household head couple: Scotland 2008



Source: Scottish Household Survey 2008

Figure 3 shows the percentage of households of different family types which are in relative poverty. Pensioner households and those headed by a single adult, both with and without dependent children, are at the greatest risk of relative poverty.

Figure 3 - Percentage of households of different family types in relative poverty: Scotland 2008



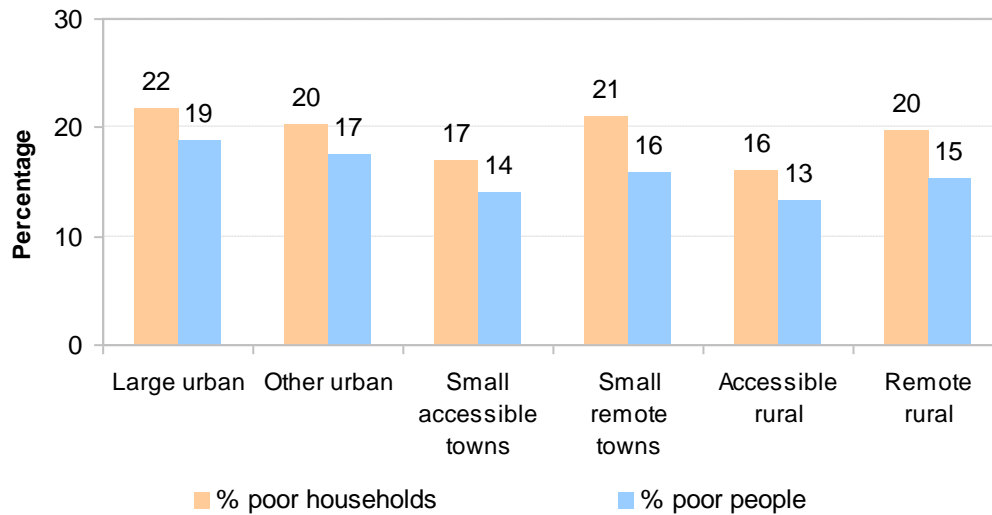
Source: Scottish Household Survey 2008

Figure 4 displays one example of the type of analysis which, until now, has not previously been possible for Scotland. It presents the proportion of households in relative poverty in urban and rural areas. A robust breakdown of this level of detail has not been possible using the Family Resources Survey because of small sample sizes in rural areas. Taking advantage of the larger sample size in the SHS however it is possible.

The chart shows that the percentage of households in relative poverty in urban and remote rural areas is around 20 to 22 percent. This is higher than in accessible rural

areas. This pattern is not the same however, when looking at the percentage of people, rather than households, in poverty. The percentage of people in relative poverty is higher in urban areas than rural areas, regardless of accessibility. This might suggest that many of those households in relative poverty in remote rural households are made up of smaller numbers of people than those in urban areas.

Figure 4 - Percentage of households and people in different geographical areas which are in relative poverty: Scotland 2008



Local authority income and poverty tables

This section presents the new SHS estimates for the proportion of households in relative poverty and median income estimates for LAs across Scotland.

The following table presents estimates of median and mean household income for Scottish local authorities. Figures are presented for equivalised and unequivalised income. Equivalisation is an adjustment made to household incomes which takes account of family size so that meaningful comparisons can be made between households of different sizes. For more detail see box 2 below.

Table 2 - Mean, median and quartiles for annual net household income by local authority: 2007-08

	Net household income before housing costs				Net <i>equivalised</i> household income before housing costs			
	Q1	Median	Q3	Mean	Q1	Median	Q3	Mean
Aberdeen City	13,900	23,100	38,000	28,700	16,000	23,800	33,900	27,800
Aberdeenshire	15,000	28,600	43,600	32,400	16,200	25,600	36,100	28,600
Angus	11,800	20,200	32,600	23,800	13,800	20,100	28,900	22,300
Argyll & Bute	11,900	20,000	32,200	24,100	14,200	20,200	29,800	23,200
Clackmannanshire	13,200	21,200	35,800	26,400	14,100	22,500	30,900	24,300
Dumfries & Galloway	11,400	19,500	30,000	22,500	13,300	19,400	26,900	21,200
Dundee City	10,800	17,200	26,600	21,300	13,200	18,900	25,500	20,900
East Ayrshire	13,100	20,800	33,400	25,700	13,900	20,600	28,600	23,700
East Dunbartonshire	14,500	25,700	41,500	31,400	15,300	25,000	34,900	27,800
East Lothian	13,000	22,400	33,800	26,700	15,100	21,400	30,500	25,000
East Renfrewshire	14,100	26,400	43,700	32,000	16,300	23,600	34,100	28,200
Edinburgh, City of	12,400	21,900	34,700	26,300	14,900	22,900	32,300	25,900
Eilean Siar	10,700	19,300	34,400	24,200	12,300	19,200	27,900	21,600
Falkirk	12,200	21,600	33,600	25,000	15,100	21,600	30,000	23,900
Fife	11,900	20,300	33,300	24,400	13,800	20,300	29,300	23,100
Glasgow City	11,000	17,800	29,500	22,200	13,100	19,000	27,800	22,100
Highland	13,300	22,900	34,600	26,000	14,700	22,300	30,900	24,200
Inverclyde	11,900	20,000	32,700	23,500	13,600	19,900	29,700	21,900
Midlothian	13,900	23,200	34,800	27,000	14,600	21,100	28,800	24,400
Moray	11,900	22,800	33,900	25,700	13,900	21,100	31,000	24,000
North Ayrshire	11,700	20,000	31,400	23,800	13,700	19,400	27,800	22,200
North Lanarkshire	12,400	21,000	34,100	25,500	13,700	20,500	29,700	23,400
Orkney Islands	12,200	21,500	34,400	26,000	13,500	21,900	29,500	23,900
Perth & Kinross	13,600	24,100	37,700	28,200	15,800	22,800	32,600	26,100
Renfrewshire	12,200	22,100	34,200	25,500	15,200	22,000	30,100	23,700
Scottish Borders	12,100	21,500	33,300	25,000	14,800	21,200	30,400	23,800
Shetland Islands	13,600	23,400	35,300	33,500	15,500	22,500	31,900	33,700
South Ayrshire	11,300	20,300	33,800	24,700	13,400	20,700	29,200	23,100
South Lanarkshire	11,700	21,000	34,200	25,500	13,700	21,200	30,200	23,500
Stirling	13,100	22,100	35,000	28,100	14,200	21,900	31,500	25,700
West Dunbartonshire	12,000	19,100	31,100	24,600	14,300	19,400	27,000	22,600
West Lothian	12,600	22,800	36,000	26,100	14,800	21,900	30,300	23,600
SCOTLAND	12,200	21,200	34,100	25,600	14,200	21,300	30,300	24,100

Box 2 - What is equivalised income?

Equivalisation is a process which reduces the incomes of larger families and increases the incomes of single people with the intention of adjusting income for family size. This equivalised income allows the comparison of living standards between households that vary in size and composition. The adjustment reflects the fact that a family of several people requires a higher income than a single person in order for both households to enjoy a comparable standard of living.

The downside of the equivalisation process is that for most families their equivalised will be higher or lower than what they would naturally think of as their “income” and may be different, and not comparable, to income estimates from other sources. For this reason table 2 presents equivalised and unequivalised figures. Users may therefore choose the income measure which best meets their needs: If they are interested in income as a proxy measure for “standard of living” (as in the relative poverty figures) it will be equivalised income. If they are interested in something which requires comparison to unequivalised financial sources - such as prices information - it will be the unequivalised figures.

To find out more about equivalisation see the following report on the Scottish Government website: <http://www.scotland.gov.uk/Topics/Statistics/Browse/Social-Welfare/IncomePoverty/equivalence-scales-paper>.

Table 3 below presents estimates of the percentage of households in relative poverty in LAs across Scotland. The figures are presented using a four-year rolling average which reduces the amount of uncertainty around the estimates and produces more consistent time series. This does mean however that these figures are more useful for tracking long-term rather than short-term change. For any two consecutive points in the series three-quarters of the data used to calculate them are the same so it is difficult to infer much from these annual changes.

Table 3 - Percentage of households in relative poverty in Scottish local authorities: 2002 to 2008

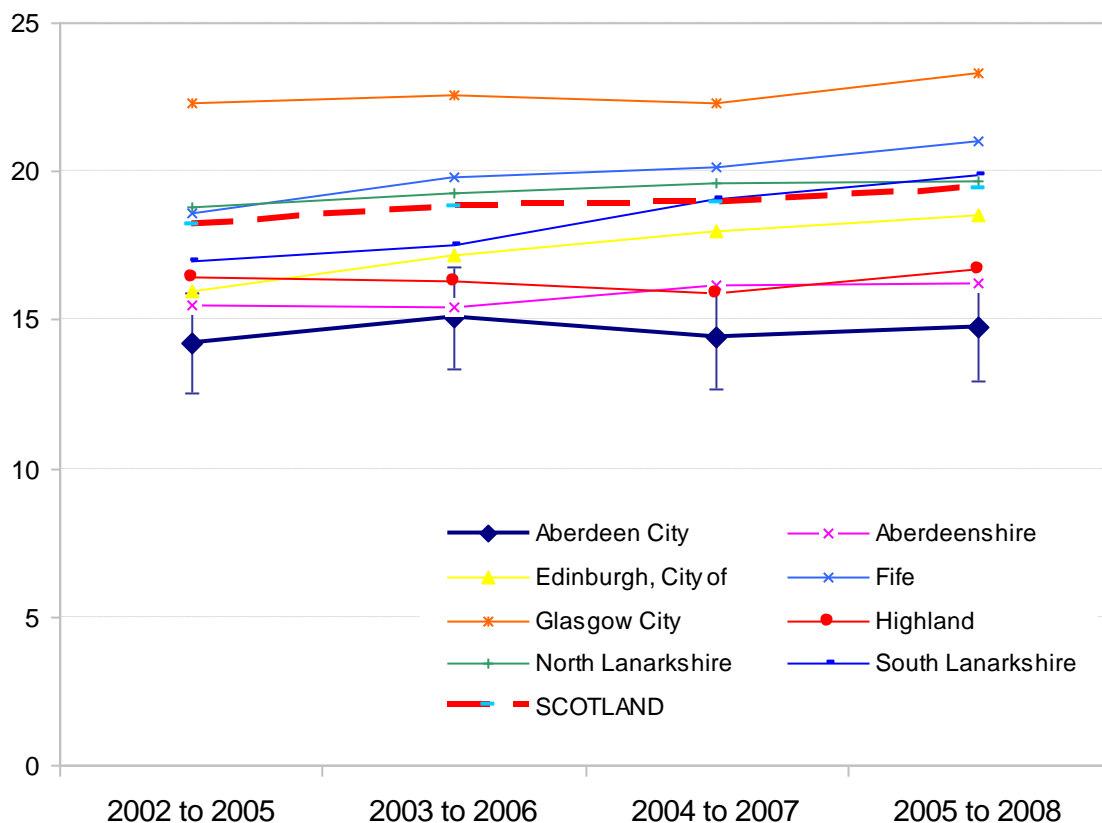
Council	2002 to 2005	2003 to 2006	2004 to 2007	2005 to 2008	Estimated 95% CI +/- % points
Aberdeen City	14	15	14	15	1.8
Aberdeenshire	15	15	16	16	1.7
Angus	18	18	19	20	2.7
Argyll & Bute	21	20	19	20	2.8
Clackmannanshire	19	17	18	18	2.7
Dumfries & Galloway	17	19	20	22	2.3
Dundee City	26	25	24	24	2.6
East Ayrshire	20	19	19	18	2.7
East Dunbartonshire	14	15	15	16	2.6
East Lothian	16	19	20	20	2.8
East Renfrewshire	13	14	14	14	2.6
Edinburgh, City of	16	17	18	19	1.3
Eilean Siar;	23	23	22	25	3.1
Falkirk	17	19	20	20	2.4
Fife	19	20	20	21	1.5
Glasgow City	22	23	22	23	1.3
Highland	16	16	16	17	1.8
Inverclyde	23	22	24	21	3.1
Midlothian	15	16	16	16	2.7
Moray	20	20	21	21	2.8
North Ayrshire	22	23	22	23	2.7
North Lanarkshire	19	19	20	20	1.6
Orkney Islands	21	21	20	21	2.8
Perth & Kinross	14	16	15	16	2.3
Renfrewshire	19	20	18	17	2.2
Scottish Borders	17	17	17	18	2.5
Shetland Islands	20	18	15	15	2.6
South Ayrshire	18	20	21	22	2.8
South Lanarkshire	17	18	19	20	1.7
Stirling	15	17	18	18	2.6
West Dunbartonshire	18	20	19	20	3.0
West Lothian	18	16	16	16	2.2
SCOTLAND	18	19	19	19	0.4

Local authority relative poverty charts

In this section the relative poverty rates from Table 3 are presented as charts so that trends over time can be simply examined. Figures for each LA are presented along with estimates of the 95% confidence intervals and comparable figures for the 8 LAs with the largest SHS samples sizes - those for which the figures are most reliable.

Aberdeen City

Figure 5 - Percentage of households in relative poverty in Aberdeen City: 2002 to 2008 (4 year rolling average)



95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 Aberdeen City was one of the local authorities with the lowest rates of relative poverty in Scotland.
- Over this period there was little change in poverty rates and around 14 or 15 percent of households in Aberdeen City were in relative poverty.

Aberdeenshire

Figure 6 - Percentage of households in relative poverty in Aberdeenshire: 2002 to 2008 (4 year rolling average)



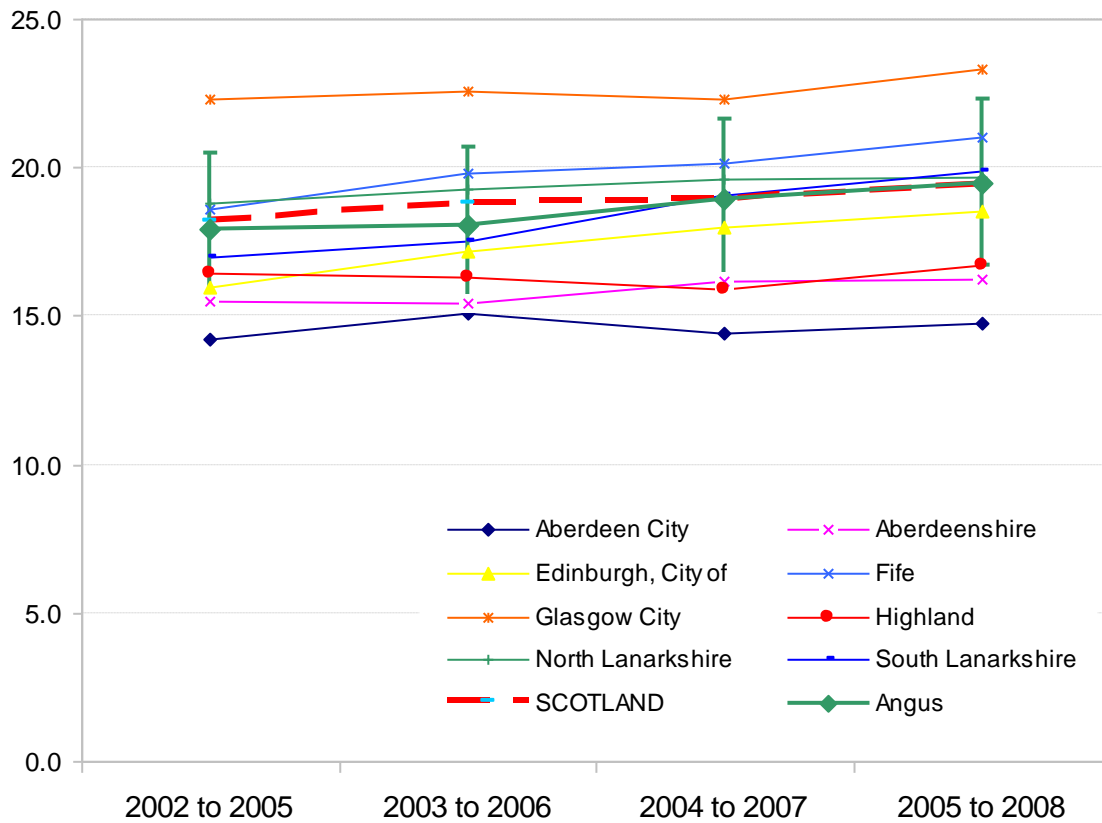
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 Aberdeenshire was one of the local authorities with the lowest rates of relative poverty in Scotland.
- Over this period the proportion of households in poverty may have increased slightly from around 15 percent to around 16 percent. However this change is well within the margin of error for the survey upon which these figures are based.

Angus

Figure 7 - Percentage of households in relative poverty in Angus: 2002 to 2008 (4 year rolling average)



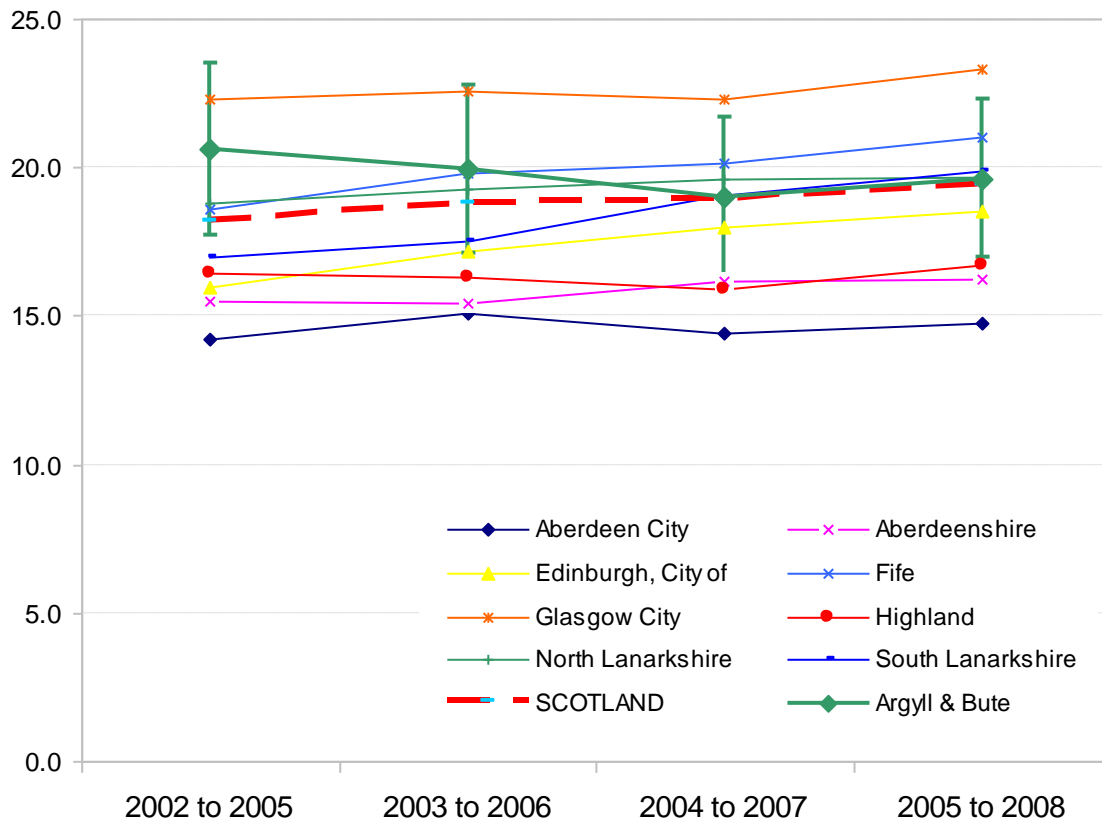
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 poverty rates in Angus were close to the Scottish national average.
- Over this period the percentage of households in relative poverty in Angus has increased slightly, from around 18 percent to around 19 percent. This change however is well within the margin of error for the survey upon which these figures are based.

Argyll and Bute

Figure 8 - Percentage of households in relative poverty in Argyll and Bute: 2002 to 2008 (4 year rolling average)



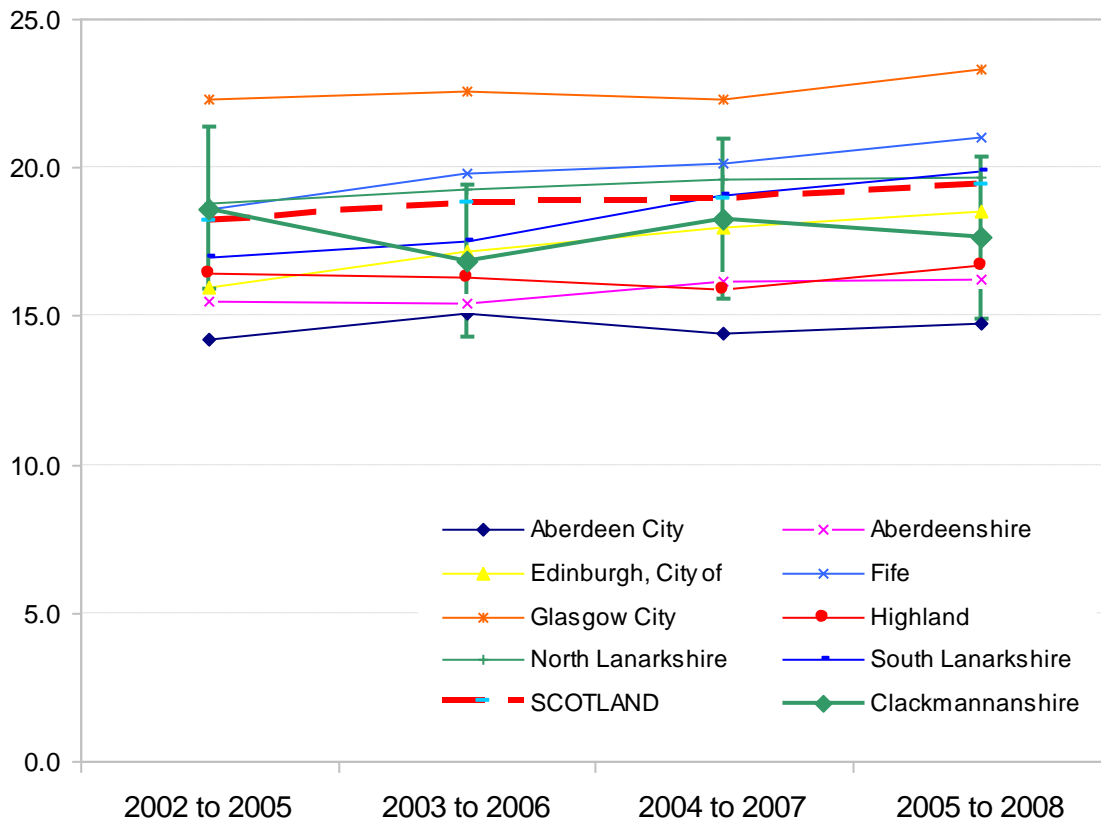
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 poverty rates in Argyll and Bute were close to the Scottish national average.
- Over this period around 20 percent of households in Argyll and Bute were in relative poverty.

Clackmannanshire

Figure 9 - Percentage of households in relative poverty in Clackmannanshire: 2002 to 2008 (4 year rolling average)



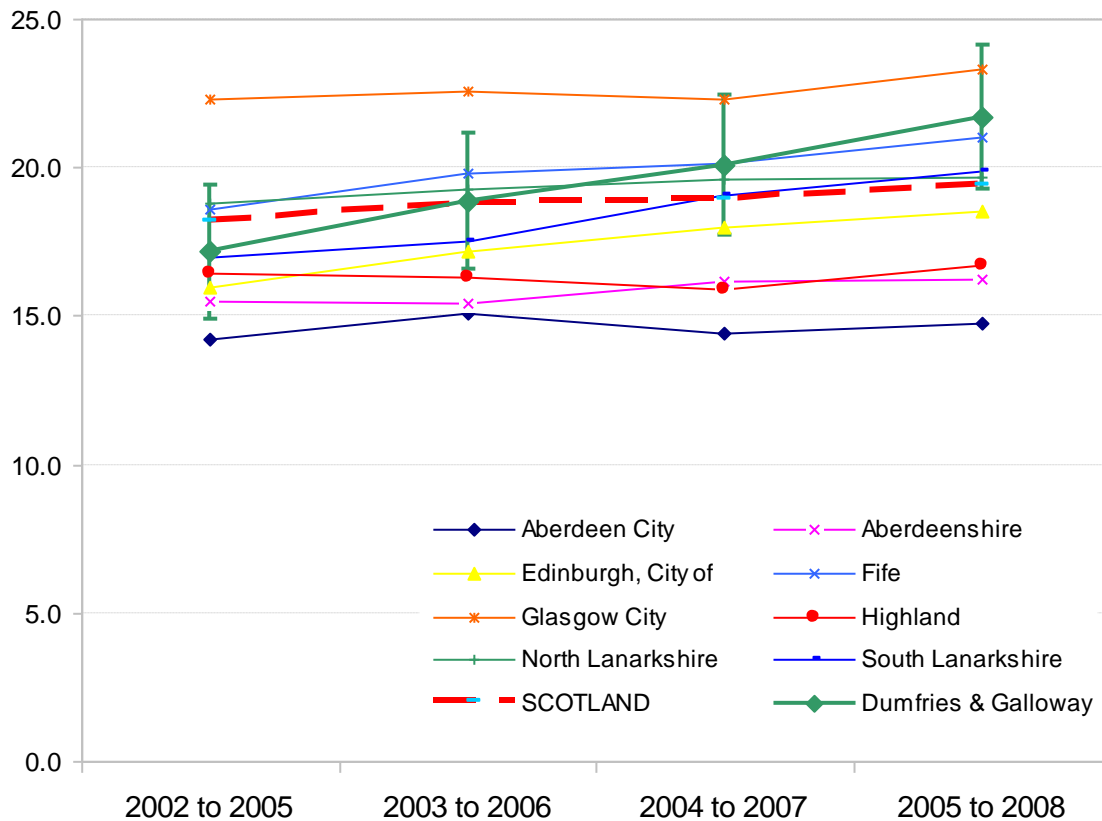
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 poverty rates in Clackmannanshire were slightly lower than the Scottish national average.
- Over this period around 17 or 18 percent of households in Clackmannanshire were in relative poverty.

Dumfries and Galloway

Figure 10 - Percentage of households in relative poverty in Dumfries and Galloway: 2002 to 2008 (4 year rolling average)



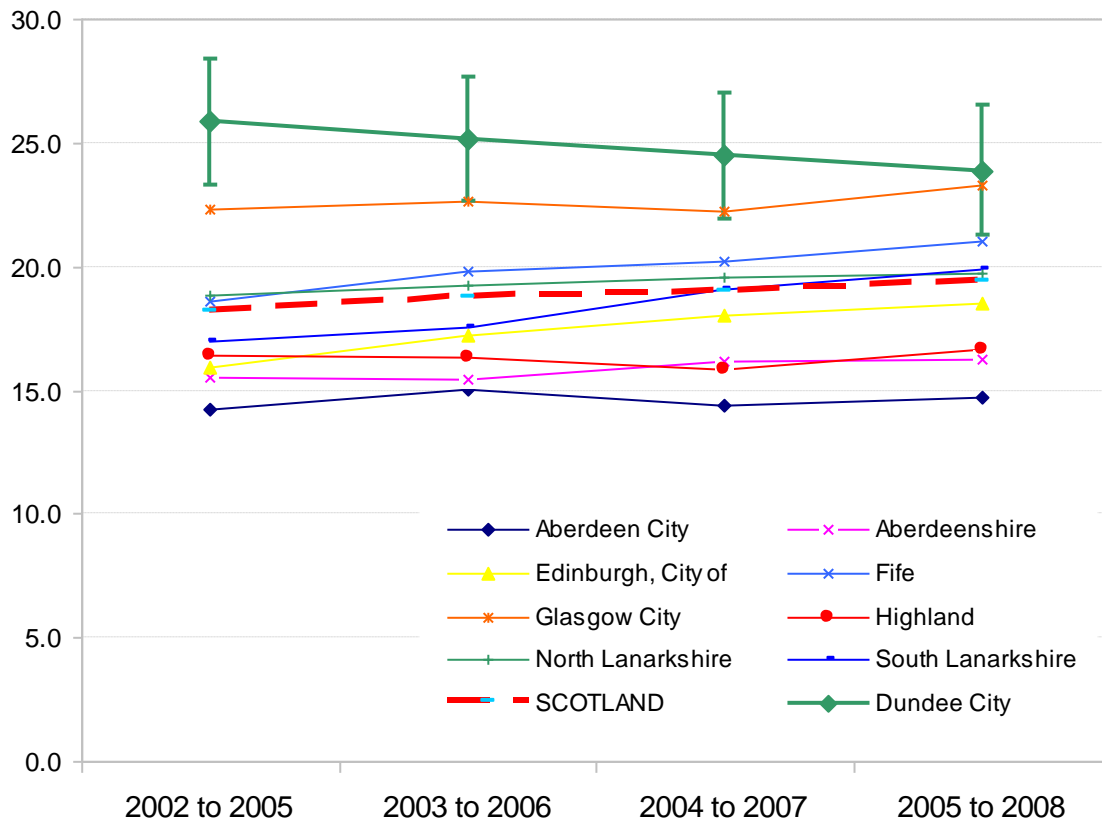
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 poverty rates in Dumfries and Galloway rose from just below to just above the Scottish average.
- Over this period the percentage of households in relative poverty in Dumfries and Galloway increased from around 17 percent to around 22 percent.

Dundee City

Figure 11 - Percentage of households in relative poverty in Dundee City: 2002 to 2008 (4 year rolling average)



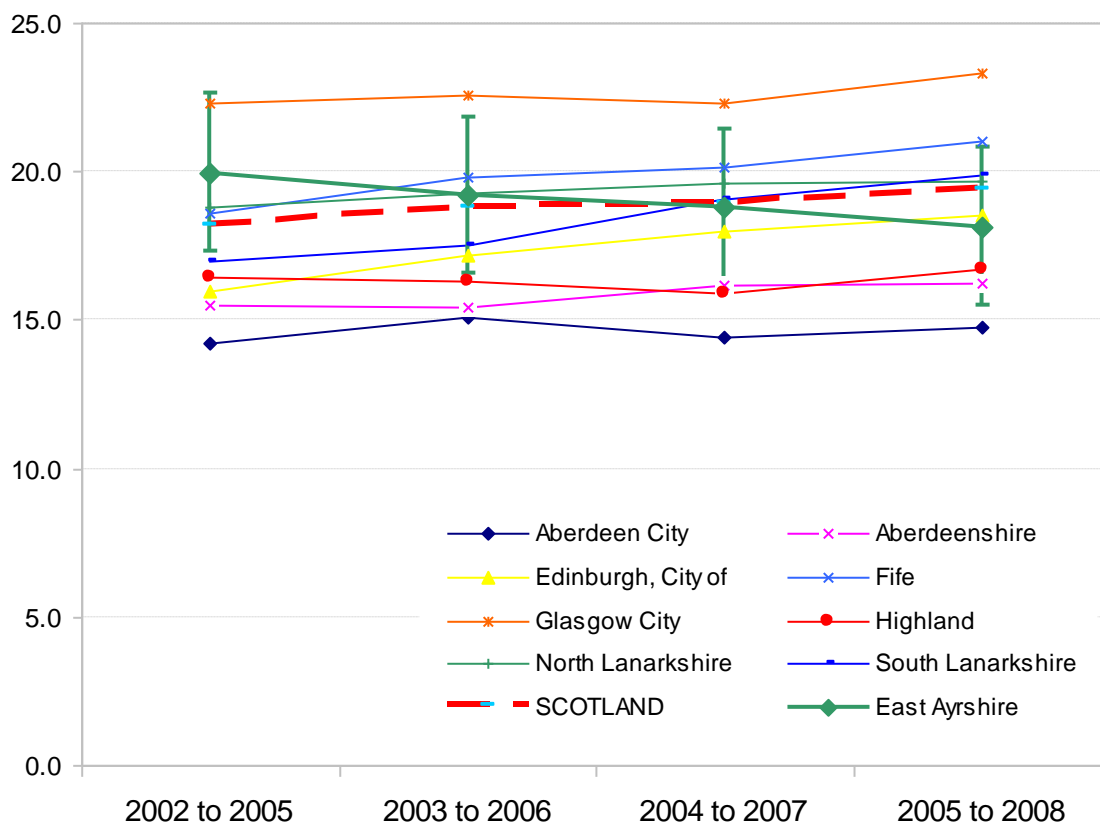
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 Dundee was the local authority with the highest relative poverty rates across Scotland.
- Over this period the percentage of households in relative poverty in Dundee fell from around 26 percent to around 24 percent.

East Ayrshire

Figure 12 - Percentage of households in relative poverty in East Ayrshire: 2002 to 2008 (4 year rolling average)



95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 poverty rates in East Ayrshire fell from just above, to just below the national average.
- Over this period the percentage of households in relative poverty fell from around 20 percent to around 18 percent.

East Dunbartonshire

Figure 13 - Percentage of households in relative poverty in East Dunbartonshire: 2002 to 2008 (4 year rolling average)



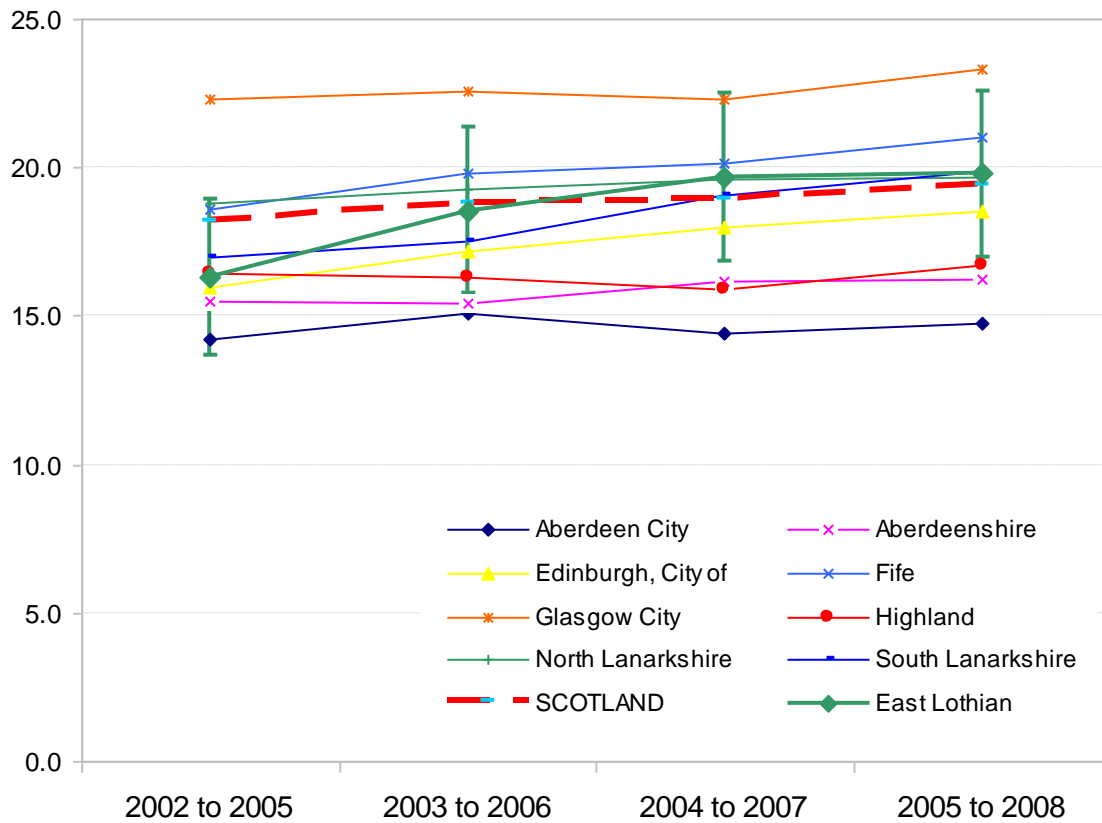
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 East Dunbartonshire was one of the local authorities with lowest relative poverty rates in Scotland.
- Over this period the percentage of households in relative poverty increased from around 14 to around 16 percent.

East Lothian

Figure 14 - Percentage of households in relative poverty in East Lothian: 2002 to 2008 (4 year rolling average)



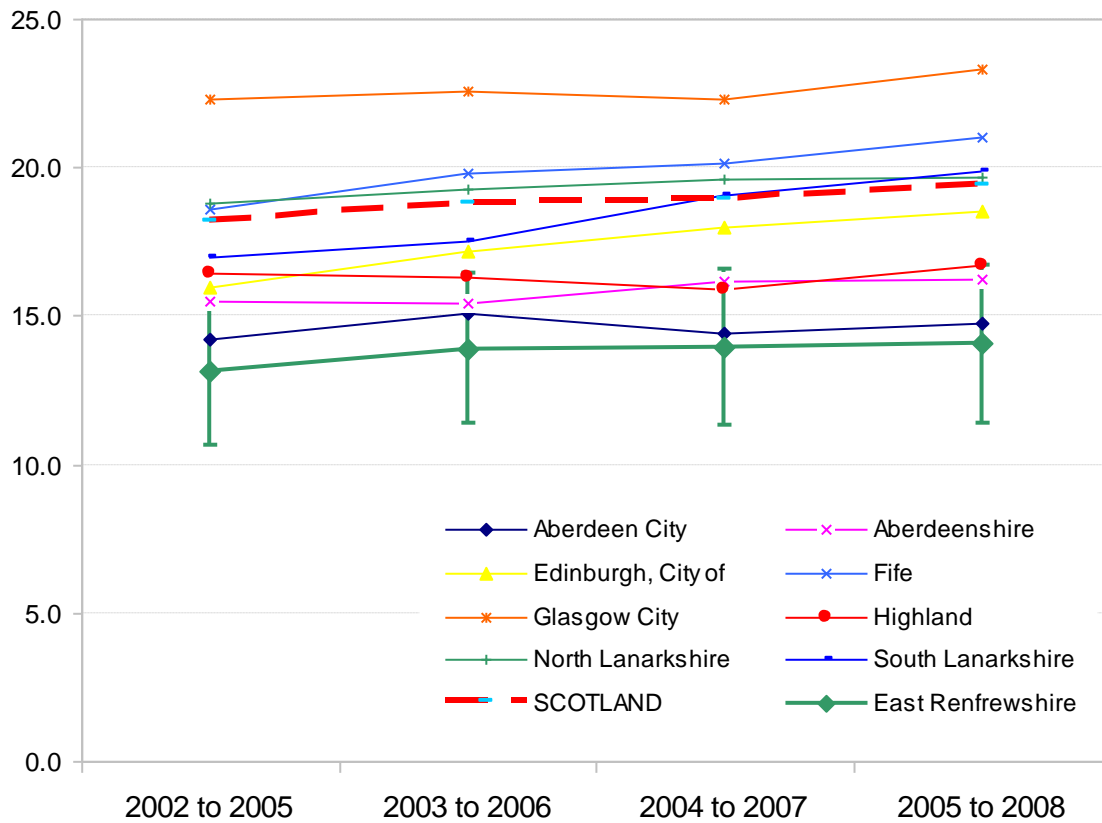
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 the percentage of households in relative poverty in East Lothian increased from just below, to roughly equal to, the Scottish average.

East Renfrewshire

Figure 15 - Percentage of households in relative poverty in East Renfrewshire: 2002 to 2008 (4 year rolling average)



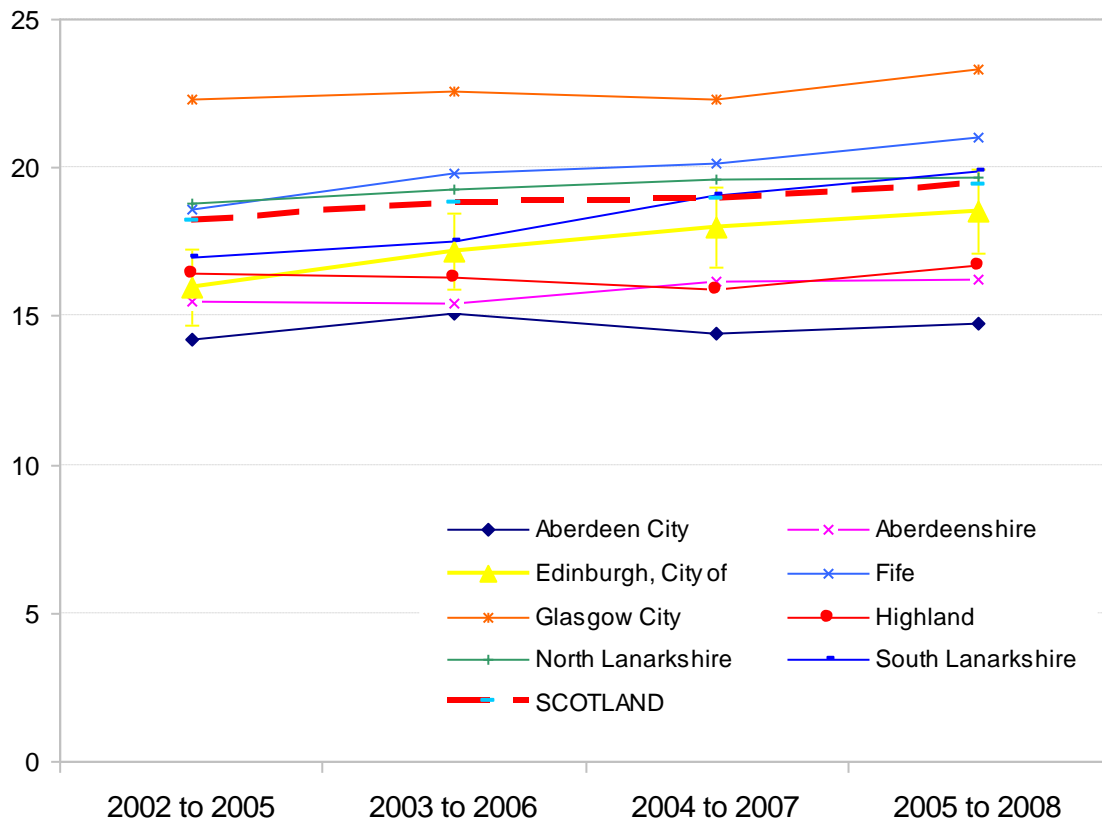
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 East Renfrewshire was one of the local authorities with the lowest poverty rates in Scotland.
- Over this period around 13 or 14 percent of households were in relative poverty.

Edinburgh

Figure 16 - Percentage of households in relative poverty in Edinburgh: 2002 to 2008 (4 year rolling average)



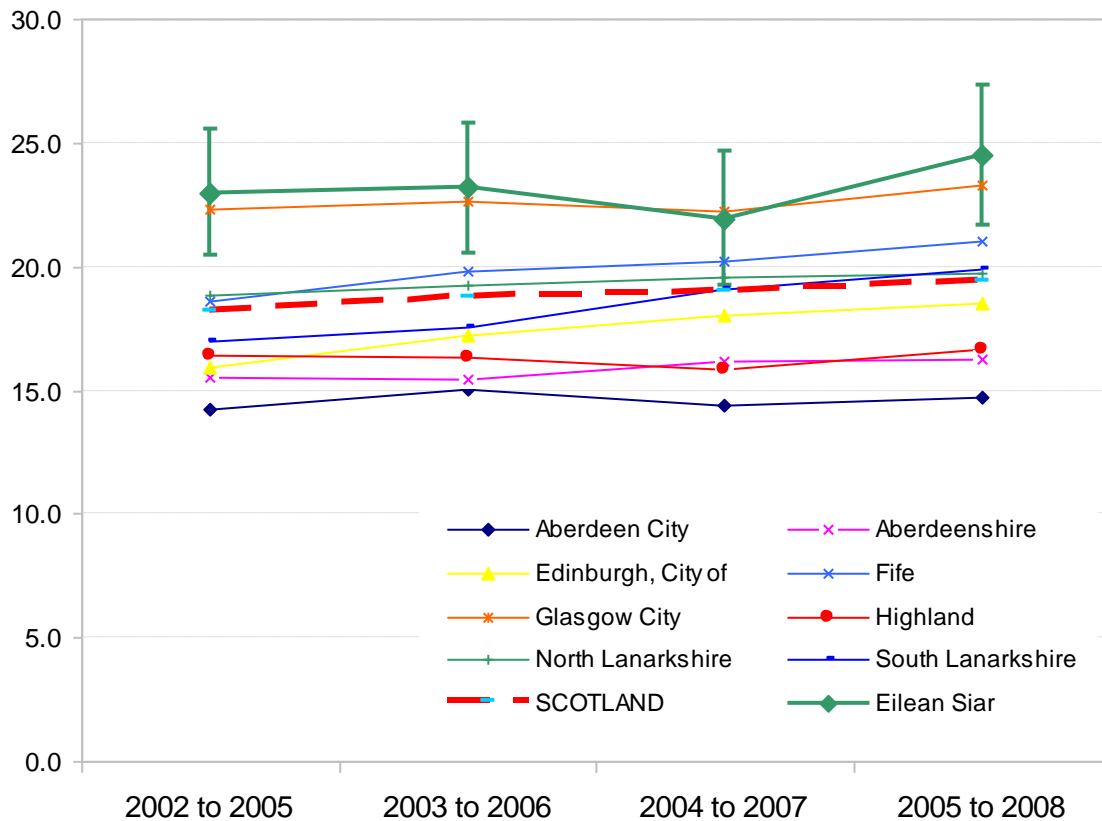
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 poverty rates in Edinburgh were slightly lower than the national average.
- Over this period the percentage of households in relative poverty in Edinburgh increased slightly, from 18 to 19 percent.

Eilean Siar

Figure 17 - Percentage of households in relative poverty in Eilean Siar: 2002 to 2008 (4 year rolling average)



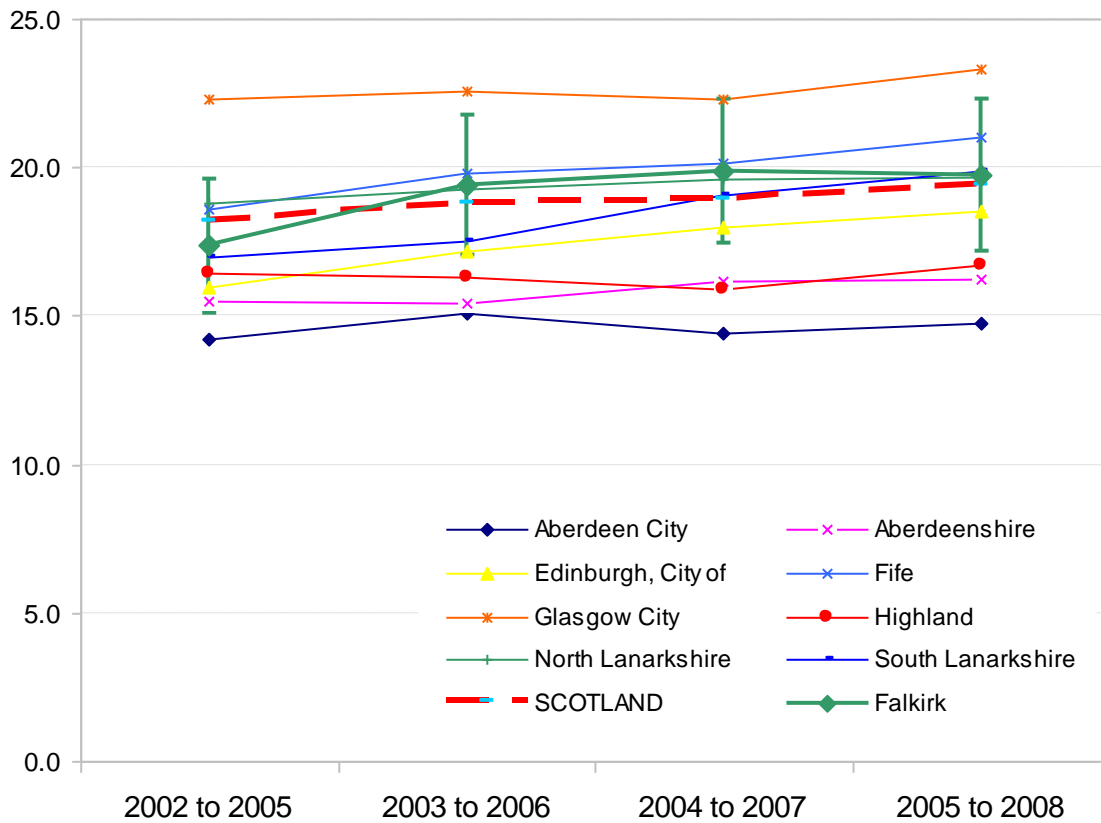
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 Eilean Siar was one of the local authorities with the highest poverty rates in Scotland, comparable to those of Glasgow.
- Over this period the percentage of households in relative poverty was around 23 percent.
- It is worth bearing in mind that these figures are based on income before housing costs and so do not take into account any differences in housing costs between different geographical areas.

Falkirk

Figure 18 - Percentage of households in relative poverty in Falkirk: 2002 to 2008 (4 year rolling average)



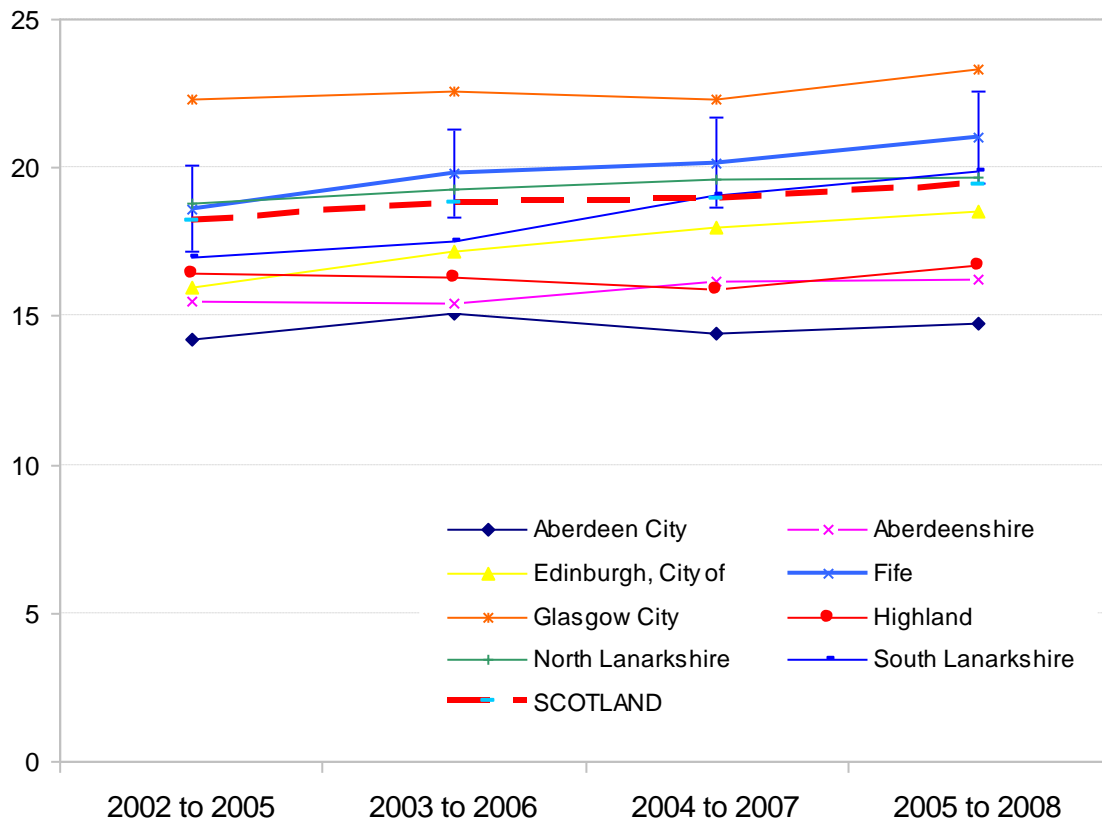
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 poverty rates in Falkirk were close to the Scottish average.
- Over this period the percentage of households in relative poverty was around 19 or 20 percent.

Fife

Figure 19 - Percentage of households in relative poverty in Fife: 2002 to 2008 (4 year rolling average)



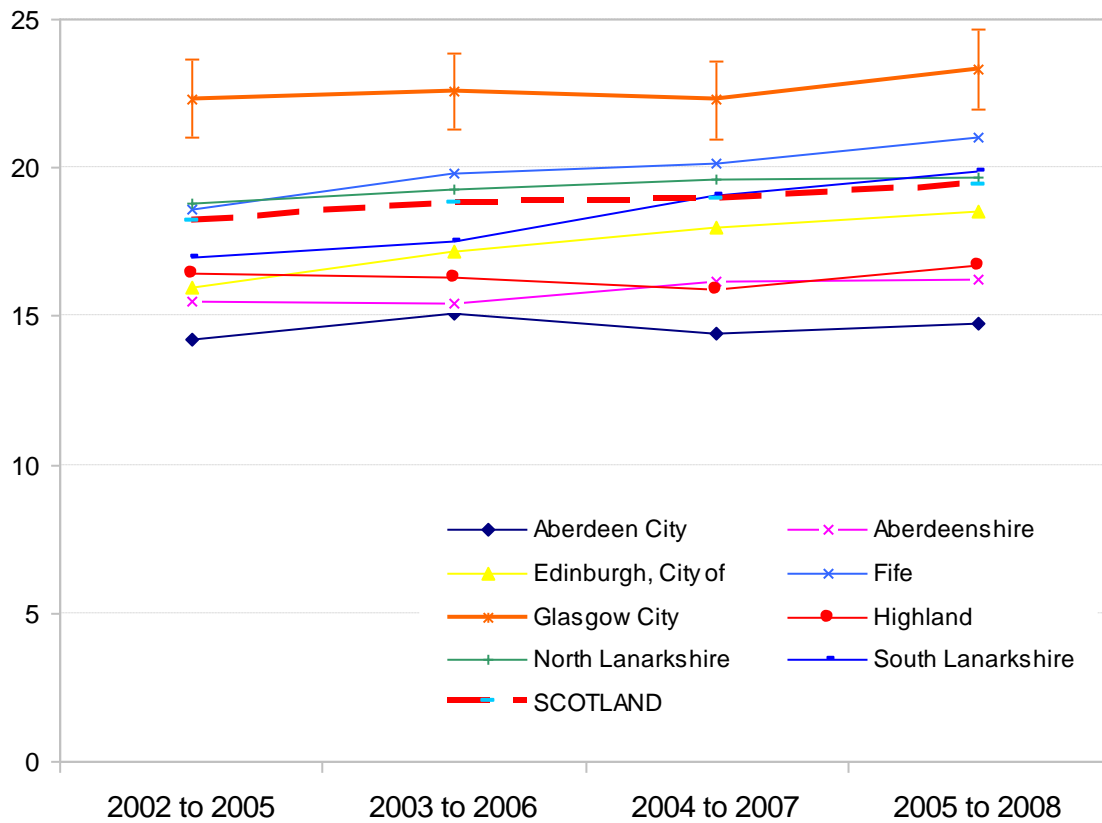
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 poverty rates in Fife were slightly above the Scottish average.
- Over this period the percentage of households in relative poverty was around 20 or 21 percent.

Glasgow City

Figure 20 - Percentage of households in relative poverty in Glasgow: 2002 to 2008 (4 year rolling average)



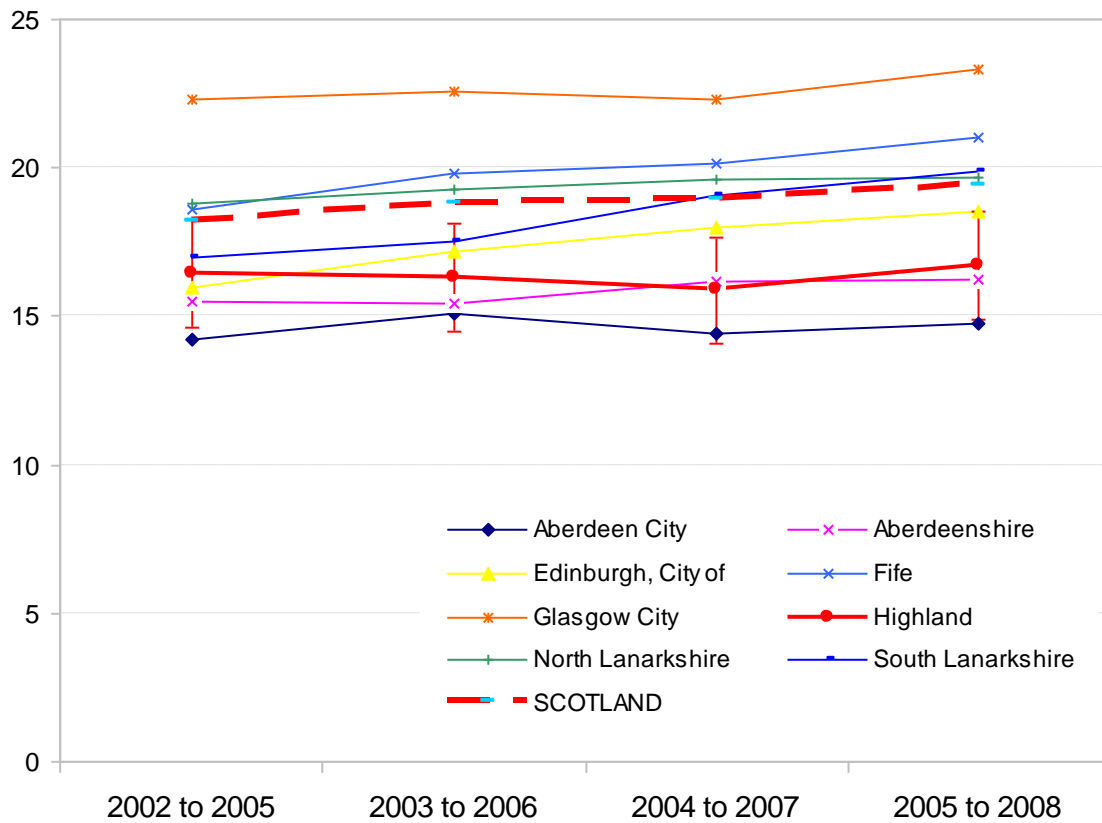
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 Glasgow was one of the local authorities with the highest relative poverty rates in Scotland.
- Over this period the percentage of households in relative poverty was around 22 or 23 percent.

Highland

Figure 21 - Percentage of households in relative poverty in Highland: 2002 to 2008 (4 year rolling average)



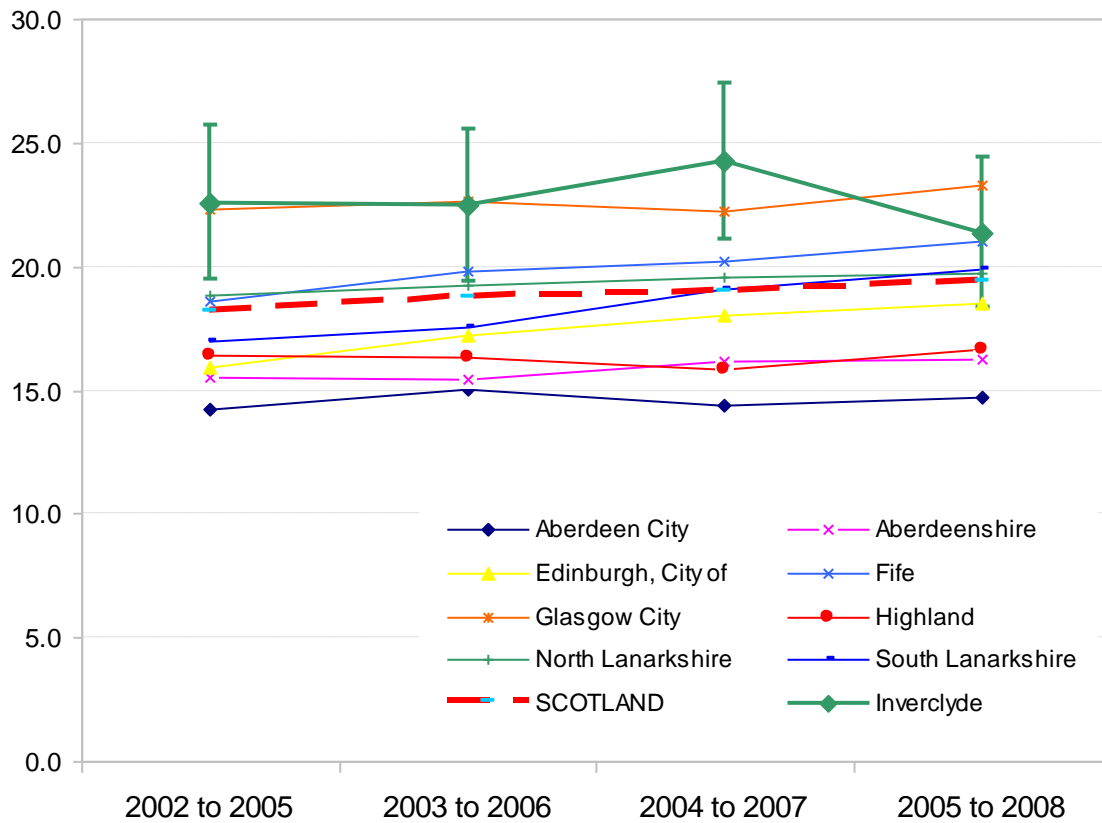
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 Highland was one of the Scottish local authorities with lower relative poverty rates.
- Over this period the percentage of households in relative poverty was around 16 percent.

Inverclyde

Figure 22 - Percentage of households in relative poverty in Inverclyde: 2002 to 2008 (4 year rolling average)



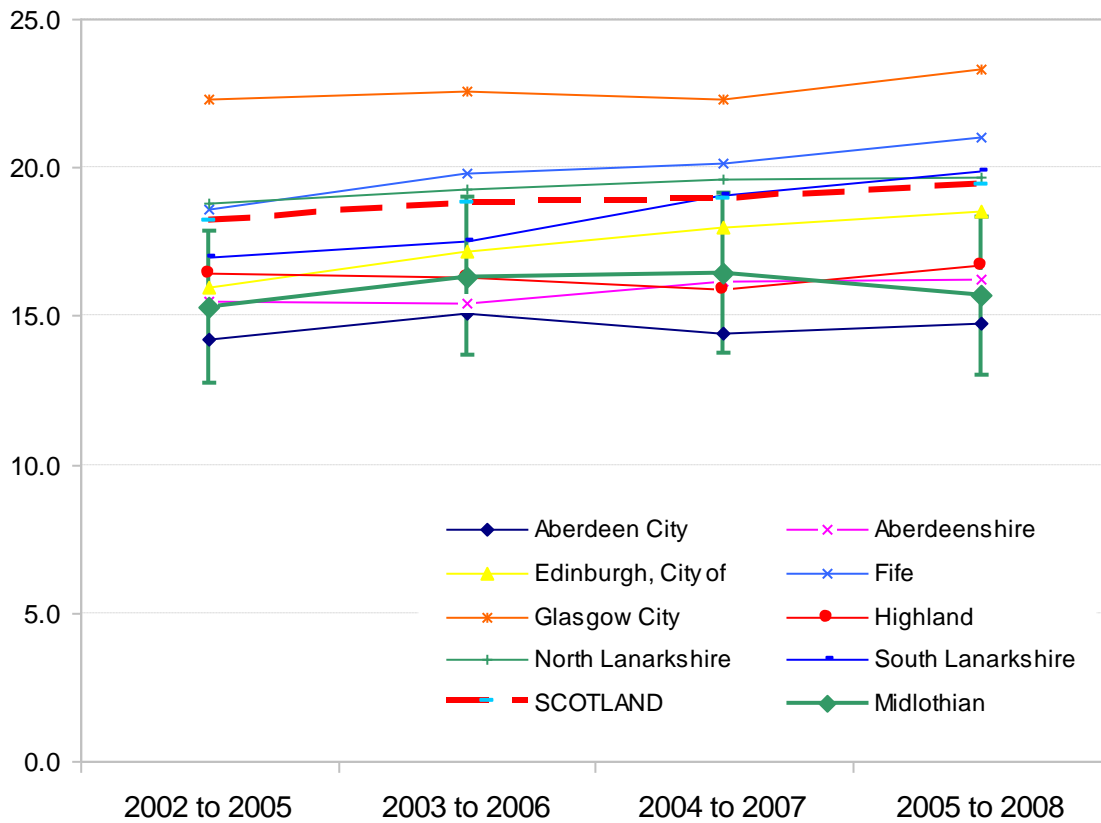
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 Inverclyde was one of the Scottish local authorities with the highest relative poverty rates.
- Over this period the percentage of households in relative poverty was around 23 percent.

Midlothian

Figure 23 - Percentage of households in relative poverty in Midlothian: 2002 to 2008 (4 year rolling average)



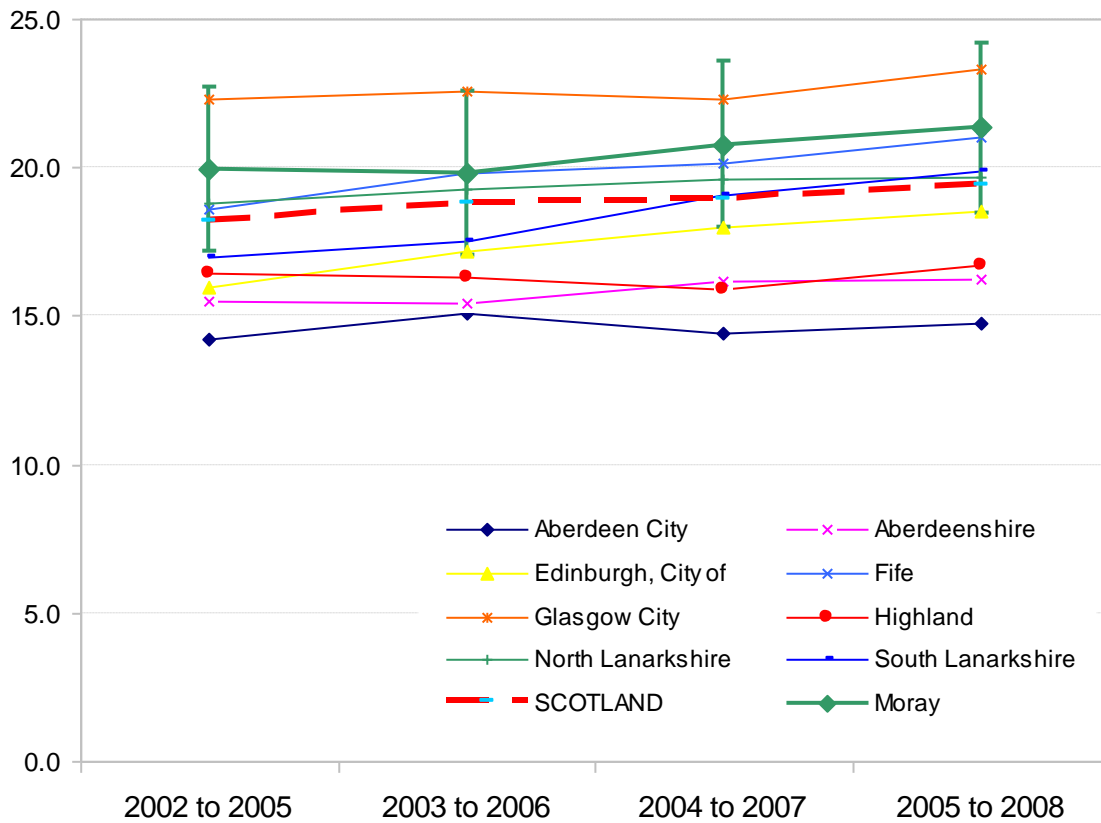
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 Midlothian was one of the Scottish local authorities with lower relative poverty rates.
- Over this period the percentage of households in relative poverty was around 16 percent.

Moray

Figure 24 - Percentage of households in relative poverty in Moray: 2002 to 2008 (4 year rolling average)



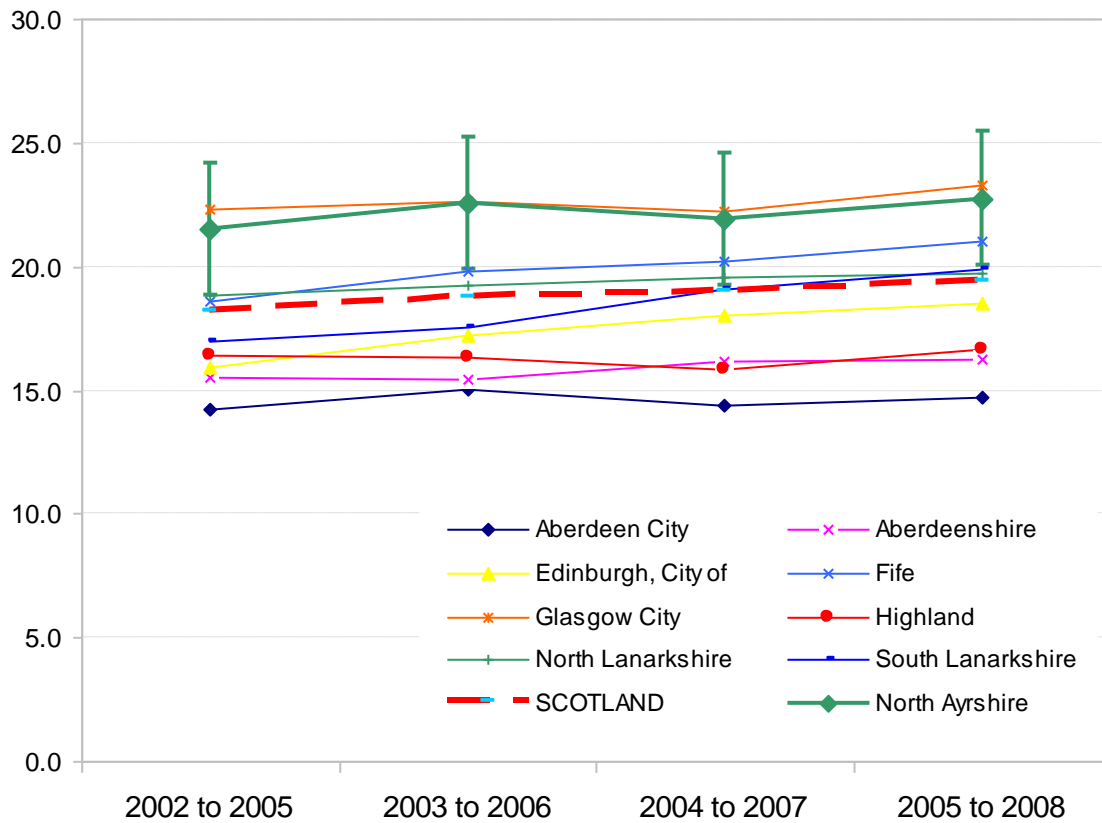
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 poverty rates in Moray were slightly above the Scottish average.
- Over this period the percentage of households in relative poverty was around 20 to 21 percent.

North Ayrshire

Figure 25 - Percentage of households in relative poverty in North Ayrshire: 2002 to 2008 (4 year rolling average)



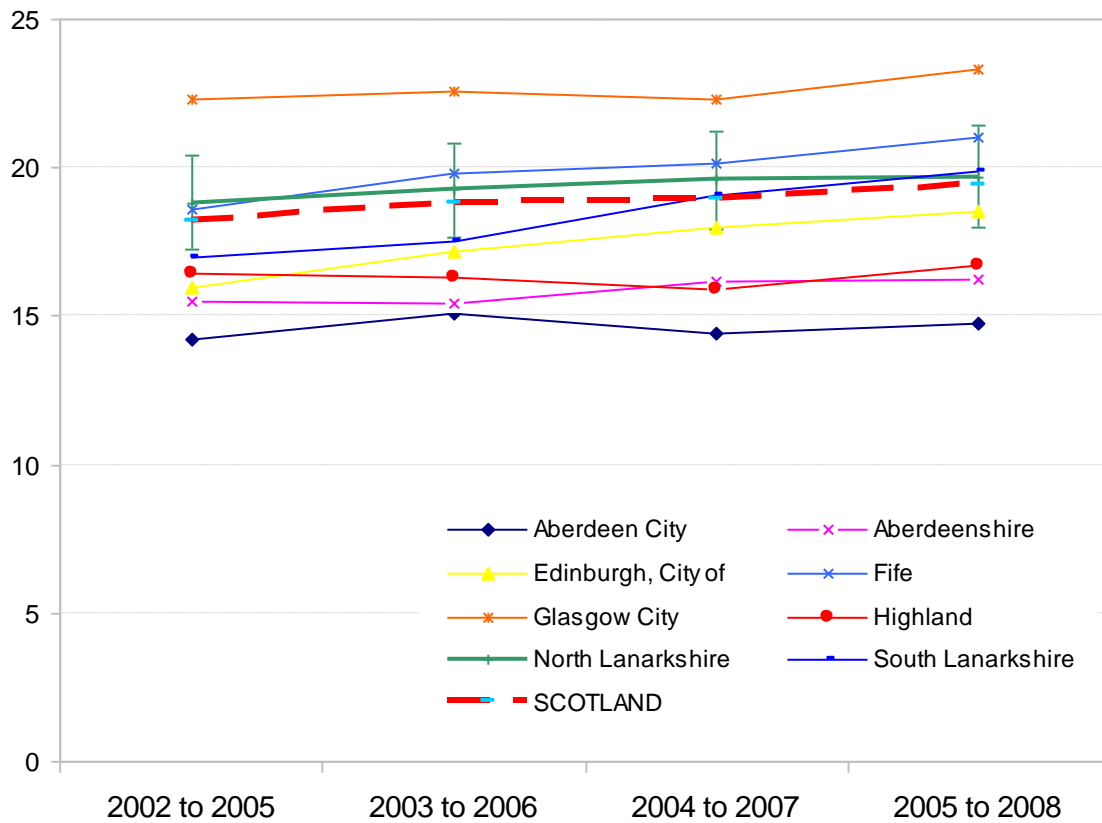
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 North Ayrshire was one of the local authorities with the highest poverty rates Scotland.
- Over this period the percentage of households in relative poverty was around 22 to 23 percent.

North Lanarkshire

Figure 26 - Percentage of households in relative poverty in North Lanarkshire: 2002 to 2008 (4 year rolling average)



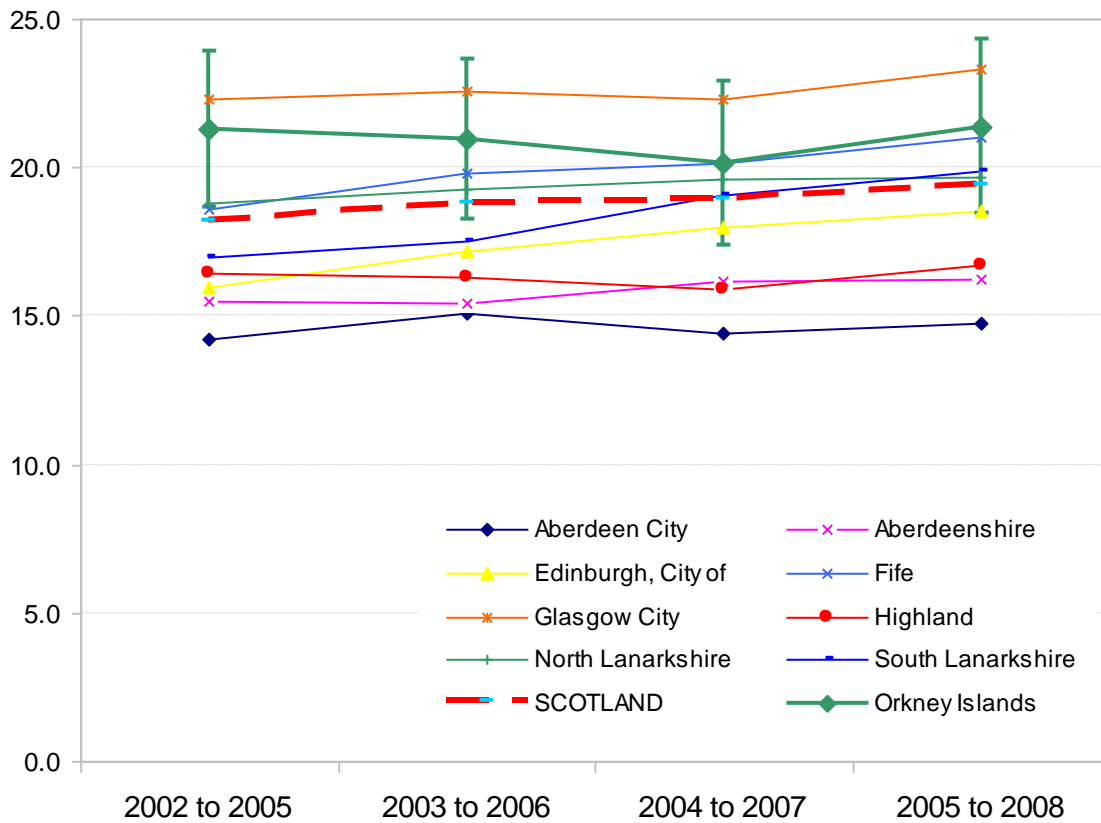
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 poverty rates in North Lanarkshire were close to the Scottish average.
- Over this period the percentage of households in relative poverty was around 19 to 20 percent.

Orkney Islands

Figure 27 - Percentage of households in relative poverty in the Orkney Islands: 2002 to 2008 (4 year rolling average)



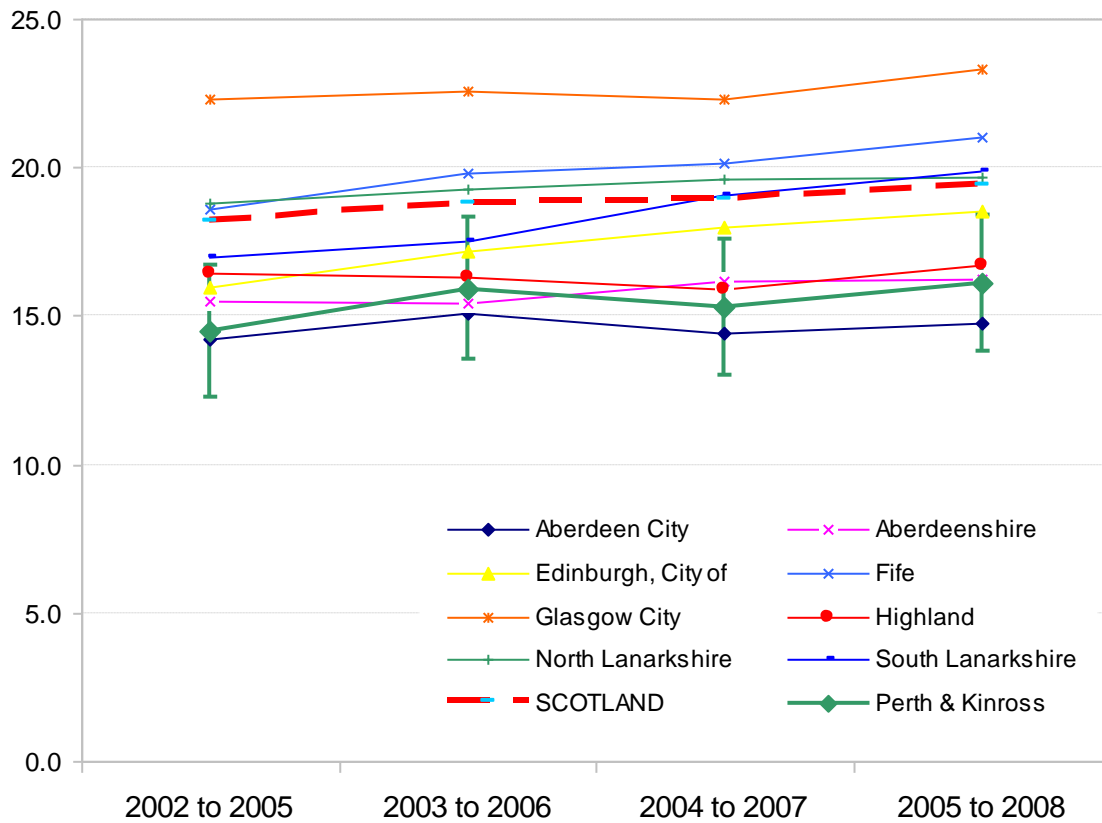
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 the Orkney islands were one of the local authorities with higher relative poverty rates.
- Over this period the percentage of households in relative poverty was around 21 percent.

Perth and Kinross

Figure 28 - Percentage of households in relative poverty in Perth and Kinross: 2002 to 2008 (4 year rolling average)



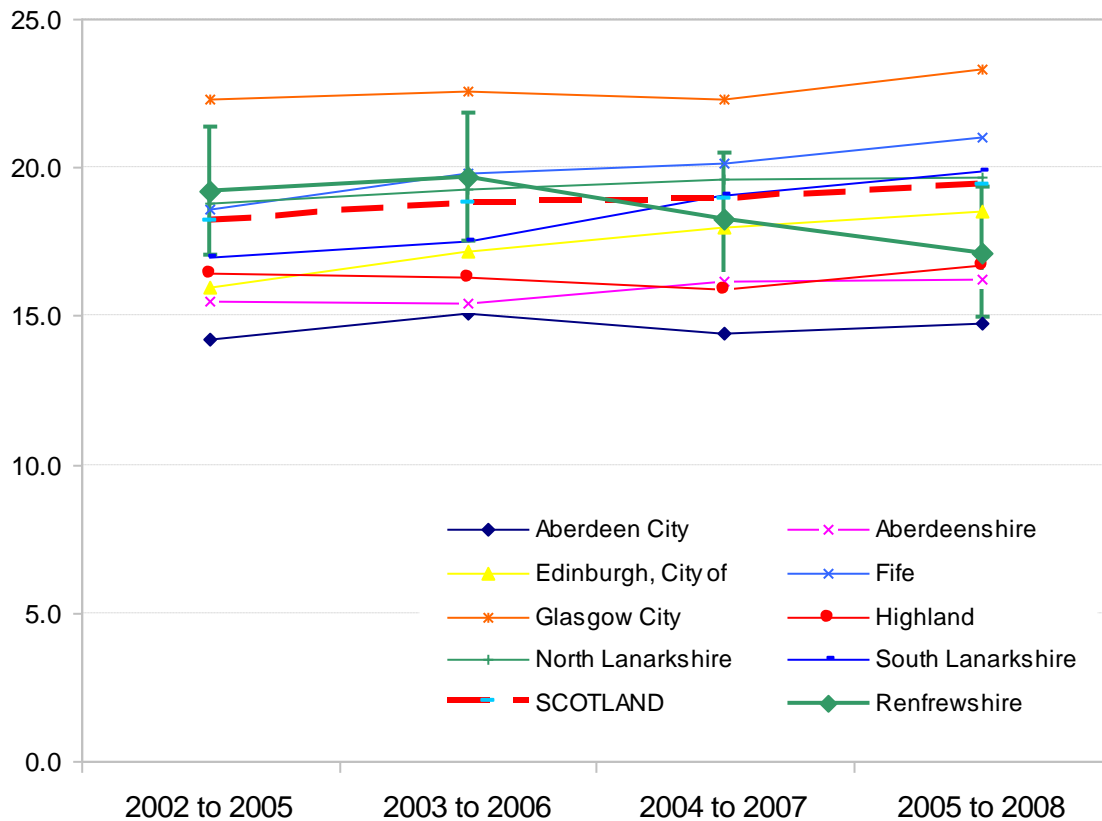
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 Perth and Kinross was one of the local authorities with lower relative poverty rates.
- Over this period the percentage of households in relative poverty was around 15 or 16 percent.

Renfrewshire

Figure 29 - Percentage of households in relative poverty in Renfrewshire: 2002 to 2008 (4 year rolling average)



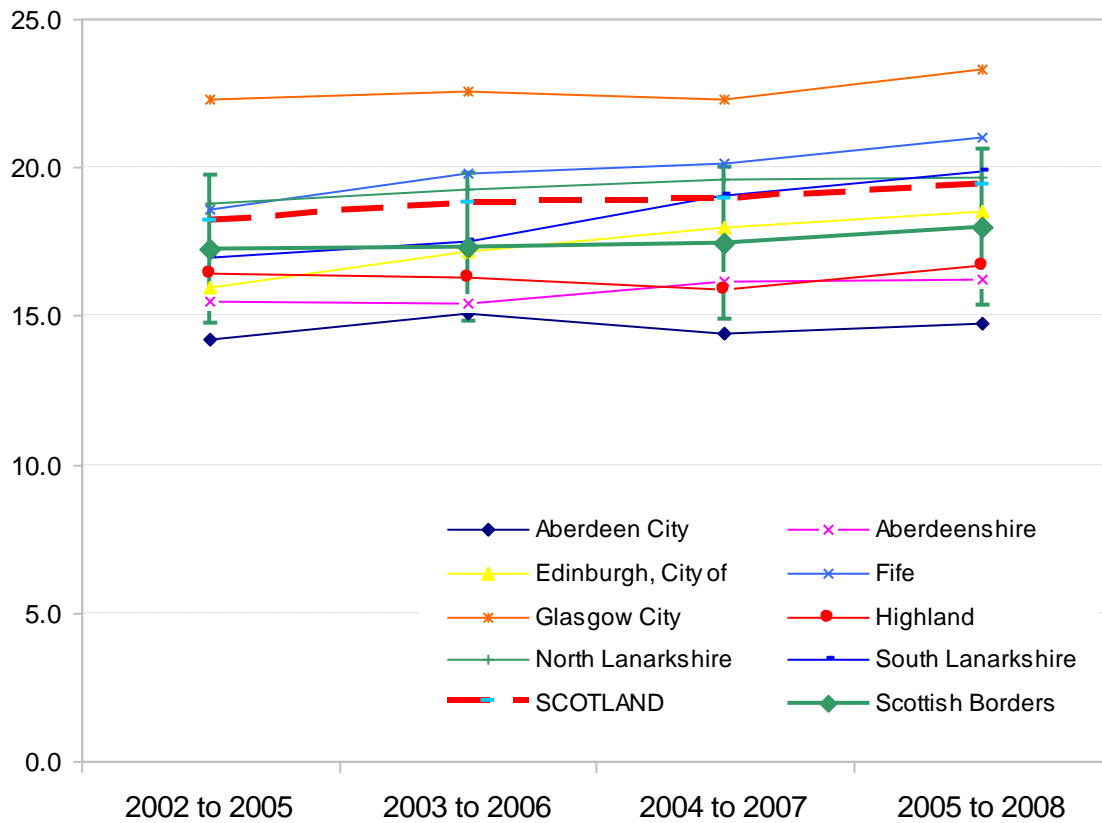
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 relative poverty rates in Renfrewshire were about the same as the Scottish average.
- Over this period the percentage of households in relative poverty fell from around 19 percent to around 17 percent.

Scottish Borders

Figure 30 - Percentage of households in relative poverty in Scottish Borders: 2002 to 2008 (4 year rolling average)



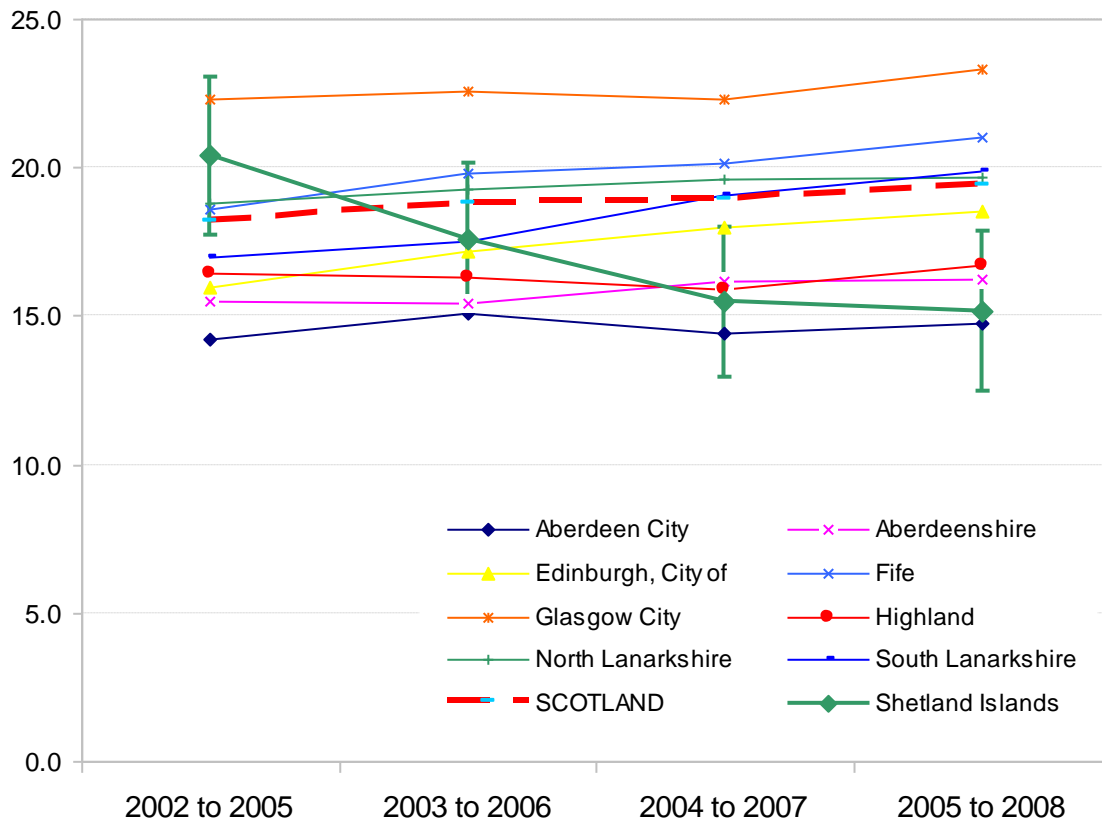
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 relative poverty rates in Scottish Borders were slightly lower than the Scottish average.
- Over this period the percentage of households in relative poverty was around 17 or 18 percent.

Shetland islands

Figure 31 - Percentage of households in relative poverty in Shetland islands: 2002 to 2008 (4 year rolling average)



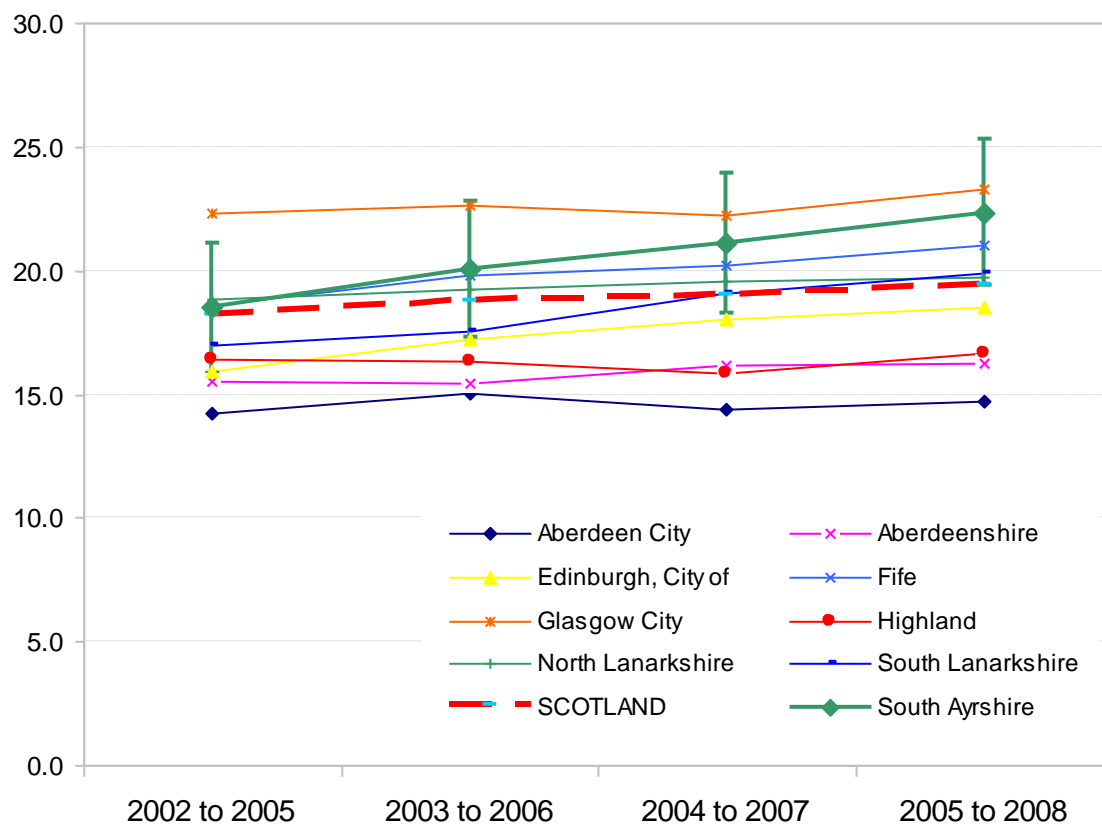
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 the percentage of households in relative poverty in the Shetland Islands fell from 20 percent to 15 percent.
- This is a fairly dramatic reduction but may have been affected by the relatively small sample size of the SHS in Shetland.
- This fall would not be regarded as statistically significant at the 95% level.

South Ayrshire

Figure 32 - Percentage of households in relative poverty in South Ayrshire: 2002 to 2008 (4 year rolling average)



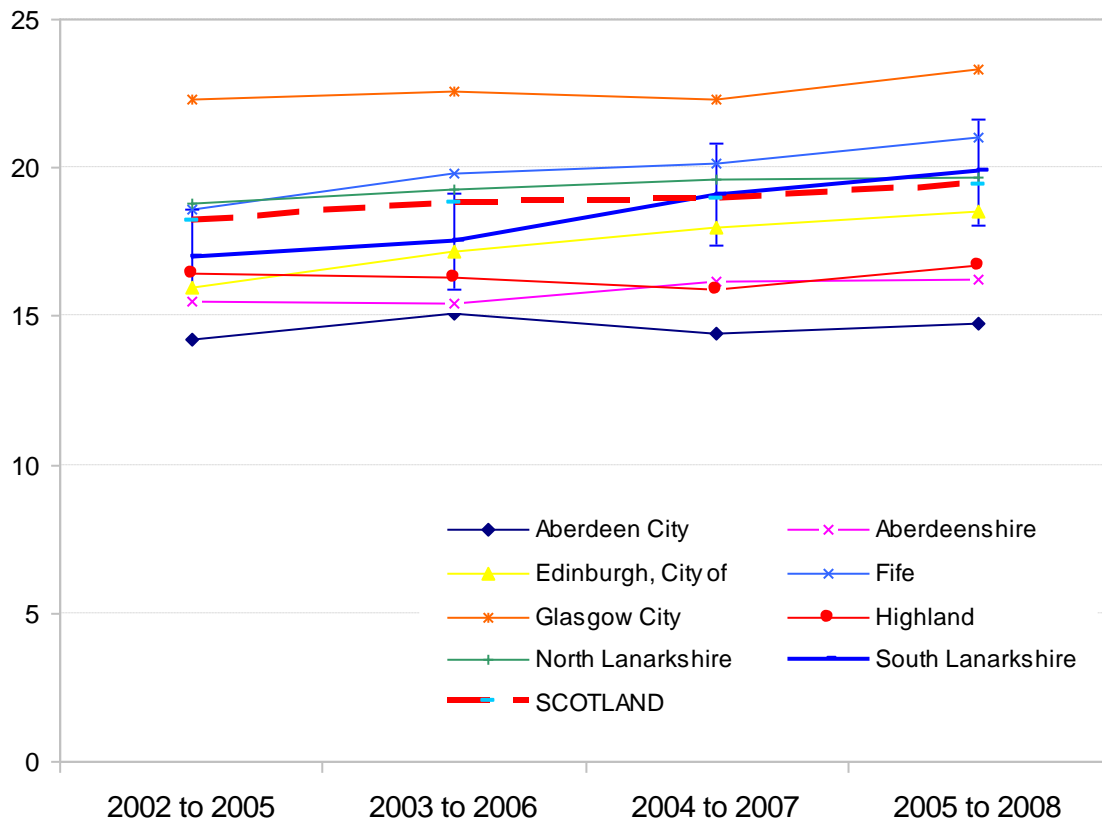
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 South Ayrshire was one of the local authorities with higher relative poverty rates.
- Over this period the percentage of households in relative poverty increased from around 18 to around 22 percent.

South Lanarkshire

Figure 33 - Percentage of households in relative poverty in South Lanarkshire: 2002 to 2008 (4 year rolling average)



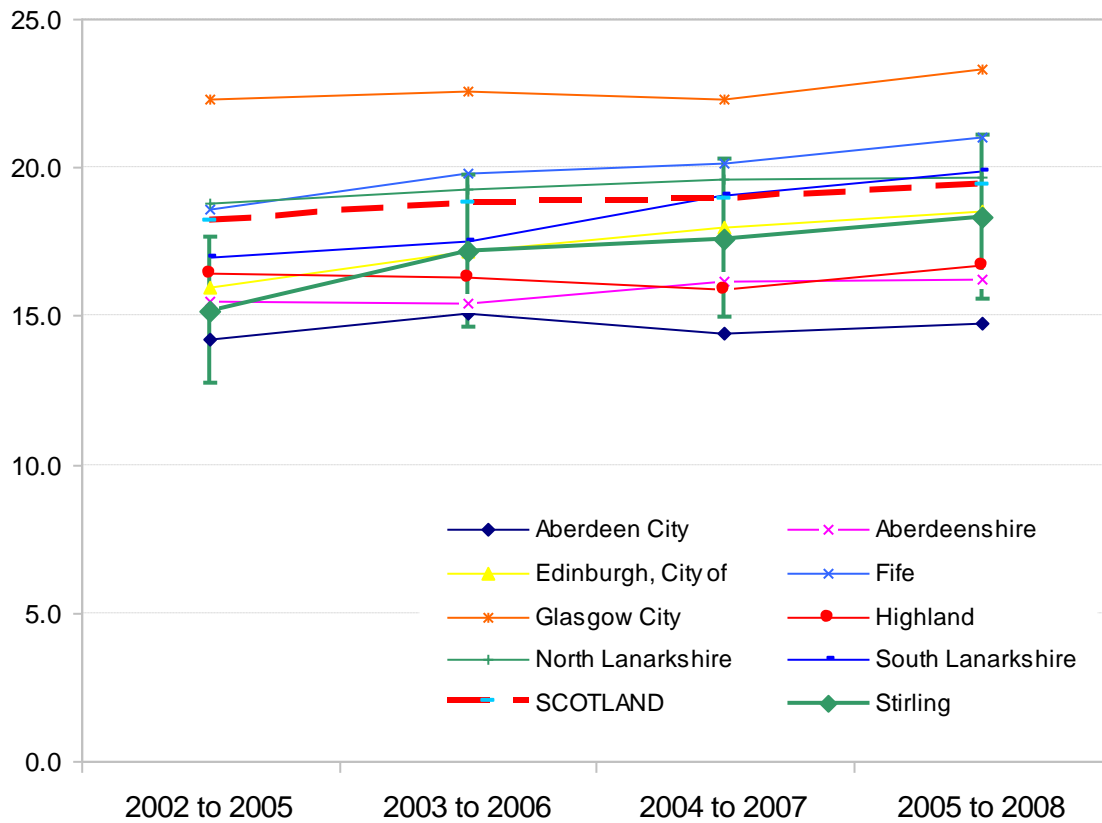
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 relative poverty rates in South Lanarkshire were close to the Scottish average.
- Over this period the percentage of households in relative poverty increased from around 17 to around 20 percent.

Stirling

Figure 34 - Percentage of households in relative poverty in Stirling: 2002 to 2008 (4 year rolling average)



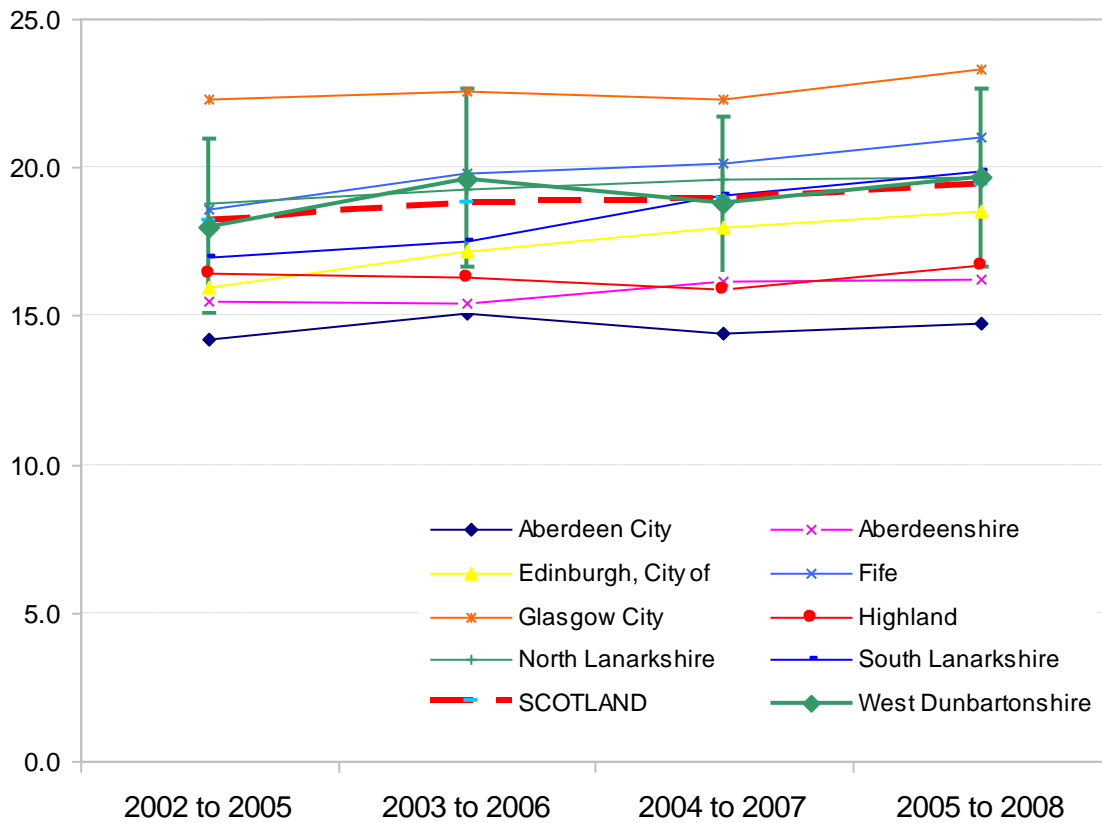
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 relative poverty rates in Stirling were slightly lower than the Scottish average.
- Over this period the percentage of households in relative poverty was around 17 or 18 percent.

West Dunbartonshire

Figure 35 - Percentage of households in relative poverty in West Dunbartonshire: 2002 to 2008 (4 year rolling average)



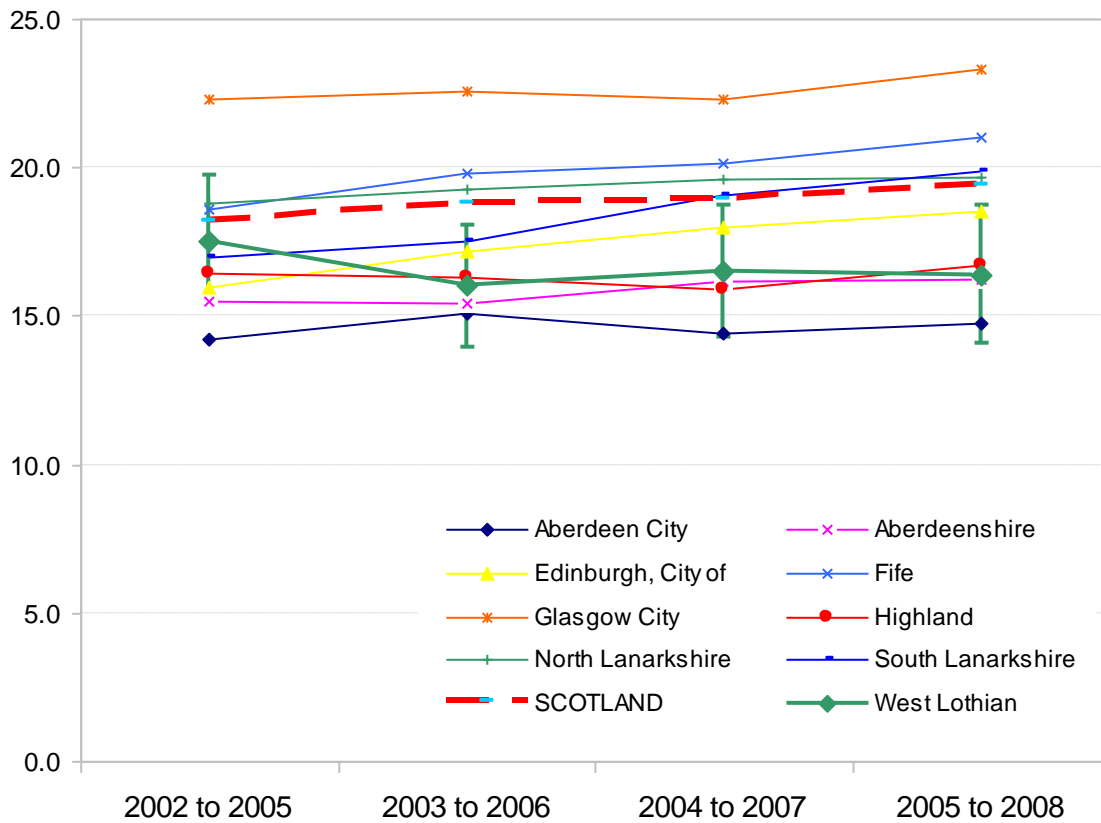
95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 relative poverty rates in West Dunbartonshire were close to the Scottish average.
- Over this period the percentage of households in relative poverty was around 19 or 20 percent.

West Lothian

Figure 36 - Percentage of households in relative poverty in West Lothian: 2002 to 2008 (4 year rolling average)



95 percent confidence intervals for this LA are indicated on chart by error bars

Source: Scottish Household Survey

- Between 2002 and 2008 relative poverty rates in West Lothian were lower than the Scottish average.
- Over this period the percentage of households in relative poverty was around 16 to 18 percent.

Guidance for using these figures

How accurate are these figures?

These figures have been produced from the Scottish Household Survey (SHS), a large household survey which interviews around 30,000 Scottish families every two years. As with any survey based estimates there is a degree of uncertainty around these estimates because of natural variation within the population. More accurate estimates can be obtained by bigger sample sizes and so the most accurate estimates here are the Scotland level estimates which are based upon the entire SHS sample.

The local authority estimates presented here are based on the SHS LA samples which are naturally smaller than the national sample and so these estimates are less accurate than the national figures. The SHS does not have an equal sample in every local authority and so estimates for LAs with bigger samples, such as Edinburgh and Glasgow are more accurate than those for LAs such as Shetland or Eilean Siar which have smaller samples.

Another source of uncertainty around these estimates is that the method used to link SHS data to the Family Resources Survey involves a random process and this too adds a degree of uncertainty to the estimates. The relatively small sample sizes for some LAs however, are the main source of variation in the data.

What can we say with these figures?

Readers will have noticed that there are error bars on the charts and these are around +/-2 or 3 percentage points for most LAs. These are estimates of the 95% confidence intervals for these figures which have been calculated from estimates of the variability within the SHS data and the degree to which the process used to produce these figures added to that.

The size of these confidence intervals, and the fact that the figures are presented using a four-year rolling average means that interpretations based on small, annual changes should be made with caution. The reasons for this are that:

- What appears as a small increase or reduction of poverty on an annual level may simply be the result of natural variation within the data.
- As we are using a four-year rolling average, for any two consecutive points three quarters of the data used to calculate the two figures will be the same.

These figures are most useful for tracking long-term changes in income and poverty rates at LA level. The most robust comparisons between figures for different years will be between those based on non-overlapping four year intervals. This would ensure that comparisons were made on completely separate samples of households within the local authority. In practise this will not always be possible and past trends, as well as the size of the confidence intervals for a particular LA will help to inform judgements.

Can I use these figures in the Housing Need and Demand Assessment (HNDA) for my local authority?

This is the first time that estimates of total household income have been produced from the SHS and the poverty rates and median incomes presented here are

suitable for use in HNDAs. Users producing HNDAs and interested in using these figures will want to bear a few things in mind:

- No data source is perfect and the advice of the SG income and poverty statistics team is that a mixture of sources are used to obtain a fuller picture of income in Scotland.
- See the “data sources and suitability” page of the income and poverty statistics for detail about the various data sources available for income and poverty research in Scotland (<http://www.scotland.gov.uk/Topics/Statistics/Browse/Social-Welfare/IncomePoverty/income-data-sources>)
- Users may consider carrying out their own analysis on the SHS datasets and using the variables created as part of this work - see question below for further detail.

Are these figures available below LA level?

The Scottish Household Survey is designed to produce robust LA-level figures every two years and SG analysts currently have no plans to publish SHS figures below LA level.

For some topics and for some areas it may be possible to produce analysis for geographical areas smaller than LAs by, for example, aggregating several year’s data. If users require analysis below LA level they should contact the income and poverty statistics team to discuss their requirements. It may be possible to carry out an ad-hoc analysis or for users to obtain the SHS data and produce figures themselves.

Can I get hold of the data?

The Scottish Household Survey data is available on the UK data archive for registered users to download. See the SHS section of the Scottish Government website for further information about obtaining these data.

During the work to produce these figures the Scottish Government income and poverty statistics team have produced a number of additional SHS variables, including an imputed total household income and household relative poverty variable. These could be linked to SHS datasets via the unique household identifier number. The income and poverty statisticians are currently considering the best way to make these additional data available to users. Users who are interested in using these variables should contact the team on the number below.

Methodology

The Scottish Household Survey is a face-to-face household survey which contains questions about income as well as a variety of other topics. It has a sample size of around 30,000 households per two-year sweep which is sufficient to report at an LA level biennially. It is therefore a useful source for researchers interested in carrying out local authority level analysis and indeed, for many topics it is used for this purpose.

Until now however, the SHS has been of limited use for the study of income and poverty across Scotland. This is because there is a key limitation in the SHS income data from the point of view of poverty analysts: Detailed income information is only

recorded for the Head of household and his or her spouse. This means that for larger households which contain *other adults* - those not in a relationship with the head of household - the survey under-reports complete household income. This is a problem because it means that some households will appear to have lower incomes than they actually do so that when poverty figures are calculated the wrong households will appear to be in poverty.

In 2008 Ipsos Mori carried out a feasibility study for the Scottish Government looking into this issue (the final report is available on the Scottish Government website at the following link: <http://www.scotland.gov.uk/Topics/Statistics/Browse/Social-Welfare/IncomePoverty/income-imputation-study6>). This project recommended a process for imputing income values for these *other adults* using data from the Family Resources Survey - a UK wide survey which collects detailed income data about households. This is the survey used to produce the official poverty estimates for Scotland and the UK, however it does not have a Scottish sample size sufficient to produce LA-level estimates. The process recommended by Mori has been followed in the production of these figures. Further detail about the method is available at the following link (<http://www.scotland.gov.uk/Topics/Statistics/Browse/Social-Welfare/IncomePoverty/income-imputation-study6>), however it is described below briefly.

1. Identified variables recorded for FRS and SHS other adults.

The process began by examining the FRS and SHS and identifying variables which were available for adults other than the highest income householder or his/her partner (referred to as *other adults*) on both datasets and which were reasonable determinants of income. Because relatively few variables are recorded for SHS *other adults* these were economic status, age, gender, tenure, relationship to household head and a few others.

2. Regressions on FRS to determine which variables were best determinants of income

Using the FRS, where income is available for these *other adults*, the relationship between these variables (identified from the SHS) and income was examined. A regression model approach was used to determine which of these variables were the best determinants of income. Economic status was by far the most useful with the other variables adding little to the model.

3. Hierarchical hot-deck imputation based on these variables

A hierarchical hot-deck imputation was then carried out using these variables which treated the FRS *other adult* incomes as “donors” and the SHS other adults as “recipients”. An example of how this process worked is that for an SHS *other adult* working full time, aged 20 - 29, in rented accommodation and who was unrelated to the head of household, the imputation programme would randomly select the income from an *other adult* matching these criteria from the FRS dataset and allocate it to the SHS adult. For further detail on this process see the Mori report (<http://www.scotland.gov.uk/Topics/Statistics/Browse/Social-Welfare/IncomePoverty/income-imputation-study6>) and the ONS project report on the income and poverty statistics website.

4. Output dataset with complete households income

The final product of the imputation process is an SHS dataset with “complete” household income for all households. Relative poverty figures are then calculated from this dataset in the similar way to those produced from the FRS.

- The household incomes are equivalised. This is an adjustment made to household income to enable meaningful comparisons to be made between households of different sizes. It is based on the notion that larger households require a larger income than smaller households to achieve a comparable standard of living. The incomes for larger households are reduced and the incomes for households of 1 person are increased. For further information about equivalisation see box 2 “What is equivalised income?” earlier in the report.
- The median equivalised household income is then calculated and sixty percent of this is defined as the relative poverty threshold.

5. Estimates of variability

To produce the confidence intervals which are used in the report estimates of the amount of uncertainty around the figures were produced. These took into account the variability in the SHS survey data and that produced by the imputation process (the imputation process described above contains a random element and so increases the variability around the estimates). For more detail of this see the ONS project report.

Contacts

If you have any comments or questions about these figures please contact the Scottish Government Income and Poverty Statistics Team.

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