

Household Analysis Review Group (HARG)

2010-Based Household Projections – Variant Projections Provisional Results

Contents

1.	Background	2
2.	Methodology.....	2
3.	Results	3
3.1	Scotland	3
3.2	Local Authorities.....	4
4.	Next Steps.....	4

Tables

Table 1:	Projected change in household numbers from 2010 to 2035, by local authority and variant projection	10
----------	--	----

Figures

Figure 1:	Variant household projections for Scotland	5
Figure 2:	Change in household types, 2010 to 2035, Scotland	6
Figure 3:	Average household size for Scotland, 2010 to 2035	7
Figure 4:	Change in age group of head of households, 2010 to 2035, Scotland	8
Figure 5:	Change in household numbers, 2010 to 2035, by local authority	9

Note

The results presented in this paper are provisional. They may differ from the final figures used in the published household projections. Please treat these figures as 'restricted' until after publication in June, and do not pass them on to anyone else without prior agreement from National Records of Scotland (NRS).

1. Background

This paper describes the draft 2010-based variant household projections, due to be published in June 2012. The variant household projections will provide a broad indication to the sensitivity of the household projections to key demographic assumptions. There are three variant household projections that will be published.

The first two variants are based on alternative population projections (high and low migration variants) published by National Records of Scotland (NRS) and were included in the 2008-based household projections. Since 2010, NRS have published additional population variants, based on alternative assumptions regarding fertility and life expectancy, however it was agreed at Household Analysis Review Group (HARG)2011¹ that the migration variants would continue to be the variants that are published with the principal household projection.

Headship rates are another key demographic variable that is used in the household projections. Introducing an additional variant that uses different headship rates was also discussed at HARG 2011. The third variant introduces a variant that uses alternative headship rates, as agreed at HARG 2011 and Population and Migration Statistics (PAMS) (May 2011²).

2. Methodology

The principal household projection is based on the principal population projection produced by National Records of Scotland (NRS), and is described in Household Analysis Review Group (HARG) [Paper 3 HARG 2012\(3\)](#). This population projection uses assumptions about fertility, mortality and migration that are thought most likely to occur over the next 25 years.

Variant 1: High migration

NRS also produces a variant population projection that assumes higher migration than the principal projection. This population projection is used as the basis for the high migration household variant. All other inputs and methodology are the same as the principal household projection.

Variant 2: Low migration

The NRS population projection with low migration assumptions is the basis for the low migration household projection. All other inputs and methodology are the same as the principal household projection.

Footnotes

- 1) [Paper 6 HARG 2011\(6\)](#) contains further information.
- 2) Further details can be found in the [Minutes](#) for Population and Migration Statistics (PAMS) Meeting May 2011.

Variant 3: Alternative headship rates

The principal household projection and the variants described above use headship rates that are projected from 1991 and 2001 census data using a modified exponential curve to estimate the number of households from the population projections ([Paper 3 HARG 2012 \(3\)](#) has further details). This method assumes that past trends in household formation will continue, however this is not necessarily the case.

The alternative headship rate household variant is based on the principal population projection. The headship rates used in this projection, however, are the midpoints between the projected trends used in the principal projection and headship rates that are assumed to be constant at the 2001 level.

3. Results

3.1 Scotland

The principal household projection shows the number of households in Scotland increasing from 2.36 million in 2010 to 2.89 million in 2035. This compares to 2.77 million and 3.01 million in 2035 for the low and high migration variants, respectively, and 2.81 million for the alternative headship variant. These projections can be seen in [Figure 1](#).

[Figure 2](#) compares the projected percentage change in households from 2010 to 2035 by household type and projection. It shows that increases in the number of smaller households and decreases in the number of larger households are projected by all variants. The high and low migration variants show similar patterns of change, as compared to the principal projection, but with the high migration variant showing higher, and the low migration variant showing lower numbers of households in all household types.

The alternative headship variant shows a different pattern of change, compared to the other projections. Whereas the total number of households at 2035 sits between the low migration variant and the principal projection, in all but one household types the scale of the change in the number of households in the alternative headship variant is smaller than the low migration variant, meaning that there are fewer smaller household and more larger households. The only exception to this is two adult households, where the change in the alternative headship variant is between that in the principal and low migration projections.

These differences are also reflected in the average household size ([Figure 3](#)). The trends in average household sizes for the principal, high and low migration variant are very similar (moving from 2.18 in 2010 to 1.94-1.96 at 2035), as the headship rate assumptions are the same. In contrast, the average household size for the alternative headship variant decreases more slowly, to 2.01, reflecting that the projected change in headship rates in this variant is smaller.

[Figure 4](#) compares the projected percentage change in the number of households with a head in each age group, from 2010 to 2035, for the variant projections. Increases are seen in the number of households in all age groups, with the largest

increases in the 75+ age group in all projections and smaller increases in younger households, particularly in the 45–59 group. The most difference between the variants is seen in the 16-29 and 30-44 age groups, and the least in the 75+ group.

3.2 Local Authorities

The variant household projections for local authorities follow similar patterns as those for Scotland, although there are exceptions. In particular, household numbers in Inverclyde are forecast to fall in all projections, and in Argyll and Bute in the low migration and alternative headship rate variants. The alternative headship rate variant always produces household projections for 2035 that are below that of the principal projection, but whether these are above or below the low variant projection varies by local authority.

Details for individual local authorities can be seen in [Figure 5](#) and [Table 1](#).

4. Next Steps

National Records of Scotland (NRS) will produce the final 2010-based variant household projections using the final communal establishment and 2011 household estimates. These projections will be published with the principal projection on 14 June 2012.

Household Analysis Review Group (HARG) members are asked to note the initial findings and state whether they are satisfied with the approach used so far, or whether alternative methods or additional analysis may be required.

NRS: Household estimates and projections branch
March 2012

Figure 1: Variant household projections for Scotland

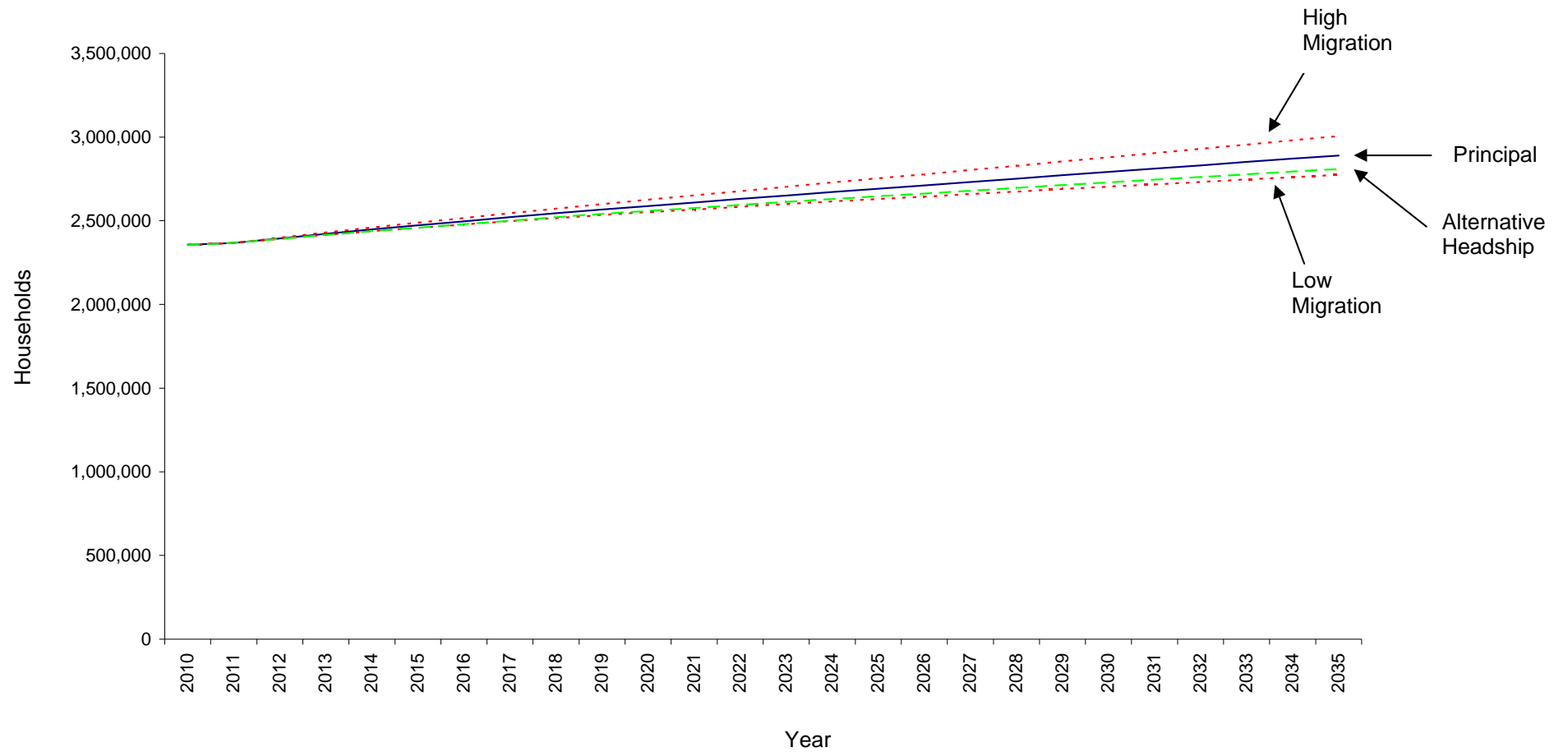


Figure 2: Change in household types, 2010 to 2035, Scotland

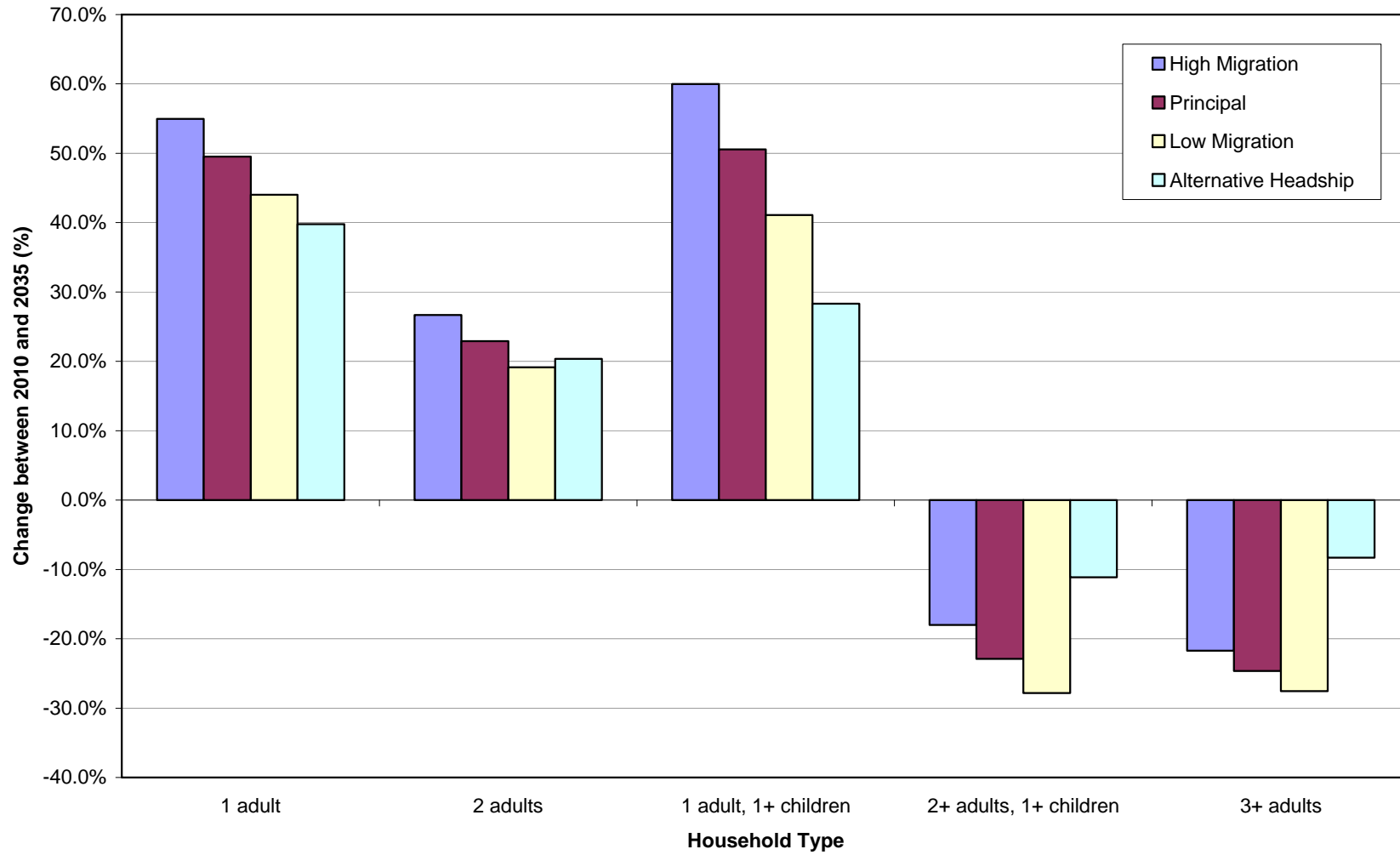


Figure 3: Average household size for Scotland, 2010 to 2035

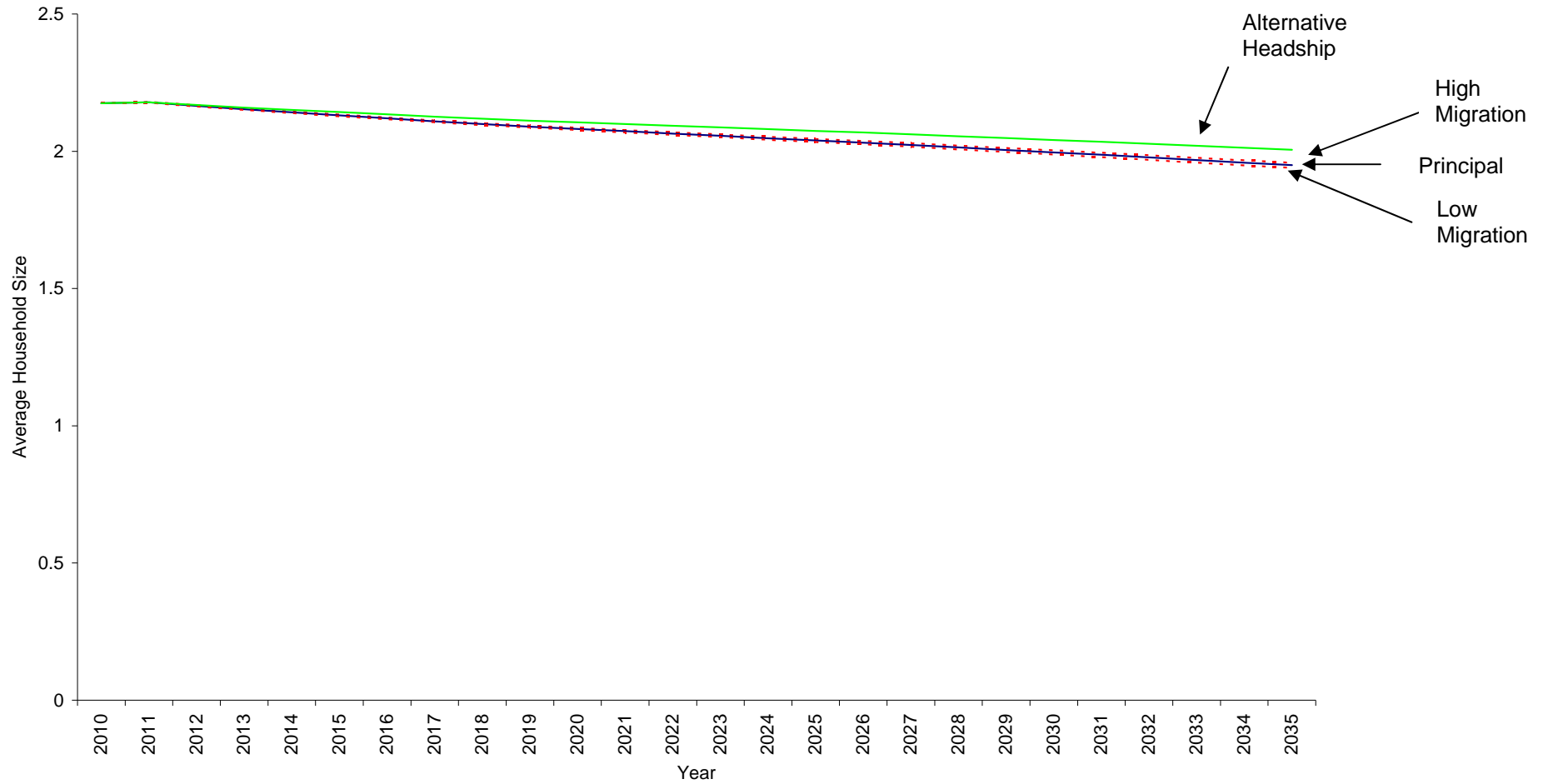


Figure 4: Change in age group of head of households, 2010 to 2035, Scotland

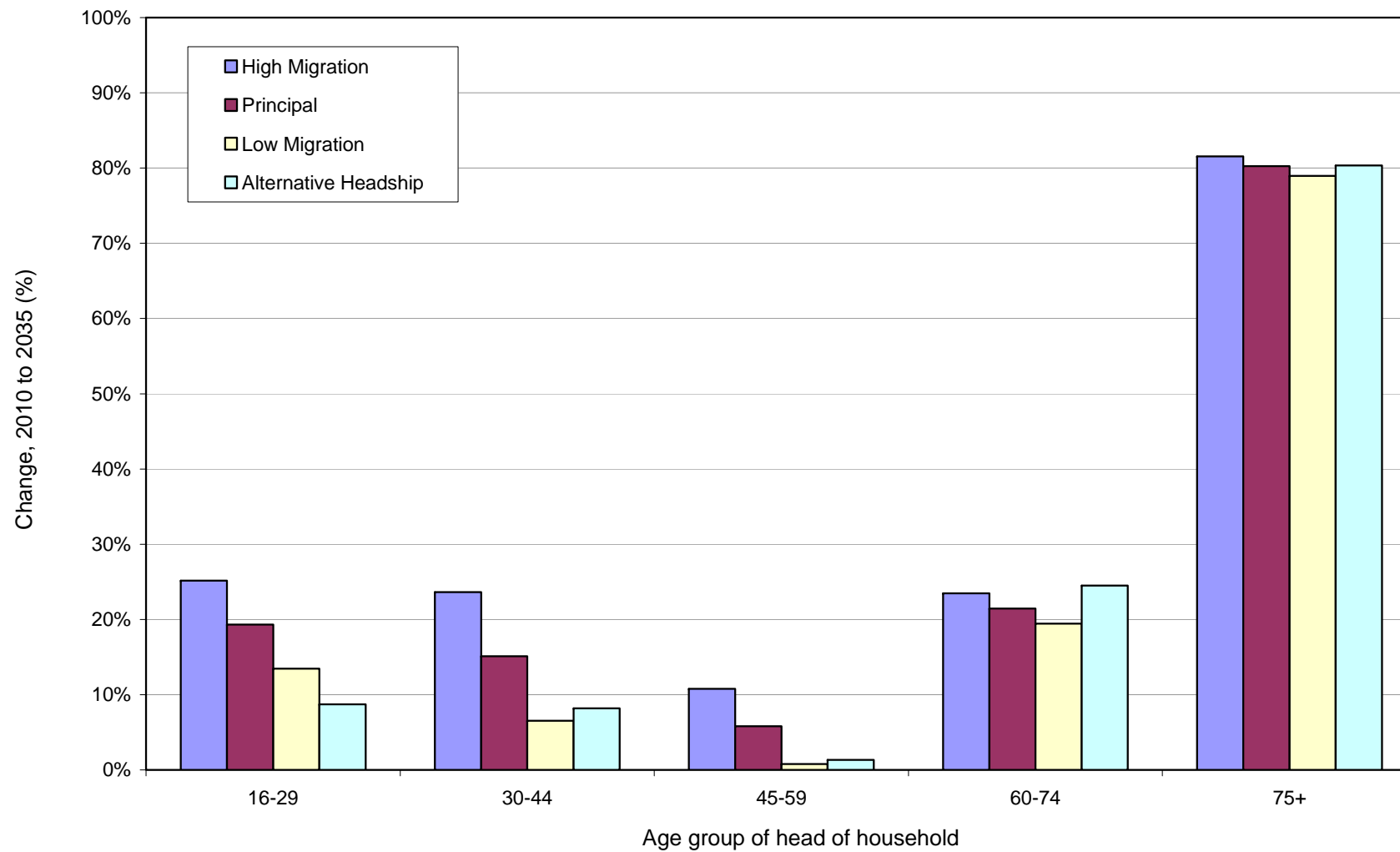


Figure 5: Change in household numbers, 2010 to 2035, by local authority

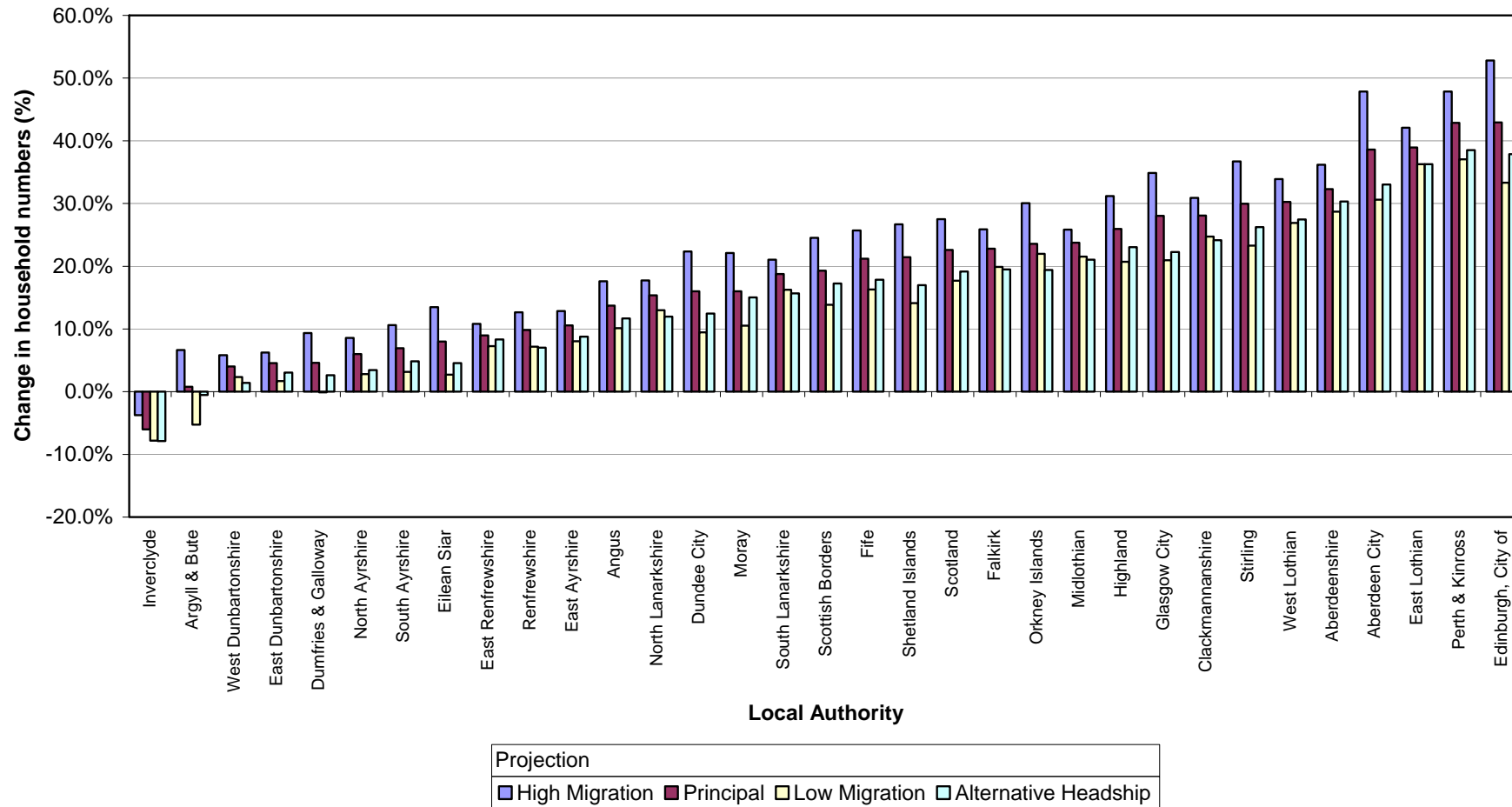


Table 1: Projected change in household numbers from 2010 to 2035, by local authority and variant projection

Local Authority	Projection											
	High Migration			Principal			Low Migration			Alternative Headship		
	2010	2035	Change (%)	2010	2035	Change (%)	2010	2035	Change (%)	2010	2035	Change (%)
Scotland	2,357,424	3,006,277	27.5%	2,357,424	2,890,381	22.6%	2,357,424	2,774,355	17.7%	2,357,424	2,809,296	19.2%
Aberdeen City	103,677	153,301	47.9%	103,677	143,686	38.6%	103,677	135,406	30.6%	103,677	137,910	33.0%
Aberdeenshire	103,770	141,334	36.2%	103,770	137,272	32.3%	103,770	133,546	28.7%	103,770	135,251	30.3%
Angus	50,568	59,466	17.6%	50,568	57,500	13.7%	50,568	55,677	10.1%	50,568	56,475	11.7%
Argyll & Bute	41,609	44,369	6.6%	41,609	41,940	0.8%	41,609	39,413	-5.3%	41,609	41,387	-0.5%
Clackmannanshire	22,953	30,044	30.9%	22,953	29,398	28.1%	22,953	28,630	24.7%	22,953	28,494	24.1%
Dumfries & Galloway	68,408	74,792	9.3%	68,408	71,553	4.6%	68,408	68,330	-0.1%	68,408	70,199	2.6%
Dundee City	70,401	86,124	22.3%	70,401	81,669	16.0%	70,401	77,064	9.5%	70,401	79,151	12.4%
East Ayrshire	53,722	60,638	12.9%	53,722	59,393	10.6%	53,722	58,042	8.0%	53,722	58,437	8.8%
East Dunbartonshire	43,010	45,684	6.2%	43,010	44,975	4.6%	43,010	43,729	1.7%	43,010	44,310	3.0%
East Lothian	42,798	60,808	42.1%	42,798	59,449	38.9%	42,798	58,321	36.3%	42,798	58,327	36.3%
East Renfrewshire	35,995	39,882	10.8%	35,995	39,231	9.0%	35,995	38,613	7.3%	35,995	38,984	8.3%
Edinburgh, City of	220,195	336,427	52.8%	220,195	314,767	42.9%	220,195	293,590	33.3%	220,195	303,523	37.8%
Eilean Siar	12,018	13,635	13.5%	12,018	12,977	8.0%	12,018	12,346	2.7%	12,018	12,564	4.5%
Falkirk	68,655	86,412	25.9%	68,655	84,315	22.8%	68,655	82,316	19.9%	68,655	82,035	19.5%
Fife	161,274	202,734	25.7%	161,274	195,481	21.2%	161,274	187,541	16.3%	161,274	190,087	17.9%
Glasgow City	282,196	380,592	34.9%	282,196	361,343	28.0%	282,196	341,364	21.0%	282,196	345,027	22.3%
Highland	101,833	133,590	31.2%	101,833	128,255	25.9%	101,833	122,924	20.7%	101,833	125,289	23.0%
Inverclyde	36,502	35,125	-3.8%	36,502	34,317	-6.0%	36,502	33,656	-7.8%	36,502	33,624	-7.9%
Midlothian	35,270	44,385	25.8%	35,270	43,645	23.7%	35,270	42,865	21.5%	35,270	42,695	21.1%
Moray	39,207	47,869	22.1%	39,207	45,486	16.0%	39,207	43,330	10.5%	39,207	45,102	15.0%
North Ayrshire	62,006	67,309	8.6%	62,006	65,709	6.0%	62,006	63,737	2.8%	62,006	64,142	3.4%
North Lanarkshire	144,865	170,571	17.7%	144,865	167,131	15.4%	144,865	163,682	13.0%	144,865	162,161	11.9%
Orkney Islands	9,308	12,104	30.0%	9,308	11,505	23.6%	9,308	11,353	22.0%	9,308	11,116	19.4%
Perth & Kinross	64,780	95,769	47.8%	64,780	92,543	42.9%	64,780	88,769	37.0%	64,780	89,737	38.5%
Renfrewshire	79,054	89,065	12.7%	79,054	86,840	9.8%	79,054	84,714	7.2%	79,054	84,608	7.0%
Scottish Borders	51,983	64,731	24.5%	51,983	62,006	19.3%	51,983	59,188	13.9%	51,983	60,943	17.2%
Shetland Islands	9,829	12,455	26.7%	9,829	11,937	21.4%	9,829	11,218	14.1%	9,829	11,501	17.0%
South Ayrshire	51,526	56,992	10.6%	51,526	55,089	6.9%	51,526	53,148	3.1%	51,526	54,011	4.8%
South Lanarkshire	137,228	166,116	21.1%	137,228	162,979	18.8%	137,228	159,539	16.3%	137,228	158,748	15.7%
Stirling	38,048	52,012	36.7%	38,048	49,451	30.0%	38,048	46,904	23.3%	38,048	48,032	26.2%
West Dunbartonshire	41,578	44,000	5.8%	41,578	43,242	4.0%	41,578	42,559	2.4%	41,578	42,164	1.4%
West Lothian	73,158	97,943	33.9%	73,158	95,294	30.3%	73,158	92,838	26.9%	73,158	93,261	27.5%