

Volunteering in Scotland: Calculation of hours volunteered and economic value.

TECHNICAL NOTE

As some local authorities have a small sample size there is a high degree of variability in local authority volunteer participation rates, as shown in Table 1 below. The variability in participation rates occur as the Scottish Household survey's estimates are based on a sample of the population, apparent differences between different years sub-samples may not reflect real differences in the population. It might be that the true values in the population are similar but the random selection of households for the survey has, by chance, produced a sample which gives different values.

For example in Falkirk volunteer participation rates vary from 14% in 2016 to 45% in 2017, taking a 4 year average gives a participation rate of 27% which will remove some of the variability in rates due to different sub-samples of the local area responding to the survey each year,

Table 1: Formal Volunteering Rates by Scottish Local Authority Areas, 2007-08 to 2018

Local Authority Area	2007-08	2009-10	2011	2012	2013	2014	2015	2016	2017	2018	4 Year Average
Aberdeen City	33%	32%	26%	27%	32%	29%	36%	25%	24%	18%	26%
Aberdeenshire	37%	35%	33%	31%	27%	31%	33%	32%	25%	26%	29%
Angus	31%	39%	34%	32%	31%	33%	33%	33%	32%	34%	33%
Argyll and Bute	41%	39%	28%	37%	33%	24%	19%	33%	20%	28%	25%
Clackmannanshire	32%	33%	22%	22%	26%	27%	26%	25%	32%	30%	28%
Dumfries and Galloway	34%	34%	29%	36%	31%	35%	23%	27%	19%	21%	22%
Dundee City	31%	27%	32%	22%	26%	28%	26%	21%	26%	28%	25%
East Ayrshire	28%	24%	18%	23%	31%	21%	20%	26%	17%	32%	24%
East Dunbartonshire	45%	30%	23%	24%	35%	36%	31%	21%	33%	19%	26%
East Lothian	37%	39%	34%	32%	34%	33%	38%	26%	33%	37%	33%
East Renfrewshire	35%	39%	53%	30%	33%	31%	30%	29%	28%	34%	30%
Edinburgh City	29%	32%	36%	34%	29%	34%	35%	32%	36%	29%	33%
Eilean Siar	36%	57%	50%	57%	48%	50%	36%	52%	35%	33%	39%
Falkirk	34%	26%	32%	21%	20%	17%	26%	14%	45%	22%	27%
Fife	22%	24%	27%	28%	24%	24%	21%	22%	23%	21%	22%
Glasgow City	25%	23%	26%	24%	21%	20%	20%	23%	21%	21%	21%
Highland	44%	47%	52%	44%	35%	37%	40%	48%	39%	37%	41%
Inverclyde	29%	21%	25%	24%	28%	25%	21%	25%	27%	19%	23%
Midlothian	37%	37%	39%	30%	30%	28%	26%	20%	28%	32%	26%
Moray	31%	33%	40%	36%	34%	34%	30%	36%	28%	30%	31%
North Ayrshire	28%	29%	31%	25%	32%	26%	30%	27%	27%	18%	25%
North Lanarkshire	24%	21%	26%	21%	20%	16%	21%	22%	27%	26%	24%
Orkney	38%	33%	48%	46%	35%	34%	19%	35%	32%	35%	30%
Perth and Kinross	39%	37%	25%	36%	30%	31%	31%	30%	26%	31%	29%
Renfrewshire	19%	19%	20%	23%	26%	26%	22%	31%	27%	26%	26%
Scottish Borders	41%	37%	30%	39%	43%	44%	30%	30%	35%	35%	32%
Shetland	43%	34%	43%	44%	46%	47%	50%	56%	55%	48%	52%
South Ayrshire	37%	30%	30%	28%	24%	23%	25%	26%	17%	29%	24%
South Lanarkshire	28%	24%	28%	25%	24%	21%	23%	25%	22%	25%	24%
Stirling	35%	30%	22%	45%	37%	43%	31%	32%	39%	38%	35%
West Dunbartonshire	26%	22%	27%	23%	23%	15%	18%	14%	16%	12%	15%
West Lothian	29%	25%	22%	26%	26%	16%	24%	29%	42%	31%	32%
Scotland	31%	30%	30%	29%	28%	27%	27%	27%	28%	26%	27%

Source: SHS (2007-08, 2009-10, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018)

To calculate the economic value of volunteering the number of hours volunteered are grouped into a number of categories as shown in Table 2. The mean hours volunteered in each category is calculated along with the % of volunteers providing hours with the category.

Due to the small sample sizes for some local authorities discussed above more than 1 years of data is used in these calculations. Unlike the overall volunteer participation rate the Scottish Household Survey only asks respondents the frequency with which they volunteer and the number of monthly hours of help they provide every 2 years. For this reason we combine the 2 most recent years Scottish Household Survey results to calculate the % of volunteers in each hours category along with the mean.

Table 2: Hours volunteered in last 4 weeks	Mean	% Volunteers
Less than an hour		
1-5 hours		
6-10 hours		
11-15 hours		
16-20 hours		
21-35 hours		
36 hours or more		

A fully worked example using Falkirk as an example is shown on the next page.

Calculating Formal Volunteering Economic Value - 2018 - Falkirk		
Hours volunteered in last 4 weeks	Mean	% of volunteers
Less than an hour	0.5	19%
1-5 hours	3.159	31%
6-10 hours	8.352	16%
11-15 hours	12.229	11%
16-20 hours	18.717	7%
21-35 hours	24.946	15%
36 hours or more	60	1%
Total adult population (16 and over)*	132,110	
*Source is NRS 2018 mid-year estimate		
Level of volunteer participation	SHS %	Pop. Est.
	27%	35,405
% of hours classification	Pop. Est. of vols	Est. hrs/month
19%	6,727	3,364
31%	10,976	34,672
16%	5,665	47,313
11%	3,895	47,627
7%	2,478	46,388
15%	5,311	132,484
1%	354	21,243
Total hours per month		333,091
Hours per annum	4,330,181	4.3
FTE weeks	123,719	
(35 hours per week)		
FTE jobs per annum	2,812	
(44 FTE weeks in a year)		
Average Scottish weekly wage	453.6	
(ASHE 2018 average (median) weekly earning for f/t employees (excluding overtime) in Falkirk)		
Annual economic value of volunteering	56,119,148	£56.1
Annual value inc. employment overheads	67,342,978	£67.3
(Additional 20% added to represent employment overheads such as pension and holiday pay)		

The % of volunteers is the average % of volunteers over 2 years (2016 and 2018) that have given time in each of the hours categories.

The mean hours are the average number of hours from 2016 and 2018 that volunteers have given in each hours category.

132,110 is the population of Falkirk for those aged over 16 from the National records of Scotland 2018 mid-year population estimate.

27% is the average participation rate (2015-2018) for Falkirk, multiplied by the population for Falkirk gives the volunteer population of 35,405.

Multiplying the % in each hours category by the volunteer population gives the number of volunteers in each category, for example 6,727 adults in Falkirk give less than an hour of help on a 4 weekly basis.

The population estimate for each hours category is multiplied by the mean number of hours to give the total hours volunteered in each hours category on a four weekly basis, for example those giving under an hour each 4 weeks give 3,364 hours every 4 weeks.

Adding the hours for each hours category gives the total hours of help given in 4 weeks, 333,091.

This figure is divided by 4 and multiplied by 52 to give the total hours per year, 4,330,181.

Dividing this by 35, gives the number of full time employee weeks given by volunteers each year (123,719).

Multiplying this figure by the average Scottish weekly wage for Falkirk gives an initial economic value of volunteering of £56,119,148. An additional 20% is added to represent employee overheads such as pensions and holiday pay to give a final economic value to £67.3 million.