

Local Government Tourism Statistics 2011-2012 - Confidence Intervals

Official Northern Ireland Tourism Statistics bring together the results from passenger and household surveys to create an overview of current tourism activity. The figures provide the best estimate of the number of overnight trips, nights and associated expenditure.

As NISRA cannot interview everyone who overnights in Northern Ireland, we sample households and passengers randomly to estimate the total number of trips, nights and expenditure. One way to assess sampling efficiency is to calculate the associated confidence intervals. For example, a survey might report a figure of 100 cases with a confidence interval of $\pm 6\%$ at a 95% confidence level. This means that if the same survey was conducted 2000 times the result would be within the range of $100 \pm 6\%$ (i.e. between 94 and 106) in 1900 of the 2000 samples. In simple terms, a confidence interval is a range that we believe the true figure lies "the vast majority of the time".

Example (using data from Table 1, 2011/2012 [LGD Publication](#))

If we select Belfast LGD from table 1 in the [Tourism Statistics LGD Publication](#), there were an estimated 1,114,000 overnight trips in this LGD in 2011-2012. The corresponding 95% confidence interval is $\pm 8\%$, we can then say that the true estimate for trips would fall between 1,021,000 and 1,206,000 in 1900 out of 2000 times. Figure 1 illustrates this.

To compare two LGDs we need to assess whether the lower confidence limit (green line in the charts) of one LGD is higher than the higher confidence limit (red line) of the second LGD. In other words, if there is a clear space between the green and red lines. For example, in figure 1, if we compare Belfast with Antrim, we can clearly see that there is no overlap between the Belfast green line and the Antrim red line. This means that there is a real difference in overnight trips between Belfast and Antrim. Alternatively figure 1 shows that the lines overlap for Antrim and Ards, which means we cannot conclude with certainty that there is a real difference in overnight trips between Antrim and Ards. Table 1 shows the actual LGD overnight trip values and the confidence interval ranges.

Figure 1: Confidence Interval all overnight trips LGD 2011-2012

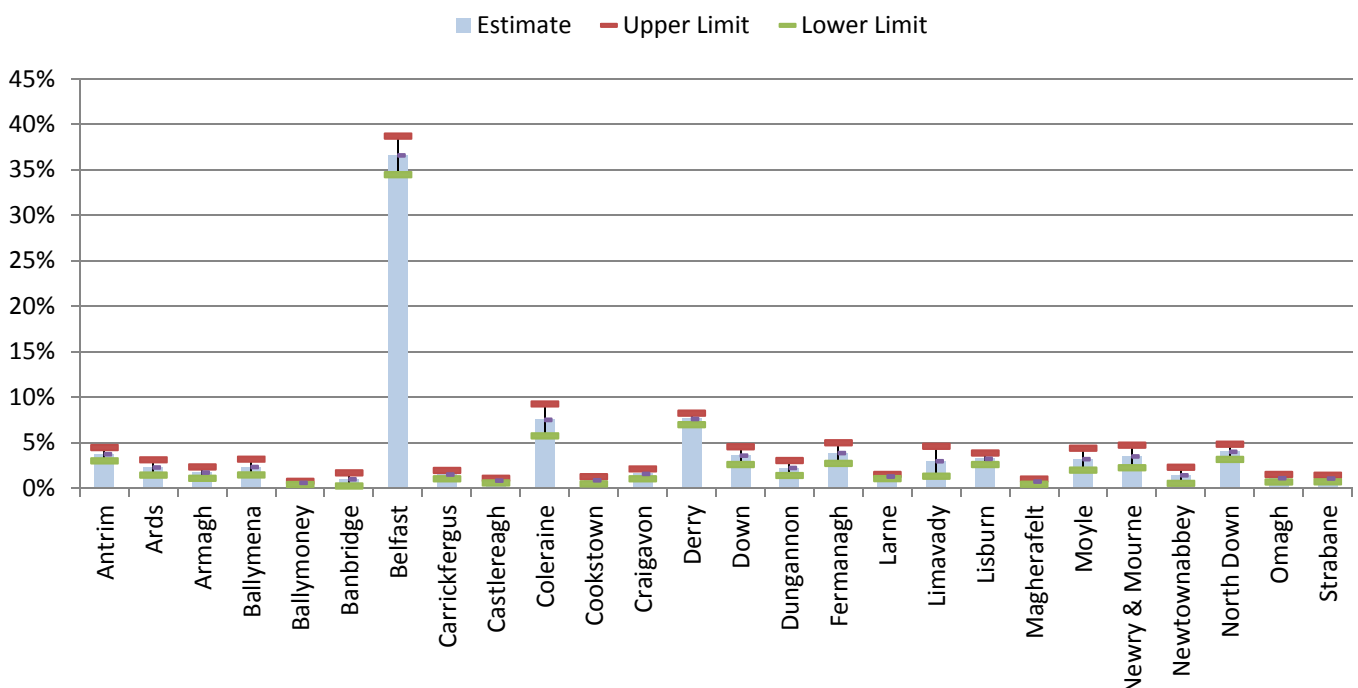


Table 1: Confidence Interval around overnight trips by LGD 2011-2012

Local Government District	Trips ¹		Confidence Interval (+/- %) ²	Range in which the true number of trips lies (000s) ³		Range in the proportion of all overnight trips (%) ³		Sample size (n) ⁵
	000s	Prop. overnight trips		Lowest	Highest	Lowest	Highest	
Antrim	145	4	25	109	182	2.7	4.5	425
Ards	116	3	35	75	157	1.8	3.8	325
Armagh	70	2	43	40	100	1.0	2.5	195
Ballymena	119	3	34	78	160	1.9	3.9	315
Ballymoney	15	0	45	8	21	0.2	0.5	90
Banbridge	42	1	85	6	78	0.2	1.9	160
Belfast	1,114	27	8	1,021	1,206	25.0	29.6	4,495
Carrickfergus	59	1	36	38	80	0.9	2.0	230
Castlereagh	26	1	46	14	37	0.3	0.9	135
Coleraine	489	12	17	406	573	9.9	14.0	830
Cookstown	36	1	50	18	54	0.4	1.3	125
Craigavon	52	1	50	26	78	0.6	1.9	230
Derry	202	5	14	174	229	4.3	5.6	550
Down	284	7	20	226	341	5.5	8.4	350
Dungannon	73	2	44	41	105	1.0	2.6	320
Fermanagh	275	7	22	214	336	5.2	8.2	340
Larne	41	1	25	30	51	0.7	1.2	160
Limavady	114	3	43	65	164	1.6	4.0	480
Lisburn	100	2	28	71	128	1.8	3.1	605
Magherafelt	28	1	45	16	41	0.4	1.0	120
Moyle	177	4	32	121	233	3.0	5.7	330
Newry & Mourne	198	5	31	137	260	3.0	5.7	385
Newtownabbey	77	2	61	30	124	0.7	3.0	195
North Down	151	4	25	112	189	2.8	4.6	620
Omagh	41	1	47	22	60	0.5	1.5	170
Strabane	36	1	46	19	52	0.5	1.3	145
Northern Ireland^{3,4}	4,079	100	5	3,863	4,296			12,302

Notes:

- 1) Figures derived from Northern Ireland Passenger Survey (NIPS) and the Continuous Household Survey (CHS) conducted by NISRA, the Survey of Overseas Travellers (SOT) conducted on behalf of Fáilte Ireland and the Household Travel Survey (HTS) conducted by CSO Ireland.
- 2) Confidence Intervals are available for the NIPS and CHS. The NIPS confidence interval is applied to the SOT and the CHS to the HTS to provide a combined confidence interval.
- 3) Figures may not add due to rounding
- 4) The Northern Ireland total will be greater than the estimate for overnight trips to NI as each destination visited will be counted
- 5) Estimate based on a sample size of <100 appear shaded as

The Tourism Statistics Review 2005 indicated that results should not be published when there are fewer than 100 in the sample. Rather than exclude this data, NISRA has provided all figures but colour coded tables to indicate where sample sizes fall below 100. Where this occurs, users are advised to treat such estimates with caution.