

Tasmanian Visitor Survey Confidence Intervals

TVS Visitors			TVS Visitor Nights			TVS Expenditure		
Estimate of Adult Visitors	Lower Limit	Upper Limit	Estimate of Nights	Lower Estimate	Upper Estimate	Estimate of Expenditure (\$'000)	Lower Limit (\$,000)	Upper Limit (\$,000)
1,000	581	1,419	40,000	24,944	55,056	\$1,500	\$740	\$2,260
1,500	1,037	1,963	60,000	42,957	77,043	\$2,000	\$1,190	\$2,810
2,000	1,493	2,507	80,000	60,981	99,019	\$5,000	\$3,891	\$6,109
2,500	1,949	3,051	100,000	79,018	120,982	\$8,000	\$6,593	\$9,407
3,000	2,405	3,595	150,000	124,161	175,839	\$10,000	\$8,395	\$11,605
3,500	2,861	4,139	200,000	169,378	230,622	\$20,000	\$17,413	\$22,587
4,000	3,318	4,682	300,000	260,029	339,971	\$30,000	\$26,444	\$33,556
4,500	3,774	5,226	400,000	350,966	449,034	\$40,000	\$35,489	\$44,511
5,000	4,230	5,770	500,000	442,182	557,818	\$50,000	\$44,546	\$55,454
6,000	5,143	6,857	600,000	533,672	666,328	\$60,000	\$53,615	\$66,385
7,000	6,057	7,943	700,000	625,430	774,570	\$70,000	\$62,698	\$77,302
8,000	6,970	9,030	800,000	717,450	882,550	\$80,000	\$71,792	\$88,208
9,000	7,884	10,116	900,000	809,725	990,275	\$90,000	\$80,898	\$99,102
10,000	8,797	11,203	1,000,000	902,251	1,097,749	\$100,000	\$90,017	\$109,983
15,000	13,370	16,630	1,100,000	995,020	1,204,980	\$150,000	\$135,779	\$164,221
20,000	17,947	22,053	1,200,000	1,088,028	1,311,972	\$200,000	\$181,809	\$218,191
25,000	22,529	27,471	1,300,000	1,181,268	1,418,732	\$250,000	\$228,082	\$271,918
30,000	27,117	32,883	1,400,000	1,274,735	1,525,265	\$300,000	\$274,574	\$325,426
40,000	36,307	43,693	1,500,000	1,368,421	1,631,579	\$350,000	\$321,261	\$378,739
50,000	45,517	54,483	1,600,000	1,462,323	1,737,677	\$400,000	\$368,119	\$431,881
100,000	91,849	108,151	1,700,000	1,556,433	1,843,567	\$450,000	\$415,124	\$484,876
150,000	138,613	161,387	1,800,000	1,650,745	1,949,255	\$500,000	\$462,252	\$537,748
200,000	185,758	214,242	1,900,000	1,745,255	2,054,745	\$600,000	\$556,778	\$643,222
250,000	233,233	266,767	2,000,000	1,839,955	2,160,045	\$700,000	\$651,504	\$748,496
300,000	280,987	319,013	2,500,000	2,316,112	2,683,888	\$800,000	\$746,239	\$853,761
350,000	328,970	371,030	3,000,000	2,796,153	3,203,847	\$900,000	\$840,788	\$959,212
400,000	377,129	422,871	3,500,000	3,279,339	3,720,661	\$1,000,000	\$934,958	\$1,065,042
450,000	425,415	474,585	4,000,000	3,764,930	4,235,070	\$1,100,000	\$1,028,557	\$1,171,443
500,000	473,776	526,224	4,500,000	4,252,186	4,747,814	\$1,200,000	\$1,121,391	\$1,278,609
550,000	522,162	577,838	5,000,000	4,740,369	5,259,631	\$1,300,000	\$1,213,268	\$1,386,732
600,000	570,520	629,480	5,500,000	5,228,738	5,771,262	\$1,400,000	\$1,303,994	\$1,496,006
650,000	618,801	681,199	6,000,000	5,716,555	6,283,445	\$1,500,000	\$1,393,376	\$1,606,624
700,000	666,953	733,047	6,500,000	6,203,080	6,796,920	\$1,600,000	\$1,481,221	\$1,718,779
750,000	714,926	785,074	7,000,000	6,687,573	7,312,427	\$1,700,000	\$1,567,336	\$1,832,664
800,000	762,667	837,333	7,500,000	7,169,295	7,830,705	\$1,800,000	\$1,651,528	\$1,948,472
850,000	810,128	889,872	8,000,000	7,647,507	8,352,493	\$1,900,000	\$1,733,603	\$2,066,397
900,000	857,255	942,745	8,500,000	8,121,469	8,878,531	\$2,000,000	\$1,813,370	\$2,186,630
950,000	903,999	996,001	9,000,000	8,590,442	9,409,558	\$2,100,000	\$1,890,634	\$2,309,366



Why estimates may differ from the “real” number?

The estimates in this report are based on information obtained from a **sample** of visitors coming to Tasmania. As with all surveys, the estimates are subject to sampling variability. This means the survey results may vary from the results that would have been produced, if all visitors could have been interviewed.

Therefore, it is often prudent to talk about results in a range, rather than as a single figure. These ranges are called “confidence intervals”. In other words, the true result lies within a range, to which a level of confidence can be given. The above table shows ranges for visitors, nights and expenditure estimates. Statistically, we are 95 percent confident that the actual result lies somewhere within the lower and upper limits of these ranges.

A basic assumption is that the bigger the sample (i.e. the more visitors that were interviewed), the smaller the range can be. Conversely, results based on a small number of interviews are less reliable, meaning the size of the range is bigger to compensate. This means that smaller estimates are less reliable than larger estimates.

How to interpret TVS statistics using confidence intervals – examples:

Visitors example (left hand table). The TVS estimated that 800,000 scheduled air and sea visitors came to Tasmania. The lower range of this result is 762,667 and the upper range is 837,333. Therefore, there are 19 chances in 20 (i.e. we are 95 percent confident) that the true number of visitors to Tasmania was somewhere between 762,667 and 837,333 visitors.

Expenditure example (right hand table). When a group of visitors returns a result that they spent \$1,500,000, we are 95 percent confident that they spent somewhere between \$1,393,376 and \$1,606,624.

Non sampling error

Non-sampling errors may occur due to such things as non-response and imperfections in reporting by surveyed visitors. Every effort has been made to keep non-sampling error to a minimum by careful design and testing of TVS questionnaires, efficient interviewing procedures and appropriate sampling methodology.