

Labour Force Survey – Data accuracy

Since the LFS is a sample survey, all LFS estimates are subject to both sampling error and non-sampling errors.

Non-sampling errors can arise at any stage of the collection and processing of the survey data. These include coverage errors, non-response errors, response errors, interviewer errors, coding errors and other types of processing errors.

The LFS closely monitors coverage errors and non-response errors, and produces regular monthly estimates of slippage rates and non-response rates for various age-sex groups at various geographic levels. The slippage rates are measures of coverage errors, which are calculated as the percentage difference between LFS population estimates and the most recent census-based population estimates. The non-response rates are calculated as the percentage of households eligible for an LFS interview that did not respond because of a refusal, temporary absence, no answer, or other such reason.

The extent of many of the other types of non-sampling errors, as well as their impacts, is more difficult to quantify. The LFS includes quality control processes for the coding of industry and occupation information, and all of the results of the regular survey processing are closely monitored so that changes can be made to the processes as needed. As well, the performance of LFS interviewers is also monitored and training updates and reminders are distributed regularly.

Sampling errors associated with survey estimates are measured using standard errors of the estimates obtained from jackknife variance estimation procedures. These standard errors are calculated regularly for many LFS estimates. Estimates of the standard errors for both levels of the estimates and changes in the levels over time are calculated. As well, approximate sampling variability tables are regularly produced that can be used to obtain approximate coefficients of variation for LFS estimates as a function of the size of the estimate and the geographic area. All LFS products contain information about approximate measures of sampling error and users of LFS data are urged to make use of them while analyzing LFS data.

At the Canada level, the approximate coefficient of variation (CV) can be obtained using the following table, by finding the monthly (or annual average) estimate less than or equal to the estimate of the characteristic of interest. For example, for a monthly estimate of 340,000 unemployed youth 15-24, the approximate CV would be 2.5%.

Approximate coefficients of variation for LFS monthly and annual average estimates at the Canada level:

Coefficient of variation	Size of estimate	
	Monthly	Annual
1%	1, 089,600	407,100
2.5%	308,100	114,800
5%	132,100	50,300
7.5%	75,600	28,900
10%	41,900	15,500
15%	24,000	8,900
20%	15,800	5,900
25%	11,300	4,200
30%	8,600	3,200

The smaller the CV, the more reliable the estimate is. Generally, estimates with CVs less than or equal to 15% should be considered reliable enough for most purposes. Estimates with CVs greater than 15% but less than or equal to 25% are reliable enough for some purposes but should be used with great caution. Estimates with CVs greater than 25% should be considered as unreliable and should not be used.

For CVs of monthly and annual estimates for provinces, please refer to section 7 of the Guide to the Labour Force Survey available under Questionnaire(s) and reporting guide(s) above.