

Employment in Canada: The establishment survey has been much less volatile since 2012

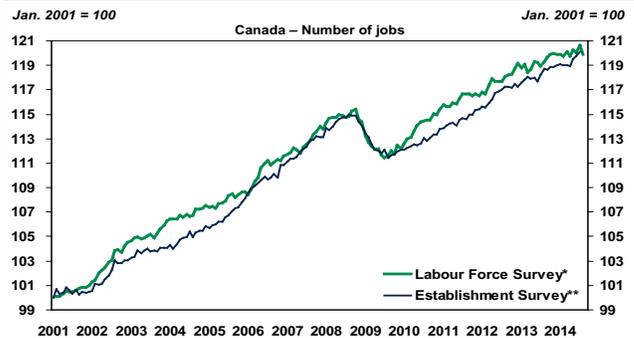
Like some other countries, including the United States, Canada has two separate surveys that track employment. The best known, the *Labour Force Survey (LFS)*, is conducted among households. Its main objective is to divide up the population of working age into three mutually exclusive categories: those who are working, the unemployed and those who do not participate in the labour force. The *LFS* is also the official source of information for the unemployment rate. The *LFS* data attract close attention from investors, economic commentators, the media and government. Recently, however, some criticism has emerged about the *LFS* data. The numbers seem to be more volatile than in the past, with heavy job losses and strong gains following each other in succession. Moreover, the recent error by Statistics Canada in the release of the July *LFS* results has fuelled concerns about these data.

The second survey is used to a much lesser degree by the economic community and garners far less attention: the *Survey of Employment, Payrolls and Hours (SEPH)*. The main goal of the *SEPH* is to take a monthly snapshot of the level of compensation, the number of jobs and the number of hours worked. The *SEPH* employment data come from a survey of payroll deductions provided by the Canada Revenue Agency.

The *LFS* and the *SEPH* clearly use different methodologies and definitions of employment but, as may be seen in graph 1, the employment trends revealed by the two surveys have been fairly similar from a historical perspective, if we make a few statistical adjustments.¹

For instance, the average monthly variations in employment between 2001 and 2011 have been nearly identical² in the two surveys. The *LFS* has shown the creation of 15,800 jobs on average, while the *SEPH* shows an increase of 15,100 jobs

Graph 1 – Job growth according to the two surveys is similar over the long term



* Excluding self-employed workers; ** Excluding unclassified enterprises.
Sources: Statistics Canada and Desjardins, Economic Studies

Graph 2 – The Labour Force Survey has been more volatile in recent years

CANADA
Monthly variations* in employment during the period (in thousands)

	According to the LFS**		According to the SEPH***	
	Average	Standard deviation	Average	Standard deviation
Since 2001	16.0	±38.0	15.9	±35.2
From 2001 to 2011	15.8	±36.9	15.1	±36.9
Since 2012	16.9	±42.8	19.3	±27.5
Since 2013	10.0	±46.3	18.9	±29.5
Since 2014	13.6	±49.3	19.4	±31.1

* The latest reading used for both surveys is that of July 2014; ** Excluding self-employed workers; *** Excluding unclassified enterprises.
Sources: Statistics Canada and Desjardins, Economic Studies

(graph 2). In both cases, the standard deviation is the same (±36.9), evidence of equal volatility for both surveys. Given that they so closely resemble each other, it is understandable that the *SEPH* attracts less attention, since its data are released nearly a month and a half after those of the *LFS*.

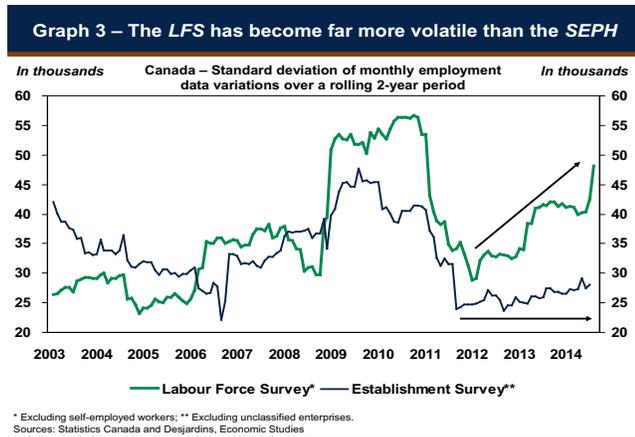
However, a significant divergence has emerged between the two surveys since 2012, in that the *LFS* data have become far more volatile. For example, the standard deviation of the *LFS* since 2013 is ±46.3, versus ±36.9 between 2001 and 2011. As for the *SEPH*, the standard deviation

¹ In order to make the fairest possible comparison, self-employed workers have been excluded from the *LFS* data.

² The *SEPH* data begin in 2001.

since 2013 is just ± 29.5 , less than that of the *LFS* for the same period.

One might nevertheless think that the recent upswing in the standard deviation of the *LFS* is actually the reflection of a statistical phenomenon linked to a smaller sample. The standard deviation of the *LFS* since 2014 is greater than that since 2013, which in turn is higher than that since 2012. However, this is not the case. Graph 3 shows the standard deviation of both surveys over a rolling 2-year period. We note that the volatility of both surveys increased in 2009 and 2010 due to the turbulence linked with the Great Recession. A significant lessening of volatility was observed after that. However, the volatility of the *LFS* has started increasing again since 2012, and this phenomenon has even intensified recently. Meanwhile, for the *SEPH*, the volatility has not only remained stable since 2012, but has stayed at a much lower level. The conclusion is simple: the *SEPH* results have been far more reliable than those of the *LFS* in recent months.



As may be seen in graph 4, the same phenomenon shows up in the employment data for both Quebec and Ontario. In fact, the volatility of the provincial results even appears to be greater, which is not surprising since their samples are smaller.

Implications: Analysts, investors, economic commentators and government decision-makers would do well to pay more attention to the *SEPH* results, in order to have a better and less volatile picture of the labour market situation. On this point, the recent *SEPH* data paint a much more positive picture of the employment trend. For example, the average monthly job growth since 2013 has been 18,900 according to the *SEPH*, while the *LFS* shows an average increase of only 10,000 jobs per month. We would point out that the creation of approximately 20,000 jobs per month is more

Graph 4 – Volatility is even more evident in the provincial data

QUEBEC
Monthly variations* in employment during the period (in thousands)

	According to the <i>LFS</i> **		According to the <i>SEPH</i> ***	
	Average	Standard deviation	Average	Standard deviation
Since 2001	3.2	± 17.2	2.2	± 11.1
From 2001 to 2011	3.2	± 17.4	2.5	± 11.3
Since 2012	3.4	± 16.8	1.0	± 10.4
Since 2013	-0.8	± 17.5	-0.3	± 12.8
Since 2014	-3.5	± 20.2	-1.9	± 10.1

ONTARIO
Monthly variations* in employment during the period (in thousands)

	According to the <i>LFS</i> **		According to the <i>SEPH</i> ***	
	Average	Standard deviation	Average	Standard deviation
Since 2001	5.6	± 23.9	5.5	± 16.8
From 2001 to 2011	5.1	± 22.4	5.1	± 17.6
Since 2012	7.6	± 29.7	7.4	± 13.0
Since 2013	4.5	± 31.9	8.0	± 13.1
Since 2014	9.9	± 33.9	9.8	± 16.7

* The latest reading used for both surveys is that of July 2014; ** Excluding self-employed workers; *** Excluding unclassified enterprises.
Sources: Statistics Canada and Desjardins, Economic Studies

in line with the economic growth that has been recorded in Canada in recent months.

Under these conditions, Statistics Canada might try to bring forward the release of the *SEPH* data, to have a smaller time lag from those of the *LFS*. In the United States, these two types of survey data are released at the same time, and the analysis of the employment trend is based on the establishment survey rather than the household survey.

Statistics Canada could also consider the option of releasing the employment data from the *LFS* only once per quarter, which would reduce their volatility. Some European countries, such as France and the United Kingdom, already use that approach. As for the unemployment rate numbers arising from the *LFS*, they are far less variable due to their nature; therefore they could still be released on a monthly basis.

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