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Interpreting population totals from the Labour Force Survey

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Interpreting population totals from the Labour Force Survey

The Labour Force Survey (LFS) is a monthly survey of Canadian households carried out by Statistics Canada. The main objective of the LFS is to classify the working-age population into three mutually exclusive groups based on their labour force status (employed, unemployed and out of the labour force) to produce key monthly labour market indicators, such as the employment and unemployment rates.

The methodology of the LFS is optimized to produce reliable information about month-to-month changes in these indicators. This includes a rotating panel sample design, in which households remain in the sample for six consecutive months. This results in a month-to-month overlap of five-sixths of the LFS sample, which makes the design more efficient for estimating month-to-month changes.

LFS results are released approximately 10 days after the completion of data collection. As such, the LFS estimates are the first of the major monthly economic data series to be released at Statistics Canada. Used in combination with other sources, such as the Survey of Employment, Payrolls and Hours (SEPH), the LFS is relied upon by policy makers, researchers, analysts and the public to monitor changes in labour market conditions in Canada.

Many indicators published from the LFS are presented as rates, such as the employment and unemployment rates, while others are presented as counts, such as the number of people who are employed and unemployed. The LFS also publishes estimates for the total population aged 15 and older – this series is used as the denominator for the employment rate, and is designed to be representative of the LFS survey target population.

This note provides information about population totals in the LFS, including details on who is included in the survey target population, and a description of the methodology used to produce these monthly population totals. The note also provides guidance on how to interpret population statistics in the LFS, and discusses the extent to which the LFS can be used to examine disaggregated labour market indicators for new immigrants and non-permanent residents (NPRs), two groups whose population has increased notably in recent years.

Who is included in the LFS target population?

The Labour Force Survey (LFS) target population includes all persons aged 15 years and older whose usual place of residence is in Canada, including both non-permanent residents (NPRs)—that is, those with a work or study permit, their families, asylum claimants, protected persons and related groups—as well as permanent residents (landed immigrants) and the Canadian-born population.¹

Populations excluded from the LFS target population include those living on reserves, full-time members of the regular Armed Forces and persons living in institutions (including inmates of penal institutions and patients in hospitals and nursing homes).²

How are totals for the population aged 15 and above derived in the LFS?

Information gathered from LFS respondents is weighted to represent the survey target population using population control totals. Survey weights are calibrated to the population control totals for 24 age-sex groups, by province, as well as to population control totals for economic regions (ERs), census metropolitan areas (CMAs) and some census agglomerations (CAs). This calibration process ensures that each population control group is represented in LFS estimates in proportion with their representation in the total population.

Population control totals in the LFS are produced by Statistics Canada's Centre for Demography using methods and data inputs which are very similar to those used to produce Canada's official demographic estimates, with some minor differences related to exclusions from the LFS target population, and to the fact that LFS estimates

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1. In the LFS, information about all household members is collected from one well-informed member of the household. Respondents are asked to provide information about "all persons living at this address". To mitigate the risk of undercoverage, respondents are asked two follow-up questions: "Is anyone else staying at [this address] temporarily?" and "Are there any other persons who usually live at [this address] but are now away at school, in hospital, or somewhere else?". Interviewers are instructed to include all household members who usually live at the address, including non-permanent residents. Information about all household members is included in LFS estimates, unless it is determined that they are not part of the survey target population. Detailed information about the LFS questionnaire are available on [Statistics Canada's website](#).
 2. The LFS target population includes all provinces and territories. However, the LFS uses a different methodology for the territories, and labour market indicators for Yukon, the Northwest Territories and Nunavut are reported separately.

are produced and released in advance of demographic estimates. These population control totals are updated each month, using the available information on demographic changes at the time that LFS estimates are produced, including preliminary information on month-to-month changes in the number of permanent residents and NPRs, and account for other components of demographic growth, such as births, deaths and interprovincial migration.

More information on the LFS weighting and calibration methodology can be found in the document [Methodology of the Canadian Labour Force Survey](#).

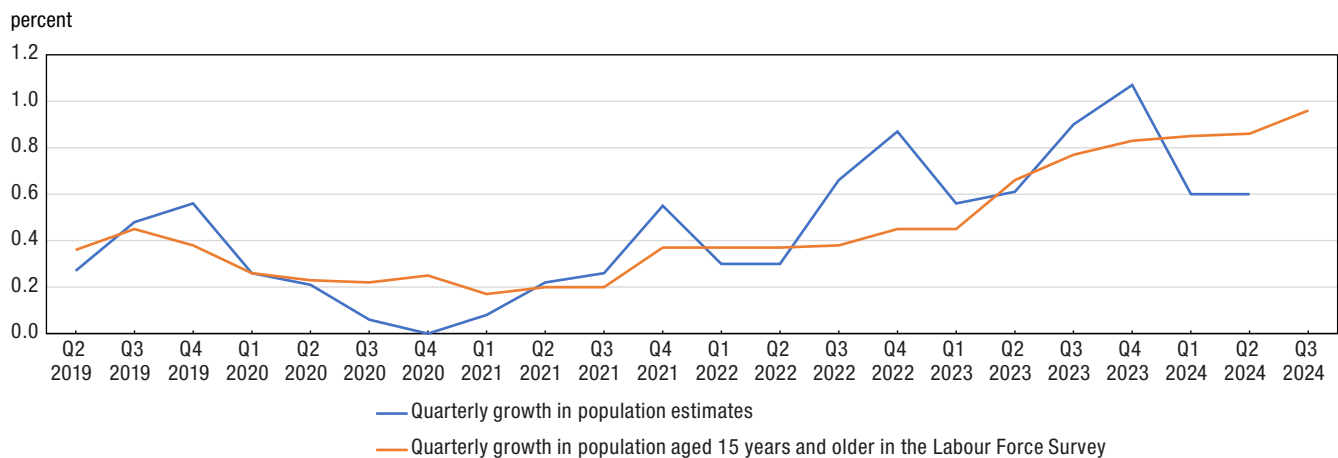
How do population control totals used in the LFS and official demographic estimates differ?

A key methodological distinction between population control totals in the LFS and official demographic estimates is that in the LFS, changes in the number of NPRs are accounted for using 12-month moving averages. This moving average is based on the most recently published quarterly estimates of the number of NPRs from demographic estimates, [which are calculated using administrative data obtained from Immigration, Refugees and Citizenship Canada \(IRCC\) and demographic adjustments](#).

The use of moving averages helps to mitigate the impact of large monthly variations and seasonal patterns in the number of NPRs, helping to provide more stable and reliable signals of month-to-month changes in labour market conditions. However, this can contribute to a difference between LFS population control totals and official demographic estimates.

For example, Canada’s population growth, as measured by official demographic estimates, started to accelerate in the second half of 2022 (Chart 1). Because LFS population totals account for variation in the number of NPRs using moving averages, this acceleration was reflected in the LFS beginning in early 2023.

Chart 1
Quarterly growth in the population estimates and quarterly growth in the population aged 15 years and older in the Labour Force Survey, Canada



Note: Reference period is the first day of the quarter for the population estimates and the reference week of the first month of the quarter for the Labour Force Survey.
Sources: Statistics Canada, Quarterly Population Estimates, table 17-10-0009-01, and Labour Force Survey, table 14-10-0287-01.

How has recent population growth been reflected in the LFS?

The growth rate of the population, from January 1st, 2023 to January 1st, 2024 (3.2%) was the highest since 1957 (3.3%). According to [official demographic estimates](#), the Canadian population grew by close to 1.3 million people in 2023. In the first quarter of 2024, the population further increased by 0.6%. Immigrants and NPRs have accounted for almost all of recent population increases.

LFS results [have reflected this strong population growth](#). In the 12 months to June 2024, employment in Canada rose by 343,000, or by 1.7%. Over the same period, the population aged 15 and older in the LFS has grown by 3.4%, twice the pace of employment growth. As a result, the employment rate—the proportion of the population aged 15 years and older who are employed—fell by 1.1 percentage points, from 62.2% in June 2023 to 61.1% in June 2024. This indicates that employment growth over the past year has generally not kept pace with population growth.

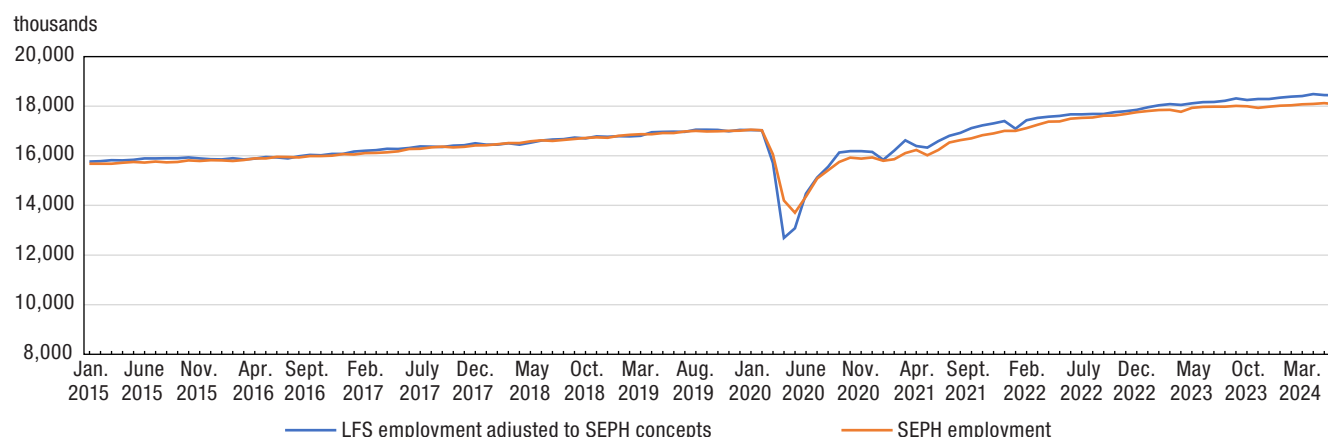
How should population totals and employment estimates from the LFS be interpreted?

While LFS population control totals are aligned with official demographic estimates in terms of both sources and methods, each data series is produced independently. Unlike official demographic estimates, the LFS is not optimized or designed to monitor changes in the size of the population. Official demographic estimates should be considered the official measure of population change in Canada.

The LFS provides an accurate reflection of the labour market situation of all those belonging to the survey target population, including NPRs. Statistics Canada conducts ongoing assessments of the quality of LFS estimates. Employment statistics from the Survey of Employment Payrolls and Hours (SEPH), which are based on a census of payroll administrative records from the Canada Revenue Agency and produced independently from the LFS, continue to align with LFS employment levels (adjusted to SEPH concepts³) (Chart 2). This indicates that aggregate labour market indicators from the LFS remain representative of the survey target population.

Chart 2

Employment levels in the Labour Force Survey and in the Survey of Employment, Payrolls and Hours



Note: Data for provinces only.

Sources: Statistics Canada, Labour Force Survey, custom tabulation, and Survey of Employment, Payrolls and Hours, table 14-10-0220-01.

To what extent can the LFS be used to examine disaggregated labour market indicators for new immigrants and non-permanent residents?

The precision of LFS estimates associated with specific population groups may vary, depending on a number of factors, including sample size for the various groups and whether or not survey weights are calibrated for the group in question. As noted earlier, LFS weights are calibrated to population control totals for 24 age-sex groups, by province and selected sub-provincial geographies. Supplementary weights calibrated to population control totals for Indigenous groups and racialized groups are also available. Disaggregated estimates of counts associated with population groups to which LFS survey weights are calibrated will be more likely to be representative of their actual population sizes.

3. More information about the comparability of LFS and SEPH employment estimates can be found in the [Guide to the Survey of Employment, Payrolls and Hours](#).

Interest for labour market information about immigrants and NPRs has increased in recent years, in the context of their strong population growth. The LFS publishes monthly labour market indicators disaggregated by immigrant status since 2006.⁴ However, because survey weights are not specifically calibrated by this dimension, estimates of immigrants from the LFS may differ from official demographic sources. For this reason, users are encouraged to focus on rates rather than totals when analyzing indicators for immigrants in the LFS.

In the LFS, non-permanent residents represent the majority of a larger group which includes all those who were not born in Canada and have never been a landed immigrant. However, NPRs are not identified directly in the LFS questionnaire, and disaggregated labour market indicators for NPRs are currently not available in the LFS.

Other data sources from Statistics Canada can be used to examine the labour force characteristics of immigrants and NPRs in Canada. This includes the [Census of Population](#),⁵ which provides a comprehensive socio-demographic portrait of Canada's labour force, as well as administrative sources such as the [Longitudinal Immigration Database \(IMDB\)](#).⁶

Statistics Canada regularly publishes special studies on the labour market situation of immigrants and NPRs in Canada using a combination of survey and administrative sources. For example, a recently released report examined [the transition to permanent residency of temporary foreign workers across work permit programs](#), while another provided insights on the [distribution of paid employment by industry of temporary foreign workers](#). These and other studies are published in the publication series "[Economic and Social Reports](#)". Statistical information about these populations can also be found on Statistics Canada's portal [Immigrants and non-permanent residents statistics](#).

Conclusion

The methodology of the LFS is optimized to monitor month-to-month changes in labour market conditions in Canada and in the provinces. Population control totals in the LFS are produced by Statistics Canada's Centre for Demography, and are designed to support the objectives of the survey.

While the LFS population totals are generally aligned with official demographic estimates, numbers from the two sources should be compared with caution, given the different goals of the programs and the methodological differences outlined in this note. Official demographic estimates should be considered the official measure of population change in Canada.

Aggregate labour market indicators from the LFS, including employment totals, are representative of the entire survey target population, including the Canadian-born population, landed immigrants and NPRs. However, the LFS methodology is not optimized to produce disaggregated labour market indicators for NPRs.

With the upcoming LFS historical revision, scheduled for early 2025, population control totals in the LFS will be produced using a revised method for calculating the 12-month moving average of NPRs. This is expected to contribute to a somewhat closer alignment between LFS population totals and official demographic estimates. More information about these changes will be available in the coming months.

On an ongoing basis, Statistics Canada is exploring new opportunities to further optimise the sources and methods involved in producing LFS control totals. For example, in recent years, in conjunction with the introduction of new survey questions to identify members of racialised groups, weighting and calibration processes for these groups have been improved. Similarly, work is ongoing to evaluate the feasibility of enhancements to the treatment of NPRs in the LFS.

4. See Table: 14-10-0082-01 [Labour force characteristics by immigrant status, three-month moving average, unadjusted for seasonality \(statcan.gc.ca\)](#).

5. Despite efforts to obtain a comprehensive count when conducting a census in a large and diverse country like Canada, undercounting of some demographic groups can occur, including for more mobile and precarious populations like NPRs. Extensive coverage studies are conducted following each census. Official demographic estimates as well as population totals in the LFS include an adjustment for census net undercoverage.

6. The IMDB combines administrative files on immigrant admissions and non-permanent resident permits from Immigration, Refugees and Citizenship Canada (IRCC) with tax files from the Canada Revenue Agency. The IMDB is a comprehensive source of longitudinal data that plays a key role in understanding the economic outcomes of immigrants and non-permanent residents.

Resources

[Guide to the Labour Force Survey](https://www150.statcan.gc.ca/n1/en/catalogue/71-543-G): <https://www150.statcan.gc.ca/n1/en/catalogue/71-543-G>

[Methodology of the Canadian Labour Force Survey](https://www150.statcan.gc.ca/n1/en/catalogue/71-526-X): <https://www150.statcan.gc.ca/n1/en/catalogue/71-526-X>

[Labour Force Survey in brief: Interactive app](https://www150.statcan.gc.ca/n1/pub/14-20-0001/142000012018001-eng.htm): <https://www150.statcan.gc.ca/n1/pub/14-20-0001/142000012018001-eng.htm>

[Statistics Canada's Labour Statistics Portal](https://www.statcan.gc.ca/labour): <https://www.statcan.gc.ca/labour>