SOCIETY AND THE ECONOMY: THE EVOLUTION OF LABOUR STATISTICS

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From the first census in present day Canada in 1666 — an enumeration in New France that identified professions and trades for nearly 800 people, there has been an interest in recording and analyzing the world of work. Today, Statistics Canada continues to foster methods and approaches that respond to and reflect the evolving dynamics of the Canadian labour market.

Labour statistics are somewhat unique in their ability to situate broad social changes in the context of long-term structural shifts in the economy. The Labour Force Survey (LFS), Statistics Canada's largest and longest-running household survey, was launched in 1945 in response to the urgent need for data related to the transition from a war-time to a peace-time economy.[1] Since then, the LFS has been

1 Usalcas, Janine, and Mark Kincack. 2017. *History of the Canadian Labour Force Survey, 1945 to 2016*. Statistics Canada catalogue number 75-005-M. Ottawa, Ontario. www150.statcan.gc.ca/n1/pub/75-005-m/75-005-m2016001-eng.htm

an essential source of information on the changing face of Canadian society and the Canadian economy.

SOCIO-DEMOGRAPHIC SHIFTS

One of the most significant changes in the labour force over the last century has been the increasing participation of women, which coincided with other related trends, such as increased participation in higher levels of education, delayed marriage and childbearing, and increased separation and divorce. The 1901 Census of Population recorded that 14% of women were participating in the labour force, compared with 78% of men.[2] By 1946, women's participation had risen to nearly 25%, and continued to increase by another 20 to 25 percentage points over the subsequent 40 years.[3] While the rate for all women has been between 60% and 63% since the early 2000s, the participation of women in the core working ages of 25 to 54 has continued to rise and reached a record level of 83.2% in 2018.[4]

Another key demographic change affecting the size and composition of the labour force is the aging population. Over the last 40 years, people aged 55 and older have accounted for an increasing share of the labour force. This reflects a number of factors, such as the entry of the baby-boom cohort into this age group, higher levels of educational attainment, longer life expectancy and improved health, and is driven by both choice and necessity.[5] Although the participation rate of older people is rising, it remains substantially lower than the rate for younger cohorts. As the population ages and a larger share of people fall into this lower-participation age group, the overall labour force participation rate in Canada continues to decline.

While the aging population puts downward pressure on the labour force, LFS data indicate that employment gains in recent years are predominantly accounted for by immigrants.[6] The LFS first included questions on immigrant status in 2006 and, since then, it has become an important source of information for studying the labour market outcomes of newcomers.

AN EVOLVING ECONOMY

The LFS also provides leading economic indicators, such as the official unemployment rate. With data released every month, just three weeks after the ref-

2 Statistics Canada. 1983. Historical Statistics of Canada. Statistics Canada catalogue number 11-516-X. Ottawa, Ontario. www150.statcan.gc.ca/n1/pub/11-516-x/sectiond/4057750-eng.htm. Table D107-122.

3 *Ibid*. Table D205-222.

4 Labour Force Survey (LFS); Labour force characteristics by sex and detailed age group, annual (14-10-0018-01) www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410001801

5 Fields, Andrew, Sharanjit Uppal and Sébastien LaRochelle-Côté. 2017. *The impact of aging on labour market participation rates*. Statistics Canada catalogue number 75-006-X. Ottawa, Ontario. www150.statcan.gc.ca/n1/pub/75-006-x/2017001/article/14826-eng.htm AND Hazel, Myriam. 2018. *Reasons for working at 60 and beyond.* Statistics Canada catalogue number 71-222-X. Ottawa, Ontario. www150.statcan.gc.ca/n1/pub/71-222-x/71-222-x2018003-eng.htm

6 Patterson, Martha, Myriam Hazel, and Dylan Saunders. 2019. *Annual Review of the Labour Market, 2018*. Statistics Canada catalogue number 75-004-M. Ottawa, Ontario. www150.statcan.gc.ca/n1/pub/75-004-m/75-004-m2019002-eng.htm

erence period, the LFS provides timely information on the health of the Canadian economy, and the impact of disruptive events, such as natural disasters.

This economic side of the LFS is complemented by the Survey of Employment, Payrolls and Hours (SEPH) and the Job Vacancy and Wage Survey (JVWS). These employer-based surveys specialize in providing labour data at the detailed industry and occupation level, respectively.

The modern version of the SEPH was first published in 1983, however, the origin of Canada's payroll employment survey dates back to 1918, when employment data were collected by the Department of Labour. The SEPH is based on administrative data from the Canada Revenue Agency as well as the monthly Business Payrolls Survey. SEPH data are an important input to other processes, including estimating Canada's Gross Domestic Product and calculating provincial equalization payments.

Launched in 2015, the Job Vacancy and Wage Survey is the newest survey on labour statistics. Each quarter, this survey gathers information about job vacancies and their characteristics, including the wage being offered, the level of experience required, and whether they are full- or part-time positions. Data from the JVWS help employers, policy makers, job seekers, and students understand the needs of the labour market in different regions of the country, and in different occupations.

These data sources have captured both short- and long-term industrial shifts in the Canadian economy. For example, SEPH and the previous payroll employment surveys show how Canada's economy transitioned from a predominantly goods-based economy to that of a service-based economy in the late 1950s. Since that time, payroll employment in services-producing industries has continued to rise, while that in goods-producing industries has remained relatively unchanged since the 1960s.

Since the turn of the 21st century, SEPH data illustrate how payroll employment changes from the two largest goods-producing sectors have nearly offset one another, with large declines in manufacturing jobs, and strong gains in construction.[7] Over the same time period, growth in the services-producing sectors was led by health care and social assistance, in keeping with the aging population. According to the JVWS, the health care and social assistance sector was among the sectors with the most job vacancies available, on average, in 2018, behind accommodation and food services and retail trade.[8]

ADAPTING FOR THE FUTURE

The economic and the social domains come together when looking at the changing nature of work in Canada. Advances in technology are disrupting traditional production processes and contributing to an acceleration of globalization and the digitalisation of the economy. Technological progress is

7 Survey of Employment, Payrolls and Hours (SEPH); Employment by industry, annual (14-10-0202-01) www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410020201

8 Job Vacancy and Wage Survey (JVWS); Job vacancies, payroll employees, job vacancy rate, and average offered hourly wage by industry sector, quarterly, unadjusted for seasonality (14-10-0326-01). www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410032601. Calculated using the annual average of the four quarters.

also changing the nature of work across industries and occupations by changing the skills employers seek and introducing new ways of exchanging labour. These ongoing changes have led to questions about impacts on the quality of employment experienced by individual workers.

Since the 1990s, the LFS has included content on some of the dimensions affected by these changes, such as temporary employment arrangements and unionization. The JVWS is helping to shed light on changing labour demand, including the level of education sought by employers for current vacancies. In addition, the Census of Population provides information about commuting patterns, which contributes to our understanding of the evolving relationship between labour supply and demand.

Statistics Canada continues to build on these existing labour market measures to better capture the impact of globalization, technological change and digitalization on the nature and quality of work by pursuing a number of initiatives in these broad areas. In 2017, it was one of the first national statistical agencies to release survey-based employment estimates on the "gig" economy, with a focus on peer-to-peer ride services such as Uber and private accommodation services such as Airbnb.[9]

Statistics Canada recently conducted one-time surveys on the reasons for temporary work and self-employment; reasons for continuing to work beyond age 55 (choice versus necessity);[10] and the activities of people, including youth, not participating in the labour market.[11] In addition, the LFS will soon include content on emerging data priorities such as pension and benefit coverage, multiple job holders, and earnings of the self-employed. Data linkages with the LFS are also being piloted (e.g. with tax, Census, and administrative-based immigration data) to derive more detailed indicators on labour market outcomes, and small-area estimation methods are being refined in an effort to meet the needs of users seeking more local data.

Statistics Canada is also involved in discussions with other federal departments on the classification of digital skills. Looking forward, the agency will play a leading role in modifying international standards for measuring forms of employment to ensure that new and changing work arrangements are reflected.

At the same time, Statistics Canada is leveraging the use of new technologies in its own production and dissemination processes. Adapting to technological change is not a new challenge — LFS interviewers started collecting information by telephone in the 1970s, and began recording data on computers in 1994.[12] More recent areas of innovation and

9 Statistics Canada. 2017. "The sharing economy in Canada." The Daily. February 28. Statistics Canada Catalogue no. 11-001-XIE. www150.statcan.gc.ca/n1/daily-quotidien/170228/dq170228b-eng.htm.

10 Hazel, Myriam. 2018. *Reasons for working at 60 and beyond*. Statistics Canada Catalogue no. 71-222-X. Ottawa, Ontario.

11 Bourbeau, Emmanuelle, and Rachelle Pelletier. 2019. *Young people not in employment, education or training: What did they do in the past 12 months?* Statistics Canada Catalogue no. 71-222-X. Ottawa, Ontario. www150.statcan.gc.ca/n1/daily-quotidien/190213/dq190213b-eng.htm

12 Usalcas, Janine, and Mark Kincack. 2017. *History of the Canadian Labour Force Survey, 1945 to 2016*. Statistics Canada catalogue number 75-005-M. Ottawa, Ontario. www150.statcan.gc.ca/n1/pub/75-005-m/75-005-m2016001-eng.htm

exploration include the use of electronic questionnaires, the development of interactive visualization tools, an increased presence on social media (e.g. Reddit), and the use of machine learning to assist with rote tasks such as the coding of occupations and industries.

In 2018, Statistics Canada held a year-long celebration of the agency's 100 years of existence with high-profile events and activities. While we celebrate these past achievements, we look forward to ongoing modernization and meeting the challenges of the next 100 years.

The last century of labour statistics has seen the development of new methods, adjustments to address changing priorities, and the adoption of new technologies. What will the next century of work bring?