

Unemployment experience in Canada: a 5-year longitudinal analysis

SUNDER MAGUN

This report presents a picture of Canadian joblessness over 5 years and reveals serious chronic unemployment. In a 1975-79 longitudinal analysis, we used three indicators: total amount of all unemployment across all spells over the period; the number of unemployment spells per person; and the average duration of such a spell. Also, we considered sex, age, province, industry, and occupation. Among our findings:

- A few bear the greatest unemployment burden;
- The people with histories of hardcore unemployment are at a relatively greater disadvantage in the labor market and risk further episodes of chronic unemployment;
- Long-term spells are relatively few but account for much greater unemployment than would be expected on the basis of probability.

We find that the long-run structure of unemployment in Canada is not consistent with the "dynamic" or the "turnover" view of the labor market. According to this view, the characteristics of the unemployment problem are rapid job turnover and brief spells of unemployment, and the burden of unemployment is not concentrated, but is widely shared among workers. This "benevolent" viewpoint of unemployment contends that unemployment is mainly frictional and voluntary. The benign view, by rejecting the existence of chronic and persistent unemployment, de-emphasizes the social and economic costs of joblessness. Our results do not support the turnover view. As noted, there are, in fact, three aspects of the real problem of unemployment in the country.

We used the linked Longitudinal Labour Force Data Base, which is composed of several administrative data files of the Canada Unemployment Insurance Commission. This data base contains microdata on the labor market experience of a 10-percent sample of all "insured" workers.¹ A sample of about 20,200 people who had at least one episode of unemployment from 1975 to 1979 was drawn from the data set. These individuals had filed regular unemployment insurance claims² for about 56,000 job separations over the 5-year span. The sample is a representation of Canadian workers who have relatively more difficulties in the labor market and

Sunder Magun is an economist in the Strategic Policy and Planning Division of Employment and Immigration Canada. The author alone is responsible for the content of this report, which is adapted from a larger study, *Labour Market Experience in Canada: A Longitudinal Analysis*.

Table 4. Ratio of women's to men's annual and weekly earnings based on full-time employment, 1955-82

Year	Annual	Weekly
1955	64	()
1956	63	()
1957	64	()
1958	63	()
1959	61	()
1960	61	()
1961	59	()
1962	60	()
1963	60	()
1964	60	()
1965	60	()
1966	58	()
1967	58	62
1968	58	()
1969	61	61
1970	59	62
1971	60	62
1972	58	63
1973	57	62
1974	59	61
1975	59	62
1976	60	62
1977	59	62
1978	59	61
1979	60	62
1980	60	63
1981	60	64
1982	(¹)	65

¹ Not available.

Note: Data on annual earnings refer to full-time, year-round wage and salary workers and are collected in the March supplement to the Current Population Survey. Weekly earnings data, which are collected monthly in the CPS, refer to usual median weekly earnings of full-time wage and salary workers. Data shown for the years 1967-78 were collected in May; for 1979-82, they are second quarter averages.

strengths and weaknesses. The purposes for which the data are to be used thus largely determine whether the annual or weekly data are more appropriate. □

FOOTNOTES

¹ Prior to 1979, comparable weekly earnings data were collected in the May CPS.

² Quarterly data on weekly earnings from the CPS are published in the press release, "Weekly Earnings of Workers and Their Families." For annual averages of weekly earnings, see *Analyzing 1981 Earnings Data from the Current Population Survey*, Bulletin 2149 (Bureau of Labor Statistics, 1982). For uses of reported annual earnings data, see *Linking Employment Problems to Economic Status*, Bulletin 2123 (Bureau of Labor Statistics, 1982); and Sylvia L. Terry, "Unemployment and its effect on family income," *Monthly Labor Review*, April 1982, pp. 35-43. Also, the Bureau of the Census regularly publishes the reported annual earnings data as part of the Current Population Reports P-60 Series.

³ The sample size for the monthly CPS is about 60,000 households. Thus, one quarter or 15,000 times 12 equals about 180,000 households as the base for the annual averages. For further discussion, see *Technical Description of the Quarterly Data on Weekly Earnings from the Current Population Survey*, Bulletin 2113 (Bureau of Labor Statistics, 1982).

⁴ See Daniel E. Taylor and Edward S. Sekscenski, "Workers on long schedules, single and multiple jobholders," *Monthly Labor Review*, May 1982, pp. 47-53.

⁵ See Nancy F. Rytina, "Occupational changes and tenure, 1981," *Monthly Labor Review*, September 1982, pp. 29-33.

who are often clients of the Commission's manpower programs.

Who are the unemployed?

The bulk of the unemployment burden falls on a small proportion of workers. About 25 percent of unemployed individuals accounted for almost half of the total time lost because of unemployment between 1975 and 1979. Each individual in this group experienced, on average, 2 years of unemployment, consisting of repeated and long spells of joblessness. This concentration of unemployment was not confined to a particular sex, age, or regional group but occurred among male, female, young, and adult workers in all regions.

There are, however, important regional differences in the distribution of unemployment burden. In a region where the unemployment rate is high, unemployment is more equally shared. In the Atlantic region, the top one-quarter of workers accounted for 45 percent of total unemployment, compared with 57 percent in the Prairie region. Therefore, the unemployment burden is somewhat more equally shared in the Atlantic region than in the Prairie provinces. This is because unemployment is more widespread in the former region than in the latter.

We define the chronically unemployed as individuals with 27 weeks or more of unemployment during a given year without regard to the number of times they were out of work. Persons with less than 27 weeks of total unemployment we consider short-term unemployed, and those with no spells of unemployment during the given year we define as not unemployed.

The chronically unemployed as a proportion of the sample, ranged from 12.5 percent in 1975 to 17.8 percent in 1978, reflecting worsening economic conditions. Of great significance are the large movements of people among the three labor force categories. For example, a worker might be chronically unemployed in 1975, not unemployed in 1976, jobless for the short term in 1977, and then chronically unemployed again.

Despite these intergroup movements, a subgroup of individuals who remained over time in a given status had little likelihood of leaving the group. This aspect of unemployment experience can be expressed in terms of conditional probability. By creating a probability tree we can track the labor market experience of certain groups of individuals. We have constructed two probabilities trees—one relates to a cohort of the long-term unemployed and the other to a cohort of the short-term unemployed during the 4-year period, 1975–78. Both trees show the influence of hardcore unemployment.

A comparison of the two probability distributions reveals an important finding: those chronically unemployed in 1975 had a much greater likelihood of repeating their experience in the following 3 years than did the short term unemployed in 1975. The probabili-

ties of a period of prolonged joblessness (27 weeks or more) were 51 percent compared with only 27 percent for the 1975 short-term unemployed cohort. Moreover, the 1975 cohort of chronically unemployed had a five times greater probability of annual long-term unemployment than the 1975 cohort of short-term unemployed.

A sequence of chronic unemployment may have a cumulative effect by worsening job skills. If a person is chronically unemployed in 1976 as well as 1975, his or her chance of becoming so in 1978 is almost 50 percent, compared with only 15 percent for the short-term unemployed. Furthermore, if an individual is also chronically out of work in 1977, his or her risk in 1978 is 64 percent, compared with 12 percent for the short-term unemployed in 1975, 1976, and 1977.

Most of the spells of unemployment are less than 21 weeks. Longer spells are relatively fewer but account for much greater unemployment. Although this would be expected on theoretical grounds, the effect was substantially larger than would be expected on the basis of chance alone.

During 1975–79, the Canadian unemployment rate rose from 6.9 percent in 1975 to 8.4 percent in 1978. By quantifying the relationship between the unemployment rate and the unemployment experience over the 5-year period, we find that a 1-percentage-point increase in the unemployment rate reflected, on average, a rise in unemployment frequency by four-tenths of a spell, duration of a spell by 2.3 weeks, and length of total unemployment by almost 10 weeks.

A closer examination of unemployment spells shows that with increasing unemployment spell length, the probability of leaving unemployment and finding a job first decreases until the spell length reaches 26 weeks, but increases up to a length of 40 weeks, because of stricter benefit control activity of the Unemployment Insurance Program, and then drops off sharply. As noted, the majority of spells are 1 to 26 weeks. An important finding is the sharp decline in the probability of employment after 40 weeks. The individual with such a long spell of unemployment may have greater problems in finding a job, or may not be actively searching for employment in the labor market.

As mentioned, we investigated how unemployment experience—measured in total length of unemployment, spell incidence, and duration—is distributed among individuals by sex, age, province, industry, and occupation. The total duration of unemployment for men was lower than that for women; so were the number of unemployment spells per person and spell length. The main reason the male worker fared better than the female worker is that the spell length for the former is shorter, on average. This could be because men are subject to more layoffs and the length of those spells which start with layoffs is relatively shorter.

With regard to age, we find two fundamental tendencies in the labor market:

- The spell *frequency* decreases with age, first slowly and then rapidly after age 44.
- The spell *length* increases with age, first slowly and then sharply after age 40.

The offsetting influences of these two tendencies determine the variation in total duration of unemployment by age group. The duration first drops with age, then increases for the 35 to 44 age group and finally falls sharply for the older age groups (45 years and over). In general, spell frequency has a more pronounced influence than increasing spell length on total unemployment.

In keeping with the overall unemployment rates, people in the Atlantic provinces and Quebec suffered greater unemployment with more frequent and more prolonged spells. Those in Ontario and the Western provinces, however, incurred fewer and shorter spells of unemployment.

The disparity in unemployment experience by industry is not as great as the disparity by province. Greater unemployment occurred in primary industries, including farming, forestry, and fishery, mainly because of seasonal factors. Both the average number of spells and the length of each spell were substantially higher than the national averages. The workers in the construction industry had more unemployment, largely because of the frequency of joblessness, while those in finance, insurance, and real estate, and trade, experienced relatively less unemployment principally because of fewer episodes per person. In general, we found more and shorter spells of unemployment in the goods-producing industries than in the service sector. In the latter sector, the spells are longer because of relatively more quits by people who often search longer for a job in the labor market. By contrast, there are relatively more layoffs in the goods sector, and workers often find reemployment faster.

The analysis of unemployment experience by occupation indicates fairly large disparities. People working in managerial or professional positions; clerical, sales, machining, or product fabricating occupations, and other crafts experience less unemployment, whereas those whose work involves construction; processing; primary industries; transport equipment; or material handling experience more unemployment. These dissimilarities in unemployment experience by occupation come mainly from the differences in spell frequencies rather than from spell durations.

As we have suggested, most unemployment is not short term. On the contrary, the burden falls mainly on a small proportion of workers experiencing repeated and long spells of unemployment. For these workers,

we would recommend intensive and carefully targeted employment and training programs.

— FOOTNOTES —

¹ Unemployment, as measured by weeks on regular unemployment insurance claim, constitutes the bulk of unemployment in Canada owing to the almost universal nature of the Unemployment Insurance Program.

² Regular claims exclude sickness, maternity, retirement, fishing, and Adult Occupational Training Act claims.

Labor organizations directory for 1978–80 is published

The biennial *Directory of National Unions and Employee Associations*, published by the Bureau of Labor Statistics, was discontinued as part of the overall BLS budget reduction last year. The Bureau of National Affairs, Inc., has published the *Directory of U.S. Labor Organizations, 1982–83 Edition*, incorporating data compiled by BLS's Division of Developments in Labor-Management Relations. The statistics include previously unpublished data which have been available to the public.

The 99-page directory combines two separate, discontinued government surveys of labor organization membership into one edition. In one chapter, membership estimates are based on information provided voluntarily to BLS in 1981 by the individual labor organizations. In a separate chapter, membership estimates are based on the May 1980 Current Population Survey on labor organization membership, conducted for BLS by the Bureau of the Census. As did the BLS directory, the new directory contains a chapter on the structure of the AFL-CIO, other federations, and independent labor organizations, and a listing of approximately 250 national labor organizations, their officers, addresses, and other pertinent information.

During the past few years, total membership of organized labor has been decreasing, while the total labor force has been increasing. Labor organization membership in the United States dropped by 391,000 to 22,366,000 during 1978–80 (or to 20.5 percent of the total labor force), according to the union response survey from BLS. Total membership fell 355,000 to approximately 23,883,000 during the same period. Membership estimates based on the Current Population Survey show a greater decline for 1979–80—a drop of 891,000 to 20,095,000.

The *Directory of U.S. Labor Organizations, 1982–83 Edition*, edited by Courtney Gifford, staff editor of BNA's *Daily Labor Report*, is available from BNA Books, Distribution and Customer Service Center, 9401 Decoverly Hall Road, Rockville, Md. 20850. The cost is \$15 per copy.