

# The many faces of unemployment

Nathalie Noreau

Usually, when people speak of unemployment, they think in terms of individuals. Rarely do they focus on the effects of unemployment – whether that of the main family breadwinner or another member – upon the family. Yet the consequences of unemployment are felt by all family members, including children.

It is possible to produce an unemployment rate based on families rather than individuals. Statistics Canada collects such information. Drawing on various sources,<sup>1</sup> it also publishes both monthly and occasional estimates according to family composition and status within the family, although these figures are seldom the focus of public attention or debate.

This article draws attention to family-based unemployment rates. It also identifies the extent to which the use of different data sources, namely the Labour Force Survey (LFS) and the Survey of Consumer Finances (SCF), can generate different unemployment rates for individuals and families, and evaluates the number of persons “affected” by unemployment when one or more members of the family become unemployed. To round out the picture, a brief analysis is devoted to the number and proportion of unattached individuals who have experienced a period of unemployment. Finally, the article examines how the use of two data sources affects the calculation of provincial unemployment rates (both for individuals and for families) and the ranking of the provinces.

*Nathalie Noreau is with the Labour and Household Surveys Analysis Division. She can be reached at (613) 951-4607.*

## Different unemployment rates

The unemployment rate most familiar to the general public is based on individuals and released monthly by the LFS. This measure represents the number of unemployed persons 15 years and over during the reference period as a percentage of the labour force of the same age during the same period (see *Differences between the two reference periods*). The unemployment rate of a specific group (by age, sex, etc.) is the number of unemployed belonging to this group, expressed as a percentage of the labour force in the same group (see *Definitions*).

The definition of the unemployment rate of individuals is expressed mathematically as follows:

$$UR_{IND} = \frac{\text{Number of individuals aged 15 and over who are unemployed}}{\text{Number of individuals aged 15 and over in the labour force}}$$

A person is considered unemployed when, during the reference week, he or she

- was without employment, had actively looked for work during the past four weeks (including the reference week) and was available for work;

or

- had not actively looked for work during the past four weeks but had been laid off and was available for work (persons are classified as laid-off workers only if they expect to get their job back, a situation known as temporary lay-off);

or

- had not actively looked for work during the past four weeks but was to begin a new job within four weeks following the reference week and was available for work.

Another unemployment rate, less well known but published monthly by Statistics Canada through the Labour Force Survey, relates to families.

The family unemployment rate is defined as the average number of families affected by unemployment during the reference period, as a proportion of the average number of families in which at least one member was in the labour force during the same period (see *Calculation of the SCF-based family unemployment rate*). Mathematically, this definition is expressed as follows:

$$UR_{FAM} = \frac{\text{Number of families with at least one member unemployed}}{\text{Number of families with at least one member in the labour force}}$$

The unemployment rate of unattached individuals is defined as the average number of unattached individuals unemployed during the reference period as a proportion of the average number of unattached individuals in the labour force during the same period. Mathematically, this definition is expressed as follows:

$$UR_{U.IND} = \frac{\text{Number of unattached individuals who are unemployed}}{\text{Number of unattached individuals in the labour force}}$$

### Differences between the two reference periods

#### Period used by the LFS

The Labour Force Survey (LFS) is conducted 12 times a year, on a monthly basis, during a specific reference period (generally the full week that includes the 15th day of the month). Respondents remain in the survey sample for six months, after which they are replaced by a similar group of representative respondents. The annual unemployment rate published by the LFS is the average of the 12 rates observed monthly during the year in question.

#### Period used by the SCF

The Survey of Consumer Finances (SCF) is conducted once a year, in April, as a supplement to the monthly LFS. The reference period for this survey is the previous calendar year.

The data concern respondents' sources of income as well as individuals' and families' experience of work and unemployment over the entire year. These family unemployment statistics differ considerably from those drawn from the LFS. Since the SCF takes account of labour force experience over the entire year (52 weeks), the probability that an individual or a member of a family will be affected by unemployment will inevitably be higher than it would in the case of the 12 monthly observations published by the LFS.<sup>2</sup>

In this article, the LFS and SCF data relate to the same years; for example, the data for 1993 were collected during that same year for the LFS, whereas they were collected in April 1994 for the SCF.

The definitions of unemployment and labour force that apply to the family and unattached individuals are the same as those regarding individuals, except that

the individual in question must be an integral part of a family or must live alone.

The unemployment rates for individuals, families and unattached

individuals are released every month by the LFS. For example, in 1993 an annual rate of 11.2% for individuals and 18.0% for families was observed. (Rates for individuals and families can differ even when drawn from the same source – in this case, by 6.8 percentage points.) The unemployment rate for unattached individuals was 12.9% (Table 1).

### What are these rates?

How do the unemployment rates from the two sources compare for individuals, families and unattached individuals? And what is the effect of changes in economic activity on the rates from both data sources?

To determine how the business cycles of the past 15 years have affected unemployment rates, 4 key years were selected for analysis: 1980 and 1989 represent end-of-expansion periods, while 1983 and 1993 are beginning-of-expansion periods (Chart A).

Table 1  
**Unemployment rates for individuals, families and unattached individuals according to the LFS and the SCF**

	LFS *†	SCF **
	%	
<b>Individuals</b>		
1980	7.5	18.3
1983	11.9	25.1
1989	7.5	18.1
1993	11.2	21.6
<b>Families</b>		
1980	11.9	28.0
1983	18.7	38.7
1989	12.6	29.5
1993	18.0	34.8
<b>Unattached individuals</b>		
1980	7.2	21.9
1983	12.3	27.4
1989	8.3	21.2
1993	12.9	24.4

Sources: Labour Force Survey (LFS) and Survey of Consumer Finances (SCF)

\* Average of 12 reference weeks.

\*\* Covers an entire year.

† The figures for individuals are published annually in Historical Labour Force Statistics (Catalogue no. 71-201-XPB).

### Definitions

**Individual:** refers to a person who is either unattached or an integral part of a family. The individual is the unit of measurement for calculating the official unemployment rate.

**Labour force:** consists of members of the non-institutional civilian population 15 years and over who had a job (employed persons) or were unemployed during the reference week.

**Family:** in this article refers to economic family. It consists of a group of two or more persons inhabiting the same dwelling who are related by blood, marriage, common-law relationship or adoption. These persons may share the same dwelling with other families or with unattached individuals.

**Unattached individuals:** are persons who live alone or who are not related to anyone else in the dwelling.

### Calculation of the SCF-based family unemployment rate

The SCF unemployment rate for families was obtained by first determining the number of families in which no member had experienced a period of unemployment during the year, and in which at least one member was employed. This number was then subtracted from the number of families with at least one member in the labour force. The result showed the number of families that were part of the labour force and had been affected by unem-

ployment at least once during the same year. Finally, this figure was divided by the number of families with at least one member in the labour force.

The SCF unemployment rates for individuals, families and unattached individuals use the same equations as those in the LFS. Only the reference period differs.

Regardless of the data source used, the unemployment rates are, as expected, higher for families than for individuals, with the rate for families more than 1.5 times the rate for individuals. The reason for the disparity is simple: since a family consists of two or more persons, there is a greater probability that it will be affected by unemployment, regardless of the reference period. The greater the number of family members in the labour force, the

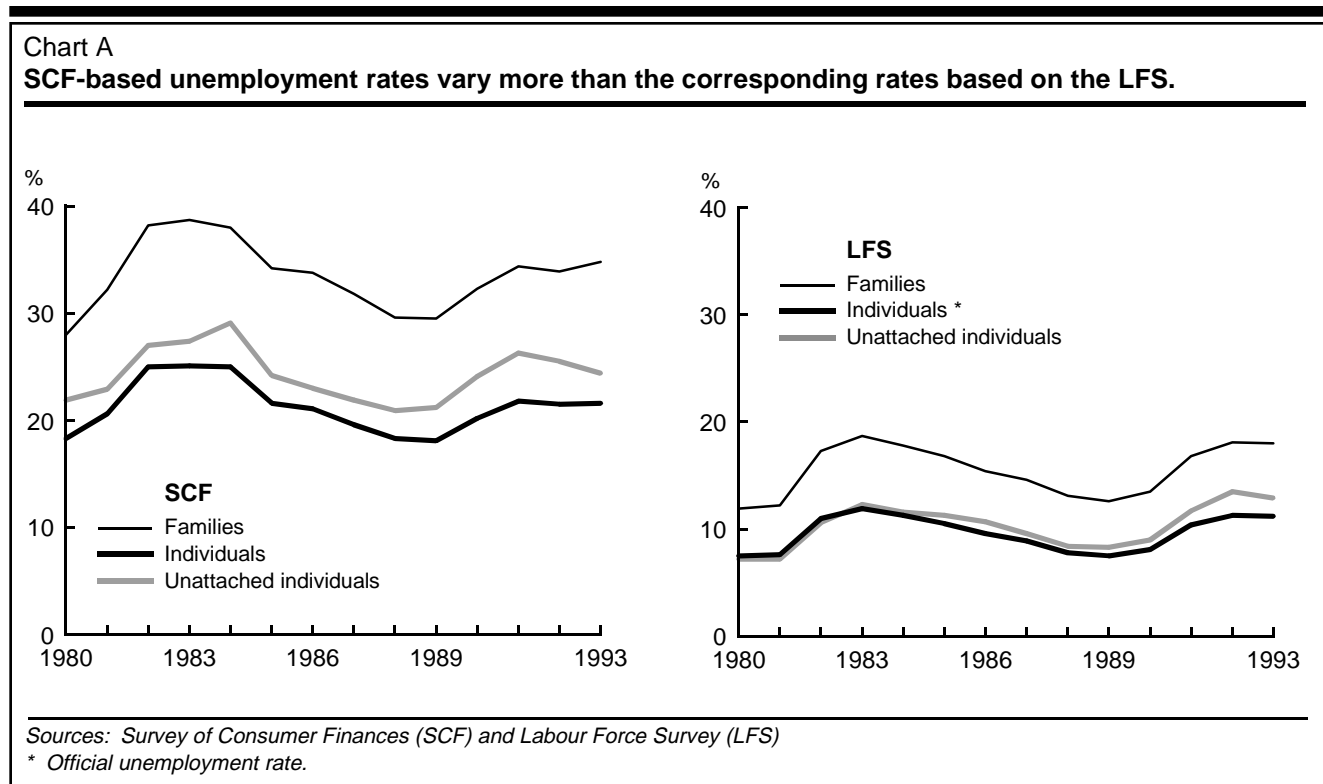
greater the chance of that family's being affected by unemployment.

Both for individuals and for families the unemployment rates are higher in the SCF than in the LFS. For example, the individual unemployment rate based on SCF data in 1993 was 21.6%, much higher than the rate obtained from the LFS (11.2%). Moreover, according to the SCF, more than one family in three (34.8%) was

affected by unemployment, compared with an LFS rate of 18.0% (Table 1). The SCF rate for individuals also exceeds the LFS rate for families. These disparities are all explained by the different reference periods of the two surveys.

Unemployment rates from both sources are sensitive to fluctuations in the business cycle, since they increase when economic conditions are unfavourable and decrease in periods of prosperity (Chart A). However, the curve of the unemployment rates from the SCF has a slightly greater amplitude than the curve for the rates from the LFS. Furthermore, the turning points in the SCF series seem to be slower to appear, probably because of the different reference periods.

Unemployment rates for unattached individuals are higher than those for all individuals and lower than those for families. Many unattached individuals are young



**Table 2**  
**Number of persons affected by unemployment**

	LFS *	SCF **
	'000	
<b>1980</b>		
<b>Individuals †</b>	<b>900</b>	<b>2,430</b>
Total number of persons affected by unemployment	1,703	4,923
Persons in families	1,588	4,526
Unemployed persons	785	2,033
Other members of family	803	2,493
Unattached individuals	115	397
<b>1983</b>		
<b>Individuals †</b>	<b>1,504</b>	<b>3,504</b>
Total number of persons affected by unemployment	2,678	6,877
Persons in families	2,467	6,360
Unemployed persons	1,293	2,987
Other members of family	1,174	3,373
Unattached individuals	211	517
<b>1989</b>		
<b>Individuals †</b>	<b>1,065</b>	<b>2,829</b>
Total number of persons affected by unemployment	1,919	5,387
Persons in families	1,747	4,924
Unemployed persons	893	2,366
Other members of family	854	2,558
Unattached individuals	172	463
<b>1993</b>		
<b>Individuals †</b>	<b>1,649</b>	<b>3,503</b>
Total number of persons affected by unemployment	2,831	6,666
Persons in families	2,553	6,077
Unemployed persons	1,371	2,914
Other members of family	1,182	3,163
Unattached individuals	278	589

Sources: Labour Force Survey (LFS) and Survey of Consumer Finances (SCF)

\* Average of 12 reference weeks.

\*\* Covers an entire year.

† Sum of unemployed persons living alone or in families; the figures based on the LFS are published annually in Historical Labour Force Statistics (Catalogue no. 71-201-XPB).

(usually between 15 and 24) and subject to the same pressures affecting the status of others in this age group, whose unemployment rate is generally higher than the Canadian average. Their rate is predictably lower than that for families, since, as already noted, the probability that the latter will be affected by unemployment increases with the number of family members in the labour force. Unemployment rates for persons living alone respond to business cycles as expected, whatever data source is used.

### Unemployment affects many

As stated earlier, since most Canadians belong to families, the total number of persons touched by unemployment exceeds the actual counts of those directly experiencing it.

Here again, the two reference periods yield different results, since the number of individuals affected by unemployment during an entire year is much greater (more than double) than the number observed on the basis of an average of 12 monthly values (Table 2).

For example, in 1993, 1,649,000 individuals experienced a period of unemployment according to the LFS, whereas according to the annual SCF the figure was more than twice as high, namely, 3,503,000 (because those unemployed outside the LFS reference period would still be counted).

Regardless of the data source considered, the number of family members coping with unemployment is 1.5 times greater (and even 1.8 times greater in some cases) than the number of individuals who became unemployed during a given period.<sup>3</sup> Thus, in 1993, 3,503,000 individuals enumerated by the SCF had experienced a period of unemployment, compared with 6,077,000 members of families who had been either directly or indirectly affected by unemployment. Of that number, 2,914,000 members of families were actually unemployed, leaving roughly half the total indirectly affected by unemployment (3,163,000).

Finally, if the number of unemployed unattached individuals in 1993 is added to the number of persons belonging to families who were affected, the LFS obtains a total of 2,831,000 persons coping with the effects of unemployment in Canada; the SCF produces a figure of 6,666,000.<sup>4</sup>

### Provincial rankings change depending on the data source used

A glance at 1993 SCF unemployment rates calculated at the provincial level reveals nearly identical provincial rankings for unemployment rates of both individuals and families. The highest rates were in the Atlantic provinces, while the lowest rates were in the Prairies (Chart B).

In addition, whether in the case of individuals or of families, the unemployment rates drawn from the SCF are approximately double

**Table 3**  
**Ranking \* of provincial unemployment rates according to the LFS and the SCF, 1993**

	Individuals		Families	
	LFS **	SCF †	LFS **	SCF †
Newfoundland	10	10	10	10
Prince Edward Island	9	9	9	9
Nova Scotia	8	7	8	7
New Brunswick	6	8	7	8
Quebec	7	6	6	6
Ontario	5	4	5	5
Manitoba	2	2	2	2
Saskatchewan	1	1	1	1
Alberta	3	3	4	3
British Columbia	4	5	3	4

Sources: Labour Force Survey (LFS) and Survey of Consumer Finances (SCF)

\* Rank 1 corresponds to the lowest unemployment rate and rank 10 to the highest.

\*\* Average of 12 reference weeks.

† Covers an entire year.

the rates calculated by the LFS. This observation applies both to provinces in which the rates are quite high and to those with the lowest rates. For example, according to the SCF, in 1993 Newfoundland exhibited rates of 44.1% and 63.1% for individuals and families, respectively, whereas LFS rates were 20.1% and 29.8%. In turn, Saskatchewan, whose unemployment rates are the lowest in Canada, in the same year exhibited rates of 16.3% for individuals and 26.5% for families according to the SCF, compared with corresponding LFS rates of 8.0% and 13.0%.

The unemployment measurements produced are intended not only to determine whether unemployment is rising or falling. They may also be used to establish comparisons between different groups, that is, to construct relative unemployment rates, which are often used to develop policies and programs targeting affected groups. For this reason the article compares provincial unemployment rates for 1993. By assigning a rank to each province based on its LFS unemployment rate, and by observing the change in the relative positions of

the provinces, the study assesses the effect of using the SCF (Table 3).

For some provinces, such as Newfoundland, Prince Edward Island, Manitoba and Saskatchewan, the ranking remains the same for both individual and family unemployment rates, regardless of whether the data are drawn from the LFS or the SCF. On the other hand, it appears that the ranking of some provinces changes when SCF rates are used. Thus, the ranks for Nova Scotia, Quebec and Ontario improve when the SCF unemployment rate for individuals is applied. However, the rate for families remains the same, except in the case of Nova Scotia, for which there is an improvement.

The opposite is observed in the case of New Brunswick and British Columbia; the use of the SCF adversely affects their ranking of both individual and family unemployment rates. New Brunswick in particular loses ground with respect to the rate for individuals (dropping from sixth place to eighth) and for families (slipping from seventh place to eighth).

The provincial unemployment rates used in this analysis are available in Appendix A. Unemployment rates for individuals, families and unattached individuals according to age and sex are provided in Appendix B.

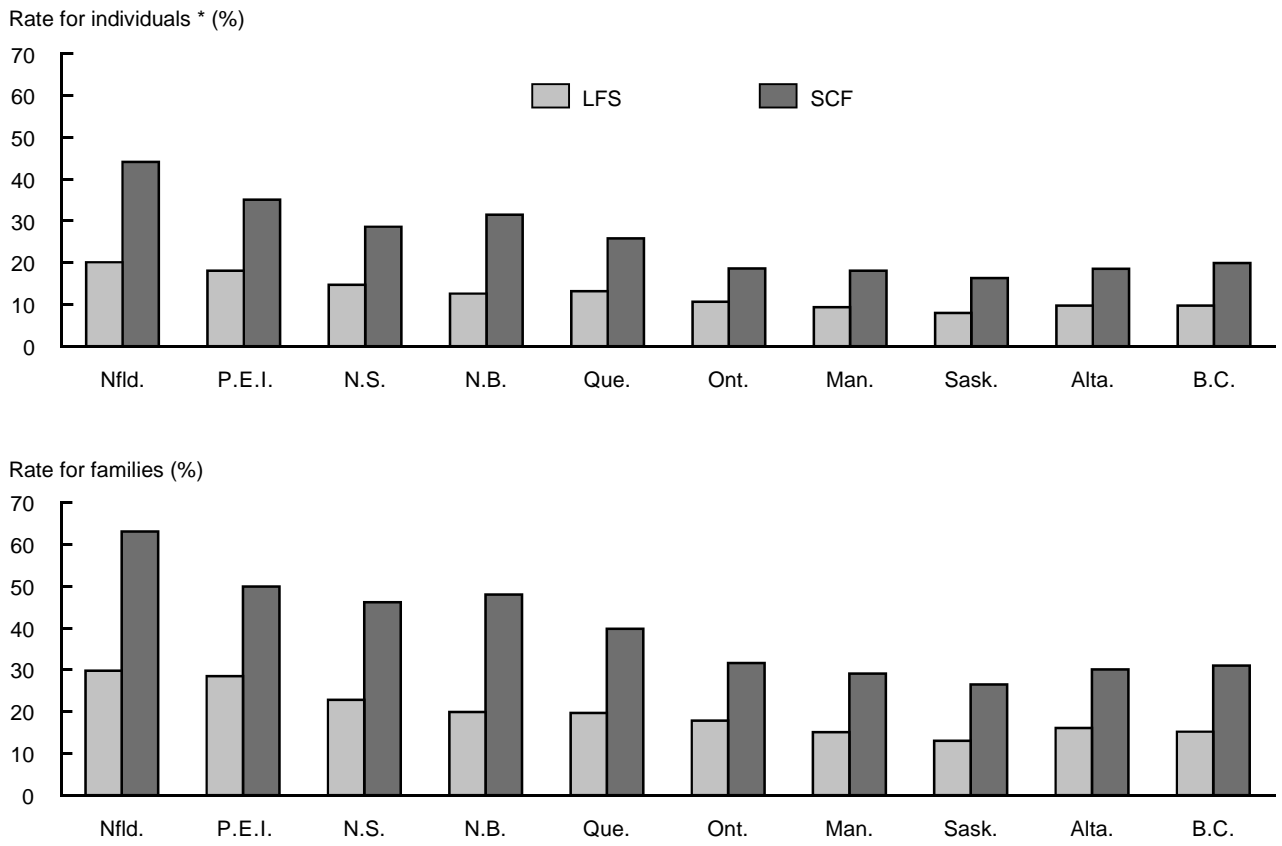
## Summary

When an individual becomes unemployed, his or her entire family may feel the consequences. In addition, a family is more likely to be affected by unemployment with each additional member who is a part of the labour force, hence, the higher unemployment rate for families than for individuals. Unattached individuals, being largely made up of young persons living alone and registering high rates of unemployment, have an unemployment rate that in most cases falls between that of individuals and that of families.

The use of different reference periods for the data can affect the calculation of the unemployment rate. Thus, the LFS, whose reference period is made up of an average of 12 weeks (one per month), produces a much lower unemployment rate than that obtained by SCF data, which cover a full year without interruption for individuals, families and unattached individuals. All these rates are sensitive to changes in the business cycle. In addition, the number of persons affected by unemployment when at least one member of a family becomes unemployed is fairly striking, especially when the SCF data are used, since this figure is more than twice the one obtained from the LFS.

One final point: unemployment rates calculated at the provincial level point up a major difference between the data from the two sources. Whichever province is observed, the rates drawn from the SCF are always about twice as high as those from the LFS and the rank-

**Chart B**  
**In 1993, unemployment rates based on the SCF exceeded those based on the LFS.**



Sources: Survey of Consumer Finances (SCF) and Labour Force Survey (LFS)  
 \* The LFS-based rate is the official unemployment rate.

ing varies according to which survey's figures are used. □

■ **Notes**

1 See *The Labour Force* (Catalogue no. 71-001-XPB) and *Labour Force Annual Averages 1981-1988 and 1989-1994* (Catalogue no. 71-529-XPB).

2 Estimates obtained through the SCF are based on events that occurred up to 16 months before the respondents were interviewed. Hence the questions used to measure employment and periods of unemployment cannot be as detailed as those used by the LFS.

3 Since families have two or more members, one would expect the number of members affected by unemployment during the year to be more than twice the number for individuals. This is not what is observed here, since regardless of the number of members experiencing a period of unemployment, a family is counted only once for a given year.

4 As a point of comparison, 9.8% of the population of Canada was affected by unemployment in 1993 according to the Labour Force Survey. This percentage rose to 23.0% according to the findings of the Survey of Consumer Finances. These proportions were calculated using estimates of the Canadian population on July 1, 1993.

■ **References**

Statistics Canada. *Guide to Labour Force Survey Data*. Catalogue no. 71-528-XPB. Ottawa, 1992.

---. *Quarterly Demographic Statistics*. April-June 1995. (Catalogue no. 91-002-XPB) 9, no. 2 (October 1995).

## Appendix A Unemployment rate by province

	LFS *				SCF **			
	1980	1983	1989	1993	1980	1983	1989	1993
	%							
<b>Newfoundland</b>								
Individuals	13.2	18.8	15.7	20.1	40.7	47.0	41.4	44.1
Families	19.0	25.9	23.9	29.8	54.2	61.8	58.9	63.1
Unattached individuals	8.6	11.0	10.1	14.3	44.9	22.2	29.2	33.5
<b>Prince Edward Island</b>								
Individuals	10.8	12.4	14.0	18.1	31.9	41.2	32.7	35.1
Families	15.8	19.4	23.2	28.5	53.9	57.3	51.2	49.9
Unattached individuals	10.9	12.6	12.7	20.6	11.2	55.6	27.8	42.6
<b>Nova Scotia</b>								
Individuals	9.7	13.1	9.8	14.7	24.4	29.8	24.4	28.6
Families	14.8	19.7	15.5	22.8	36.3	43.8	38.7	46.2
Unattached individuals	7.6	8.9	8.8	14.5	21.1	25.3	22.7	22.9
<b>New Brunswick</b>								
Individuals	11.1	14.8	12.4	12.6	30.2	35.1	28.4	31.5
Families	15.7	21.7	19.1	19.9	42.5	45.5	43.0	48.0
Unattached individuals	10.7	12.2	11.1	13.5	25.4	33.0	27.5	31.5
<b>Quebec</b>								
Individuals	9.9	14.0	9.3	13.2	22.7	29.3	22.5	25.8
Families	14.7	20.5	14.2	19.7	33.3	43.0	34.5	39.8
Unattached individuals	10.9	15.5	12.3	16.5	25.1	33.1	27.9	30.2
<b>Ontario</b>								
Individuals	6.9	10.4	5.1	10.6	14.7	20.7	13.0	18.6
Families	11.6	17.6	9.5	17.8	23.4	34.4	23.2	31.6
Unattached individuals	6.4	10.0	5.3	11.5	18.2	24.0	15.8	19.6
<b>Manitoba</b>								
Individuals	5.5	9.5	7.6	9.3	15.7	20.0	16.9	18.1
Families	9.0	15.7	12.8	15.1	23.7	32.7	25.6	29.1
Unattached individuals	6.6	10.0	8.0	11.8	20.0	23.3	27.5	23.8
<b>Saskatchewan</b>								
Individuals	4.4	7.4	7.5	8.0	12.6	18.5	15.7	16.3
Families	6.9	11.5	12.6	13.0	19.0	29.3	25.6	26.5
Unattached individuals	5.4	9.5	7.4	10.1	22.6	22.0	17.6	20.9
<b>Alberta</b>								
Individuals	3.8	10.7	7.3	9.7	14.1	23.2	16.3	18.5
Families	6.2	16.7	12.2	16.1	20.8	34.8	27.6	30.1
Unattached individuals	4.5	12.3	8.2	10.6	22.5	25.7	20.0	22.9
<b>British Columbia</b>								
Individuals	6.8	13.9	9.1	9.7	18.5	28.0	19.7	19.9
Families	11.1	21.0	15.1	15.2	29.1	43.2	30.6	31.0
Unattached individuals	6.5	15.2	9.5	12.8	24.5	30.8	23.5	27.4

Sources: Labour Force Survey (LFS) and Survey of Consumer Finances (SCF)

\* Average of 12 reference weeks.

\*\* Covers an entire year.

## Appendix B Unemployment rate by age and sex

Age		LFS *				SCF **			
		1980	1983	1989	1993	1980	1983	1989	1993
%									
<b>Both sexes</b>									
15 to 24 years	Individuals	13.1	19.7	11.2	17.7	26.2	33.8	21.4	24.3
	Families	17.2	26.4	18.5	25.4	48.0	56.9	43.5	53.4
	Unattached individuals	9.4	15.6	8.9	15.1	32.8	34.9	24.5	29.9
25 to 34 years	Individuals	6.6	11.8	8.0	11.8	19.9	27.7	21.8	26.3
	Families	9.8	16.9	12.4	17.4	28.8	40.2	33.8	37.5
	Unattached individuals	6.2	12.0	7.5	12.0	19.8	28.9	23.4	27.0
35 to 44 years	Individuals	5.0	8.6	6.2	9.4	14.7	20.7	15.9	19.9
	Families	11.1	16.9	12.0	16.9	26.1	33.6	26.5	32.3
	Unattached individuals	6.2	11.4	9.6	13.0	18.3	24.0	19.0	22.6
45 to 54 years	Individuals	4.8	7.6	5.2	8.4	12.3	18.5	13.4	17.0
	Families	14.7	22.2	13.4	19.4	29.1	43.4	29.0	34.3
	Unattached individuals	8.2	11.9	8.8	13.7	14.5	25.6	18.5	21.1
55 to 64 years	Individuals	4.5	8.1	6.3	9.6	10.0	17.8	14.1	18.6
	Families	12.0	18.8	12.0	18.4	24.0	37.7	27.8	35.2
	Unattached individuals	5.4	9.3	8.8	12.3	10.5	18.5	16.3	18.3
<b>Men</b>									
15 to 24 years	Individuals	13.6	22.2	12.3	20.2	27.5	36.7	23.9	28.5
	Families	16.6	25.9	18.4	24.1	48.6	57.2	43.4	54.2
	Unattached individuals	10.5	19.2	10.2	17.6	35.4	39.7	29.9	38.5
25 to 34 years	Individuals	6.0	12.2	7.4	12.5	19.4	29.9	22.9	29.4
	Families	9.5	16.5	11.9	16.6	29.2	40.6	34.0	37.5
	Unattached individuals	7.1	14.6	8.5	13.7	21.7	33.6	27.4	31.6
35 to 44 years	Individuals	4.3	8.2	5.6	9.5	13.9	20.6	15.0	20.5
	Families	10.7	16.2	11.6	16.2	26.1	33.5	26.1	32.0
	Unattached individuals	7.1	13.1	10.3	15.1	20.2	25.6	21.1	26.4
45 to 54 years	Individuals	4.1	7.4	4.8	8.2	11.7	19.6	12.9	17.9
	Families	14.2	21.9	13.1	18.7	28.5	43.0	28.6	34.5
	Unattached individuals	9.7	15.3	10.8	16.2	12.5	34.0	23.3	23.9
55 to 64 years	Individuals	4.3	8.2	6.4	9.9	9.7	19.0	14.6	19.8
	Families	11.8	18.5	12.0	17.7	22.8	36.1	26.9	34.5
	Unattached individuals	6.9	11.9	12.6	15.2	12.7	24.0	23.7	20.5
<b>Women</b>									
15 to 24 years	Individuals	12.5	16.8	10.0	14.9	24.7	30.5	18.8	19.9
	Families	20.9	28.8	18.8	27.1	40.5	54.8	43.9	50.6
	Unattached individuals	8.3	11.7	7.5	12.4	29.6	28.5	18.5	20.5
25 to 34 years	Individuals	7.6	11.3	8.7	10.9	20.4	24.9	20.5	22.6
	Families	13.4	19.9	14.6	19.7	23.5	34.5	31.7	37.9
	Unattached individuals	4.7	7.7	5.7	9.0	16.7	21.2	16.6	18.8
35 to 44 years	Individuals	6.1	9.1	6.9	9.2	15.9	20.9	16.9	19.3
	Families	16.8	23.2	14.3	19.3	25.8	34.5	30.6	34.3
	Unattached individuals	4.4	8.0	8.4	9.0	13.7	20.6	15.5	14.3
45 to 54 years	Individuals	6.1	8.0	5.9	8.6	13.3	16.7	13.9	15.8
	Families	21.1	25.4	15.3	23.1	34.7	46.4	32.2	32.7
	Unattached individuals	6.2	7.3	6.2	10.6	16.7	14.5	12.7	16.8
55 to 64 years	Individuals	5.1	7.9	6.1	9.3	10.6	15.7	13.1	16.9
	Families	15.2	23.0	12.7	24.2	36.5	54.1	36.4	41.9
	Unattached individuals	4.4	7.4	5.4	9.7	9.0	14.5	9.5	16.1

Sources: Labour Force Survey (LFS) and Survey of Consumer Finances (SCF)

\* Average of 12 reference weeks.

\*\* Covers an entire year.