

## **An Overview of the Survey of Labour and Income Dynamics (SLID)**

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### ***Abstract***

The Survey of Labour and Income Dynamics adds a new dimension to existing data on labour market activity and income. The survey focuses on the whole range of transitions, durations, and repeat occurrences of Canadians' financial and work situations. As a longitudinal survey, it also provides information on the fluctuations in family characteristics. Special features of the survey as well as major themes covered by the survey are described in this paper. In addition, suggestions are offered for obtaining or working with the data.

### **Résumé**

L'enquête longitudinale main d'oeuvre et revenu ajoute une nouvelle dimension aux données sur ces questions. L'enquête concerne une série de transitions, de durées et de répétitions des situations de travail et de revenue des Canadiens. Étant une enquête longitudinale, on a également des informations sur les changements de caractéristiques familiaux. On décrit ici les aspects uniques de l'enquête ainsi que les thèmes principaux, et on offre des suggestions pour obtenir et utiliser les données.

**Key Words** : SLID content themes, survey design, public-use microdata files  
SLID retrieval software

## **Introduction**

The Survey of Labour and Income Dynamics adds a new dimension to existing survey data on labour market activity and income: the changes experienced by individuals through time. At the heart of the survey's objectives is the understanding of the economic well-being of Canadians: what economic shifts do individuals and families live through, and how does it vary with changes in their paid work, family make-up, receipt of government transfers, or other factors? The survey's longitudinal dimension makes it possible to see such concurrent and often related events. SLID is the first Canadian household survey ever to provide national data on the fluctuations in income that a typical family or individual experiences through time, allowing greater insight on the nature and extent of poverty in Canada. Additionally, with the termination of the annual Survey of Consumer Finances, SLID becomes the source of detailed annual income data starting with calendar year 1998.

Starting in 1993, SLID follows the same respondents for six years. A second 'panel' was introduced in 1996, overlapping the first one for a three year period. In 1999, panel 3 was introduced and panel 1 'retired.' This pattern will be repeated every three years. Each panel includes about 15,000 households, including about 30,000 adults.

A preliminary interview takes place at the beginning of each panel to collect background information. Each of the six years has a split-interview format, with labour topics covered in January and income topics in May. In both cases, questions refer to the previous calendar year. The income interview occurs in May to take advantage of income tax time when respondents are more familiar with their records. In addition, many respondents give us the permission to consult their income tax file, and avoid the income interview.

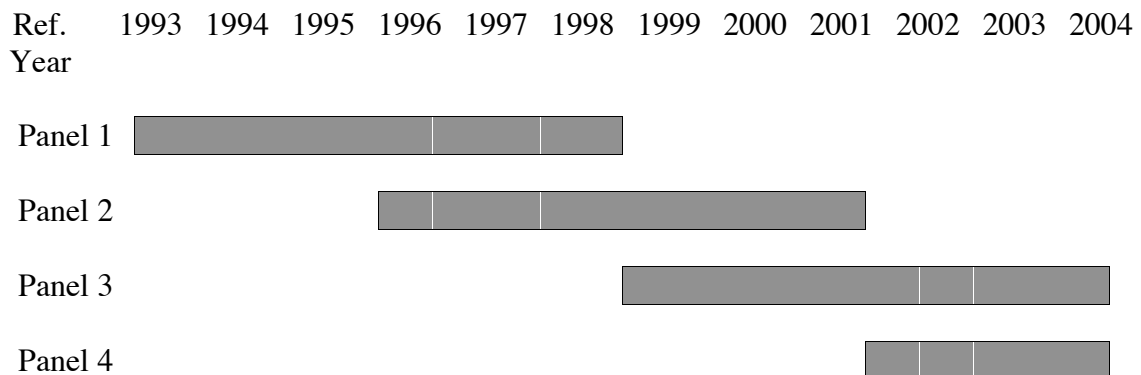
### Why a Longitudinal Survey?

With recurring surveys, it makes a difference whether a new sample of people are interviewed each time, as most surveys do, or the same people are interviewed several times in a row, as in a longitudinal survey. The advantage of cross-sectional samples is that they are generally more representative of the population, and they reveal the levels and *trends* of income or labour for the whole population or sub-groups. But what are the fluctuations in people's labour, income or family characteristics at the micro level? What events tend to coincide? How often do people change jobs or get laid off, with what impact on their total family income? How many families split or join together in a given time period? What proportion of households is persistently poor year after year, and what makes it possible for others to emerge from periods of low income?

In SLID, the focus extends from static measures to the whole range of transitions, durations, and repeat occurrences of people's financial and work situations. Since their family situation, education, and demographic background may play a role, the survey has extensive information on these topics as well (see the section **Content Themes** below).

To ensure the sample remains representative, the window on each panel of respondents is kept to 6 years. A new panel of longitudinal respondents is selected every three years, so there is always an overlap between two panels of respondents (Figure 1).

**Figure 1: Survey design**



- A new panel starts every 3 years
- Each panel has 13 interviews spread over 6 years

The longitudinal respondents — people belonging to the selected households when the new panel is introduced — are interviewed twice a year for the next six years, whether they move away or split up. After the first year, it is possible that new members will join them. New joiners, called ‘cohabitants’ in SLID, are interviewed as long as they continue to live with any longitudinal respondents. That is because the family make-up and family income situation of longitudinal respondents is of key interest. Cohabitants also form part of the cross-sectional ‘sample’ data.

The labour and income questions are intended for people 16 and over. But children who were present in the original households are also followed for the full six years. When they turn 16, they complete a preliminary interview. The following year they join other longitudinal respondents in completing both labour and income interviews.

## **Major Longitudinal Research Themes**

Discussions with prospective users and insights from other panel surveys with similar content helped in developing the following seven major research themes. They illustrate some of the survey’s potential. Depending on the angle of study, it may make sense to use individuals, jobs, employers, or spells (of unemployment for example) as the unit of analysis. SLID covers up to six jobs and six employers that a person might have during one year.

### **Employment and Unemployment Dynamics**

Usually, labour force activity data show the net changes in employment, unemployment and inactivity between two months or years; SLID will also show the flows: how many individuals experience a change one way or the other in any time period. Flow data of persons or jobs are possible by industry, occupation, or worker characteristics. Durations of spells will be of interest too. For example, to what extent long spells of unemployment are experienced by the same individuals? What are the major determinants? Why do people withdraw from the labour market, and what precedes a transition into self-employment?

### **Life Cycle Labour Market Transitions**

One can study major labour market transitions associated with particular stages of the life cycle, such as transitions from school to work, transitions from work to retirement and work absences taken to have or raise children. What are typical life-cycle patterns in Canada today? What are the subsequent activities of high school dropouts, and what precedes a return to school?

### **Job Quality**

SLID will support research in such areas as wage differences between men and women, under-employment, occupational mobility, earnings growth over a period of several years, and wage and hours polarisation among the working population.

### **Family Economic Mobility**

How stable is family income? What proportion of families experience a significant improvement or deterioration in income between two points in time? What are the determinants of these changes? How important are changes in family composition (divorce, remarriage) in explaining a change in financial wellbeing?

### **Dynamics of Low Income**

This research theme concerns the prevalence and duration of spells of low income and the factors related to families moving into or out of low income. Researchers may attempt to isolate and characterize a 'persistently poor' sub-population, as has been done using other longitudinal surveys. There will also be interest in looking at receipt of Employment Insurance benefits, social assistance and other government transfers in relation to flows into and out of low income.

### **Life Events and Family Changes**

Central to SLID's demographic potential is information on family relationships, which will make it possible to accurately identify blended and multigenerational families, for example. The longitudinal aspect will permit the study of life events and their determinants or impact. For example, what are the family's economic circumstances preceding a marriage break-up, and what are they for each spouse and any children following a separation?

### **Educational Advancement and Combining School and Work**

It will be possible to view educational activity and attainment in the evolving context of an individual's other activities and family circumstances. What are the family circumstances of young people pursuing post-secondary education? How much do high school or post-secondary students combine work and school?

### **Cross-sectional Analysis**

Many of the longitudinal research themes can have similar counterparts on the cross-sectional side. These will not be explored here as the history and usage of cross-sectional data is well established, compared to longitudinal analysis. Two particular aspects of SLID make its use for cross-sectional analysis appealing. First, the breadth of content combined with a relatively large sample (approximately 60,000 adults for the 1996 and subsequent data) make it a unique and valuable data set. Second, SLID will be the only annual source of detailed cross-sectional income data starting with reference year 1998 data.

### **Household Relationships**

This survey could be called the Survey of Labour, Income *and* Family Dynamics, since it has complete information on complex family structures and changes. How does it do this? Unlike most household surveys which describe how household members are related to one specific reference person, SLID asks explicitly about the relationship among all members of a household. Information on complex family structures – for example, blended or multigenerational families – can help in understanding family dynamics.

However, because families change, it is not possible to present data for exactly the same *families* over time. Instead, the same *individuals* are analysed in light of their family characteristics, for example their family's income, or whether they belong to a blended family.

### **Two Types of Weights**

Two types of respondent weights are required for the two types of information: longitudinal and cross-sectional. Only longitudinal respondents have a longitudinal weight. For Panel 1, this is representative of the population in January 1993. The cross-sectional weights cover both longitudinal respondents and cohabitants, and they sum to the population in January of the survey year. Cross-sectional weights apply in time series analysis and in studies focussing on a single year.

### **Computer Assisted Interviewing**

SLID uses computer-assisted interviewing (CAI) for data collection. With CAI, computers replace paper and interviewers key in reported information during the interview. Especially because of its complexity as a longitudinal survey, SLID benefits greatly from CAI's potential for improving data quality. For example, there are many dates to collect in the course of a labour interview — dates

worked, dates of jobless spells, absences from work and so on. With CAI, interviewers can feed back information that the respondent gave in the last interview. This can help respondents remember start and end dates of jobs, reducing the tendency to incorrectly associate them with the beginning or end of calendar years. CAI also makes it possible to reconcile the split labour and income interviews: the computerized questionnaire checks for logical inconsistencies between what was reported in January and what is reported in May. When an inconsistency arises, the interviewer can immediately probe the respondent for clarification. Computer-assisted interviewing also keeps track of returning members in the household and repeat employers, rather than treating them as completely new.

## **Content Themes**

SLID collects data on a wide range of topics. Some are inherently ‘dynamic,’ involving transitions and spells, and others have important explanatory value. The following are the content themes organized under the topics of labour, income and wealth, education, and personal characteristics, including selections of the variables they contain (See also Figure 2).

### **Labour**

#### *Nature and pattern of labour market activities*

- major activity during year
- spells of employment and unemployment (start and end dates, durations)
- weekly labour force status
- total weeks of employment, unemployment and inactivity by year
- multiple job-holding spells
- work absence spells

#### *Work experience*

- years of full-time and part-time employment
- years of experience in full-time, full-year equivalents

#### *Characteristics of jobless spells*

- job search during spell
- dates of search spells
- desire for employment
- reason for not looking

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*Job characteristics* (all characteristics updated each year and dates of changes recorded; collected for up to six jobs per year)

- start and end dates, first date ever worked for this employer
- wage
- work schedule (hours and type)
- benefits
- union membership
- occupation
- supervisory and managerial responsibilities
- class of worker
- tenure
- how job was obtained
- reason for job separation

*Characteristics of work absences lasting one or more weeks* (collected on first and last absence each year, for each employer)

- absence dates
- reason
- paid or unpaid

*Employer attributes*

- industry
- firm size
- public or private sector

*Income and wealth, Personal income*

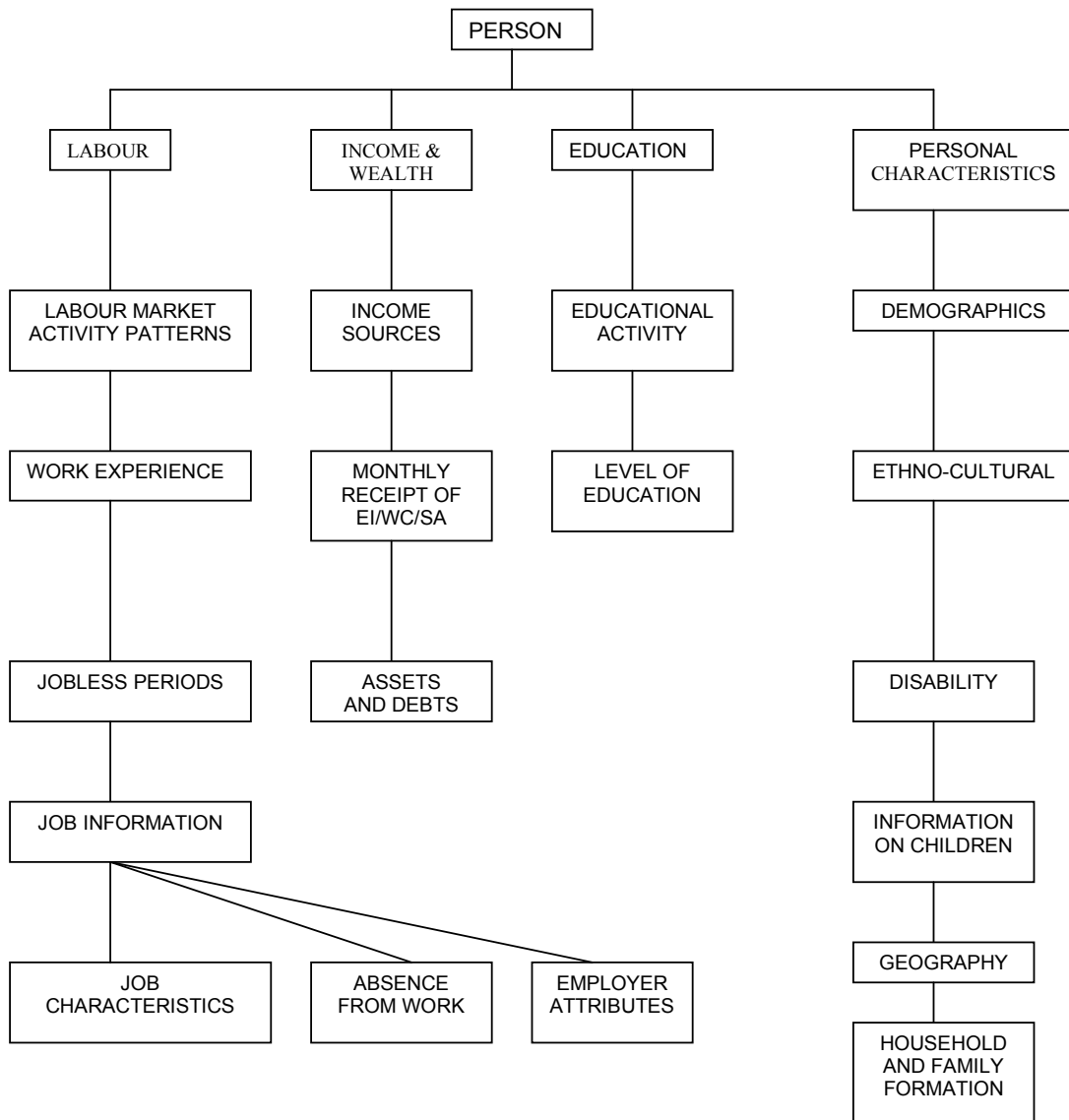
- annual information on about 25 income sources
- total income
- taxes paid
- after tax income

*Receipt of compensation* (whether benefits were received from each source and, if so, in which months)

- Employment Insurance
- Social Assistance
- Workers' Compensation



**Figure 2. Survey of Labour and Income Dynamics : Organization of Content**



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*Assets and debts*

- Although no data have yet been collected, eventually information may be collected once or twice in life of panel on roughly 20 asset and debt categories.

*Education and Educational activity*

- enrolled in a credit program, months attended
- type of institution
- full-time or part-time student
- certificates received (if applicable)

*Educational attainment (updated annually)*

- years of schooling
- degrees and diplomas
- major field of study

*Personal characteristics, Demographics*

- year of birth / age
- sex
- duration of current marital status
- year/age at first marriage

*Ethno-cultural*

- ethnic background
- member of an Employment Equity designated group
- mother tongue
- date of immigration
- country of birth
- parents' schooling and place of birth

*Activity limitation*

- annual information on activity limitations and their impact on working
- satisfaction with work

*Information on person's children*

- number of children born, raised
- year and person's age when first child born

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*Geography and geographic mobility*

- economic region or census metropolitan area of current residence
- size of community
- moved during year
- move dates
- reason for move
- nature of move (full household/household split)

*Household and economic and census family information* (annual summary information, e.g., size, type)

- key characteristics of other individuals in household/family (e.g., age, sex, relationship, income, annual hours worked)
- relevant low-income cut-off
- family events (marriage, separation, death, birth)
- dwelling type and tenure

## **SLID Products and Services**

For information or to order, contact the Client Services at:

TELEPHONE: 1-888-297-7355 or (613) 951-7355

FAX: (613) 951-3012

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### **Survey Documentation**

All survey documentation can be viewed and downloaded at no charge.

*Survey Overview*

<http://www.statcan.ca/english/freepub/75F0011XIE/free.htm>

Brief description of the Survey of Labour and Income Dynamics - a good starting point.

*Survey of Labour and Income Dynamics Microdata User's Guide*

<http://www.statcan.ca/english/freepub/75M0001GIE/free.htm>

A comprehensive description of the survey design, content and methods.

*Canadian Longitudinal Surveys – Philip Giles*

*SLID Electronic Data Dictionary (SEDD)*

<http://www.statcan.ca/english/SLID/diction.htm>

A useful tool to identify variables relevant to the desired analysis, providing detailed descriptions of all survey variables..

*SLID Working Paper Series*

<http://www.statcan.ca/cgi-bin/downpub/listpub.cgi?catno=75F0002MIE>

Working papers of the Survey of Labour and Income Dynamics

*Survey of Labour and Income Dynamics Public Use Microdata*

Currently, a two-year longitudinal file covering reference years 1993 and 1994 is available. Cross-sectional files for 1993 and 1994 have also been released. Public-use cross-sectional files for later years will be available during calendar year 2001. Due to concerns over the confidentiality of public-use longitudinal microdata files, no release dates for further such files have yet been established.

*International equivalence file*

This is an international longitudinal microdata file containing data for four countries (Canada, U.S.A., Germany and Great Britain. Variables have been created with common definitions, thus facilitating international comparisons. More information is available from:

<http://www.human.cornell.edu/pam/gsoep/equivfil.cfm>

*Income Trends in Canada on CD-ROM*

This is an annual product containing standard tables related to income back to 1980. The BEYOND 20/20™ Browser software is used to access the data. Price: \$195

**Access to Internal Data**

Those wishing access to internal microdata may contact the Client Services to discuss the particulars of a specific project. The objective of these discussions is to try to ensure that all survey data are available for researchers while still respecting the requirements of the Statistics Act. Currently, there are three possible approaches to accessing internal survey microdata.

*Custom retrievals*

This is the simplest approach, but can also be the most costly. In consultation with a survey analyst, the data user specifies the required output. A survey officer retrieves the data using the internal survey database. Suppression of the values in certain cells is performed for reasons of confidentiality and/or data

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quality. The output is then delivered to the client. The charge to the client is based on Statistics Canada's costs related to the request, i.e. cost recovery.

#### *Remote access*

A data user may write a program to be sent to Statistics Canada in electronic form and run against the internal database. The output is reviewed by survey staff to ensure that no risk to confidentiality exists. After this step, the program results are delivered to the client. The cost is lower than that of custom retrievals.

#### *On-premises access*

Under certain conditions, researchers may work within a Statistics Canada office or in a Statistics Canada Research Data Centres. Under this approach, researchers have access to the complete internal microdata database (at least those variables identified as data variables; information such as name, address, postal code, telephone number is removed). Since researchers have access to the detailed microdata, requirements of the Statistics Act must be met.

### **SLID Retrieval Software**

This software has been developed to aid users with remote access and on-premises access. The purpose of the SLID retrieval software (SLIDRET) is to extract the microdata required for a particular study in the form of a rectangular text file. This is a useful tool for three primary reasons:

- The data reside in a complex relational database. SLIDRET eliminates the requirement to understand the structure of the database and the knowledge of software for manipulating relational databases.
- The database structure is invariant with time (other than for changes required due to questionnaire changes and the addition of derived variables). This eliminates the need to keep track of updates to record layouts and data dictionaries.
- A "database query" is produced and saved within SLIDRET. This query can be produced without having access to the data. This means that an analyst may work with SLIDRET outside a Statistics Canada office and then use the output for remote or on-premises access. One may also modify an existing query, such as would be required when a new year of data is released.

For more information on SLIDRET or to obtain a copy, please contact Client Services.