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Survey of Labour and Income Dynamics: A Survey Overview

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. not available for any reference period
.. not available for a specific reference period
... not applicable
0 true zero or a value rounded to zero
0^s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
^{p} preliminary
^{r} revised
x suppressed to meet the confidentiality requirements of the *Statistics Act*
^{E} use with caution
F too unreliable to be published
* significantly different from reference category ($p < 0.05$)

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Survey of Labour and Income Dynamics: A Survey Overview

Survey objectives

The Survey of Labour and Income Dynamics (SLID) is an important source for income data for Canadian families, households and individuals. Introduced in 1993, SLID provides an added dimension to traditional surveys on labour market activity and income: the changes experienced by individuals and families through time. At the heart of the survey's objectives is the understanding of the economic well-being of Canadians.

Starting with reference year 1996, the Survey of Labour and Income Dynamics (SLID) officially replaced the annual Survey of Consumer Finances (SCF). Though the income content of the two surveys is similar, SLID adds a large selection of variables that capture transitions in Canadian jobs, income and family events.

SLID, as a longitudinal survey, interviews the same people from one year to the next for a period of six years. The survey's longitudinal dimension allows evaluation of concurrent and often related events, which yields greater insight on the nature and extent of poverty in Canada: What socio-economic shifts do individuals and families live through? How do these shifts vary with changes in their paid work, family make-up, receipt of government transfers and other factors? What proportion of households are persistently poor year after year, and what makes it possible for others to emerge from periods of low income?

SLID also provides information on a broad selection of human capital variables, labour force experiences and demographic characteristics such as education, family relationships and household composition. Its breadth of content combined with a relatively large sample makes it a unique and valuable data set.

What's new?

New version of SLID database

The Survey of Labour and Income Dynamics (SLID) database is expanding this year to include micro-data from the cross-sectional Survey of Consumer finance (SCF) from 1976 to 1997 inclusive.

Some of the SCF information is now available through the SLID entities database. This will permit users to access a longer period of historical data from a unique database. Users still have the choice of using the SCF historical files, if it better suits their needs.

Data from SCF were adapted as much as possible to SLID concepts variables. Some concepts were almost identical between the two surveys, such as income data, allowing SCF variables to be easily transformed into SLID variables. Nevertheless, other SCF concepts differed and thus some variables were modified to follow SLID concepts. For example because the SCF "head of family" concept differs from the SLID "major income earner" concept, variables related to the family characteristics were converted.

Most of the income variables as well as others, such as demographic information, were converted in this release. Other SCF data will be transformed and added to the SLID database in the future.

Since SLID data starts with reference year 1993, there are five years of overlap between the two surveys where users have to specify which survey they intend to be using when accessing micro data through the extraction tool – SLIDRET (see SLIDRET User's manual – cross-sectional section).

For further information on this and for a list of the variables available using SLID concepts from SCF, see section Notes and Definitions – Comparisons between data up to 1995 and data since 1996.

Introduction of new variables

Universal Child Care Benefit

The Universal Child Care Benefit for children under 6 was introduced in the second half of 2006. Families with children under 6 year of age can receive $100 per month for each eligible child. This benefit is taxable and is available to all families. A new variable called "Child Benefits" has also been created. This variable represents the sum of the regular Child Tax Benefits and Universal Child Care Benefit.

Inter-household transfers

Inter-Household Transfers represent money given or received to or from family members outside the household. Total amounts transferred are captured and as well as the countries with which these exchanges took place. In 2006, this information was asked to respondents 16 to 69 years of

age. This information is only available at the individual level.

Capital Gains

In addition to gathering information on Taxable Capital Gains, Total Capital Gains and Total Income with Total Capital Gains are available for 2006.

Disability Portion of Canada Pension Plan & Quebec Pension Plan

As of 2006, this information has been captured for individuals who granted permission for the access to their personal income tax form (T1). As of 2007, this information will be available for all respondents 16 years of age and over.

Energy Rebates and Credits, Federal

Added in 2006, this variable includes amounts for energy rebates and credits at the federal level. In 2006, this variable only included the Federal Energy Cost Benefit program. This variable is subsequently added to the "Goods and Services Tax (GST) and Harmonized Sales Tax (HST) credits" variable.

Energy Rebates and Credits, Provincial

Added in 2006, this variable includes some amounts for energy rebates and credits at the provincial level. In 2006, this variable only included the Alberta Resource Rebate program. This variable is subsequently added to the "Provincial and territorial tax credits" variable.

Student loans

In 2006, two student loan variables were introduced. These variables indicate whether respondents aged 16 to 45 who had some educational activity in the reference year had received a student loan in the reference year and the amount borrowed. For more information, please see the section Survey Content - Education.

Changes to variables

For this release, SLID revised the following variable:

Historical revision of Major Field of Study for years 1993 to 2003

SLID used to code all fields of study of post-secondary programs and job-related courses according to the Major Field of Study (MFS) classification. However, starting in 2004, SLID adopted the Classification of Instructional Programs (CIP) because it was a detailed and proven classification with a 20-year history, was up to date, had an established mechanism for updates and a track record of regular updates, and had a proper hierarchical coding structure. As an added advantage, it would provide comparability with the United States. CIP is now the Statistics Canada standard for field of study classification.

In SLID, all the fields of study reported prior to reference year 2004 were coded according to the MFS classification. For historical comparison purposes, all these MFS codes were converted into CIP codes. Researchers can now use the CIP to do historical analysis of fields of studies back to 1993.

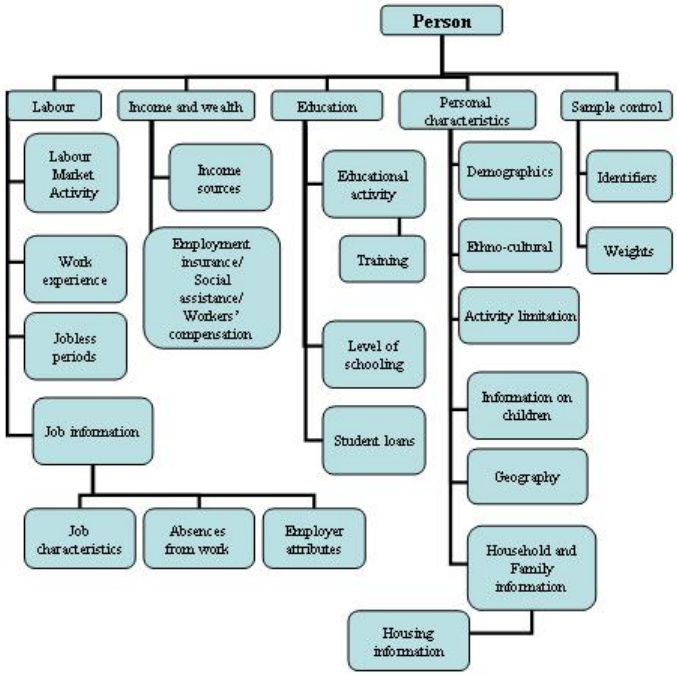
Survey content

SLID collects data on a wide range of topics. Some are inherently "dynamic", involving transitions and spells, while others have important explanatory value.

The content themes are shown in Figure 2

For more detailed information on survey variables, refer to the SLID electronic data dictionary

Figure 2. Organization of SLID content



Labour

Labour market activity

- major activity during year
- employment/unemployment spells (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

Jobless periods

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

Job characteristics*

- start and end dates, first date ever worked for this employer
- wages
- 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

*Job characteristics are updated annually for up to six jobs per year with dates of change recorded.

Absences from work*

- absence dates
- reason
- paid or unpaid

*Absences lasting one or more weeks are collected on the first and last absence each year, for each employer.

Employer attributes

- industry
- firm size
- public or private sector

Income and wealth

Income sources

- annual information on about many income sources

  For example:

  - market income
  - government transfers
  - taxes paid
  - after-tax income
  - inter-household transfers

Receipt of Employment Insurance/social assistance/workers' compensation*

- employment insurance
- social assistance
- workers' compensation

* Amount and timing of monthly benefits received from each source.

Education

Educational activity

- enrolled in a credit program, months attended
- type of institution
- full-time or part-time student
- certificates received (if applicable)
- job-related training courses, seminars, workshops and conferences

Level of schooling/educational attainment*

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

Student loans

- received a student loan
- total amount borrowed
- amount currently owing

*Updated annually

Personal characteristics

Demographics

- year of birth/age
- sex
- marital status
- 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 children

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

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 family information*

- key characteristics of other household/family members (e.g., age, sex, relationship, income, annual hours worked)
- relevant low-income cutoff
- family events (marriage, separation, deaths, births)
- Housing information:

- type of dwelling
- dwelling condition
- characteristics of dwelling
- ownership / mortgage / rent
- payments / costs / rent inclusions
- housing suitability indicator
- shelter costs to income ratio

* Annual summary information, e.g., size, type

Sample control

Identifiers

- person
- household
- economic family
- census family

Weights

- cross-sectional
- cross-sectional adjusted for labour non-response
- longitudinal

Notes and definitions

Classification of income

Table A
Classification of income by source

Market Income
Earnings
Wages, salaries and commissions
Self-employment income
Farm
Non-farm
Investment income
Retirement pensions
Other income
(plus) Government transfers
Child tax benefits
Child tax benefits
Universal child care benefit
Canada Pension Plan/Quebec Pension Plan benefits
Old Age Security and Guaranteed Income Supplement/Spouse's Allowance
Employment Insurance benefits
Social assistance
Workers' compensation benefits
GST/HST Credit
Provincial/territorial tax credits
Other government transfers
(equals) Total income
(minus) Income taxes
(equals) After-tax income

Income

This section reviews the definitions of the main income concepts and their components. In order to highlight the relationships between them, this section is organized according to the "Classification of income", described above.

The concept of income

There are several important inclusions and exclusions in the concept of income:

- The concept of income covers income received while a resident of Canada or as relevant for income tax purposes in Canada . This excludes some, but not all, foreign income.
- Retirement income received as a regular pension or annuity during retirement is included, while cash withdrawals from private pension plans, including Registered Retirement Savings Plans (RRSPs), prior to retirement, are excluded.
- Realized capital gains from financial investments are excluded.
- In the Canadian System of National Accounts (CSNA) and the present income classification, taxes on capital gains are included in income taxes, as are taxes on RRSP withdrawals. Both capital gains (the taxable portion thereof) and RRSP withdrawals figure in the calculation of taxes, but are not part of total income in the CSNA or in SLID's Classification of income.
- SLID's classification of income includes all refundable tax credits and benefits, including those that are not considered for income tax purposes, such as child tax benefits, the Goods and Services Tax Credit/Harmonized Sales Tax Credit, and other provincial or territorial tax credits. There are other smaller differences between SLID's total income and total income defined for tax purposes (see Other income and Other government transfers).
- Contributions to Employment Insurance and the Canada and Quebec Pension Plans, both federal programs, are not included in income taxes, nor are they deducted from income to arrive at after-tax income. However, the CSNA recently revised its definition of taxes on production to include these payroll taxes, in accordance with international recommendations on national accounting.

Market income

Market income is the sum of earnings (from employment and net self-employment), net investment income, (private) retirement income, and the items under "Other income". It is equivalent to total income minus government transfers. It is also called income before taxes and transfers.

Earnings

This includes earnings from both paid employment (wages and salaries) and self-employment.

Wages, salaries and commissions

These are gross earnings from all jobs held as an employee, before payroll deductions such as income taxes, employment insurance contributions or pension plan contributions, etc. Wages and salaries include the earnings of owners of incorporated businesses, although some amounts may instead be reported as investment income. Commission income received by salespersons as well as occasional earnings for baby-sitting, for delivering papers, for cleaning, etc. are included. Overtime pay is included.

Military personnel living in barracks are not part of the target population in SLID.

Self-employment income

This is net self-employment income after deduction of expenses. Negative amounts (losses) are accepted. It includes income received from self-employment, in partnership in an unincorporated business, or in independent professional practice. Income from roomers and boarders (excluding

that received from relatives) is included. Note that because of the various inclusions, receipt of self-employment income does not necessarily mean the person held a job.

Self-employment income is subdivided into farm self-employment income and non-farm self-employment income. Farm self-employment income is reported by individuals who operate their own or a rented farm, either on own account or in partnership. Included are money receipts from the sale of farm products as well as related supplementary and assistance payments from governments. Income in kind is excluded.

Investment income

This includes interest received on bonds, deposits and savings certificates from Canadian or foreign sources, dividends received from Canadian and foreign corporate stocks, cash dividends received from insurance policies, net rental income from real estate and farms, interest received on loans and mortgages, regular income from an estate or trust fund and other investment income. Realized capital gains from the sale of assets are excluded. Negative amounts are accepted.

Retirement pensions

This is retirement pensions from all private sources, primarily employer pension plans. Amounts may be received in various forms such as annuities, superannuation or RRIFs (Registered Retirement Income Funds). Withdrawals from RRSPs (Registered Retirement Savings Plans) are not included in retirement pensions. However, they are taken into account as necessary for the estimation of certain government transfers and taxes. For data obtained from administrative records, income withdrawn from RRSPs before the age of 65 is treated as RRSP withdrawals, and income withdrawn from RRSPs at ages 65 or older is treated as retirement pensions. Retirement pensions may also be called pension income.

Other income

This sub-total includes all items of market income not included elsewhere. Among them are support payments received (also called alimony and child support). The coverage of other items depends at least to some extent on the method of income data collection, whether from administrative income tax records or by interview. Those items which are included on line 130 of the T1 tax return are well covered. These include, but are not restricted to, retirement allowances (severance pay/termination benefits), scholarships, lump-sum payments from pensions and deferred profit-sharing plans received when leaving a plan, the taxable amount of death benefits other than those from CPP or QPP, and supplementary unemployment benefits not included in wages and salaries.

Government transfers

Government transfers include all direct payments from federal, provincial and municipal governments to individuals or families. See the table Classification of income for a list of the government transfers identified separately in the latest reference year. It should be noted that many features of the tax system also carry out social policy functions but are not government transfers per se. The tax system uses deductions and non-refundable tax credits, for example, to reduce the amount of tax payable, without providing a direct income.

Child tax benefits

Federal child tax benefits began in 1993 and replaced both the federal Family Allowances and the Child Tax Credit. Several provincial and territorial programs have since been introduced, in addition to Quebec family allowances which already existed before 1993. To be eligible, a person must have the primary responsibility for the care and upbringing of one or more children under the age of 18. Most benefits are calculated by setting a maximum amount per family or per child and reducing that total by a certain percentage of the family's net income.

The programs which were explicitly accounted for in the data were the federal basic benefit and National Child Benefit Supplement (together called the Canada Child Tax Benefit, began in 1998), the Newfoundland and Labrador Child Benefit (began in 1999), the Nova Scotia Child Benefit (began in 1998), the New Brunswick Child Tax Benefit (began in 1997), the New Brunswick Working Income Supplement (began in 1997), the Quebec Allocation familiale (began in 1981), the Quebec Allocation à la naissance (began in 1998), the Ontario Child Care Supplement for Working Families (began in 1998), the Saskatchewan Child Benefit (began in 1998), the Alberta Family Employment Tax Credit (began in 1997), the BC Family Bonus (began in 1996), and the BC Earned Income Benefit (began in 1998).

Benefits from these programs are non-taxable. Effective July 2007, the Canada Child Tax Benefit under 7 supplement within Canada Child Tax Benefit program will cease to exist and will no longer be paid. This supplement will also only be paid for children who are six years of age between July 2006 and June 2007. In addition, as of July 2006, the Saskatchewan Child Benefit was fully phased out and replaced by the full federal increases to the National Child Benefit Supplement.

In July 2006 a new Child Benefit program was introduced at the federal level. The Universal Child Care Benefit for children under 6 was introduced in the second half of 2006. Unlike the other child tax benefits, this benefit is taxable and is available to all families with children under 6 year of age regardless of their income. Famillies can receive $100 per month for each eligible child. This new benefit has been added to the Child Tax Benefits data.

Old Age Security (OAS)

The Old Age Security (OAS) pension is targeted to Canadian residents aged 65 and over. OAS recipients who have little or no other income may also receive the federal Guaranteed Income Supplement (GIS); and their spouses, if aged 60 to 64 (and not yet eligible for OAS and GIS themselves), receive the Spouse's Allowance.

Canada Pension Plan (CPP) and Quebec Pension Plan (QPP)

The CPP and QPP are compulsory contributory social insurance programs that provide a source of retirement income and protect workers and their families against loss of income due to disability or death.

Employment Insurance

Employment Insurance is a federal program which includes the following types of benefits: regular unemployment benefits, sickness benefits, maternity and parental benefits, and benefits for persons taking approved training courses or participating in job creation or job-sharing projects. To qualify, the claimant must have ceased receiving employment income and have worked a minimum number of weeks or hours of insurable employment over the preceding period.

Social assistance

Social assistance covers many provincial and municipal income supplements to individuals and families. It is usually provided only after all other possible sources of support have been exhausted.

Workers' compensation

Workers' compensation is provided to protect all full-time and part-time employees from loss of salary due to work accidents or occupational diseases and help them to pay their medical expenses and other costs.

Goods and Services Tax/Harmonized Sales Tax credit

Introduced in conjunction with the Goods and Services Tax in 1990, it is intended to offset the GST/HST for lower income families and individuals. In Nova Scotia , New Brunswick, and Newfoundland and Labrador, it is called the Harmonized Sales Tax Credit because the administration of the tax is combined with the provincial sales tax. Included are the federal Relief for Heating Expenses paid in 2001 and the Federal Energy Cost Benefit paid in 2006.

Provincial/territorial tax credits

Included here are refundable tax credits other than those for children (included with child tax benefits). Some are designed to help low income individuals and families to pay property taxes, education taxes, rent and living expenses, and so on. Provincial sales tax credits such as the Quebec Sales Tax Credit and the Newfoundland and Labrador HST Credit are included. The Quebec abatement, although refundable, is not included here but rather with income taxes. Included is the Alberta Resource Rebate paid in 2006.

Other government transfers

This includes government transfers not included elsewhere, mainly any other non-taxable transfers. In SLID, these amounts are included with "Other income". This is partly because the coverage of any transfers not taxed through the income tax system is low. There may be under-reporting of these transfers, which are mainly collected using an open question in SLID interviews. Nonetheless, the types of transfers which have come under this heading include: training program payments not reported elsewhere, the Veteran's pension, pensions to the blind and the disabled, regular payments from provincial automobile insurance plans (excluding lump-sum payments), and benefits for fishing industry employees.

Total income

Total income refers to income from all sources including government transfers before deduction of federal and provincial income taxes. It may also be called income before tax (but after transfers). All sources of income are identified as belonging to either market income or government transfers.

Income tax

Income tax is the sum of federal and provincial income taxes payable (accrued) for the taxation year. Income taxes include taxes on income, capital gains and RRSP withdrawals, after taking into account exemptions, deductions, non-refundable tax credits, and the refundable Quebec abatement. The data are either taken directly from administrative records or estimated based on aggregate data from administrative records, as this yields better results than the amounts reported by interview.

After-tax income

After-tax income is total income, which includes government transfers, less income tax. It may also be called income after tax.

Family

Dwelling

In general terms a dwelling is defined as a set of living quarters. A private dwelling is a separate set of living quarters with a private access. A collective dwelling may be institutional, communal or commercial in nature. Of the different types of collective dwellings, SLID covers only communal dwellings.

Household

A household is defined as a person or group of persons residing in a dwelling. SLID defines households and families according to the living arrangements on December 31 of the reference year. Residents of Canada are also defined at those points in time.

Adults

Adults are defined in SLID as individuals 16 or older as of December 31st of the reference year.

Family income

Family income is the sum of income of each adult in the family as defined above. Household income is likewise the sum of incomes of all adults in the household. Family and household membership is defined at a particular point in time, while income is based on the entire calendar year. The family members or "composition" may have changed during the reference year, but no adjustment is made to family income to reflect this change.

Economic family type

"Economic family type" refers to either economic families or unattached individuals. An economic family is defined as a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common law or adoption. An unattached individual is a person living either alone or with others to whom he or she is unrelated, such as roommates or a lodger. See Family classification for more detailed groupings.

Census family type

"Census family type" refers to either census families or persons not in census families. The term "census family" corresponds to what is commonly referred to as a "nuclear family" or "immediate family". In general, it consists of a married couple or common-law couple with or without children, or a lone-parent with a child or children. Furthermore, each child does not have his or her own spouse or child living in the household. A "child" of a parent in a census family must be under the age of 25 and there must be a parent-child relationship (guardian relationships such as aunt or uncle are not sufficient).

Persons "not in census families" are those living alone, living with unrelated individuals, or living with relatives but not in a husband-wife or parent-unmarried child (including guardianship-child) relationship.

By definition, all persons who are members of a census family are also members of the same economic family.

See Family classification for more detailed groupings.

Major income earner

This characteristic is important for the derivation of detailed family types (see Family classification). For each household and family, the major income earner is the person with the highest income before tax, with one exception: a child living in the same census family as his/her parent(s) cannot be identified as the major income earner of the census family (this does not apply to economic families).

For persons with negative total income before tax, the absolute value of their income is used, to reflect the fact that negative incomes generally arise from losses "earned" in the market-place which are not meant to be sustained. In the rare situations where two persons have exactly the same income, the older person is the major income earner.

Family classification

SLID uses the major income earner to classify families.

Table B

Classification of family types

Economic families (or Census families), 2 persons or more
Elderly families
Married couples
Other elderly families
Non-elderly families
Married couples without children
No earner
One earner
Two earners
Two-parent families with children
No earner
One earner
Two earners
Three or more earners
Married couples with other relatives
Lone-parent families
Male lone-parent families
Female lone-parent families No earner
One earner
Two earner or more earners
Other non-elderly families
Unattached individuals (or Persons not in census families)
Elderly male
Non-earner
Earner
Elderly female
Non-earner
Earner
Non-elderly male
Non-earner
Earner
Non-elderly female
Non-earner
Earner

Elderly family

The major income earner is aged 65 or over.

Non-elderly family

The major income earner is under age 65.

Married couples/spouses

Married couples, including legally married, common-law and same-sex relationships, where one of the spouses is the major income earner.

Children

A child or children (by birth, adopted, step, or foster) of the major income earner under age 18. Other relatives may also be in the family.

Lone-parent family

Includes at least one child as defined above. Families where the parent is 65 years or older are excluded.

Relative

A person related to the major income earner by blood, marriage, adoption or common-law.

Other relative

A person in the economic family who is not the major income earner nor his/her spouse or child under age 18.

Analytical concepts

Current dollars versus constant dollars

"Current dollars" are what we usually mean when we refer to a currency in the current time period. The term "constant dollars" refers to dollars of several years expressed in terms of their value ("purchasing power") in a single year, called the base year. This type of adjustment is done to eliminate the impact of widespread price changes.

Current dollars are converted to constant dollars using an index of price movements. The most widely used index for household or family incomes, provided that no specific uses of the income are identified, is the Consumer Price Index (CPI), which reflects average spending patterns by consumers in Canada.

The following table shows the annual rates of the Consumer Price Index. To convert current dollars of any year to constant dollars, divide them by the index of that year and multiply them by the index of the base year you choose (remember that the numerator contains the index value of the year you want to move to). For example, using this index, $10,000 in 1997 would be 10,553 in 2000 constant dollars ($10,000 × 95.4/ 90.4 = $10,553).

Table C
Consumer Price Index, annual rates, 2002=100

1976	31.1	1984	60.6	1992	84.0	2000	95.4
1977	33.6	1985	63.0	1993	85.6	2001	97.8
1978	36.6	1986	65.6	1994	85.7	**2002**	**100.0**
1979	40.0	1987	68.5	1995	87.6	2003	102.8
1980	44.0	1988	71.2	1996	88.9	2004	104.7
1981	49.5	1989	74.8	1997	90.4	2005	107.0
1982	54.9	1990	78.4	1998	91.3	2006	109.1
1983	58.1	1991	82.8	1999	92.9	2007	111.5

Earner/Income recipient

An earner is a person who received income from employment (wages and salaries) and/or self-employment during the reference year. The term income recipient is generally used for someone who received a positive (or negative) amount of income of any given type.

Mean income (average income)

The mean or average income is computed as the total or "aggregate" income divided by the number of units in the population. It offers a convenient way of tracking aggregate income while adjusting for changes in the size of the population.

There are two drawbacks to using average income for analysis. First, since everyone's income is counted, the mean is sensitive to extreme values: unusually high income values will have a large impact on the estimate of the mean income, while unusually low ones, i.e. highly negative values,

will drive it down. (See also Recipients versus non-recipients and Negative values.) Secondly, it does not give any insight into the allocation of income across members of the population. To examine allocation of income, measures such as Percentiles or Gini coefficients may be used.

Recipients versus non-recipients (zero values)

For every table showing average incomes, it must be kept in mind whether non-recipients of that type of income are included or excluded from the population. In the case of total family income, the difference from including or excluding units with zero income is small since there are very few such families. However, if one is interested in the average amount of individual self-employment earnings, the value will be quite different if one includes those persons who were not self-employed.

Negative values

Negative income amounts can arise in two ways: net losses from self-employment (expenses exceed receipts), or net investment losses (losses exceed gains). As with zero values, negative values can have a large impact on results. In general, the published income tables treat negative values no differently than positive values, but there are a few exceptions: for the calculation of both Gini coefficients and the low income gap, negative values are converted to zeroes; and in the derivation of the major income earner of a family or household, the absolute value is used instead (see Major income earner).

Percentiles

Income percentiles, like quintiles and deciles, are a convenient way of categorizing units of a given population from lowest income to highest income for the purposes of drawing conclusions about the relative situation of people at either end or in the middle of the scale. Rather than using fixed income ranges, as in a typical distribution of income, it is the fraction of each population group that is fixed.

First, all the units of the population, whether individuals or families, are ranked from lowest to highest by the value of their income of a specified type, such as after-tax income. Then the ranked population is divided into five groups of equal numbers of units, called quintiles. Analogously, dividing the population ranked by income into ten groups, each comprising the same number of units, produces deciles.

Most analyses should be carried out on the people of different percentiles within one population distribution. Care should be taken in making comparisons between percentiles that resulted from different distributions, because any difference in either the population or the income concept used to rank units could have a large effect. It is probable that both the income ranges represented by each percentile and the people making up each percentile will be different.

Median income

The median income is the value for which half of the units in the population have lower incomes and half has higher incomes. To derive the median value of income, units are ranked from lowest to highest according to their income and then separated into two equal-sized groups. The value that separates these groups is the median income (50th percentile).

Because the median corresponds exactly to the midpoint of the income distribution, it is not, contrary to the mean, affected by extreme income values. This is a useful feature of the median, as it allows one to abstract from unusually high values held by relatively few people.

Since income distributions are typically skewed to the left - that is, concentrated at the low end of the income scale - median income is usually lower than mean income.

Implicit rate of government transfers or taxes

The implicit rate of government transfers or taxes is a way of showing the relative importance of transfers received or taxes paid for different families or individuals. This concept is similar, but not identical, to the effective rate of taxation. For a given individual or family, the effective rate is the amount of transfers/taxes expressed as a percentage of their market income, total income, or after-tax income. The implicit rate for a given population is the average (or aggregate) amount of transfers/taxes expressed as a percentage of their average (or aggregate) income.

Family size adjustment (equivalence scale)

When comparing family incomes to study such things as income adequacy or socio-economic status, one often wants to take family size and composition into account-the income amount itself is not sufficient to understand a family's financial well-being without knowing how many people are sharing it. In general, two approaches have been used to help with the analysis of family income. One is to produce data by detailed family types, so that within a given family type, differences in family size are not significant. In fact, many income measures have been crossed by detailed family types in the published tables. The other way to take into account family size and composition is to adjust the income amount by an adjustment factor.

The simplest method is to use per capita income, that is, to divide the family income by the family size. A limitation of per capita income, however, is that it tends to underestimate economic well-being for larger families as compared to smaller families. This is due to the fact that it assumes equal living costs for each member of the family, but some costs, primarily those related to shelter, decrease proportionately with family size (they may also be lower for children than for adults). For example, the shelter costs for an adult married couple with no children are arguably not much more than those for an adult living alone.

To take such economies of scale into account, it is common to use an "equivalence scale" to adjust family incomes. Instead of implicitly assuming equal costs for additional family members as the per capita approach does, the equivalence scale is a set of decreasing factors assigned to the first member, the second member, and so on. The adjusted income amount for the family is obtained by dividing the family's income by the sum of the factors assigned to each member.

There is no single equivalence scale in use in Canada. The one used in the published income tables and in concepts such as the low income measure (LIM) has, however, achieved a high degree of acceptance. In this equivalence scale, the factors are as follows:

- the oldest person in the family receives a factor of 1.0;
- the second oldest person in the family receives a factor of 0.4;
- all other family members aged 16 and over each receive a factor of 0.4;
- all other family members under age 16 receive a factor of 0.3.

Other equivalence scales in use include:

OECD scale (Organization for Economic Cooperation and Development)

- the oldest person in the family receives a factor of 1.0;
- all other family members aged 15 and over each receive a factor of 0.5;
- all other family members under age 15 receive a factor of 0.3.

Square root of family size (this is a close approximation to the LIM equivalence scale, particularly for families with 6 members or less).

Gini coefficient

The Gini coefficient measures the degree of inequality in the income distribution. Gini coefficients are published for market income, total income and after-tax income, and are used to compare the uniformity of income allocation between different income concepts, across different populations or within the same population over time.

Values of the Gini coefficient can range from 0 to 1. A value of zero indicates income is equally divided among the population with all units receiving exactly the same amount of income. At the opposite extreme, a Gini coefficient of 1 denotes a perfectly unequal distribution where one unit possesses all of the income in the economy. A decrease in the value of the Gini coefficient can, by and large, be interpreted as reflecting a decrease in inequality, and vice versa. As a rough rule of thumb when using data from SLID at the Canada level: an absolute difference of 0.01 or less between two Gini coefficients is considered statistically significant.

Low income definitions

Low Income Cut-offs (LICOs)

Low income cut-offs (LICOs) are established using data from the Survey of Household Spending. They convey the income level at which a family may be in straitened circumstances because it has to spend a greater proportion of its income on necessities than the average family of similar size. Specifically, the threshold is defined as the income below which a family is likely to spend 20 percentage points more of its income on food, shelter and clothing than the average family. There are separate cut-offs for seven sizes of family - from unattached individuals to families of seven or more persons - and for five community sizes - from rural areas to urban areas with a population of more than 500,000.

The first step in the production of a set of low income cut-offs is to calculate the average proportion of income that a family spends on food, shelter and clothing. The 1992 Family Expenditure Survey found that, on average, families spend 43% of their after-tax income (and 35% of their total "before-tax" income) on these necessities. Then, 20 percentage points are added, giving 63% of after-tax income. This is done on the grounds that a family spending more than this proportion of its income on necessities is significantly worse off than the average family. The final step is to look at the distribution of income by expenditure and determine, using a regression line, the level of income at which a family tends to spend 20 percentage points more than the average on the necessities of food, shelter and clothing.

Rebasing and Indexing the LICOs

Over time, Canadian families have spent a smaller percentage of their income on the necessities of food, shelter and clothing. This relationship between families' income and spending is associated with a specific point in time, i.e. the year of the expenditure survey used to derive the cut-offs. That particular year is referred to as the base year for the set of cut-offs.

After having calculated LICOs in the base year, cut-offs for other years are obtained by applying the corresponding Consumer Price Index (CPI) inflation rate to the cut-offs from the base year - the process of indexing the LICOs.

Low income rate and low income gap

To determine whether a person (or family) is in low income, the appropriate LICO (given the family size and community size) is compared to the income of the person's economic family. If the economic family income is below the cut-off, all individuals in that family are considered to be in low income. In other words, "persons in low income" should be interpreted as persons who are part of low income families, including persons living alone whose income is below the cut-off. Similarly, "children in low income" means children who are living in low income families. Overall, the low income rate for persons can then be calculated as the number of persons in low income divided by the total population. The same can be done for families and various sub-groups of the population; for example, low income rates by age, sex, province or family types.

The low income gap is the amount that the family income falls short of the relevant low income cut-off. For example, a family with an income of $15,000 and a low income cut-off of $20,000 would have a low income gap of $5,000. In percentage terms this gap would be 25%. The average gap for a given population, whether expressed in dollar or percentage terms, is the average of these values as calculated for each unit. For the calculation of this low income gap, negative incomes are treated as zero.

Use of after-tax and before-tax LICOs

Statistics Canada produces two sets of low income cut-offs and their corresponding rates-those based on total income (i.e., income including government transfers, before the deduction of income taxes) and those based on after-tax income. Derivation of before-tax versus after-tax low income cut-offs are each done independently. There is no simple relationship, such as the average amount of taxes payable, to distinguish the two types of cut-offs.

Although both sets of low income cut-offs continue to be available, Statistics Canada prefers the use of the after-tax LICOs. The before-tax rates only partly reflect the entire redistributive impact of Canada's tax/transfer system. It is therefore logical that the low income rate is higher on a before-tax basis than on an after-tax basis.

Low Income Measures (LIMs)

For the purpose of making international comparisons, the LIM is the most commonly used low income measure. Unlike the low income cut-offs, which are derived from an expenditure survey and then compared to an income survey, the LIMs are both derived and applied using a single income survey. The LIM is a fixed percentage (50%) of median adjusted family income, where "adjusted" indicates that family needs are taken into account. See the paragraph Family size adjustment (equivalence scale) for more information.

The LIMs are calculated three times; using market income, before-tax income, and after-tax income. They do not require updating using an inflation index because they are calculated using an annual survey of family income.

Market Basket Measure (MBM)

Social Development Canada (formerly Human Resources Development Canada) has collaborated with the provincial and territorial ministries of social services to develop the Market Basket Measure (MBM) of low income. The approach is to cost out a basket of necessary goods and services including food, shelter, clothing and transportation, and a multiplier to cover other essentials. The results define thresholds that represent levels of income needed to cover the cost of the basket.

The same argument that can be made for using after-tax low income rates can be made for using after-tax income to compare to the MBM thresholds. That is, a measure of well-being should take into account what is actually available to spend. The income concept that is used for comparisons with the MBM thresholds goes even further than after-tax income by also subtracting from total income other non-discretionary expenses such as support payments, work-related child care costs and employee contributions to pension plans and to Employment Insurance.

Statistics Canada collects the data necessary to produce rates based on Social Development Canada's Market Basket Measure.

Comparisons between data up to 1995 and data since 1996

Starting with reference year 1996, the Survey of Labour and Income Dynamics (SLID) replaced the annual Survey of Consumer Finances (SCF) as the official source of family income in Canada. This means that estimates of *Income in Canada* and *Income Trends in Canada* up to and including 1995 are drawn from SCF (last conducted for reference year 1997), and estimates for 1996 and onwards are drawn from the SLID (which was introduced in 1993).

The Survey of Labour and Income Dynamics (SLID) database expanded with the edition of the reference year 2006 to include micro-data from the cross-sectional Survey of Consumer finance (SCF) from 1976 to 1997 inclusive.

Some of the SCF information is now available through the SLID entities database. This will permit users to access a longer period of historical data from a unique database. Users still have the choice of using the SCF historical files, if it better suits their needs.

Data from SCF were adapted as much as possible to SLID concepts variables. Most of the income variables as well as others, such as demographic information, were converted in this edition. Other SCF data will be transformed and added to the SLID database in the future.

When SLID was originally created, every attempt was made to minimize and monitor these differences between the two income surveys, while nonetheless making some important improvements in survey practices. Before replacing the SCF series with SLID, a study was done on the overlapping reference years, particularly the years 1996 and 1997. The results of the study are contained in a research paper, *A Comparison of the Results of the Survey of Labour and Income Dynamics (SLID) and the Survey of Consumer Finances (SCF) 1993-1997: Update* (75F002MIE99007). All ISD research papers are available free of charge.

In short, it was found that the two surveys told essentially the same story for all of the main income concepts. Nonetheless, analysis of some data trends reveals a "break" as a result of the change in survey. Such a break would represent a change in the data which is attributable to the two surveys having different samples and different methods rather than a true change in the characteristics of the population. Users are advised to take note of the following survey differences which are known to exist and to have had an impact on the data trends at some detailed levels.

Better coverage of small income amounts

One notable improvement that occurred as a result of new survey techniques introduced in SLID is better coverage of small income amounts received by respondents. It has been observed in surveys conducted by questionnaire that respondents tend to forget or neglect small income amounts they received in the past. This means an underestimation of income in general. The use of administrative income tax files in SLID for approximately 80% of sample respondents means that there is considerably better coverage of non-zero amounts of income, and in general, a greater number of recipients of most kinds of income.

Detailed family types

Following the SCF conversion into SLID concepts, the standard published "detailed family types" for economic families are now derived with reference to the"major income earner". Nonetheless, differences between the two surveys persist.

The preference given to older members following the head of family concept was preserved during the conversion of SCF. The major income earner was determined from the couple comprised of the head of the family and his spouse.

Younger adults are much more likely to qualify as major income earners in SLID than they did in SCF. As a result, we see significant decreases in the number of "other elderly families" and "married couples with other relatives", and a large increase in the number of "other non-elderly families". (See the section "Family definitions" for the precise definitions of family types.)

Impact of the conversion on the published estimates in *Income Trends in Canada* and *Income in Canada*

The historical series has now been extended to include years 1976 to 1979, as well as the years included in previous versions, 1980 to the last reference year of SLID.

The change in family concepts resulting from the transition from SCF to SLID has not affected data produced for the entire population of families consisting of two or more persons. However, for some of the detailed family types, the estimated number of families underwent a one-time increase or decrease.

Shift from elderly families to non-elderly families

The previous definition always gave husbands the status of head of family rather than wives. With the major income earner concept there is no distinction by sex, and it is possible for the wife to qualify. Since it still holds that wives are on average younger than husbands, at least for older couples, this has caused a shift from elderly families to non-elderly families.

Shift from other families (other than elderly families) to lone-parent families

In the original SCF, in order for a family to be classified as lone-parent, not only did the family head have to be without a spouse and have at least one child below 18 years of age, but no other family member could be present and all children had to be single. By other family member we mean a parent, a grand-child or a child's spouse of the family head. Following the conversion, families which included these other relatives were classified as lone-parent families and thus explains why some of the "other non-elderly families" shifted to lone-parent families.

Shift from two-parent families with children to married couples with other relatives

Children of guardians are not considered "children" in the classification of the SLID economic family type variable. In other words, older relatives are not treated as de facto parents when there is no direct parent identified. This transformation explains the shift from two-parent families with children to married couples with other relatives.

Less full year full time workers

In SLID, working full year means working 52 weeks compared to 50 weeks for SCF. For this reason, after the conversion there were less full year full time workers and their average earnings increased.

Job characteristics

Job characteristics in SCF were defined based on the job involving the greatest number of usual hours worked during the reference week of the Labour Force Survey (LFS). If the respondent had not worked during the reference week , the job characteristics were defined by the most recent job within the last year (for the 1996 and 1997 reference years) or the last five years (for the 1976 to 1995 reference years). With the conversion of SCF, job characteristics were kept only if the respondent had worked during the reference year. This change explains why some respondents no longer have job characteristics information, such as occupation and industry, if they had not worked during the reference year.

Goods and Services Tax (GST) and Harmonized Sales Tax (HST) Credits from 1987 to 1989

With the conversion of SCF, amounts for the Federal Sales Tax Credits from 1987 to 1990 were moved from provincial and territorial tax credits to Goods and Services Tax (GST) and Harmonized Sales Tax (HST) Credits. This explains that a value is found for GST and HST between 1987 and 1989.

Impact of the conversion on the micro-data base and on the extraction tool SLIDRET

Some of the SCF information is now available through the SLID entities database. This will permit users to access a longer period of historical data from a unique database. Users still have the choice of using the SCF historical files if it better suits their needs. Since SLID data starts with reference year 1993, there are five years of overlap between the two surveys where users have to specify which survey they intend to use when accessing micro-data through the extraction tool – SLIDRET (see SLIDRET User's manual – cross-sectional section).

Here is the list of SCF variables available in SLID format.

Comparisons with previous editions

Data from different editions are not directly comparable. Every edition has some modifications done on data. The modification which is applied every year is the expression of all dollar amounts in constant dollars of the latest reference year. (See "Current dollars versus constant dollars".)

Periodically, the weights are updated to reflect the availability of new population benchmarks provided by a new census. The most recent multi-year weight revision for the Survey of Labour and Income Dynamics and the Survey of Consumer Finance occurred with the release of data for 2003, when the population projections based on the 2001 Census of Population were incorporated.

The improvements to survey weights during the 2000 and 2003 historical revisions were part of a comprehensive project at Statistics Canada regarding the weighting strategies in the main annual surveys on income, expenditures, and wealth. Weights are typically adjusted using population benchmarks by province, age and sex. Since the 2000 weight revision, the weights in SLID also respect population benchmarks by household size and economic family size.

Since the 2003 revision, the weights from 1990 to the current period include adjustments based on the annual T4 file from Canada Revenue Agency (CRA), which is a compilation of employer remittances for the purposes of payroll taxes. For more, please refer to the free research paper,*Survey of Labour and Income Dynamics: 2003 historical revision*, Statistics Canada,

Methodology

Survey universe

SLID is a household survey that covers all individuals in Canada, excluding residents of the Yukon, the Northwest Territories and Nunavut, residents of institutions and persons living on Indian reserves or in military barracks. Overall, these exclusions amount to less than three percent of the population.

The sample

The samples for SLID are selected from the monthly Labour Force Survey (LFS) and thus share the latter's sample design. The LFS sample is drawn from an area frame and is based on a stratified, multi-stage design that uses probability sampling. The total sample is composed of six independent samples, called rotation groups, because each month one sixth of the sample (or one rotation group) is replaced.

The SLID sample is composed of two panels. Each panel consists of two LFS rotation groups and includes roughly 17,000 households. A panel is surveyed for a period of six consecutive years. A new panel is introduced every three years, so two panels always overlap.

Weighting

The estimation of population characteristics from a survey is based on the premise that each sampled unit represents, in addition to itself, a certain number of unsampled units in the population. A basic survey weight is attached to each record to indicate the number of units in the population that are represented by that unit in the sample.

For each reference year, SLID produces two sets of weights: one is representative of the initial population (the longitudinal weights) while the other is representative of the current population (the cross-sectional weights). For the production of the cross-sectional weights, SLID combines two independent samples and assigns a probability of selection to individuals who joined the sample after the panel was selected.

Two types of adjustment are applied to the basic survey weights in order to improve the reliability of the estimates. The basic weights are first inflated to compensate for non-response. The non-response adjusted weights are then further adjusted to ensure that estimates on relevant population characteristics would respect population totals from sources other than the survey.

The first set of population totals used for SLID is based on Statistics Canada's Demography Division population counts for different age/sex groups as well as counts by household and family size at the provincial level. These annual population totals are based in large part on totals from the Census of population.

The second set of totals is derived from Canada Revenue Agency (CRA) administrative data (T4 file) and is intended to ensure that the weighted distribution of income (based on wages and salaries) in the data set matches that of the Canadian population.

The switch from 1996 to 2001 Census-based population totals for recent years and the use of T4 information from CRA were introduced with the release of data for 2003. SCF estimates from 1990 to 1995 and SLID estimates from 1996 to 2002 were revised back to 1990 at the same time.

Cross-sectional representation

Each longitudinal sample, or "panel" in SLID initially constitutes a representative cross-sectional sample of the population. However, because the real population changes each year, whereas by design the longitudinal sample does not, the sample must be modified to properly reflect these changes to the composition of the population. This is done by adding to the sample all new people in the population who are found to be living with the initial respondents (and likewise dropping them from the sample if they leave at later time-points).

Any original respondents who leave the target population (by moving abroad, into institutions, etc.) are given a zero weight for cross-sectional purposes. In this way, the cross-sectional sample, composed of the original respondents minus those who left the target population plus those who have entered it, is virtually fully representative of the population at each subsequent time-point. The missing group is composed of persons who have newly entered the target population and are not living with anyone who was in the target population when the most recent panel was selected. However, since SLID introduces a new panel every three years, this group is quite small.

Data quality

There are two types of errors inherent in sample survey data, namely, non-sampling errors and sampling errors. The reliability of survey estimates depends on the combined impact of non-sampling and sampling errors. For more detailed information on data quality indicators see the research paper Data quality in the 2005 Survey of Labour and Income Dynamics (SLID)

Non-sampling errors

Non-sampling errors generally result from human errors such as simple mistakes, misunderstanding or misinterpretation. The impact of randomly occurring errors over a large number of observations will be minimal. Errors occurring systematically can, on the other hand, have a major impact on the reliability of estimates. Considerable time and effort is invested into reducing non-sampling errors in SLID.

Non-sampling errors may arise from a variety of sources such as coverage, response, non-response and processing errors.

Coverage error arises when sampling frame units do not exactly represent the target population. Units may have been omitted from the sampling frame (under-coverage), or units not in the target population may have been included (overcoverage), or units may have been included more than once (duplicates). Undercoverage represents the most common coverage problem.

Slippage is a measure of survey coverage error. It is defined as the percentage difference between control totals (Census population projections) and weighted sample counts. Slippage rates for household surveys are generally positive because some people that should be enumerated are missed. Slippage rates have been revised back to 1997 using the 2001 Census population projections. According to the numbers in the table below, in 2006, SLID covered 84% of its target population. SLID estimation procedures use Census population projections to compensate for determined slippage.

Rates are also available upon request for sex, province and age groupings.

Table A
Slippage rates in SLID

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Canada (%)	8.4	9.0	8.4	9.5	10.6	12.4	13.4	14.2	14.5	16.0

Response errors may be due to many factors, such as faulty questionnaire design, interviewers' or respondents' misinterpretation of questions, or respondents' faulty reporting. Great effort is invested in SLID to reduce the occurrence of response error. Measures undertaken to minimize response errors include the use of highly-skilled and well-trained interviewers, and supervision of interviewers to detect misinterpretation of instructions or problems with the questionnaire design. Response error can also be brought about by respondents who, willingly or not, provide inaccurate responses.

Income data are especially prone to misreporting, as income is a sensitive issue and includes many items with which respondents are not always familiar. Therefore, respondents are provided with information by mail prior to the interview, informing them of the income related questions. This gives them time to consult documents and have information available at the time of the interview. For respondents who grant Statistics Canada permission to access their tax files (the majority of respondents), SLID collects income data directly from administrative files. This procedure reduces misreporting of income in the SLID.

Non-response errors occur in sample surveys because not all potential respondents cooperate fully. The extent of non-response varies from partial non-response to total non-response.

Total non-response occurs when the interviewer is unable to contact the respondent, no member of the household is able to provide information, or the respondent refuses to participate in the survey.

Response is calculated at the household level. A household is considered to be "respondent" if at least one of its members responds to the interview. There is the additional stipulation that the information on the household's composition cannot be missing for more than one year.

Total household non-response is handled by adjusting the basic survey weight for individuals within responding households to compensate for individuals in nonresponding households.

Nonresponding members (if any) within responding households will have final data that are either shown as "missing" on the final database or imputed, depending on the variable (see partial non response section for details on imputation).

The importance of the non-response error is unknown but in general this error is significant when a group of people with particular characteristics in common refuse to cooperate and where those characteristics are important determinants of survey results. The bias introduced by non-response increases with the differences between respondent and non-respondent characteristics. Methods employed to compensate for non-response make use of information available for both respondents and non-respondents in an attempt to minimize this bias.

High response rates are essential for the data quality of any survey and thus considerable effort is invested to encourage effective participation from SLID respondents.

Cross-sectional households' response rates, given in Table B, range between 74.7% (2004) and 86.0% (1996).

Table B
Response rates in SCF (1990-1995) and SLID (1996-2006)

Year	Response rate (%)
1990	79.0
1991	80.0
1992	80.7
1993	80.0
1994	79.5
1995	82.1
1996	86.0
1997	84.1
1998	82.7
1999	82.7
2000	79.2
2001	79.1

2002	79.0
2003	78.3
2004	74.7
2005	76.1
2006	74.9

Partial non response occurs when the respondent does not understand or misinterprets a question, refuses to answer a question, or is unable to recall the requested information. Imputing missing values compensates for this partial non-response.

Income data are imputed using previous years' data updated for any changes in circumstances. In the absence of previous years' data, data is imputed using the "nearest neighbour" technique, in which a respondent with certain similar characteristics becomes the "donor" for the imputed value.

Amounts received through certain government programs, such as child tax benefits, the Goods and Services Harmonized Sales Tax Credit, and the Guaranteed Income Supplement, are also derived from other information.

Processing errors can occur at various stages in the survey: data capture, editing, coding, weighting or tabulation. The computer-assisted collection method used for SLID reduces the chance of introducing capture errors because checks for consistency and completeness of the data are built into the computer application. To minimize coding, weighting or tabulation errors, diagnostic tests are carried out periodically. These tests include comparisons of results with other data sources.

Sampling errors

Sampling errors occur because inferences about the entire population are based on information obtained from only a sample of the population. The results are usually different from those that would be obtained if information were collected from the whole population. Errors due to the extension of conclusions based on the sample to the entire population are known as sampling errors. The sample design, the variability of the population characteristics measured by the survey, and the sample size determine the magnitude of the sampling error. In addition, for a given sample design, different methods of estimation will result in sampling errors of different sizes.

Standard error and coefficient of variation

A common measure of sampling error is the standard error (SE). The standard error measures the degree of variation introduced in estimates by selecting one particular sample rather than another of the same size and design. The standard error may also be used to calculate confidence intervals associated with an estimate (Y). Confidence intervals are used to express the precision of the estimate. It has been demonstrated mathematically that, if the sampling were repeated many times, the true population value would lie within the confidence interval Y ± 2SE 95 times out of 100 and within the narrower confidence interval defined by Y ± SE, 68 times out of 100. Another important measure of sampling error is given by the coefficient of variation, which is computed as the estimated standard error as a percentage of the estimate Y (i.e., 100 × SE / Y).

To illustrate the relationship between the standard error, the confidence intervals and the coefficient of variation, let us take the following example. Suppose that the estimated average income from a given source is $10,000, and that its corresponding standard error is $200. The coefficient of variation is therefore equal to 2%. The 95% confidence interval estimated from this sample ranges from $9,600 to $10,400, i.e. $10,000 ± $400. Thus it is assumed with a 95% degree of confidence that the average income of the target population is between $9,600 and $10,400.

The bootstrap approach is used for the calculation of the standard errors of the estimates. For more information on standard errors and coefficients of variation, refer to the Statistics Canada publication, Methodology of the Canadian Labour Force Survey

Quality Indicators

Quality indicators (QIs) are based on the estimate's coefficient of variation (CV) and suppression rules. The following symbols are used:

Table D
Quality rules

QI Code	Description
A	Excellent (CV between 0 and 2%)
B	Very good (CV between 2% and 4%)
C	Good (CV between 4% and 8%)
D	Acceptable (CV between 8% and 16%)
E	Use with caution (CV greater than or equal to 16%)
F	Too unreliable to be published
.	Not available for a complete reference period
..	Not available for a specific reference period
...	Not applicable
p	Preliminary
r	Revised
x	Suppressed to meet the confidentiality requirements of the Statistics Act

Suppression rules

Suppression rules, or data reliability cutoffs, are currently established based on the sample size that underlies the estimate. In general, a sample size of 25 observations is required for the estimate to be published. Depending on the type of estimate, this rule can vary slightly. These rules help protect the confidentiality of survey respondents and ensure the reliability of estimates.

Table C
Suppression rules

Estimate	Suppress if:
Percentage, Distribution, Proportion/Shares	
• % under the low-income cutoff (LICO) • Income distribution • Proportion of families with income=0	Denominator sample size* < 25 or Denominator sample size* < 100 and numerator sample size < 5
Ratios	
• female/male earnings	Numerator sample size < 25 or Denominator sample size < 25
Quintiles (shares, means and upper income limits)	
• shares of income by quintile • average income by quintile • upper income limits	sample in quintile/5 < 25 or upper income limit for upper income quintile or total of quintiles
Other estimates	
• Counts • Mean • Medians • Gini coefficients	sample < 25

*The denominator sample size refers to the sample size of the total estimate from which the distribution, percentage, proportion or share is derived.

Data products

The links below are related to data products generated by SLID and other surveys.

Below is a list of additional Statistics Canada data products created from SLID as well as other surveys. Additional support for the use and interpretation of SLID estimates are available from a number of user guides, publications, and research paper series, also listed below.

Free publication

- Analysis of Income in Canada
- Income in Canada
- Income Trends in Canada

Free summary tables in Canadian Statistics

- Labour: salaries and wages
- Personal finance and household finance: income

Data products for sale

- Detailed tables on CANSIM
- SLID cross sectional public use microdata files

SLID documentation for researchers

- SLID Electronic Data Dictionary
- Survey of Labour and Income Dynamics Microdata User's Guide
- Analytical Studies Branch research paper series
- Income research paper series; includes SLID interview questionnaires, users' guides for the SLID public-use microdata file and for Income Trends in Canada, and publications on the low-income cutoff (LICO).
- Perspectives on labour and income

Data services

Custom tabulations of SLID data

For clients with specialized data needs, custom tabulations can be produced on a cost-recovery basis. Contact Client Services, Income Statistics Division (1-888-297-7355 or 613-951-7355; income@statcan.gc.ca).

Remote access to SLID data

Remote access is an initiative that enables external researchers to access and use SLID data.

Under this arrangement, researchers contact the Income Statistics Division to indicate their interests in remote access to SLID data and provides a short abstract outlining the objectives for their research. Upon approval of their access request, researchers are provided with a copy of the SLID retrieval software (SLIDRET), as well as an empty SLID database structure.

Researchers write and test their own computer programs, then send these programs to Statistics Canada over the Internet. We submit their programs, vet the output for confidentiality, and e-mail the results back. This process opens up our complex data set to even more researchers and increases research volume.

This service is an alternative to Statistics Canada's Research Data Centres and regional offices.

Contact Client Services, Income Statistics Division (1-888-297-7355 or 613-951-7355; income@statcan.gc.ca).

Research Data Centres

Research Data Centres are part of an initiative by Statistics Canada, the Social Sciences and Humanities Research Council (SSHRC) and university consortia to help strengthen Canada 's social research capacity and to support the policy research community.

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