



*Guide to the Survey  
of Employment Payrolls  
and Hours*

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# 1. BACKGROUND AND OBJECTIVES

## Objectives

The monthly Survey of Employment, Payrolls and Hours (SEPH) is designed to provide monthly estimates of the levels and month-to-month trends in payroll employment paid hours and earnings. The data are compiled at detailed industrial levels for Canada, the provinces and territories. The target population is composed of all employers in Canada, except those primarily involved in agriculture, fishing and trapping, private household services, religious organizations and the military personnel of the defence services.

## Survey Background

Canada's monthly payroll employment survey was begun in 1918 by the Department of Labour and taken over in 1922 by the Dominion Bureau of Statistics. The survey has continued to the present without change in basic purpose. Initially, estimates were restricted to those employers with 15 or more employees and covered only certain industries. Earnings data were added in 1941. In 1961, the employment size threshold was raised to 20 employees and a sample survey was conducted to collect employment services data from firms below the threshold. In 1968, the non-commercial services industries were added, so that except for agriculture, fishing and trapping, and military services, industrial coverage for employment was complete.

In the early 1970's, differences between an external benchmark and establishment-based estimates for Labour Income, as well as large and erratic revisions to the monthly estimates caused concern. The problems were thought to result from the absence of earnings data for the entire universe. This, together with a desire to reduce survey response burden and to resolve conceptual and definitional problems, prompted a major review of the surveys. An integrated survey (Survey of Employment Payroll and Hours) was developed, adding earnings and hours data to the small business and non-commercial institutions components.

The results of SEPH were first published for the April 1983 reference month and the program was improved and developed throughout the next decade. By the summer of 1992, the Labour Division was able to release detailed industry data on a consistent basis back to 1983 and had developed new data products including the fixed-weighted earnings indices, the dispersion indices together with seasonally-adjusted data. The data were released in a redesigned publication with the April 1992 reference month.

## A Proposal to Reduce Response Burden through Statistics Canada Revenue Agency

Concerns with response burden led the Canadian Organization of Small Businesses to write to Canada Revenue Agency in the late 1980's, suggesting the addition of payroll employment and gross monthly payrolls information on the payroll deductions remittance (PD7) forms. In 1989 a joint Canada Revenue Agency /Statistics Canada working group concluded that it would be feasible to add two questions on numbers of employees and total payrolls to the monthly PD7 remittance form. (Employers who remit less than \$15,000 need only to remit monthly; larger employers usually remit twice monthly or more frequently). In early 1992, the cost picture was re-examined. Focus group testing to gauge the reaction of potential respondents revealed that adding employment and total payrolls questions to the PD7 form was not perceived to pose any significant additional burden on respondents. It was agreed to add the questions to the Revenue Canada Agency forms beginning in January 1993. To the extent that the PD7 data could be used in place of SEPH questionnaires, there would be a net reduction in total response burden.

## SEPH redesign

Starting in the mid-1990's, SEPH was engaged in an extensive multi-phases redesign process. The major objectives of the redesign were to improve the quality of the estimates and to reduce the response burden imposed on the business community.

Throughout the three phases of the redesign, administrative data have been gradually included in the survey sample to replace survey questionnaires. The administrative sample used to derive employment and monthly payroll was supplemented with a small sample survey (Small Business Payrolls Survey) of establishments to derive the weekly component of payrolls, the employment categories and the hours paid.

Phase I of the survey redesign was implemented with the March 1994 reference month when administrative records were used for small sized employers. As a result, the SEPH monthly sample size was reduced by approximately 30,000 respondents (from approximately 70,000). At the same time a sample of 2,500 establishments was drawn for the Small Business Payrolls Survey<sup>1</sup>.

In May 1996, the use of administrative data was extended to cover medium and large sized businesses that operated in a unique combination of industrial activity and province. The implementation of Phase II resulted in a further reduction of some 22,000 respondents in the monthly survey. The Business Payrolls Survey (BPS) sample was then increased to 6,000 establishments.

The last phase of the redesign (PHASE III) was implemented in May of 1998. The most significant change was the extension of the use of administrative records to businesses engaged in multiple industrial activities (SIC-3<sup>2</sup>) and in different provinces. With this change, the sample survey portion of the SEPH process was reduced to the 10,000 establishments of the BPS.

With the completion of the survey redesign, the SEPH monthly sample size was reduced from 70,000 to 10,000 establishments. This represents a reduction of 720,000 contacts on an annual basis.

With the January 2001 data, the SEPH program has switched from Standard Industrial Classification 1980 to the North American Industrial Classification System 1997. The increased number of domains of estimation has necessitated a slight increase to the BPS sample size, which now stand at 11,000 establishments.

With the January 2004 data, SEPH has switched from the North American Industrial Classification System 1997 to the North American Industrial Classification System 2002 version.

With January 2008 data, current and historical estimates from the Survey of Employee Payroll and Hours (SEPH) are using the 2007 North American Industry Classification System (NAICS) instead of NAICS 2002.

## SEPH's Future

The Labour Statistics Division's Program of Employment, Payrolls and Hours data has a bright future. With the collaboration of the Canada Revenue Agency in providing valuable administrative data, the survey program will result in better quality data produced at less cost. These data will continue to be crucial to the understanding of Canada's labour markets.

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<sup>1</sup> In 1996 the Small Business Payrolls Survey was renamed Business Payrolls Survey.

<sup>2</sup> First three digits of the 1980 Standard Industrial Classification

## 2. SURVEY METHODOLOGY

### Survey Population

The target population is composed of all employers in Canada, except those primarily involved in agriculture, fishing and trapping, private household services, religious organizations and the military personnel of the defence services. SEPH draws its samples from the Business Register (BR) maintained by the Business Register Division of Statistics Canada and from a list of all businesses registered in Canada Revenue Agency's Business Number program, with one or more active payroll deduction accounts.

The Business Register is a list of all businesses in Canada and is updated each month using data from various surveys, business profiling and administrative data. The Business number is a unique identifier assigned by Canada Revenue Agency to businesses participating in one or more of the following programs: Payroll Deduction, Goods and Services Tax, Importer and Exporter Tax, and Corporation Tax. The payroll deduction source includes all employers with remittances for employee income taxes, CPP/QPP and Employment Insurance contributions.

### Reference Period

The survey reference period for SEPH is the pay period that includes the last seven days of the month. When the reported pay period is longer than one week, the data are reduced to a weekly equivalent using the number of days the respondent usually operates during a week divided by the number of working days covered by the reported pay period. Reference week adjustments are also made for strikes, lockouts and layoffs.

### Methodology

The statistics produced by SEPH are based on a census of administrative records (provided by Canada Revenue Agency) for all employers' establishments that are in-scope for the survey and are present on the Business Register<sup>3</sup>. The monthly payroll and employment estimates are derived from the administrative source.

The Business Payrolls Survey (BPS) is conducted monthly to collect data by a CATI (Computer Assisted Telephone Interviews) collection system to estimate SEPH variables not available on administrative records. The estimates derived from the administrative source are combined with the results of the BPS to produce estimates for the full range of SEPH variables.

### Administrative Survey

An arrangement between Canada Revenue Agency and Statistics Canada allows Statistics Canada to access information on the total gross monthly payrolls and the total number of employees for the last pay period of the month from the payroll deduction forms completed by employers who remit on the PD7 form.

The use of administrative data contributes to the reduction of survey costs and response burden. They also enhance the overall estimates of SEPH payroll employment, and the estimates of wages and salaries of the Income and Expenditure Division of Statistics Canada. These improvements are due to the timeliness of administrative data and to a better coverage of the surveyed population.

### There are three types of payroll deduction (PD) accounts:

**Quarterly or monthly remitters** represent small businesses with remittances of less than \$15,000 monthly (\$12,000 or less per year for quarterly remitters).

**Accelerated remitters** who generally represent larger businesses remit more often than once a month.

Canada Revenue Agency, transfers to Statistics Canada information on the number of employees and the total gross monthly payroll for these PD7 accounts. Because of the census nature of the survey, the administrative sample is always made up of the same units except when new businesses are created and existing businesses cease their activities.

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<sup>3</sup> Except for data for general government services at the provincial and federal levels which are provided by the Public Institution Division

### **The Business Payrolls Survey (BPS)**

The BPS provides the basis for the estimation of additional variables not reported on the PD7 form. These include the weekly component of gross monthly payrolls, total hours and the allocation of hours, earnings and employment for categories of employees (paid by the hour, salaried and other). Sample allocation is oriented towards maximizing the accuracy of the weekly earnings and total hours estimates for the NAICS sub-sectors for Canada, the provinces and the territories.

The BPS draws a sample of 11,000 from the 915,000 establishments that are potentially in business and classified to an industry and a province. The BPS sample is stratified using a combination of province, sub-sector, and size. Allocation is determined using an approach which initially specifies a target coefficient of variation (CV) for estimated weekly earnings and total hours at the Canada level. The CVs at the geographical level and the industrial level are then derived from the overall CV.

Estimates for payroll employment and gross monthly payrolls from the Administrative Survey are produced using a census of administrative records, while estimates for other SEPH variables are derived via a regression or a ratio estimation procedure.

Each month, the BPS frame is updated to reflect new establishments created and those that no longer exist. Generally, sampled units leave the BPS sample after 12 months and are not eligible for re-selection for one year. Approximately 1/12 of the BPS sample is replaced every month.

## 3. DATA COLLECTION AND DATA PROCESSING

### Data Collection

The BPS uses a combination of methods for data collection to permit maximum flexibility for the respondent. For mail units, questionnaires are mailed to the payroll office of employers each month. Telephone interviews are used for respondents who express a preference for being surveyed by telephone. Respondents can also report their data electronically.

Reporting units which are non-respondents to the initial mailing are followed up by telephone by the staff of the regional offices of Statistics Canada. Establishments that do not report data diminish the accuracy of the estimates.

At the Canada level, less than one percent of establishments surveyed refuse to report data and about ten percent report too late to be included in the estimation process.

Administrative data for total gross monthly payrolls and the total number of employees for the last pay period in the month are obtained from payroll deduction (PD7) accounts maintained by Canada Revenue Agency.

Finally, the Public Institutions Division of Statistics Canada provides information on general government services at the provincial, territorial and federal levels.

### Data Processing

#### Data Edits and Corrections

Once the returned questionnaires are captured, extensive edit procedures are used to check for accuracy and consistency. The edit procedures include the comparison of the values of key characteristics (e.g. number of employees, hours worked, salary per employee, etc.) reported for consecutive months by the same unit to detect large changes or errors in reporting. Whenever there is a large change or the data appear inconsistent, the record is: either manually corrected by editors, imputed, or confirmed with the respondent.

### Imputation Methods

#### Administrative Survey

There are three main methods of imputation:

- imputing zero where the PD7 has indicated to Canada Revenue Agency that there will be no employees in the month;
- imputing previous month information with a month-to-month change ratio where there are indications that the units have activity in the current month;
- imputing based on current month stratum averages in some cases where only one value has been reported

The administrative data are received for about 80% of the PD7 forms. The remaining 20% are from business that are either temporarily or seasonally closed or do not respond to the 2 questions (employment and payroll) on PD7 forms. The later cases of a non-response are imputed.

## 4. DATA QUALITY

### Reliability

The estimates obtained from sample surveys are subject to both **sampling** and **non-sampling errors**.

**Sampling errors** occur because observations are obtained from a sample rather than from the entire universe. Estimates based on a sample can differ from those that would have been obtained if a complete census had been taken using the same questionnaires, instructions, interviewers and processing techniques. This difference is called the sampling error of the estimate.

The true sampling error is unknown. However, it can be estimated from the sample itself by using a statistical measure called the standard error. When the standard error is expressed as a percent of the estimate, it is known as the relative standard error or coefficient of variation. Tables of indicators of the coefficients of variation are available upon request along with an explanatory note on how to use them to judge the quality of the estimates contained in SEPH January publication 72002XIB.

**Non-sampling errors** are those which may occur in survey operations for many reasons such as non-response, coverage and classification errors, differences in the interpretation of the question, incorrect information from respondents, and mistakes in recording, coding and processing of data. Efforts to reduce non-sampling errors include careful design of questionnaires, editing of data, follow-up, imputation for non-respondents, and thorough control of processing operations.

SEPH has a statistical quality control program at the data capture, business structure updating and data editing stages to minimize non-sampling errors. These programs monitor and control the completeness, accuracy and consistency of the reported survey data. Procedures are in place to follow up for non-response and to impute for those late responses.

The SEPH program has a head-office Quality Assurance unit that is mandated to study and reduce non-sampling errors and ensure that concepts and definitions are respected.

### Coverage Errors

Two sources of coverage errors associated with survey frames are duplication and under coverage. Duplication occurs on the frame when payroll deduction records cannot be linked to their associated businesses residing on the frame. Therefore a second statistical business is created. Under-coverage arises when new businesses are not classified on the Business Register.

The administrative portion of the survey is continuously updated with the most recent new businesses.

The survey publication contains a separate estimate for the "unclassified businesses" for overall employment by province. The other SEPH variables cannot be estimated since the "unclassified businesses" are not represented in the BPS. There is no industry split for the "unclassified businesses", but they are included in the overall employment estimate, thereby depicting a payroll employment total, that better reflect economic reality.

### Seasonal Adjustment

It is common practice to publish most economic indicators in seasonally adjusted and unadjusted forms. Fluctuations in economic time series are caused by seasonal, cyclical and irregular movements. A seasonally-adjusted series is one for which seasonal movements have been eliminated. Seasonal movements are defined as those which are caused by regular annual events such as usual changes in weather, reduced or expanded production and the opening and closing of schools. Since these seasonal events follow a regular pattern each year, their influence on trends can be eliminated by adjusting the data.

Seasonal adjustment is imperfect, so if a time series has irregular variations that are larger than the seasonal variation, the seasonally adjusted series will be a poor estimate. In the opinion of the Time Series Division of Statistics Canada, the unadjusted series will probably be a better estimate than the poorer seasonally adjusted series.



### Fixed-Weighted Earnings Index

The fixed-weighted average hourly earnings index has been constructed to deal with the impact of changes in the paid hours and employment mix among industries, provinces, and territories, salaried and hourly paid employees. This index provides a better indicator of the underlying trends in wage rates than the variable-weighted earnings series.

This data series adjusts for compositional changes in employment by re-aggregating SEPH survey information using fixed rather than variable weights for the paid hours and employment. Overtime is excluded because it is an important source of compositional change in some industries. The base year for this index is, 2002 (2002=100). Thus, for consistency purposes, the time base year for the fixed-weighted earnings index is the same.

### Diffusion Index

The diffusion index can be used to assess how broadly based a change is for SEPH variables such as employment or average weekly hours for the Industrial Aggregate. The diffusion index measures the dispersion of change for the SEPH variables by indicating the fraction of industries which had year-over-year increases in the value of a variable. The SEPH diffusion index, is calculated at the Canada level, and is available for selected industry groups for employment, payrolls average weekly hours, average hourly earnings and average weekly earnings adjusted for inflation. The index is particularly useful in analyzing trends in cyclically sensitive industries such as manufacturing and trade.

### Revision

Towards the end of each month, the SEPH program publishes statistics for two successive months. The most current month is known as preliminary and the previous month is revised. Preliminary estimates are released two months later therefore have a two month lag to the calendar month. Revised estimates have a 3 month lag to the calendar month. For example July 2002 revised estimates and August 2002 preliminary estimates are available in October 2002 calendar month. Revisions are necessary to account for any late survey returns or newly identified reporting or processing errors.

Further revisions can be placed in the context of periodic *historical revisions which may be conducted yearly* and are usually made available at the end of March. These revisions can consist of corrections warranted by further analysis and data validation.

Historical revisions can also, include statistical adjustments to historical figures required to maintain their comparability with current data. Some important changes can affect the program, for example, conversion to the new administrative data source (CRA payroll remittance forms) and to the North American Industrial Classification System (NAICS) in January 2001 necessitated a complete revision back to January 1991. In order to re-calibrate employment and earnings levels measured historically to ones that would be comparable with the new survey methods and data sources.

The process of historical revision and correction is always on-going and normal in the context of a large survey program, and it should always be taken into consideration by users of SEPH statistics.

### Confidentiality

Seph data is reviewed every year to ensure that the confidentiality of business responses is respected at all time. Any aggregated employment estimate that could reveal information about a specific respondent is declared confidential, and consequently not published.

## 5. DATA COMPARABILITY

### Comparability with other Data Sources

#### Employment

SEPH payroll employment estimates are frequently compared to the employment estimates provided by the Labour Force Survey (LFS). When comparing the enterprise-based SEPH employment estimates to the household-based LFS data, some differences can be quantified and others not. The quantifiable adjustments to the LFS include the addition of multiple job holders and the subtraction of the following: unpaid family workers, self-employed, unpaid absentees (such as workers on strike), incorporated businesses, working partners without employees and the industries excluded from SEPH. The adjustments, which are not easily quantifiable, include errors in NAICS coding, differences in reference periods, survey procedures and the unrecorded economy. Also, SEPH covers the Territories while the LFS does not. The LFS data, which focus on demographic characteristics of the labour force, are reasonable measures of trends within broad industry and occupational groups. The SEPH estimates are more suitable as indicators of employment change over detailed industry group levels.

According to the North American Industrial Classification System 2007 (NAICS 2007), public administration (NAICS 2007- 91) contains only those establishments engaged in activities that are governmental in character and those serving as internal service agencies of the public service. SEPH does not produce data on defence services (NAICS 2007- 9111) but includes civilian defence workers in federal administration. Thus, SEPH publishes public administration data that essentially conforms to this definition. Government establishments engaged in activities such as health and education services and transportation and communication services are classified to the appropriate industries. The Public Institutions Division (PID) publishes government employment data that represent all employees of non-commercial entities under the control of a government.

The quantifiable adjustments to the PID data include the addition of Statistics Canada interviewers and the exclusion of military personnel, government personnel working outside of Canada, employees on unpaid absences and government employees assigned to industries other than public administration. The adjustments, which are not easily quantifiable, include differences in reference periods, survey procedures and the treatment of extra pay periods. The Labour Statistics Division and the Public Institution Division conduct a reconciliation process to ensure that the public administration data are compatible.

#### Earnings

The user community focuses on two earnings indicators, which are often compared to the average weekly and hourly earnings data produced by SEPH. These two earnings indicators are referred to as the Human Resource Development Canada (HRDC) base wage rate settlements and the estimates of Wages and Salaries and Supplementary Labour Income produced by the Income and Expenditure Accounts Division in Statistics Canada.

HRDC's wage rate indicator data include only unionised workers covered by major collective agreements representing 500 or more employees. For instance, the base wage rate, as an indicator of wage change, covers about 10% of the overall SEPH employment. Therefore, the value and relevance of the HRDC base wage rate as an indicator of wage change should be carefully considered.

The SEPH data for average weekly/hourly earnings are imperfect indicators of wage rate changes because they are subject to compositional shifts by industry, by provinces and changes in underlying rates of pay.

The estimates of wages and salaries produced by the Income and Expenditure Accounts Division are primarily based on annual T4 supplementary administrative records provided by Canada Revenue Agency Taxation which are projected forward on a monthly or quarterly basis using SEPH and LFS data. Supplementary Labour Income (SLI), which accounts for about 11% of total Labour Income, is not measured by SEPH. SLI includes employer contributions to pension's plans, medical and other welfare plans, Canadian and Quebec Pension Plan and workers' compensation. The labour income estimates, which are a more comprehensive source of employment compensation, do not provide any information on wage rates.

**Comparability over time**

SEPH data have been historically corrected to produce consistent time series from **January 1991 to date**.

## 6. TERMS AND DEFINITIONS

### Terms and Definitions

**Enterprise:** An enterprise is any business or institution whether incorporated or not; it comprises sole proprietorships, partnerships, companies and other forms of organizations. An enterprise is considered to be simple if all its establishments operate in the same province/industry classification; otherwise, an enterprise is classified as complex.

**Establishment:** For statistical purposes it is the smallest entity capable of reporting statistics of economic production, typically a factory, a mine, a store or a similar unit.

**Industrial coverage:** The SEPH survey covers of all industries in Canada, except those primarily involved in agriculture, fishing and trapping, private household services, religious organisations and the military personnel of the defence services.

**Industry classifications:** The North American Industrial Classification System 2007 (NAICS2007) is based on the supply side or on production oriented principles. Each establishment is assigned an industry code according to the NAICS 2007. A description of the various industries and groups of industries is contained in the "North American Industrial Classification System 2007 manual, Catalogue #12-501XPE. For analytical purposes, we have created special groupings that are not part of the NAICS 2007 classification.

#### Special Industrial grouping:

- a) **Industrial aggregate** (00-91N) represents the sum of all the industries included in the survey. Since March 1994, the employment estimates for the industrial aggregate include the unclassified businesses (0000). The variables earnings and hours are excluded from the unclassified businesses (0000).
- b) **Unclassified businesses** (0000) represents the businesses that have not yet been classified to a NAICS 2007, a province or to a territory. This industry is available since March 1994. Data for this industry are calculated only for employment for all employees. All other variables are not compiled for this industry.
- c) **Goods-producing industries** (11-33N) comprise forestry, mining, utilities, construction and manufacturing.
- d) **Service-producing industries** (41-91N) consists of trade, transportation and warehousing, information and cultural industries, finance and insurance, real estate and rental and leasing, professional, scientific and technical services, management of companies and enterprises, administrative and support, waste management and remediation services, educational services, health care and social assistance, arts, entertainment and recreation, public administration (except for military personnel and other government services) and other services (except religious organizations and private households).
- e) **Durable goods manufacturing** (321N) includes wood products manufacturing (321), non-metallic mineral products manufacturing (327), primary metal manufacturing (331), fabricated metal products manufacturing (332), machinery manufacturing (333), computer and electronic products manufacturing (334), electrical equipment, appliances and components manufacturing (335), transportation equipment manufacturing (336), furniture and related products manufacturing (337) and miscellaneous manufacturing (339).
- f) **Non-durable goods manufacturing** (311N) is the sum of food manufacturing (311), beverage and tobacco products manufacturing (312), textiles mills (313), textile products mills (314), Clothing manufacturing (315), leather and applied products manufacturing (316), paper manufacturing (322), printing and related support activities (323), petroleum and coal products manufacturing (324), chemical manufacturing (325), and plastics and rubber products manufacturing (326).
- g) **Education special aggregation** (611N) includes elementary and secondary schools (6111), community college and CEGEP(s) (6112), universities (6113), business schools and computer management training (6114) and technical and trade schools (6115).
- h) **Public Administration** (91) contains only the establishments engaged in activities that are governmental in character and those serving as internal service agencies of the public service. Government owned establishments primarily engaged in activities assigned to other industries are classified in those industries along with similar establishments owned by non-government bodies. Therefore, data included in this industry division do not represent the actual number of persons employed by government at any level.

**Geographic classification:** The reporting units are assigned to a province or territory. The statistics published by SEPH are based on the 1996 version of the Standard Geographic Classification.

**Paid absence** includes, statutory holidays, paid holidays, sick leave including industrial injury and personal leave such as bereavement leave, jury duty, etc.

### Employee

Any person drawing pay for services rendered or for paid absences and for whom the employer must complete a Canada Revenue Agency T-4 Supplementary Form is deemed to be an employee. The "employee" concept comprises full-time employees, part-time employees (those who regularly work fewer hours than the standard workweek of the establishment) and casual or temporary employees. It also comprises working owners, directors, partners and other officers of incorporated businesses.

**The employee concept excludes** owners or partners of unincorporated businesses and professional practices, the self employed, unpaid family workers, persons working outside Canada, military personnel, and casual workers for whom a T-4 is not required. It also excludes persons who did not receive any pay from the employer for the entire survey reference period (e.g. persons on strike, persons on unpaid holidays, persons receiving remuneration from an insurance plan, workers compensation or related fund, etc.). However, employees paid by the employer for a part of the reference period and unemployed or on strike for the rest are counted as employed.

#### *The employees are classified into the following categories:*

- a) **All employees:** is the sum of employees paid by the hour, salaried employees and other employees.
- b) **Employees paid by the hour:** any employee whose basic wage is expressed as an hourly rate.

For Elementary and Secondary schools (6111), Community colleges and CEGEP(s) (6112), Universities (6113), Business schools and Computer management training (6114) and Technical and Trade schools (6115) industries, this category of employment represents **Non-teaching Staff:** all employees other than teachers and academic staff i.e. president, vice-president, librarian, registrar, bursar, accountant, guidance counsellor, laboratory technician, personnel officer, and other services (janitor, bus driver etc).

- c) **Salaried employees:** any employee whose basic remuneration is a fixed amount for at least one week.

For Elementary and secondary schools (6111), Community colleges and CEGEP(s) (6112), Universities (6113), Business schools and computer management training (6114) and Technical and trade schools (6115) industries, this category of employment represents **Teaching Staff:** those classified as teachers, instructors or academics in the payroll records (e.g. principal, professor, dean, head of department, master, teacher, etc.) whether they teach during the day or evening. Supply or substitute teachers are excluded.

- d) **Other employees:** Those employees, whose basic remuneration is in the form of commissions, piece rates, mileage allowances, etc. Although information for other employees is not published it remains available.

For Elementary and secondary schools (6111), Community colleges and CEGEP(s) (6112), Universities (6113), Business schools and computer management training (6114) and Technical and trade schools (6115) industries, this category of employment represents **Supply or Substitute Teachers:** teachers who are called in to teach whenever their services are needed either to augment the existing staff or as a short-term replacement for a full-time or part-time teacher.

### Earnings

**Weekly payrolls:** Weekly payrolls are defined as the portion of gross taxable monthly payrolls that reflect work performed during the reference week. It represents the gross dollar value before deductions for income taxes, employment insurance contributions etc., including regular pay, overtime and a portion of bonuses, commissions and other type of special payments. The payroll concept excludes dollar amounts that are taxable allowances and benefits, certain types of non-wage compensation as well as employer contributions to employment insurance, Canada/Quebec pension plans, provincial medical plans, workers compensation and other welfare plans. Some annual special payments are excluded while other lump sum special payments are adjusted to coincide with the reference week period. The gross monthly payrolls are derived from administrative records. It is calculated for all types of employees.

**Weekly overtime pay:** is defined as all pay received for paid work in excess of the standard workday or workweek. It is calculated for all, hourly and salaried employees.

**Average weekly earnings (including overtime):** is obtained by dividing the gross taxable payrolls (including overtime) by the number of employees. It is calculated for all types of employees.

**Average weekly earnings (excluding overtime):** is obtained by dividing the gross taxable payrolls (excluding overtime) by the number of employees. It is calculated for all, hourly paid and for salaried employees.

**Average hourly earnings for hourly paid employees (including or excluding overtime):** is obtained by dividing the gross taxable payroll (including or excluding overtime) by the total number of weekly paid hours (including or excluding overtime).

**Average hourly earnings for salaried employee (including or excluding overtime):** is obtained by dividing the total gross taxable payrolls (including or excluding overtime) by the total hours (note that hours for salaried employees does not include overtime).

## Hours

**Total hours paid for hourly paid employees (including or excluding overtime):** are defined as all hours worked including or excluding overtime hours and hours of paid absence (e.g. holidays, sick leave, jury duty, etc.).

**Total hours for salaried employees:** are obtained by multiplying the average Standard workweek hours (note that this variable does not include overtime) by the number of salaried employees.

**Overtime hours for hourly paid employees:** are defined as hours for which overtime was paid. This represent actual hours worked.

**Average weekly hours for hourly paid employees (including or excluding overtime):** are obtained by dividing total number of weekly paid hours (including or excluding overtime) by the number of hourly paid employees.

**Average weekly hours (average standard workweek) for salaried employees:** are obtained by dividing the total weekly (derived) hours by the number of salaried employees.

## Response/Non-response

- a) **Response rate:** includes all units which during the collection phase responded by providing "usable information".
- b) **Refusal rate:** includes those units which were contacted but have refused to participate in the survey.
- c) **No contact rate:** includes those units which were contacted but were unable to provide the required information.
- d) **Residual non-response rate:** includes those units for which the data have not been received on time for the monthly closing date and other types of non-response

## 7. SEPH DATA BY SIZE OF ENTERPRISE

On a quarterly and annual basis, SEPH produces estimates for employment, average weekly earnings and hour data by employment size of enterprises for Canada, provinces and territories. Provincial and territorial employment is thus allocated to the size of employment of the enterprise in Canada. The employment size of an enterprise is calculated as an average of the monthly employment levels reported for the reference period. The data are produced at the sector level of the North American Industrial Classification 2002 and for the Industrial aggregate level.

**The employment sizes are:**

0 to 4 employees,  
5 to 19,  
20 to 49,  
50 to 99,  
100 to 299,  
300 to 499  
500 and plus  
All sizes

***SEPH also produces data by for the following sizes:***

0 to 49  
50 to 299  
300 and plus

The data produced by size of enterprises will generally be more volatile than the estimates produced for the SEPH monthly production. For example, the levels published for smaller size of employment cells may be affected by the movements of enterprises from one size to another from quarter to quarter. Other events such as strikes, temporary closures, changes in the enterprise structures on the Business Register will also cause volatility to the more detailed sizes series. In addition, data by size produced for quarters prior to year 2001 should be used with caution since they were estimated from the previous production based on the SIC-1980 and backcasted on the new NAICS classification. It should be noted that while the data by employment can be a useful research tool, should not be used in contract escalation because of the potential for higher level volatility associated with this product.

## 8. PRODUCTS AND SERVICES

- **Employment, Earnings and Hours; Catalogue 72-002XIB  
Monthly (Internet)**

This monthly publication is available via the Internet. It provides current estimates for employment, earnings, and hours at the national, provincial/territorial level, for detailed industry groupings, based upon the North American Industrial Classification System 2007. Further more this publication includes data by size of enterprise for selected industries and variables. This electronic publication has been produced with the Adobe Acrobat software, it allows user to browse the information on screen and print any or all pages.

- **Annual Estimates of Employment, Earnings and Hours 1991-2007; Catalogue 72F-0023XCB  
(Monthly and Annual 1991-2007) CD-Rom**

This CD-ROM using the Beyond 20/20 data viewer provides an annual and monthly historical perspective for employment, earnings, and hours data for the years 1991 to 2007. This reference tool will help you identify, retrieve and process essential information for detailed industry groupings at national, provincial and territorial levels, based upon the North American Industrial Classification System 2007. Further more this product includes data by size of enterprise for selected industries and variables. This publication is normally available in May.

- **CANSIM**

Over 80,000 data series are also available through CANSIM, Statistics Canada's electronic online database. The SEPH survey can be found on CANSIM in tables 281-0023 to 281-0046. Series are updated monthly and revised when appropriate. Data are release at the same time as the Statistics Canada's official release bulletin, The Daily, catalogue number 11-001-XIE. You can access CANSIM via Statistics Canada's website at [www.statcan@ca](http://www.statcan@ca) under Products and Services.

- **Custom Requests and our Client Services Centre**

Custom tabulations can be arranged on an ad hoc or regular basis. This service allows you to specify the tables and variables that best meet your own requirement. The cost for this service varies depending on the request. If you have any questions or simply need data, contact our Centre by: Telephone: (613) 951-4090 or Toll-free number: 1(866) 873-8788, Fax: (613) 951-4087; E-Mail: [labour@statcan.ca](mailto:labour@statcan.ca).