

The Informatics Professional Services Price Indexes: Use of administrative data

The Informatics Professional Services Price Indexes (IPSPI) is an annual business survey conducted by Statistics Canada (SC) to generate estimates of price changes of informatics professional services transacted in Canada. To alleviate some of the reporting burden faced by companies participating in this survey, SC will use administrative data as a substitute for survey data where appropriate. As of reference year 2013, the IPSPI will substitute survey data with T2 tax data for all simple enterprises to estimate average price changes in the informatics professional services industry.

The Informatics Professional Services Price Indexes¹

The IPSPI collects financial, wage and contractor fee information that is used to produce price indexes measuring changes in prices for informatics professional services. Under the North American Industry Classification System (NAICS 2007), this industry consists of all enterprises primarily engaged in providing at least one of the following services:

541510 - Computer Systems and Related Services

511210 - Software Publishers

518210 - Data Processing, Hosting and Related Services

519130 - Internet Publishing and Broadcasting, and Web Search Portals

Selection of Sampled Units for Tax Data Replacement

The IPSPI sample contains two types of enterprises: simple and complex.

A simple enterprise is an entity engaged in a single industry and at a single location. T2 tax data is considered an acceptable replacement for simple enterprises because it provides comparable information for the sampled unit. Approximately 75% of the IPSPI sample contains simple enterprises.

About Tax Data and the Informatics Professional Services Price Indexes

Corporate Income Tax

Corporate income taxes are taxes levied against profits earned by businesses during a given taxable period. All businesses in Canada, with the exception of Crown corporations, Hutterite colonies and registered charities, have to file a corporation income tax (T2) return every tax year. Reporters must remit taxes no later than 6 months after the last day of the businesses' fiscal period (tax year).

Every month, the Canadian Revenue Agency (CRA) sends the T2 Incorporated Businesses file to SC's Tax Data Division (TDD), which carries out further processing solely for statistical purposes. This processing ensures that the database accessed by the various business survey programs is clean and complete. Processing activity carried out by TDD involves an editing and imputation process to detect and correct outliers and to replace missing values for businesses that filed their returns too late. This processing is not done to administer or monitor the corporate tax program and no modifications are sent back to CRA. Confidentiality of information relating to individual persons, businesses or organizations (public or private, including public institutions and NGOs) used in record linkages is strictly maintained and the results of the record linkage is not used for purposes that can be detrimental to the persons, businesses or organizations whose information is involved.

¹For more information on the IPSPI methodology, please consult **Definitions, data sources and methods: survey number 2333**.

Price index calculation using T2 tax data

From each respondent and for each fiscal year, the IPSPI survey collects information on the revenue and expenses associated with sales of informatics professional services. The survey also asks for information on the average annual percentage change in wages paid to employees and in fees paid to contract workers that work to produce the service. These data are used to derive a price relative by calculating the product of a profit multiplier and a labour component. The index is then calculated using a geometric mean of all enterprise price relatives.

A similar approach is taken to estimate the index using tax data based on the relationship between the available T2 variables and collected survey variables. For the profit component of the equation, variables from the tax data were selected to correspond to survey data variables based on their definitions. The labour component of the equation consists of a weighted average of wage and contract fee changes by approximating average labour cost changes.

Quality of the estimates

Prior to the introduction of tax data replacement in reference year 2013, a thorough assessment was carried out to demonstrate its merits. In particular, the estimates produced using the IPSPI survey data were compared to those obtained using a combination of survey data and tax data. The substitution of tax data was determined to be suitable in NAICS 511210 Software Publishing, 518210 Data Processing and Hosting and 541541 Computer System Design.

Conclusion

The replacement of survey data with administrative data, specifically T2 data, maintains the high quality standard of the IPSPI estimates while reducing respondent burden for small businesses in particular. Tax data will be introduced into price estimates for NAICS 511210 Software Publishing, 518210 Data Processing and Hosting and 541541 Computer System Design beginning in reference year 2013. Estimates for NAICS 519130 will continue to be based exclusively on survey data.