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## **PROGRESS IN COLLECTING BUSINESS DATA**

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### **ABSTRACT**

Statistics Canada's chart of accounts was introduced in the spring of 2001. Its purpose was to streamline the collection and dissemination of business data. However, business data have to be interpreted and converted before they can be used in economic analysis. The chart of accounts has helped us understand the links and differences between business accounting and national accounting. The administrative data project has eased the response burden on small business. We are continuing this work and broadening our scope to maximize the use of administrative data for complex enterprises. In addition, to improve data collection from complex enterprises, coherence analysis identifies collection problems, and solutions are developed to remedy them.

**KEY WORDS:** Chart of accounts, business accounting, national accounting, links and differences, administrative data, complex enterprises, coherence analysis.

### **1. INTRODUCTION**

Most of Statistics Canada's data come from households, businesses and public institutions. This article is about the collection of data from businesses. Its structure is as follows. In section 2, we compare the business world and Statistics Canada. In section 3, we describe how business data were collected in the past. In sections 4, 5 and 6, we discuss the changes that were needed, the development of the chart of accounts, and progress since its development. In section 7, we conclude the paper with a description of our plans for the future.

### **2. COMPARISON BETWEEN THE BUSINESS WORLD AND STATISTICS CANADA**

To collect relevant data from businesses, we need to understand the business world, which is very different from Statistics Canada's world in many respects. However, it is very easy to draw a parallel between the two worlds.

The business world is about profits. People go into business to make money. Businesspeople are well aware that they can't survive if they don't show a profit at the end of the day. Indeed, the Canada Revenue Agency has little patience with corporations that say they are in business but have no profit to report after a few years. At Statistics Canada, our goal is certainly not to make a profit. We are a governmental organization whose mandate is to serve the country by providing relevant, high-quality information to meet the needs of a rapidly changing society.

In the business world, companies are concerned with measuring their profits and their financial position. Statistics Canada, of course, is interested in measuring the economic situation in Canada – all the households that reside there and all the public institutions and companies that operate there.

To measure their profits, companies produce an income statement, which reflects their financial performance for a given period. They also produce a balance sheet, which reflects their financial position at a specific point in time. To measure the country's economic situation, Statistics Canada uses, first and foremost, the gross domestic product (GDP). It also produces statistics for each economic sector and each province at different intervals.

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Business accounting, which companies use to produce their financial statements, is governed by generally accepted accounting principles (GAAP), under the auspices of the Canadian Institute of Chartered Accountants (CICA). The national accounting used to produce the GDP must comply with standards set by the 1993 System of National Accounts.

Companies record their financial transactions by legal entity and by activity or function, depending on their needs. If a company's shares are traded on the stock market, it must produce consolidated financial statements under CICA rules. Statistics Canada keeps national accounts so that it can produce statistics for each economic sector and each province. It collects data by enterprise, establishment and location.

This comparison of business and Statistics Canada shows that while the two institutions differ substantially in their goals, there are some similarities between them. To be successful in collecting business data for use in economic analysis, we need to understand the links and differences between the two institutions.

### **3. HOW BUSINESS DATA WERE COLLECTED IN THE PAST**

Statistics Canada used to collect the vast majority of its data by survey. Moreover, collection was different for each industry. Surveys were developed to meet the specific needs of the industry or a particular economic sector. There was very little uniformity between surveys. In addition, since the surveys were designed to meet national accounting requirements, their terminology and structure were not always familiar to business accountants. Very little effort was made to ensure that data collected at the establishment level were consistent with data collected at the legal entity or enterprise level. In fact, we were not properly equipped to do so.

Since business's goal is to make a profit, it is easy to understand why they do not regard providing data to Statistics Canada as a priority. Indeed, they have very little time to spend on such things. In addition, they do not always understand what Statistics Canada wants. A company may be required to complete a number of surveys, all different from one another and many of them collecting the same data with various questionnaires. Depending on the sector, a company may not be able to respond to a survey based on physical establishments because its accounts are structured by activity. This is true for companies in the telecommunications sector. In many cases, companies are reluctant to provide more information than they include in the income tax return they file with the Canada Revenue Agency.

Response rates tend to decline over time. High-quality data are becoming more difficult to obtain, for a number of reasons: the growing complexity of the business world, globalization and various other pressures being exerted on companies. We have noticed that data are not always uniform from one industry to another. In addition, in the case of large businesses from which data for each activity are collected separately, the totals for those activities are not always consistent with the data collected at the enterprise level.

### **4. SOLUTIONS THAT BENEFIT EVERYONE**

We clearly need a better understanding of the links and differences between business accounting and national accounting. Consequently, we will stop forcing business to accept our economic concepts and our national accounting terminology, and we may develop more user-friendly surveys for businesses. We have to standardize the way we collect data from businesses and use administrative data more effectively. We must find a way to collect, interpret and convert business data so that they can be used in economic analysis.

To achieve those goals, Statistics Canada developed a chart of accounts. A number of divisions contributed to its development. The Standards Committee approved the original chart of accounts in April 2001 and the revised version in October 2005. The chart of accounts streamlines the collection of business data and the dissemination of the resulting economic statistics. A general description of the chart of accounts is provided in the next section.

## 5. CHART OF ACCOUNTS

The chart of account has three main purposes:

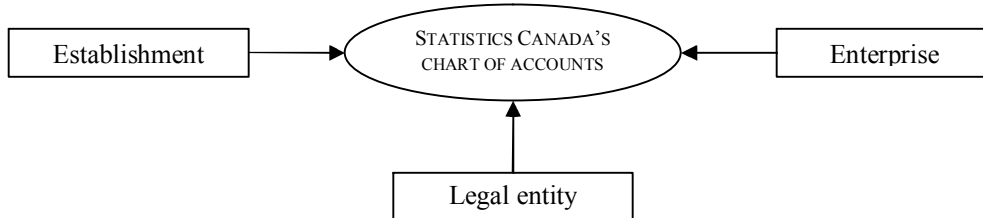
- (a) provide a business data collection tool – a menu of financial accounts – to be used in designing business surveys;
- (b) provide an economic data dissemination tool, based on a uniform conceptual framework for compiling statistics;
- (c) convert business data to economic data.

Before the chart of accounts was introduced in 2001, Statistics Canada had two different systems for collecting financial data from businesses: the **establishment**-based system, reflected in the content of the 1999 Unified Enterprise Survey (UES) questionnaire, and the **enterprise**-based system, reflected in the Industrial Organization and Finance Division's Standard Industrial Classification (SIC) accounts.

In addition, the Canada Revenue Agency uses a **legal entity**-based system, the General Index of Financial Information, introduced in 2000. Since January 1, 2000, incorporated businesses have not had to submit financial statements with their income tax returns. Instead, they have to complete an additional schedule in which each item of their financial statements is represented by a specific code.

Under Statistics Canada's chart of accounts, data can be collected at the establishment, enterprise and legal entity levels, since the chart of accounts contains a concordance between the three data sources. This makes it possible to compare data collected from various sources. Tax Data Division (TDD) has prepared its own version of Statistics Canada's chart of accounts. Its version reflects the three data sources, so that data can be converted and compared between levels.

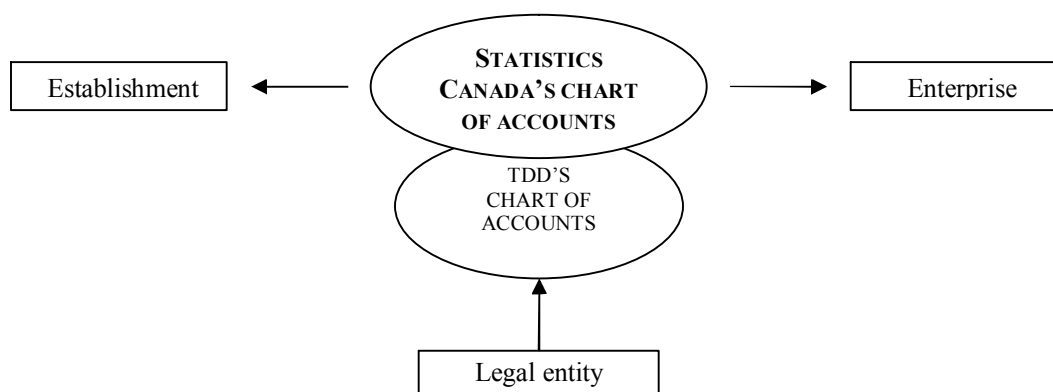
Figure 1: Possible Levels of Collection Under Statistics Canada's Chart of Accounts



Statistics Canada's chart of accounts is a list of accounts for the collection of financial data. In the business world, that list is commonly known as the general ledger. The accounts included in our general ledger, or chart of accounts, are mutually exclusive and hierarchical.

In 2002, a working group composed primarily of current and potential tax data users identified a number of income statement variables as essential to most divisions' surveys. Following the identification of those variables, the TDD developed a condensed version of the chart of accounts that focuses on the key variables. Then a link was established between those variables and the tax data provided by the Canada Revenue Agency. This system is used to replace survey data for businesses and thereby reduce the response burden. Since the TDD's chart of accounts makes tax data consistent with Statistics Canada's chart of accounts, and since both establishment and enterprise surveys will eventually all be consistent with Statistics Canada's chart of accounts, the substitute data will be truly comparable with survey data.

Figure 2: Tax Data Division's Chart of Accounts



## 6. PROGRESS SINCE DEVELOPMENT OF STATISTICS CANADA'S CHART OF ACCOUNTS

### 6.1 Redesign of business surveys

After the chart of accounts was introduced in 2001, the Annual Survey of Manufactures was redesigned for the 2004 reference year. The survey now uses accounting terms such as “cost of goods sold” and “sales”. A number of surveys in the service sector were redesigned for the 2005 reference year. They were redesigned to reflect the particular structure of service accounting. We received a number of positive comments on the Annual Survey of Manufactures for the 2004 reference year. With regard to data quality, at the time of writing it was still too early to draw any conclusions, but there is every indication that the new survey represents a major step forward for the quality of business data.

### 6.2 More uniform collection

The more consistent business surveys are with Statistics Canada's chart of accounts, the more uniform the collection of business accounting data will be. To cite just one example, in some surveys, before they were redesigned on the basis of the chart of accounts, the proceeds from the sale of an asset were treated as sales of goods and services. To meet national accounting requirements, the chart of accounts puts such transactions into an account that is included in operating profit. Those surveys have been redesigned to reflect the variable as it is defined in the chart of accounts.

### 6.3 A clearer understanding of the links and differences between business data and national accounting data

In developing the chart of accounts, we needed to achieve a better understanding of both the links and especially the differences between business accounting and national accounting. While some concepts are similar, others are obviously quite different. We have used many examples from the United Nations document to illustrate the links and differences between the two types of accounting. In Appendix 1, colours are used to show the links between the variables used in business accounting and the ones used in national accounting. The figures are for illustrative purposes only, and most of them are taken from the UN document.

The appendix is laid out in the form of two blocks: the first block is an income statement, commonly known as a statement of profit and loss, and the second block below it shows how financial data from the income statement are used in economic calculations. The variables used in the economic analysis in the lower block are from the income statement; the colours help us identify links between the two blocks. For example, the calculation of \$762 for outputs shown in yellow in the lower block is the sum of all the variables in yellow in the upper block.

This document also reflects the difference between the UES's establishment-based questionnaire and the enterprise-based questionnaire of the Industrial Organization and Finance Division's quarterly survey. The data are used to compute the net operating surplus, by the "top down" method in the former case, and by the "bottom up" method in the latter case. You will note that both calculations produce the same result. This analysis serves as an important conceptual tool for successfully completing a coherence analysis, in which data collected at the establishment level can be compared with data collected at the enterprise level.

#### **6.4 Coherence analysis**

The national accounts, which reflect our country's financial situation, have to be coherent. For that to be true, their components must also be coherent. A coherence analysis is currently under way for the most complex enterprises and enterprises that have the greatest impact on Canada as a whole, in a particular province or in a given sector. According to the initial results, it is not unusual, in the case of a complex enterprise, to have discrepancies of \$5 billion to \$10 billion in sales of goods and services between the data collected from the enterprise itself (annualized quarterly survey) and the data collected from the enterprise's establishments (the total for all UES and non-UES surveys).

To assist our economists, a special effort is being made to solve this collection problem. Every internal inconsistency is discussed with respondents, one enterprise at a time, whenever a reconciliation of Statistics Canada's data and the respondent's data reveals collection irregularities.

Coherence analysis is performed at various levels:

- (a) monthly data compared with annual data, by establishment;
- (b) annual survey data for all establishments of a legal entity compared with administrative data for the same legal entity;
- (c) annual survey data for all establishments of all legal entities of an enterprise compared with quarterly survey data at the enterprise level;
- (d) the data for all the enterprises in an economic sector.

It is still too soon to identify all the causes of inconsistencies, but some of them seem obvious:

- (a) intra-enterprise and inter-enterprise transactions are reported incorrectly in the quarterly enterprise-level survey;
- (b) the respondent providing the monthly data and the respondent providing the annual data have differing interpretations of Statistics Canada's requirements;
- (c) the enterprise's profile in the Business Register is not directly linked to the respondent's accounting system;
- (d) the collection of data that are fragmented by activity to meet economic requirements is not transparent in the respondent's accounting system.

When enough coherence analyses have been completed to confirm that all major causes of inconsistency have been identified, a report will be prepared for the parties concerned.

#### **6.5 Single window reporting**

The "single window reporting" collection method takes a comprehensive approach to collection and ensures its consistency. It encourages the collection of many, if not all, of the respondent's available financial data by means of the chart of accounts. In other words, it is one collection process for multiple uses.

The method has significant benefits:

- (a) data consistency;
- (b) continuous updating of the enterprise's profile;
- (c) collection of relevant, timely, high-quality data;
- (d) significant reduction in the response burden.

In the last 12 months, this collection method has been tested on two complex enterprises. With a special-purpose computer program, we can determine not only the links between the enterprise's consolidated structure and our data

requirements at the establishment level but also the relationships between the two classifications. Thus, the enterprise's accounting data are extracted from the general ledger and reproduced in our chart of accounts, by establishment. For one such enterprise, the data are provided quarterly and annually, and for the other, they are provided monthly as well.

When we compare the data obtained for those two enterprises using the single window reporting method and the data obtained by survey, we find that (a) because of definition and coverage problems, the data reported previously were not always accurate; (b) there was overlap in some cases, since the collection of industry data is not consistent with the enterprises' hierarchical structure; (c) some data were not reported; and (d) intra-enterprise and inter-enterprise transactions were misreported in the questionnaires.

The test of the single window reporting method on the two enterprises in question shows that the method's benefits depend on how the enterprise's general ledger is structured and how accessible the general ledger is through the accounting system. For example, in the case of one of the two enterprises, the accounting system from which the data were extracted provides no detail concerning the costs of manufactured goods (available only from the plant's costing system). In this case, the data collected satisfied the monthly requirements, but not the annual requirements. The cost of establishing a concordance between the costing systems of the various plants far outweighs the potential benefits. In our view, this type of enterprise is not the ideal choice for the single window reporting method.

In addition, we must not underestimate the importance of the work required to develop a concordance between the two classifications. That work is fundamental to the method. A background in business accounting and an understanding of the data requirements of economic analysis are absolutely critical to the method's success. It is important to keep in mind that the concordance has to be maintained for all new accounts that might be created between data collection events.

We are continuing to collect data from the two enterprises using the single window reporting method. The initial investment was part of the test. Both respondents are happy with the reduced response burden, and users are receiving the data on a timely basis in the required format. For now, however, the method will not be offered to other enterprises, since the employees who are qualified to do the concordance have to spend all their time on coherence analyses of a number of other complex enterprises.

## **7 CONCLUSIONS AND FUTURE PROSPECTS**

Coherence analyses of complex enterprises are under way. Once all the causes of inconsistencies are identified, they will be corrected at the source. For example, the quarterly survey's variable relating to intra-enterprise and inter-enterprise transactions will be better defined. The enterprise's profile will provide a better picture of how the enterprise reports its financial data. Two initiatives will unquestionably have a positive impact on the collection of business data: (a) redesigning the Business Register, and (b) amalgamating the Key Provider Management (KPM) program and the Large Business Profiling Program (LBUS) with the Business Register.

Once the various coherence analyses have been completed for a given enterprise, it may be necessary to revise the financial data for previous years. In some cases, revision will have to wait until the coherence analyses for other enterprises in the same sector have been completed in order to ensure coherence within the sector. The conclusions produced by the coherence analyses cannot be taken lightly; they must be discussed with the parties concerned before revision of the data is contemplated. A committee was formed in early 2006 to review the conclusions of the coherence analyses. It is studying the discovery's impact on previously published data and on data that will be published in the future.

The chart of accounts developed and introduced by Statistics Canada was a great step forward in the collection of business data. As a result of the links between the various data sources and the chart of accounts, administrative data are being used more effectively. Through the coherence analyses that are now possible, irregularities are being identified and data quality is being improved.

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