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Tammy Hoogsteen
Statistics Canada
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Globalization and Profiling

Globalization and Profiling at Statistics Canada

Introduction

Canadian businesses are increasingly engaged in the global economy. Rapidly changing technology, the development of trade agreements and evolving government policy have changed the way businesses operate. They have adopted a more global approach to growth and productivity. For the past few years, Statistics Canada has been working towards gathering accurate and complete information on the extent of the involvement in global economic activities of Canadian businesses. The primary goal is the development and production of statistics that captures these global activities and measures their international importance and their positioning in the global value chains.

Statistics Canada is in the process of incorporating various methods of collecting global economic indicators including the use of administrative data; the use of a characteristic “filter” questionnaire to identify units involved in global activities and how they are involved; a longer production activity questionnaire to measure the extent of this economic activity once the appropriate units are identified; and the addition of two questions added to the Annual Survey of Manufacturers.

The Business Register profiling program was implicated in the testing of the Filter Questionnaire. From the perspective of the Business Register as the statistical frame supporting all economic surveys, the focus of this paper will be on the questions asked on the filter questionnaire, the characteristics of the units selected, issues confronted by the profilers, overall results observed as well as data storage and implementation on the Statistical Business Register (SBR) for future use, such as sampling, business demographics and analysis.

Questionnaire Tested by Business Register Profilers

The questionnaire was designed to identify units actively engaged in any of four specific types of international activities: manufacturing service providers, merchanting, factory-less goods producing and holding of inventories abroad.

Scenario 1

Companies that perform custom work in Canada for foreign clients (manufacturing service provider) – manufacturers not owning the intellectual rights to the products.

Question 1

During the fiscal year____, did your business perform manufacturing, processing, or assembly work for other clients, according to the specifications provided by these clients? Please note this work may be referred to as “custom work”, “custom manufacturing”, “tolling” or “consignment”.

A - Yes - continue to question 1.1

B - No – continue to question 2

Question 1.1

Of the work performed by your business, where were the clients located?

A – Only in Canada – Go to Q 2 B – Only outside of Canada C – Some inside and some outside of Canada

Question 1.2

Of the work performed for clients outside of Canada by your business did the clients supply and maintain the ownership of at least some of the material inputs or goods for processing? Please note material inputs include materials, components, or semi-finished goods that are used for production towards the clients’ outputs.

A – Yes

B – No

C – Some clients did, some clients didn’t

Scenario 2

Companies responsible for marketing, purchasing and selling goods “as is” abroad without passing through Canada, no design or material input involved – referred to as merchanting.

Question 2

During the fiscal year ____ , did your business purchase goods outside of Canada “off the shelf” and sell them “as is” in foreign markets without altering the goods and without having the goods enter Canada before the sales? Please note goods may include raw materials, components, semi-finished goods, or finished goods that are purchased for resale

A – Yes

B – No

Scenario 3

Companies that pay foreign entities to perform custom work outside of Canada (imports of services) - owners of property subcontracting the manufacturing to foreign companies or factoryless goods producers

Question 3

During the fiscal year ____, did your business pay other business entities to perform manufacturing, processing or assembly work, according to the specifications provided by your business or on behalf of your clients? Please note that this may be referred to as “outsourcing”, “custom manufacturing”, “custom work”, “external manufacturing”, “subcontract”, or “tolling”. Other business entities could be called contract suppliers or service providers. Specifications provided “on your behalf” refer to the product requirements that are originated from your own clients, and you subcontract part of the work from your own clients to another business entity.

A – Yes – Go to Q 3.1 B – No – Go to Q 4

Question 3.1

Of the work performed by other business entities, where were those business entities located?

A – Only in Canada – Go to Q 4 B – Only outside of Canada – Go to Q 3.2
C – Some inside and outside of Canada – Go to Q 3.2

Question 3.2

Of the work performed by other business entities located outside of Canada, did your business supply and maintain ownership of at least some of the material inputs or goods for processing? Please note the material inputs include raw materials, components, or semi-finished goods that are used for production towards your business’s outputs.

A – Yes B – No C – Some of your business did, some of your business didn’t

Question 3.3

Of the work performed by other business entities located outside of Canada, were any of the semi-finished or finished goods sold to clients outside of Canada by your business?

A – Yes - Go to Q 3.4 B – No – Go to Q 4

Question 3.4

You mentioned some of the products were sold to clients outside of Canada from the work done by other foreign business entities, from where were the goods shipped?

A – Shipped from Canada

B – Shipped directly from outside of Canada without passing through Canada

C – Some shipped from Canada, some shipped directly from outside of Canada

Scenario 4

Companies that hold inventories abroad – goods that have left Canada but have not changed ownership

Question 4

On the last day of the fiscal year ____, did your business hold inventories abroad, including inventories in transit? Note, please include any raw materials, components, semi-finished, finished goods, and goods purchased abroad for resale that were recorded in your business' Canadian accounting books, but physically located outside of Canada.

A – Yes

B – No

The version presented above is the second version tested by the Business Register profilers. A previous version was tested by Statistics Canada's Questionnaire Design and Research Centre. The results led to changes to the wording of the questions and recommended the involvement of the profilers for the second round of testing. The assumption was that the profilers having experience and knowledge of the business structures would be able to identify specific issues and document the respondent reactions to the tested questions.

Test Objective and Methods

The purpose of this testing was qualitative in nature with two main objectives. First objective was to determine whether the questions developed and the flow of the questionnaire were sufficiently understood by respondents resulting in accurate data collection. The second objective was to try and determine what position or positions within the organization could best answer questions relating to global activity.

Business Register profilers with extensive experience in complex legal and operational business structures were brought in to administer the questionnaire, to report any instances of confusion or concern from the respondent and to identify the respondent's position within the company. Two groups of profilers were implicated in the testing.

The Enterprise Portfolio Manager (EPM) profilers are responsible for the top 250 enterprise group business structures in Canada. They not only profile the largest, highest impact structures but they also co-ordinate the collection of survey data. They build a relationship with representatives of their

assigned companies with on-site visits and frequent communications to help ease the survey requirements burden for their respondents.

The Business Register (BR) Profilers are responsible for the maintenance and profiling of all other complex enterprise group structures. Their portfolio of companies have significant impact on the economic survey programs and vary in complexity and size. Although they focus on the top 5,000 enterprise group structures (excluding EPM and government structures), they frequently update and profile structures from varying levels of complexity as required for specific program areas.

A half day training session for the profilers was developed to explain the data needs for the agency and the program, define the terminology, provide practical examples for each of the scenarios and to present the survey questions and flow. Along with their significant SBR and business experience, this training provided each of the profilers with the appropriate subject-matter tools to collect high quality data and address any questions the respondents may have had. This training also ensured consistent application in the collection of the data and understanding of the concepts.

The EPM team contacted their respondents by telephone and followed up by emailing the questionnaire to the appropriate contact at the selected unit. The BR profilers contacted the business respondent and collected the questionnaire data through a telephone interview.

Test Sample Characteristics

The testing focused on units that were engaged in wholesaling and manufacturing activities, as these sectors were deemed to be the most likely to be involved in the four specific global activities being assessed. In total, 75 establishments were selected with various levels of legal and operational complexities from the Canadian SBR. Of the 75 units, 30 were selected from the EPM program and 45 from the BR program. The selection was highly concentrated on units reporting recent and significant revenue values.

A partial administrative data file listing businesses that reported some value of imports and exports crossing the Canadian borders was also used to identify approximately one third of the sample. This was done to ensure appropriate qualitative results as these units were deemed to have a high probability of being engaged in global activity. As useful as this administrative data source is, it is important to note that it is understood that an acknowledged data gap exists: this source cannot indicate which businesses are solely involved in the direct trading in foreign markets of products never entering or exiting Canadian borders commonly referred to as “merchanting”.

The selection of units for this testing was not probabilistic in nature and there was a definite bias towards units suspected of engaging in global activities. As this activity was to test the wording and understanding of the questions, it was important to ensure that a large number of them should be responding positively to some indication of global activity.

Test Results

Of the 75 units selected for this questionnaire testing, 55 questionnaires were collected and reported as fully answered by the respondent. Of which 47 indicated they were involved in one or more of the global activity scenarios questioned. The total EPM units collected was 25, with 19 responding “yes” to one or more of the questions. The total BR Profiler units collected was 30, with 28 responding “yes” to one or more of the questions.

Of the 55 units fully responding to the questionnaire, 19 establishments were selected from the companies listed on the partial data file received from Canada Border Services and of those, 18 responded positively to implications in global activities. All 55 units were also matched to the business registration (Canada Revenue Agency) file used for the SBR and there is a relationship between the companies that responded positively on the questionnaire to those with an active importer/exporter account registered with the federal tax office. This is an indication that the administrative files used by the Canadian business register could be used to indicate global activities for enterprises where this program account exists, however the reverse is not necessarily true, those companies without an importer/exporter account may still be implicated in global activities. For example, the unit providing the manufacturing service may not be the unit importing or exporting the goods directly. Additionally, a definite data gap exists in trying to identify “merchanting” companies.

It was also noted that the simplicity of the legal and operating structure of a business on the SBR does not exclude them from being implicated in global activities. Of the 47 units responding positively to global activities, 9 units are simple with regards to business structure meaning they represented single legal entities with either a single operation in Canada or a small number of operations in Canada.

Test Observations and Findings

As the terminology used to describe some of these activities varies globally, the questions were developed to include the various possible terms. Both profiling teams were to document any questions or issues that arose during collection. Overall the collection ran smoothly, however, there were two reoccurring themes that arose, although not as frequently as expected.

The profilers commented on the difficulty in finding the appropriate contact who could respond to the question. As business organizations vary, it was not one single position within each company who could respond to all the questions in every case. It varied from plant managers, to CEO’s to Presidents to warehouse managers and so on. However, all profilers commented that once the appropriate contact was reached the data was easily collected.

Second comment made by the profilers was the use of varying terminology in the questions. As they were well trained on all the various terminology and it was provided on the questionnaire, the discussions with the respondent were easily managed. In most cases the respondent was familiar with one of the terms provided and could easily respond to the questions with no further clarification

required from the profilers. This led to 100% completion of all cases where the appropriate respondent was reached.

All profilers involved in the collection of this data showed a strong level of comfort with the subject-matter and agreed that, as required, these questions could be added to their profiling activities on a consistent basis. The results also indicated that perhaps the option of self-response to this questionnaire can be further explored. This would greatly reduce the cost and timeline in collecting the information required to identify units in scope for the global production activity questionnaire.

Continued Work

Considerations for Data Storage and Implementation on the Statistical Business Register

As the Canadian SBR is the sole frame used by all economic programs at Statistics Canada, the system would need to be enhanced to store and maintain global activity indicators for use by the macroeconomic accounts (MEA) program. The SBR would need to store four auxiliary variables using a binary code identifying units engaged in merchanting, manufacturing service providers, factory-less goods producing and holding inventories abroad. This development is in the early stages of discussion. The SBR team will be presenting proposals on possible solutions to the storage of this data on the SBR over the next few months.

Initialization and Maintenance of Global Indicator Variables on the Business Register

The initial identification of globally active businesses will be a collaborative effort using several sources as listed in this section and will take some time to initialize fully on the SBR.

The Canadian Business Register was developed using administrative data as its foundation and is highly dependent on monthly and annual files for the updating and processing of millions of businesses. Statistics Canada receives data from the Canada Revenue Agency on business registration, federal income tax data, employment taxes and value-added taxes. It is highly effective in its current use, and further analysis and testing is being done to assess its use for identifying global activity.

This administrative source identifies legal status changes of corporations; reduction or increase in the stratification variables, such as sales, assets and employment numbers; registration of various federal program accounts which could indicate a change in organizational structure or possible involvement in global activities; and finally the birth of newly registered businesses. Once the frame is identified, these automated processes would continue to maintain the status changes of the legal units and feedback signals of possible changes to profilers for research and processing.

The imports/exports data from Border Services can be used to identify in scope units, however, exceptions exist, those that import/export indirectly and those that are engaged in merchanting

which leaves the statistical agency with a data gap. The assumption would be that the federal business registration source used for the Canadian SBR would have a similar data gap but further and more extensive analysis needs to be done to determine this conclusively.

Since the results of the testing proved that the terminology was mostly understood and correctly completed, the addition of the filtering questions to the annual electronic survey of business characteristics may be re-considered. Should this option be applied, an additional module concerning global activity would need to be developed and implemented and the filter questions used for this testing would need to be slightly modified to ensure they would function appropriately in an electronic version sent directly to the respondent for completion. Depending on the units selected for the annual survey, this data will enhance the administrative data and help cover the data gap that exists.

The survey feedback from the annual characteristics survey would help identify new in scope units. Those units identified on the frame and selected for the production activity survey, can be maintained through the collection of this survey data and feed any frame updates required back to the SBR for processing such as, units no longer in scope for the program.

Additional questions on the Annual Survey of Manufacturers that were added for 2015 data collection will be used to identify units as possible manufacturing service providers for companies inside or outside of Canada or those paying for manufacturing services from companies inside or outside of Canada.

In addition, the business register profiling survey can be expanded to include the questions on global activities as required and deemed appropriate to collect through regularly scheduled profiling activities. Although, the profiling of all possible businesses in scope for this frame would be too costly and would require a significantly large amount of resource time for the agency, the regular profiling activity would only be used to enhance the quality and coverage of this frame once it is identified or to continue to build the frame already identified.

With all initiatives in place, the maintenance and upkeep of the frame will be managed through regular monthly and annual processes utilized on the SBR. The planned future development on the SBR will allow for the inclusion of global indicators and the manual updating of these auxiliary variables as well as through automated processes as deemed appropriate.

As is evident, ultimately, a multi-pronged approach will be needed to develop the globally active frame and to ensure a high coverage rate.

Conclusion

Statistics Canada is advancing in identifying the units that participate in global value chains and reporting on the Canadian international involvement and impact. There has been continual advancement on the identification of the globally active units, in the creation and improvement on the survey questions on characteristics and production data and the integration of this data on the SBR for frame management.

A proposal for auxiliary global indicator variables will be on the development plan in the New Year. As well, the addition of global activity questions in the ongoing profiling procedures is being presented for survey inclusion for the 2017 collection period.