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##### Measuring Global Production

### Strategies for Collecting Information Related to Global Production

Prepared by Statistics Canada

#### *Summary*

Over the last number of years national statistical agencies have been adapting their data collection vehicles to acquire information on global production activities. Given the complex nature of global production arrangements this has been a slow and difficult task. Over the last year Statistics Canada has developed a number of collection instruments that could be used to collect information from respondents about global production, goods for processing and Merchanting. Statistics Canada recently tested these collection tools with firms engaged in global production activities to determine their ability to provide the information being requested. This document outlines the results of these tests.

## **I. Introduction**

1. Changes in technology, trade agreements, multi-national organizational structures and government policy have significantly altered the way firms operate. Firms are now operating from a global rather than domestic perspective. Macroeconomic accounting frameworks, which measure domestic product and national income and trade, have recently been updated to better capture the increasingly global activities and international inter/intra-connectedness of firms, governments and individuals. Appropriate data collection vehicles need to be employed so that they can provide the informational building blocks needed to populate these revised frameworks.

2. Over the last number of years national statistical agencies have been adapting their data collection vehicles to acquire information on global production activities. Given the complex nature of global production arrangements this has been a slow and difficult task. Over the last year Statistics Canada has developed a number of collection instruments to collect information from respondents about global production, goods for processing and Merchanting. Statistics Canada recently tested these collection tools with firms engaged in global production activities to determine their ability to provide the information being requested. This document outlines the results of these tests.

## **II. What was tested?**

3. Statistics Canada tested two blocks of questions related to global production activities with both English and French respondents. The first block of questions consisted of 4 questions that were intended to determine whether or not the firm engages in global production activities. Throughout this paper this block of questions will be referred to as the Global Production Activities Filter Questions or Filter Questions/Filter Questionnaire. Given that only a small subset of Canadian businesses engage in global production activities, Statistics Canada felt the need to develop an instrument that would identify this small set of firms who, once identified would receive a more in depth questionnaire requesting more detailed information. The four filter questions identify the firms that:

- Perform custom work for foreign clients
- Pay foreign entities to perform custom work
- Engage in direct trading (Buy and sell 'as-is' in foreign markets)
- Hold inventory abroad

4. The second block of questions tested a longer questionnaire on global production activities. This questionnaire contains 26 questions divided into the sections noted above. Throughout this document this block of questions will be referred to as the Global Supply, Production and Distribution Chain Activities questions or Main Questions/Main Questionnaire. A schematic of the questions tested is provided in table 1. The filter questionnaire is provided as an appendix to this document.

Table 1  
Questions tested by category of question

<i>Category</i>	<i>Filter Questionnaire</i>	<i>Main Questionnaire</i>
Performing custom work for foreign clients	One question with two parts	Seven supplementary questions. Three of the questions had grids asking for product and country detail
Paying foreign entities to perform custom work	One question with three parts	Thirteen supplementary question
Engaging in direct trading (Buy and sell 'as-is' in foreign markets)	One question	Five supplementary questions
Holding inventories abroad	One question	One supplementary question

### III. Testing Methodology

5. The questionnaire testing was administered by Statistics Canada's Questionnaire Design and Research Center (QDRC). The Questionnaire Design and Research Center is part of the Methodology Branch at Statistics Canada and is staffed by experts in questionnaire design and testing.

6. The filter questionnaire and main questionnaire were tested in both French and English. The same set of respondents were used to test both questionnaires. English tests were conducted from August 26<sup>th</sup> – August 28<sup>th</sup>, 2015 in Toronto, Canada with nine respondents and from September 7<sup>th</sup> – September 10<sup>th</sup>, 2015 in Montreal, Canada with an additional two respondents. French tests were conducted from September 7<sup>th</sup> – September 10<sup>th</sup>, 2015 and the week of September 18<sup>th</sup>, 2015 in Montreal, Canada with seven respondents. In total the filter questionnaire and main questionnaire were tested with 18 respondents.

7. The companies were selected based on their likelihood of participating in global production, supply and distribution chain activities. Customs information was used to select an initial group of potential respondents.<sup>1</sup> An initial screening of the participants was done over the phone to ensure the companies were involved in at least one of the activities described in the questionnaire. The company representatives taking part in the interviews were office managers, controllers, and vice presidents or presidents. Most had a good understanding of their company's business model.

8. A questionnaire design and research center moderator led the interview, accompanied by one analyst from Statistics Canada's international accounts and trade program and one analyst from Statistics Canada's manufacturing and wholesale statistics program.

9. It should be noted that, as an exceptional case, in Toronto, small changes were made to the filter questions after each interview, in order to try to clarify confusing concepts identified in previous interviews. Therefore, in Toronto, not all participants saw the exact same version of the questionnaire. In Montreal, the tested questionnaire incorporated all the changes from Toronto and the same version was used for all interviews.

<sup>1</sup> There are a number of customs programs in Canada that provide a tax exemption status to firms that receive goods for the purpose of processing them and subsequently exporting the goods.

10. Each participant was asked to answer the initial filter questions using a paper ‘mock-up’ of a potential electronic questionnaire. After this exercise, the questions themselves and the respondent’s answers were discussed to determine how well the participant understood the intent of each question, and whether the terminology used was clear. After determining which answers were a true “yes”, participants were shown the corresponding sections of the main questionnaire and asked for their feedback about the availability of the information requested, as well as their understanding of the wording of each question.

11. Interviews lasted anywhere from 30 minutes for an out-of-scope respondent (who was not shown the main questionnaire at all), to more than 90 minutes for in-scope respondents who explored some of the main questionnaire. In many cases, the QDRC moderator guided participants to particular areas of the questionnaire, since time constraints prevented them from reading and reacting to all applicable questions.

12. It is important to note that there are limitations to the findings from one-on-one cognitive interviews. Since the research is qualitative, the findings and conclusions are not representative of all potential survey respondents from the target population. The study’s findings therefore, should not be viewed as quantitative, statistical findings. Although the results are only representative of the respondents who participated in this study, their usefulness can be realized in terms of the potential problems and issues that the testing identified. The findings contained in the next section of this document provide important insights into respondents’ reactions to the questions, their ease of understanding and responding to the questions, interpretations of some of the terminology used and their willingness to answer the questions that were asked.

## **IV. Test results**

13. In general, the questions related to custom work (inward and outward) presented significant challenges for respondents. The main challenge being that the respondents being interviewed all seemed to have very different business models. As a result it was hard to find terminology and questions that make sense across all industries and all respondents. The participants visited did not fit neatly into an imagined scenario and phrases like “custom manufacturing”, “processing”, “inputs” and “end products” all had different meanings to different companies. The questions on holding inventories abroad and buying and selling goods ‘as-is’ abroad tested well. The following represents the general feedback received for each of themes tested.

### **1. Performing custom work for foreign clients**

14. The “Performing custom work for foreign clients” section of the questionnaire is intended to measure what is referred to in the 2008 System of National Accounts as ‘goods sent abroad for processing’. ‘Goods sent abroad for processing’ represent goods that change location and characteristics from one economy to another but do not change economic ownership. These goods should not appear in import and export of goods statistics but rather they should be treated as exports and imports of services. This section of the questionnaire is intended to collect information related to the export of processing services (where goods are processed in Canada on behalf of a foreign client). In order to illustrate the type of information Statistics Canada hoped to obtain from this section of the questionnaire consider the following scenario:

“A foreign firm (a firm that is not a resident of Canada) contracts with a Canadian firm (a Canadian resident) to assemble a widget. The widget is assembled according to the specifications provided by the foreign firm to the Canadian firm. Steel, circuit boards and plastic are required to assemble the widget. The foreign firm supplies the circuit board

used to assemble the widget. The steel and plastic are purchased by the Canadian firm from a local supplier. Some of the finished widgets are shipped back to the country of the foreign firm and some of the finished widgets remain in Canada. The Canadian firm charges the foreign firm a processing or assembly fee as well as a fee to recover all charges related to the steel and plastic they purchased that were used to assemble the widget.”

15. In order to properly record these transactions in the Canadian National Accounts Statistics Canada needs to collect information that will enable the agency to record:

- An export of processing services equal to the assembly fee charged by the Canadian firm to the foreign firm for the assembly of the widget.
- An export of steel and plastic equal to the value of the steel and plastic that were used to assemble the widget.
- An import of a good equal to the value of the final widget that remained in Canada and was sold to resident Canadians.

16. There were different variants of the “performing work for foreign clients” filter question tested with respondents. Each variant used different terms or different flows to try and determine if the respondent provided ‘processing services’. In addition, respondents who responded positively to the filter question were asked the seven more detailed questions from the main questionnaire. Figure 1 summarizes the filter question that was tested with respondents. The main questions related to this section are provided as an appendix to this document.


Figure 1

**Filter Question: Performing custom work for foreign clients**

**During the last fiscal year, did this Canadian business perform custom manufacturing, processing, or assembly work for clients outside of Canada, according to the requirements specified by the foreign clients?**

**Note: This Canadian business receives payments from foreign clients for the work performed according to the specifications (designs, pattern papers, samples, formulas, or other intellectual property) provided by the foreign clients. This may be referred to as “custom work”, “custom manufacturing”, “tolling”, or “consignment”. Refer to the Help button for more information.**

☐ No  
☐ Yes



Of this work performed, did the **foreign clients supply** at least some of the **inputs** (raw materials or semi-finished goods) and **own the end product**?

☐ Yes  
☐ No

During the testing the following terminology changes were made to the filter question:

- The phrase “clients outside of Canada” was replaced with ‘foreign clients’
- The word ‘requirements’ was replaced with ‘specifications’.
- The word ‘inputs’ was replaced with ‘material inputs’.
- The word ‘own the end product’ was replaced with ‘free of charge’
- The word ‘supply’ was replaced with ‘supply and maintain legal titles’.

17. Overall respondents had a significant amount of difficulty with both the terminology used and the amount of detail requested in the ‘performing custom work for foreign clients’ section. The following represents some of the more pertinent observations obtained from the testing:

- Respondents had difficulty with the phrase “perform...work for clients outside of Canada.” They thought it meant the work itself was to be performed outside of Canada.
- Participants were not clear as to whether “clients outside of Canada” included affiliates. Some participants were not sure whether “foreign client” included or excluded the United States. They indicated that they treat Canada and the United States as ‘domestic’ locations. Most participants found the phrase “This Canadian business” a bit vague, and wondered what it would include.
- Some participants mentioned that the client provides specifications but they supply the designs. The clients tells them what to make but not how to make the goods. Participants therefore had difficulty understanding the term “requirements”.
- A few participants answered ‘yes’ when asked whether the foreign entity supplies at least some of the inputs, even though their Canadian company buys the goods from the foreign entity. They did not interpret supplies as ‘without ownership change’ (i.e., the foreign company retained ownership of the material inputs).
- When the phrase “supply free of charge” was introduced to try and clarify what was meant by supplying material inputs, participants thought it meant the clients were giving them the materials to keep as a gift, rather than simply retaining ownership. Even once the wording was changed to ‘supply and maintain legal title’ a few participants did not understand what this meant.
- A few respondents were confused by the phrases “custom work” and “custom manufacturing.” Some wondered whether this was the same as contract manufacturing.
- When the moderator asked respondents if they could provide a list of the material inputs supplied by the foreign client along with their corresponding value – respondents indicated this information would be very difficult if not impossible to supply – especially if they were required to provide the geographic origin of the material.
- In general respondents felt it would be very difficult to place a value on inputs received from abroad if they were simply being supplied by the foreign entity. In many cases the customs documentation for these goods is completed by a third party and they do not have access to what the good was valued at the border.
- The main questionnaire asked respondents to provide the value of foreign supplied material that originated in Canada. Participants were confused about how ‘foreign-supplied material’ could ‘originate in Canada’. This seemed like a contradiction to them. They also indicated that they just receive the inputs from the foreign client. They do not know the origin of the inputs.

## 2. Paying foreign entities to perform custom work

18. The “Paying foreign entities to perform custom work” section of the questionnaire is intended to collect information related to the import of processing services (where Canadian inputs are processed outside of Canada on behalf of the Canadian firm). In order to illustrate the type of information Statistics Canada hopes to obtain from this section of the questionnaire consider the following scenario:

“A Canadian firm (a firm that is a resident of Canada) contracts with a foreign firm (a firm that is not a resident of Canada) to assemble a widget. The widget is assembled according to the specifications provided by the Canadian firm to the foreign firm. Steel, circuit boards and plastic are required to assemble the widget. The foreign firm supplies the circuit board used to assemble the widget and the Canadian supplies the steel and plastic. Some of the finished widgets are shipped back to Canada, some of the widgets remain in the economy of the foreign firm and some of the widgets are shipped to a neighbouring economy. The Canadian firm pays the foreign firm a processing or assembly fee which includes charges for the assembly service and the cost of the circuit board that was used to assemble the widget.”

19. In order to properly record these transactions in the Canadian National Accounts, Statistics Canada needs to collect information that will enable the agency to record:

- An import of processing services equal to the assembly fee charged by the foreign firm to the Canadian firm for the assembly of the widget.
- An import of the circuit board equal to the value of the circuit boards that were used to assemble the widget.
- An import of a good equal to the value of the final widgets that were returned to Canada and was sold to resident Canadians.
- An export of a good equal to the value of the final widgets that remained in the economy of the foreign firm.
- An export of a good equal to the value of the final widgets that was shipped to and consumed in the neighbouring economy.

20. The filter question was once again tested separately from the main questionnaire. As was the case with the ‘performing custom work for foreign client section’ variants of the filter questions along with the main questionnaire were tested. Figure 2 summarizes the filter questions that were tested with respondents. The main questionnaire is provided as an appendix to this document.


Figure 2

**Filter Question: Paying foreign entities to perform custom work**

During the last fiscal year, did this Canadian business **pay foreign entities** to perform custom manufacturing, processing or assembly **work outside of Canada**, according to the **requirements specified by this Canadian business**?

**Note:** This Canadian business **pays the foreign entities** for the work performed according to the specifications (designs, pattern papers, samples, formulas or other intellectual property) **provided by this Canadian business**. This may be referred as “outsourcing”, “custom work”, “custom manufacturing”, “external manufacturing”, or “tolling”. Refer to the Help button for more information.

☐ NO  
☐ YES



Of this work performed, please indicate **the provider of the material inputs** (raw materials, components, or semi-finished goods) and the **destination of end products** (semi-finished or finished goods).  
 Select all that apply below.

☐ This business sourced and **supplied some or all of the material inputs** to the foreign entity

☐ This business **did not supply material inputs** to the foreign entity

☐ The end products were **sold within Canada** or **exported to foreign countries after coming back to Canada**

☐ The end products were **sold in foreign countries directly** without having the goods physically enter Canada.

During the testing the following terminology changes were made to the filter question:

- The phrase “clients outside of Canada” was replaced with ‘foreign clients’
- The word ‘requirements’ was replaced with ‘specifications’.
- The word ‘inputs’ was replaced with ‘material inputs’.
- The word ‘own the end product’ was replaced with ‘free of charge’
- The word ‘supply’ was replaced with ‘supply and maintain legal titles’.

21. Overall respondents had a significant amount of difficulty with both the terminology used and the amount of detail requested in the ‘paying foreign entities to perform custom work’ section. The following represents some of the more pertinent observations obtained from the testing:

- Participants were confused by the phrase “requirements specified by this Canadian business”. Some of the companies were sub-contracting out a part of their manufacturing. They felt the ‘specifications’ were simply being ‘passed along’ and therefore did not know if it was their specifications or the specification of the firm they were contracting with.
- Respondents were confused by the phrase “without the goods physically entering Canada”, since material inputs had been in Canada.



- Respondents asked what it meant to “sell the products in a foreign country directly”. They wondered if this was the same as shipping the goods directly.
- There was some confusion over what was meant by “maintain the legal title.” Some respondents noted they always own the rights to the intellectual property behind the product – they never give up the legal title of the intellectual property.
- Individuals were confused about the supplementary question “Where were the custom-made or processed products sold?” Some companies outsource the manufacturing of components – which are used as inputs into a final good. According to these companies there are no processed products sold because they are only components into a final product. They confused processed products with final product.
- There was some discussion about what Statistics Canada means by ‘product’. Do we mean the *component* that was manufactured abroad, or the *end product sold by the Canadian company to their end customer*?
- A few participants stated that they understood that the question was asking about sub-contracting in foreign countries; however, once again the concept of sister companies or affiliates came up. Participants were unsure if they should be including those types of arrangements or if we were only asking about completely separate entities. In some cases it was yes to one circumstance but not the other.

### 3. Direct Trading (Buy and sell ‘as-is’ in foreign markets)

22. The “Direct trading” section of the questionnaire is intended to collect information related to merchanting. Merchanting as described in the 2008 System of National Accounts is a ‘process whereby a unit in economy X, purchases a good from economy Y for sale in economy Z. The goods legally change ownership but do not physically enter the economy where the owner is resident.’ P14.74 (2008 SNA).

23. In order to properly record these transactions in the Canadian National Accounts Statistics Canada needs to collect information that will enable the agency to record:

- A negative export when the goods are acquired abroad.
- A positive export when the goods are sold abroad.

24. Figure 3 summarizes the questions that were tested with respondents. The complete questionnaire is provided as an appendix to this document.

Figure 3

**Filter Question: Direct trading (Buy and sell ‘as-is’ in foreign markets)**

During the last fiscal year, did this business purchase goods (raw materials, semi-finished, finished goods) outside of Canada and sell them “as-is” in foreign markets without altering the goods, nor having the goods physically enter Canada?

Includes the finished goods that were purchased “off the shelf” and resold “as is” outside of Canada without any further transformation. This business records the cost of the goods and the revenue from the sale of these same goods in its accounting books.

☐ Yes  
☐ No

This original question was replaced with the following question after the first three tests:  
 During the last fiscal year, did this business purchase goods (raw materials, semi-finished, finished goods) “off the shelf” outside of Canada and sell them “as-is” in foreign markets without altering the goods, and without the goods ever entering Canada?

☐ NO  
☐ YES

25. Overall this question tested well. Respondents found the terminology easy to follow and felt they could provide the necessary information. The following represents some of the more pertinent observations obtained from the testing:

- Once the phrase “off the shelf” was incorporated into the question most participants understood the question and were able to answer it accurately.
- A few respondents were confused by the phrase “not having the goods physically enter Canada”. Some answered ‘yes’ to the question, even though the goods were purchased abroad, entered Canada and were subsequently exported to another country. Some other respondents answered ‘yes’ to this question, even though the goods were sold in Canada.
- Similar to the first question, “this Canadian business” or “your business” was not always clearly understood and a few participants asked if we were asking about their company and if they should be including affiliate companies.
- A few participants did not read the entire question so they missed the concept of the products not entering the country before being sold in foreign markets.
- In some cases the respondents noted they did some minimal branding of the product so they were unsure if this should be considered a type of transformation.

#### 4. Inventories Held Abroad

26. The final set of questions tested concerned inventories held abroad. In cases where inventories are held abroad the Canadian National Accounts needs to adjust their production statistics. For example, even though Canadian output has left the economic territory of Canada there has not been a change in ownership. These inventories need to be reflected in Canadian production and not Canadian trade until they are sold or consumed.

27. Figure 4 summarizes the questions that were tested with respondents. The complete questionnaire is provided as an appendix to this document.

Figure 4

**Filter Question: Holding Inventories abroad**

<p>On the <b>last day</b> of the fiscal year, did this <u>business</u> <b>hold inventories abroad</b>, including inventories in transit?</p> <p><b>Include:</b> Raw materials, work in process, and finished goods recorded in this business's accounting books, but physically located outside of Canada. Also include goods purchased abroad for resale "as-is" in foreign markets.</p> <p>This original question was replaced with the following question after the first three tests: On the <b>last day</b> of the fiscal year, did this <u>Canadian business</u> <b>hold inventories abroad</b>, including inventories in transit?</p> <p><b>Include:</b> Raw materials, work in process, and finished goods recorded in this business's accounting books, but physically located outside of Canada. Also include goods purchased abroad for resale "as-is" in foreign markets.</p>
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28. Similar to this question on 'Direct Trading' this question tested relatively well and was the question that caused the least amount of confusion. The concept of holding inventory abroad seemed to be quite straightforward for most participants.

29. The following represents some of the more pertinent observations obtained from the testing:

- One participant wondered if "abroad" referred to simply "outside of their company" or specifically "outside of Canada".
- Most participants stated that they would be able to determine if they had inventory held abroad.
- Some respondents noted that the more detailed questions were difficult to answer. They know that they hold inventory abroad but the amount and type is buried in their accounting records and difficult to extract. Overall, it seemed that almost all participants would answer this question as we would want them to so that they would be properly screened into the appropriate section of the main questionnaire.

## 5. Main Recommendations

30. The main conclusion from the testing was that there does not exist, at this time, a common language among global producers when it comes to custom processing. All use slightly different terms to describe their activity and therefore interpret the questions differently. It was recommended to adjust the terminology based on the feedback received from the respondents.

31. It was clear from the testing that the questions are complex and require some form of face to face or interviewer to respondent interaction to be completed properly. It was recommended that Statistics Canada use its Enterprise Portfolio Management program (EPM) program to collect this information. The EPM program is a client management program that works with the 300 largest enterprises operating in the Canadian economy. The program regularly interacts with these respondents via phone call or personal visit and would be the most promising way to obtain accurate information.

32. It was clear from the testing that respondents did not have and could not provide the level of detail requested with respect to material inputs and geographic region. Respondents recommended that Statistics Canada work with customs and revenue authorities to try and obtain this information since some of it is being captured on the Canadian import and export declaration forms. For example, a number of respondents noted that they receive a special tax exemption status for goods that enter the country for processing purposes. They enter this code on customs declarations when they enter the country.

33. It was recommended that any questions that are retained be part of a standalone questionnaire rather than integrated into an existing questionnaire. The complexity and length of the questionnaire did not make it a good candidate for integration.

34. With respect to 'Direct trading' and 'Inventories held abroad', respondents did not have difficulty understanding these terms or relating the terms to their business. Respondents indicated they could readily answer the filter questions indicating that they engaged in the activity but there is some concern over the amount of detailed information respondents will be able to provide on the main questionnaire. Information on the origin and destination of goods bought and sold is not always available from company records and would often need to be imputed. It was recommended to retain these questions.

## V. Way Forward

35. Based on the results of the questionnaire testing Statistics Canada made significant modifications to the filter questionnaire and main questionnaire and the overall data collection strategy.

36. With respect to the terminology used on the filter questionnaire and main questions a number of the terms and definitions were clarified which align with the feedback provided from the respondents. Table 2 provides a summary of some of the changes. The revised filter questionnaire is provided in the Appendix.

Table 2

### Adjustments to terminology based on respondent feedback

Original Terminology Tested	Finalized terminology
"did this Canadian business perform custom manufacturing, processing, or assembly work for clients outside of Canada according to the requirements specified by the foreign clients?"	<p>"did your business perform manufacturing, processing or assembly work for other clients, according to the specifications provided by these clients?"</p> <p>If yes – Of the work performed by your business, where were the clients located?</p> <p>Only in Canada Only outside of Canada Some inside Canada, some outside of Canada</p>
"Of this work performed, did the <b>foreign clients supply</b> at least some of the <b>inputs</b> (raw materials or semi-finished goods) and <b>own the end product</b> ?"	"Did your clients supply and maintain ownership of at least some of the material inputs or goods for processing."

“During the last fiscal year, did this business purchase goods (raw materials, semi-finished, finished goods) outside of Canada and sell them “as-is” in foreign markets without altering the goods, nor having the goods physically enter Canada?”	“Did your business purchase goods outside of Canada ‘off the shelf’ and sell them ‘as-is’ in foreign markets (including the US).”
....”according to your requirements”	“...according to the specifications provided by your business or on behalf of your clients?”
“pay foreign entities to perform custom manufacturing, processing or assembly work outside of Canada?”	<p>Of the work performed by other business entities, where were those business entities located?</p> <p>Only in Canada Only outside of Canada Some inside Canada, some outside of Canada</p> <p>Were any of the semi-finished or finished goods sold to clients outside of Canada by your business</p> <p>From where were the goods shipped?</p> <p>Shipped from Canada Shipped directly from outside Canada without passing through Canada Some from Canada, some directly from outside of Canada.</p>

37. With respect to a collection strategy Statistics Canada decided against sending the ‘filter questions’ to all respondents of its annual business survey program (around 40,000 respondents). It was felt that given only a very limited number of firms engage in any of the four activities it would place undue response burden on the program. Instead Statistics Canada decided to leverage its Enterprise Portfolio Manager program (EPM). The EPM program is a respondent management program for the largest firms operating in the Canadian economy. It is felt that the majority of the highly globalized Canadian enterprises are part of the EPM program. Statistics Canada administered the revised filter questions, via telephone interview or personal visit to approximately 60 enterprises that are part of the EPM program and that it deemed likely to engage in global activities.

38. In addition to administering the filter questionnaire to a subset of the largest enterprises operating in Canada, Statistics Canada added two additional questions to its annual survey of manufacturing. These questions ask respondents to provide the revenue they received for processing services provided to businesses inside Canada and businesses outside of Canada. A second question was also added requesting firms to provide processing fees paid to businesses inside of Canada and outside of Canada. These questions will be used to further identify the population of globally engaged firms as well as provide some ‘benchmark’ estimates of processing imports and exports.

39. Finally, Statistics Canada is working with the Canadian Border Services Agency (CBSA) to investigate how it can use customs declarations and tax exemption codes to

identify the products entering or exiting Canada without ownership change that are intended for further downstream processing. Canadian businesses that provide processing services can apply for a tax exemption code that exempts them from paying value added tax on the value of the imported good for processing.

40. Statistics Canada feels that its three pronged strategy, where it leverages its EPM program, Annual Survey of Manufactures and customs data, will allow the agency to develop estimates of acceptable quality of goods for processing and Merchanting as recommended by the 2008 SNA.

## VI. Results

41. The results from the first round of data collection using the filter questionnaire administered by the Enterprise Management Portfolio (EPM) program were very positive. There were over 70 large enterprises that were surveyed and 55 provided a completed questionnaire.

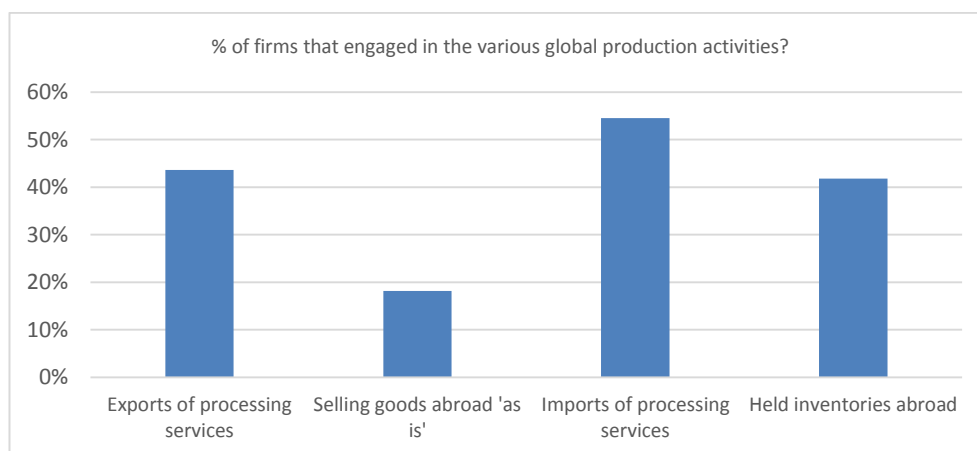
42. The filter questionnaire was divided into four sections.

1. The first section collected information on *‘businesses performing manufacturing, processing, or assembly work for other clients, according to the specifications provided by these clients.’*
2. The second section of the questionnaire collected information on *‘businesses purchasing goods outside of Canada “off the shelf” and selling them “as-is” in foreign markets (including the US) without altering the goods, and without having the goods enter Canada before the sale.’*
3. The third section of the questionnaire collected information on *‘businesses that paid other business entities to perform manufacturing, processing or assembly work, according to the specifications provided by their business or on behalf of their clients.’*
4. The final section of the questionnaire collected information on *‘businesses that held inventories abroad, including inventories in transit.’* The questionnaire is included in Appendix A.

43. Chart 1 shows the percentage of firms that engaged in each of the four global production activities outlined in the questionnaire.

Chart 1

**Percentage of firms that engaged in various global production activities**

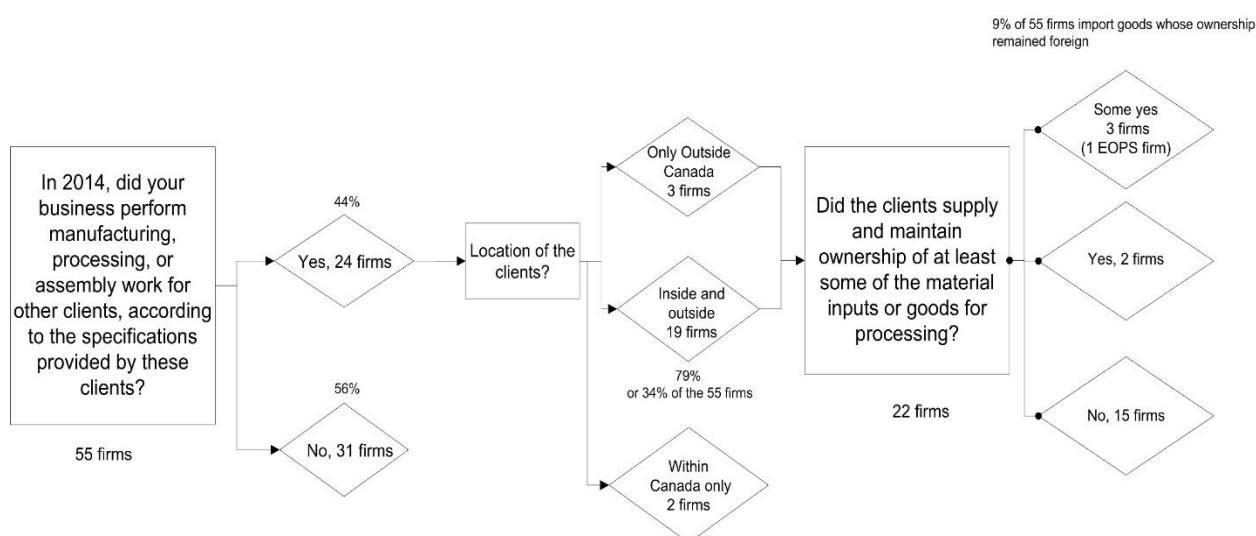


44. The most common activity reported by the respondents was the purchase of processing services. The least common activity was selling goods ‘as-is’ from abroad. This is probably more reflective of the sample of firms than the actual distribution of these activities across the Canadian business population. The sample of firms was in part based on firms that indicated on Canadian customs declaration forms that the goods they were exporting were for ‘processing’ reasons.

## 1. Performing custom work for foreign clients

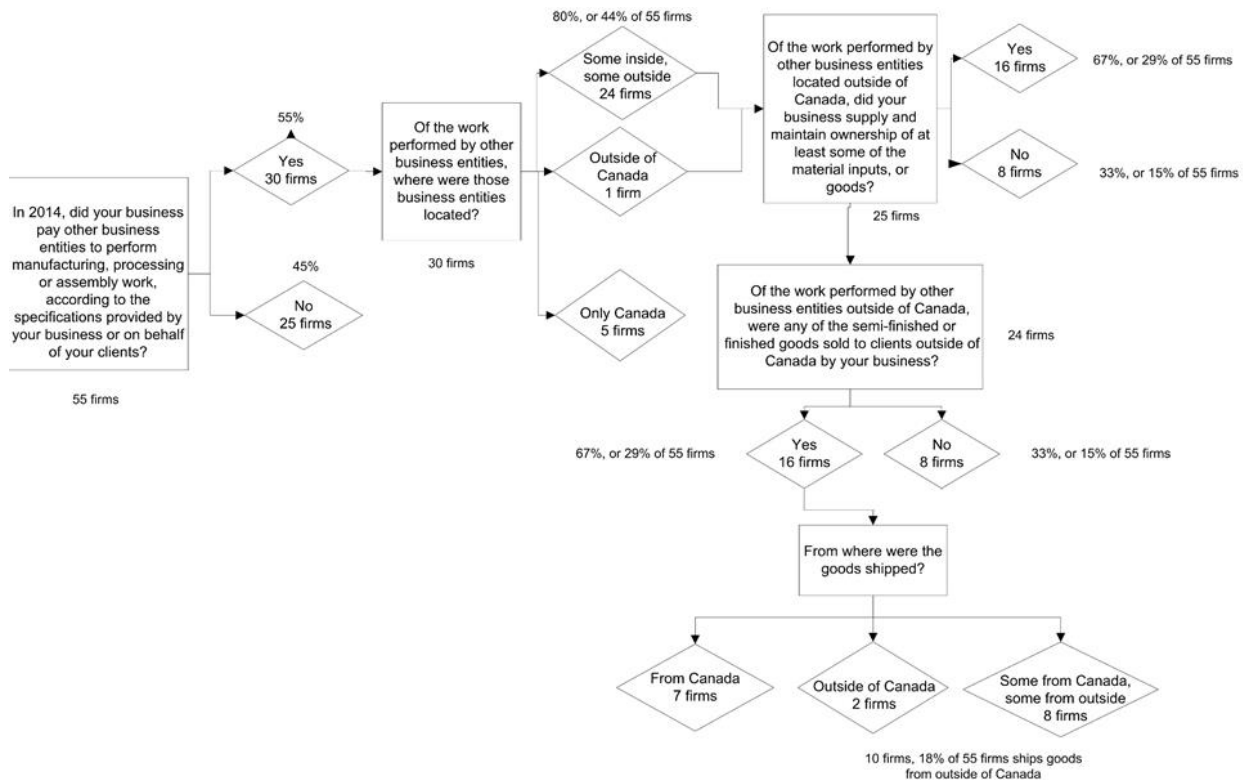
45. The majority of respondents performed processing services for clients both inside and outside of Canada. Only three firms reported performing processing services exclusively for foreign firms all the other firms purchased processing services from a combination of firms inside and outside of Canada.

46. In most cases the foreign client did not supply and maintain ownership of the material inputs used in the processing.



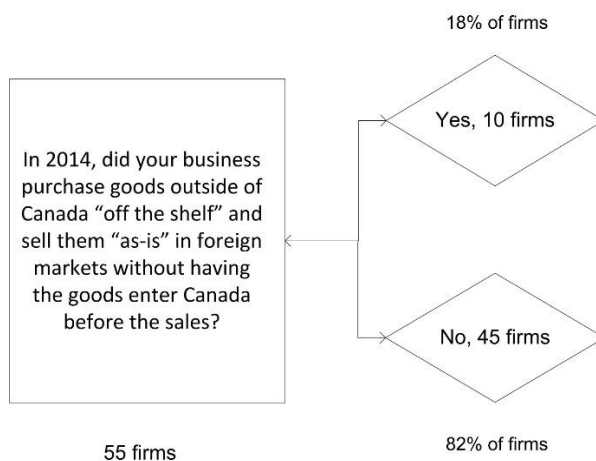
## 2. Paying foreign entities to perform custom work

47. Over 50% of the firms indicated that they purchased processing services from other firms and over 44% indicated that the supplier could be located outside Canada. Of the firms that purchased processing services from foreign clients – 67% indicated that they maintained ownership of at least some of the material inputs. Firms also indicated that they sold the processed goods to clients outside of Canada and that in some cases the goods were sold directly without passing through Canada.



### 3. Direct Trading (buy and sell ‘as-is’ in foreign markets)

48. Very few businesses purchased goods abroad and sold them ‘as-is’ without entering Canada. This may be more reflective of the sample than the overall Canadian population of businesses as the sample of firms selected for the test were predominately manufacturers, large natural resources companies or finance and insurance companies. Less than 20% of the firms indicated that they engaged in merchandising activities.

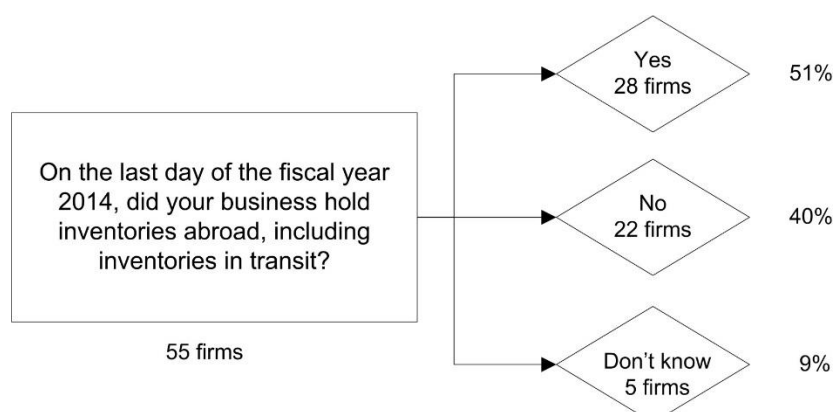


### 4. Held Inventories Abroad

49. Over 50% of the firms indicated that they held inventories abroad on the last day of their 2014 fiscal year. There were also a number of firms that indicated they did not know if they held inventories abroad. This could be related to the individual completing the



questionnaire not having access to information about the type and location of the enterprises inventories.



50. Overall, while the results cannot be extended to the universe of Canadian firms it does indicate that the questionnaire that was developed can collect information that can be processed in a meaningful way to develop a profile of Canada's global producers and Canada's global production arrangements. The next phase of testing will focus on quantifying these global production arrangements.

## Appendix A

### Global Production Filter Questions

Thank you for agreeing to participate in this short survey. Your answers provided to Statistics Canada are kept strictly confidential under the Statistics Act. To minimize the reporting burden, Statistics Canada may combine information collected from this survey with data from other surveys or from outside administrative sources. The survey should take no more than 15 minutes.

Statistics Canada would like to seek your participation in a short survey in order to better understand how companies like yours organize the supply and production chain related activities. Statistics Canada is mandated to develop new statistics in order to improve the measurement of economic statistics such as trade flows and gross domestic product (GDP). The questions are related to the purchasing, producing, and selling of goods abroad; besides, whether your business did manufacturing or processing work for other Canadian or foreign clients, and whether your company hired other Canadian or foreign firms to do the same type of work for your business.

The questions are related to your business's production arrangement including raw material supply and sales of final products.

When reporting to these questions, please ensure you report on behalf of the business entities that are located in Canada; in other words, the revenue and cost incurred from these activities should be recorded on your accounting books in Canada.

1. During the fiscal year 2014, 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". You have three options,

a. **Yes** (go to 1.1)

b. **No** (go to Q2)

c. **Don't know** (go to d)

d. Can you please provide another contact person in your company that can help answer this question?

*Yes (write down name, phone #, go to Q2);*

*No (go to Q2)*

1.1 Of the work performed by your business, where were the clients located? You have three options,

a. **Only in Canada** (go to Q2)

b. **Only outside of Canada** (go to Q1.2)

c. **Some inside Canada, some outside of Canada** (go to Q1.2)

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

a. **Yes** (go to Q2)

b. **No** (go to Q2)

c. **Some clients did, some clients didn't** (go to Q2)

Questions or comments  
related to Q1.

**2. During the fiscal year 2014, did your business purchase goods outside of Canada “off the shelf” and sell them “as-is” in foreign markets (including the U.S.) 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. You have three options,**

a. **Yes** (go to Q3)

b. **No** (go to Q3)

c. **Don't know** (go to d)

**d. Can you please provide another contact person in your company that can help answer this question?**

*Yes (write down name, phone #, go to Q3);  
No (go to Q3)*

Questions or comments  
related to Q2.

**3. During the fiscal year 2014, 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. You have three options,**

a. **Yes** (go to 3.1)b. **No** (go to Q4)c. **Don't know** (go to d)

d. Can you please provide another contact person in your company that can help answer this question?

*Yes (write down name, phone #, go to Q4);*

*No (go to Q4)*

**3.1 Of the work performed by other business entities, where were those business entities located? You have three options,**

a. **Only in Canada** (go to Q4)b. **Only outside of Canada** (go to Q3.2)c. **Some inside Canada, some outside of Canada** (go to Q3.2)

**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 material inputs include raw materials, components, or semi-finished goods that are used for production towards your business's outputs. You have three options,**

a. **Yes** (go to Q3.3)b. **No** (go to Q3.3)c. **Some your business did, some your business didn't** (go to Q3.3)

**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? You have two options,**

a. **Yes** (go to Q3.4)b. **No** (go to Q4)

**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? You have three options,**

a. **Shipped from Canada** (go to Q4)

b. **Shipped directly from outside of Canada without passing through Canada** (go to Q4)

c. **Some from Canada, some directly from outside of Canada** (go to Q4)

Questions or comments related to Q3.

**4. On the last day of the fiscal year 2014, 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's Canadian accounting books, but physically located outside of Canada. You have three options,**

a. **Yes** (go to thank you)

b. **No** (go to thank you)

c. **Don't know** (go to thank you)

Questions or comments related to Q4.

**Thank you!**

**Thank you very much for your participation in completing this short survey. Your answers will remain strictly confidential as required by the *Statistics Act*. The purpose of this phone call is to help develop a survey and therefore any questions, comments, or sources of confusion would help us to make improvements.**

Comments