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Strategies for collecting information related to global production, goods for processing and merchandising

Group of Experts on National Accounts: measuring global production

Statistics Canada

July 2015

Background

- As fragmented production expands, firms are increasingly sub-contracting (outsourcing) manufacturing work. This involves either (i) providing processing services to other firms or (ii) purchasing processing services from other firms or (iii) “coordinating” the production process.
- Correspondingly, data collection vehicles need to be updated so that they can provide the informational building blocks needed to measure global production arrangements.
- This presentation outlines the collection strategies related to global production arrangements (emphasis on goods for processing) that Statistics Canada has developed and is currently testing with selected Canadian respondents.

Global Production Collection Vehicles

- Statistics Canada has developed five modules that it proposes to use to collect information related to global production activities.
 - Module 1 – Global Production Activities
 - Module 2 – Exports of processing services
 - Module 3 – Imports of processing services
 - Module 4 – Merchanting
 - Module 5 – Other global arrangements for manufacturing finished goods.
- ❖ *These modules have been developed taking into account Statistics Canada's current statistical infrastructure (e.g. the use of customs based statistics to derive imports and exports of goods).*

Module 1 – Global Production Activities

- Module 1 is a screening module which consists of a series of six questions that are used to determine if a given Canadian firm has any global supply, production and/or distribution activities such as:
 - Processing
 - Merchanting
 - Other global production arrangements for manufacturing finished goods.
- The typology of global production found in “*The Guide to Global Production*” was used to develop this module.



1. From **# {StartDate} to # {EndDate}**, did this business perform processing or manufacturing services for **clients outside of Canada**?

Definition of processing or manufacturing services includes assembly or transformative work undertaken to the specifications of a foreign client using some or all of the foreign client's **inputs**.

Note: The foreign client **must own and supply all or some of the raw materials and intermediate goods, and own the finished goods**. This business receives a payment from the foreign client for the processing or manufacturing service work performed.

☐ Yes **Show Q7 to Q15**

☐ No



Exports of processing services

2. From **# {StartDate} to # {EndDate}**, did this business **pay foreign entities** to perform processing or manufacturing services **outside of Canada**?

Includes: Processing or manufacturing services or custom work which was undertaken by a foreign entity according to this business's specifications using raw materials or intermediate goods supplied by this business, whether they are sent from Canada or sourced from outside of Canada.

Note: this business **must own all or some of the raw or intermediate raw materials or intermediate goods, and own the finished goods** as well as record these costs in its accounting books.

☐ Yes **Show Q16 to Q26**

☐ No



Imports of processing services

3. From **# {StartDate} to # {EndDate}**, did this business **purchase goods outside of Canada** and sell them in foreign markets **without** having the goods physically enter the economic territory of Canada?

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

☐ Yes **Show Q27 to Q31**

☐ No



Merchanting

Continues on next page.



4. From **#{StartDate}** to **#{EndDate}**, did this business **sell** finished goods that were manufactured outside of Canada on its behalf without supplying raw materials?

Note: this business **should not own nor supply** any raw or intermediate materials that were used for production abroad; however, it **does supply design, pattern paper, sample, drawings, or other intellectual properties; it should own the finished goods; and it should also control the distribution channel.** This business also records the cost of the goods and the revenue of the sale on the goods manufactured abroad in its accounting books.

☐ Yes [Show Q32 to Q37](#)

☐ No



Other global arrangements

5. On **#{EndDate}**, did this business hold inventories abroad?

Include: Inventories that are recorded in this business's accounting books, but physically located outside of Canada at the beginning or the last day of the reporting period.

☐ Yes [Show Q38](#)

☐ No



Other global arrangements

6. From **#{StartDate}** to **#{EndDate}**, did this business engage in **any other global supply and production chain activities** not mentioned above?

Include: managing or selling projects, or providing R&D, intellectual properties, distribution or other services for this global business and other international clients

☐ Yes [Show Q39](#)

☐ No



Other global arrangements

Module 2 – Exports of Processing Services

- Series of nine questions that are used to determine exports of processing services and adjustments required to place the customs based international trade statistics on a change in ownership basis. The specific information required includes:
 1. Processing revenue (by country) received from clients outside of Canada – **to be recorded as an export of a manufacturing service**
 2. Materials originating outside of Canada and received from a foreign client for processing on behalf of the foreign client – **to be removed from imports of goods**
 3. Materials originating in Canada and received from a foreign client for processing on behalf of the foreign client – **to be recorded as exports of goods**
 4. Output of processed goods (finished goods) sold in Canada – **to be recorded as imports of goods**
 5. Output of processed goods (finished goods) shipped or sold on behalf of the foreign client outside of Canada – **to be removed from export of goods.**



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Case Study

- Foreign finished goods processed in Canada (baby lobster originated in the US, stored and grew up in Canada, and then shipped to different countries under US brand name)

OUR FACILITY

What to look for in an ideal lobster facility?

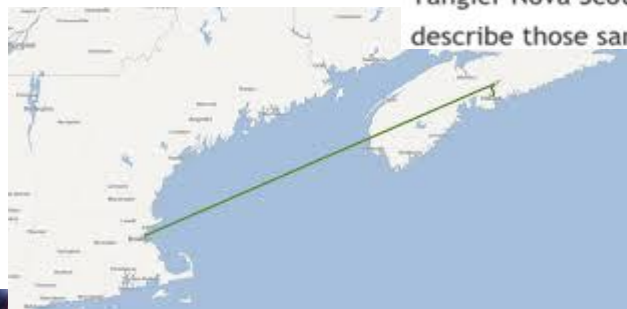
Location

You would choose to locate it in an area where there is absolutely no industrial activity or oceanside tarnish.

Our facility is at water's edge in the community of Tangier Nova Scotia. And pristine is the very best way to describe those same waters.



A state of the art lobster facility nestled by the pristine waters of the Atlantic Ocean on the Eastern Shore of Nova Scotia, Canada.



Inventory Tracking

You would want to be able to accurately track lobster lots from various suppliers, various purchase dates, in various sizes and in various locations throughout the Facility. Traceability, here we come!



Our inventory database is the backbone of our entire lobster facility. It is the key to quality control, the key to traceability, and the key to ensuring our customers are pleased with the results of their shipment every single time.

Connections

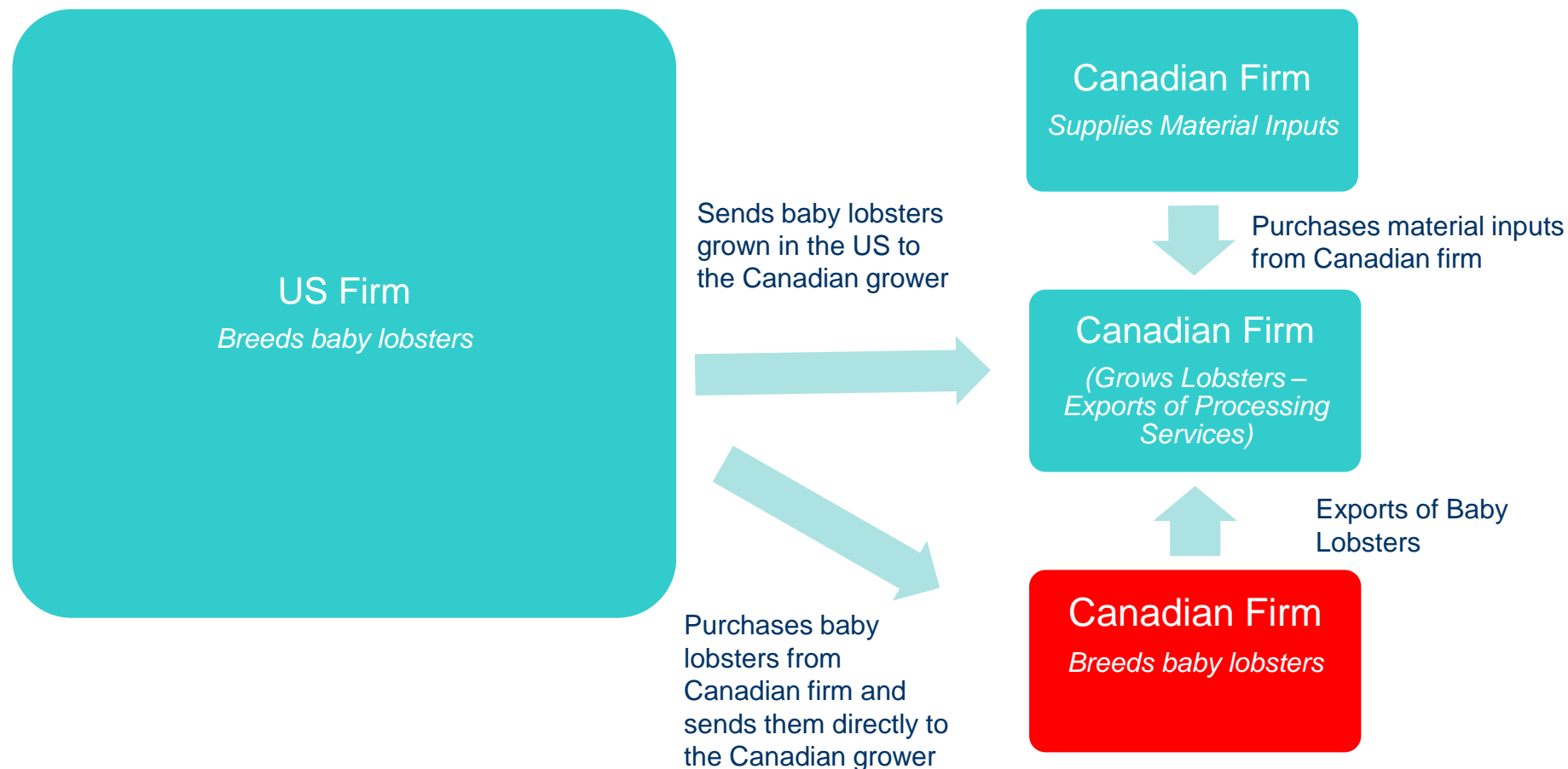


You would want to ensure that this lobster facility was sufficiently close to an international airport with good connections.

We are slightly over a one hour drive to Halifax International (Robert Stanfield Airport). We are close enough that we send two or three trucks daily for just in time delivery. Location, Location, Location!

Case Study

- Foreign finished goods processed in Canada (baby lobster originated in the US, stored and grew up in Canada, and then shipped to different countries under US brand name)





Revenue from processing or manufacturing services on raw material or intermediate goods owned by clients

7. What was the **revenue for processing or manufacturing services** from clients **within and outside of Canada** on raw materials and intermediate goods owned and supplied by clients?

Report all amounts in **thousands** of Canadian dollars.

Record as exports of processing Services **CAN\$ '000**

a. Revenue earned from clients outside of Canada	\$ <input type="text"/> ,000
b. Revenue earned from clients in Canada	\$ <input type="text"/> ,000
Total revenue	\$ <input type="text"/> ,000

8. Of the **# {RevQ7a}** of revenue received from clients outside of Canada, what was the percentage breakdown by **country of client**?

Note: Select the **top 3 countries** that contributed to the largest percentage of revenue for the processing or manufacturing services.

	Country of client	Percentage
a. Country 1	<<< Select >>> ▼	<input type="text"/> %
b. Country 2	<<< Select >>> ▼	<input type="text"/> %
c. Country 3	<<< Select >>> ▼	<input type="text"/> %
d. All other countries	<<< Select >>> ▼	<input type="text"/> %
Total percentage		<input type="text"/> %



Inputs related to revenue from (exports of) processing or manufacturing services on raw materials or intermediate goods owned by foreign clients

9. What was the total estimated **value of raw material or goods** received from clients outside of Canada that were used for processing?

Note: The value of raw materials or goods that were imported into Canada should be the same amount reported as per Customs declarations.

\$



Remove from imports of goods

10. Of the **# {ValueQ9}** estimated **value of raw material or intermediate goods** received, what was the percentage breakdown by **commodity and its corresponding country of origin**?

Note: Provide a **brief description of the top 5 commodities** that contributed to the largest percentage of the total estimated value of raw material or goods by country of origin.

	Commodity description	Origin of commodity by country	Percentage
a.	Commodity 1	<input type="text"/>	<input type="text"/> %
b.	Commodity 2	<input type="text"/>	<input type="text"/> %
c.	Commodity 3	<input type="text"/>	<input type="text"/> %
d.	Commodity 4	<input type="text"/>	<input type="text"/> %
e.	Commodity 5	<input type="text"/>	<input type="text"/> %
f.	All other commodities		<input type="text"/> %
Total percentage			<input type="text"/> %

Canada



If "Canada" then
add to exports



**Finished products related to revenue from (exports of) processing or manufacturing services
on raw materials or intermediate goods owned by foreign clients**

11. What was the estimated **value of the finished goods after processing that were shipped outside of Canada without ownership change?**

Note: The value of finished goods shipped outside of Canada after processing should be the same amount as per Customs declarations.



Remove from exports of goods

12. Of the **# {Value Q11}** estimated **value of the finished goods**, what was the percentage breakdown by **finished goods and its corresponding country of destination?**

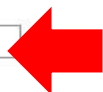
Note: Provide a **brief description of the top 5 finished goods** that contributed to the largest percentage of the total estimated value of the finished goods by country of destination.

	Finished goods description	Destination of finished goods by country	Percentage
a. Finished goods 1	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
b. Finished goods 2	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
c. Finished goods 3	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
d. Finished goods 4	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
e. Finished goods 5	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
f. All other finished goods			<input type="text"/> %
Total percentage			<input type="text"/> %



**Finished products related to revenue from (exports of) processing or manufacturing services
on raw materials or intermediate goods owned by foreign clients**

13. What was the estimated **value of finished goods after processing that were shipped or sold in Canada** on behalf of the foreign client **without ownership change**?



Add to imports of goods

14. Of the **#**{Value Q13} estimated **value of finished goods**, what was the percentage breakdown by **commodity**?

Note: Provide a **brief description of the top 5 commodities** that contributed to the largest percentage of the total estimated value of finished goods.

	Commodity description	Percentage
a. Commodity 1	<input type="text"/>	<input type="text"/> %
b. Commodity 2	<input type="text"/>	<input type="text"/> %
c. Commodity 3	<input type="text"/>	<input type="text"/> %
d. Commodity 4	<input type="text"/>	<input type="text"/> %
e. Commodity 5	<input type="text"/>	<input type="text"/> %
f. All other commodities		<input type="text"/> %
Total percentage		<input type="text"/> %



Summary of your total estimated value of finished goods after processing

15. Please **review the values** and if needed, **press the Previous button** at the bottom of the page to navigate to the previous pages **to make any modications.**

CAN\$ '000

Total estimated value of the finished goods after processing shipped outside Canada without ownership change as **reported at question 11.**

\$,000

Total estimated value of finished goods after processing shipped or sold in Canada on **behalf of the foreign client** without ownership change as **reported at queston 13.**

\$,000

Total estimated value of finished goods after processing

\$,000

Validation added to the questionnaire to ensures all output is accounted for



Module 3 – Imports of Processing Services

- Series of eleven questions that are used to determine imports of processing services and adjustments required to place the trade in goods on a change in ownership basis. The specific information required includes:
 1. Processing expenses (by country) paid to clients outside of Canada— **to be recorded as an import of a manufacturing service**
 2. The value of raw materials or intermediate goods (by country/commodity) this business owned that were exported from Canada, provided to the foreign service provider and used as an input for their processing activities — **to be removed from export of goods.**
 3. Value of raw materials or intermediate goods (by country / commodity) this business owned that were sourced outside of Canada without physically entering Canada, provided to the foreign service provider and used as an input for their processing activities — **to be added to import of goods.**
 4. Estimated value of finished goods (without ownership change) (by country/commodity) that were shipped or sold outside of Canada on behalf of this business after processing — **to be added to export of goods**
 5. Estimated value of the finished goods (by country/commodity) after processing that were returned to Canada without ownership change — **to be removed from the imports of goods.**



Module 4 – Merchanting

- Series of three questions that are used to determine the value of merchanting. The specific information required includes:
 1. The cost of goods (by country/commodity) **purchased outside of Canada for resale in foreign markets.**
 2. What was the revenue from the goods (by country/commodity) that were resold **outside of Canada after being purchasing abroad?**
 3. The value of inventory (by stage) that was held outside of Canada at the beginning and at the end of the reporting period.



Merchandising

27. What was the cost of goods **purchased outside of Canada for resale in foreign markets?**

Include only goods purchased for resale “as is” (no transformation) **in foreign markets** and **without** the goods physically entering the economic territory of Canada.

\$,0  **Negative exports of goods**

28. Of the $\#\{\text{CostGoodQ27}\}$ cost of goods **purchased outside of Canada for resale**, what was the percentage breakdown by **commodity and its corresponding country of origin?**

Note: Provide a **brief description of the top 5 commodities** that contributed to the largest percentage of the total estimated value of cost of goods **purchased outside of Canada for resales** by country of origin.

	Commodity description	Origin of commodity by country	Percentage
a. Commodity 1	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
b. Commodity 2	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
c. Commodity 3	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
d. Commodity 4	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
e. Commodity 5	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
f. All other commodities			<input type="text"/> %
Total percentage			<input type="text"/> %



Merchanting

29. What was the revenue from the goods that were resold **outside of Canada** after being purchasing **abroad**?

Report all amounts in **thousands** of Canadian dollars

\$,0

← positive exports of goods

30. Of the **#{RevQ29}** value of goods that were resold **outside of Canada** after being purchased abroad, what was the percentage breakdown by **commodity** and its corresponding country of destination?

Note: Provide a **brief description of 5 commodities** that contributed to the largest percentage of the total estimated value of goods resold outside of Canada by country of destination.

	Commodity description	Destination of commodity by country	Percentage
a. Commodity 1	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
b. Commodity 2	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
c. Commodity 3	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
d. Commodity 4	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
e. Commodity 5	<input type="text"/>	<<< Select >>> ▼	<input type="text"/> %
f. All other commodities			<input type="text"/> %
Total percentage			<input type="text"/> %



Measure of inventories held abroad

38. From #{StartDate} to #{EndDate}, what was the value of inventory that was held outside of Canada at the beginning and at the end of the reporting period.

	Opening inventories CAN\$ '000	Closing inventories CAN\$ '000
a. Raw materials and components Include: non-returnable containers and other shipping and packaging materials.	\$ <input type="text"/> ,000	\$ <input type="text"/> ,000
c. Goods and work in process	\$ <input type="text"/> ,000	\$ <input type="text"/> ,000
d. Finished goods manufactured	\$ <input type="text"/> ,000	\$ <input type="text"/> ,000
e. Goods purchased for resale, as is Include text goes here.	\$ <input type="text"/> ,000	\$ <input type="text"/> ,000
f. Other inventories - specify: <input type="text"/>	\$ <input type="text"/> ,000	\$ <input type="text"/> ,000
Total inventories	\$ <input type="text"/> ,000	\$ <input type="text"/> ,000

Module 5 – Other global arrangements for manufacturing finished goods

- Series of five questions that are used to determine the global production activities of an enterprise. The specific information requested includes:
 1. Location of manufacturing activities
 2. Ownership of materials
 3. Ownership of output
 4. Ownership of Intellectual Property
 5. Assumption of risk
 6. Control of the process
- This information will be used to establish a 'global production' flag to be added to Statistics Canada's business register.

Testing Strategy

- In July and August of 2015 Statistic Canada will test the preceding global production modules with 24 Canadian global manufactures
- The questionnaire content will be revised based on the 1st-round of cognitive testing
- A second phase of testing will be conducted with pre-selected respondents using Electronic Questionnaire format in the fall of 2015
- An important part of the testing will be to determine which part of the organization can provide the required information.

Testing Strategy

- Test firms were selected based on the likelihood that they engage in at least one of:
 - exports of processing services;
 - imports of processing services;
 - merchanting; or
 - other global production arrangements
- Existing data sources were used to isolate those firms most likely to engage in these activities.



1st frame of test respondents were selected using the Annual Survey of Manufacturers: **Goods for processing (exports)**

IBSP-2013 Annual Survey of Manufacturing Industries

Industry Characteristics

Sales

1. Sales of goods manufactured
(a detailed breakdown will be requested in a subsequent section)

F43002

\$

2. Sales of goods purchased for resale, as is

\$

3. Revenue from repair work
Include: only repair revenue from billing labour, as the materials and products are owned by clients, or by other business units of this company

F45901

\$

4. **Revenue from manufacturing service fees and/or custom work**
Include: only service revenue from billing labour, as the materials and products are owned by clients, or by other business units of this company

F45001

\$

5. Other sales — please specify:

F43175

F43005

Sales by consumer location

6. **Total sales of goods and services**
(sum of lines 1 to 5)

13. Nunavut

F43008_g13

%

14. United States

F43008_g14

%

15. All other countries

F43008_g15

%

1. **Total sales of G&S (\$100) x Sales by consumer location** (=US & All other countries)
=> \$ Sales foreign (\$50) vs. \$ Sales in Canada (\$50)
2. **\$Revenue from mfg services (\$80) > \$ Sales in Canada (\$50) => In scope flag (n=101)**



2nd frame of test respondents selected using the Canadian Non-US export declaration form: **Goods for processing (imports)**

- *Non-US: Canadian companies who reported 'processing' (reason #13) when asked 'Reasons for goods not for sold' in Field 25 on B13A via CAED.*

The image shows a screenshot of the Canadian Non-US Export Declaration Form (B13A). The form is titled "EXPORT DECLARATION / DÉCLARATION D'EXPORTATION" and includes fields for business information, exporter details, and reasons for export. Field 25, which asks for the reason for export if goods are not sold, is highlighted with a red border. The form also includes a "PROTECTED / PROTÉGÉ" section and a "Restore - Restaurer" button.

<input type="checkbox"/> Original <input type="checkbox"/> Amended - Modifié <input type="checkbox"/> Void - Nul <input type="checkbox"/> Copy - Copie _____ of - de _____		<input type="checkbox"/> See completion instructions - PLEASE PRINT - Voir la façon de remplir le formulaire - EN LETTRES MOULÉES S.V.P.		Page _____ of - de _____
1. Business no. / N° d'entreprise: _____		2. Export permit/licence no. (if applicable) - N° du permis/de la licence d'exportation (s'il y a lieu): _____		
3. Exporter information (includes non-resident) - Renseignements sur l'exportateur (y compris les non-résidents)				
Name - Nom: _____				
No. and street - N° et rue: _____		City - Ville: _____		Province/state, country - Province/État, pays: _____
Postal/Zip code - Code postal/ZIP: _____				
21. Currency used for declared value - Devise de la valeur déclarée: _____		22. Gross weight - Poids brut: _____		23. Total value F.O.B. place of exit - Valeur totale f.à.b. bureau de sortie: _____
24. Freight charges to place of exit, estimated if unknown (included in field 20) / Frais de transport jusqu'au bureau de sortie, estimatifs si inconnus (compris dans le champ 20): _____		25. If goods are not sold, state reason for export (if applicable). If a lease or rental, state period - Si les marchandises ne sont pas vendues, motivez l'exportation (s'il y a lieu). S'il s'agit d'une location ou d'un bail, précisez la période.		
26. Customs service provider information (if applicable) - Renseignements sur le fournisseur de services douaniers (s'il y a lieu)				
Name - Nom: _____		Area code and tel. no. / Indicatif régional et n° de tél.: () -		

If Goods are not Sold, State Reason for Export

If the goods are not sold, state the reason for the export (e.g., repair and return, lease, transfer of company goods). If the goods have been leased to a person/company in another country, identify the period of the lease or rental agreement.



2nd frame of test respondents selected using the Canadian Non-US export declaration form: **Goods for processing (imports)**

RY2011	Trade Type	Reasons for <i>Goods Are Not Sold</i>	<u>Nb</u> Transactions	Total Value (\$)
1	Trade	Transfer, inter company	39,047	10,853,435,450
2	Trade	Processing	3,722	1,259,928,046
3	Trade	Other	41,563	870,019,842
4	Trade	Repairs, goods repaired in Canada	20,213	652,465,053
5	Trade	Personal and personal household effects of migrants	8,633	128,100,059
6	Trade	Credit, returned for	3,926	79,952,609
7	Trade	Gifts and Donations, not personal	4,614	29,054,357
8	Trade	Lease, one year or more	155	28,931,105
9	Trade	Samples, commercial	3,707	19,859,427
10	Trade	Contractors equipment, one year or more	1,102	15,000,907
11	Trade	Gifts and Donations, personal	2,165	8,389,048
12	Trade	Warehouse, customs bonded, exports from	152	5,016,312
13	Trade	Warehouse, sufferance, exports from	96	163,976
14	Non-trade	Lease, less than one year	3,445	841,997,972
15	Non-trade	Repairs, goods sent out of Canada for repair	7,719	776,788,273
16	Non-trade	Temporary exports, less than one year	7,846	340,740,218
17	Non-trade	Carrier goods, international	1,459	167,608,442
18	Non-trade	Repairs, warranty	6,912	93,538,450
19	Non-trade	Contractors equipment, less than one year	1,823	41,548,836



3rd frame of test respondents selected using the Annual Wholesale Trade Survey: **Merchanting**

Industry characteristics IBSP-2013 Annual Wholesale Trade Survey

Selected sales information

What were this business's sales and revenue for each of the following products and services?

1. **All products purchased for resale**
Report sales **net** of returns, discounts and rebates provided to clients.
Include: parts used in generating repair and maintenance revenue
Exclude: labour revenue from repair and maintenance

Sales by type of customer

2. **Clients outside of Canada**

Cost of goods sold '000 CAN\$ F61101_p1 \$,000

Sales of goods '000 CAN\$ F43173_p1 \$,000

Purchased from origin **Sold to destination**

Canada

Outside Canada

USA	F61307_p1_g14		%	F43174_p1_g14		%
China	F61307_p1_g15		%	F43174_p1_g15		%
Other	F61307_p1_g16		%	F43174_p1_g16		%

1. *Purchased from origin (COGS): 100% outside of Canada*
2. *Sold to destination : 100% outside of Canada*
3. *Revenue from goods purchased for resale & Location of customer: 100% outside of Canada*



Collection Strategy

- Data collection for RY2015 will begin in 2016.
- Use module 1 to establish a 'global production' flag to be added to Statistics Canada's business register.
- Administer a separate questionnaire to 'global producers' most likely using Statistics Canada's Enterprise Portfolio Manager (EPM) program
- Identify a sub-set of questions that can be added to Statistics Canada's Quarterly Survey of Financial Statements to derive sub-annual measures needed for monthly/quarterly Balance of Payments and Quarterly National Accounts.