

# *Canada*

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## **1. Introduction**

The input-output table for Canada used in the previous version of the GTAP Data Base was derived from the 2009 input-output (I-O) data. For the GTAP 10 Data Base, the Office of the Chief Economist at Global Affairs Canada has undertaken to provide updated input-output data using Canadian I-O tables for 2011 that were released in 2014. This report documents the procedure and considerations underlying the construction of the updated I-O table for Canada.

## **2. Data Sources**

The revised Canadian I-O table was sourced from the Canadian Input-Output tables compiled by Statistics Canada. The reference year for the Canadian I-O table is 2011 and the units of accounts are in millions of Canadian dollars. Statistics Canada publishes supply and use input-output tables on a rectangular industry-by-commodity basis and on a symmetric industry-by-industry basis. For the purpose of this revision to Canada's I-O table in the GTAP Data Base, we chose the symmetric tables as our starting point.

The symmetric tables show the inter-industry transactions – that is, all purchases of an industry from all other industries including expenditures on imports and inventory withdrawals as well as all expenditures on primary inputs. Similarly, the symmetric final demand table shows all purchases by a final demand category from all other industries, including expenditures on imports and inventory withdrawals as well as all expenditures on indirect taxes.

## **3. Data Limitations**

The original data from Statistics Canada is at a higher level of disaggregation than required for the GTAP Data Base. However, in some cases mostly relating to agricultural sectors, the GTAP Data Base required a finer level of disaggregation than is provided by the I-O data. The following table describes the sectors where there was an insufficient amount of disaggregated detail.

**Table 1: List of GTAP Sectors with insufficient I-O data for disaggregation**

| GSC2 code | GSC2 Description        | CanGSC | CanGSC description |
|-----------|-------------------------|--------|--------------------|
| 1         | Paddy rice              | 1      | Crops              |
| 2         | Wheat                   | 1      | Crops              |
| 3         | Cereal grains nec       | 1      | Crops              |
| 4         | Vegetables, fruit, nuts | 1      | Crops              |
| 5         | Oil seeds               | 1      | Crops              |
| 6         | Sugar cane, sugar beet  | 1      | Crops              |
| 7         | Plant-based fibers      | 1      | Crops              |

| GSC2 code | GSC2 Description                          | CanGSC | CanGSC description    |
|-----------|-------------------------------------------|--------|-----------------------|
| 8         | Crops nec.                                | 1      | Crops                 |
| 9         | Bovine cattle, sheep and goats, horses    | 2      | Animal products       |
| 10        | Animal products nec.                      | 2      | Animal products       |
| 11        | Raw milk                                  | 2      | Animal products       |
| 12        | Wool, silk-worm cocoons                   | 2      | Animal products       |
| 16        | Oil                                       | 6      | Oil and gas           |
| 17        | Gas                                       | 6      | Oil and gas           |
| 19        | Bovine cattle, sheep and goat, horse meat | 8      | Meat products nec     |
| 20        | Meat products nec                         | 8      | Meat products nec     |
| 21        | Vegetable oils and fats                   | 11     | Food products, n.e.c. |
| 23        | Processed rice                            | 11     | Food products, n.e.c. |
| 25        | Food products, n.e.c.                     | 11     | Food products, n.e.c. |
| 28        | Wearing apparel                           | 14     | Wearing apparel       |
| 29        | Leather products                          | 14     | Wearing apparel       |

## 4. *Data Processing*

This section discusses adjustments that were made to the data to address various issues in the tables.

### *Conversion to basic prices*

The Canadian Input-Output tables value transactions at modified basic prices. The modified basic price for a good or service is its selling price at the boundary of the producing establishment excluding sales and excise taxes levied after the final stage of production. This means that modified basic prices do not include subsidies, while basic prices include subsidies.

To convert the modified basic prices to basic prices, we had to add back subsidies. However, the tables only show the total value of subsidies on products received by each industry; information on which product is being subsidized is not available. Converting the tables to basic prices required the allocation of subsidies on products to all the main outputs of each industry (commodities representing greater than 10% of the industry's total gross output) and then proportionally grossing up the value of demand for each product by an equivalent amount.

### *Allocation of “Net income of unincorporated businesses”*

Mixed income (of unincorporated businesses) was split for each industry based on the shares of employee compensation and surplus.

### *Negative outputs in the Supply and Use I-O tables*

The Supply and Use Tables (SUT) contain negative secondary outputs of wholesaling margins by some industries. Unless these negatives are removed, they can cause negative inter-industry transactions in the symmetric tables. These negative margins were therefore removed from the SUT by re-allocating them to

the wholesaling industry and balancing the industries in the 'other operating surplus' commodity. This causes the distribution of total gross output and GDP to be slightly altered as compared to the SUT. The differences, however, are very minor.

### ***Machinery and equipment disinvestment***

The SUTs show machinery and equipment disinvestment by commodity as a negative adjustment column. This leads to negative total investment for some commodities (scrap metal and used cars). To avoid negative values in investment, these commodities were moved to inventories.

### ***Re-exports***

Re-exports appear as a separate column in the SUTs and also as part of imports. Re-exports were netted out of imports and eliminated. Trade and transport margins on re-exports, relatively small values, were added to exports.

## ***5. Conversion into GTAP Format***

This section discusses how the Canadian I-O tables were converted into a format that is compatible with GTAP. As previously mentioned, the original data from Statistics Canada is at a higher level of disaggregation than required for the GTAP Data Base. Converting from the Canadian I-O format to the GTAP format required aggregating the data. The following table describes how the Canadian I-O format was aggregated to the GTAP format.

**Table 2: Concordance of Canadian I-O industries to GTAP industries**

| IOIC            | Canadian IO industries description                                           | GSR | GSR Description      |
|-----------------|------------------------------------------------------------------------------|-----|----------------------|
| <b>BS111A00</b> | Crop production (except greenhouse, nursery and floriculture production)     | 1   | Crops nec.           |
| <b>BS111400</b> | Greenhouse, nursery and floriculture production                              | 1   | Crops nec.           |
| <b>BS112000</b> | Animal production                                                            | 2   | Animal products nec. |
| <b>BS113000</b> | Forestry and logging                                                         | 3   | Forestry             |
| <b>BS114000</b> | Fishing, hunting and trapping                                                | 4   | Fishing              |
| <b>BS115A00</b> | Support activities for crop and animal production                            | 1   | Crops nec.           |
| <b>BS115300</b> | Support activities for forestry                                              | 3   | Forestry             |
| <b>BS211113</b> | Conventional oil and gas extraction                                          | 6   | Oil                  |
| <b>BS211114</b> | Non-conventional oil extraction                                              | 6   | Oil                  |
| <b>BS212100</b> | Coal mining                                                                  | 5   | Coal                 |
| <b>BS212210</b> | Iron ore mining                                                              | 7   | Minerals nec         |
| <b>BS212220</b> | Gold and silver ore mining                                                   | 7   | Minerals nec         |
| <b>BS212230</b> | Copper, nickel, lead and zinc ore mining                                     | 7   | Minerals nec         |
| <b>BS212290</b> | Other metal ore mining                                                       | 7   | Minerals nec         |
| <b>BS212310</b> | Stone mining and quarrying                                                   | 7   | Minerals nec         |
| <b>BS212320</b> | Sand, gravel, clay, and ceramic and refractory minerals mining and quarrying | 7   | Minerals nec         |
| <b>BS212392</b> | Diamond mining                                                               | 7   | Minerals nec         |

| <b>IOIC</b>     | <b>Canadian IO industries description</b>                                   | <b>GSR</b> | <b>GSR Description</b>         |
|-----------------|-----------------------------------------------------------------------------|------------|--------------------------------|
| <b>BS21239A</b> | Other non-metallic mineral mining and quarrying (except diamond and potash) | 7          | Minerals nec                   |
| <b>BS212396</b> | Potash mining                                                               | 7          | Minerals nec                   |
| <b>BS21311A</b> | Support activities for oil and gas extraction                               | 6          | Oil                            |
| <b>BS21311B</b> | Support activities for mining                                               | 7          | Minerals nec                   |
| <b>BS221100</b> | Electric power generation, transmission and distribution                    | 28         | Electricity                    |
| <b>BS221200</b> | Natural gas distribution                                                    | 29         | Gas manufacture, distribution  |
| <b>BS221300</b> | Water, sewage and other systems                                             | 30         | Water                          |
| <b>BS23A000</b> | Residential building construction                                           | 31         | Construction                   |
| <b>BS23B000</b> | Non-residential building construction                                       | 31         | Construction                   |
| <b>BS23C100</b> | Transportation engineering construction                                     | 31         | Construction                   |
| <b>BS23C200</b> | Oil and gas engineering construction                                        | 31         | Construction                   |
| <b>BS23C300</b> | Electric power engineering construction                                     | 31         | Construction                   |
| <b>BS23C400</b> | Communication engineering construction                                      | 31         | Construction                   |
| <b>BS23C500</b> | Other engineering construction                                              | 31         | Construction                   |
| <b>BS23D000</b> | Repair construction                                                         | 31         | Construction                   |
| <b>BS23E000</b> | Other activities of the construction industry                               | 31         | Construction                   |
| <b>BS311100</b> | Animal food manufacturing                                                   | 11         | Food products, n.e.c.          |
| <b>BS311200</b> | Grain and oilseed milling                                                   | 11         | Food products, n.e.c.          |
| <b>BS311300</b> | Sugar and confectionery product manufacturing                               | 10         | Sugar                          |
| <b>BS311400</b> | Fruit and vegetable preserving and specialty food manufacturing             | 11         | Food products, n.e.c.          |
| <b>BS311500</b> | Dairy product manufacturing                                                 | 9          | Dairy products                 |
| <b>BS311600</b> | Meat product manufacturing                                                  | 8          | Meat products nec              |
| <b>BS311700</b> | Seafood product preparation and packaging                                   | 11         | Food products, n.e.c.          |
| <b>BS311800</b> | Bakeries and tortilla manufacturing                                         | 11         | Food products, n.e.c.          |
| <b>BS311900</b> | Other food manufacturing                                                    | 11         | Food products, n.e.c.          |
| <b>BS312110</b> | Soft drink and ice manufacturing                                            | 12         | Beverages and tobacco products |
| <b>BS312120</b> | Breweries                                                                   | 12         | Beverages and tobacco products |
| <b>BS3121A0</b> | Wineries and distilleries                                                   | 12         | Beverages and tobacco products |
| <b>BS312200</b> | Tobacco manufacturing                                                       | 12         | Beverages and tobacco products |
| <b>BS31A000</b> | Textile and textile product mills                                           | 13         | Textiles                       |
| <b>BS31B000</b> | Clothing and leather and allied product manufacturing                       | 14         | Wearing apparel                |
| <b>BS321100</b> | Sawmills and wood preservation                                              | 15         | Wood products                  |
| <b>BS321200</b> | Veneer, plywood and engineered wood product manufacturing                   | 15         | Wood products                  |
| <b>BS321900</b> | Other wood product manufacturing                                            | 15         | Wood products                  |
| <b>BS322100</b> | Pulp, paper and paperboard mills                                            | 16         | Paper products, publishing     |
| <b>BS322200</b> | Converted paper product manufacturing                                       | 16         | Paper products, publishing     |

| <b>IOIC</b>     | <b>Canadian IO industries description</b>                                                | <b>GSR</b> | <b>GSR Description</b>              |
|-----------------|------------------------------------------------------------------------------------------|------------|-------------------------------------|
| <b>BS323000</b> | Printing and related support activities                                                  | 16         | Paper products, publishing          |
| <b>BS324110</b> | Petroleum refineries                                                                     | 17         | Petroleum, coal products            |
| <b>BS3241A0</b> | Petroleum and coal product manufacturing (except petroleum refineries)                   | 17         | Petroleum, coal products            |
| <b>BS325100</b> | Basic chemical manufacturing                                                             | 18         | Chemicals, rubber, plastic products |
| <b>BS325200</b> | Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing | 18         | Chemicals, rubber, plastic products |
| <b>BS325300</b> | Pesticide, fertilizer and other agricultural chemical manufacturing                      | 18         | Chemicals, rubber, plastic products |
| <b>BS325400</b> | Pharmaceutical and medicine manufacturing                                                | 18         | Chemicals, rubber, plastic products |
| <b>BS325500</b> | Paint, coating and adhesive manufacturing                                                | 18         | Chemicals, rubber, plastic products |
| <b>BS325600</b> | Soap, cleaning compound and toilet preparation manufacturing                             | 18         | Chemicals, rubber, plastic products |
| <b>BS325900</b> | Other chemical product manufacturing                                                     | 18         | Chemicals, rubber, plastic products |
| <b>BS326100</b> | Plastic product manufacturing                                                            | 18         | Chemicals, rubber, plastic products |
| <b>BS326200</b> | Rubber product manufacturing                                                             | 18         | Chemicals, rubber, plastic products |
| <b>BS327A00</b> | Non-metallic mineral product manufacturing (except cement and concrete products)         | 19         | Mineral products n.e.c              |
| <b>BS327300</b> | Cement and concrete product manufacturing                                                | 19         | Mineral products n.e.c              |
| <b>BS331100</b> | Iron and steel mills and ferro-alloy manufacturing                                       | 20         | Ferrous metals                      |
| <b>BS331200</b> | Steel product manufacturing from purchased steel                                         | 20         | Ferrous metals                      |
| <b>BS331300</b> | Alumina and aluminum production and processing                                           | 21         | Metals nec                          |
| <b>BS331400</b> | Non-ferrous metal (except aluminum) production and processing                            | 21         | Metals nec                          |
| <b>BS331500</b> | Foundries                                                                                | 22         | Metal products                      |
| <b>BS332100</b> | Forging and stamping                                                                     | 22         | Metal products                      |
| <b>BS332A00</b> | Cutlery, hand tools and other fabricated metal product manufacturing                     | 22         | Metal products                      |
| <b>BS332300</b> | Architectural and structural metals manufacturing                                        | 22         | Metal products                      |
| <b>BS332400</b> | Boiler, tank and shipping container manufacturing                                        | 22         | Metal products                      |
| <b>BS332500</b> | Hardware manufacturing                                                                   | 22         | Metal products                      |
| <b>BS332600</b> | Spring and wire product manufacturing                                                    | 22         | Metal products                      |
| <b>BS332700</b> | Machine shops, turned product, and screw, nut and bolt manufacturing                     | 22         | Metal products                      |
| <b>BS332800</b> | Coating, engraving, heat treating and allied activities                                  | 22         | Metal products                      |
| <b>BS333100</b> | Agricultural, construction and mining machinery manufacturing                            | 26         | Machinery and equipment nec         |
| <b>BS333200</b> | Industrial machinery manufacturing                                                       | 26         | Machinery and equipment nec         |

| <b>IOIC</b>     | <b>Canadian IO industries description</b>                                                   | <b>GSR</b> | <b>GSR Description</b>      |
|-----------------|---------------------------------------------------------------------------------------------|------------|-----------------------------|
| <b>BS333300</b> | Commercial and service industry machinery manufacturing                                     | 26         | Machinery and equipment nec |
| <b>BS333400</b> | Ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing | 26         | Machinery and equipment nec |
| <b>BS333500</b> | Metalworking machinery manufacturing                                                        | 26         | Machinery and equipment nec |
| <b>BS333600</b> | Engine, turbine and power transmission equipment manufacturing                              | 26         | Machinery and equipment nec |
| <b>BS333900</b> | Other general-purpose machinery manufacturing                                               | 26         | Machinery and equipment nec |
| <b>BS334100</b> | Computer and peripheral equipment manufacturing                                             | 25         | Electronic equipment        |
| <b>BS334200</b> | Communications equipment manufacturing                                                      | 25         | Electronic equipment        |
| <b>BS334A00</b> | Other electronic product manufacturing                                                      | 25         | Electronic equipment        |
| <b>BS334400</b> | Semiconductor and other electronic component manufacturing                                  | 25         | Electronic equipment        |
| <b>BS335100</b> | Electric lighting equipment manufacturing                                                   | 26         | Machinery and equipment nec |
| <b>BS335200</b> | Household appliance manufacturing                                                           | 26         | Machinery and equipment nec |
| <b>BS335300</b> | Electrical equipment manufacturing                                                          | 26         | Machinery and equipment nec |
| <b>BS335900</b> | Other electrical equipment and component manufacturing                                      | 26         | Machinery and equipment nec |
| <b>BS336110</b> | Automobile and light-duty motor vehicle manufacturing                                       | 23         | Motor vehicles and parts    |
| <b>BS336120</b> | Heavy-duty truck manufacturing                                                              | 23         | Motor vehicles and parts    |
| <b>BS336200</b> | Motor vehicle body and trailer manufacturing                                                | 23         | Motor vehicles and parts    |
| <b>BS336310</b> | Motor vehicle gasoline engine and engine parts manufacturing                                | 23         | Motor vehicles and parts    |
| <b>BS336320</b> | Motor vehicle electrical and electronic equipment manufacturing                             | 23         | Motor vehicles and parts    |
| <b>BS336330</b> | Motor vehicle steering and suspension components (except spring) manufacturing              | 23         | Motor vehicles and parts    |
| <b>BS336340</b> | Motor vehicle brake system manufacturing                                                    | 23         | Motor vehicles and parts    |
| <b>BS336350</b> | Motor vehicle transmission and power train parts manufacturing                              | 23         | Motor vehicles and parts    |
| <b>BS336360</b> | Motor vehicle seating and interior trim manufacturing                                       | 23         | Motor vehicles and parts    |
| <b>BS336370</b> | Motor vehicle metal stamping                                                                | 23         | Motor vehicles and parts    |
| <b>BS336390</b> | Other motor vehicle parts manufacturing                                                     | 23         | Motor vehicles and parts    |
| <b>BS336400</b> | Aerospace product and parts manufacturing                                                   | 24         | Transport equipment nec     |
| <b>BS336500</b> | Railroad rolling stock manufacturing                                                        | 24         | Transport equipment nec     |
| <b>BS336600</b> | Ship and boat building                                                                      | 24         | Transport equipment nec     |
| <b>BS336900</b> | Other transportation equipment manufacturing                                                | 24         | Transport equipment nec     |
| <b>BS337100</b> | Household and institutional furniture and kitchen cabinet manufacturing                     | 27         | Manufactures nec            |
| <b>BS337200</b> | Office furniture (including fixtures) manufacturing                                         | 27         | Manufactures nec            |

| <b>IOIC</b>     | <b>Canadian IO industries description</b>                                                   | <b>GSR</b> | <b>GSR Description</b>      |
|-----------------|---------------------------------------------------------------------------------------------|------------|-----------------------------|
| <b>BS337900</b> | Other furniture-related product manufacturing                                               | 27         | Manufactures nec            |
| <b>BS339100</b> | Medical equipment and supplies manufacturing                                                | 26         | Machinery and equipment nec |
| <b>BS339900</b> | Other miscellaneous manufacturing                                                           | 27         | Manufactures nec            |
| <b>BS411000</b> | Farm product wholesaler-distributors                                                        | 32         | Trade                       |
| <b>BS412000</b> | Petroleum product wholesaler-distributors                                                   | 32         | Trade                       |
| <b>BS413000</b> | Food, beverage and tobacco wholesaler-distributors                                          | 32         | Trade                       |
| <b>BS414000</b> | Personal and household goods wholesaler-distributors                                        | 32         | Trade                       |
| <b>BS415000</b> | Motor vehicle and parts wholesaler-distributors                                             | 32         | Trade                       |
| <b>BS416000</b> | Building material and supplies wholesaler-distributors                                      | 32         | Trade                       |
| <b>BS417000</b> | Machinery, equipment and supplies wholesaler-distributors                                   | 32         | Trade                       |
| <b>BS418000</b> | Miscellaneous wholesaler-distributors                                                       | 32         | Trade                       |
| <b>BS419000</b> | Wholesale electronic markets, and agents and brokers                                        | 32         | Trade                       |
| <b>BS441000</b> | Motor vehicle and parts dealers                                                             | 32         | Trade                       |
| <b>BS442000</b> | Furniture and home furnishings stores                                                       | 32         | Trade                       |
| <b>BS443000</b> | Electronics and appliance stores                                                            | 32         | Trade                       |
| <b>BS444000</b> | Building material and garden equipment and supplies dealers                                 | 32         | Trade                       |
| <b>BS445000</b> | Food and beverage stores                                                                    | 32         | Trade                       |
| <b>BS446000</b> | Health and personal care stores                                                             | 32         | Trade                       |
| <b>BS447000</b> | Gasoline stations                                                                           | 32         | Trade                       |
| <b>BS448000</b> | Clothing and clothing accessories stores                                                    | 32         | Trade                       |
| <b>BS451000</b> | Sporting goods, hobby, book and music stores                                                | 32         | Trade                       |
| <b>BS452000</b> | General merchandise stores                                                                  | 32         | Trade                       |
| <b>BS453000</b> | Miscellaneous store retailers                                                               | 32         | Trade                       |
| <b>BS454000</b> | Non-store retailers                                                                         | 32         | Trade                       |
| <b>BS481000</b> | Air transportation                                                                          | 35         | Air transport               |
| <b>BS482000</b> | Rail transportation                                                                         | 33         | Transport nec               |
| <b>BS483000</b> | Water transportation                                                                        | 34         | Water transport             |
| <b>BS484000</b> | Truck transportation                                                                        | 33         | Transport nec               |
| <b>BS485100</b> | Urban transit systems                                                                       | 33         | Transport nec               |
| <b>BS48A000</b> | Other transit and ground passenger transportation and scenic and sightseeing transportation | 33         | Transport nec               |
| <b>BS485300</b> | Taxi and limousine service                                                                  | 33         | Transport nec               |
| <b>BS486A00</b> | Crude oil and other pipeline transportation                                                 | 33         | Transport nec               |
| <b>BS486200</b> | Pipeline transportation of natural gas                                                      | 33         | Transport nec               |
| <b>BS488000</b> | Support activities for transportation                                                       | 33         | Transport nec               |
| <b>BS491000</b> | Postal service                                                                              | 36         | Communication               |
| <b>BS492000</b> | Couriers and messengers                                                                     | 36         | Communication               |
| <b>BS493000</b> | Warehousing and storage                                                                     | 33         | Transport nec               |
| <b>BS511110</b> | Newspaper publishers                                                                        | 16         | Paper products, publishing  |

| <b>IOIC</b>     | <b>Canadian IO industries description</b>                                       | <b>GSR</b> | <b>GSR Description</b>          |
|-----------------|---------------------------------------------------------------------------------|------------|---------------------------------|
| <b>BS5111A0</b> | Periodical, book and directory publishers                                       | 16         | Paper products, publishing      |
| <b>BS511200</b> | Software publishers                                                             | 39         | Business services nec           |
| <b>BS5121A0</b> | Motion picture and video industries (except exhibition)                         | 40         | Recreational and other services |
| <b>BS512130</b> | Motion picture and video exhibition                                             | 40         | Recreational and other services |
| <b>BS512200</b> | Sound recording industries                                                      | 40         | Recreational and other services |
| <b>BS515100</b> | Radio and television broadcasting                                               | 36         | Communication                   |
| <b>BS515200</b> | Pay and specialty television                                                    | 36         | Communication                   |
| <b>BS517000</b> | Telecommunications                                                              | 36         | Communication                   |
| <b>BS518000</b> | Data processing, hosting, and related services                                  | 36         | Communication                   |
| <b>BS519000</b> | Other information services                                                      | 36         | Communication                   |
| <b>BS521000</b> | Monetary authorities - central bank                                             | 37         | Financial services nec          |
| <b>BS5221A0</b> | Banking and other depository credit intermediation                              | 37         | Financial services nec          |
| <b>BS522130</b> | Local credit unions                                                             | 37         | Financial services nec          |
| <b>BS522200</b> | Non-depository credit intermediation                                            | 37         | Financial services nec          |
| <b>BS522300</b> | Activities related to credit intermediation                                     | 37         | Financial services nec          |
| <b>BS52A000</b> | Financial investment services, funds and other financial vehicles               | 37         | Financial services nec          |
| <b>BS524100</b> | Insurance carriers                                                              | 38         | Insurance                       |
| <b>BS524200</b> | Agencies, brokerages and other insurance related activities                     | 37         | Financial services nec          |
| <b>BS531100</b> | Lessors of real estate                                                          | 39         | Business services nec           |
| <b>BS531A00</b> | Offices of real estate agents and brokers and activities related to real estate | 39         | Business services nec           |
| <b>BS5311A0</b> | Owner-occupied dwellings                                                        | 42         | Dwellings                       |
| <b>BS532100</b> | Automotive equipment rental and leasing                                         | 39         | Business services nec           |
| <b>BS532A00</b> | Rental and leasing services (except automotive equipment)                       | 39         | Business services nec           |
| <b>BS533000</b> | Lessors of non-financial intangible assets (except copyrighted works)           | 39         | Business services nec           |
| <b>BS541100</b> | Legal services                                                                  | 39         | Business services nec           |
| <b>BS541200</b> | Accounting, tax preparation, bookkeeping and payroll services                   | 39         | Business services nec           |
| <b>BS541300</b> | Architectural, engineering and related services                                 | 39         | Business services nec           |
| <b>BS541400</b> | Specialized design services                                                     | 39         | Business services nec           |
| <b>BS541500</b> | Computer systems design and related services                                    | 39         | Business services nec           |
| <b>BS541600</b> | Management, scientific and technical consulting services                        | 39         | Business services nec           |
| <b>BS541700</b> | Scientific research and development services                                    | 39         | Business services nec           |
| <b>BS541800</b> | Advertising, public relations, and related services                             | 39         | Business services nec           |
| <b>BS541900</b> | Other professional, scientific and technical services                           | 39         | Business services nec           |
| <b>BS551113</b> | Holding companies                                                               | 39         | Business services nec           |
| <b>BS561100</b> | Office administrative services                                                  | 39         | Business services nec           |
| <b>BS561A00</b> | Facilities and other support services                                           | 39         | Business services nec           |

| <b>IOIC</b>     | <b>Canadian IO industries description</b>                                            | <b>GSR</b> | <b>GSR Description</b>                               |
|-----------------|--------------------------------------------------------------------------------------|------------|------------------------------------------------------|
| <b>BS561300</b> | Employment services                                                                  | 39         | Business services nec                                |
| <b>BS561400</b> | Business support services                                                            | 39         | Business services nec                                |
| <b>BS561500</b> | Travel arrangement and reservation services                                          | 39         | Business services nec                                |
| <b>BS561600</b> | Investigation and security services                                                  | 39         | Business services nec                                |
| <b>BS561700</b> | Services to buildings and dwellings                                                  | 39         | Business services nec                                |
| <b>BS562000</b> | Waste management and remediation services                                            | 41         | Public administration and defence, education, health |
| <b>BS610000</b> | Educational services                                                                 | 41         | Public administration and defence, education, health |
| <b>BS621100</b> | Offices of physicians                                                                | 41         | Public administration and defence, education, health |
| <b>BS621200</b> | Offices of dentists                                                                  | 41         | Public administration and defence, education, health |
| <b>BS621A00</b> | Miscellaneous ambulatory health care services                                        | 41         | Public administration and defence, education, health |
| <b>BS623000</b> | Nursing and residential care facilities                                              | 41         | Public administration and defence, education, health |
| <b>BS624000</b> | Social assistance                                                                    | 41         | Public administration and defence, education, health |
| <b>BS71A000</b> | Performing arts, spectator sports and related industries, and heritage institutions  | 40         | Recreational and other services                      |
| <b>BS713A00</b> | Amusement and recreation industries                                                  | 40         | Recreational and other services                      |
| <b>BS713200</b> | Gambling industries                                                                  | 40         | Recreational and other services                      |
| <b>BS721100</b> | Traveller accommodation                                                              | 32         | Trade                                                |
| <b>BS721A00</b> | RV (recreational vehicle) parks, recreational camps, and rooming and boarding houses | 32         | Trade                                                |
| <b>BS722000</b> | Food services and drinking places                                                    | 32         | Trade                                                |
| <b>BS811100</b> | Automotive repair and maintenance                                                    | 32         | Trade                                                |
| <b>BS811A00</b> | Repair and maintenance (except automotive)                                           | 32         | Trade                                                |
| <b>BS812A00</b> | Personal care services and other personal services                                   | 40         | Recreational and other services                      |
| <b>BS812200</b> | Funeral services                                                                     | 40         | Recreational and other services                      |
| <b>BS812300</b> | Dry cleaning and laundry services                                                    | 40         | Recreational and other services                      |
| <b>BS813000</b> | Professional and similar organizations                                               | 41         | Public administration and defence, education, health |
| <b>BS814000</b> | Private households                                                                   | 40         | Recreational and other services                      |
| <b>NP610000</b> | Educational services                                                                 | 41         | Public administration and defence, education, health |
| <b>NP621000</b> | Ambulatory health care services                                                      | 41         | Public administration and defence, education, health |

| <b>IOIC</b>     | <b>Canadian IO industries description</b>                       | <b>GSR</b> | <b>GSR Description</b>                               |
|-----------------|-----------------------------------------------------------------|------------|------------------------------------------------------|
| <b>NP624000</b> | Social assistance                                               | 41         | Public administration and defence, education, health |
| <b>NP710000</b> | Arts, entertainment and recreation                              | 40         | Recreational and other services                      |
| <b>NP813100</b> | Religious organizations                                         | 41         | Public administration and defence, education, health |
| <b>NP813A00</b> | Grant-making, civic, and professional and similar organizations | 41         | Public administration and defence, education, health |
| <b>NP999999</b> | Other non-profit institutions serving households                | 41         | Public administration and defence, education, health |
| <b>GS611100</b> | Elementary and secondary schools                                | 41         | Public administration and defence, education, health |
| <b>GS611200</b> | Community colleges and C.E.G.E.P.s                              | 41         | Public administration and defence, education, health |
| <b>GS611300</b> | Universities                                                    | 41         | Public administration and defence, education, health |
| <b>GS611A00</b> | Other educational services                                      | 41         | Public administration and defence, education, health |
| <b>GS622000</b> | Hospitals                                                       | 41         | Public administration and defence, education, health |
| <b>GS623000</b> | Nursing and residential care facilities                         | 41         | Public administration and defence, education, health |
| <b>GS911100</b> | Defence services                                                | 41         | Public administration and defence, education, health |
| <b>GS911A00</b> | Other federal government services (except defence)              | 41         | Public administration and defence, education, health |
| <b>GS912000</b> | Other provincial and territorial government services            | 41         | Public administration and defence, education, health |
| <b>GS913000</b> | Other municipal government services                             | 41         | Public administration and defence, education, health |
| <b>GS914000</b> | Other aboriginal government services                            | 41         | Public administration and defence, education, health |