

Retrieving CANSIM Data through E-STAT - a Brief Guide

E-STAT is a portal to Statistic's Canada's census information and to selected data from CANSIM, its Canadian Socio-Economic Information Management database. The information in these databases lets you analyze economic and social patterns about many parts of Canadian society. E-STAT is an excellent resource for research in commerce and the social sciences; its interface is easy to use and it is also available to search from off-campus.

Part A: CANSIM Data and E-STAT

CANSIM data is extracted from hundreds of surveys and censuses. Since this data is compiled from every individual response to the questions asked, CANSIM organizes the information into smaller, workable formats called **tables** and **time series**. A table is the compiled data to a question, and a time series is a specific answer to the question organized over a period of time. A table might deal with domestic exports; a time series might deal specifically with domestic exports, from Nova Scotia, between 1990 and 2009.

1. Tables

Tables are collections of related data about a topic, such as inflation figures or youth incarceration rates. This data is derived from surveys and censuses. Since a survey or census will ask many questions about its subject, many distinct tables will be derived from the answers. For example, the **Canadian International Merchandise Trade (Customs Basis) census**, which is focused on international trade, has 58 different tables. These include:

- *Table 228-0033*, the monthly dollar value of customs-based imports by province of clearance,
- *Table 228-0034*, the monthly dollar value of customs-based domestic exports by province of origin,
- *Table 228-0055*, the annual import/export price and volume indexes.

Home > Learning resources > E-STAT: Table of contents > CANSIM >

E-STAT

- About E-STAT
- What's new in E-STAT
- Table of contents
- User guides and lesson plans
- Search CANSIM in E-STAT
- Help using this page
- Search Censuses in E-STAT
- Help/Frequently asked questions
- Contact E-STAT

List of tables

Canadian International Merchandise Trade (Customs Basis) - [2201](#)

► **Displaying tables 1 to 58**

Title	Description	Table no.
Domestic exports, customs-based, by province of origin, monthly (dollars), Jan 1990 to Apr 2009	Description	228-0034
Imports, customs-based, by province of clearance, monthly (dollars), Jan 1990 to Apr 2009	Description	228-0033
Merchandise import and export price and volume indexes by sector and sub-sector, customs and balance of payments basis, for all countries, annual (index, 2002=100), 2002 to 2008	Description	228-0055
Merchandise import and export price and volume indexes	Description	228-0053

Survey

Distinct tables in the survey

The data compiled in surveys and censuses is organized into retrievable tables.

2. Time Series, Dimensions, and Dimension Members

A table's information is held in small data sets called **series**, or **time series**. A series measures specific data over a given period of time. This data is organized into **dimensions** and **dimension members**. A dimension is a category, and a dimension member is an element held in that category. For example:

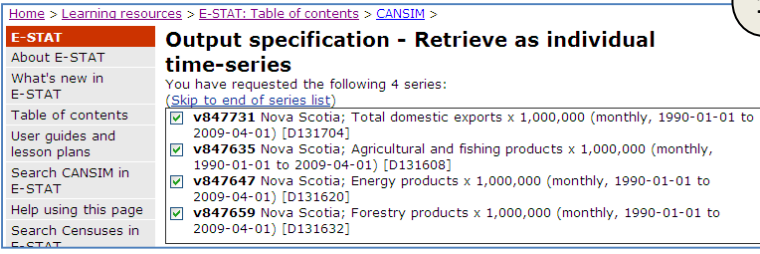
- A **Geography** dimension would list all the provinces and territories that are reported in the series
- An **Industry** dimension would list the different manufacturing sectors that are reported in the series

Each series is unique because it tracks a different combination of dimension members. Therefore, tables with many dimension members can have hundreds, even thousands of series. Table 228-0034, which tracks the monthly value of exports by province and industry, has many series, including:

- Series V847634, **Prince Edward Island agricultural and fishing exports** since 1990,
- Series V847635, **Nova Scotia agricultural and fishing exports** since 1990,
- Series V847636, **New Brunswick agricultural and fishing exports** since 1990,
- Series V847646, **Prince Edward Island energy exports** since 1990,
- Series V847647, **Nova Scotia energy exports** since 1990,
- Series V847648, **New Brunswick energy products** since 1990
- Series V847658, **Prince Edward Island forestry products** since 1990
- Series V847659, **Nova Scotia forestry exports** since 1990.
- Series V847660, **New Brunswick forestry products** since 1990
- Series V847730, **Prince Edward Island total domestic exports** since 1990
- Series V847731, **Nova Scotia total domestic exports** since 1990,
- Series V847732, **New Brunswick total domestic exports** since 1990.

A new series is created whenever a new combination of dimension members is made.

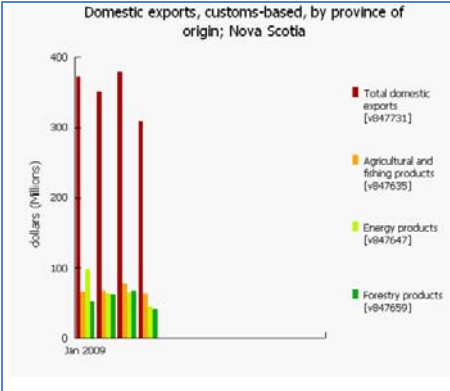
E-STAT, however, can retrieve just the data you need from the table. You can then display them as charts or graphs, or you can export data to statistics software like Beyond 20/20 or Microsoft Excel:



Output specification - Retrieve as individual time-series

You have requested the following 4 series:
 v847731 Nova Scotia; Total domestic exports x 1,000,000 (monthly, 1990-01-01 to 2009-04-01) [D131704]
 v847635 Nova Scotia; Agricultural and fishing products x 1,000,000 (monthly, 1990-01-01 to 2009-04-01) [D131608]
 v847647 Nova Scotia; Energy products x 1,000,000 (monthly, 1990-01-01 to 2009-04-01) [D131620]
 v847659 Nova Scotia; Forestry products x 1,000,000 (monthly, 1990-01-01 to 2009-04-01) [D131632]

- Only pertinent data (e.g., Nova Scotia exports) is chosen.
- This data can be displayed as graphs and charts, or exported to statistics software.



Domestic exports, customs-based, by province of origin; Nova Scotia

Source: Statistics Canada, CANSIM table 228-0034.

CANSIM				
Table 228-0034 Domestic exports, customs-based, by province of origin				
Monthly	v847731 - Nova Scotia; Total domestic exports (dollars - millions)	v847635 - Nova Scotia; Agricultural and fishing products (dollars - millions)	v847647 - Nova Scotia; Energy products (dollars - millions)	v847659 - Nova Scotia; Forestry products (dollars - millions)
Jan 2009	373.0	66.2	98.2	51.4
Feb 2009	350.8	67.0	63.0	61.9
Mar 2009	379.5	77.2	64.2	67.1
Apr 2009	309.4	63.7	44.6	41.0

Source: Statistics Canada, CANSIM table 228-0034

This E-STAT graph and chart combine data retrieved from four different time series in Table 228-0034.

Part B: Finding CANSIM Information in E-STAT

1. Browsing

E-STAT has a Table of Contents on its home page offering 6 broad topics: Economy, Land and Resources, People, Nation, Historical Censuses, and Election Data. The first four topics follow CANSIM's information hierarchy, so browsing is consistent whether you use E-STAT, another portal like CANSIM Multi-dimensional, or the regular StatCan webpage (http://www.statcan.ca).

Clicking on a topic will open a new page listing many subtopics. Browsing lets you "drill down" from broad areas to specific themes. For example, by moving from International trade in the Table of Contents to its subtopics, you can find CANSIM tables categorized by themes such as Merchandise exports, Merchandise imports, and Trade Patterns. Tables and table data are found in these E-STAT themes; clicking on the table description will give us information about data collection and analysis, and clicking on the table number will bring us to the table data itself:

1. Click on **International trade** to open its sub-topic.

2. Click on **Merchandise exports** to view this theme's tables.

3. Click on the **table number** to retrieve its data.

Browsing E-STAT's Table of Contents lets you drill down to specific data.

2. Searching CANSIM in E-STAT

You can also “Search CANSIM in E-STAT” from the **Table of Contents** to find data specific to your topic. However, since CANSIM has indexed so much data and so many categories, the success and relevance of your search results can vary. Understanding how E-STAT’s search engines work will make your data retrieval more efficient.

2.1 Text Searching (i.e. “Basic Search”)

E-STAT’s default search engine will search all the titles, descriptions (i.e. “table keywords”), dimensions, and dimension members used in CANSIM tables. You may enter your keywords into the search box and then choose one of three methods to search by:

- **Exact phrase** – searches for keywords in their exact order; your search string must appear exactly as shown.
- **All of these words** – searches for every keyword in any number of fields; this is narrow in scope.
- **Any of these words** – searches for *any* of your keywords in any number of fields; this is very broad in scope.

CANSIM in E-STAT

Updated: July 4, 2009

Your online resource for socioeconomic statistics.

CANSIM is a multidimensional database containing more than 41 million time series regrouped in more than 2,800 tables.

Find the data you're looking for by typing in your search term, CANSIM table or series numbers, or by browsing using the links on the right.

accounting price atl [Advanced search](#)

Type of search:

- Exact phrase
- All of these words
- Any of these words

The success of your search depends not only on the keywords you use but also on the type of search you complete. For example, using the keywords, **accounting price atlantic canada** will yield:

- **Exact phrase** – 0 tables – not one CANSIM table has the exact string, **accounting price atlantic canada**.
- **All of these words** – 5 tables – any table in CANSIM where all of these words appear anywhere.
- **Any of these words** – 2699 tables – any table in CANSIM where at least one of the words appear.

2.2 Advanced Searching

The advanced search engine is very precise. This search engine lets you use Boolean operators (e.g., “(Accounting **OR** Audit) **AND** price **AND** Atlantic Canada”), which can help fine-tune your results.

However, the advanced search considers each CANSIM field individually. This means that E-STAT’s advanced mode will conduct *separate* searches for your keywords in *all* the fields you choose.

For example, searching for **accounting price atlantic canada** in the four search fields listed to the right will retrieve:

Advanced search:

1- Select one or more fields to search:

<input checked="" type="checkbox"/> Table titles	<input checked="" type="checkbox"/> Table keywords
<input checked="" type="checkbox"/> Dimension descriptions	<input checked="" type="checkbox"/> Dimension member descriptions
<input type="checkbox"/> Units of measure	<input type="checkbox"/> Footnote texts

2- Select all, active or terminated tables:

- All tables matching search criteria
- Active tables matching search criteria
- Terminated tables matching search criteria

3- Select the frequency of the tables:

- All tables regardless of frequency
- Daily tables
- Weekly tables
- Monthly tables

4- Enter a search term and click on the Find tables button:
You may use Boolean operators (AND, OR, NOT) in the search query.

accounting price atlantic canada

1. Tables where **accounting price atlantic canada** all appear in the title.
2. Tables where **accounting price atlantic canada** all appear in the description (i.e. “table keywords”).
3. Tables where **accounting price atlantic canada** all appear in the list of dimensions.
4. Tables where **accounting price atlantic canada** all appear in the list of dimension members.

Even though an earlier basic text search with these keywords retrieved 5 tables to consider, an advanced search with these keywords will not return any tables at all. Since these four keywords *never* appear together in only a table title, in only a table description, in only a list of table dimensions, or in only a list of a table’s dimension members, the advanced search yields zero results.

Since there is so much data held in CANSIM, there can be no one “perfect way” to search. Using both basic and advanced search techniques as well as browsing by theme is recommended to ensure that your retrieval methods cover the breadth of your topic in the database.

Part C: Working with CANSIM data

1. The Subset Selection screen

Whether searching or browsing, you can retrieve either all of a table’s data or only the series you need. You determine which data you want to retrieve through E-STAT’s **Subset Selection** screen, which also gives important information for your references. The Subset Selection screen is divided into five areas:

- **Table number, name and number of series** – information for retrieval and citation purposes
- **Data sources** – data collection methods and sources for this table
- **Categories** – broader E-STAT themes and CANSIM subjects under which this table is listed
- **Dimension Member selection boxes** – boxes to limit the amount of information to be retrieved
- **Reference Period (not shown below)** – boxes to limit the data to a particular time period

The screenshot shows the E-STAT Subset Selection screen for Table 027-0048. The screen is divided into several sections:

- Table number, name, and number of series:** Table 027-0048^{1,2} Canada Mortgage and Housing Corporation, housing starts, under construction and completions in selected census metropolitan areas, monthly (units) (555 series)
- Data sources:** Definitions, data sources and methods: Canada Mortgage and Housing Corporation - Z505
- Categories:** Residential construction
- Dimension Member selection boxes:**
 - Geography (37 items):** Select all, Deselect all, View checklist and footnotes. List includes: Census metropolitan areas, Abbotsford-Mission, British Columbia [59932], Barrie, Ontario [35568], Brantford, Ontario [35543], Calgary, Alberta [48825].
 - Housing estimates (3 items):** Select all, Deselect all, View checklist. List includes: Housing starts, Housing under construction.

A note on the screen states: "Note: You **must** select at least one item from each one of the lists below. To select more than one item, see the Help text."

You can pick and choose which dimension member's data you would like to retrieve by pressing the CTRL key while right-clicking with your mouse. Clicking on "View Checklist" or "View checklist and footnotes", however, will open the entire list for easier browsing and selection:

The screenshot shows the E-STAT interface. On the left is a navigation menu with items like "About E-STAT", "What's new in E-STAT", "Table of contents", "User guides and lesson plans", "Search CANSIM in E-STAT", "Help using this page", "Search Censuses in E-STAT", "Help/Frequently asked questions", "Contact E-STAT", "Learning resources", and "May I copy this?". The main content area is titled "Checklist" and shows "Table 027-0048^{1,2}". Below this, it says "Definitions, data sources and methods: Canada Mortgage and 7505". A note states: "Note: At least one item **must** be selected from the list below:". There are buttons for "Return to pick list", "Select all", and "Deselect all". Under the "Geography (37 items)" section, there is a list of dimension members with checkboxes:

- Census metropolitan areas
- Abbotsford-Mission, British Columbia [[59932](#)]
- Barrie, Ontario [[35568](#)]
- Brantford, Ontario [[35543](#)]
- Calgary, Alberta [[48825](#)]
- Edmonton, Alberta [[48835](#)]
- Greater Sudbury, Ontario [[35580](#)]³
- Guelph, Ontario [[35550](#)]
- Halifax, Nova Scotia [[12205](#)]
- Hamilton, Ontario [[35537](#)]
- Kelowna, British Columbia [[59915](#)]
- Kingston, Ontario [[35521](#)]
- Kitchener, Ontario [[35541](#)]

 A callout box on the right points to the "Geography" section header with the text: "Clicking 'View checklist' on the Geography selection box above opens this entire list of dimension members to choose from."

2. Retrieving and Exporting Data

E-STAT has three different retrieval options. After choosing your dimension members and time period, you will be given the option to:

[Retrieve as a Table](#) [Retrieve as individual Time Series](#)
 If you are a PC/Windows user with the [Beyond 20/20 browser](#) installed, you may also [download the entire table](#) as an .IVT file (517.0KB).

- **Retrieve Data as a Table** – useful if you have several dimensions (e.g., Geography, Housing Types, Housing Construction status) because it creates simple charts to follow.
- **Retrieve Data as individual Time Series** – useful if you have fewer dimensions but extended lengths of time because it lets you choose line graphs, pie charts, and scatter graphs for simple projects (e.g. housing starts of all kinds, but only in Halifax).
- **Export to Beyond 20/20** – useful to re-arrange data in other software. See our [Beyond 20/20 handout](#) for more information.

Selecting "Export to Beyond 20/20" will download a file to your computer. Selecting either of the other two retrieval options will open a new page that lets you choose how to represent the data (e.g., in a chart or a graph) and how to place the data (e.g., time as columns or as rows) on the screen:

Home > Learning resources > E-STAT: Table of contents > CANSIM > Table 027-0048 >

E-STAT
 About E-STAT
 What's new in E-STAT
 Table of contents
 User guides and lesson plans
 Search CANSIM in E-STAT
 Help using this page
 Search Censuses in E-STAT
 Help/Frequently asked questions
 Contact E-STAT
 Learning resources
 May I copy this?

Output specification - Retrieve as a table

Table 027-0048
Canada Mortgage and Housing Corporation, housing starts, under construction and completions in selected census metropolitan areas, monthly (units)

Definitions, data sources and methods: Canada Mortgage and Housing Corporation - 7505

You must select an **output format** from the list below in order to continue:

SCREEN OUTPUT formats

- HTML table, time as columns
- HTML table, time as rows
- HTML table, geography as rows
- HTML table, layout optimized for viewing (max. 12 columns)
- Vertical bar chart
- Horizontal bar chart
- Vertical stacked bar chart

E-STAT can reproduce CANSIM data as charts, graphs, map, and diagrams.

CANSIM

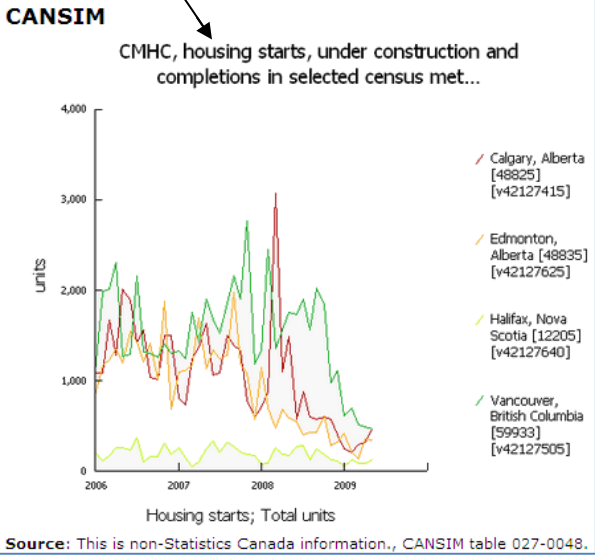
Table 027-0048^{1,2}
Canada Mortgage and Housing Corporation, housing starts, under construction and completions in selected census metropolitan areas, monthly (units)

Survey or program details:
 Canada Mortgage and Housing Corporation - 7505

Housing estimates = Housing starts
 Type of unit = Total units [Refresh table](#)

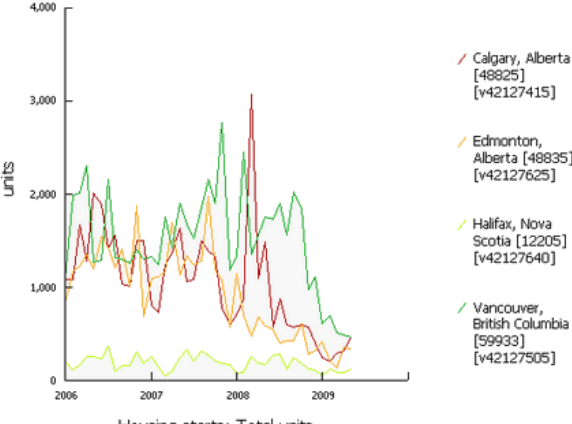
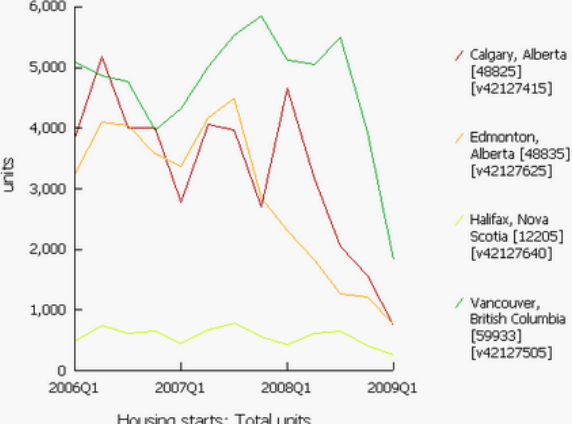
Housing estimates=Housing starts
 Type of unit=Total units

Geography	Calgary, Alberta [48825]	Edmonton, Alberta [48835]	Halifax, Nova Scotia [12205]	Vancouver, British Columbia [59933]	
2006	January	1,086	843	206	1,089
	February	1,088	1,173	111	1,988
	March	1,670	1,232	172	2,016
	April	1,286	1,358	258	2,304
	May	2,010	1,193	263	1,267
	June	1,889	1,547	229	1,297
	July	1,412	1,424	361	2,163
	August	1,560	1,209	100	1,313
	September	1,038	1,410	161	1,300
	October	1,011	1,017	159	1,256
	November	1,497	1,883	310	1,405
	December	1,499	681	181	1,307
January	800	1,098	260	1,327	



3. Changing Frequency

It is possible to change the frequency, or the time period, that E-STAT uses in the charts and tables it provides. By clicking on **Manipulate Data**, you can combine time periods together to improve the presentation of the data. For example, the housing data collected in Table 027-0048 is collected on a monthly basis, which can make it difficult to see patterns over long periods of time. By changing the frequency from a monthly basis to a quarterly basis, we can improve the presentation of the data to show not only a recent decline but also season spikes in various markets:

E-STAT About E-STAT What's new in E-STAT Table of contents User guides and lesson plans Search CANSIM in E-STAT Help using this page Search Censuses in E-STAT Help/Frequently asked questions Contact E-STAT	Output manipulation Note: Statistics Canada assumes responsibility for the quality of data as retrieved with the frequency unchanged. Clients take responsibility for any manipulations made to the original data. Frequency of output data will be: Frequency left unchanged Standard frequency conversion options Annual (average) Annual (sum) Quarterly (average) Quarterly (sum) Monthly to annual, by selecting one month out of every year January data February data	Changing the frequency from monthly to quarterly can sometimes improve your data's readability.
CANSIM CMHC, housing starts, under construction and completions in selected census met...  Housing starts; Total units Source: This is non-Statistics Canada information., CANSIM table 027-0048.	CANSIM CMHC, housing starts, under construction and completions in selected census met...  Housing starts; Total units Source: This is non-Statistics Canada information., CANSIM table 027-0048.	

The graph on the left presents its data on monthly basis; the graph on the right presents it on a quarterly basis.