Lab 5 – Introduction to Statistics Canada

In this lab and the next, we will be seeing two different ways to collect data from Statistics Canada.

**Important Note: The Statistics Canada and University Library websites described in these two labs may change over time. These labs are general guides to the websites, and you may find that menus have been moved or renamed, but the basics of retrieving data remain the same.

**If you can't find the exact menu or link listed below, use your best judgement to find a similar menu or link.

Lab 5 Quick View

- Statistics Canada's (StatCan's) website can be found at www.statcan.gc.ca, or by using a search engine to search for "Statistics Canada".
- Once on a database's website, look for a link to where the data is stored.
- Good links to look for are "Common Data Sets," "Subject," "Category," etc.
- Often, data sets can be edited to choose the variables and time periods that are needed.
- Data can be input into Excel by highlighting the data table, right clicking and selecting "Copy" then pasting into Excel.
    - You may need to convert the data into columns, as seen in a previous lab.
- Data can sometimes be downloaded as an excel-compatible or text file.
- Data can also be found using a website's search bar.
    - This search method can be more time intensive as many, many possible data sets can come from one search.
    - If you find a data set close to what you are looking for, you can often change options such as provinces listed.
- Whenever you download a data set, make sure to note a reference for a "works cited" page, as well as definitions of the variables you download.

The best way to learn how to gather data from Statistics Canada's website is through practice.

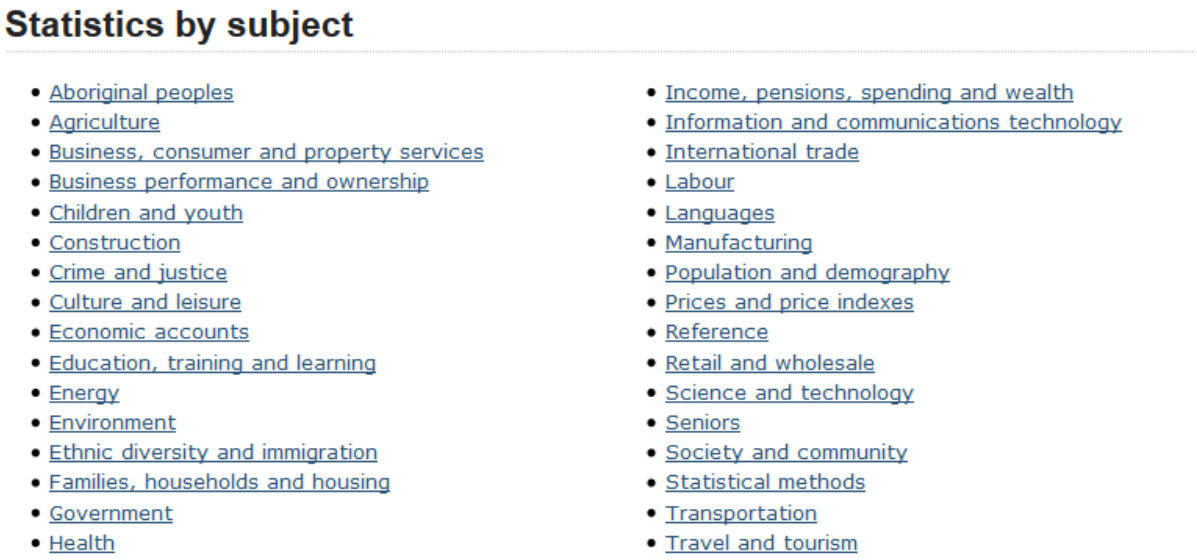
© 2021 University of Alberta
Written by Lorne Priemaza

A) Looking Up Common Canadian Data on StatsCan Website

i) Using an internet browser, go to Statistics Canada's (StatsCan's) website at http://www.statcan.gc.ca/ and select your preferred language (English or French), or use a search engine to search for "Statistics Canada".

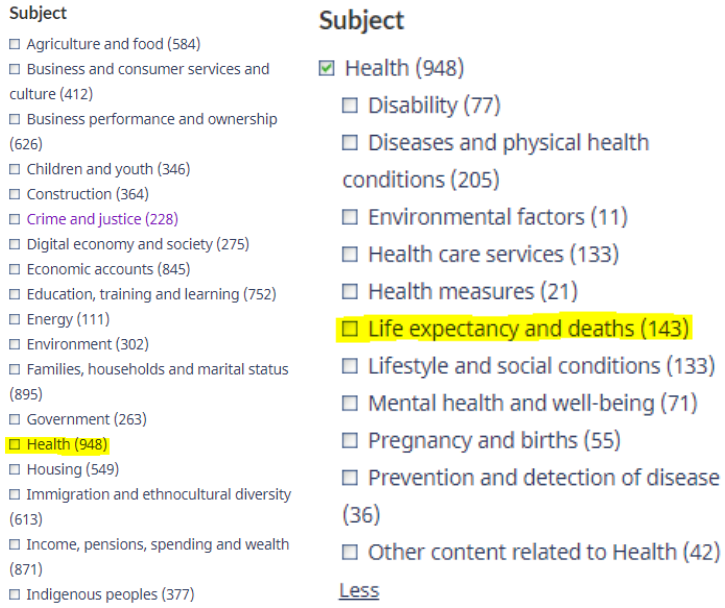
ii) From a database's homepage, you may need to navigate to find the data itself, often by clicking on a "Data", "Data Base," "Start Here," or similar button.

iii) When you first search a database for data, it is often best to start looking for common data sets, often through a link or category such as "Common Data Sets," "Browsing by subject," "Subject" etc. The appearance of databases changes over time, as you can see below from the old 2016 interface:

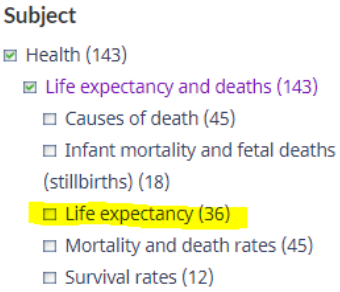


© 2021 University of Alberta
Written by Lorne Priemaza

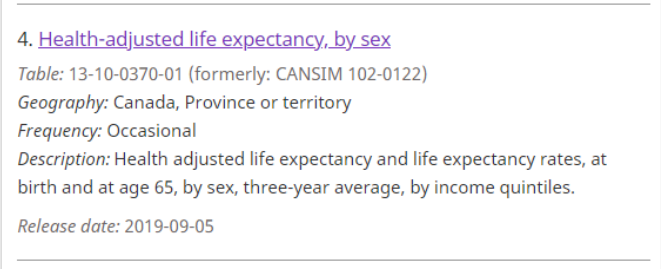
iv) If, for instance, you wanted information on life expectancy, you could choose “Health”, then “Life expectancy and deaths”. Now, instead of thousands of data sets, we have a narrow set of 143 (as of January 2021).



v) Sometimes it is possible to narrow down our search further, in this case by selecting “Life Expectancy”, reducing the data sets to 36 (as of January 2021).



vi) Often searching through databases gives a series of options (called “Tables” in Statistics Canada) that may hold the data we are looking for. A researcher needs to spend time looking over various data sets until they find the data they are looking for. In our case, “Health Adjusted Life Expectancy” looks promising (after trying a few others that didn’t quite have the information we were looking for).

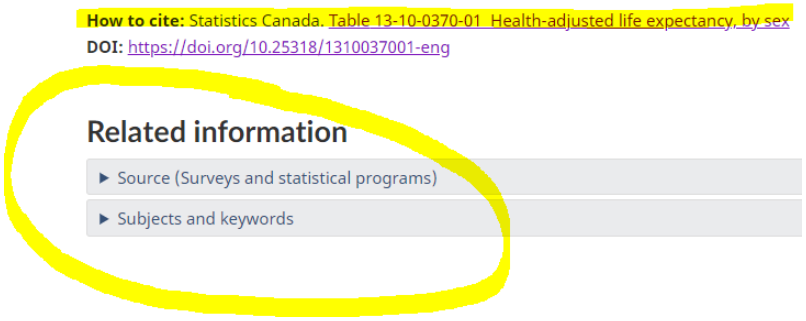


© 2021 University of Alberta
Written by Lorne Priemaza

vii) Some tables have advanced options to change the years and variables that are displayed. By using these options (though the Add/Remove data button), we are able to create a table as seen below:

Geography	At birth			
	All income groups			
	Males		Females	
	Health-adjusted life expectancy		Health-adjusted life expectancy	
	2010 to 2012	2015 to 2017	2010 to 2012	2015 to 2017
	Years			
Newfoundland and Labrador(map)	67.1	66.4	69.9	66.3
Prince Edward Island(map)	68.2	67.6	71.9	72.5
Nova Scotia(map)	66.9	66.1	69.4	69.5
New Brunswick(map)	67.4	67.0	71.2	68.9
Quebec(map)	70.2	71.2	72.6	72.0
Ontario(map)	69.6	68.9	70.9	70.1
Manitoba(map)	67.3	66.8	69.5	67.6
Saskatchewan(map)	67.4	66.5	70.1	69.0
Alberta(map)	68.5	68.4	70.3	69.4
British Columbia(map)	70.3	67.9	72.6	71.3
Yukon[13, 14, 15](map)	64.4	..	66.7	..
Northwest Territories[13, 14, 15](map)	66.3	..	66.6	..
Nunavut[13, 14, 15, 16](map)	60.1	..	64.0	..

viii) When gathering data from a database, don't forget to look for how the data can be referenced, and information as to how the variables are defined.



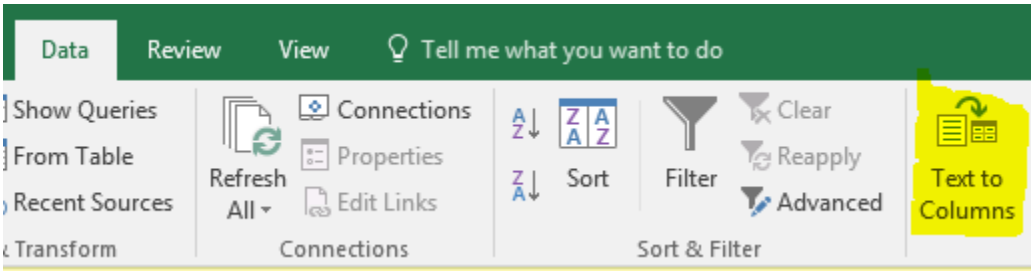
B) Importing Statistics Canada Data into Excel

i) Method 1: Copy and Paste

To import this table into excel, simply start at one corner of the table, then click and drag to highlight the whole table. Right-click and select "Copy". Then in excel, right-click on the cell you want to be the top left cell of the table, right-click and select "Paste". (You may be able

© 2021 University of Alberta
Written by Lorne Priemaza

to mouse over various Paste options to see how they will appear.) While newer versions of excel will usually automatically sort this data into tables, if this does not occur, simply choose "Text to Columns" under the "Data" menu to format the data as seen last lab.



ii) Method 2: Download

If the database allows it, download your data as an excel-compatible text file and import it into excel as seen in the previous lab. (This is often preferable, as it can include variable definitions and references in the excel file for later reference.)

iii) After the table is in excel, you often will need to edit it – moving and combining variables and dealing with unusable data points (such as the lack of values from the Yukon above.) An edited data set could look like this:

Health-adjusted life expectancy by gender

Location	2010 to 2012		2015 to 2017	
	Males	Females	Males	Females
Canada	69.4	71.4	68.9	70.4
Newfoundland and Labrador	67.1	69.9	66.4	66.3
Prince Edward Island	68.2	71.9	67.6	72.5
Nova Scotia	66.9	69.4	66.1	69.5
New Brunswick	67.4	71.2	67	68.9
Quebec	70.2	72.6	71.2	72
Ontario	69.6	70.9	68.9	70.1
Manitoba	67.3	69.5	66.8	67.6
Saskatchewan	67.4	70.1	66.5	69
Alberta	68.5	70.3	68.4	69.4
British Columbia	70.3	72.6	67.9	71.3

iv) If copying multiple data sources from the internet, it is often useful to paste them onto separate excel tabs, then combine all the data sets manually in excel by cutting and pasting.

© 2021 University of Alberta
Written by Lorne Priemaza

C) Searching for Data Using the Search Bar

i) This is only one way of looking up data in Statistics Canada. You may be tempted to use the "search" bar in the top right corner. While this can be used if the "Subject" menu doesn't help, it can be more difficult as you search through various options. For example, putting "unemployment" into the search bar gives over 8,000 results. Only after clicking multiple links could you find the data you are looking for.

ii) In this case, by choosing "Employment and unemployment rate, annual, population centers and rural areas", (note that this title may change over time) and editing our database as seen above, we can eventually find data on Albertan unemployment from 2016 to 2018 for both genders:

		Alberta (map)					
		Males			Females		
		15 years and over			15 years and over		
Labour force characteristics	Population centre and rural areas	2016	2017	2018	2016	2017	2018
		Persons					
Population[3]	Total, all population centres and rural areas (x 1,000)	1,723.0	1,734.8	1,750.2	1,675.8	1,693.9	1,720.2
Labour force[4]	Total, all population centres and rural areas (x 1,000)	1,353.6	1,360.1	1,358.0	1,111.0	1,121.6	1,136.8
Employment[5]	Total, all population centres and rural areas (x 1,000)	1,233.5	1,247.6	1,264.6	1,030.2	1,039.4	1,066.1
Not in labour force[6]	Total, all population centres and rural areas (x 1,000)	369.5	374.8	392.2	564.8	572.3	583.4
		Percentage					
Unemployment rate[7]	Total, all population centres and rural areas	8.9	8.3	6.9	7.3	7.3	6.2
Participation rate[8]	Total, all population centres and rural areas	78.6	78.4	77.6	66.3	66.2	66.1
Employment rate[9]	Total, all population centres and rural areas	71.6	71.9	72.3	61.5	61.4	62.0

© 2021 University of Alberta
Written by Lorne Priemaza

Econ 299 Practice Lab 5: Statistics Canada Data

A) From the Statistics Canada Website, find the following data and open it using separate tabs in excel:
   i. Gross Domestic Province for each province and territory from 2012 to 2014.
   ii. Homicides for each province and territory from 2012 to 2014.
   (Hint: Search for common data sets {using "Subjects:}. Using the search bar will make this process MUCH more difficult.)

B) Using copy and paste, combine these two tables, editing titles and headings where needed. Your results may look something like:

Canadian Homicides and GDP, by province, 2012-2014

	2012		2013		2014	
	Homicides	GDP	Homicides	GDP	Homicides	GDP
Canada	546	1,822,808	512	1,892,193	516	1,973,043
Newfoundland and Labrador	3	32,032	7	34,991	2	33,514
Prince Edward Island	0	5,573	1	5,783	3	6,003
Nova Scotia	17	37,835	13	38,576	6	39,077
New Brunswick	6	31,723	7	31,857	9	32,056
Quebec	108	354,040	70	361,211	71	370,064
Ontario	163	680,084	168	693,210	155	721,970
Manitoba	53	59,781	51	61,897	44	64,077
Saskatchewan	29	77,957	31	83,496	24	82,780
Alberta	86	312,485	82	344,452	104	375,756
British Columbia[1]	71	221,414	76	226,605	88	237,188
Yukon	0	2,551	0	2,550	3	2,603
Northwest Territories	5	4,393	2	4,490	3	4,731
Nunavut	5	2,199	4	2,339	4	2,487

(GDP is nominal and in millions of dollars)

(You may find that your values are different than the ones shown. Databases can be updated as better data becomes available. It is a little odd though, that homicides can do down. Zombies?)

C) Repeat steps A and B above with two other Canadian statistics that interest you.

© 2021 University of Alberta
Written by Lorne Priemaza