



TABLEAU

FORMATTING AND UPLOADING DATA

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It is important to ensure that data that is obtained from external sources is of good quality. If you choose to select data from online sources, choose websites that are reputable. Sites such as Statistics Canada or the World Health Organization are great resources. In the example throughout this tutorial we selected data from The Canadian Institute for Health Information. You are able to select from various file types when working with tableau.

Examples of acceptable data files include Excel files, PDF, or text files. Data can also be uploaded from servers such as Google Sheets.

The data needs to be in the correct format before uploading to Tableau

The data you want to use in Tableau should follow these guidelines.

1. The data should be granular as possible. This means that your data is detailed rather than just average values.
2. Ensure that there are no aggregated data (no total values)
3. All extra titles and notes should be removed. This excludes data headers.
4. Ensure that there are no blank cells or rows
5. The data should follow database format where it is row-oriented rather than column oriented.

Tableau is optimized to work with row-oriented tables. This can be done either in Tableau or before you upload your data.

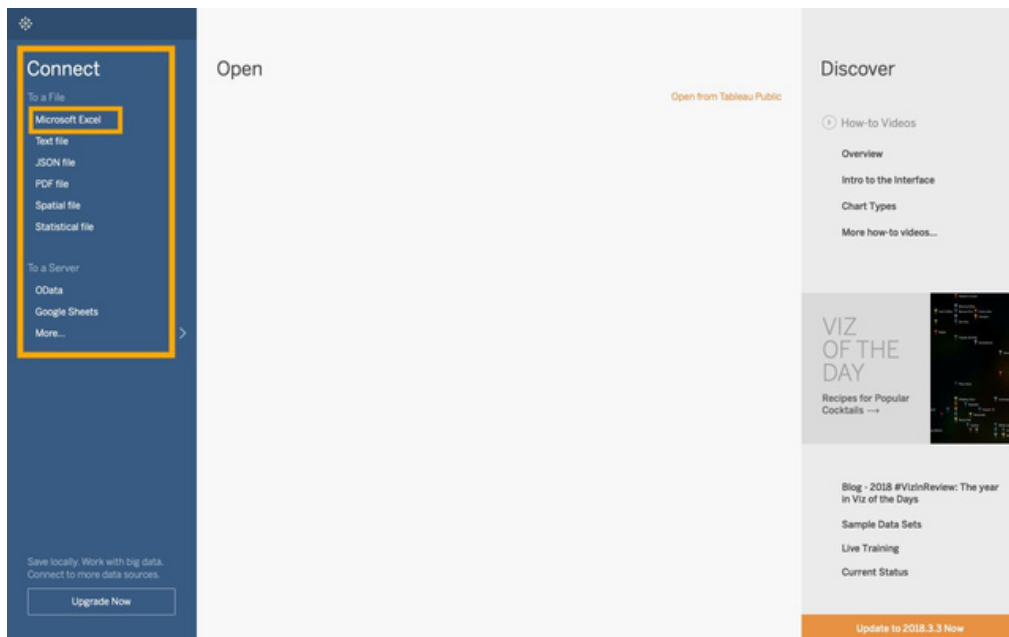
Here's an example of how to reformat the data

Original Data

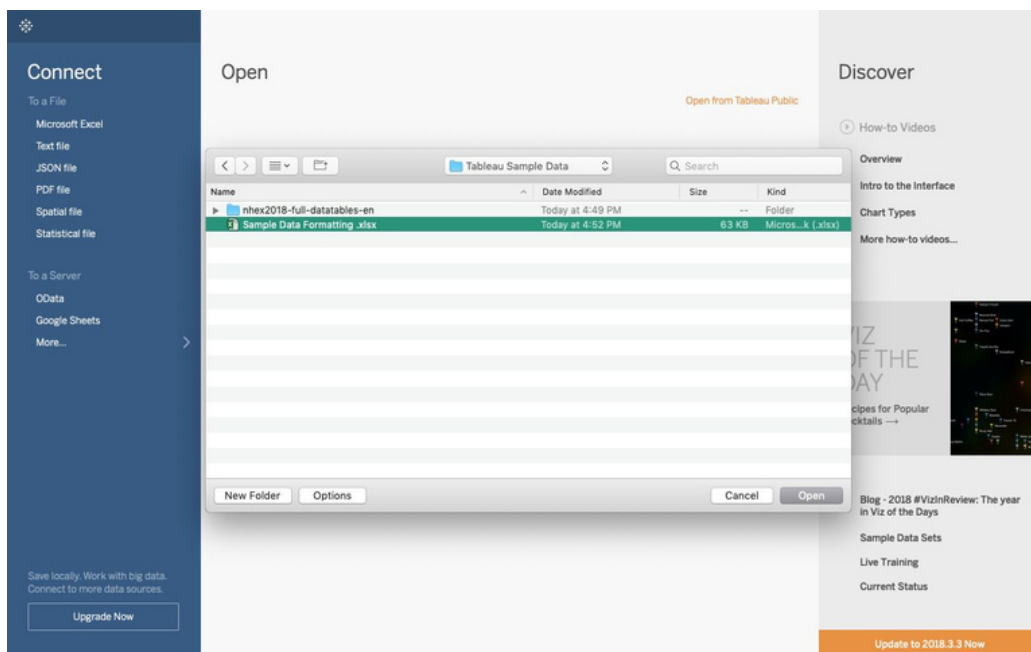
nhex-Series-B-2018-en														
Home Insert Page Layout Formulas Data Review View														
A1 fx Screen reader users: There are 5 tables on this tab, each with 2 sub-tables. The first table is called Table B.1.1: Total health expenditure														
A B C D E F G H I J K L M N O														
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Table B.1.1 Total health expenditure by province/territory and Canada, in millions of current dollars, 1975 to 2018														
Expenditure by year														
Year	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nun.	Canada
1975	264.5	59.2	362.5	277.5	3,376.8	4,422.8	566.3	441.2	992.3	1,383.4	15.9	35.1	---	12,199.4
1976	312.8	62.9	442.2	321.9	3,875.2	5,040.8	629.4	529.3	1,156.9	1,628.3	16.1	39.0	---	14,049.8
1977	362.9	68.7	469.1	358.9	4,200.7	5,524.6	706.0	587.4	1,272.1	1,831.8	16.5	49.3	---	15,450.0
1978	412.7	79.5	512.5	404.7	4,656.6	6,071.9	749.0	622.4	1,455.4	2,044.4	21.3	56.5	---	17,106.8
1979	473.3	96.6	573.0	470.0	5,149.6	6,728.0	823.3	703.5	1,731.0	2,288.6	23.9	59.0	---	19,169.7
1980	528.4	122.3	657.2	562.5	5,886.5	7,634.1	971.4	815.7	2,153.1	2,890.0	26.1	61.1	---	22,298.4
1981	621.3	136.4	798.8	681.2	6,867.8	8,803.0	1,153.2	949.0	2,623.7	3,430.4	28.2	73.8	---	26,276.7
1982	701.2	152.4	919.1	819.3	7,890.5	10,445.2	1,332.1	1,130.0	3,351.7	3,870.2	37.1	110.4	---	30,759.1
1983	773.7	164.5	1,004.9	884.6	8,675.3	11,850.0	1,478.6	1,257.6	3,622.1	4,195.7	38.0	123.5	---	34,039.6
1984	761.7	171.0	1,125.3	975.1	9,313.7	13,086.0	1,692.0	1,371.3	3,754.2	4,428.9	37.9	125.8	---	36,743.1
1985	785.8	181.2	1,232.5	1,026.2	10,031.9	14,442.8	1,726.5	1,528.8	4,070.4	4,637.9	39.7	138.5	---	39,842.4
1986	812.5	187.6	1,376.9	1,091.1	10,537.4	15,097.2	1,899.7	1,703.6	4,448.5	4,984.1	42.6	166.9	---	43,338.1
1987	881.6	202.9	1,560.6	1,194.0	11,268.6	17,866.4	1,980.2	1,767.8	4,499.9	5,341.3	44.7	181.3	---	46,789.2
1988	930.9	219.5	1,585.2	1,291.5	12,279.2	19,819.6	2,069.6	1,837.8	4,830.6	5,839.1	45.6	211.2	---	50,960.1
1989	991.6	239.3	1,791.8	1,406.1	13,290.3	21,970.8	2,297.4	2,052.9	5,349.8	6,509.7	49.5	232.9	---	56,086.2
1990	1,096.4	256.2	1,866.9	1,533.5	14,378.1	23,799.1	2,484.3	2,252.2	5,749.4	7,376.3	53.6	246.8	---	61,092.9
1991	1,153.2	280.6	1,970.0	1,629.3	15,762.2	26,184.3	2,576.0	2,319.8	6,062.5	8,127.4	62.6	279.5	---	66,437.4
1992	1,197.4	295.0	2,031.6	1,699.8	16,479.8	27,575.2	2,701.9	2,325.4	6,430.7	8,769.7	67.5	279.6	---	69,853.6
1993	1,208.1	311.7	2,025.0	1,739.1	16,903.2	28,074.9	2,749.1	2,301.9	6,520.4	9,297.4	80.1	287.1	---	71,519.1
1994	1,249.3	313.7	2,023.4	1,793.0	17,376.1	29,749.1	2,804.9	2,385.2	6,313.4	9,771.3	94.0	286.3	---	73,199.6
1995	1,269.4	327.4	2,061.3	1,819.3	17,516.9	29,286.7	2,915.5	2,442.3	6,092.5	10,113.2	95.8	295.0	---	74,237.4
1996	1,253.4	336.1	2,089.0	1,813.7	17,344.8	29,693.7	2,872.1	2,480.0	6,320.6	10,378.1	110.2	277.7	---	75,062.3
1997	1,305.4	340.3	2,364.2	1,857.2	16,016.3	30,795.1	3,100.5	2,656.2	7,082.1	10,832.0	103.3	289.0	---	76,741.5

In order to optimize the data for tableau, the null data cells needs to be replaced with zeros. The extra notes at the top must also be deleted.

Once all the data is in the correct format, you can upload the file to Tableau. From the home screen, click on the corresponding file format in the blue payne highlighted in the orange box.



Select the data file you need.



Once the data has loaded your screen will look like this.

Sheet1 (Sample Data Formatting)

Sort fields: Data source order

Show aliases: ☐ Show hidden fields: ☐ 44 rows

Year	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Unk.
1975	264.49	59.170	382.47	277.48	3,378.77	4,422.82	546.33	441.20	992.34	1,383.36	15.916	35.079	
1976	312.82	62.862	442.18	321.89	3,875.16	5,040.80	629.38	520.34	1,158.90	1,628.32	18.075	39.045	
1977	362.88	68.725	469.11	358.88	4,200.68	5,524.59	705.99	587.37	1,272.12	1,831.82	18.503	49.308	
1978	412.69	79.485	512.48	404.66	4,666.57	6,071.88	749.02	622.38	1,465.36	2,044.41	21.343	56.503	
1979	473.34	96.583	572.95	470.02	5,149.61	6,727.96	823.32	703.47	1,780.96	2,288.57	23.942	58.955	
1980	528.40	122.314	657.22	562.47	5,886.51	7,634.07	971.42	815.68	2,153.11	2,880.00	26.097	61.080	
1981	621.26	136.384	788.84	681.19	6,887.76	8,902.96	1,153.24	949.02	2,623.70	3,430.37	28.153	73.824	
1982	701.24	152.368	919.06	819.31	7,890.47	10,445.22	1,332.09	1,129.96	3,351.65	3,870.25	37.145	110.369	
1983	773.73	164.497	1,004.86	894.61	8,675.32	11,850.05	1,478.59	1,257.60	3,622.09	4,155.72	38.048	123.481	
1984	751.72	171.042	1,125.35	975.12	9,313.75	13,085.98	1,592.04	1,371.33	3,764.23	4,428.92	37.908	125.753	

From here, you can reformat the table so that it is row-oriented. While holding the shift key, select the data that you want to be grouped together. In this example we want three columns, the year, province, and the expenditure. To achieve this, we need to group together all the province columns. After highlighting all columns we want to be grouped, click on the dropdown menu that appears in the heading of any province columns, and select pivot table. After pivoting the table you can rename your columns and being to work with your data set.

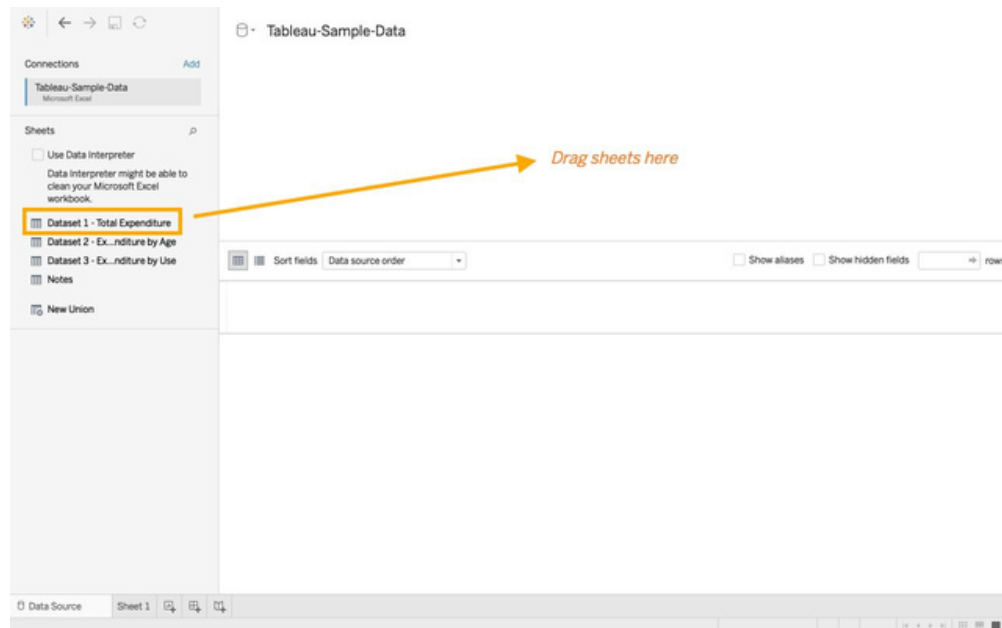
Sheet1 (Sample Data Formatting)

Sort fields: Data source order

Show aliases: ☐ Show hidden fields: ☐ 616 rows

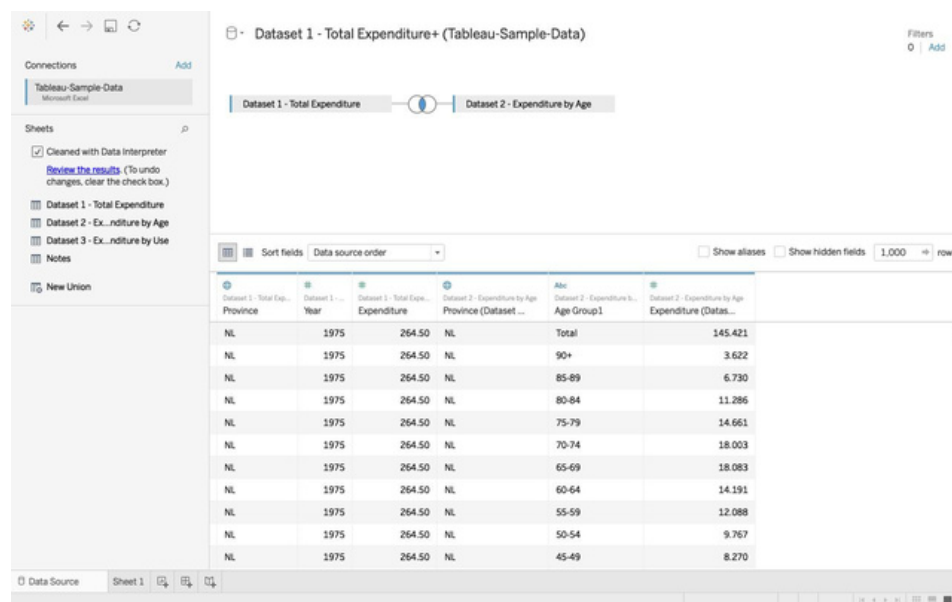
Alta.	Pivot Field Values	Year
Alta.	992.34	1975
Alta.	1,158.90	1976
Alta.	1,272.12	1977
Alta.	1,465.36	1978
Alta.	1,780.96	1979
Alta.	2,153.11	1980
Alta.	2,623.70	1981
Alta.	3,351.65	1982
Alta.	3,622.09	1983
Alta.	3,764.23	1984
Alta.	4,070.41	1985

Tableau will allow you to select which sheet from the file you want to work with if you have more than one sheet in your excel file. To select a sheet, click and drag the file into the open space on the top half of the screen. During this stage you also have the option to clean up your data by checking the box on the left hand side of the screen.



To combine a data set from two separate sheets, click and drag the two sheets you want to the center space on the top half of the screen.

ex) Combined data sets from different sheets on one excel file



To begin manipulating and working with the data, select a sheet at the bottom left of the screen.