

WesDaX[®]

Quick Start Guide • Version 1.0

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$$= \sum_{i=1}^n w_i y_i$$

$$v(\hat{\theta})$$

WesDaX® Quick Start Guide

WesDaX enables clients, collaborators, and Westat staff to run online analyses and display various types of reports quickly without programming and without directly exposing individual records. WesDaX (<https://www.wesdax.com>) provides a means of familiarizing yourself with WesDaX using real data. With WesDaX, you can create simple summary tables from complex surveys in seconds with only a few mouse clicks. This guide will show you how to get off to a quick start exploring the data.

There are five required steps to get a result:

- Step 1: Sign in
- Step 2: Click on “Create a Query”
- Step 3: Select a year
- Step 4: Select a topic
- Step 5: Click on “Get results”

A number of optional steps provide additional ways to examine the data:

- Step 6: Specify an additional topic to do a cross-tabulation
- Step 7: Click on an option to specify statistical options and/or population limits

Each of these steps is described in a separate section below.

Step 1: Sign in with an email address

You will see the initial WesDaX page.

The demo site has been set up with multiple public use datasets. For this guide, we use 2013 and 2014 data from the Behavioral Risk Factor Surveillance System (BRFSS), which is sponsored by the Centers for Disease Control. Once in WesDaX, click on “Explore our Public Data Suite!”, and then “Check out Open Access Data”. Click on “Welcome” on the left-hand side of the page. You can get more information about the BRFSS data from the “About the Data” link ① on the next screen (see Figure 1).

The “Documents” link ② on the left-hand side of the screen redirects to a page with links to download content created outside of WesDaX and demonstrates the ability for a project to disseminate information that may be of interest to end users.

For the purposes of this guide, we will use the “Create a Query” link ③ (see Figure 1).

Figure 1. Home screen



You can use WesDaX to summarize datasets in several ways including simple frequency counts and crosstabs. You can then display the summary information in a variety of tables, charts, and graphs. Steps 2 through 7 show you how to accomplish these tasks using WesDaX.

Step 2

Click on the “Create a Query” link ① in the left panel of the Home screen to see the START NEW QUERY screen (see Figure 2).

Figure 2. START NEW QUERY screen



The three tabs used when running analyses are YEAR, TOPIC(S), and GET RESULTS. Tabs OPTIONAL FILTERS and SAVED QUERIES let you produce more elaborate analyses and re-use previously used queries.

1. YEAR: Select 2013, 2014, or both (option “Include All”).
2. TOPICS: Choose the variable(s) to analyze.
3. GET RESULTS: View the results.
4. OPTIONAL FILTERS: Refine your query after you have seen initial results.
 - A. The POPULATION LIMITS panel lets you subset data to your population of interest.
 - B. The STATISTICAL OPTIONS panel lets you add another variable to compute means, percentiles, or ratios.
5. SAVED QUERIES: Re-use a previously created and saved query.

Step 3: Select a Year

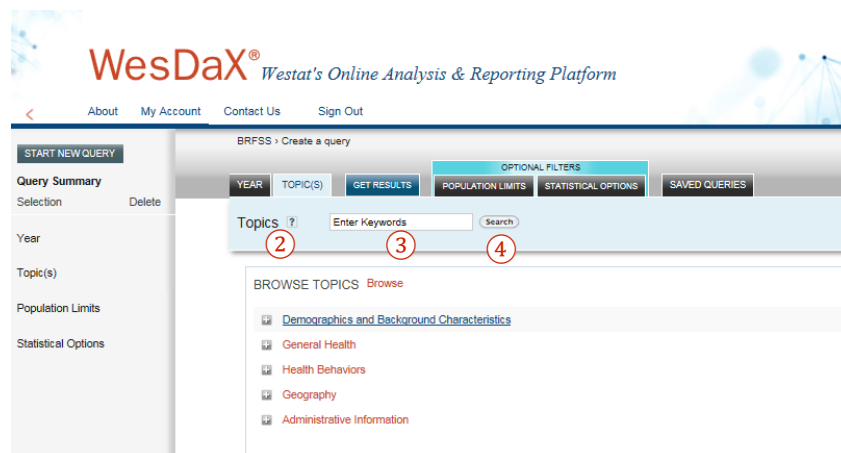
Click on the YEAR tab. Depending on the goals of your analysis, you might want to subset the data to a single year or all the years (option “Include All”) for which data are available. If you select all years, the data are aggregated. If you want to analyze only a single year, select that year.

For purposes of this demonstration, so you can produce the same results as in this tutorial, set the year selections to 2013 and 2014 selected.

Step 4: Topics

Step 4.1: Click on the “TOPIC(S)” tab ② in Figure 3. Your screen will now display the TOPIC(S) window. Here, you can review variables available in the dataset and select the ones you want to analyze.

Figure 3. BROWSE TOPICS screen



There are two ways to find and select the variables to use for analysis. If you know the variable name or a word in the questionnaire item, you can type it in the “Enter Keywords” ③ window and click “Search” ④.

Step 4.2: To find variables whose name begin with “smo”, enter those letters in the search window. The search will display two possible survey items, as shown in Figure 4.

Figure 4. Possible topics with "smo"

Select Topic Show More Information

Add	How long has it been since you smoked?	+
	listed under Health Behaviors	
5 Add	Do you smoke every day, some days, or not at all	+
	listed under Health Behaviors	

You can get detailed information about the topic(s) in a list by clicking on the “+” sign to the right of the topic.

Step 4.3: Click on the “+” sign next to “Do you smoke every day, some days, or not at all.” You will learn that the variable name in the dataset is “SMOKDAY2,” and that there are five possible response options, including “Refused” and “Don’t know/Not sure.”

Step 4.4: To select the variable “Do you smoke every day, some days, or not at all,” click the green “Add” button ⑤ (see Figure 4) to the left of the variable. The Topic(s) item in the left hand panel will expand to show the selected question. A red “X” to the right of the question will let you remove the item if you no longer need it.

Step 5: Get Results

Step 5.1: Click the GET RESULTS tab ⑥ (see Figure 5). You will get the frequency distribution of the variable (see Figure 6). The table includes both frequency counts and the percentages of observations in each row. Note that the QUERY SUMMARY, above the table, tells you the Topic(s) included in the table and the Population Limits (in this example, “None”). Below the table, you will see LEGEND that shows what is displayed in the table and NOTES indicating the source of the data (see Figure 6).

Figure 5. BROWSE TOPICS screen

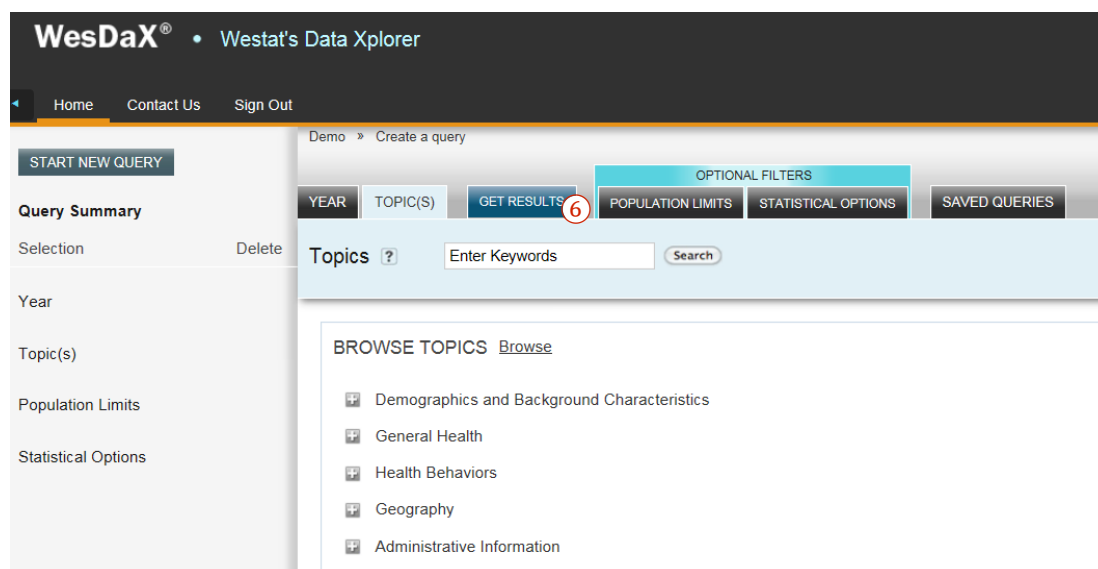
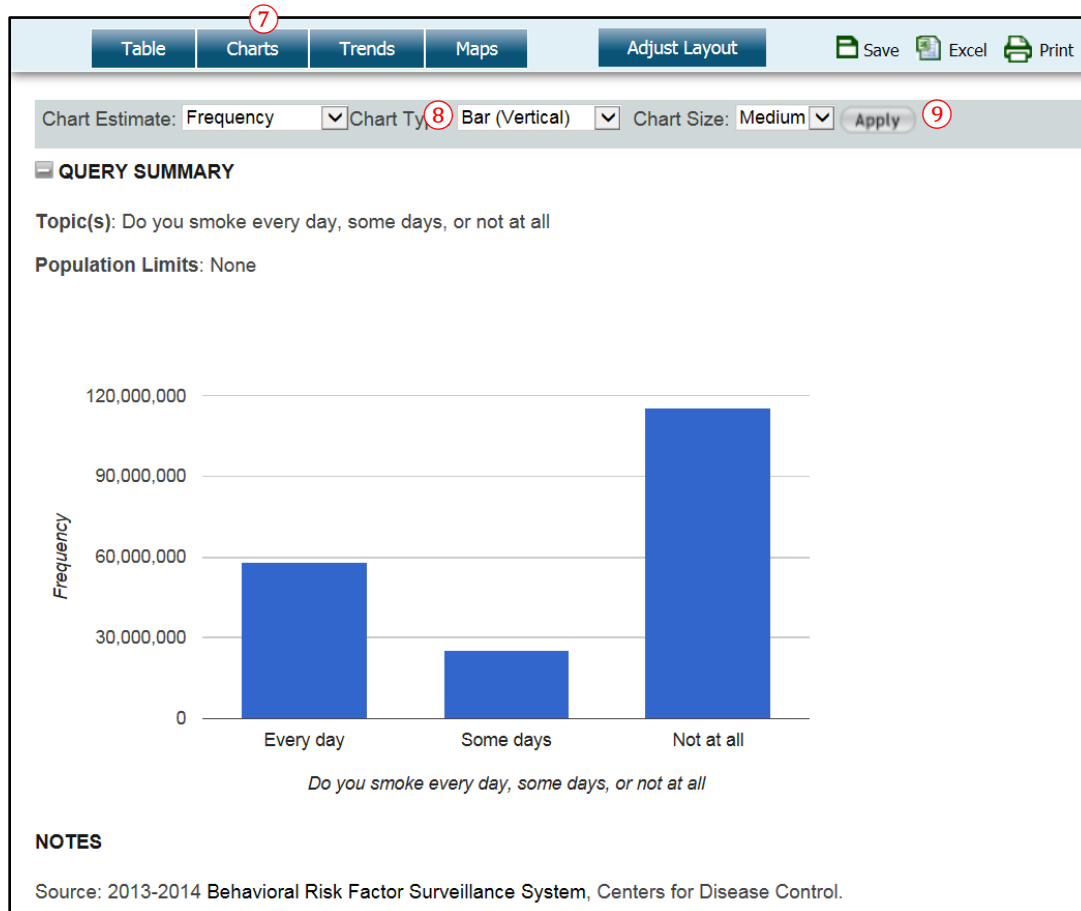


Figure 6. Frequency distribution for the question “Do you smoke every day, some days, or not at all”

QUERY SUMMARY		
Topic(s): Do you smoke every day, some days, or not at all		
Population Limits: None		
Do you smoke every day, some days, or not at all	Every day	58,153,586 29.2%
	Some days	25,446,005 12.8%
	Not at all	115,528,741 58.0%
	TOTAL	199,128,333 100.0%
LEGEND		
The table displays:		
<ul style="list-style-type: none"> Frequency Cell Percentage 		
NOTES		
Source: 2013-2014 Behavioral Risk Factor Surveillance System, Centers for Disease Control.		

Step 5.2: Charting (optional). To see the results displayed as a bar chart, click the “Charts” tab ⁷, located next to the “Table” tab, under “Query Results.” WesDaX automatically generates a bar chart showing the results (see Figure 7).

Figure 7. Bar chart showing smoking frequency responses



If you would like to see the results displayed in another format, select the chart type you want from the “Chart Type” drop-down list ⁸ and click Apply ⁹.

Step 5.3: To view only the percentages without the frequency counts, go to the “Statistical Options” tab ¹⁰ (see Figure 8). In the left box, titled “Cell Estimates,” uncheck “Frequency.” ¹¹ Click on the GET RESULTS tab ¹², and WesDaX will generate a simplified table. (Similarly, to see only the frequencies, you can uncheck “Cell Percentage”.)

Figure 8. Statistical options tab with Frequency unchecked

The screenshot displays the 'Statistical Options' tab in the WesDaX interface. The top navigation bar includes 'YEAR', 'TOPIC(S)', 'GET RESULTS' (highlighted with a red circle 12), 'POPULATION LIMITS', 'STATISTICAL OPTIONS' (highlighted with a red circle 10), and 'SAVED QUERIES'. The main content area is titled 'Statistical Options' and contains three panels:

- Cell Estimates** (with a help icon):
 - ☒ Basic Estimates (check all that apply)
 - ☐ Frequency (marked with a red circle 11)
 - ☒ Cell Percentage
 - ☐ Row Percentage
 - ☐ Column Percentage
 - ☐ Statistics of Another Variable(s)
 - ☐ Mean
 - ☐ Total
 - ☐ Median
 - ☐ Percentile (input: 25, range: 1-99)
 - ☐ Ratio
- Missing Values** (with a help icon):
 - ☐ Yes
 - ☒ No
- Statistical tests** (with a help icon):
 - (check all that apply)
 - ☒ Chi-Square
 - Approach: ☐ RS2 ☐ RS3
 - ☐ Two-sample t-test
 - [Select t-tests](#)

Below the main panels, there are additional options for 'Precision Measures' (with a help icon):

- (check all that apply)
- ☐ Confidence Interval
 - Approach: ☐ Standard ☐ Wilson
 - Confidence Level: ☐ 90% ☐ 95% ☐ 99%
- ☐ Standard Error
- ☐ Relative Standard Error (RSE)

Selecting only “Cell Percentage” will produce the table in Figure 9.

Figure 9. Table of mean values of responses to smoking question

QUERY SUMMARY

Topic(s): Do you smoke every day, some days, or not at all
Population Limits: None

Do you smoke every day, some days, or not at all	Every day	29.2%
	Some days	12.8%
	Not at all	58.0%
	TOTAL	100.0%

LEGEND

The table displays:

- Cell Percentage

NOTES

Source: 2013-2014 Behavioral Risk Factor Surveillance System, Centers for Disease Control.

Step 6: Cross tabulations (optional)

To see how the counts (or percentages) are distributed by gender, click on the TOPICS tab. If you haven't removed the question, you will see that "Do you smoke every day, some days, or not at all" is already selected as the Row Topic (Figure 10).

You can now select a column variable. Under BROWSE TOPICS, click the "+" sign ¹³ to the left of "Demographics and Background Characteristics." This will expand the available demographic variables. Figure 11 shows a partial list of demographic variables.

Figure 10. TOPICS window after selecting the "Do you smoke" question

SELECTED TOPICS

Row Topic ☒ ? Do you smoke every day, [Combine/Reorder Response](#)
some days, or not at all [Categories](#)

BROWSE TOPICS [Browse](#)

¹³ ☐ Demographics and Background Characteristics

☐ General Health







☐ Health Behaviors

☐ Geography

☐ Administrative Information

Figure 11. Partial list of demographic variables

BROWSE TOPICS [Browse](#)

Select Topic	Demographics and Background Characteristics	Show More Information
 14	Are you male or female listed under Demographics and Background Characteristics	
	Imputed Age collapsed over 80 listed under Demographics and Background Characteristics	
	Education listed under Demographics and Background Characteristics	

Step 6.1: Add the variable “Are you male or female” by clicking the green Add button 14 (see Figure 11).

Step 6.2: Click on GET RESULTS to see the new table (Figure 12).

Figure 12. Smoking responses by gender

QUERY SUMMARY

Topic(s): Do you smoke every day, some days, or not at all; Are you male or female

Population Limits: None

		Are you male or female		
		Male	Female	TOTAL
Do you smoke every day, some days, or not at all	Every day	31,521,879	26,631,707	58,153,586
	Some days	14,604,379	10,841,626	25,446,005
	Not at all	64,252,720	51,276,021	115,528,741
	TOTAL	110,378,979	88,749,354	199,128,333

Step 7: OPTIONAL FILTERS: Statistical Options and Population Limits

WesDaX allows you to replace the counts in the table produced above (Figure 12) with statistics calculated on a third variable.

Step 7.1: Getting Means

To generate a table with the means of a third variable by row and by column variables, as shown in Figure 16, use the STATISTICAL OPTIONS tab:

- A. Select STATISTICAL OPTIONS ¹⁵ under OPTIONAL FILTERS (see Figure 13),
- B. Click on “Statistics of Another Variable(s),” ¹⁶ and
- C. Check the “Mean” ¹⁷ option.

The “Statistical Options” screen will now resemble Figure 13.

Figure 13. STATISTICAL OPTIONS screen after checking “Statistics of Another Variable(s)”

The screenshot shows the 'STATISTICAL OPTIONS' screen. At the top, there are tabs: 'YEAR', 'TOPIC(S)', 'GET RESULTS', 'POPULATION LIMITS', 'STATISTICAL OPTIONS' (highlighted with a red circle 15), and 'SAVED QUERIES'. Below the tabs, the 'Statistical Options' section is visible. It contains three main panels: 'Cell Estimates', 'Missing Values', and 'Statistical tests'. In the 'Cell Estimates' panel, 'Statistics of Another Variable(s)' is selected with a red circle 16, and 'Mean' is selected with a red circle 17. The 'ANALYSIS VARIABLES' section has a search bar. The 'BROWSE ANALYSIS VARIABLES' section shows 'Demographics and Background Characteristics' with a red circle 18 next to it.

You now need to specify the analysis variable whose mean will be calculated. To do this, click on the “+” sign ¹⁸ next to “Demographics and Background Characteristics” at the bottom of the

screen to see a list of numeric variables (only numeric variables can be used to produce means). Next, select the item “Imputed Age collapsed over 80” by clicking the green Add button ¹⁹ (see Figure 14).

Figure 14. STATISTICAL OPTIONS screen showing possible variables for mean

Statistical Options ?

Cell Estimates ?

☐ Basic Estimates
(check all that apply)

☐ Frequency

☐ Cell Percentage

☐ Row Percentage

☐ Column Percentage

☒ Statistics of Another Variable(s)

☒ Mean

☐ Total

☐ Median

☐ Percentile 25 1-99

☐ Ratio

ANALYSIS VARIABLES

Enter Keywords Search

Missing Values ?

☐ Yes

☒ No

Precision Measures ?

(check all that apply)

☐ Confidence Interval

Approach

☐ Standard ☐ Wilson

Confidence Level

☐ 90% ☐ 95% ☐ 99%

☐ Standard Error

☐ Relative Standard Error (RSE)

Statistical tests ?

(check all that apply)

☐ Chi-Square

Approach

☐ RS2 ☐ RS3

☐ Two-sample t-test

[Select t-tests](#)

Browse Analysis Variables

Select Topic **Demographics and Background Characteristics** Show More Information

Add ¹⁹ **Imputed Age collapsed over 80** +

listed under [Demographics and Background Characteristics](#)

Add **Number of Adults in House** +

listed under [Demographics and Background Characteristics](#)

The WesDaX window should now look like Figure 15. Note that the “Imputed Age collapsed over 80 (Mean)” ②① now appears in the left-hand column.

Figure 15. STATISTICAL OPTIONS window after selecting an analysis variable

START NEW QUERY

Query Summary

Selection Delete

Year

Topic(s)

Do you smoke every day, some days, or not at all ✖

Are you male or female ✖

Population Limits

Statistical Options

Imputed Age collapsed over 80 (Mean) ✖ ②①

Demo > Create a query

YEAR TOPIC(S) GET RESULTS POPULATION LIMITS STATISTICAL OPTICS

Statistical Options ?

Cell Estimates ?

☐ Basic Estimates
(check all that apply)

☐ Frequency

☐ Cell Percentage

☐ Row Percentage

☐ Column Percentage

☒ Statistics of Another Variable(s)

☒ Mean

☐ Total

☐ Median

☐ Percentile 25 1-99

☐ Ratio

ANALYSIS VARIABLES

Enter Keywords Search

SELECTED TOPICS

Analysis Variable ✖ ? Imputed Age collapsed over 80

BROWSE ANALYSIS VARIABLES

- Demographics and Background Characteristics
- General Health
- Health Behaviors

Click on GET RESULTS to see the table in Figure 16. This table is similar to Figure 12 but has the mean ages of the respondents in each cell instead of counts.

Figure 16. Mean ages for smoking responses by gender

QUERY SUMMARY

Topic(s): Do you smoke every day, some days, or not at all; Are you male or female

Population Limits: None

Statistical Options - Analysis Variables: Imputed Age collapsed over 80 (Mean)

		Are you male or female		
		Male	Female	TOTAL
Do you smoke every day, some days, or not at all	Every day	43.4	44.7	44.0
	Some days	39.7	44.1	41.6
	Not at all	54.8	55.5	55.1
	TOTAL	49.6	50.8	50.1

LEGEND

The table displays:

- Mean

NOTES

Source: 2013-2014 Behavioral Risk Factor Surveillance System, Centers for Disease Control.

Step 7.2: Population Limits

The POPULATION LIMITS tab ⁽²¹⁾, under OPTIONAL FILTERS, displays options to restrict the results to specific subpopulations (Figure 17). For instance, to produce the same table as that in Figure 16 while subsetting the data to non-Hispanic Whites, uncheck the “Include All” box under “Imputed race” and check the “White, Non-Hispanic” option. When you click on “Get Results,” ⁽²²⁾ WesDaX will generate the table depicted in Figure 18.

Figure 17. Population Limits tab with White, Non-Hispanic race option selected

The screenshot shows the WesDaX interface with the 'POPULATION LIMITS' tab selected under the 'OPTIONAL FILTERS' section. The 'GET RESULTS' button is circled with a red 22. The 'POPULATION LIMITS' tab is circled with a red 21. The 'Population Limits' section contains two main filter areas: 'Are you male or female' and 'Imputed race'. In the 'Are you male or female' section, the 'Include All' checkbox is checked, and both 'Male' and 'Female' checkboxes are also checked. In the 'Imputed race' section, the 'Include All' checkbox is unchecked, and the 'White, Non-Hispanic' checkbox is checked. Below these sections are 'SEARCH FILTERS' with a text input field and a 'Search' button, and 'BROWSE FILTERS' with a 'Browse' link and a list of filter categories: 'Query Topic(s)', 'Recently Used Filters', 'Demographics and Background Characteristics', 'General Health', 'Health Behaviors', 'Geography', and 'Administrative Information'.

YEAR TOPIC(S) GET RESULTS POPULATION LIMITS STATISTICAL OPTIONS SAVED QUERIES

Population Limits ?

Are you male or female

- ☒ Include All
 - ☒ Male
 - ☒ Female

Imputed race

- ☐ Include All
 - ☒ White, Non-Hispanic
 - ☐ Black, Non-Hispanic
 - ☐ Asian, Non-Hispanic
 - ☐ American Indian/Alaskan Native, Non-Hispanic
 - ☐ Hispanic
 - ☐ Other race, Non-Hispanic

SEARCH FILTERS

Enter Keywords Search

BROWSE FILTERS Browse

- + Query Topic(s)
- + Recently Used Filters
- + Demographics and Background Characteristics
- + General Health
- + Health Behaviors
- + Geography
- + Administrative Information

Figure 18. Mean ages for smoking responses by gender – White, Non-Hispanic

Query Results ?

Table Charts Trends Maps Adjust Layout Save Excel Print

QUERY SUMMARY

Topic(s): Do you smoke every day, some days, or not at all; Are you male or female

Population Limits: Imputed race: White, Non-Hispanic

Statistical Options - Analysis Variables: Imputed Age collapsed over 80 (Mean)

		Are you male or female		
		Male	Female	TOTAL
Do you smoke every day, some days, or not at all	Every day	44.1	45.2	44.6
	Some days	40.4	45.0	42.6
	Not at all	56.4	56.5	56.4
	TOTAL	51.2	52.0	51.6

LEGEND

The table displays:

- Mean

NOTES

Source: 2013-2014 Behavioral Risk Factor Surveillance System, Centers for Disease Control.

This concludes the WesDaX Quick Start Guide. There are many other exciting features you can explore. Since WesDaX is a table and graph generating tool that does not allow altering the underlying data, you can try different WesDaX options and features without worrying about modifying the data.

Hint: Try clicking on the Adjust Layout and Charts tabs above a results table.

Hint: Click on START NEW QUERY to discard all your existing settings and start with a clean slate.

Hint: After generating a table, click on the “Excel” option to export the data to Excel.

Hint: After generating a table, click on the Charts tab to generate a bar chart with the same information as the table. Explore the effect of selecting different chart types.

Hint: After generating a table, click on “Save” to save a copy of your query for future use. You can see the list of saved queries by clicking on the SAVED QUERIES tab. After retrieving a saved query, you can modify it in the same way as when it was initially created. For instance, you can choose to add confidence intervals and standard errors to a table that did not have them in the saved query or to remove them if they were in the saved query. The modified query will not overwrite the original saved query.