



Manual:

How to Use V-Dem Online Analysis Tools

March 2015

Contents:

1. Introduction	2
2. Variable and Country Graphs	3
3. How to create a graph, step-by-step	4
4. Drill-Down Feature	5
5. Motion Charts	6
6. More Examples	7
7. How to Interpret Graphs	8

1. Introduction

The online analysis tools were specially designed for V-Dem data. They allow users to analyze 400+ indicators and indices of democracy in 120 countries from 1900 to the present day. Data for all countries of the world will be available by December 2015. The reliable, precise nature of the indicators as well as their lengthy historical coverage should be useful not just to scholars studying why democracy succeeds or fails, but also to governments and NGOs.

The V-Dem online analysis is composed of three tools:

Variable Graph: This tool is used to compare multiple countries for one index or one variable at a time.

Country Graphs: This tool can be used to display multiple variables and/or indices for one country over time.

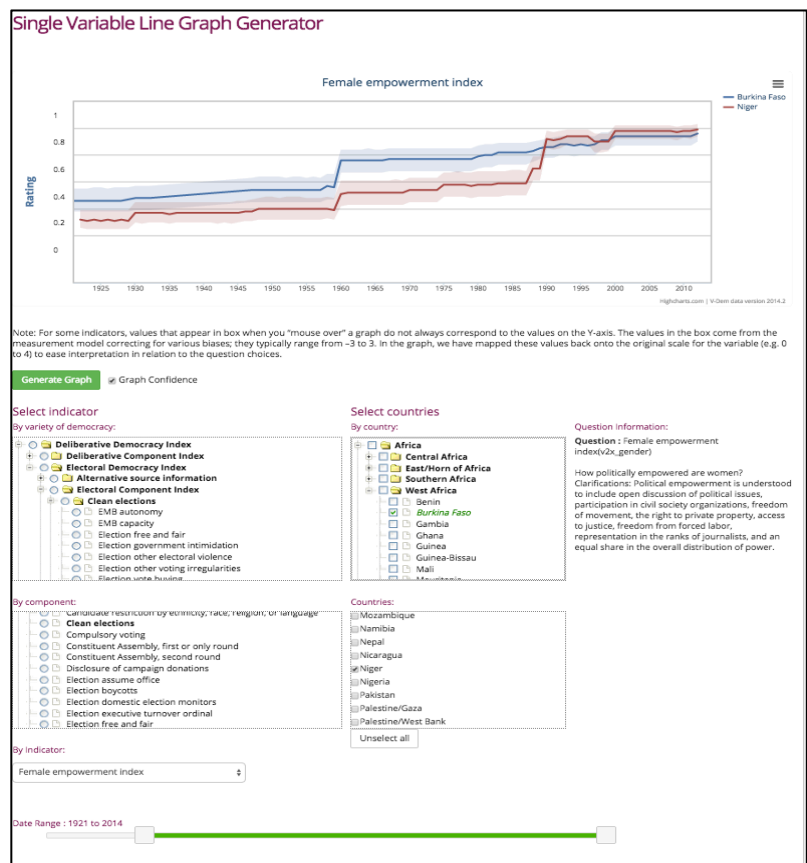
Motion Charts: This tool enables users to explore how the relationship between two variables changes over time.

Tips! The V-Dem database contains a large number of indicators. In order to identify indicators within a certain theme/area of interest: go to the V-Dem codebook, enter search mode and search on keywords/concepts within the theme you wish to explore. The search will take you to the relevant indicators. Keep the codebook open in a separate window while using the online tools, this will make it easier to navigate among the V-Dem indicators. You find the codebook via: <https://v-dem.net/DemoComp/en/reference/version-4-mar-2015>

2. Variable and Country Graphs

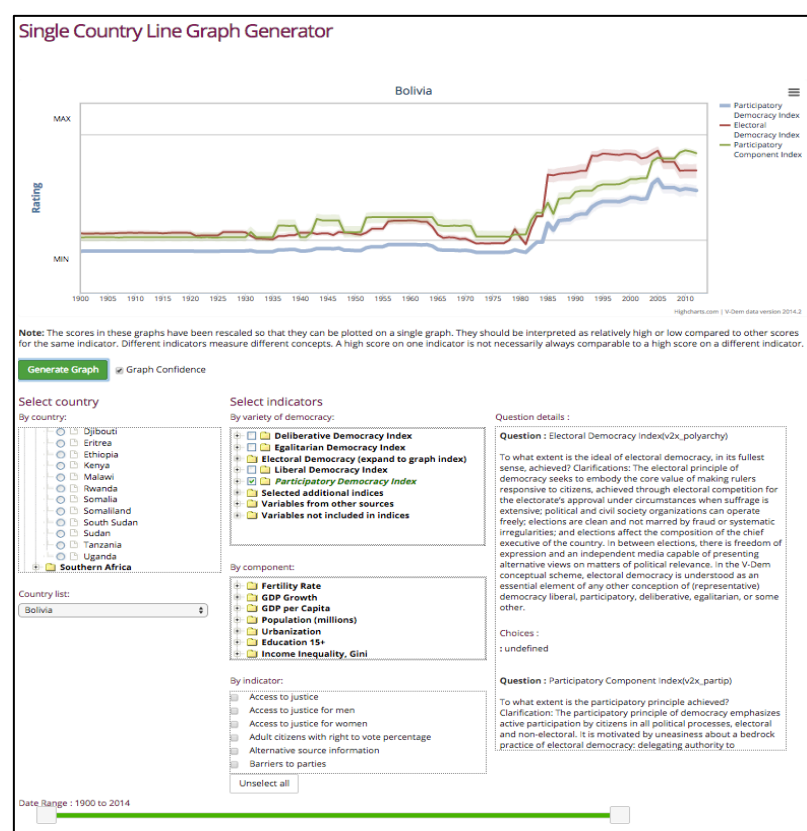
Variable Graph:

1. Select **ONE** indicator; these are listed by variety of democracy (top-level aggregations, the main principles of democracy), by component (meso-level aggregation, made up by combinations of indicators) and in alphabetical order by indicator (lowest level of aggregation).
2. Choose **SEVERAL** countries
3. The question and answer options will be displayed on the right hand side of the page.
4. Adjust your **date range**
5. Press **"Generate Graph"**
6. Tick the box **"Graph Confidence"** to display the coder confidence. Your graph is now ready and will be displayed.

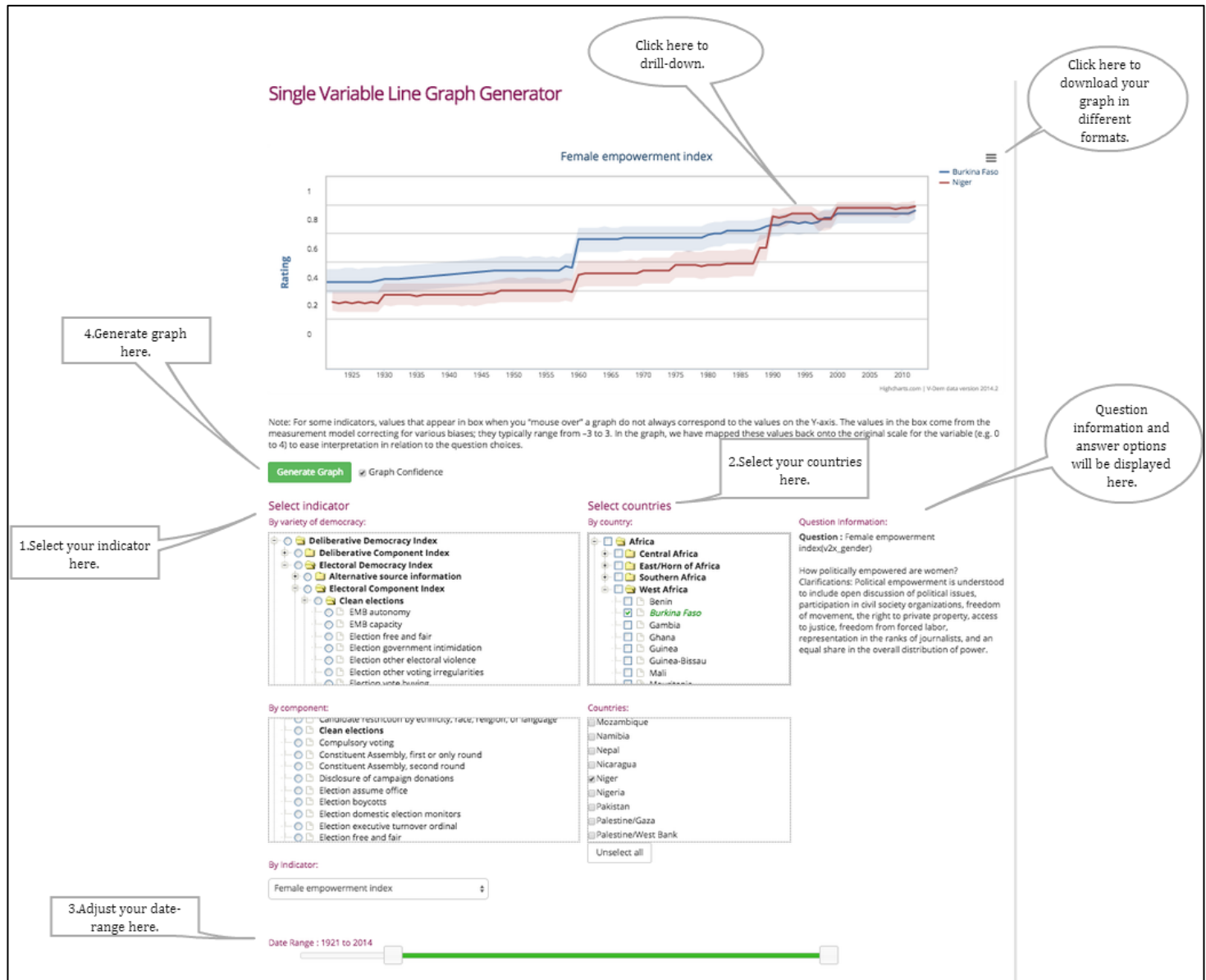


Country Graph:

1. Select **ONE** country.
2. Select **SEVERAL** indicators either by variety of democracy, by component, by indicator or from the alphabetical list provided.
3. Adjust your **date range**.
4. Press **"Generate Graph"**
5. Tick the box **"Graph Confidence"** to display the coder confidence. Your graph is now ready and will be displayed.



3. How to Create a Graph, Step-by-Step



The example above illustrates a comparison of the female empowerment index between Burkina Faso and Niger. The image displays step-by-step instructions on how to create your graph but also what other information that is available when one creates a graph.

Step 1: Select you indicator.

Step 2: Select your countries. This allows for country comparison. Several countries can be graphed at the same time for the same indicator or index.

Step 3: Adjust your date range. The graph can display the full range of dates during which information is available for the specific country or indicator. However this can also be adjusted according to preference.

Step 4: To display the graph, press the green 'Generate Graph' button.

Additional Information:

- The question and answer options are displayed on the right hand side of the page.
- To activate the 'Drill Down' function, click on the on the graph.
- On the upper right hand side, the option to download the graph in different formats is available.

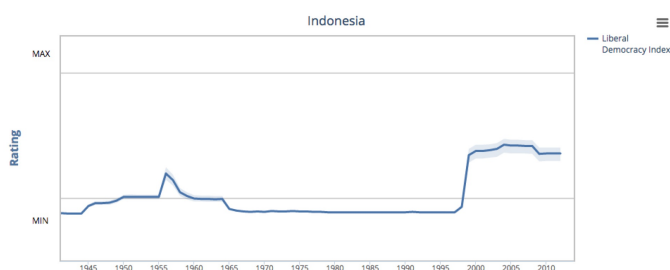
4. Drill-Down Feature

The graph generators include a drill-down feature. It offers the opportunity to interactively reveal the individual indicators included in indices while keeping the index in view.

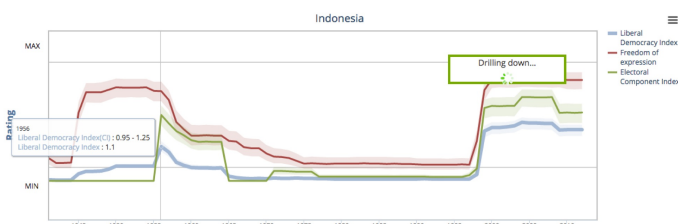
Below we have selected an example that illustrates the Liberal Democracy Index in Indonesia (blue line in first picture). To activate the drill-down, just click the line of the index-line in the graph. The box “Drilling down” shows up. The graphing tool will then draw all the different components of the liberal democracy index. The index line in blue fades slightly and the component lines are drawn in other colors, as in the second picture below. Finally, you can select and unselect which of the components you want to display on the graph by clicking on the text labels on the right-hand side, as shown in in the lower-right graph.

The drill-down option is a very useful part of our online analysis tool. Policy makers can use it to generate more detailed reports, projects can focus on specific sectors in a country and efforts can be prioritized in term of program support.

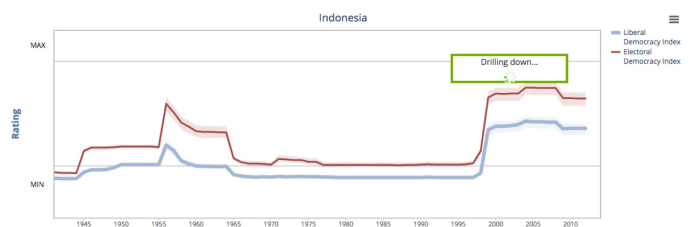
Single Country Line Graph Generator



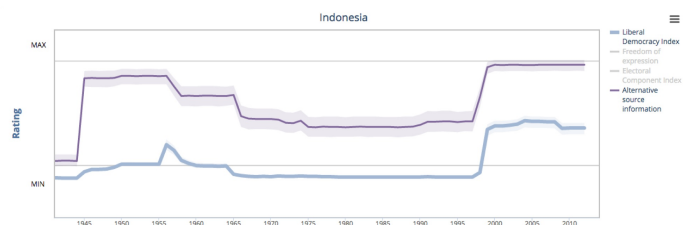
Single Country Line Graph Generator



Single Country Line Graph Generator



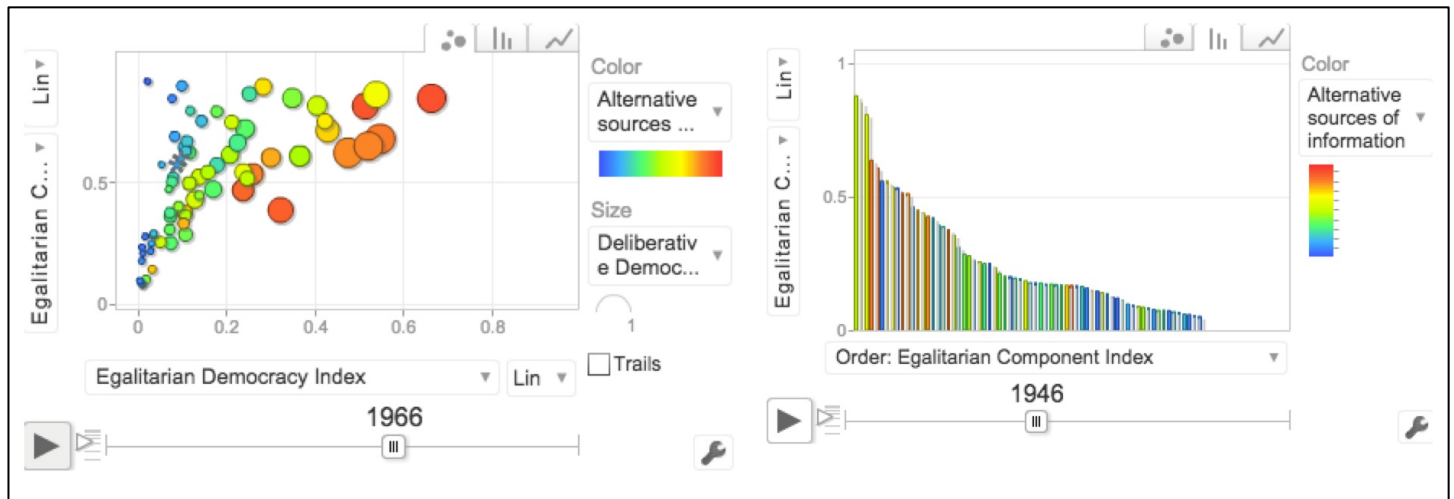
Single Country Line Graph Generator



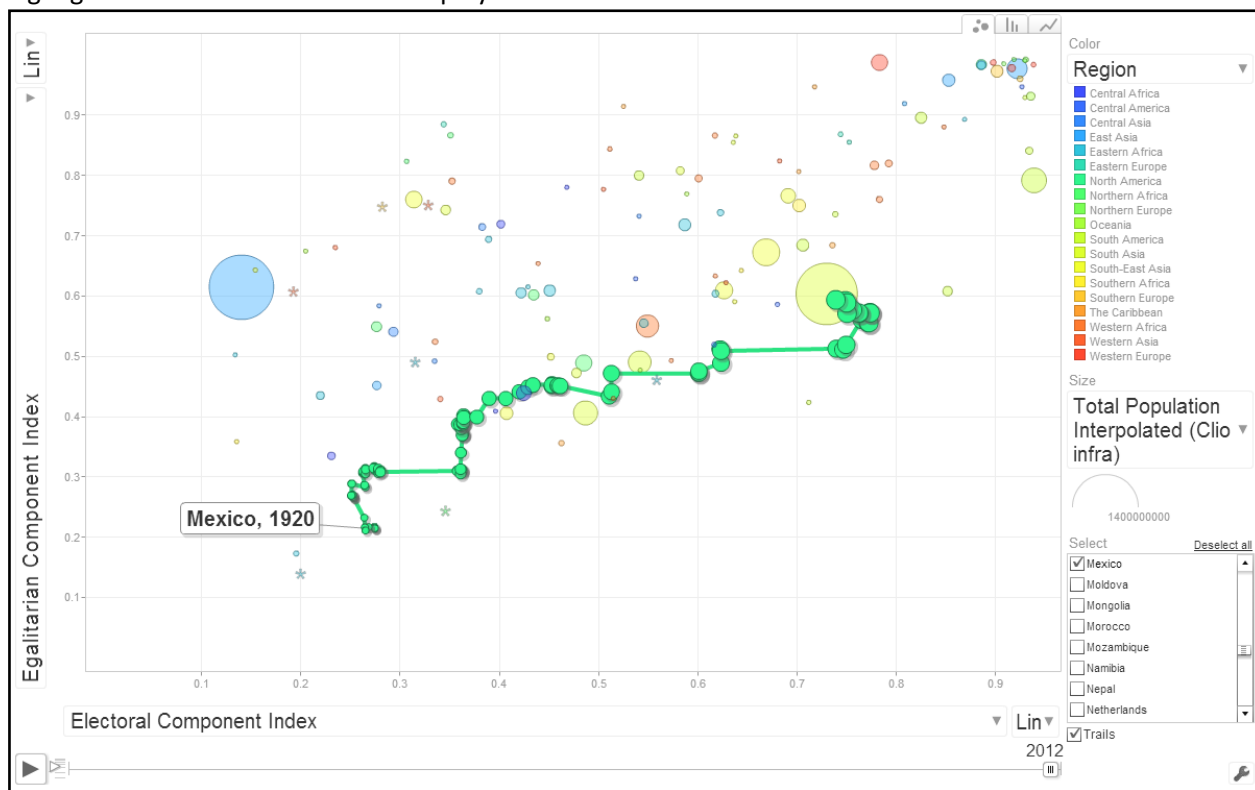
Tips! In the V-Dem codebook you find the table ‘Indicators and Components Included in Indices’, which displays how indicators, components and indices relate. This makes it easier to understand the structure and relations between a given set of indicators and indices, this is especially relevant when exploring indices and the drill-down feature.

5. Motion Charts

The motion chart allows users to *watch* the development of a country or a region over time. Choose your preferred parameters (region/country and indicator), then click “play” in the bottom-left-hand corner and watch the developments unfold. Motion charts can be paused and a year can be selected in the time line to view information on specific years.



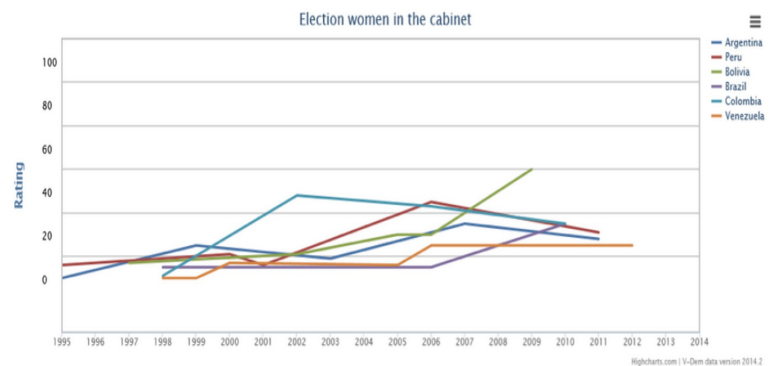
To increase the size of the motion chart, hit ctrl++ or cmd++ in your browser a few times. This makes it possible to see all the elements easily, including a full list of the available regions and countries, and to choose which ones to highlight and track as the animation plays.



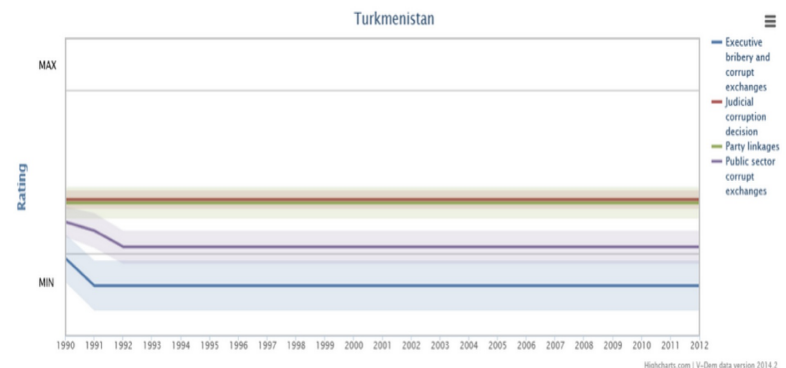
6. Visual Examples

As the only global data set on democracy, V-Dem provides indicators that can be used not just by scholars but also by practitioners, policy makers, politicians as well as individuals. Our vast collections of specific indicators enable users to do country and regional comparisons, observe the development over time of countries and much more. Below we have selected three examples to demonstrate the diversity and practicality of V-Dem data. For more examples, see the V-Dem homepage and go to “Graph of the Week” under “News”.

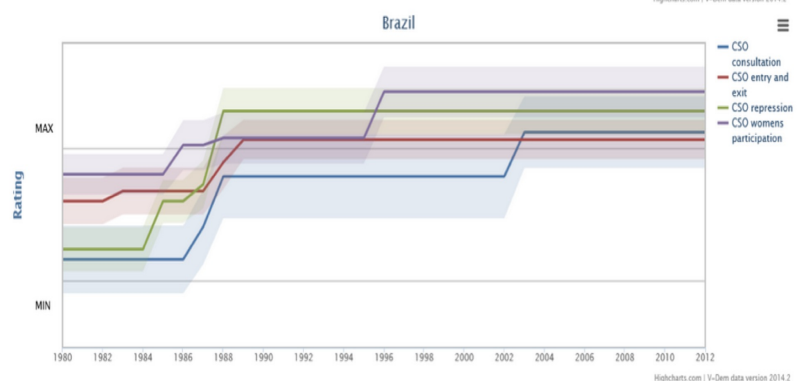
Individual issues of interest and their development can be tracked using the online graph generator. The example on the right observes and compares the development of election women in cabinet over a period of 10 years in a few selected countries in Latin America.



A number of indicators measuring different forms of clientelism and corruption within various sectors are available as part of our online analysis tool. Turkmenistan was ranked as one of the world's top ten most corrupt countries in the Corruption Perception Index, provided by Transparency International in 2014. The lack of development in this area since 1990 can be observed on the adjoining graph.



V-Dem offers 11 indicators on civil society organizations (CSOs), hopefully valuable to the CSO research community and policymakers. Four of them are included in this graph, where the role of the CSOs over time in Brazil can be examined. Apart from an overall increase in all four indicators over time, a quite sharp change can be noted around 1984-1988, around the time of Brazil's most recent transition to democracy. In addition, women's participation in CSOs seems to have experienced a leap in 1995-1996, while the CSO consultation increased significantly in 2002-2004.

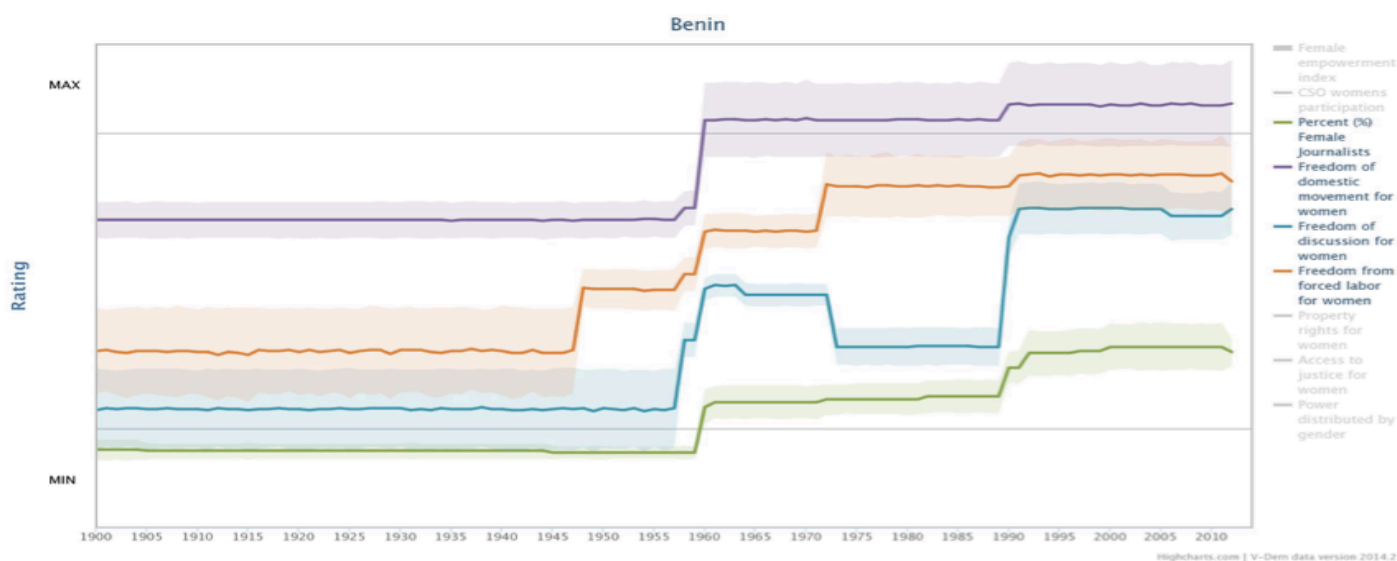


7. How to Interpret Graphs

V-Dem online analysis tools are specifically designed for our data, therefore the generated graphs differ from customary line graphs. Bellow we have provided information on how to interpret V-Dem generated graphs.

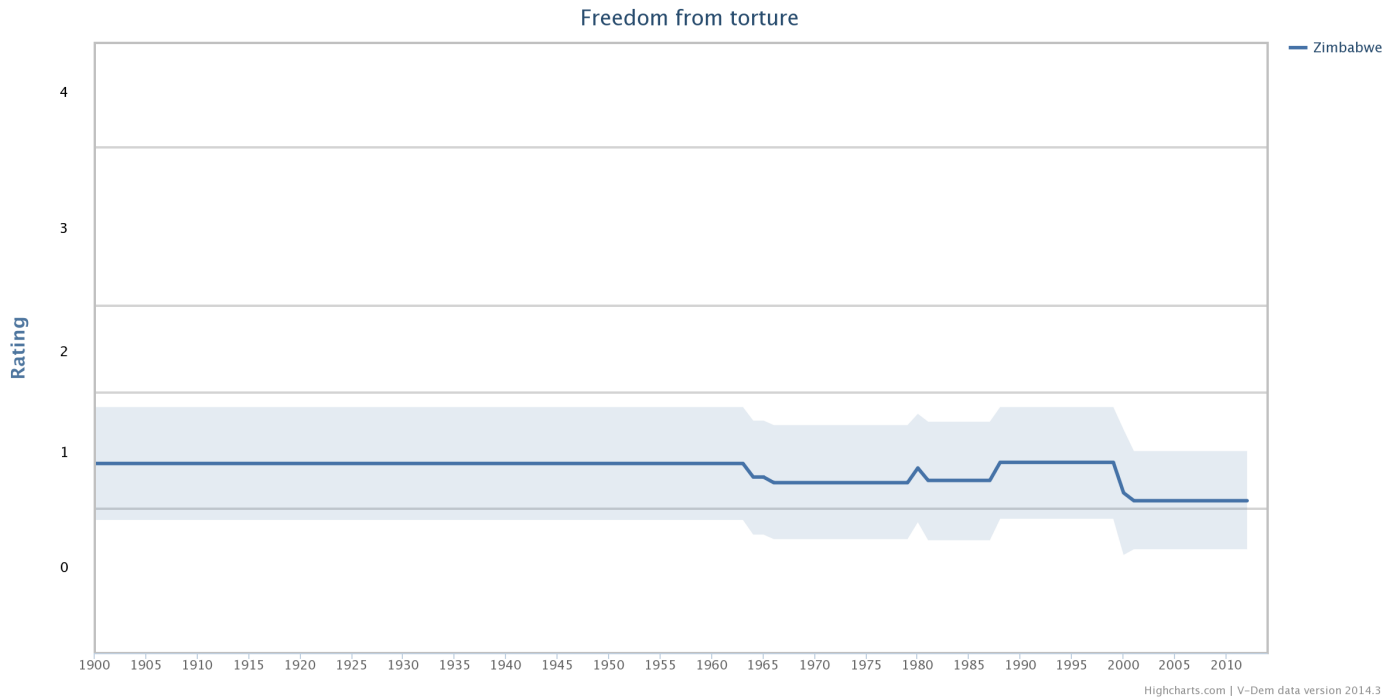
Confidence Intervals

Confidence intervals are displayed as a shadow above and below the graph, as can be seen in the graph below. The bounds are one standard deviation above and below the graph, meaning that in effect about 68 percent of the true values would be found inside these intervals. Confidence intervals are only available for indicators coded by multiple coders (Country Expert coding). The more expert ratings obtained, the more they were in agreement, and the more historical variation there was for that question for that particular country, the narrower the confidence intervals are.



Variable graphs

When just one variable is graphed, the scores are displayed relative to the values in the original indicator. Therefore, scale for percentages is 0-20-40-60-80-100 and in the "Election women in the cabinet" example at the beginning of this section. The scale for a multiple-choice question could be 0-1-2-3-4, as in the example below. However, these numbers refer to the range of values between the gridlines, not the gridlines themselves. In other words, the gridlines demarcate the boundaries between 0 and 1, 1 and 2, and so on. A line below the gridline separating 1 and 2 is more likely to have a true value of 1; a value above that line is more likely to be a 2; and so on for other ranges. For ordinal variables, these lines are not evenly spaced because the actual distances between scores are not the same. In the example below, on the dimension of Freedom from torture, it is easier to move from the range of 1 to the range of 3 than to move from the range of 2 to the range of 4, as the range of values consistent with a 3 is very wide.



Country graphs

The graph below will be used to explain how one can correctly interpret a V-Dem country graph. When multiple variables are combined in the same line graph their values cannot be plotted in a strictly comparable manner. In order to make it possible to display multiple variables in the same graph, we transform them so that the gridline below the maximum and the gridline above the minimum are all the same: 0 and 4, respectively. This does not make these values comparable in any but a very rough sense. A relatively high value on one variable may have the same transformed score as a relatively low value on a different value. Ultimately, whether these scores are “relatively democratic” or “relatively undemocratic” depends on the meaning of those scores.

In the example below, the bottom gridline, above the “MIN” label, corresponds to the difference between a score of 0 and a score of 1. The top gridline, below the “MAX” label, corresponds to the threshold between the highest score and the second-highest score on the scale.

In the example displayed below, the two indicators belong to different scales and their answer alternatives differ. Health equality ranges from 0 to 4 while Range of Consultation varies from 0 to 5, but here the two are standardized and graphed on the same scale.

Zimbabwe

