



***How to use: ONLINE TOOLS***  
**&**  
***How to interpret: RESULTS FROM GRAPHS***

*Institutional Homes:*



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## V-Dem Online Analysis Tools

The tools allow users to analyze more than 300 indicators and indices of democracy in 68 countries from the year 1900 to present day. Data for all countries of the world will be available by fall 2015.

One can generate interactive **graphs** and **motion charts** for one country or for a group of countries, at: <https://v-dem.net/DemoComp/en/data/analysis>.

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## 1. Single Variable Graph

This tool compares **one** indicator across **several** countries. To create a graph, select parameters (countries to be compared, indicator, date range,) and press “Generate Graph”. Indicators are listed by indexes of varieties of democracy, by component as well as in alphabetical order. The questions as well as the answer options are displayed under “Question details”, next to the parameters. Tick the box “Graph Confidence” to display the coder confidence. To the right is an example of a comparison between Afghanistan, Benin and Brazil on the indicator *Power distribution by gender* (1900-2011).



## 2. Single Country Graph

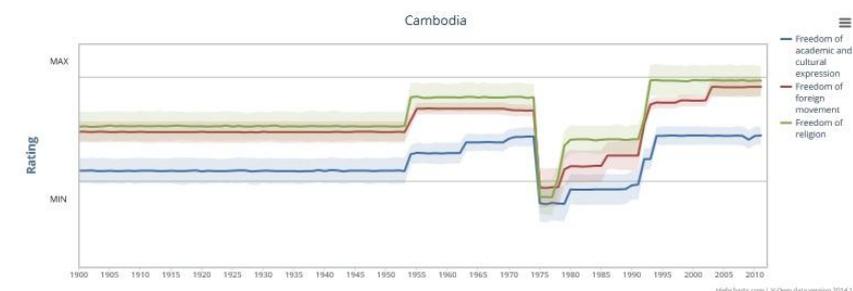
This graph allows for comparisons of *several* indicators in *one* country. To create a graph, select parameters (country, indicators to be compared, date range) and press

“Generate Graph”.

Indicators are listed by indexes of varieties of democracy, by component as well as in alphabetical order. The questions as well as the answer options are displayed under

“Question details”, next to the parameters. Tick the box “Graph Confidence” to display the coder confidence.

To the right is an example comparing the indicators *Freedom of academic and cultural expression*, *Freedom of foreign movements* and *Freedom of religion* in Cambodia (1900 – 2011).



Note: The scores in these graphs have been rescaled so that they can be plotted on a single graph. They should be interpreted as relatively high or low compared to other scores for the same indicator. It is not meaningful to compare scores on different indicators, as they measure different concepts. A high score on one indicator is not necessarily comparable to a high score on a different indicator.

Generate Graph  Graph Confidence

Select country  
By country: Africa  
Central Africa  
Angola  
Burundi  
Cameroun  
Central African Republic  
Chad  
Congo, Democratic Republic of  
Equatorial Guinea  
Gabon

Country list:  
Cambodia

Select indicators  
By variety of democracy:  
Core Civil Society Index  
Deliberative Democracy Index  
Deliberative Component Index  
Electoral Democracy Index  
Alternative source information  
Electoral Component Index  
Freedom of expression  
Freedom of academic and cultural expression

By component:  
Civil Liberties  
Access to Justice  
Access to justice for men  
Access to justice for women  
Equality before the law and individual liberty  
Freedom from forced labor for men

By indicator:  
Freedom of domestic movement for men  
Freedom of domestic movement for women  
Freedom of expression  
Freedom of foreign movement  
Freedom of religion

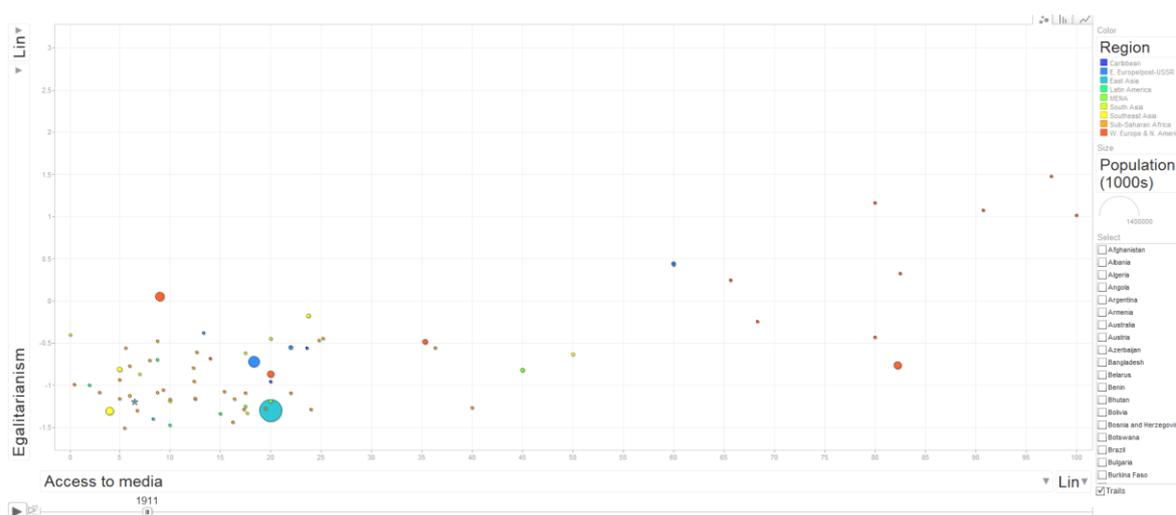
Unselect all

Question details:  
Question : Freedom of academic and cultural expression(V2ciacfree)  
Is there academic freedom and freedom of cultural expression related to political issues?  
Choices :  
0 : Not respected by public authorities. Censorship and intimidation are frequent. Academic activities and cultural expressions are severely restricted or controlled by the government.  
1 : Weakly respected by public authorities. Academic freedom and freedom of cultural expression are practiced occasionally, but direct criticism of the government is mostly met with repression.  
2 : Somewhat respected by public authorities. Academic freedom and freedom of cultural expression are practiced routinely, but strong criticism of the government is sometimes met with repression.  
3 : Mostly respected by public authorities. There are few limitations on academic freedom and freedom of cultural expression, and resulting sanctions tend to be infrequent and soft.  
4 : Fully respected by public authorities. There are no restrictions on academic freedom or cultural expression.

Date Range : 1900 to 2012

### 3. Motion Charts

The motion chart allows users to *watch* the development of a country or a region over time. Choose 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.



### 4. How to Interpret Graphs

Below follows a short guide on how to interpret graphs generated by V-Dem analysis tools. We suggest that users read this in order to understand what information graphs convey and how they differ from line graphs one might be accustomed to.

#### Confidence Intervals

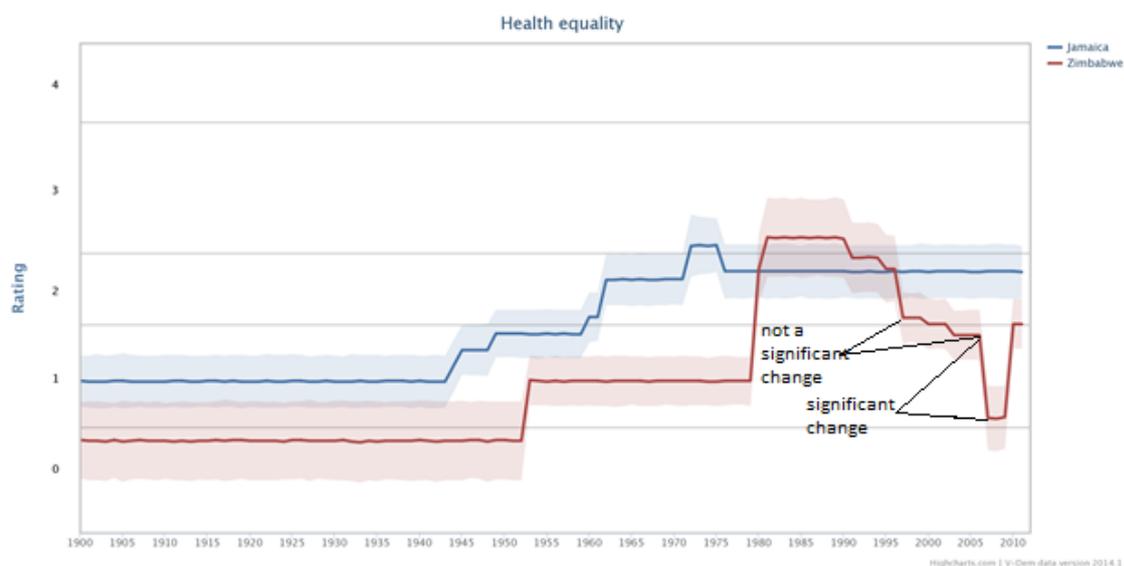
By default, the line graphs display a confidence interval around the line when one is available. Confidence intervals are available for variables coded by multiple country experts. The confidence interval is displayed as a shadow above and below the graphed line, in the same color but partially transparent. The bounds are one standard deviation above and below the line, meaning that in effect about 68 percent of the true values would be found inside these intervals. These intervals are calculated by country-year. The more expert ratings obtained, the more they were in agreement, and the more historical variation there was for that country-question combination, the narrower the confidence intervals are. The confidence intervals tell us how much a score must change to count as a significant change.

In this graph, for example, Health equality did not decline significantly from 1997 to 2006, but it did from 2006 to 2007 (at a 68 percent confidence level).

Estimates for base-level indicators were generated by a latent variable measurement model; those for indices (which combine several base-level indicators) were generated via Bayesian factor analysis. Estimates will change as more data is collected and our measurement models become more complex. Each set of estimates will be given a version number, such as 2014.1, and earlier versions will be archived for future reference.

### Single-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; 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 above, on the dimension of Health equality, it is easier to move from

the range of 0 to the range of 2 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.

### Single-country graphs

When multiple variables are combined in the same line graph, it is not possible to plot their values in a strictly comparable way, for the same reason that it is impossible to say what degree of freedom of the press is in some sense “equivalent” to a degree of gender equality. Scatterplots, as in the motion chart tool, are better for such comparisons because they do not presume such dubious equivalence. Furthermore, each variable would have its own set of gridlines, which would introduce confusion. However, for some purposes it is desirable to have multiple-variable line graphs, so we provide this option. 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: 3.5 and 0.5, respectively, on a 0-4 scale. 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 and what one’s standard of democracy is. This information is better ascertained from the Question Details in the single-variable graphs.

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 on the scale and the second-highest score on the scale.

For Health equality, the MAX threshold divides:

*3: Relatively equal. Basic health care is overall equal in quality but because of poor-quality healthcare, five to ten percent (%) of citizens’ ability to exercise their political rights as adult citizens is undermined.*

from

*4: Equal. Basic health care is equal in quality and less than five percent (%) of citizens cannot exercise their basic political rights as adult citizens.*

For Educational equality, the MAX threshold divides:

*4: Consultation includes the former plus a select range of society/labor/business representatives.*

from

*5: Consultation engages elites from essentially all parts of the political spectrum and all politically relevant sectors of society and business.*

