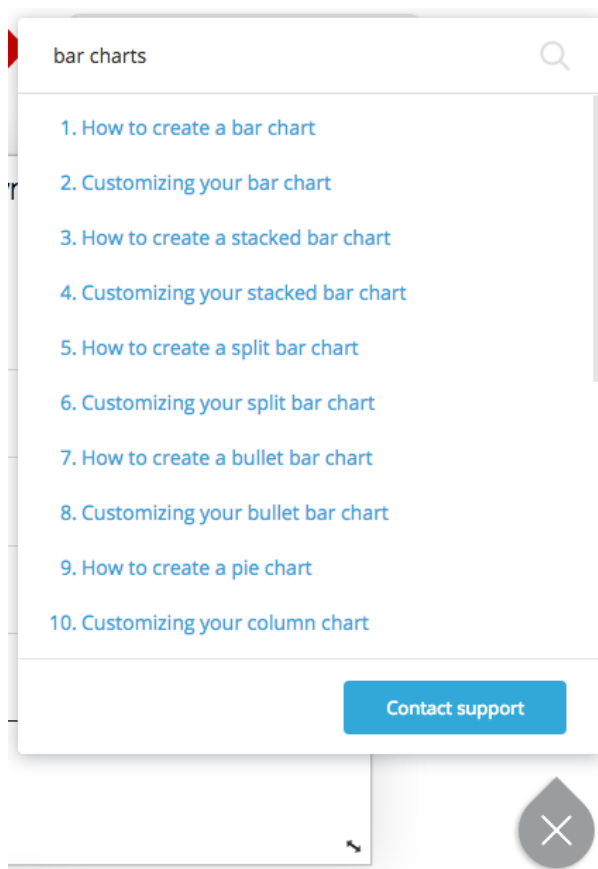


Using Datawrapper

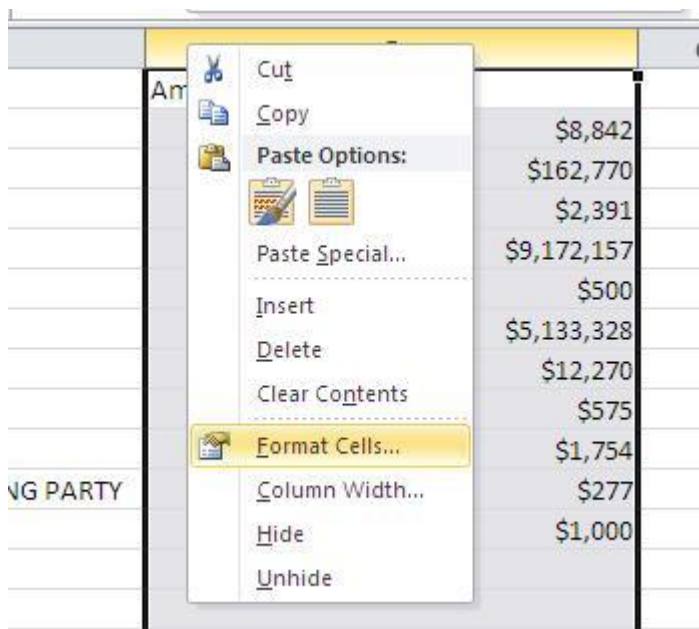
- **Datawrapper** ([Datawrapper.de](https://datawrapper.de)) is a great tool for making simple interactive graphics. It runs completely in your web browser so there's no need to install anything on your computer to use it.
- Datawrapper works really well with the types of summary tables you're likely to get after analyzing your data with Excel Pivot Tables, for example a list of how much money B.C. political parties received in donation last year.
- **IMPORTANT NOTE #1:** Datawrapper is a relatively new tool that is being constantly improved upon by its developers. One downside of this is that the steps for making a graphic may change slightly from what's described below. If something doesn't look exactly as described here, don't be alarmed. It's probably only changed slightly. Datawrapper also has a blue question mark icon on every page where you can access its help files. Just click on the question mark and type some keywords about what you're stuck on.



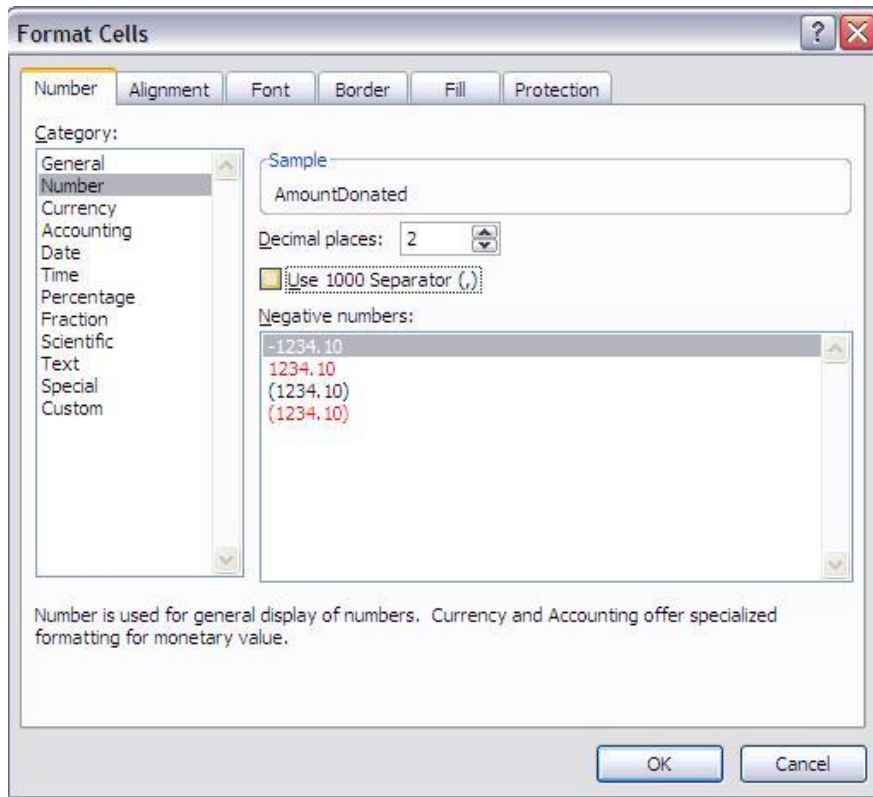
- **IMPORTANT NOTE #2:** The biggest quirk of Datawrapper is that, for it to function properly, it needs **clean, unformatted numbers**. Numbers will often be displayed in a spreadsheet with commas separating the thousands or dollar signs for currencies (ie. \$1,356 instead of 1356). This confuses Datawrapper and will screw up the presentation of your chart.

- **IMPORTANT NOTE #3:** Datawrapper can be a bit buggy sometimes and sometimes will stop responding to your clicks. If this happens, just click on one of the four buttons at the top (so if you're on "Visualize", click on "Check & Describe", then back to "Visualize", and that will usually reset it).

- Right click on the column (or columns) of data in your spreadsheet that contain numbers and choose "Format Cells"



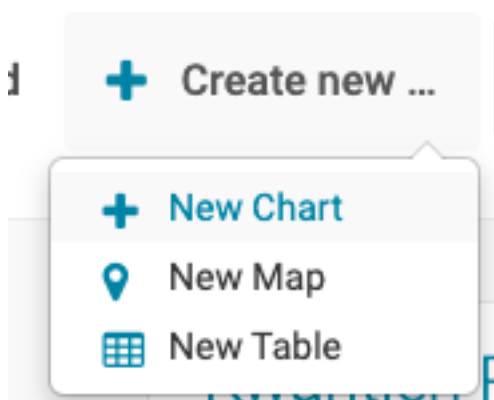
- From here, you want to select "Number" from the left hand side and make sure that the "Use 1000 Separator" box is **unchecked**. You should also set the "Decimal place" value to 2. For lots of types of data — like the total amount of donations to each party — you don't really care about what's after the decimal place. But for some types of data, like percentages, it matters a lot because all of your values will actually be less than 1 (ie. 55% will actually be 0.55 in your spreadsheet). So setting it to two decimal places is a good habit to get into.



- Now go to [Datawrapper.de](https://datawrapper.de) and click on the “Login/Sign up” box in the top right to create a new account.

MAKING A SIMPLE BAR CHART IN DATAWRAPPER

- Once your account is created, go to the Datawrapper home page and click on the **+ Create New...** button and select New Chart.



- From here you’ll be given a box where you can upload your data. You have the option of uploading your data as a CSV or XLSX fil. But if you’ve formatted your number columns properly, there’s an easier option: just copy and paste the data into Datawrapper by selecting the data you want to use in your chart in Excel, clicking CTRL-

C/CMD-C to copy and then CTRL-V/CMD-V in the data box on Datawrapper. It should look something like this:

This chart is in [Kwantlen Po...ersity](#)

1 Upload Data 2 Check & Describe 3 Visualize 4 Publish & Embed

How do you want to upload your data?

Copy & paste data table XLS/CSV upload Connect Google Sheet Link external dataset

Copy & paste your data

Select your data (including header row/column) in Excel or LibreOffice and paste it in the text field. You can also upload a CSV or Excel file from your computer.

If you just want to try Datawrapper, here's a list of some example datasets

Party	AmountDonated
ADVOCATIONAL PARTY	8842
BC CONSERVATIVE PARTY	162770
BC FIRST	2391
BC LIBERAL PARTY	9172157
BC MARIJUANA PARTY	500
BC NDP	5133328
COMMUNIST PARTY OF BC	12270
LIBERTARIAN	575
THE PLATINUM PARTY	1754
UNPARTY: THE CONSENSUS-BUILDING PARTY	277
YPP	1000

- Click Proceed and you should see how Datawrapper has structured your data.

1 Upload Data ✓ 2 Check & Describe 3 Visualize 4 Publish & Embed

Make sure the data looks right

Please make sure that Datawrapper interprets your data correctly. In the table, **number** columns should be shown in blue, **dates** in green and **text** in black. A **red** cell indicates a problem in your dataset that needs to be fixed.

cells contain no data.

First row as label

Output locale

Defines decimal and thousand separators as well as translation of month and weekday names.

English (en-US)

← Back Proceed →

Click on table header to edit column properties

Sort view by... Search data table

	A	B
1	Party	AmountDonated
2	ADVOCATIONAL PARTY	8,842
3	BC CONSERVATIVE PARTY	162,770
4	BC FIRST	2,391
5	BC LIBERAL PARTY	9,172,157
6	BC MARIJUANA PARTY	500
7	BC NDP	5,133,328
8	COMMUNIST PARTY OF BC	12,270
9	LIBERTARIAN	575
10	THE PLATINUM PARTY	1,754
11	UNPARTY: THE CONSENSUS-BUILDING PARTY	277
12	YPP	1,000

↔ Swap rows and columns (transpose) Add column... Revert changes...

- Datawrapper often does a good job of guessing how your data should be structured but this is where you have an opportunity to tweak it a bit.
- You should, in most cases have the “First row as label” box checked. This is basically just telling Datawrapper that your spreadsheet has column headings and that the party names are descriptions not numbers.
- As it says on the screen, you should check to make sure that any numbers in your data (in this case, the AmountDonated field) are shown in blue. If they’re not, you may have forgotten to clean up the formatting in Excel to remove things like commas and currency symbols.
- You also want to tell Datawrapper how it should display numbers in your data. Click on the column heading for AmountDonated and you’ll be given some options for how the numbers should be displayed.

Edit column "AmountDonated"

Column type

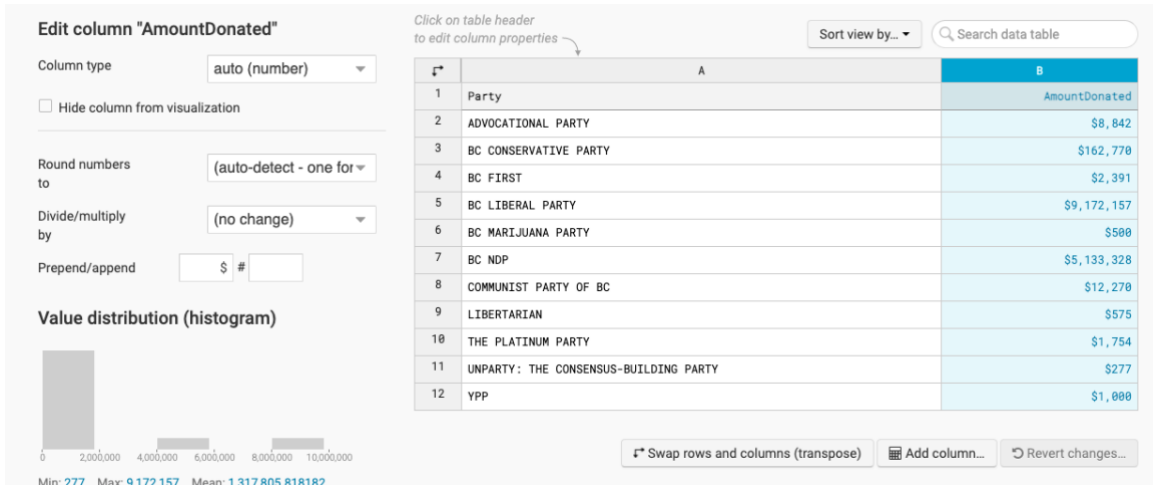
Hide column from visualization

Round numbers to

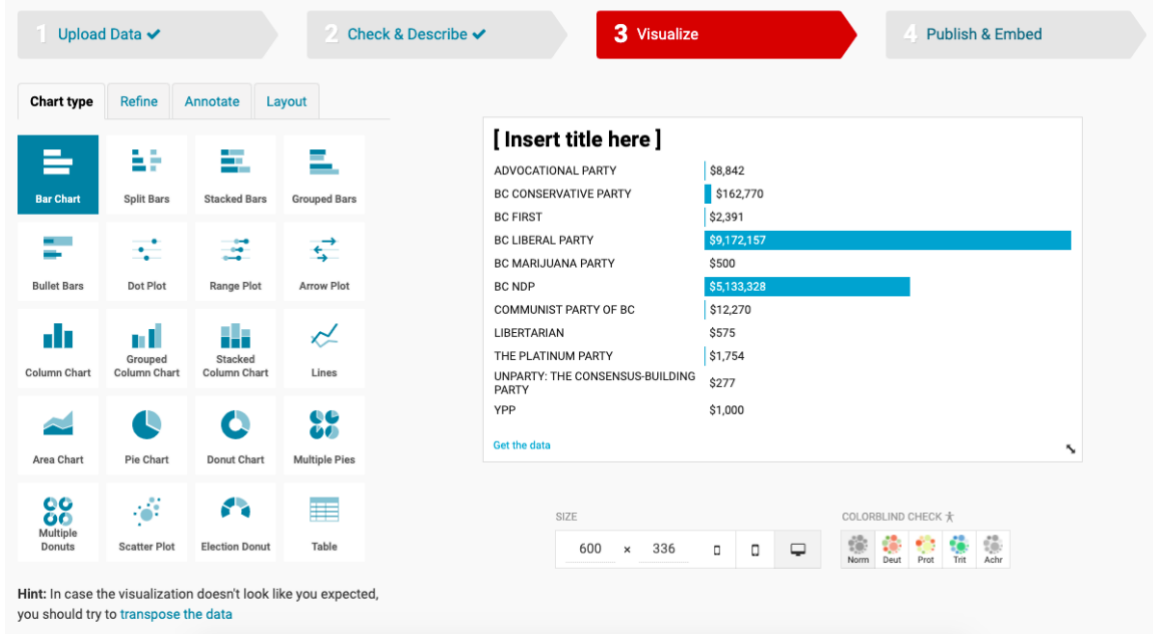
Divide/multiply by

Prepend/append #

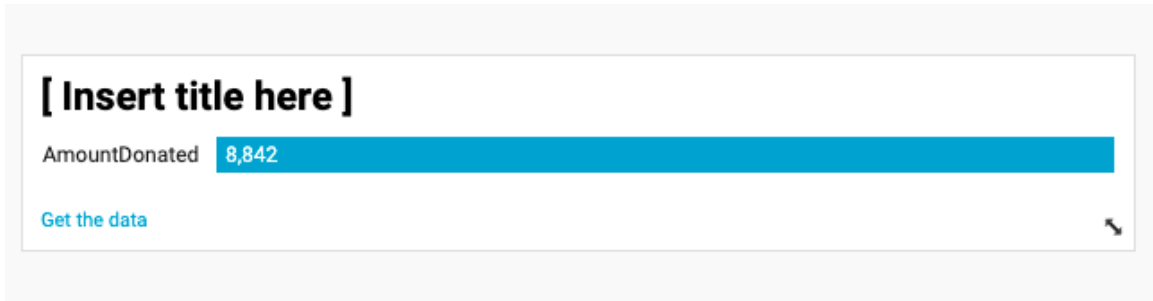
- Moving down the list, the first option is to tell Datawrapper what type of data is in the column. Usually it will automatically recognize it as a number but, if it hasn't, you can tell Datawrapper that the column contains a number.
- You also have the option to divide your values by a certain amount. This is helpful if the amounts in your data are all in the millions. In this case, while some of the parties received millions of dollars, others received only a few thousand, so we'll leave the data alone.
- You can also tell Datawrapper how many decimal places you want in your data (in the "round numbers to" section). Earlier I advised you to get in the practice of keeping two digits after the decimal point. But for this data we don't actually care how many cents each party got. So we can get Datawrapper to round the data to 0 decimal places.
- You can also "prepend" and "append" information to your data here. That basically just means putting a certain word or character both before and after the number. In this case, the data we have is money, so we'd put a \$ sign before the #. If you look carefully, you'll see the data change all the numbers to dollar amounts. If you earlier divided your number by a million or a billion, you should put an "m" or a "b" after each number.



- From here, click “Proceed”. Datawrapper will often default first to showing a line chart, but that makes no sense for our data. So select Bar Chart instead.



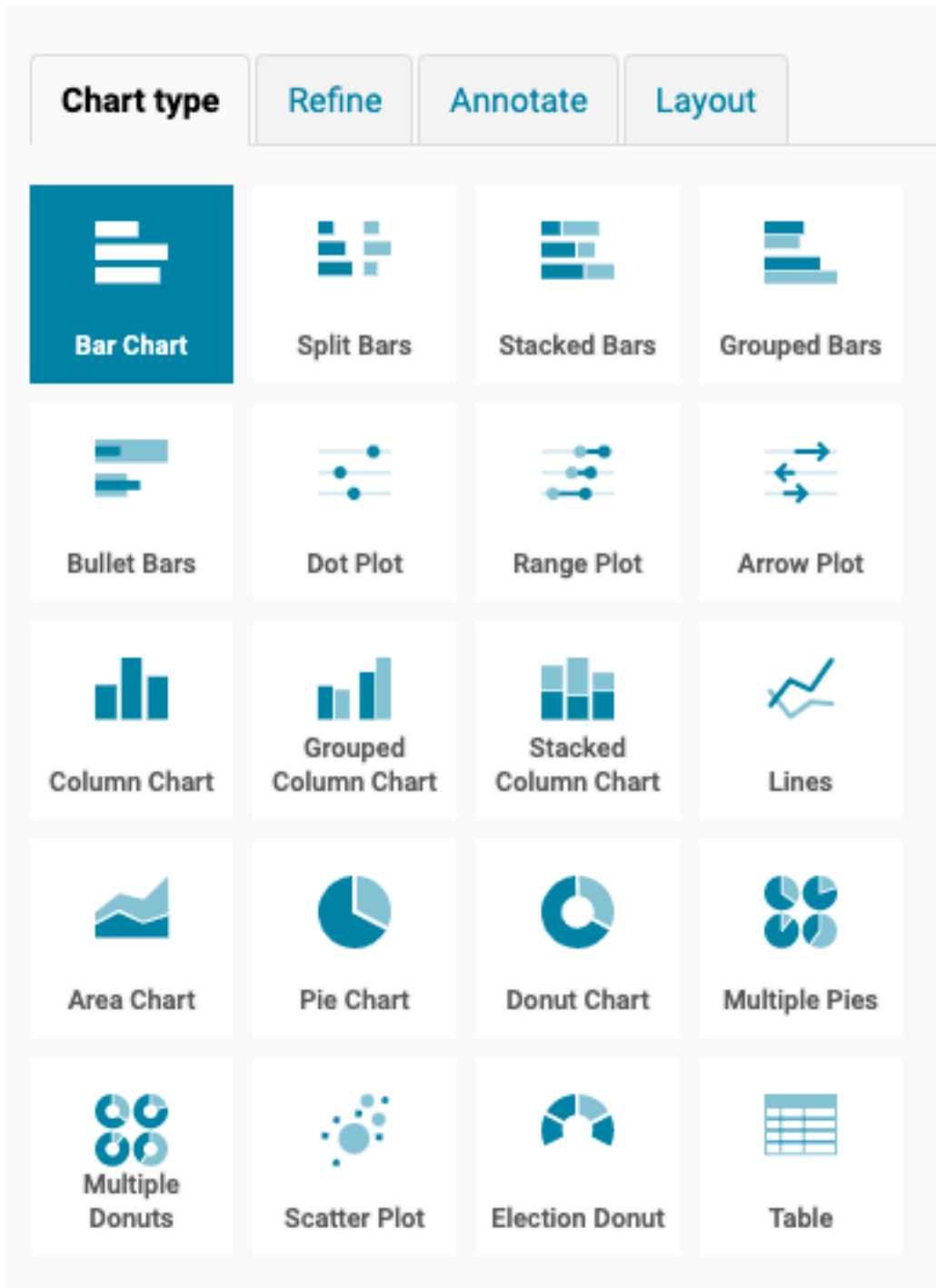
- Datawrapper’s chart are **responsive**, meaning they will automatically resize depending on the device your user is on (smartphone, tablet or desktop).
- You can preview what your chart will look like on different devices by clicking on the three icons beside the chart size for Small Mobile, Large Mobile and Desktop. For most charts, these default sizes should be fine and you shouldn’t need to fiddle with your chart’s size any further.
- However, in the rare situation where you want to make your chart a specific size, you can change the pixel sizes to whatever you want (ie. from 600 x 336 to, say, 400 x 300).
- In some cases, though, your chart will look really screwed up, like this:



- If your data looks like the chart above, it means your data is probably being processed by Datawrapper “backwards”. If this happens, your first step should be to click on the “transpose data” link on the right. In most cases, this will fix your problem.

Hint: In case the visualization doesn't look like you expected, you should try to ↕ transpose the data

- On the Visualize tab you have four tabs to style your data: **Chart type**, **Refine**, **Annotate** and **Layout**.
- The first, “Chart type” tells Datawrapper what type of chart to use. The default is a bar chart but you can click on this and choose another type. Play around with different types to find the one you think looks best. Remember, though, that pie charts (and their cousins, Donut charts and Election Donuts) are almost always a bad idea.



- Make sure that **Bar chart** is selected and then click on the “Refine” tab.
- From here you have several options for how to customize the look of your chart. You can play around with these to see how they change the look and feel of your chart. I’ll go through some of the most common changes below.

Chart type

Refine

Annotate

Layout

Labels

Alignment left right

Move labels to separate line

Show values

Value alignment left right

Number format

Swap labels and values

Horizontal axis

Custom range -

Grid lines


Appearance

Bar color Customize colors


- Color key Thicker bars
 Separating lines Bar background

- Moving down to the **Appearance** section, you can choose what colour to use for your bars (blue is the default). You can either choose one colour to use for all the bars or, by clicking “**customize colors**” give each party a different colour.
- If you only want to colour-code some of the parties, you could choose a neutral base colour (like grey) first, and then assign custom colours to just the Liberals, NDP and Conservatives.

Appearance

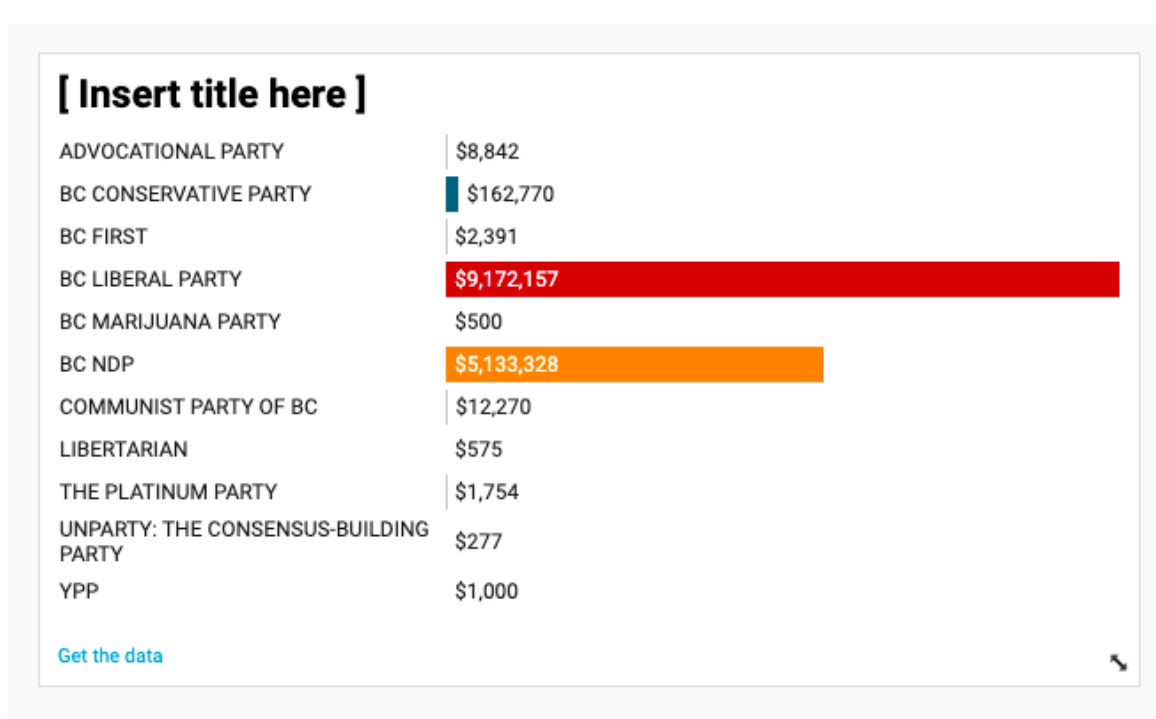
Bar color  Customize colors

- BC MARIJUANA PARTY
- BC NDP
- COMMUNIST PARTY OF BC
- LIBERTARIAN

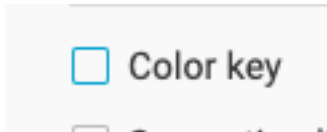
COLOR: 

TEXT:

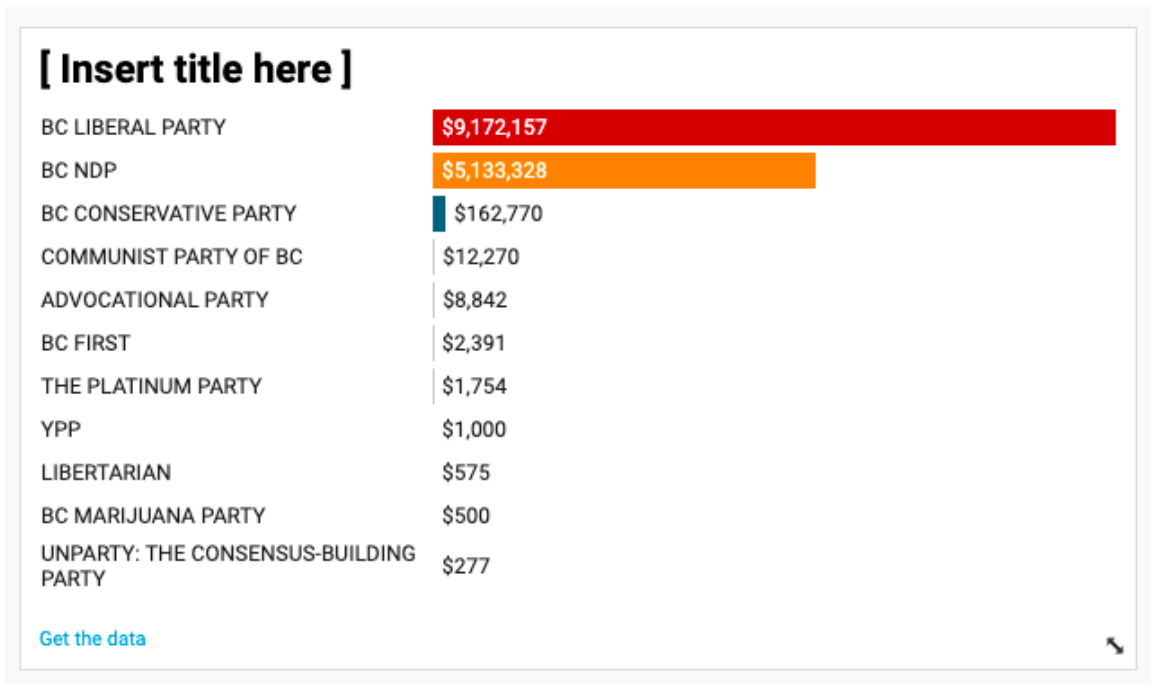
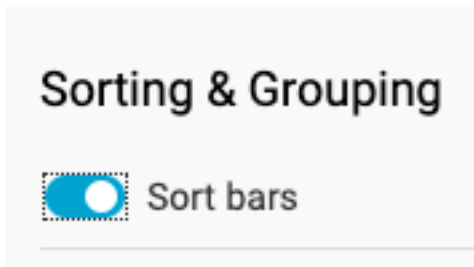
Select: [all](#) [none](#) [invert](#)



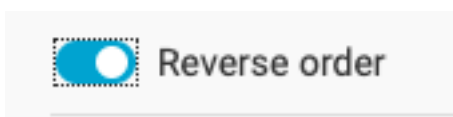
- By default, Datawrapper will put a “color key” at the top of your chart indicating what each colour means. But in our case, that key/legend doesn’t mean anything, so we can turn it off by unchecking the Color key box.



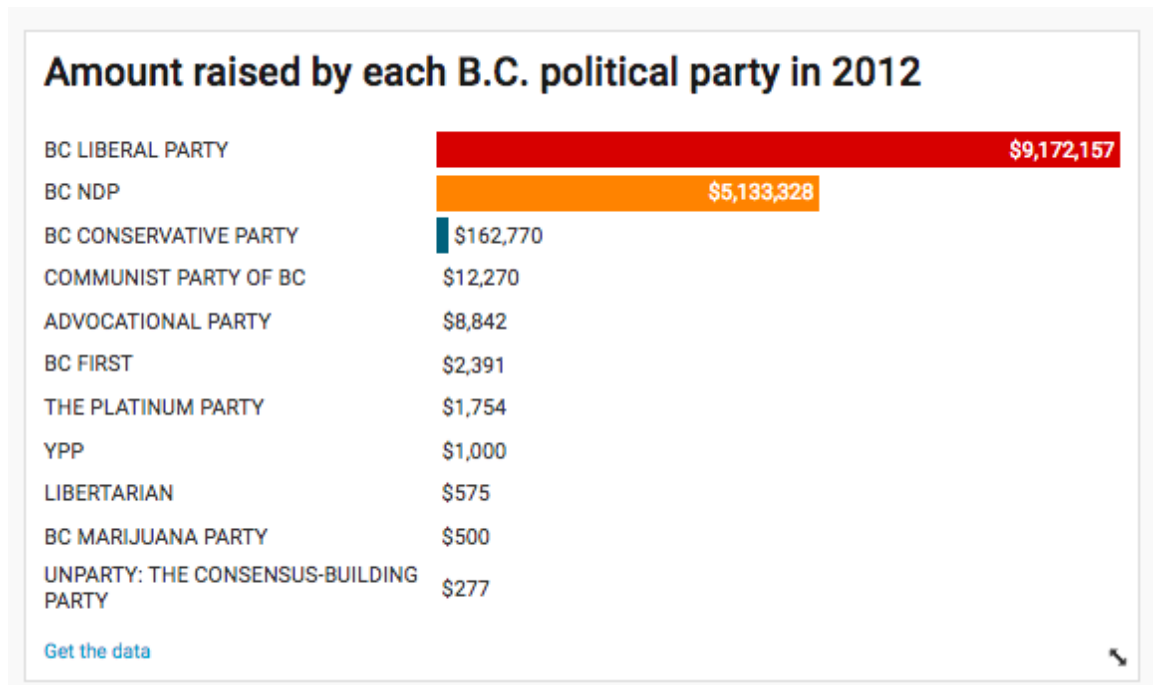
- Next is **Sorting & Grouping**. By default, Datawrapper will order the bars in your chart in the same order that was in your data. But in most cases, with a bar chart, we want to sort it from biggest to smallest, so we’ll click on “Sort bars”.



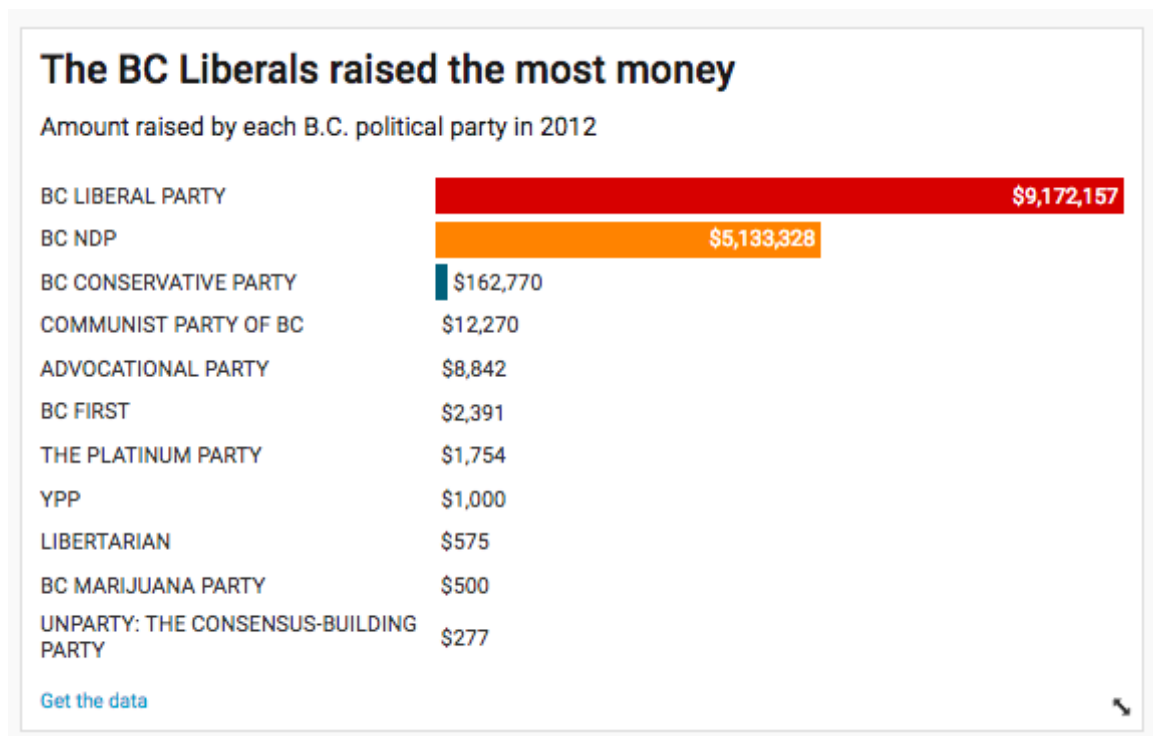
- In rare cases, we may want the smallest value on top. In those cases, we can select **Reverse order**.



- Now click on the “Annotate” tab. From here you can give your chart a title.
- Many people give their charts titles that describe their data, like so:



- However, it’s often better to instead think of your chart title like a **headline**: Something that will communicate the main message of your chart and grab your reader’s attention. You can then put the description of your data in the subtitle.



- In addition to a title and subtitle, you should also indicate the source of your data and provide a link directly to the raw data, if you have it (if you do include a link, try to link to the specific web page where the data can be found rather than the organization’s homepage; this will be a lot more useful to your users). You can also add a “Note” to your chart, which will appear at the bottom of your chart. In this case, you may want to explain that the Green Party isn’t included in the chart because they failed to submit their donation data on time.

The BC Liberals raised the most money
Amount raised by each B.C. political party in 2012

BC LIBERAL PARTY	\$9,172,157
BC NDP	\$5,133,328
BC CONSERVATIVE PARTY	\$162,770
COMMUNIST PARTY OF BC	\$12,270
ADVOCATIONAL PARTY	\$8,842
BC FIRST	\$2,391
THE PLATINUM PARTY	\$1,754
YPP	\$1,000
LIBERTARIAN	\$575
BC MARIJUANA PARTY	\$500
UNPARTY: THE CONSENSUS-BUILDING PARTY	\$277

NOTE: The Green Party is not included because they failed to submit their donation data on time
Chart: Chad Skelton • Source: [Elections B.C.](#) - [Get the data](#)

Annotation Interface:

- Title:** The BC Liberals raised the most money
- Description:** Amount raised by each B.C. political party in 2012
- Notes:** NOTE: The Green Party is not included because they failed
- Data source:** Elections B.C. | <https://contributions.elect>
- Byline:** Chad Skelton

- You can also “Highlight” one value on your chart. This is helpful if your story is about, say, a particular party (in our case it doesn’t work because we’ve already colour-coded the individual parties). Play around with these options. As you make changes, the chart will automatically change before your eyes, so you can see how different options look.

- Your chart should now look something like this:

The BC Liberals raised the most money

Amount raised by each B.C. political party in 2012

BC LIBERAL PARTY	\$9,172,157
BC NDP	\$5,133,328
BC CONSERVATIVE PARTY	\$162,770
COMMUNIST PARTY OF BC	\$12,270
ADVOCATIONAL PARTY	\$8,842
BC FIRST	\$2,391
THE PLATINUM PARTY	\$1,754
YPP	\$1,000
LIBERTARIAN	\$575
BC MARIJUANA PARTY	\$500
UNPARTY: THE CONSENSUS-BUILDING PARTY	\$277

NOTE: The Green Party is not included because they failed to submit their donation data on time

Chart: Chad Skelton • Source: Elections B.C. • [Get the data](#)

- This chart is probably fine except it looks kind of ugly. And for a very specific reason: The “Unparty” has such a long name it’s crowding out the whole chart.
- If there is a value in your chart that you want to edit you can do that right on the chart by clicking on the name of the label and typing a replacement. In this case, we could just delete everything but the “UNPARTY”.

BC MARIJUANA PARTY	\$500
UNPARTY: THE CONSENSUS-BUILDING PARTY	\$277

NOTE: The Green Party is not included because #

UNPARTY	\$277
---------	-------

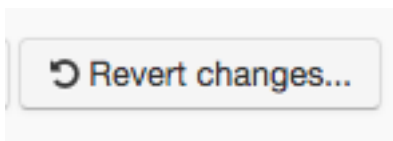
- NOTE: If you make a change to a label that you’ve colour coded (like BC LIBERAL PARTY to BC LIBERALS), you will have to re-do the colour coding.

BC LIBERALS	\$9,172,157
BC NDP	\$5,133,328

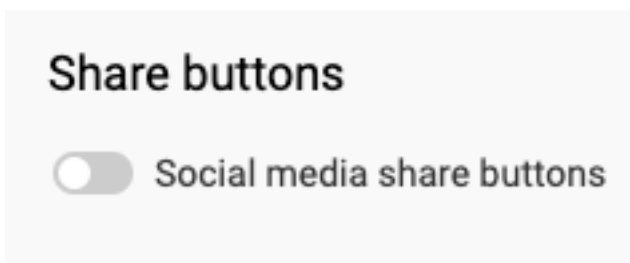
- Changes to a label in your chart will show up on the “Check & Describe” step. The labels that have been changed will have a yellow indicator on them.

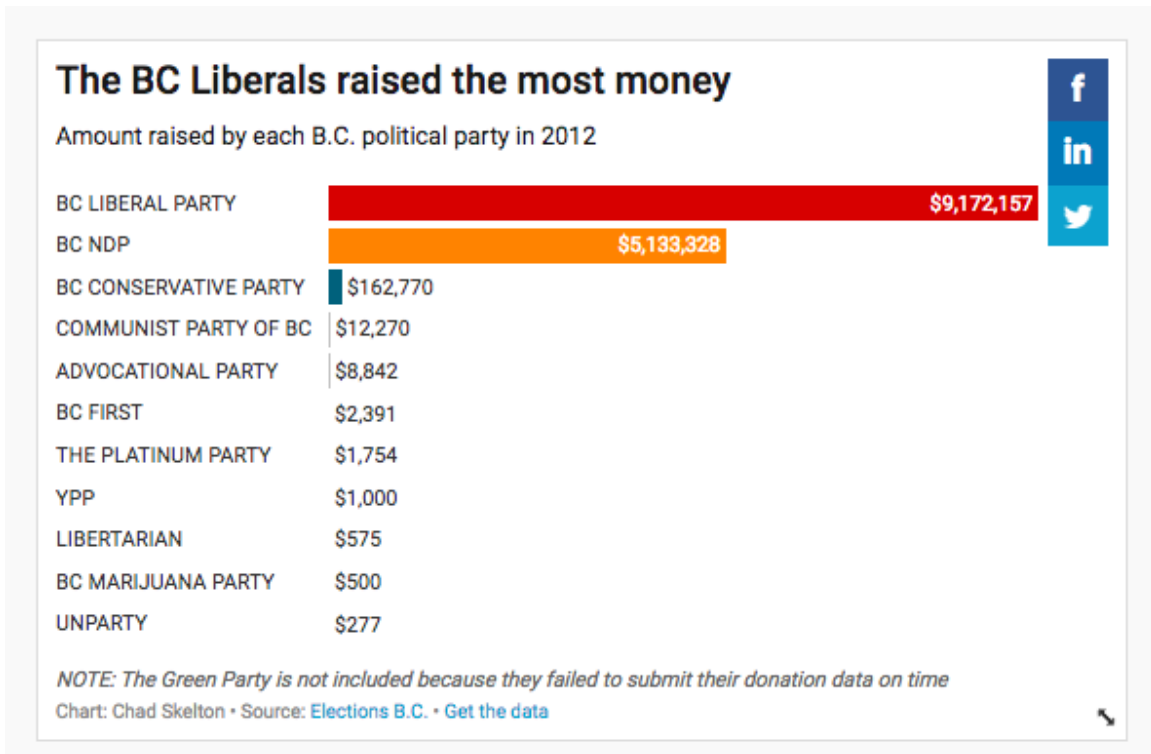
	A
1	Party
2	ADVOCATIONAL PARTY
3	BC CONSERVATIVE PARTY
4	BC FIRST
5	BC LIBERALS
6	BC MARIJUANA PARTY
7	BC NDP
8	COMMUNIST PARTY OF BC
9	LIBERTARIAN
10	THE PLATINUM PARTY
11	UNPARTY
12	YPP

- If you want to go back to the original labels, you can click on the “Revert changes” button and that will restore all the labels to their original values.



- There is one final tab on this page — Layout — where you can switch from the “Datawrapper” chart style to one called “Pageflow”. Pageflow is a darker style, which you may prefer. But in most cases, the default “Datawrapper” layout is best.
- You can also enable “Social Sharing” which will put Twitter, Facebook and LinkedIn buttons in the top right corner of your chart. When activated, if someone clicks on one of those share buttons, they will share the link to the site you’ve embedded your chart on (like a blog post or news article).





- Now click on the big blue “Publish” button. Congratulations! You’ve created your first interactive graphic.
- Your graphic will automatically be saved in your Datawrapper account (you can see it by clicking on the “My Charts” button at the top of the page). You’ll also be given options for how you want to share your chart.

To share or embed your chart you need to publish it. It will only be visible to people who know the chart URL.

[Publish chart](#) ← Click here if you want to embed your chart in your website or CMS.

Export or duplicate chart

The best and easiest way to use a Datawrapper chart is to embed it directly into your website or CMS. You can also download your chart as an image or PDF file to use it in different contexts.

[PNG](#) [PDF](#) [DUPLICATE](#)

The BC Liberals raised the most money

Amount raised by each B.C. political party in 2012

NOTE: The Green Party is not included because they failed to submit their donation data on time
 Chart: Chad Skelton • Source: [Elections B.C.](#) • [Get the data](#)

- If you have a free Datawrapper account, you can embed the chart or download it as a PNG image file. If you have a paid Datawrapper account, you also have the option of downloading it as PDF.

Publish visualization



Your visualization is **not published.**



Publish now

- After you click on the Publish chart button, you can just copy and paste the embed code onto your blog or website. (NOTE: The “Copy” button doesn’t work on some browsers. In that case, just double click on the code in the box itself and press CMD/CTRL-C to Copy.) The default embed code is a “responsive embed code” that will resize depending on your user’s device (mobile phone, tablet, desktop). You should try to use this code first. But if it doesn’t work, you can click on the other tab and use the plain iframe.

Share & Embed

Link to your visualization:



https://www.datawrapper.de/_/bFYim/



Visualization only For sharing

Embed code for your visualization:



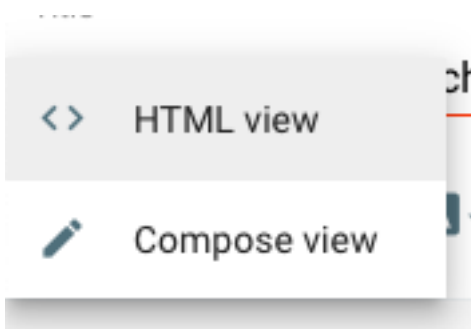
```
<iframe title="[ Insert title here ]" aria-label="Bar Chart" id="datawr...
```



Responsive iframe Iframe

For the best way to embed your visualization on a specific platform (e.g., Wordpress, Powerpoint), [check our documentation](#).

- If you’re putting your chart on a Blogger blog, make sure that you click on the “HTML view” (by clicking on the Pencil icon in the top left), then find where you want your chart to go, and paste the embed code in there.



Title


My first Datawrapper chart


```
<> | ↶ | ↷ | 🔍 | ↻ | ☰ | ↵ | ↶ | B | I | ⌵ | " | 🔗 | 🖼️ | 🎬
```

```
1 <p>&nbsp;   This is my first Datawrapper chart.</p><p>
2
3
4   <iframe aria-label="Bar Chart" frameborder="0" height="382" id="datawrapper-
   chart-FJGxA" scrolling="no" src="https://datawrapper.dwdn.net/FJGxA/1/"
   style="border: none; min-width: 100% !important; width: 0;" title="The BC
   Liberals raised by far the most money in 2012"></iframe><script
   type="text/javascript">!function(){ "use
   strict"; window.addEventListener("message", (function(e){ if(void
   0!==e.data["datawrapper-height"]){ var
   t=document.querySelectorAll("iframe"); for(var a in e.data["datawrapper-
   height"]) for(var r=0;r<t.length;r++){
   if(t[r].contentWindow===e.source)t[r].style.height=e.data["datawrapper-
   height"][a]+"px"}}}})}}();
5 </script>
6
7 <br /></p><p>That was my first Datawrapper chart.</p>
```

- **IMPORTANT:** If you make a change to a Datawrapper chart *after* you click on the embed button, your changes **will not** automatically be reflected on your website or blog. You have to click on the embed button again and “Re-Publish” your chart.

- **ALSO IMPORTANT:** When you re-publish your chart, Datawrapper creates a **brand new embed code**. The old embed code will eventually redirect to the new one, but it doesn’t happen instantly. So if you want your new chart to appear on your site, you should grab the new embed code after you re-publish and replace it on your site.

 Your visualization is **published**, but it has been **changed** and needs to be **republished** to show those changes.



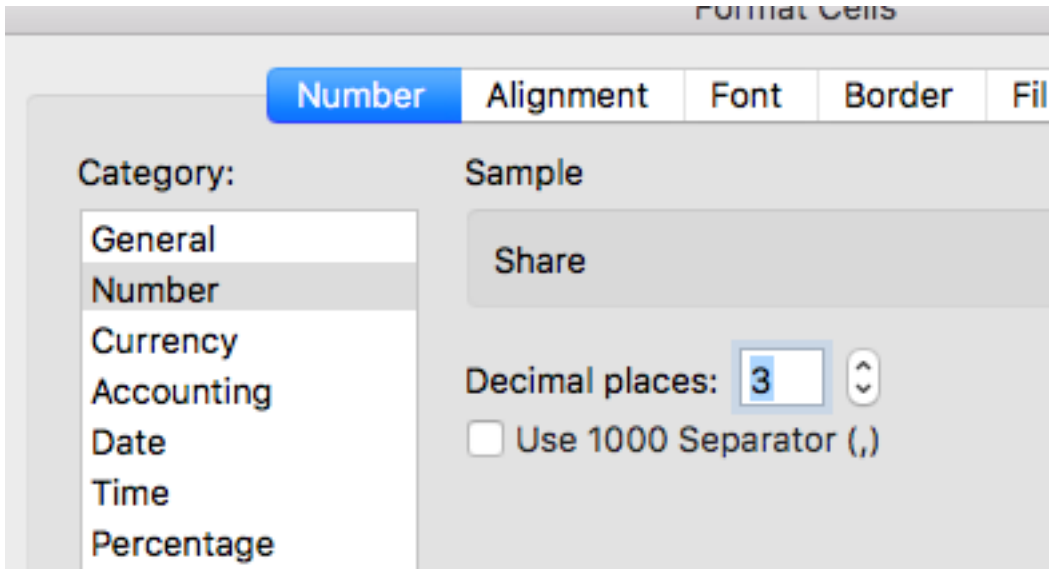
MAKING A SIMPLE LINE CHART IN DATAWRAPPER

• When you have data showing how something has changed over time, a line chart is often a better way to visualize that data than a bar chart. For example, here's some data showing the share of B.C. MLAs who are women by election year:

Year	Share
1916	0.0%
1920	2.1%
1924	2.1%
1928	0.0%
1933	2.1%
1937	4.2%
1941	10.4%
1945	4.2%
1949	4.2%
1952	6.3%
1953	2.1%
1956	3.8%

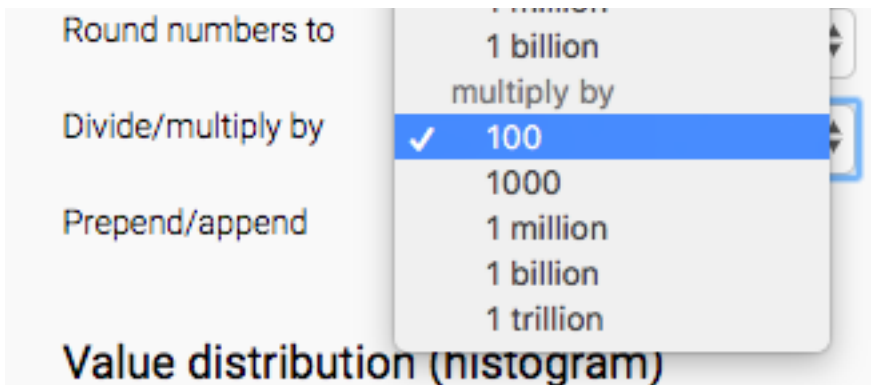
• As with our previous Datawrapper chart, you'll want to make sure that you remove the number formatting (in this case the percentage) from the data before uploading it, by changing the number format back to a **Number**.

• **NOTE:** Because percentages are fractions of 1, it's that we retain at least **three decimal places** so we get the full percentage values (and a single decimal place) later. For example, **0.213** is the same as **21.3%**.



Year	Share
1916	0.000
1920	0.021
1924	0.021
1928	0.000
1933	0.021
1937	0.042
1941	0.104
1945	0.042
1949	0.042
1952	0.063
1953	0.021

- Upload the data to Datawrapper. At the “Check and Describe” stage, you’ll want to multiply the Share number by **100** (to get it to look like a proper percentage again) and then append a % symbol.



Prepend/append # %

- If your data contains data by year (i.e. 2011, 2012, 2013) like this, or individual dates, Datawrapper will usually automatically recognize them as a date field when you import them. You can learn more about what date formats Datawrapper recognizes at <https://academy.datawrapper.de/article/164-date-formats-that-datawrapper-recognizes>

- You can tell Datawrapper has automatically recognized a date field because it will show up in green. If it didn't, try clicking on the date column and telling Datawrapper that it is a Date field:

	A	B
1	Year	Share
2	1916	0
3	1920	2.1
4	1924	2.1
5	1928	0
6	1933	2.1
7	1937	4.2

Column options for Year

Column type: auto (Date)

Hide column
 Hide column from visualization

- Now click on “Visualize”. By default, Datawrapper will show us a line chart.

1 Upload Data ✓

2 Check & Describe ✓

3 Visualize

4 Publish & Embed

Chart type Refine Annotate Layout

Bar Chart

Split Bars

Stacked Bars

Grouped Bars

Bullet Bars

Dot Plot

Range Plot

Arrow Plot

Column Chart

Grouped Column Chart

Stacked Column Chart

Lines

Area Chart

Pie Chart

Donut Chart

Multiple Pies

Multiple Donuts

Scatter Plot

Election Donut

Table

[Insert title here]

Get the data

- Click on the “Refine” tab. As with the bar chart, you have various options for changing the look and feel of your chart. We’ll cover some of the most common changes.

Chart type

Refine

Annotate

Layout

Horizontal axis

Select column

Year

?

Custom range

min

-

max

?

Custom ticks

e.g. 2000,2005,2012

?

Tick format

(automatic)

Grid lines

show

hide

tick marks

Vertical axis

Grid lines

linear

logarithmic

?

This dataset can only be shown on a linear scale because your dataset contains negative or zero values, which cannot be shown on a logarithmic scale.

Custom range

min

-

max

?

Custom ticks

e.g. 10,20,50

?

Number format

(automatic)

Grid lines

show

hide

tick marks

Grid labels

inside

outside

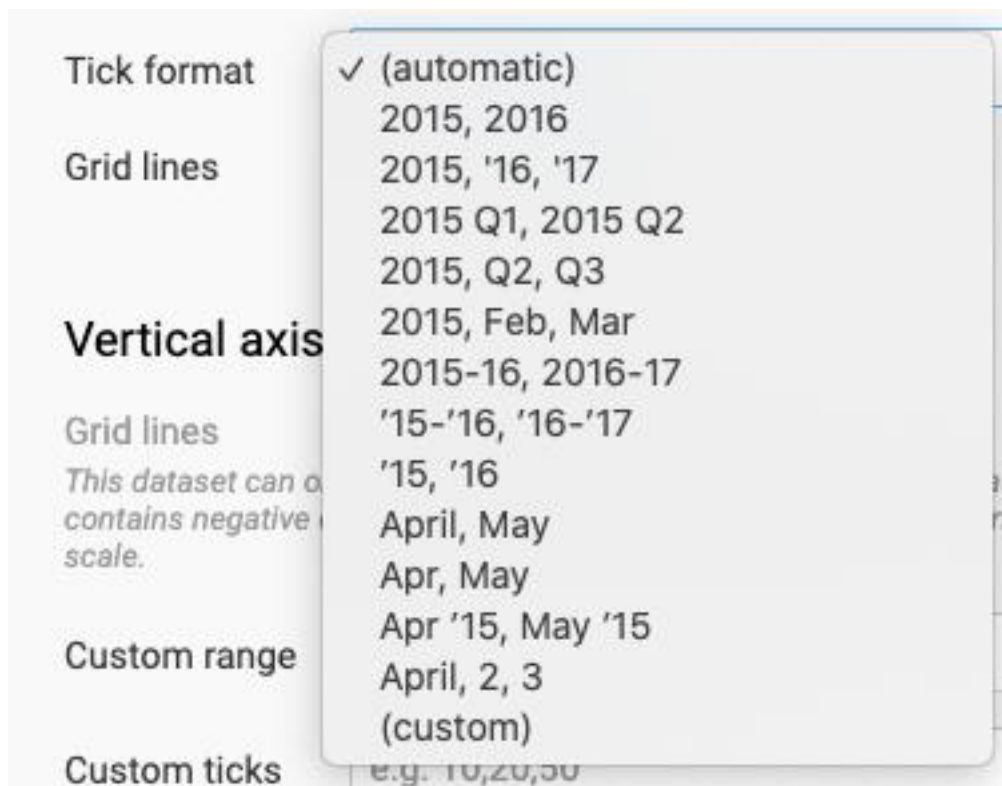
auto

?

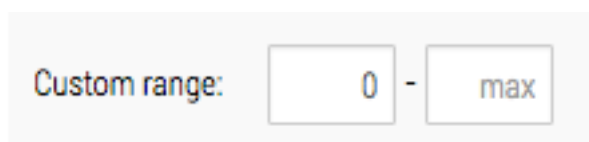
left

right

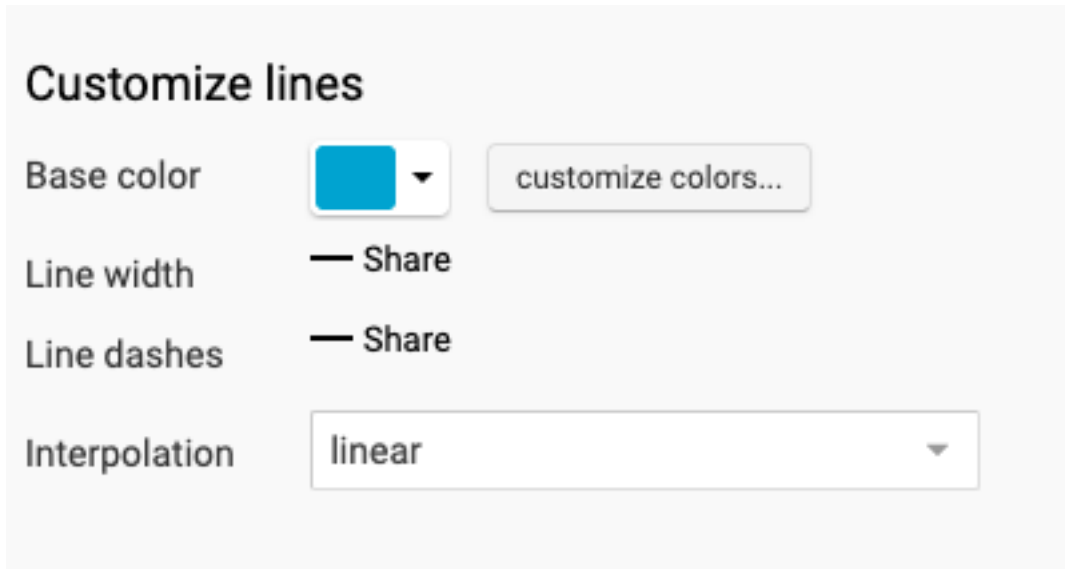
- We'll start with the **Horizontal axis** (also often known as the "X axis"). Datawrapper will make an assumption about what you want on the horizontal axis for your line chart (usually the Date). But if for some reason Datawrapper guessed wrong, you can choose a different column.
- Datawrapper will also make decisions about the default number of 'tick marks' (ie. which years to show) and what range of data to show. In most cases, the defaults Datawrapper uses are fine, so you can leave this section alone.
- You can also change the "Tick format". This is useful for certain dates like months that have different ways of being displayed. But for years, the default is usually fine.



- You can make similar formatting changes for the **Vertical axis** (also known as the "Y axis"). Again, you can leave most of these as they are.
- The one thing you often will want to change for the Vertical axis, though, is the "Custom range". If the numbers in your chart are large, Datawrapper may use a baseline other than zero, which can create a misleading chart. To fix this, just type a "0" in the min box.



- Under “Customize lines” you can change the color, width and style of the line (dotted, dashed or solid), and fill the area below the line (and specify what colour to use in that area).



Customize lines

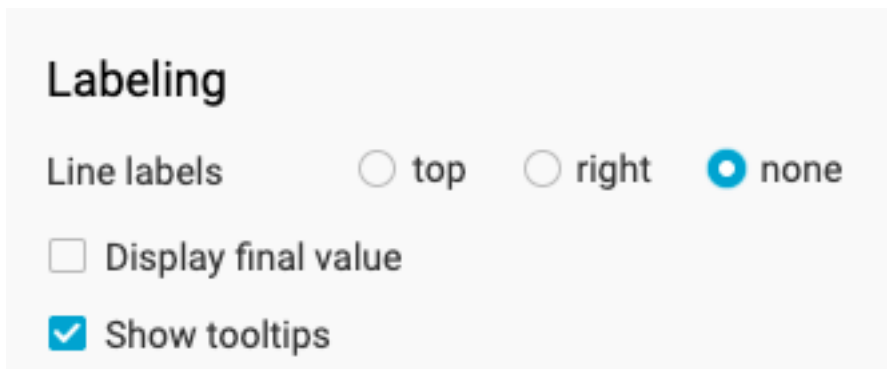
Base color ■

Line width — Share

Line dashes — Share

Interpolation linear

- Under Labelling you can decide whether to show the “Share” label at the end of your line. Since we only have one line, we probably don’t need it, we can select “non” for Line labels.



Labeling

Line labels top right none

Display final value

Show tooltips

- Under “Interpolation”, you also have the option of making your line “curved” or “stepped”. Technically, “stepped” would be most accurate in this case, as the number of Female MLAs only changed on election days. But for most line charts, “straight” is the best option.

- Finally, under “Customize symbols” you can add dots to your line: either just the first and last dot or every data point. Symbols are useful when it’s important to show all the data points that make up the trend, rather than just the overall pattern of the data.

Customize symbols

Line symbols

Shape

circle



on...



first & last



first



last



every point

Size



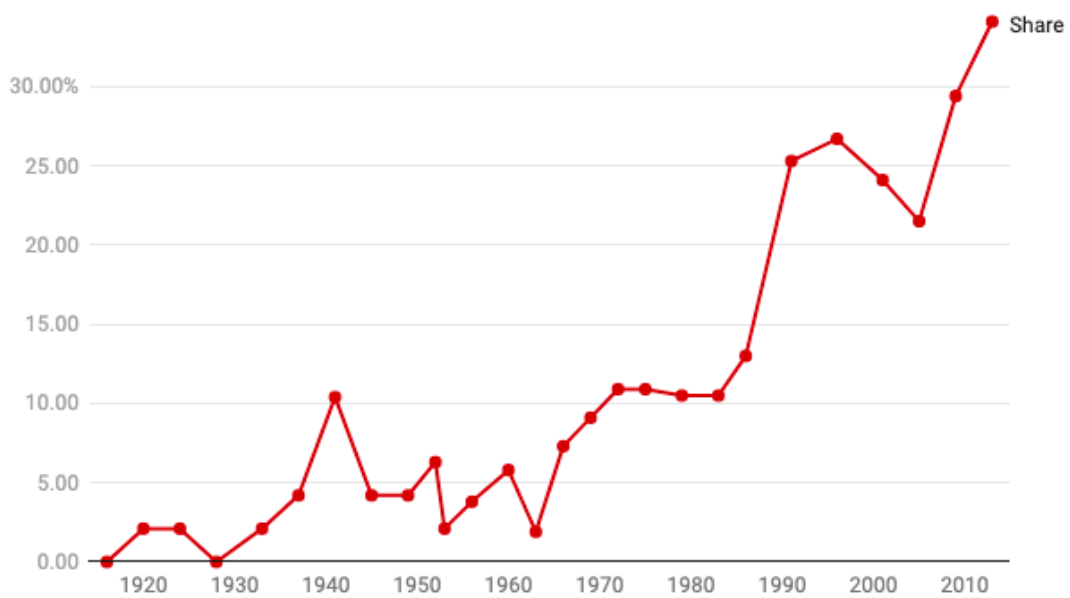
3.5

Opacity



1

[Insert title here]



[Get the data](#)

- Finally, since we only have one line on our chart, we could fill the area below it if we wanted to.

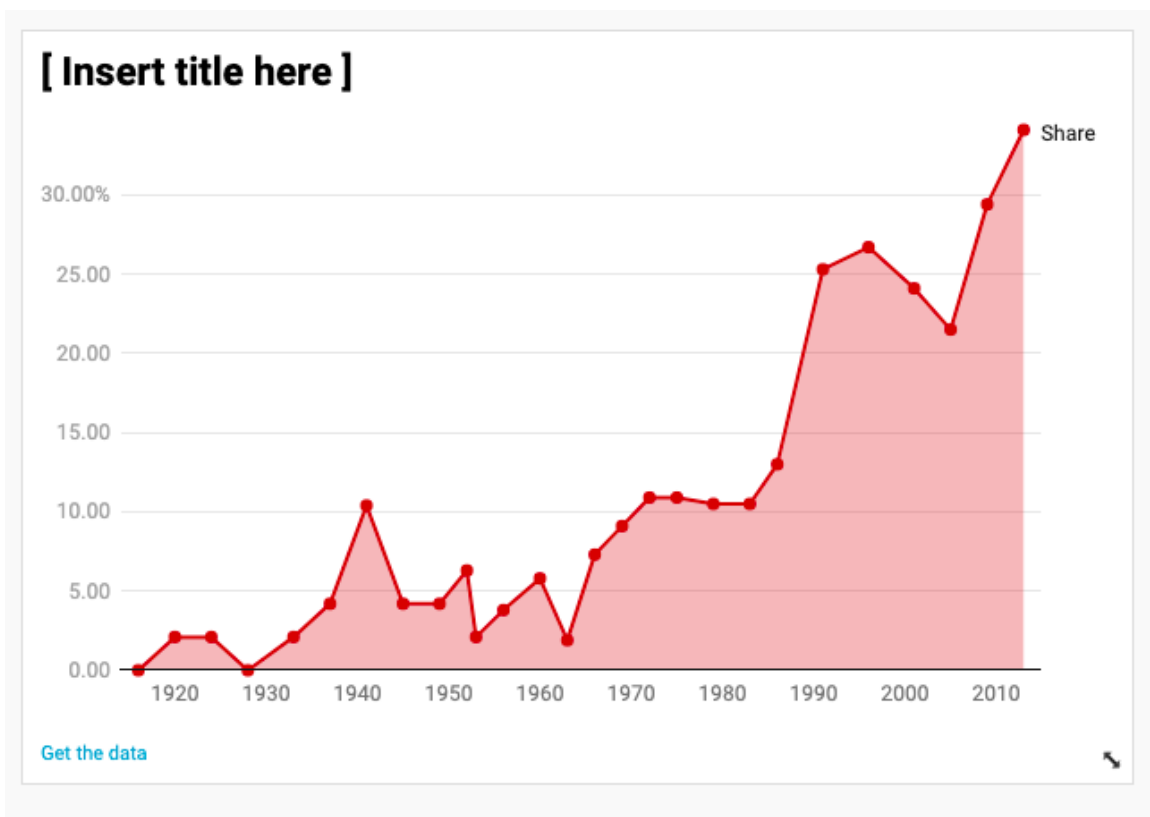
Fill area between lines

Fill area below line

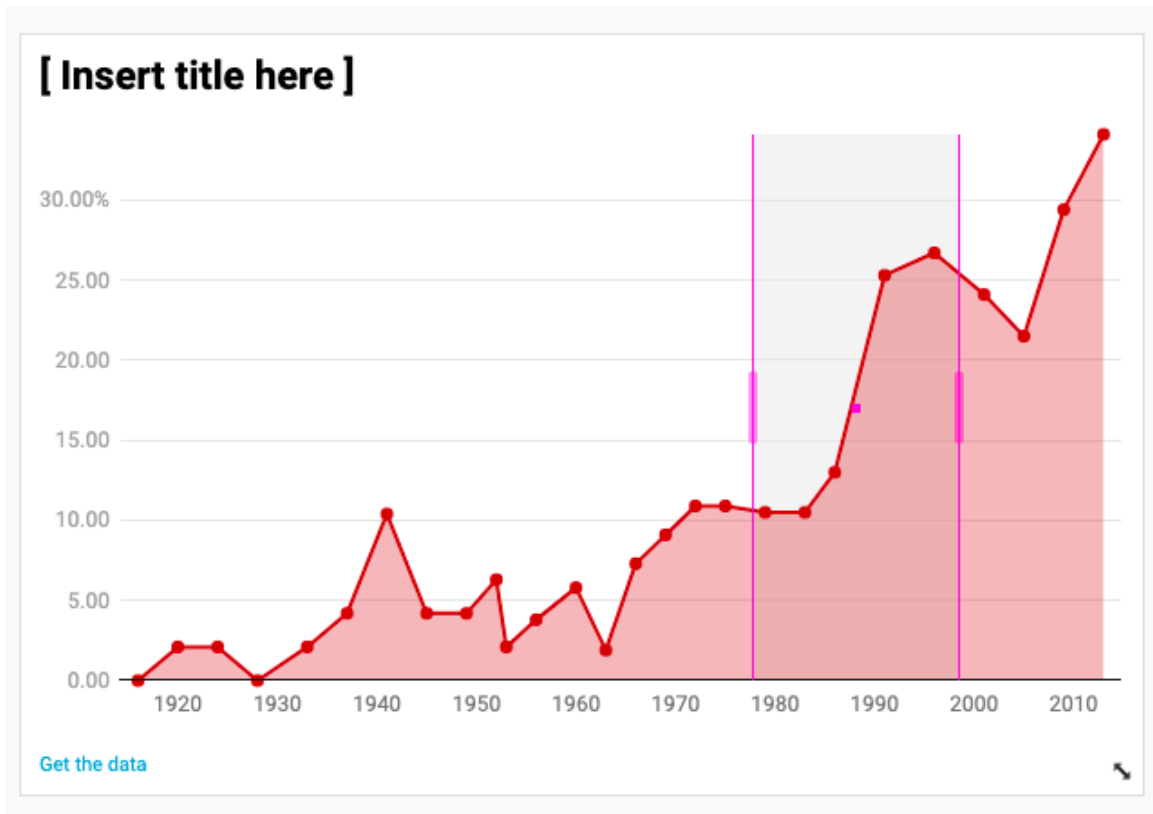
COLOR

OPACITY % V

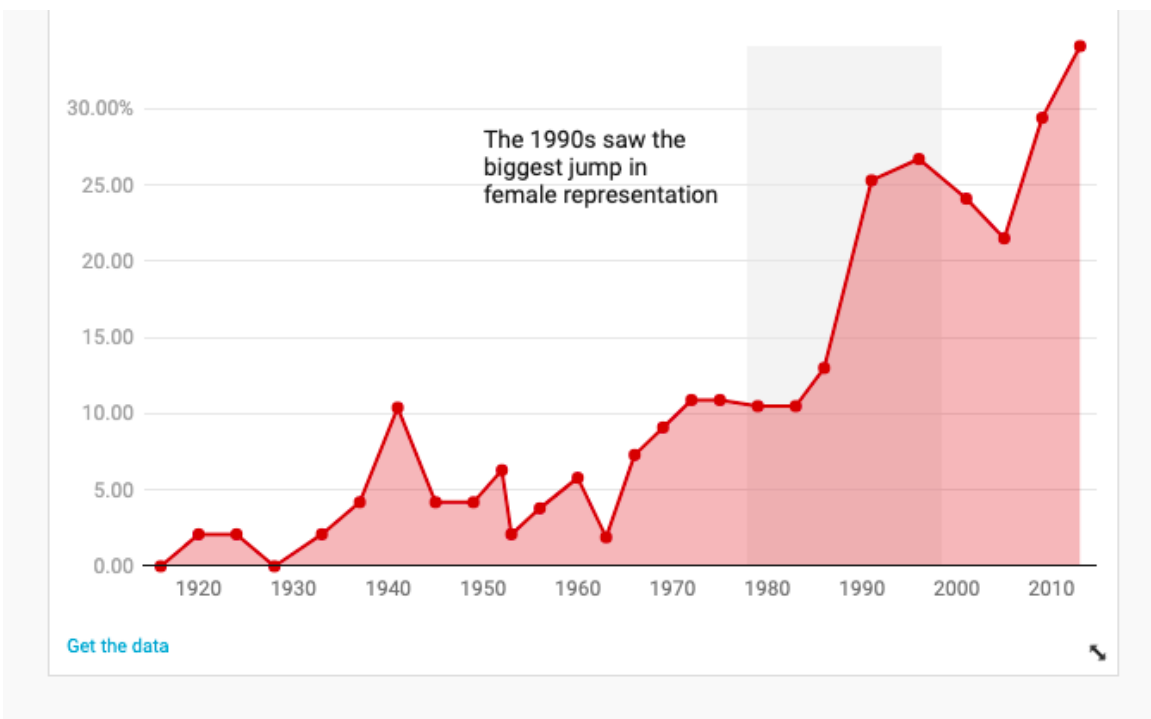
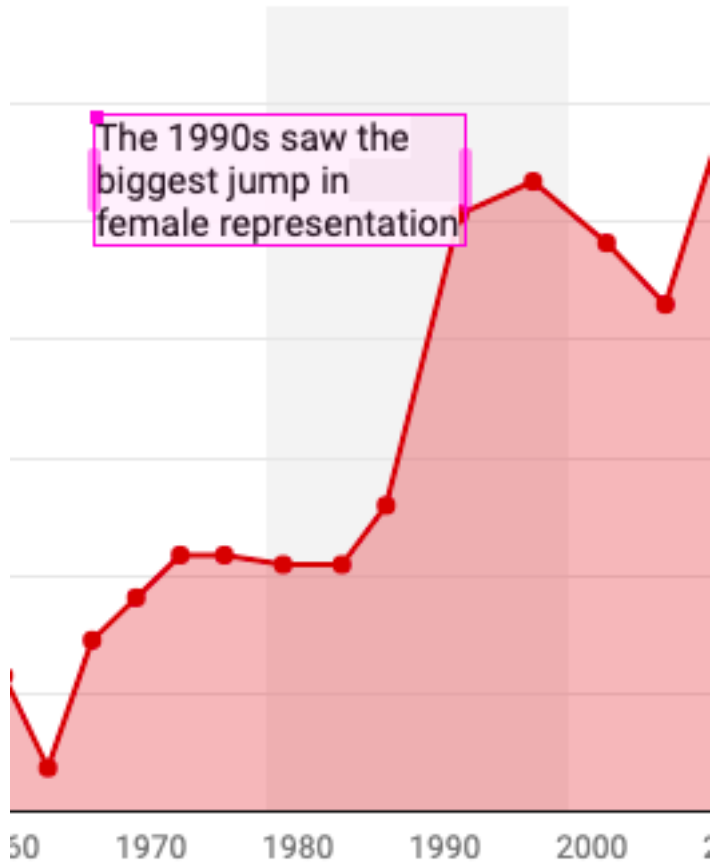
- With all those customization options, you should have a chart that looks something like this:



- Next is the “Annotate” tab. Many of the options here are the same as the bar chart: adding a title, subtitle, source and notes. But there are also some others.
- You can select Highlight range to highlight a particular part of your line chart that you want to draw your audience’s attention to. This is helpful if there’s a big change in your data at a particular point that you want to focus on — like, in this data, the big jump from the 1970s to the 1980s. Click **Add range highlight** and drag across the area you want to highlight. You can then adjust the highlighted area if you want.



- You can then click on Text annotations to add some text explaining the area you highlighted.



- The rest of the steps are the same as above: Give your chart a title, publish it and then grab the embed code.