

Sweden Population Pyramid Chart in Excel

By Robert Allison

Another example in my series showing how to create graphs “on the cheap” – this time I’ll be using Microsoft Excel to create a population pyramid chart for Sweden.

Getting the Data

To get the population data, go to the SCB Statistical Database [website](#). In the interface, select age:5-year intervals, select all of the age groups (such as ‘0-4 years’), select both sexes (men & women), select year 2021, and clicked the “Show Table” button.

The resulting table contained the data I want, but it is not in the layout I need:

	2021
0-4 years	
Men	302 380
Women	286 054
5-9 years	
Men	320 980
Women	302 622

Then click “Pivot clockwise” twice, to restructure the data into the layout needed to create the chart:

[< Tools](#) [↻ Pivot manual](#) [↻ Pivot clockwise](#) [↻ Pivot counterclockwise](#)

	Men	Women
2021		
0-4 years	302 380	286 054
5-9 years	320 980	302 622
10-14 years	322 770	304 297
15-19 years	304 562	286 409

Then in the “Tools” section along the right side of the page, select “Save Result As...” and select “Excel (xlsx)”. Here’s what the Excel spreadsheet looks like:

	A	B	C	D
1	Population by year, age and sex			
2				
3			men	women
4	2021	0-4 years	302380	286054
5		5-9 years	320980	302622
6		10-14 years	322770	304297
7		15-19 years	304562	286409
8		20-24 years	307170	271045
9		25-29 years	356091	336224
10		30-34 years	390393	371415
11		35-39 years	347980	327998

Massaging the Data

The data still needs a bit of modification to easily create the graph, therefore make a 2nd copy of the data in the spreadsheet, using Excel functions and calculations to modify the data on-the-fly.

Having the word ‘years’ repeated in each age range (such as ‘0-4 years’) is a bit redundant, therefore use the following function to take just the first part (such as ‘0-4’) without the word ‘years’. This reads as “Get the value in B4, starting with the first character, and go until you find the first blank space.”

=MID(B4,1,FIND(" ",B4))

In the pyramid bar chart, we want the bars for men to go to the left, therefore make them negative by using the following equation:

=-1*C4

Last, make a simple copy of the “Women” column.

The resulting spreadsheet looks like this:

	A	B	C	D	E	F	G	H
1	Population by year, age and sex							
2								
3			men	women		Age	Men	Women
4	2021	0-4 years	302380	286054		0-4	-302380	286054
5		5-9 years	320980	302622		5-9	-320980	302622
6		10-14 years	322770	304297		10-14	-322770	304297
7		15-19 years	304562	286409		15-19	-304562	286409
8		20-24 years	307170	271045		20-24	-307170	271045
9		25-29 years	356091	336224		25-29	-356091	336224
10		30-34 years	390393	371415		30-34	-390393	371415
11		35-39 years	347980	327998		35-39	-347980	327998

Creating the Basic Chart

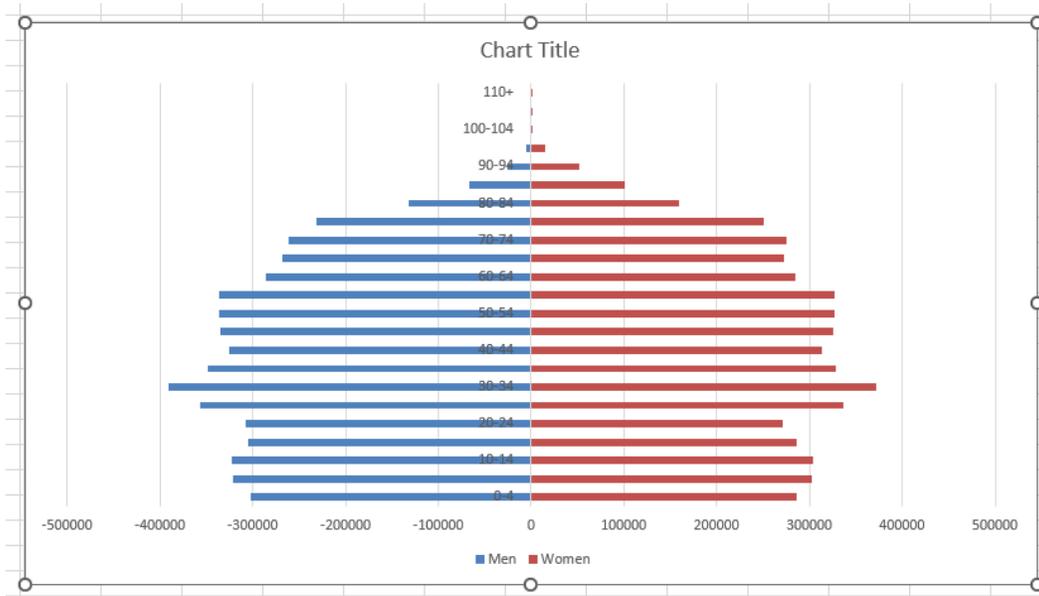
To create the chart, select the new/modified Age, Men, and Women columns:

Age	Men	Women
0-4	-302380	286054
5-9	-320980	302622
10-14	-322770	304297
15-19	-304562	286409
20-24	-307170	271045
25-29	-356091	336224
30-34	-390393	371415
35-39	-347980	327998

Then go to the Excel "Insert" tab, and select the 2-D Bar, Stacked Bar chart:

The screenshot shows the Microsoft Excel ribbon with the 'Insert' tab active. The 'Charts' group is expanded, showing various chart options. The '2-D Bar' chart type is selected, and a tooltip is visible over it. The tooltip text reads: 'Stacked Bar Use this chart type to: • Compare parts of a whole across categories. • Show how parts of a whole change over time. Use it when: • The category text is long.' In the background, a portion of an Excel spreadsheet is visible, showing a table with columns for 'Age', 'Men', and 'Women'.

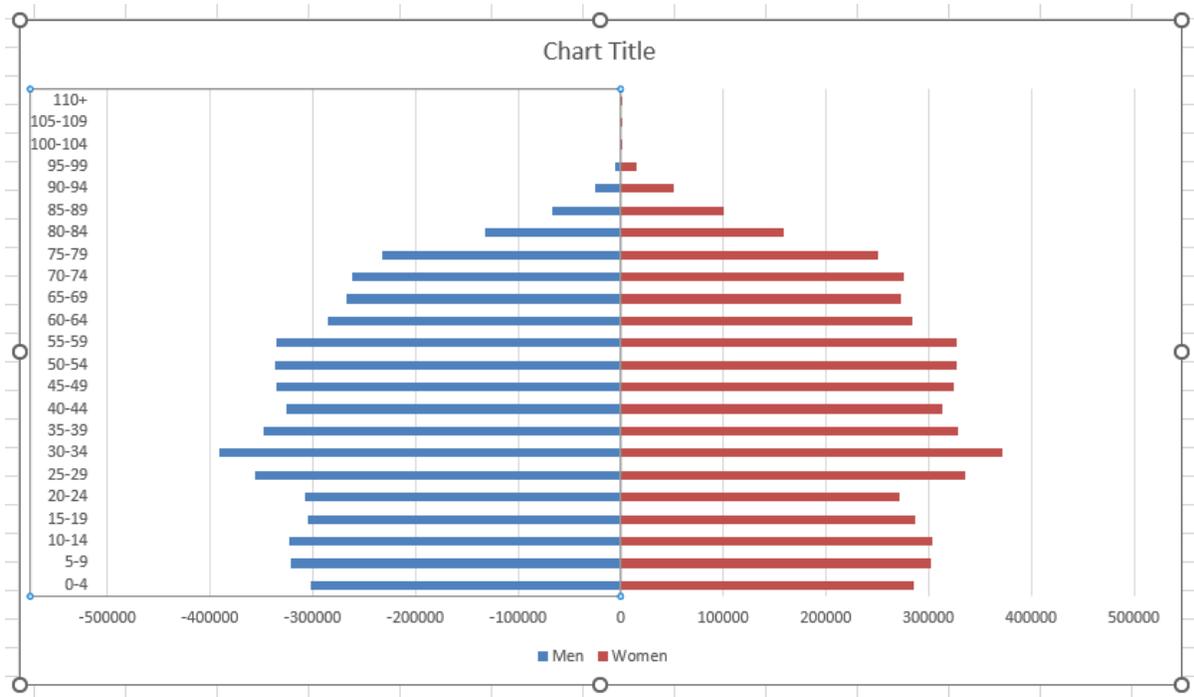
The default chart looks like this (almost what we want!)



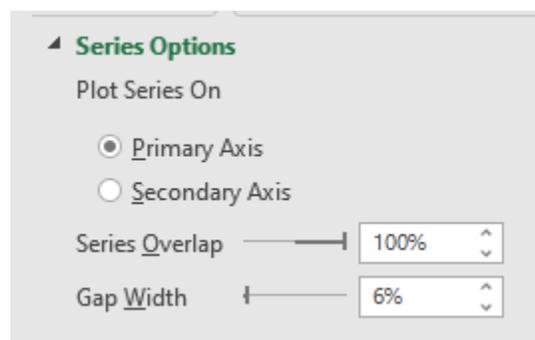
Customizing the Chart

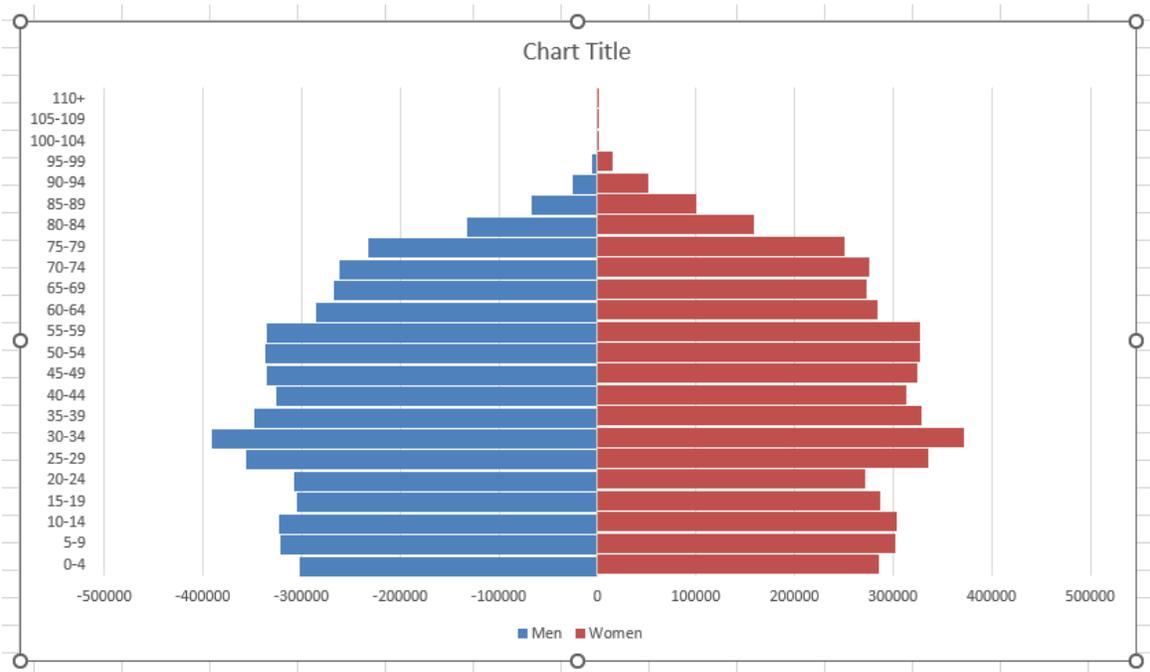
The default chart is ok, but needs a few customizations to make it look great.

First, move the y-axis labels to the left, rather than the middle of the chart. Select the y-axis values, right-click and select “Format axis...”. Change Labels->Label Position from “Next to axis” to “Low”. Now the values are along the left (low) side of the chart:

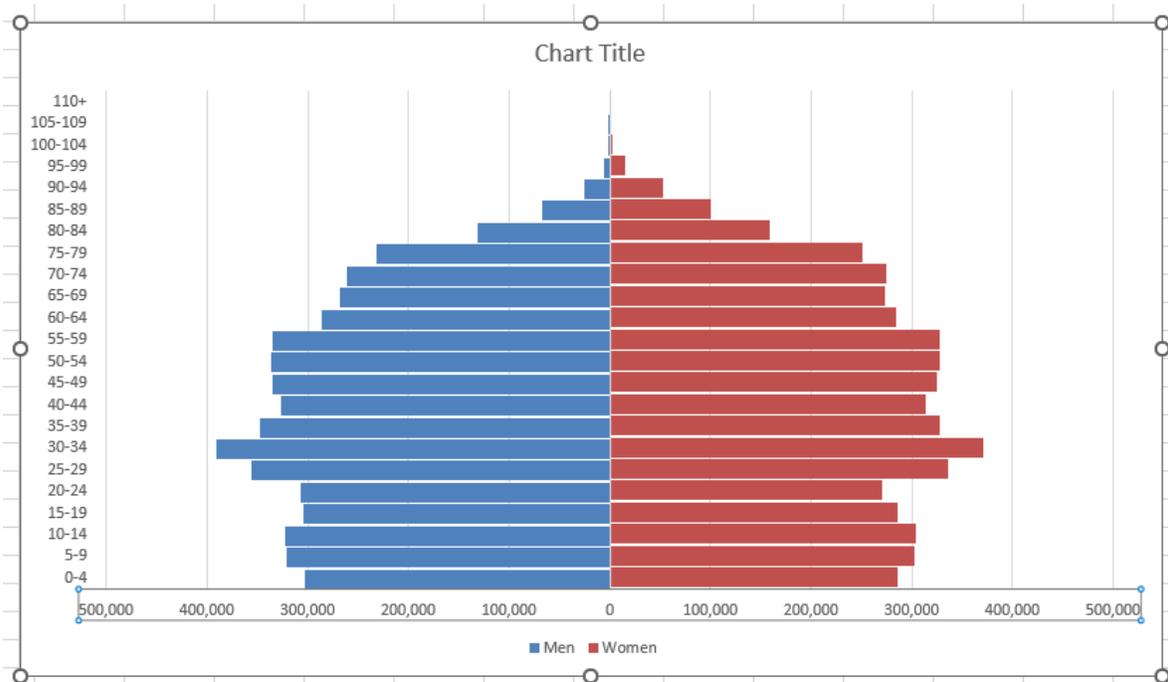


Next, let's make the bars wider. Select the bars on the left, right-click and “Format data series...”, and modify the gap width and overlap until the bars and spaces look good to you. Here are the values I used:





We're using negative values for the male population to make the bars go to the left of the axis, but we don't want the values to display the negative signs. We can create a custom format to accomplish that. Select the numbers along the bottom axis, right-click and "Format axis..." Change the Number category from General to Currency, and select the red "1,234" under Negative Numbers. Then change the Format Code from "\$#,###0.00;[Red]\$#,###0.00" to "#,###0;#,###0" and click "Add". The negative numbers now show up without the negative sign.



And for the simple final enhancements, change the title to something descriptive, and resize the chart so it's taller.

Final Chart

Here's the final chart – I think it looks pretty good for something created with an Excel license that cost me less than \$50. 😊 It even looks pretty good when compared to my old [SAS population pyramid charts!](#)

