NB: Excel 1997-2003!!

Population Pyramids

Guatemala, 1990   Sun City, Ariz., 1990
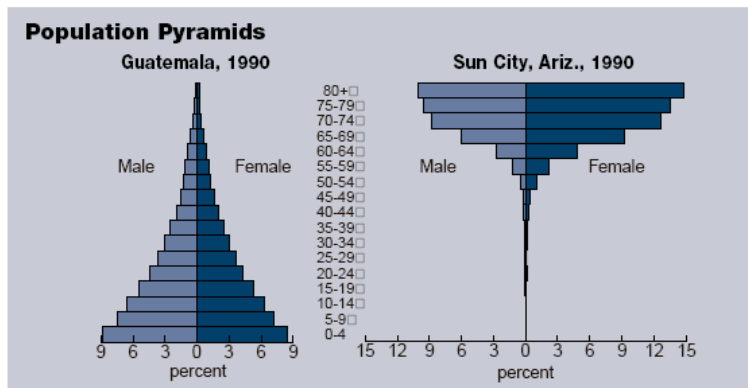

Building Pyramids

By CHERYL STAUFFER

Population pyramids—used by demographers to represent the age and sex distribution of a particular population at a specific point in time—are easy to build.

The Shape Tells the Story

With relatively high fertility, most developing countries exhibit the classic "pyramid" shape (see graph of Guatemala's age and sex distribution, above). Some developed countries, however, have begun to exhibit pillar-like shapes. And graphs for smaller areas, such as states and cities, may show further variation. For example, the above graph representing the age and sex structure of Sun City, Ariz., turns the traditional pyramid upside down. The graph tells the story of a haven for retirees.

Handy Tools

You can build these pyramids with a readily available, commonly used spreadsheet software program like Microsoft Excel.

A population pyramid is a specifically formatted comparative histogram. To create this histogram, you must first enter age and sex data into a spreadsheet, with the number of males and the number of females listed separately either by single years of age or by designated age cohorts. If you are interested in making any comparisons with other populations, you should calculate these data into percentages of the total population, for example, females ages 0-4 as a percentage of the total population.

Here are the steps to take when you use Microsoft Excel:

1. After listing as negative numbers those data pertaining to males—Excel requires these negative numbers to graph the data appropriately—**select** the data for both males and females, as well as age category labels. Under **Insert**, select **Chart**; from the chart type, select the bar chart **Cluster Bar** from the chart wizard and follow the prompts for steps 2 to 4.
2. Click on the vertical axis and select **Format**. From the **Patterns** tab, set major and minor tick marks to "none" and set the tick mark labels option to "low."
3. Click on either data series from the chart and select **Format**. From the **Options** tab, set the **Overlap** to 100 and the **Gap Width** to 0.
4. Click on the horizontal axis and select **Format**. From the **Numbers** tab, select the custom number format and enter in the following: **0;0**. Doing this will eliminate the negative signs.
5. Complete the chart by adding the appropriate labels to designate males and females, and by designating that the age and sex distribution is in percent, if appropriate. Apply any other formatting, such as altering the colors of the bars in the pyramid and removing the gridlines.

Data on the current age and sex distribution for the United States can be found on the Census Bureau's Web site for states (http://www.census.gov/population/www/estimates/statepop.html) and counties (http://www.census.gov/population/www/estimates/countypop.html). Age and sex distribution data by race and Hispanic origin can also be downloaded. The Census Bureau's International Data Base provides information on countries and displays pyramids for 1997, 2025, and 2050 (http://www.census.gov/ipc/www/idbnew.html).

Population pyramids can also be generated by using a software utility called "Population Pyramids 98" from HPN Technologies, Inc. (http://www.visitus.com/popsite/software/pyramids/). ■

For more information:

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Excel 2007

1. Lag en ny kolonne med negative tall for menn. Insert 2D Bar Chart. Høyre klikk figuren og velg Select Data. Velg kolonnene for kvinner og (minus) menn i Chart Data Range. Klikk på Edit under Horizontal (Category) axis labels, og velg kolonnen for aldersetiketter. Velg Series 1, klikk på Edit, og skriv inn kvinner i ruten for Series Name. Gjenta dette for Series 2: menn. Klikk OK.
2. Velg ikongruppen Design øverst i Excelarket, og velg det første ikonet i gruppen Chart Layouts. Skriv inn figurtittel.
3. Velg den loddrette aksen ved å klikke på ett av aldersetikettene. Høyre klikk, og velg Format Axis. Under Axis Options, sett Axis Labels på Low. Klikk Close. Dette flytter aldersetikettene til venstre.
4. Venstre klikk på strekene for kvinner, høyre klikk, og velg Format Data Series. Juster Series Overlap til 100%, og Gap Width til 20%. Klikk Close.
5. Venstre klikk på ett av tallene på vannrett akse, høyre klikk, og velg Format Axis. Velg Number, Custom, skriv inn 0;0 og klikk på Add. Klikk Close. Dette fjerner minustegnet. NB trenger du 1 desimal, så skriver du 0,0;0,0. Trenger du prosenter med 1 desimal så skriver du 0,0%; 0,0%.

Excel 2010
1. Lag en ny kolonne med negative tall for menn.
2. Insert 2D Bar Chart. Høyre klikk figuren og velg Select Data. Klikk på Add og legg inn kolonnen for kvinner (med «kvinner» som Series name). Gjenta dette for (minus) menn. Klikk på Edit under Horizontal (Category) axis labels, og velg kolonnen for aldersetiketter. Klikk OK.
3. Velg ikongruppen Design øverst i Excelarket, og velg det første ikonet Add Chart Element i gruppen Chart Layouts. Velg Chart Title. Skriv inn figurtittel. Velg også Legend i Add Chart Element.
4. Velg den loddrette aksen ved å klikke på ett av aldersetikettene. Høyre klikk, og velg Format Axis. Under Labels, sett Label position på Low. Klikk Close. Dette flytter aldersetikettene til venstre.
5. Venstre klikk på strekene for kvinner, høyre klikk, og velg Format Data Series. Juster Series Overlap til 100%, og Gap Width til 0%. Klikk Close.
6. Venstre klikk på ett av tallene på vannrett akse, høyre klikk, og velg Format Axis. Velg Number, Custom under Category, skriv inn 0;0 under Format Code og klikk på Add. Klikk Close. Dette fjerner minustegnet. NB trenger du 1 desimal, så skriver du 0,0;0,0. Trenger du prosenter med 1 desimal så skriver du 0,0%; 0,0%.