

Insight 1: Which states have the most poverty?

Summary

[This visualization](#) allows the viewer to see at a glance which states have the highest rates of poverty. Both the map and the bar graph show that Texas, Georgia and Puerto Rico have higher rates of poverty than the other states. The user can filter the information by state or multiple states using the checkboxes on the right. The user may also click on a state or set of states in the visual map to get filtered results.

Design

The use of blue-only was a design choice. Red-green was avoided due to a common color blindness condition, and the use of multiple colors was avoided, because it would only serve to distract.

Resources

https://help.tableau.com/current/pro/desktop/en-us/filtering_global.htm

<http://breaking-bi.blogspot.com/2013/01/filter-actions-linking-and-highlight.html>

Insight 2: Which counties in Texas have the most poverty?

Summary

Following up on the finding from the previous insight, [this visualization](#) focuses on Texas and its counties. Here, one can see that the highest levels of poverty are clustered in the southernmost and westernmost counties of the state. Actual poverty numbers may be seen by hovering the cursor over the map or the bars in the bar graph.

Design

Similar to the previous visualization, the blue-only color is used as there isn't a reason to use multiple colors, which would be distracting. The shades of blue make it possible to see at a glance the areas with highest numbers of poverty. Clicking away from Texas retains the last filtered grouping.

Insight 3: Do poverty and employment correlate? What about poverty and unemployment or poverty and self employment?

Summary:

These visualizations look for a correlation between employment and poverty. From [this visualization](#), we see that employment is unexpectedly correlated with poverty in Vermont, Wyoming, Texas, and Illinois. One would expect that low employment would be correlated with high poverty, as seen in Mississippi and West Virginia. One would expect that high employment would be correlated with low poverty, as seen in California and New York.

This graphic can be misleading, because the line graph implies a connection or trend from state to state, when they are really discrete values. However, the visual still allows us to see that employment oddly sometimes lines up with poverty.

An alternative is [this overlapped bar chart](#). Here, we do not have the same problem of the implied connection between the states. We see in this visualization that the number in poverty exceeds the number employed in most states. When we sort the bars in order of employment descending, we see that the poverty rate sometimes exceeds and sometimes is below the employment rate. When we sort the bars by poverty, we see that the employment numbers rise and fall without predictability.

In [this visualization](#), we see a correlation between the Self Employed and Poverty (bottom visualization), and a stronger correlation between Unemployment and Poverty (upper visualization).

Finally, when we synchronize the axes and plot Self Employed, Unemployed and Poverty in a [single visualization shown here](#), it may now be seen that those states with little or no self employment or unemployment also have little or no poverty, whereas in those states with some self employment and some unemployment, it appears that the poverty number may be approximated by adding self employment and unemployment together. However, this could also be coincidental as unemployment does not account for all of the poverty and any other factor, could potentially suggest the same (e.g. unemployment + construction might appear to account for poverty).

Design

These visualizations avoid the use of red and green and instead utilize blue and orange, to make them more accessible to those with red-green colorblindness. In this series of graphs, orange is consistently used as the color for poverty. Note that Tableau Public occasionally displays duplicate information in the tooltip, which does not appear in Tableau Desktop (see reference below).

Resources

<https://kb.tableau.com/articles/howto/dual-axis-bar-chart-multiple-measures>

<https://kb.tableau.com/articles/issue/dashboard-published-to-tableau-server-show-duplicated-rows-sporadically>

Insight 4: Is racial diversity linked to poverty?

Summary

Finally, [this visualization](#) takes a look at the racial diversity in the 8 states with the most poverty and 8 states with the least poverty. This is a difficult comparison, because many of the states with very little poverty are also very small with smaller populations. However, in looking at the top 3 in each category, we can see that the high poverty states of Texas, Georgia and North

Carolina do appear to have higher proportions of people of black and hispanic races as compared to the low poverty states of Massachusetts, Connecticut and New Hampshire.

Design

In this graphic, blue is used to represent the typical majority race in each state, while the colors red, brown, orange, aqua and green are used to show the minority races. This makes it easy to see at a glance the relative diversities among the states being compared.

Resources

<https://knowledge.udacity.com/questions/445767>

Links to all Visualizations

Which states have the most poverty?

https://public.tableau.com/views/Whichstateshavethemostpoverty/Whichstateshavethemostpoverty?:language=en&:display_count=y&publish=yes&:origin=viz_share_link

Which counties in Texas have the most poverty?

https://public.tableau.com/views/PovertyinTexas_16105909545020/Dashboard2?:language=en&:retry=yes&:display_count=y&:origin=viz_share_link

Do poverty and employment correlate?

https://public.tableau.com/views/PovertyandEmploymentII/Dashboard5?:language=en&:display_count=y&:origin=viz_share_link

https://public.tableau.com/views/RelationshipBetweenPovertyandEmploymentintheUS/Dashboard7?:language=en&:display_count=y&publish=yes&:origin=viz_share_link

What about poverty and unemployment or poverty and self employment?

https://public.tableau.com/views/PovertyandUnemploymentSelfEmployment/Dashboard8?:language=en&:display_count=y&:origin=viz_share_link

https://public.tableau.com/views/PovertyandUnemploymentSelfEmployment-Tooltips/PovertyandSelfEmployment?:language=en&:display_count=y&publish=yes&:origin=viz_share_link

Is racial diversity linked to poverty?

https://public.tableau.com/views/PovertyandRacialDiversity/ComparingRacialMakeup?:language=en&:retry=yes&:display_count=y&:origin=viz_share_link

