DALI Data Challenge (Part 1)
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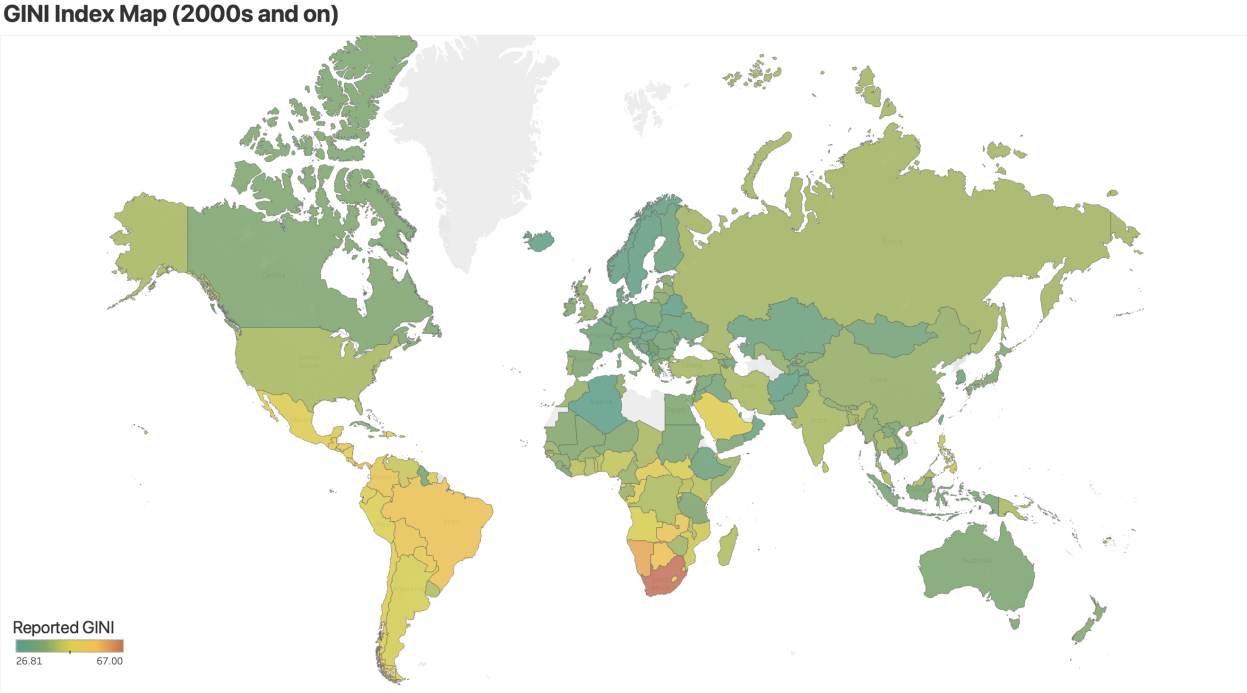
Figure 1: GINI Index Map

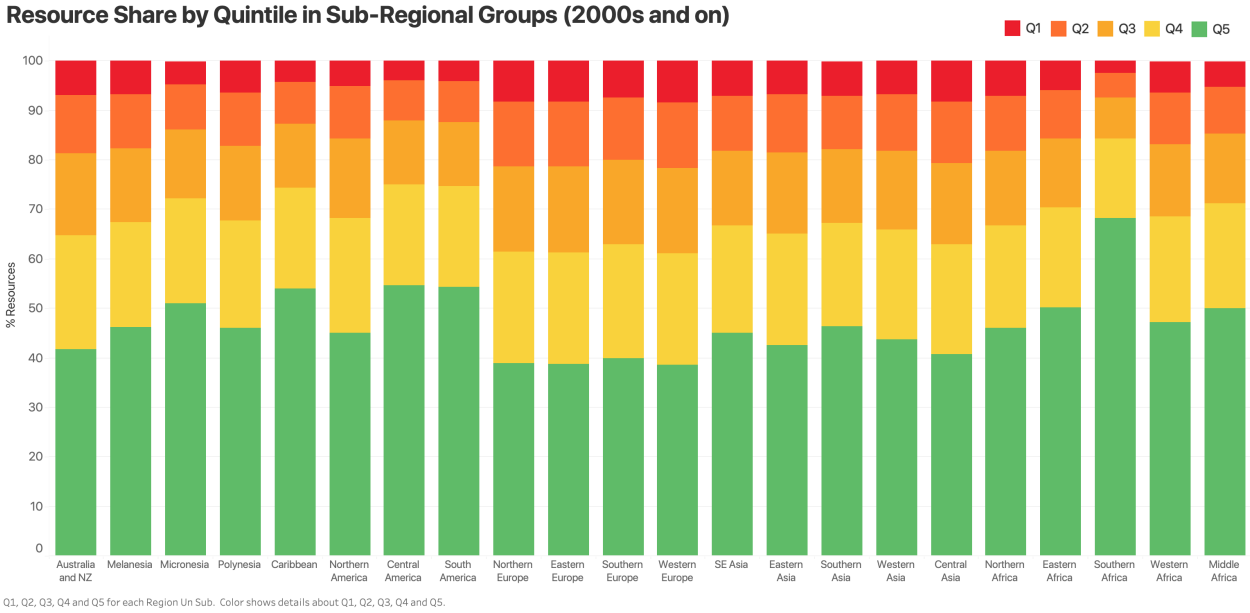


I elected to use a map to visualize reported GINI index across countries, averaged across data from the years 2000-2017. The GINI index is a score used to measure income inequality in a given population. Higher GINI indexes correspond to higher disparity inequality, while lower GINI indexes indicate a more equitable distribution of income.

Presenting the data in this form enables the viewer to observe global trends in inequality that would be less easily visible in another type of chart. I chose a temperature-based color scheme: countries with higher GINI indexes appear in warmer yellows and oranges, while those with lower ones appear in cooler greens.

From the data, it is immediately evident that Europe and Central Asia have little inequality, while Southern Africa, South America, and Central America struggle with great wealth disparity.

Figure 2: Resource Share by Quintile in Sub-Regional Groups

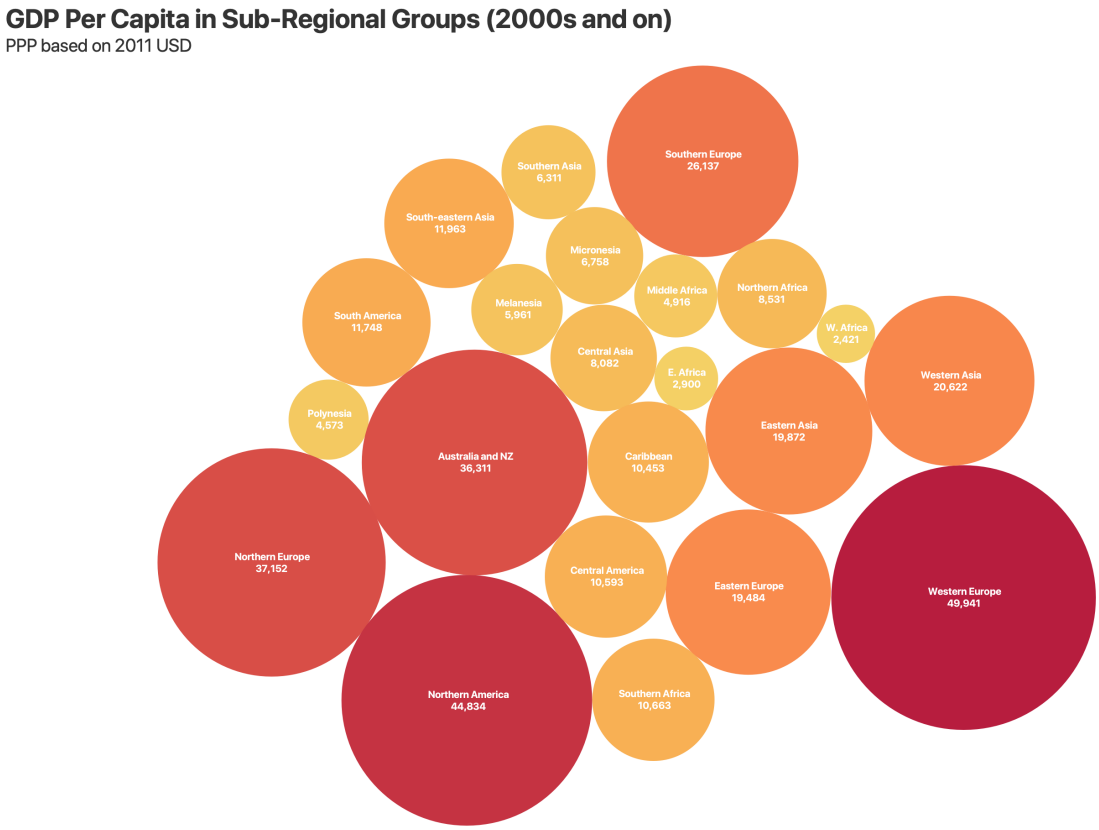


This graphic displays resource share among quintiles in sub-regional groups, averaged across data from the years 2000-2017. The quintile displayed in green – Q5 – corresponds to the richest 20% of the population, while the quintile displayed in red – Q1 – corresponds to the poorest 20% of the population.

Concatenating resource shares across groups into a single bar for each sub-region visually reinforces the percentage values that the colors represent. Furthermore, the adjacency of the data in this form allows easy comparison. I chose to divide the data by sub-region to provide a fairly high resolution that is still visually comprehensible.

It is quick to see, for example, that Southern Africa has extreme wealth disparity, followed closely by South America, Central America, and the Caribbean. Europe seems to have the least disparity across the board.

Figure 3: GDP Per Capita in Sub-Regional Groups

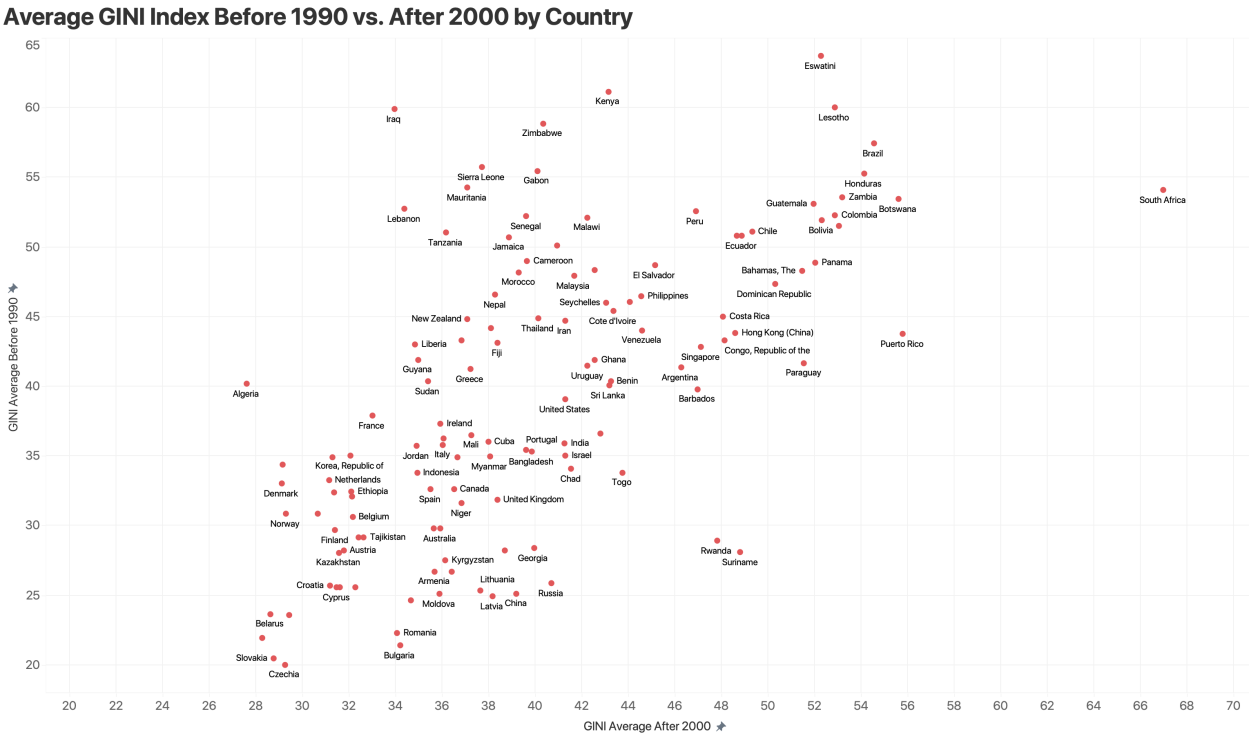


In this graph, I chose to use colored bubbles to represent GDP per capita in various sub-regions, averaged across data from the years 2000-2017. GDP per capita is a metric that describes the economic output of a country or region, corrected for its population size.

I chose a packed bubble chart because the size and colors of the bubbles visually reinforce that data contained within them, giving an immediate sense of relative economy size in countries across these sub-regions. While there could be variability within these sub-regions, the visualization gives a quick, generalized view of differences across the world.

As displayed, countries Northern America, Western and Northern Europe, and Austrailia and New Zealand have the highest GDP per capita, while those in Eastern and Western Africa have the lowest.

Figure 3: Average GINI Index Before 1990 vs. After 2000 by Country



In this graph, I hoped to convey the change in social inequality in various countries over the past several decades by plotting their average GINI scores from the time period before 1990 against that from after 2000.

This graph was tricky because many countries did not have sufficient data or were clustered very closely on the chart. However, I still think that the graph relays valuable information. Countries along the diagonal saw no or little change in GINI coefficient between the period before 1990 and after 2000. Countries to the lower right of this diagonal saw an increase in GINI index, while countries to the upper left saw a decrease in this metric. For example, Iraq saw a dramatic increase in equality, while Rwanda and Suriname saw great increases in wealth disparity. Countries like Brazil and Honduras had consistently high GINI indexes, while countries like Slovakia and Czechia had consistently low GINI indexes.