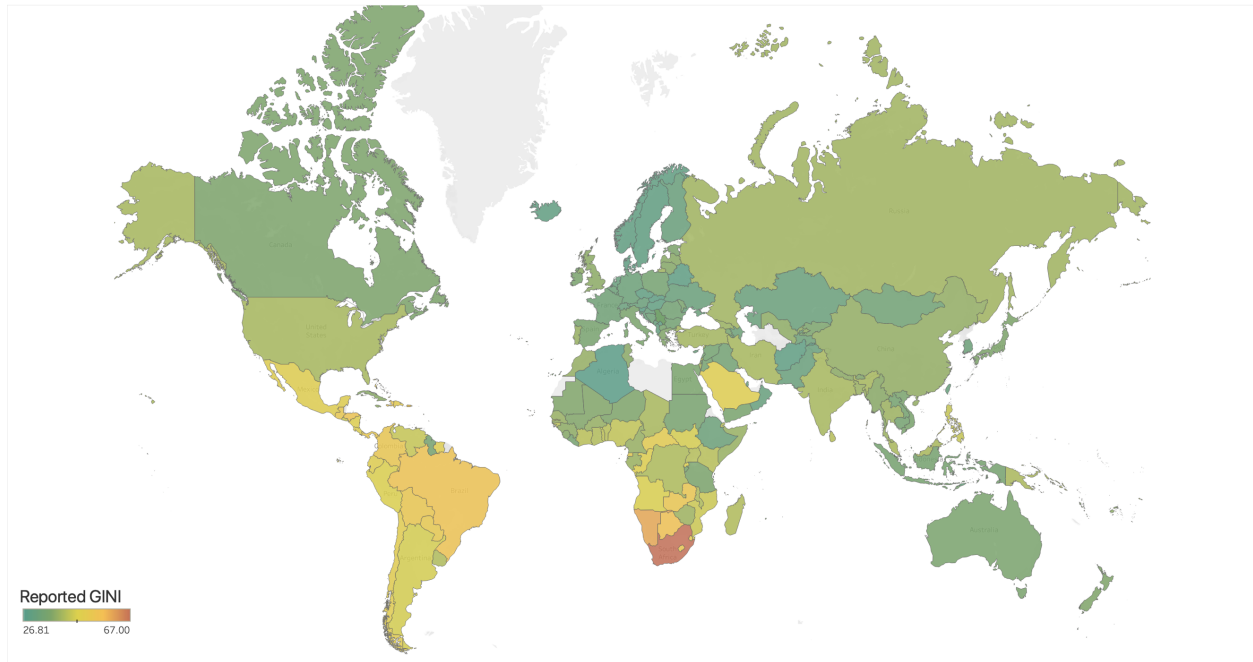


DALI Data Challenge (Part 1)

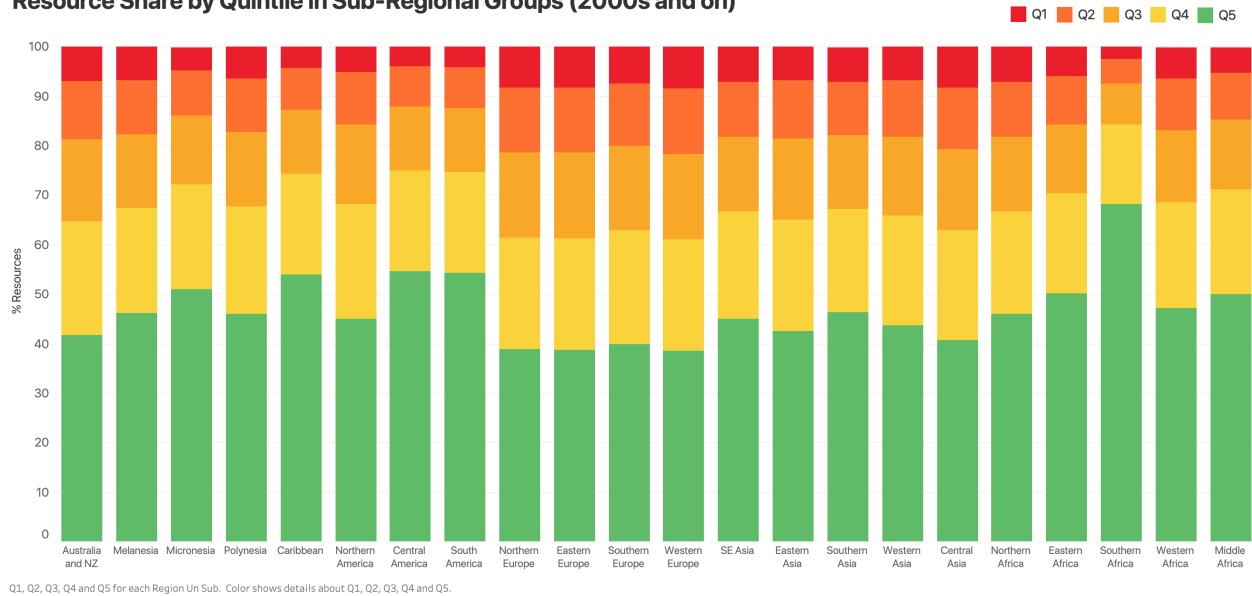
Joshua Pfefferkorn

GINI Index Map (2000s and on)



I elected to use a map to visualize reported GINI index across countries in the modern era. The GINI index is a score used to measure income or wealth inequality in a given population. 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. Warm colors indicate a higher GINI index (more inequality), while cooler colors indicate a lower GINI index. 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.

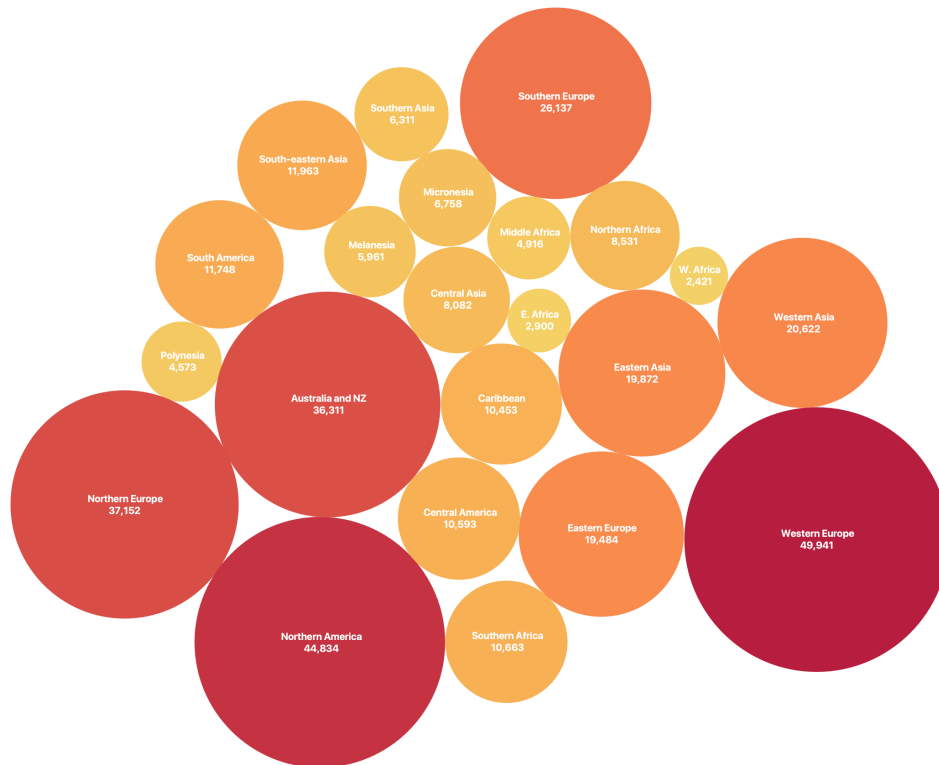
Resource Share by Quintile in Sub-Regional Groups (2000s and on)



This graphic displays resource share among quintiles in sub-regional groups. Concatenating shares across groups into a single bar for each sub-region enforces the percentage values that the colors represent. Furthermore, the adjacency of the data in this form allows easy comparison. 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.

GDP Per Capita in Sub-Regional Groups (2000s and on)

PPP based on 2011 USD



In this graph, I chose to use colored bubbles to represent GDP per capita in various sub-regions. 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 regions. As displayed, countries Northern America, Western and Northern Europe, and Australia and New Zealand have the highest GDP per capita, while those in Eastern and Western Africa have the lowest.

The scatter plot displays the relationship between the GINI Average Before 1990 (Y-axis) and the GINI Average After 2000 (X-axis). The X-axis ranges from 20 to 70, and the Y-axis ranges from 20 to 65. The plot shows a positive correlation, with many countries clustered between 20 and 60 on both axes. Notable outliers include Eswatini (high GINI before, high GINI after) and South Africa (high GINI after, moderate GINI before).

Country	GINI Average Before 1990 (Y)	GINI Average After 2000 (X)
Eswatini	64	48
South Africa	54	67
Lesotho	60	53
Brazil	57	55
Kenya	61	44
Sierra Leone	56	37
Gabon	55	40
Malawi	52	43
Peru	52	47
Guatemala	53	50
Honduras	55	54
Zambia	54	55
Botswana	53	56
Colombia	53	54
Bolivia	51	52
Panama	48	52
Costa Rica	45	50
Hong Kong (China)	44	50
Congo, Republic of the	43	50
Paraguay	42	52
Puerto Rico	43	56
Argentina	41	48
Uruguay	40	46
Benin	40	45
Sri Lanka	39	43
United States	39	40
India	37	43
Portugal	36	41
Indonesia	35	38
Myanmar	35	39
Malaysia	35	40
Seychelles	35	41
Cote d'Ivoire	35	42
Venezuela	35	43
Singapore	35	47
Philippines	35	48
El Salvador	35	49
Dominican Republic	35	50
Guinea	35	34
Sierra Leone	35	35
Liberia	35	36
Ghana	35	37
Thailand	35	38
Iran	35	39
Maldives	35	40
Malta	35	41
Cuba	35	42
Portugal	35	43
India	35	44
Israel	35	45
Chad	35	46
Togo	35	47
United Kingdom	35	38
Niger	35	37
Spain	35	36
Belgium	35	35
France	35	34
Ireland	35	33
Italy	35	32
Malta	35	31
Cuba	35	30
Portugal	35	29
India	35	28
Israel	35	27
Chad	35	26
Togo	35	25
United Kingdom	35	24
Niger	35	23
Spain	35	22
Belgium	35	21
France	35	20
Ireland	35	19
Italy	35	18
Malta	35	17
Cuba	35	16
Portugal	35	15
India	35	14
Israel	35	13
Chad	35	12
Togo	35	11
United Kingdom	35	10
Niger	35	9
Spain	35	8
Belgium	35	7
France	35	6
Ireland	35	5
Italy	35	4
Malta	35	3
Cuba	35	2
Portugal	35	1
India	35	0
Israel	35	-1
Chad	35	-2
Togo	35	-3
United Kingdom	35	-4
Niger	35	-5
Spain	35	-6
Belgium	35	-7
France	35	-8
Ireland	35	-9
Italy	35	-10
Malta	35	-11
Cuba	35	-12
Portugal	35	-13
India	35	-14
Israel	35	-15
Chad	35	-16
Togo	35	-17
United Kingdom	35	-18
Niger	35	-19
Spain	35	-20
Belgium	35	-21
France	35	-22
Ireland	35	-23
Italy	35	-24
Malta	35	-25
Cuba	35	-26
Portugal	35	-27
India	35	-28
Israel	35	-29
Chad	35	-30
Togo	35	-31
United Kingdom	35	-32
Niger	35	-33
Spain	35	-34
Belgium	35	-35
France	35	-36
Ireland	35	-37
Italy	35	-38
Malta	35	-39
Cuba	35	-40
Portugal	35	-41
India	35	-42
Israel	35	-43
Chad	35	-44
Togo	35	-45
United Kingdom	35	-46
Niger	35	-47
Spain	35	-48
Belgium	35	-49
France	35	-50
Ireland	35	-51
Italy	35	-52
Malta	35	-53
Cuba	35	-54
Portugal	35	-55
India	35	-56
Israel	35	-57
Chad	35	-58
Togo	35	-

In this graph, I hoped to convey the change in social inequality in various countries over the past several decades. 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.