

The Statistically Most Average Country

In this essay I will be explaining and defending my method for finding averageness, as well as providing examples using the question of the most average country. For this, each country will be evaluated on four criteria: population, area, total GDP, and GDP per capita. The average will be calculated using the standard formula $y_1 + y_2 + \dots + y_n / n$.

Averageness will be calculated on a scale from 0.0 to 4.0 with each of the four data sets being a value from 0.0 to 1.0.

Each value will be calculated as follows:

- First, take the average of all data points and let it be equal a .
- Then, find the value of each data point/country minus a and take its absolute value, let this be the variable n .
- Finally, divide each data point by the maximum value of n (or $\max n$).
- Now, each data point will have an indicator of averageness between 0.0 and 1.0 (which will be the variable x) with 1.0 being the least average and the lowest being the most average.

After x has been found for each data point/country, find x for each of the other data sets for all of the data points/countries and let these be x' , x'' and x''' respectively. Then add x , x' , x'' and x''' together for each data point/country. Finally, the country with the lowest value of $x + x' + x'' + x'''$ is the statistically most average country.

I use this method because it provides a simple, efficient way to view the differences between really any number and a data set. It also provides a gradient from 0 to 1. This is extremely useful as the many values of x can be sorted in groups and analyzed individually. These traits as well as the simplicity of this method make it extremely useful in any scenario.

The results of each data set will also be summarized with one paragraph. For this I will summarize the patterns I see in the values of x , as well as providing the actual average. Of course I will also show the statistically most average country for that data set and its actual value before any equations.

To begin I will summarize total GDP as it is the first data set in my spreadsheet whose actual average was roughly 548 billion USD. Firstly, the statistically most average country for category is Ireland with an original value of 551 billion USD and a value of x of roughly 0.0011. The pattern I recognized here was that the values of x changed exponentially nearing the end (being the highest values of x and therefore the furthest from the average eg. US, China) of the data set.

Next, I will summarize the results for GDP per capita as it was next on my spreadsheet. Firstly, here the actual average is 16825 USD. Secondly, the pattern I observed here is similar to the first, the main difference here is that the change at the highest values of x is slightly more gradual. Lastly, the lowest value of x (most average) of roughly 0.0003 belonged to Oman whose original value was 16889 USD.

Thirdly, I will be summarizing the results of total area as, guess what, it is next on my spreadsheet. I found that this category was much more intriguing than the others as there is much more variation. That being said, the pattern here is also similar to those of the first and second,

though the change between any two given numbers is on average much higher. Thirdly the country with the lowest value of x in this category was Morocco with a value of x of roughly 0.0001. Lastly, Here the actual average is 692414 km^2 and the original value for Morocco is 676578 km^2 .

Lastly, here are the results for the last data set on my spreadsheet, population. Here, the country with the lowest value of x is Afghanistan with a value of x of roughly 0.0004 and an original value of roughly 42 million. Finally the pattern I observed here was generally exactly the same as that of total GDP in that at the end the numbers grew by larger and larger amounts.

Now, the final results. This was calculated as the sum of the values of each category for each country. Firstly, only 5 countries had a total of more than 1 (these being the least average), China, The US, India, The Republic of Moldova and Monaco. Of these 5 countries only 1 has a total of more than 2 that being China with a total of roughly 2.2. After that there's only one thing left, by definition, the statistically most average country. And that is, with a total of roughly 0.035, Chile.

In conclusion, Chile is, by my definition, the statistically most average country. The method I used is helpful as it provides a simple and efficient way to view data and, as illustrated in the previous paragraph, multiple values of x (e.g x , x' , x'' , and x''') can be added together. I do believe that this method is the best one out there and if there is a better one, I'm excited to write an essay about that one next.

Notes:

1. All data used here is from 2023.
2. It's not awfully complex because I am 11 as of submission.

Sources:

1. [UN Member States](#)
2. [PopTotal](#)
3. [GDPTotal](#)
4. [List of countries and dependencies by area - Wikipedia](#)

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