**Data Visualization**

Below is the original diagram from https://data.worldbank.org

A screenshot of a social media post

Description automatically generated

The source is from ICP 2017 (International Comparision Program), which covered 176 economies, producing purchasing power parities (PPPs) for 2017, along with estimates of PPP-based gross domestic product (GDP) and its major expenditure components in aggregate and per capita terms.

This chart shows countries across world with different GDP Price levels and PPP-based GDP per capita. Bubble size represents PPP-based GDP of each economy. When comparing price levels, bermuda was the most expensive economy in 2017, followed by Iceland and Switzerland. The cheapest economy was Egypt. When comparing PPP-based GDP per capita, luxembourg was the richest country, while Burundi was the poorest country.

I created the following diagram:

A screenshot of a cell phone

Description automatically generated

I resorted out the data by myself. As the PPP-based GDP per capita was calculated with GDP divided by population, the data is slightly different with original one. The font and size don’t look exactly the same as well. In addition, the sequence of regions in legend looks different, actually I followed the sequence in coding, but still it shows the different sequence.

I figured out several challenging parts:

1. The values on X-Axis must look equal distance, I added trans= “log2” in scale\_x\_continous to achieve the effect.
2. I also used “expand (0,0)” in scale\_x\_continous to ensure 500 is the start of ticks.
3. I changed the symbol shape of legend to rectangle from circle with guides (colour = guide\_legend (override.aes = list (shape = 15, size = 4)))
4. I used geom\_hline & geom\_vline respectively to create two dotted lines