Design for per capita income change over the years for all the countries.

Data:

Data in hand is the list of per capita income each year for all the countries over the time period 1960 to 2017.

Visualization:

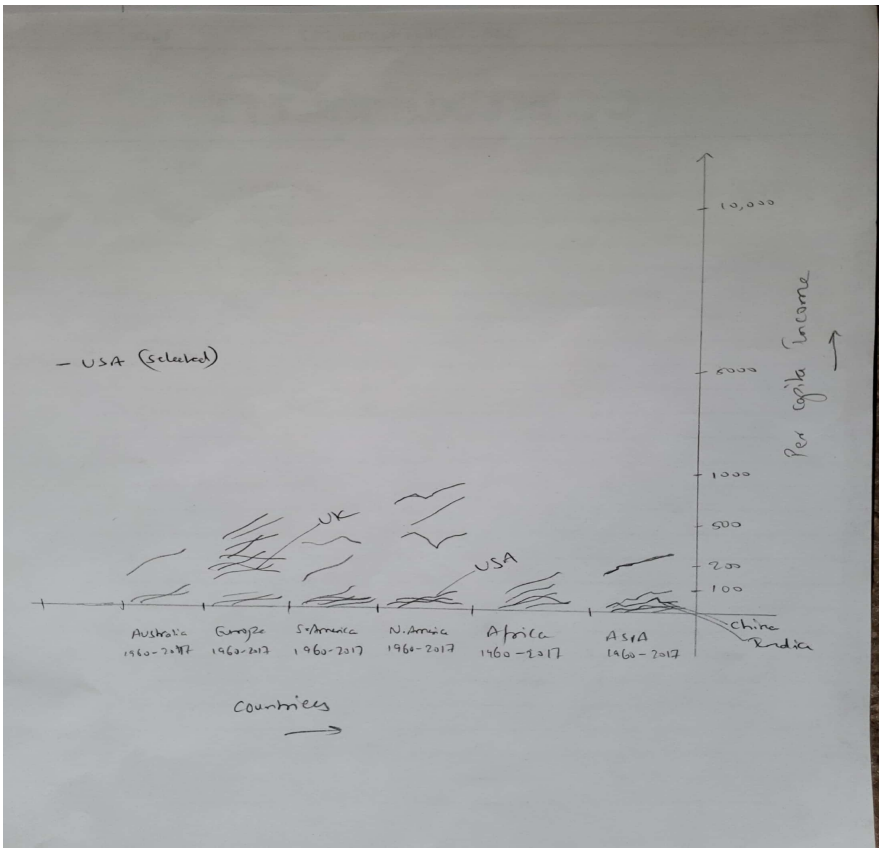
Very basic visualization which comes to the mind is to plot bar graph for each year for all countries. For this my x-axis would be year, y-axis is list of countries. Each graph segment will be a bar plot showing the difference in per capita income of all countries in that year.

Even though it was not my final visualization, I plotted the above said visualization in Tableau and attached the same with this document. After plotting this, I realized the visualization is bad, since it is clutter with lot of information which normal viewer cannot decrypt.

Hence, I came up with the different technique.

Since there is a lot of information, I prioritize myself on the intention to visualize the relevant data. I am interested in the trend in the per capita income over the years, rather the value itself. And, I want to compare the growth of the per capita income among countries. Since there are lot of countries, I categorized them into continents and compared the growth/decline of per capita income of countries among continents.

Below is the hand-written diagram of the visualization.



Design explanation:

X- axis is set of continents where each set contains numerous segments. Each of which represents the progress of per capita income for the particular country. Change in per capita over the years is noted in the change of line segment over the time period. Since per capita income can decrease or increase over the years, the segment in itself will be a graph shape.

Y-axis is the per capita income.

Implementation and effectiveness:

For the static visualization, I can use colors for each country in continent. Since counties in the continent can be huge, we can use continues color segment with respect to the geographical location. I.e., if the two countries are nearby, they will be similar shades of color. But, this color differentiation can lead to confusion.

But, if we make it a dynamic visualization, I may not use the color factor itself. One can hover over the segment, and the country associated with it will appear on the front. This way viewer can see the interested country.

The visualization is effective since we can see a trend in the country's growth or decline over the time period.

Questions:

One of the questions which will be left unanswered is the comparison of two countries of interest. This is not obvious from the graph. We should manually trace two countries and figure out the differences. If this is the details in demand, then the visualization can be changed giving priority to comparing countries. The current visualization is best suited for the seeing trends in growth of each country.