

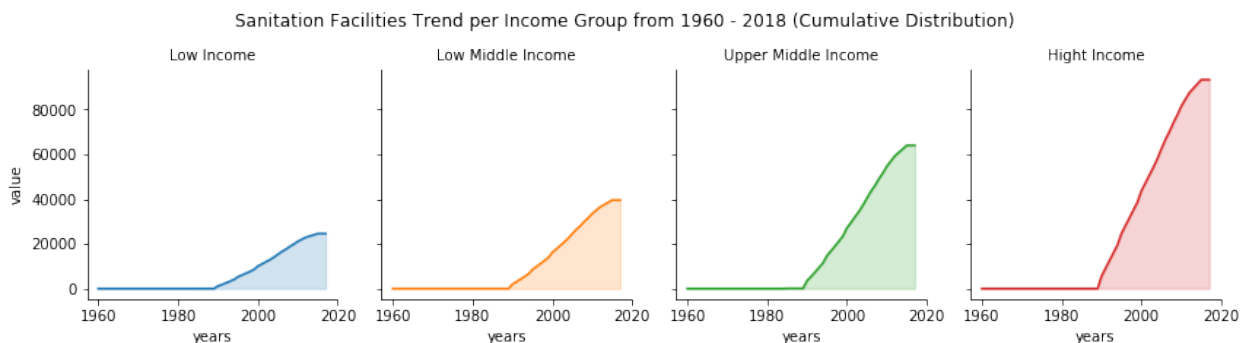
Part I

- Approach:

I approach this problem by downloading data from API using argument like "http://api.worldbank.org/v2/countries/" + income_level + "/indicators/SH.STA.ACSN per_page=58&format=json&date=1960:2018", where income level is in 4 income group required from the exercise document. For visualization, I created cumulative distribution graph that adds all sanitation facilities before current year as values in Y axis to illustrate the each income group's total sanitation facilities counts trend distribution. To observed the improved sanitation facilities each year, I just simply denote each year's sanitation numbers in Y axis without extra data processing.

- Conclusions:

Overall, access to sanitation facilities is increasing per income groups, while higher income groups have larger amounts of sanitation groups than countries in lower income groups.



If we want to see the improved sanitation facilities per year by different Income Groups, the following chart explains the fact that although there is a robust increasing trend of newly added sanitation facilities increasing from 1990 - 2010, recently, from 2010 - 2016, overall sanitation facility numbers are decreasing. For all income groups, they has similar peaks around 1995, 2000 and 2005.

