

# Office Location for Global Companies

## 1. Introduction/Business Problem

Global Companies have to think about finding appropriate office locations to expand business globally. Recently, remotely working far away from headquarter office is becoming common, but it is still necessary to think about “good” locations as an important factor to hire “good” people. Finding appropriate cities around the world is a painful project if responsible people do not have appropriate evaluation methods & knowledges of global cities.

## 2. Data

Finding appropriate data source is the first step for evaluating global cities. GDP; Gross Domestic Product is well-known, tangible, and good for measuring business growths of global cities from around the world. “List of cities in the world by gross domestic product (GDP)” from Wikipedia has good data sources for this project, and everybody in the world can access the same data as a reference.

List of cities by GDP

[https://en.wikipedia.org/wiki/List\\_of\\_cities\\_by\\_GDP](https://en.wikipedia.org/wiki/List_of_cities_by_GDP)

## 3. Methodology

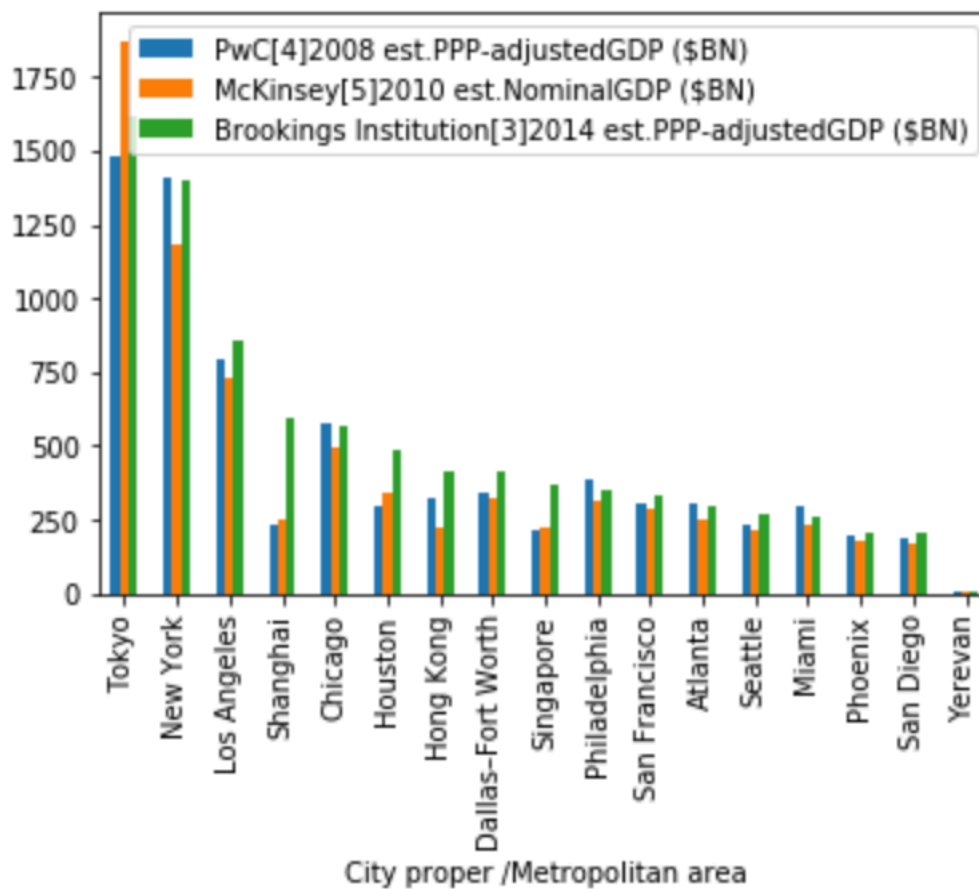
Taking following steps to visualize “List of cities in the world by GDP”.

- 1) Scraping “List of cities by GDP” data from Wikipedia web page, putting into Dataframe.
- 2) Deleting no GDP data rows from Dataframe to proceed.

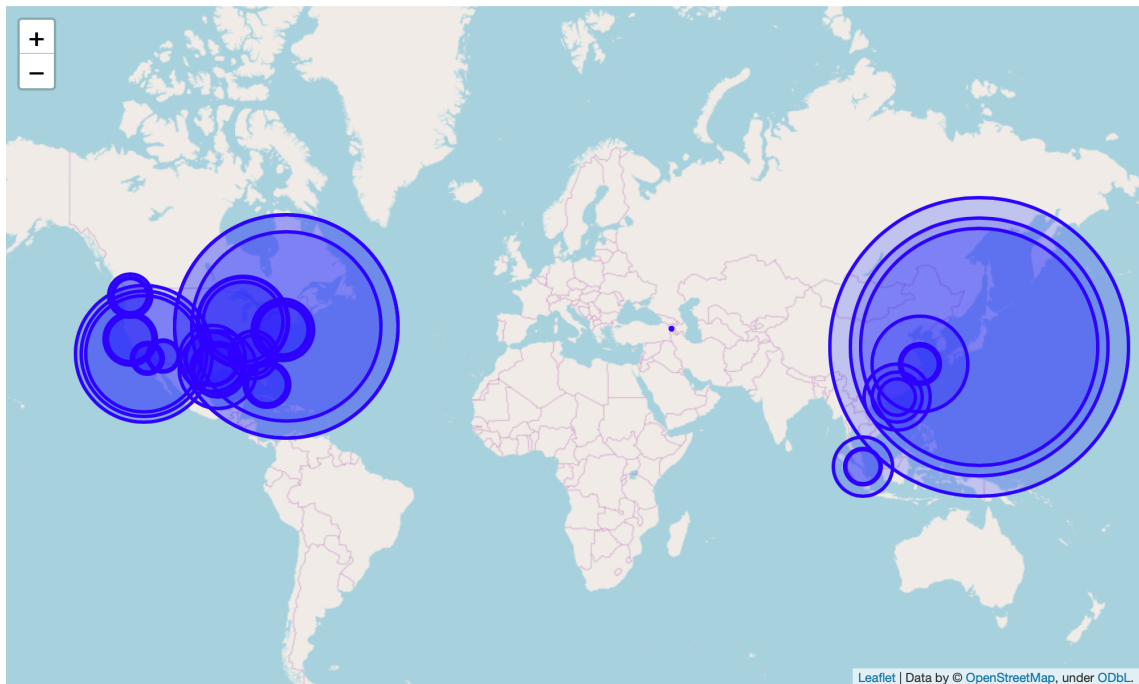
### 3) Sorting cities by using GDP number.

	City proper /Metropolitan area	Country/Region	PwC[4]2008 est.PPP- adjustedGDP (\$BN)	McKinsey[5]2010 est.NominalGDP (\$BN)	Brookings Institution[3]2014 est.PPP- adjustedGDP (\$BN)
339	Tokyo	Japan	1479.00	1874.70	1617.00
240	New York	United States	1406.00	1180.30	1403.00
197	Los Angeles	United States	792.00	731.80	860.50
306	Shanghai	China	233.00	250.70	594.00
75	Chicago	United States	574.00	496.40	563.20
146	Houston	United States	297.00	341.10	483.20
144	Hong Kong	Hong Kong	320.00	224.50	416.00
90	Dallas-Fort Worth	United States	338.00	324.90	412.70
313	Singapore	Singapore	215.00	222.70	365.90
258	Philadelphia	United States	388.00	314.50	346.50
293	San Francisco	United States	301.00	283.30	331.00
20	Atlanta	United States	304.00	249.70	294.40
302	Seattle	United States	235.00	211.00	267.50
216	Miami	United States	292.00	235.90	262.70
259	Phoenix	United States	200.00	181.60	207.10
292	San Diego	United States	191.00	172.90	202.50
366	Yerevan	Armenia	5.23	5.23	5.23

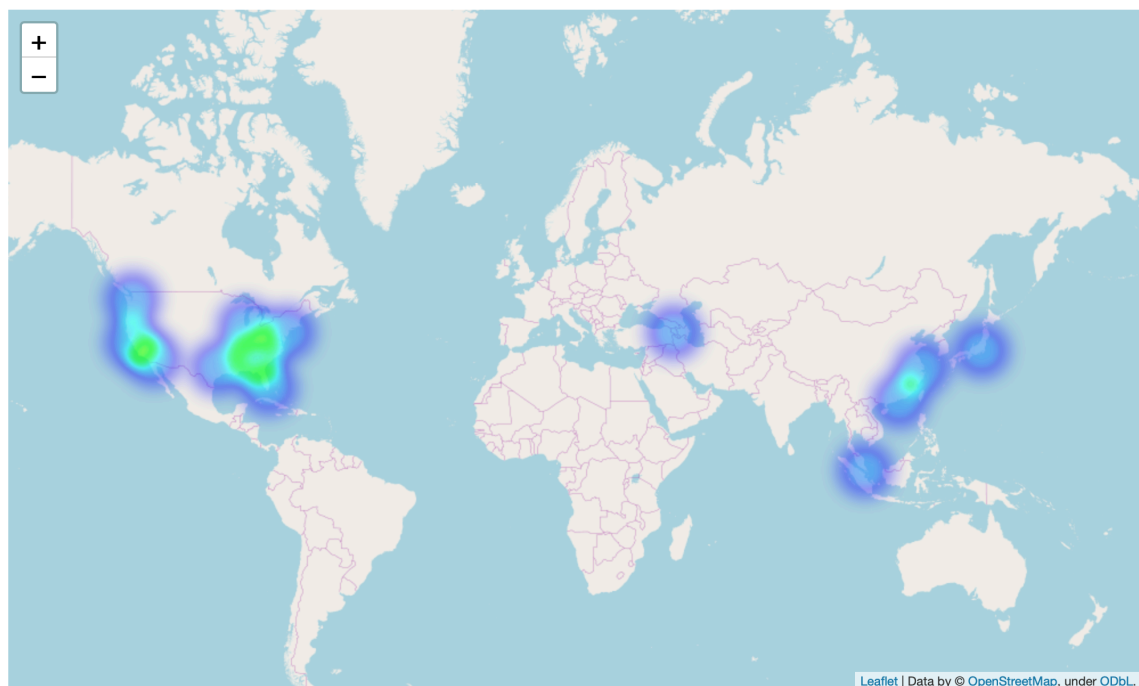
### 4) Displaying bar chart to make sure priorities by GDP numbers.



5) Plotting GDP sizes of cities as circle markers to map.



6) Creating heatmap from cities.



#### 4. Results

GDP shows growing business by each city in the world, and Tokyo, New York, Los Angeles are top three from statistical viewpoints but heatmap

shows Shanghai has better neighbors compared with Tokyo. New York, Los Angeles have no difference results from GDP numbers.

## **5. Discussion**

Before processing list of cities in the world by GDP data from Wikipedia, it was expected to have much more cities for analysis because Wikipedia shows 366 cities' name but after eliminating cities which have no GDP data, remaining only 17 cities. Performing equivalent comparisons within the same countries such as United States and / or Japan can expect to have much more interesting results.

## **6. Conclusion**

First choice is New York, Second choice is Los Angeles, third choice is Shanghai. Tokyo is possible choice because of good number of GDP, but isolated from other cities from heatmap viewpoints.