Capstone Project – The Battle of London Boroughs

By

Sin Wee Lee

Version 1: 11/03/2019

Table of Contents

1. Introduction

London, capital and one of the largest city of both England and the United Kingdom, voted most attractive city to work for overseas worker in a global survey of 3666,000 people, beating New York, Berlin and Barcelona to take the top spot in 2018 (Total Jobs and Boston Consulting Group).
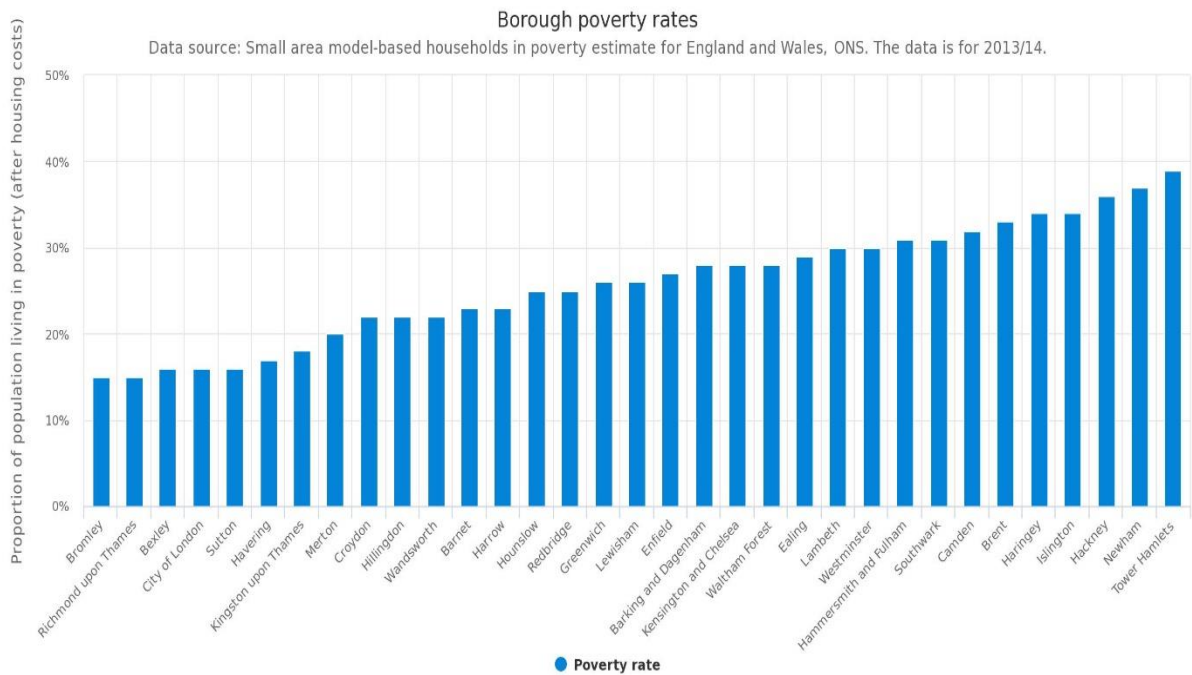
However, with Brexit fast approaching, there are not clear forecasts on the impacts of Brexit on the social, economic and the development of the city. To anticipate the impacts, local authorities (local government) are looking at ways to reduce cost and have more targeted development at borough level.

Although London as a whole has been booming for the last decade, the segregation of wealth across London are still visible since the 80s. Thus, it will be interesting to see how the social, economic impacts influence the facilities, venues and amenities available in the boroughs.

In order for the stakeholders, the local authorities and the business chamber of commerce to understand the social and economic impacts based on the facilities and amenities of certain borough and how this insights can provide targeting local and business development for London boroughs.

This project aims to address this by carried out a comparative studies on the facilities and amenities between the two boroughs with the highest income rate and the lowest in London.

In London, there are 32 London boroughs and the City of London. Among them, Tower Hamlet have the highest poverty and Bromley has the lowest. Although the data are from 2013/14, the stats remained at the same level.

Borough poverty rates
Data source: Small area model-based households in poverty estimate for England and Wales, ONS. The data is for 2013/14.

Chart Source: trustforlondon.org.uk/data

Notes:

London's Poverty profile is created by charitable funder, Trust for London, and the independent think tank, New Policy Institute.

Questions to answer:

1. What types of facilities (venues) and amenities are available in the area with different poverty line?
2. How venues changing based on the spending power?
3. What are the distinctive venues that represent in these boroughs
4. Suggestions and recommendations of development in these areas.

By answering the above questions, the findings can be used for the targeting development for the rest of the London Boroughs so that unnecessary development can be avoided and overall budget can be sustained.

2. Data Descriptions

The data folder for this project will consists the following data set:

london_poverty_rate.csv

Number of Instances: 33
Sources: https://www.trustforlondon.org.uk/data/poverty-borough
Date accessed: 11/03/2019

This dataset consists of two attributes:
- *borough:* the borough name in London
- *poverty_rate:* proportion of population living in poverty (after housing costs)

Sample data: *first 10 instances of the dataset*

borough	poverty_rate
Bromley	15
Richmond upon Thames	15
Bexley	16
City of London	16
Sutton	16
Havering	17
Kingston upon Thames	18
Merton	20
Croydon	22
Hillingdon	22

london_geospatial_data.csv

Number of Instances: 33
Source: https://www.distancesto.com/coordinates/gb/
Date accessed: 11/03/2019

This dataset consists of three attributes:
- *borough:* the borough name in London
- *latitude:* latitude of the borough
- *longitude:* longitude of the borough

Sample data: *first 10 instances of the dataset*

borough	latitude	longitude
Barking and Dagenham	51.54648	0.12935
Barnet	51.62515	-0.15294
Bexley	51.4519	0.117179

Brent	51.56728	-0.27106
Bromley	51.36797	0.070062
Camden	51.55171	-0.15883
City of London	51.51234	-0.09099
Croydon	51.36797	-0.07006
Ealing	51.52503	-0.3415
Enfield	51.66229	-0.11807

Step 1:
Using the dataset above, in conjunction with Folium, we can first visualise the poverty coverage across the London borough, providing an overview of the poverty situations in London boroughs.

Step 2:
With london_geospatial_data.csv and the Foursquare location data, map the venues of the surrounding area onto a folium map.

Step 3:
Analysis each borough in terms of the venues and make the necessary clusters to look into the insights the relationship between clusters and the poverty rate of the clustered borough.