

# **The Inequality in Public Transport Accessibility : Evidence from the London Borough of Newham**

Word Count : 500

## **Background and Theoretical Framework:**

Cities attract large inflows of people and capital. While the city may provide many opportunities for development, they also are spaces of stark inequalities. Often people migrate to cities in search of better livelihood and living conditions (WEF, 2017). These aspirations are not always materialised when they are faced with poor infrastructure. Access to public transport is instrumental in the mobility of people for work, education and health. Using Sen's Capability approach (Sen, 1999), our research tries to understand the relationship between public transport accessibility and inequality in London.

This approach entails two normative claims:

- i) the freedom to achieve well-being is of primary moral importance and
- ii) that freedom to achieve well-being is to be understood in terms of people's capabilities. (Sen, 1999)

The London Borough of Newham is London's 3rd most populated borough (Greater London Authority, 2017) with good public transport connections as seen in Figure 1 with 29 Transport for London stations, and has the 3rd highest modal share for public transport (Transport for London, 2018, p.44). In the context of Newham, we plan to look at how the accessibility to public transport has helped people find freedom to achieve well-being.

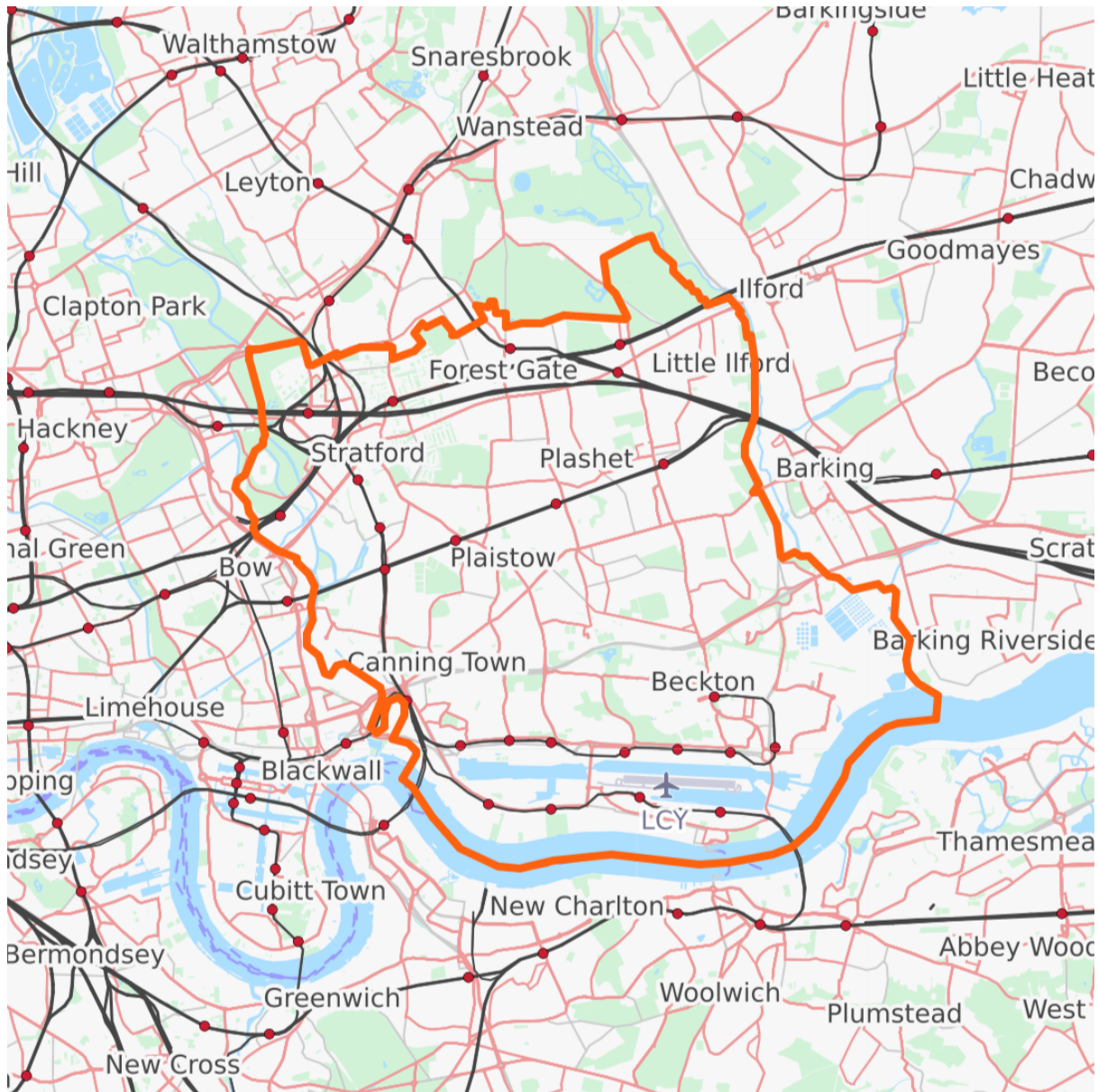


Figure 1: Depiction of Newham (OpenStreetMap, 2019)

## Research Questions

1. What is the relationship between accessibility to public transport and the income of its users?
2. Are there any other demographic factors that affect patterns of mobility of various social groups?

## **Approach**

Spatial data analysis methods will involve using GIS software such as QGIS to produce a visual map of the key public transport infrastructure within each ward in the London Borough of Newham and their shortest distances to the nearby buildings to visualize the public transport accessibility. Ideally, we could add other layers onto this map such as demographics, health to produce multi-layer maps to better visualize the topic being explored in this project. We also plan to use a network map of key public transport and road traffic routes for our spatial analysis.

Using R and SPSS, we plan to analyse the correlation between income and public transport accessibility. They will also be used to analyse other patterns of the commuters including travel by public transport, by cycling or by private vehicle.

## **Data sets**

We have identified two key datasets. The first is the Public Transport Accessibility Levels (Transport for London, 2016 ), a quantifiable metric used to measure the density of the public transport network, with values provided for 100 metre squares. The second is the Ward Profiles (Greater London Authority, 2014 ), giving demographic data at ward-level, offering opportunities for expansion to neighbouring boroughs.

## **Group work allocation**

We plan to approach the project as a group by gathering data and literature from our readings and sharing on a common database and document, where it will be organized in a structured manner for ease of access. In the data analysis process, we plan to divide the work between statistical analysis and producing choropleth maps from our data set. In the report writing stage, each member will focus on a specific area from the literature review, initial data analysis, visualisation, and statistical analysis.

## References

Greater London Authority (2014) “Ward Profiles and Atlas” London Data Store (<https://data.london.gov.uk/dataset/ward-profiles-and-atlas>, accessed 29 Oct 2019)

Greater London Authority (2017) “Land Area and Population Density, Ward and Borough” London Data Store (<https://data.london.gov.uk/dataset/land-area-and-population-density-ward-and-borough>, 29 Oct 2019)

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Sen, A. (1999) *Development as Freedom*, Knop: New York.

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Inequality in Transport , David Banister