Rough Sleeping in Inner London: a Cluster Analysis using the Foursquare.com data

Introduction:

Rough sleeping or homelessness is a growing social problem in central London. The problem that we want to focus on here, is why certain London boroughs are where homeless people congregate most. In London, the borough Westminster has the highest number of rough sleeping people and the borough is considered to be the homeless capital of the UK.

As the number of rough sleeping people in London is rising, policy makers face the problem of dealing with this delicate social problem. A more radical solution to the problem, i.e. reducing the total number of people sleeping rough on the streets of London would require government policies that would devote resources to things like cheaper housing, and support for mental health issues. These are clearly beyond the scope of our study. In this study, we assume that our stakeholders are the Westminster and Camden Boroughs/Councils. We assume that the mission of these councils is to reduce the number of rough sleepers in their boroughs. In order to achieve this objective, one needs to gain insights to why rough sleepers prefer to bed down in these particular boroughs. If the reason is the availability of certain amenities in the vicinity, for example bathroom facilities in nearby parks or the convenience of chain coffee shops where excess, unconsumed food is made freely available, or availability of many underground entrances that offer a shelter, then these factors can be taken into account in local policy making. Setting up amenities such as the food banks for the homeless in the periphery of London, away from the touristic centre of Westminster or Camden would likely to reduce rough-sleepers in these boroughs. It is true that such policies would redistribute the rough sleepers in London, rather than tackling the heart of the problem. However, the displacement effect may be positive especially if moving to the periphery is coupled with counselling for mental health issues, and/or has a disruptive effect in the accessibility to harmful substances.

We will examine the problem in two stages: In the first stage, focusing only on the inner London boroughs, we will describe the relationships between the rough sleep rates (by hectare area or population) and the socio-economic characteristics of the boroughs. A priori, our expectation is that things like unemployment rate or the average annual pay in a borough are not very reliable indicators, given that rough sleepers are often not the original inhabitants of the borough where they bed down. We also think that things like average house price in the borough is not a meaningful variable even if one finds a high correlation between that and the rough sleeper ratio of the borough. Both Westminster and Camden have house prices that are well above the national average. However, it is a well-known fact that, majority of professional Londoners cannot afford accommodation in those boroughs and finding a high correlation between rough sleepers and average house price does not imply any causality.

We will also examine if other borough statistics such as crime rates and ambulance incidents relate to the rough sleeper numbers. This is because the substance abuse/possession incidents and ambulance incidents may move in similar direction as the number of rough sleepers in each borough. According to Greater London Authority's "Chain October-December 2019 Report", only about 20% of all the rough sleep cases don't need alcohol, drug addiction or mental illness-related support. When

we refer to the problem of "rough sleepers" or "homeless", we need to be careful in lumping people together and treating them as a homogenous category. People can be homeless for diverse reasons: mental illness, addiction, family breakdown, and depression are among them. All we want to do in this first stage of the analysis is to let the descriptive data speak for itself.

In the second stage of the problem we will carry out some spatial analysis to support our hypotheses about the boroughs in question. We will use the foursquare.com's data about the venues in the area to help with our cluster analysis. The Westminster borough is a very touristic part of London with the Westminster Cathedral, many hotels, theatres, and restaurants. Rough sleeping people gather where there are services for them, which might be the reason why they hang out in this particular borough. In one of the neighbourhoods of the Westminster borough, the so-called "West End", theatres with their spacious entrances offer good shelter, where numerous homeless bed down on the steps once the audiences have gone home. Shop doorways also offer some shelter and, chain restaurants and cafes tend to donate their excess food and drinks to rough sleepers. Especially in summer, proximity to parks may be a desirable issue for the rough sleeping community. Parks are also attractive venues as they provide bathroom facilities.