IMPACT OF PRISONS ON THEIR SOURRAUNDING VENUES

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April, 2020

IBM Data Science Course, Coursera

Chapter 1

Introduction

A lot of factors which come into play in determining the success of a venue. To mention but a few, technology, capacity and layout are important, but the region in which your venue is situated is by far the biggest deciding factor of how many consumers will arrive at your doorstep. In an article written by the real estate adviser Steve McLinden, he stated that ”tangible influences such as heavy traffic, eyesore buildings, odors, railroads, foreclosures, prisons and psychiatric hospital institutions can and will adversely affect demand and value”[1].

In this work we will focus on prisons and how they affect their surroundings. Prison can affect the emotions of a neighborhood. In an article written by McGee, he describes the three possible reactions to being near prisons: ”fear of harm from the inmates, economic anxiety, and civic pride (McGee 1981:110).” Another writer finds that these and similar objections to a prison in town derive from resident's fears of community change and loss of preferred lifestyles (Carlson 1988). Conversely, local supporters of prison siting tend to emphasize the jobs and economic benefits an institution would bring, while discounting the likelihood of any of the negatives identified above (Pagel 1988).

Until recently, most of these debates have been carried out with little substantive information to support or refute either view. The need for some basis on which to project

socioeconomic effects has been further reinforced by the presence in many states of siting guidelines requiring community support. The final and perhaps most important factor in stimulating research on prison effects has been the growth in new prison construction [2]. The United States prison population rate of roughly 700 per 100,000 is the second-highest of 222 countries tracked by the Institute for Criminal Policy Research. Nearly one out of every 100 American adults is behind bars. Private correctional facilities were a $4.8 billion industry in 2014, with profits of $629 million, according to market research firm IBISWorld [3]

The study is made in the state of Alabama. Alabama has long practiced unnecessary and excessively long mandatory sentencing laws, resulting in a rising prison population stemming from longer prison sentences. It operates the nation's most crowded prison system. In 2015 it housed more than 24,000 inmates in a system designed for 13,318. In 2019 the U.S. Department of Justice found conditions in Alabama prisons to be unsafe and unconstitutional, as result of a long civil rights investigation prompted by numerous deaths from violence in Alabama lockups [4].

1.1 Business problem

The main goal of this article is to describe one of the socioeconomic impact of a prison: the number of venues on their surroundings. The focus will be to find and describe the influence radius of the prisons in the state of Alabama. Finally, we want to cluster the prisons by the similarities on their influences. This report is directed towards the governments who wants to understand the behaviour of its society, and also to help the investors to make better informed decision on whether to start a venue or not near a facility. This is the capstone project in the IBM Data Science Course , hosted by Coursera.

Chapter 2

Data

The target state is Alabama but this type of analisys can be done in any state. For this proyect we need two sets of data. The first one consists on a table with the names, population, and GPS locations of the prisons in Alabama. This information can be found in ”https://www.prisonersofthecensus.org”. This web page has done an incredible job recopyling data of this nature. They state that ”The way the Census Bureau counts people in prison creates significant problems for democracy and for our nation’s future. It leads to a dramatic distortion of representation at local and state levels, and creates an inaccurate picture of community populations for research and planning purposes”, so they came up with their own data set.

The second data set will be the GPS location of the venues near each facility. For this we use Foursquare API.

First, we define a radius of influence of two kilometers. Then, for each prison we calculate the euclidean distance to the venues inside the influence radius. The distance is a continuous variable, so for the sake of simplicity we will categorize the distances in ranges. For example, a prison could have 10 venues in the first 500 meters, 35 venues from 500 to 1000 meters, 23 from 1000 to 1500 and 12 from 1500 to 2000 meters. Finally, we will use machine learning techniques to cluster the similar prisons.

Bibliography

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[4] https://en.wikipedia.org/wiki/alabama_department_of_corrections.