

Which Business and where to start it in Santiago, Chile

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1 Introduction

If you want to start a new business, the more difficult question after selecting what you want to sell or offer, is where to put it. Failing in the location will mean a failure in all the project and a loss of money. Luckily, there are different factors that can help one determine where is a good option to establish it. Three of the main are: income, population and other business. you want to find a place where people have money to spend, where there is a lot of people living nearby, and where there is not already a store similar to the one you want. In this work, we want to answer the following question: what kind of business is a good idea to start, and where is the best place to establish it in Santiago, Chile

2 Data

In order to decide the type of business and the better location for it, we will use the following datasets:

- Poverty index: as a proxy to the income of the sector
- Population
- Foursquare data of venues

2.1 Data Cleaning

First, we scrap from wikipedia the information about the 'Comunas' in Santiago, Chile. given the format of the Latitude and Longitude (in grades, minutes and seconds) we need to convert them to only grades. Secondly, we need to implement a small fix for some 'Comunas' since wikipedia had their values wrong. We also extract the population information.

From another wikipedia page, we scrap the poverty index of the Comunas. we were missing a value, and given previous knowledge, we fill that with the maximum among the other places.

Then, we use Foursquare in order to get the venues of each sector. The limit of each Comuna is 50 given the current limitations of Foursquare, this will affect the final conclusions. We use the drop duplicates in order to remove the entries that are repeated given the radius used.

3 Methodology

This project consist in three phases:

Split the region of Santiago, Chile, in its 'Comunas' or sectors. First, using wikipedia data, we will plot both the poverty index and population, from which we will search for the best combination of the two.

Then, we will use foursquare data to cluster the sectors and see which are the ones that present a better opportunity for a person who want to start a business. to do this, we look at what kind of business are the more common, assuming this imply a good opportunity (already taken by someone else).

After we select a business, we will chose one of the best sectors that does not have that kind of business as the most common.

In summary: after looking for the best sectors, we look at the best five. from them, we check what are the most common business. As an example, assume that sushi place appears in the top five of three of the best sectors. then, a good idea would be to start a similar business in one of the other two.

To do this, I closely followed the examples in the course, but trying to make my own code and implementation for each step. This can be seen in the notebook submitted.

4 Results

After doing the clustering, if we make a plot considering population (Figure 1) There is no correlation between the two.

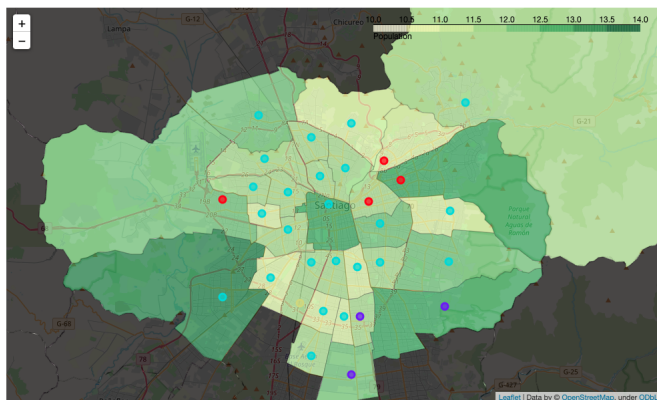


Figure 1: Population

But, if we plot the poverty index, we realize that the clustering in red represent the richer people in Santiago

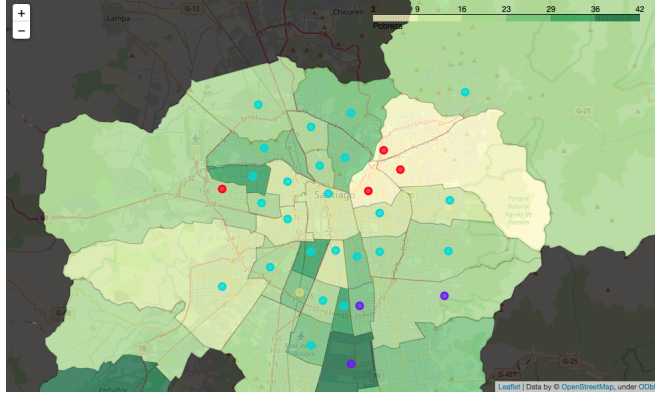


Figure 2: Population

Inspecting this Cluster, we see that Hotels, Parks and Gyms appear as the most common venues. Since those are not the type of business a normal person would start, we focus on Cluster 3, where is more of the population.

In Cluster 3, Restaurants in general, and Chinese, sushi and pizza restaurant in particular, are very common. If we now focus on poverty index and population, Ñuñoa is one of the best sectors, since there is a lot of people and have a good income. The most common venues there are Bakery, Pizza Place, Restaurant, Italian Restaurant and Cafe. in that order, for this reason, a Sushi place in this Comuna looks like a good idea.

Another good Comuna is San Miguel, where a Coffee shop is a good opportunity. In this last one, the sushi market is already crowded.

Considering that delivery is a very common way of selling, and taking into account the current pandemic, a sushi place is our best bet for a good business option.

5 Conclusions

Using the information from the Foursquare API and public data about population and income from wikipedia, we were able to determine what is a good business opportunity and in which location it should be established in Santiago, Chile.

While this do not replace a proper market study, is a good first approximation in order to reduce timescales and effort for a business project.

Our final conclusion is that a Sushi place in the Comuna of Ñuñoa is an option to be considered.