

MARKET ANALYSIS FOR OPENING A FOOD BUSINESS

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1. DESCRIPTION OF THE PROBLEM AND A DISCUSSION OF THE BACKGROUND

City of La Paz is the seat of government and the administrative capital of Bolivia. It is the second most populated department, with 25.2% of the population. It is located in the northeast of the country. According to projections for 2020, the department of La Paz has 2,927,000 inhabitants, with women making up 50.4% and men 49.6%.

The two departments with the largest number of economic units are the city of Santa Cruz and the city of La Paz. The largest number of economic units are dedicated to commerce and services.

When someone wants to start a new business it is necessary to know the growth of the economic activity of the area, also he needs to know the competition in order to evaluate the place and type of business to undertake.

This project will focus on finding information that can be useful for an investor, who will be able to evaluate where to open a food business in the city of La Paz.

2. DESCRIPTION OF THE DATA AND HOW IT WILL BE USED TO SOLVE THE PROBLEM.

The necessary data to be used are the following:

- Population of the city of La Paz divided by districts
- Data on economic activity in the Restaurant and Food Service sector
- Growth in the sector
- GPS location of established businesses

This data is important because it will guide us through understanding the market and give us a global vision with data support of the businesses currently working in the sector. We will be able to understand the relationship between different demographics and business data.

First the data will be cleaned, to prevent missing or invalid data from affecting the results later on. The information collected will be used for an exploratory analysis to evaluate the growth that has occurred in the past, and the proportion of the sector's impact compared to other economic activities will also be presented. A combination of data will be made to obtain new characteristics that can be useful in the project.

After that, we will proceed to perform relationship analysis between the data in search of new information that can help us make a good model. The results will be evaluated in order to know if we will need additional data or if the model needs to be modified.

The source of the required information is the following:

- Statistical summary of the Business Base, September 2020 - Ministry of Productive Development and Plural Economy

https://miempresa.gob.bo/docs/estadisticas/RESUMEN_BE_SEPTIEMBRE_2020_miemp.pdf

- Macrodistrict cards, services

http://sitservicios.lapaz.bo/cartillas/descargas/cartillas_macrodistitales.xlsx

- La Paz in figures 2020, INE (National Institute of Statistics)

<http://inecloud.ine.gob.bo/owncloud/index.php/s/EHUEqSsYukkuyaA/download>

- Public Accountability 2019

<https://www.economiayfinanzas.gob.bo/rendicion-publica-de-cuentas-2019.html>

https://repositorio.economiayfinanzas.gob.bo/documentos/2020/Comunicaci%C3%B3n_Presentaciones/rendicio%C81n_p%C81blica_cuentas_2019.pdf

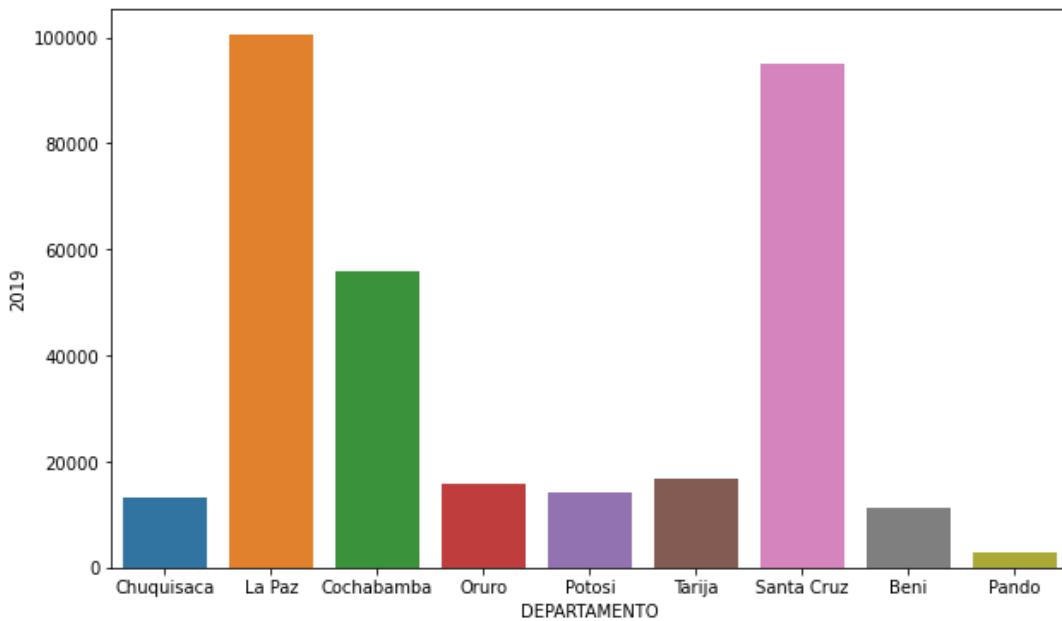
METHODOLOGY

First the data was loaded and then it was cleaned. The data had the following structure

.] :	Distrito	Macrodistrito	Latitude	Longitude							
	0	1	Centro	-16.496946	-68.133407						
	1	2	Centro	-16.499426	-68.122380						
	2	3	Cotahuma	-16.514952	-68.129473						
	3	4	Cotahuma	-16.537604	-68.135559						
	4	5	Cotahuma	-16.494808	-68.151444						
:	Actividad_Economica		Crecimiento	Participacion							
	0	Agricultura-Silvicultura-Caza-Pezca		4.09	7.24						
	1	Extraccion de Minas y Canteras		5.36	6.15						
	2	Industrias Manufactureras		3.87	8.76						
	3	Electricidad Gas y Agua		3.50	2.29						
	4	Construccion		-2.76	1.68						
:	Distrito	Habitantes	Superficie_km2	Densidad_hab_km2	Hombres	Mujeres	edad_0_14	edad_15_64	edad_65_mas	Hogares	
	0	3	35944	2.362766	15212.67870	46.981416	53.018584	19.878144	69.398654	10.723202	11963
	1	4	53461	12.471605	4286.61748	48.270702	51.729298	27.345168	67.251361	5.403472	15605
	2	5	50716	1.579951	32099.72968	48.091332	51.908668	27.299077	67.283962	5.416961	14945
	3	6	38916	1.288748	30196.74909	50.552472	49.447528	18.223867	72.212890	9.563243	12306
	4	7	61887	1.577995	39218.75545	47.415451	52.584549	25.213696	68.522326	6.263978	18783
:	DEPARTAMENTO	2019	2020	VARIACION_ABSOLUTA	VARIACION_RELATIVA						
	0	Chuquisaca	13344	13636	292	2.19					
	1	La Paz	100445	103395	2950	2.94					
	2	Cochabamba	55973	56863	890	1.59					
	3	Oruro	15735	16007	272	1.73					
	4	Potosi	14194	14578	384	2.71					

After the cleaning, a statistical analysis is made to obtain preliminary information

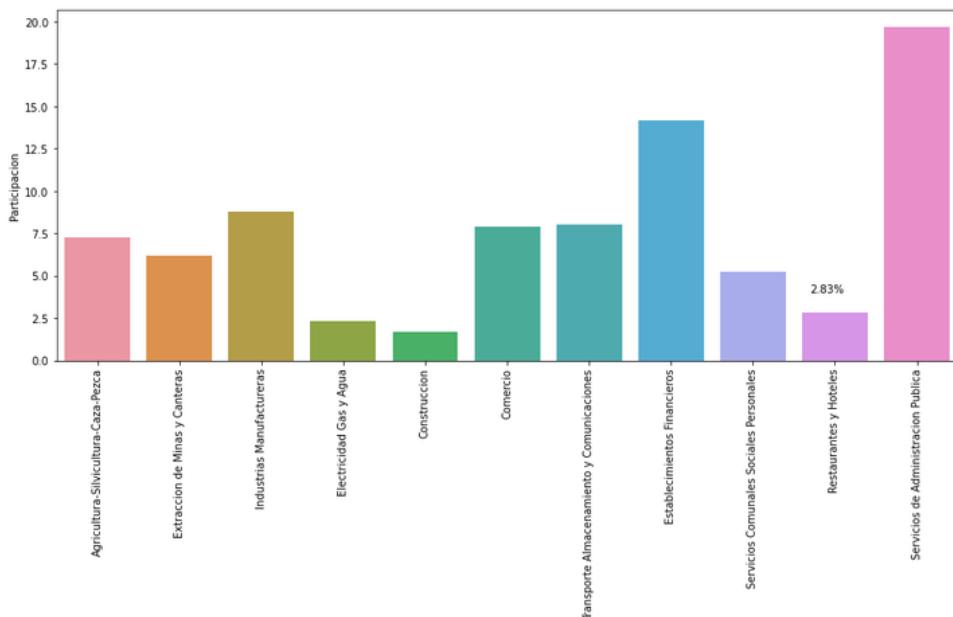
From the information we obtained the following



A comparison was made between the cities of the country and it was found that the city of Santa Cruz and the city of La Paz have the largest number of companies, surpassing by far the other cities. The city to which we will dedicate more attention will be the city of La Paz because it is the center of our research

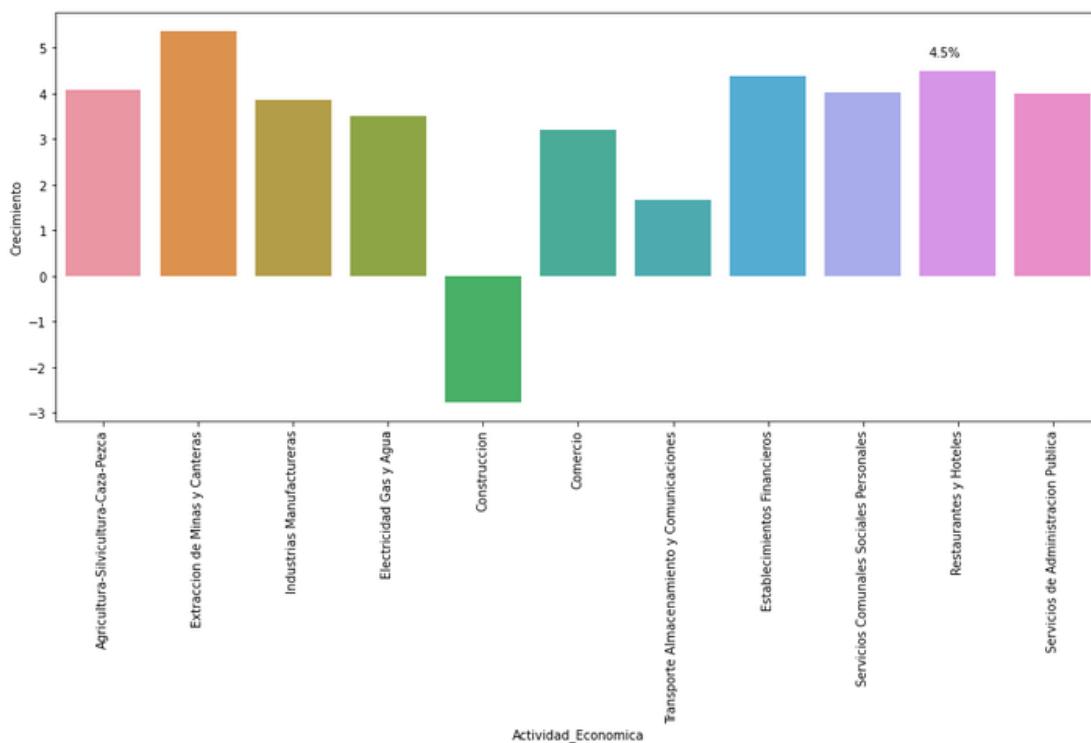
On the other hand, a study was also made on the importance of the food sector compared to other categories.

The result of the data display was the following

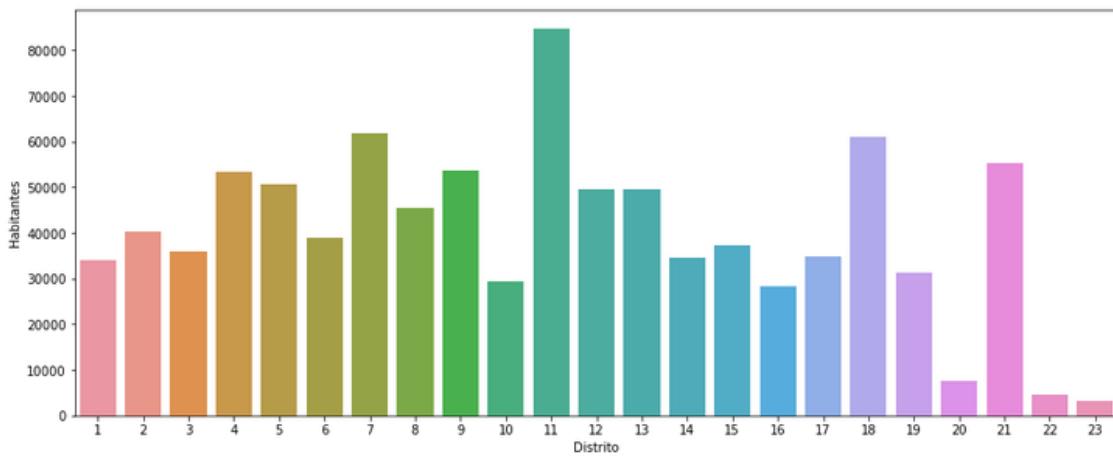


The food sector only occupies 2.83% of total production compared to other categories

[54]: <AxesSubplot:xlabel='Actividad_Economica', ylabel='Crecimiento'>



However, despite the fact that this sector is small in comparison with the other categories, its growth is in second place, which gives it greater importance and also gives it the opportunity for greater future growth



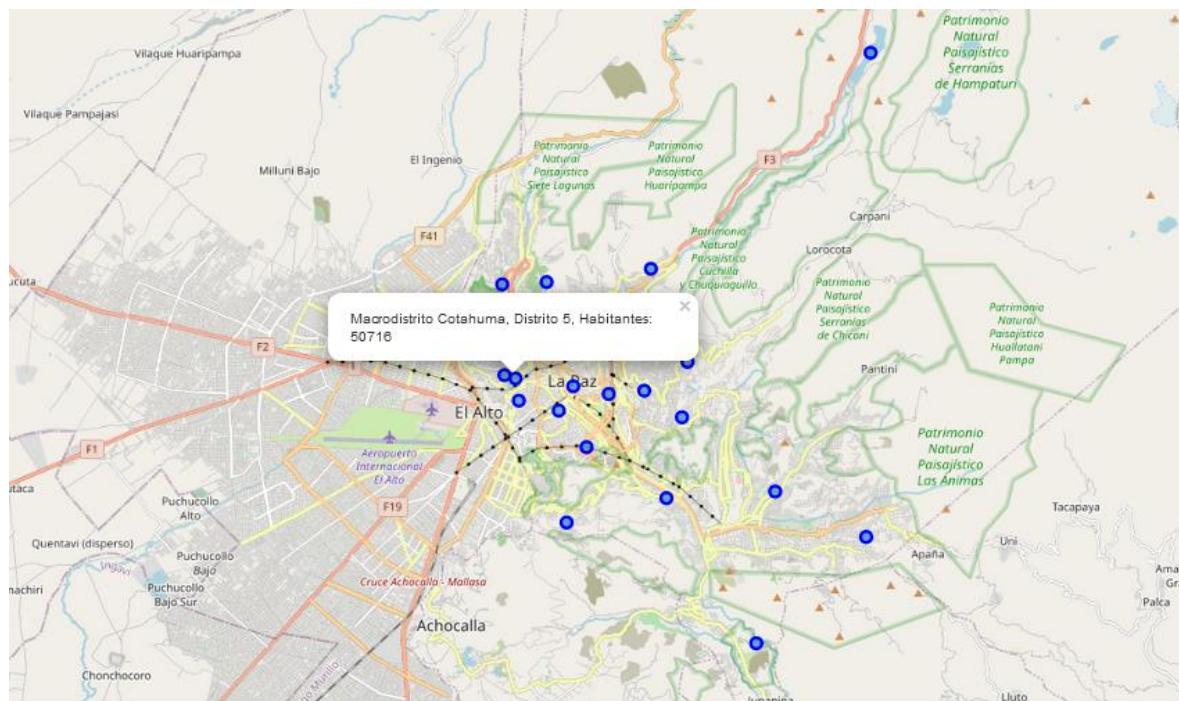
It was also possible to verify the distribution of inhabitants in the different districts of the city

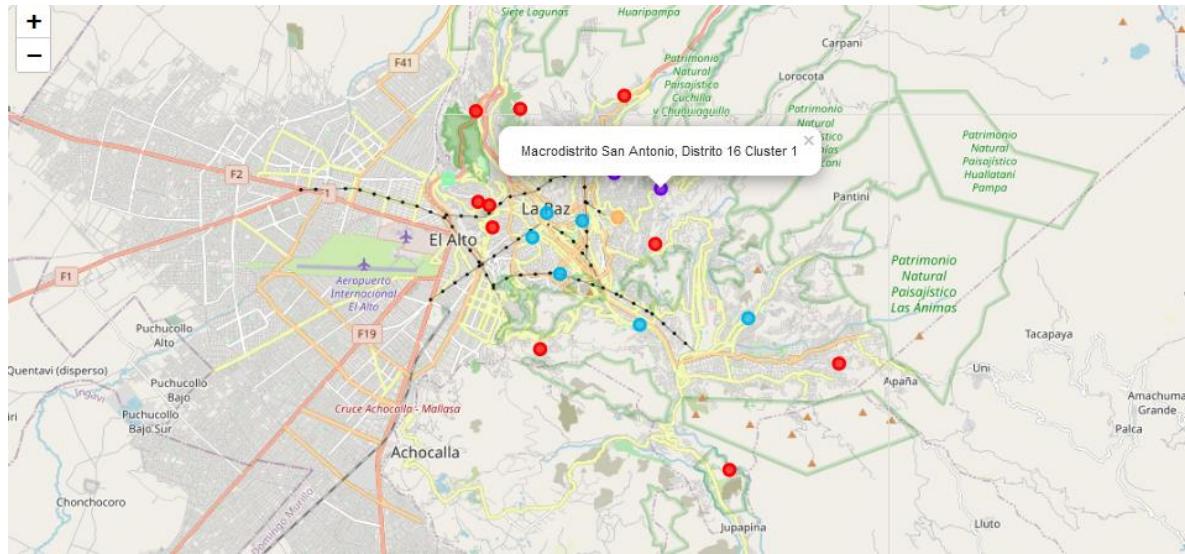
RESULTS.

Through the combination of data and the search of places we were able to find the distribution of businesses in the city through the different districts

	Neighborhood	Latitude	Neighborhood	Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Nombre								
Macrodistrito Centro, Distrito 1	47		47	47	47	47	47	47
Macrodistrito Centro, Distrito 2	49		49	49	49	49	49	49
Macrodistrito Cotahuma, Distrito 3	46		46	46	46	46	46	46
Macrodistrito Cotahuma, Distrito 5	11		11	11	11	11	11	11
Macrodistrito Cotahuma, Distrito 6	47		47	47	47	47	47	47
Macrodistrito Max Paredes, Distrito 8	8		8	8	8	8	8	8
Macrodistrito Max Paredes, Distrito 9	1		1	1	1	1	1	1
Macrodistrito San Antonio, Distrito 14	1		1	1	1	1	1	1
Macrodistrito San Antonio, Distrito 15	6		6	6	6	6	6	6
Macrodistrito San Antonio, Distrito 16	1		1	1	1	1	1	1
Macrodistrito Sur, Distrito 18	49		49	49	49	49	49	49
Macrodistrito Sur, Distrito 21	39		39	39	39	39	39	39

This information is very useful because it allows us to see the competition in each sector. In this way we can make a better decision based on the data. This information was also graphed. Two types of visualizations were made, the first one shows the different districts of the city with their respective amounts of inhabitants, on the other hand it was proceeded to make a graph grouping the different establishments according to their categories within the food area, specifically restaurants.





CONCLUSIONS

The food business is a sector in constant growth, which is why it deserves to be studied in depth. This research aimed to show the growth of the sector, the amount of competition according to the districts of the city and the number of inhabitants per district. This information will be very useful when evaluating the opening of a new food business in the city of La Paz.