

# Caribbean Restaurants in New York City

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### INTRODUCTION

#### Background

Running a successful business has great economical rewards, however, finding the right location, understanding the market you are competing in, are some of the vital prerequisites one should be aware of before opening a business.

#### Problem

A contractor is desirous of opening a “Caribbean restaurant” in New York city. He wants to know the number of restaurants in New York city, what type of restaurant is the most prevalent and what is the percentage of Caribbean restaurant in NYC.

#### Interest

Many entrepreneurs desirous of opening a restaurant would very much like to know what type of restaurants are the most prevalent in an area. Knowing this would also assist in determining whether an area is saturated or not.

### DATA SOURCES

The data used to solve this problem can be found at [https://cocl.us/new\\_york\\_dataset](https://cocl.us/new_york_dataset). It is a json file containing the latitude and longitude values of all neighborhoods in New York City. The Foursquare API was also used to obtain the names and geographical coordinates of all venues in each neighborhood in NYC.

### METHODOLOGY

✓ **Import Necessary libraries :-** The following python libraries were imported to solve the problem:

- Pandas library – used for data analysis
- Numpy library – used for vectorization
- Jason library - for handling Jason files.
- Nominatum – used to convert addresses into latitude and longitude values
- Matplotlib – used for plotting graphs and charts

- Folium – map rendering library
- ✓ **Download data:** - the New York City dataset was downloaded from [https://cocl.us/new\\_york\\_dataset](https://cocl.us/new_york_dataset)
- ✓ **Transform the data:** - the data returned was transformed into a pandas dataframe.
- ✓ **Used Foursquare API:** - The Foursquare API was use to retrieve venue’s name , category, and longitude and latitude values within a 500-meter radius.
- ✓ **Data Cleaning and Slicing :-**
  - venues category containing the word “restaurants” were extracted from the dataframe. This dataset was further cleaned by removing categories that had the word “Restaurants” but not the type of restaurant.
  - After cleaning the resulting dataset contained 1,392 rows and 8 columns(features)
- ✓ **Visualize the data by boroughs**
- ✓ **Display the name and location of all Caribbean restaurants on the New York City map.**

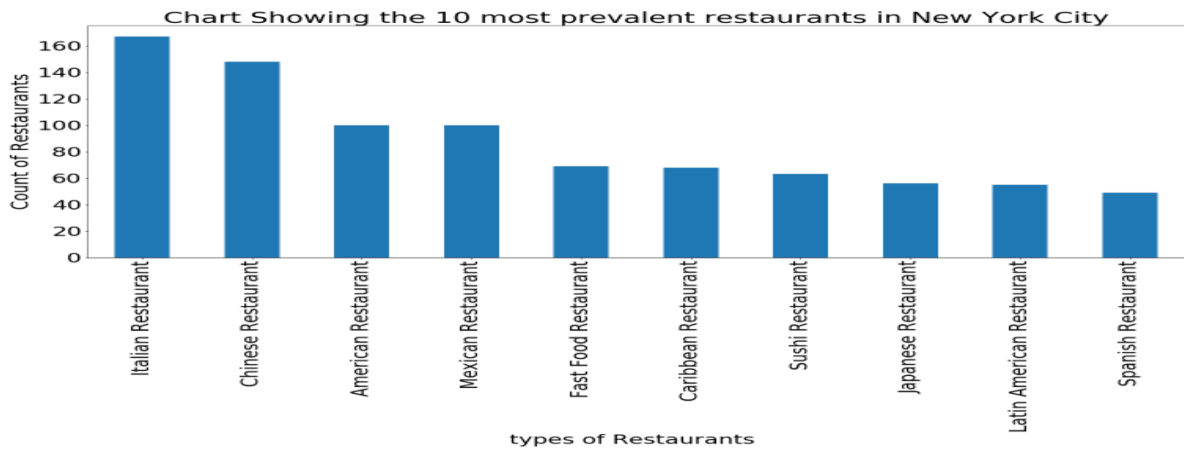
## RESULTS

Based on my analysis it was found that 1,392 restaurants are in New York City. It was also noticed that most of the restaurants are in Queens followed by Brooklyn. See table below.

Number of restaurants	
Boroughs	
Queens	403
Brooklyn	340
Manhattan	304
Bronx	205
Staten Island	140

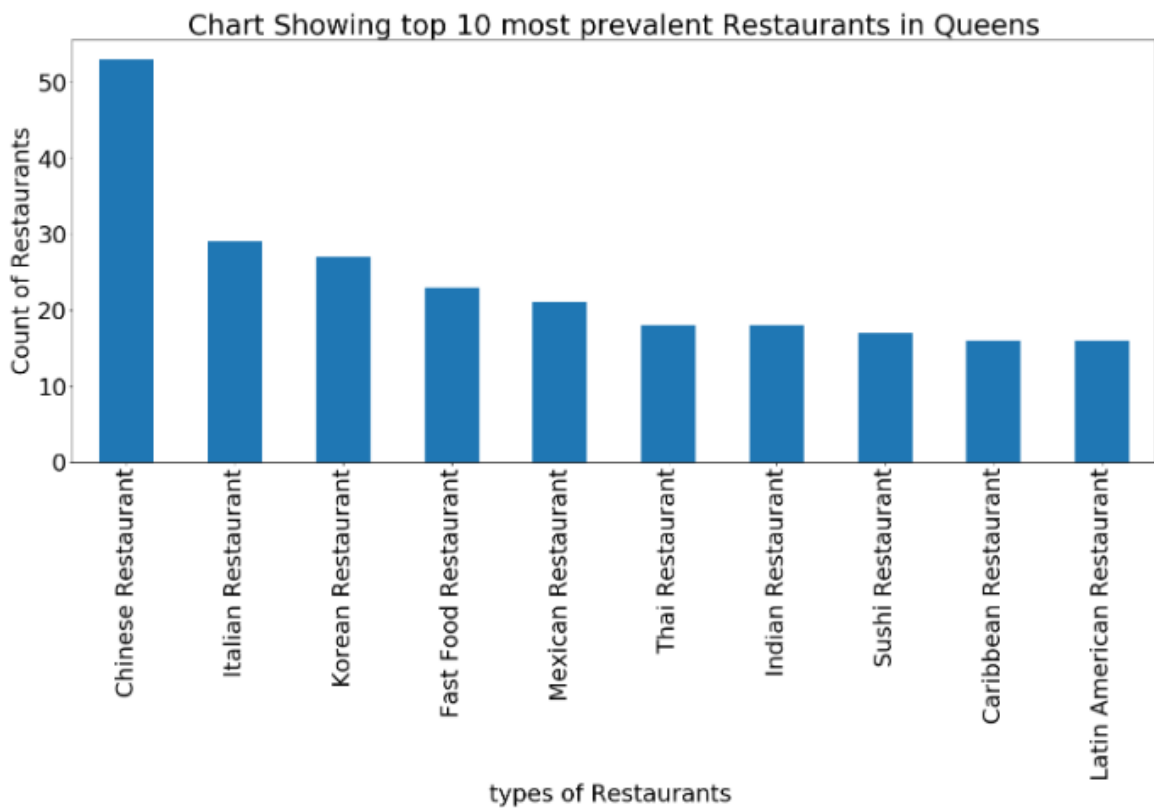
Table 1: Number of restaurants in New York City by boroughs.

The chart below shows the 10 most prevalent restaurants in New York city. As can be seen from the chart below, Italian restaurants and Chinese restaurants are the most prevalent.



## QUEENS

Queens has a total of 403 restaurants, the most prevalent are the Chinese restaurants which has 53 locations. There are 16 Caribbean restaurants in queens. *See Table 2 below.*

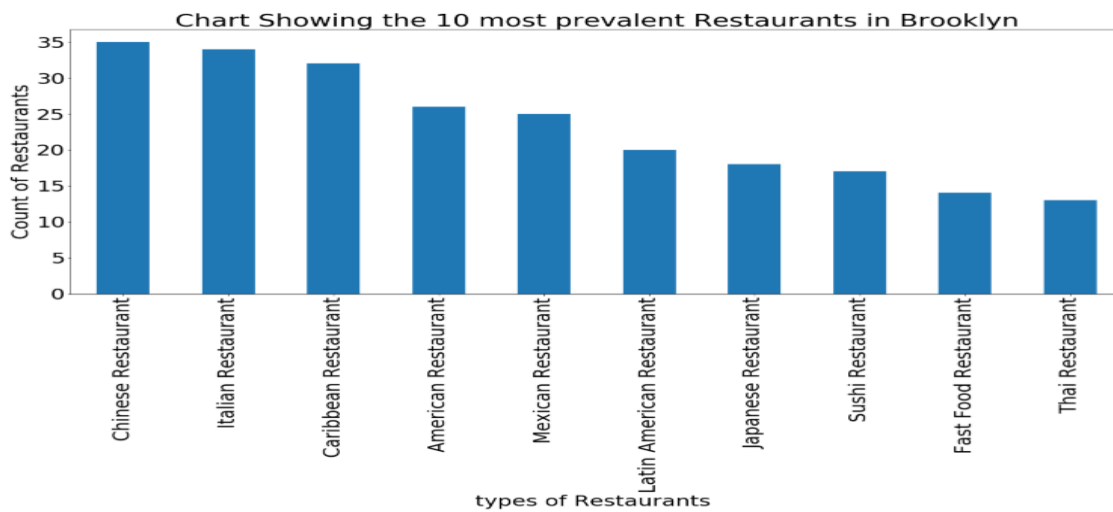


Venue_Category	Number of locations
Chinese Restaurant	53
Italian Restaurant	29
Korean Restaurant	27
Fast Food Restaurant	23
Mexican Restaurant	21
Thai Restaurant	18
Indian Restaurant	18
Sushi Restaurant	17
Caribbean Restaurant	16
Latin American Restaurant	16

Table 2: Top 10 most prevalent restaurants in Queens

## BROOKLYN

Brooklyn has 340 restaurants, the most prevalent are Caribbean restaurants with 35 locations. There are 32 Caribbean restaurants. *See table 3 for details.*

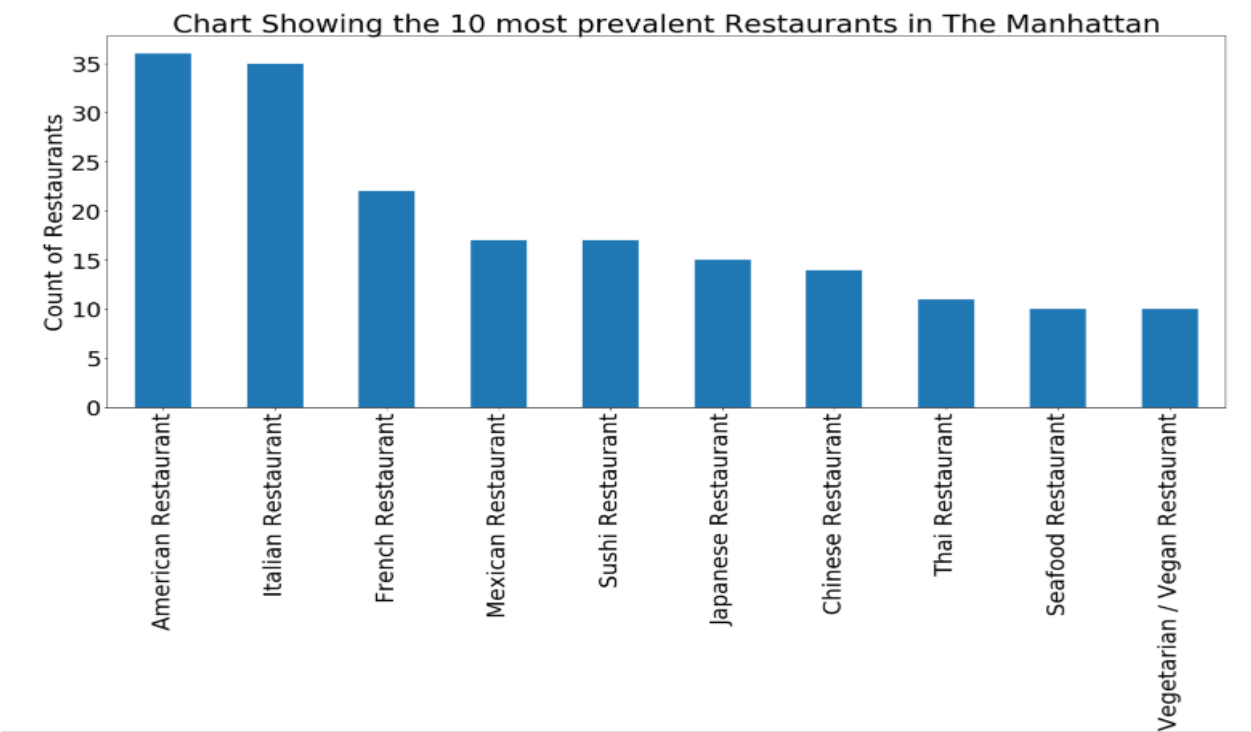


Venue_Category	Number of locations
Chinese Restaurant	35
Italian Restaurant	34
Caribbean Restaurant	32
American Restaurant	26
Mexican Restaurant	25
Latin American Restaurant	20
Japanese Restaurant	18
Sushi Restaurant	17
Fast Food Restaurant	14
Thai Restaurant	13

Table 3: Top 10 most prevalent restaurants in Brooklyn

MANHATTAN

Manhattan has 304 restaurants, American restaurants and Italian restaurants are the most prevalent with 36 and 35 locations respectively, see table 5 below. There were only 5 Caribbean restaurants in Manhattan and therefore were not listed amongst the 10 most prevalent restaurants.

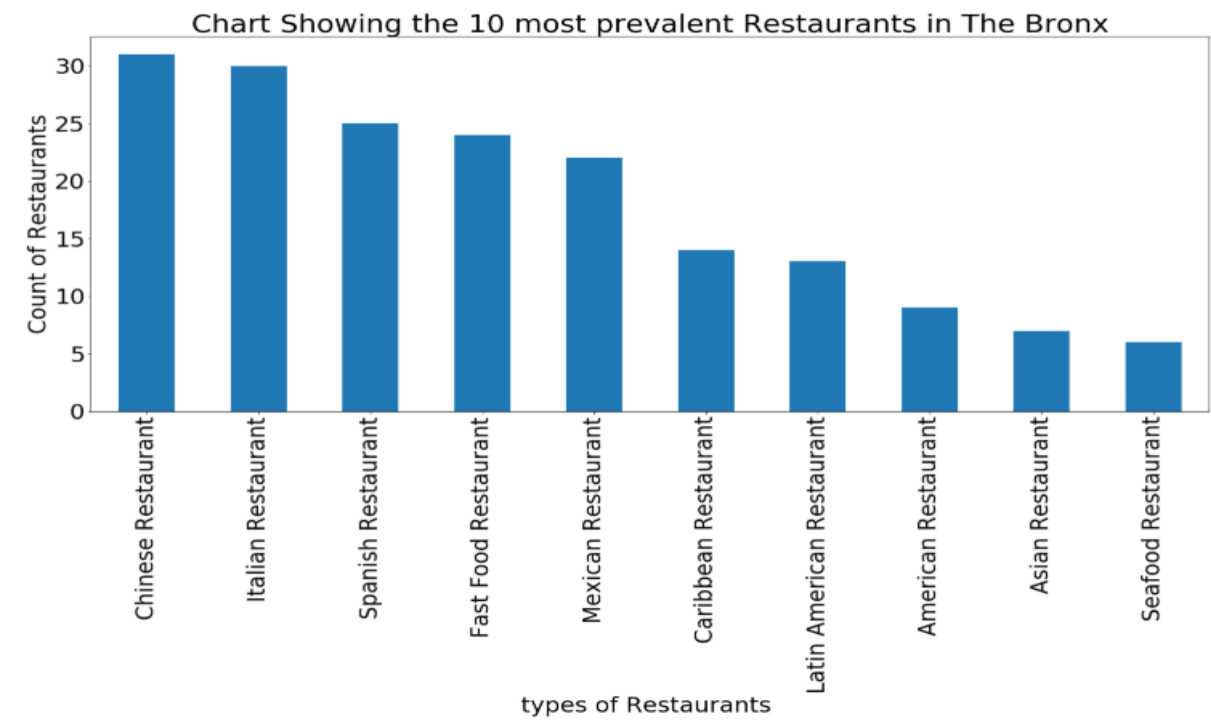


Number of locations	
Venue_Category	
American Restaurant	36
Italian Restaurant	35
French Restaurant	22
Mexican Restaurant	17
Sushi Restaurant	17
Japanese Restaurant	15
Chinese Restaurant	14
Thai Restaurant	11
Seafood Restaurant	10
Vegetarian / Vegan Restaurant	10

Table 4: Top 10 most prevalent restaurants in Manhattan

BRONXS

The Bronx has 205 restaurants Chinese restaurants, and Italian restaurants are the most prevalent with 31 and 30 locations respectively. There were 14 Caribbean restaurants.

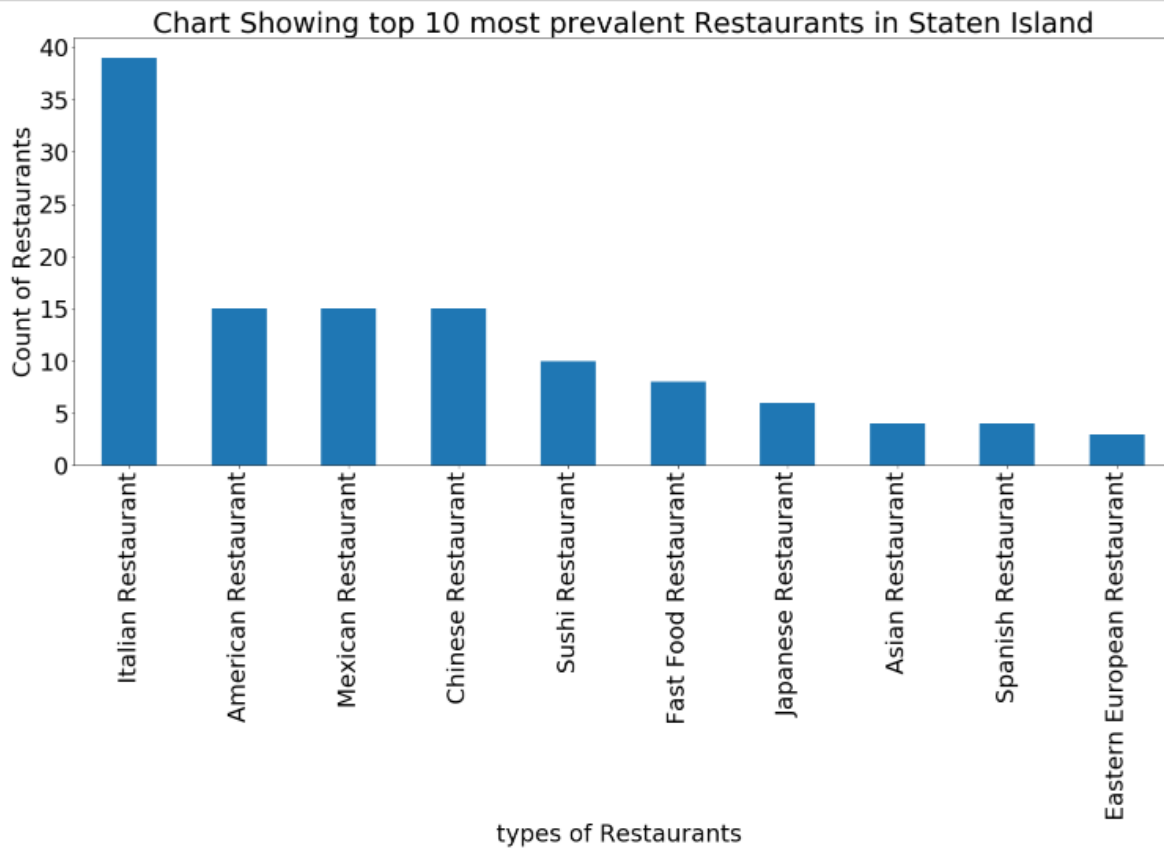


Number of locations	
Venue_Category	
Chinese Restaurant	31
Italian Restaurant	30
Spanish Restaurant	25
Fast Food Restaurant	24
Mexican Restaurant	22
Caribbean Restaurant	14
Latin American Restaurant	13
American Restaurant	9
Asian Restaurant	7
Seafood Restaurant	6

Table 5: Top 10 most prevalent restaurants in the Bronx

## STATEN ISLAND

Staten Island has 140 restaurants. Italian restaurants are the most prevalent with 39 locations. There is only one Caribbean restaurant in this borough.



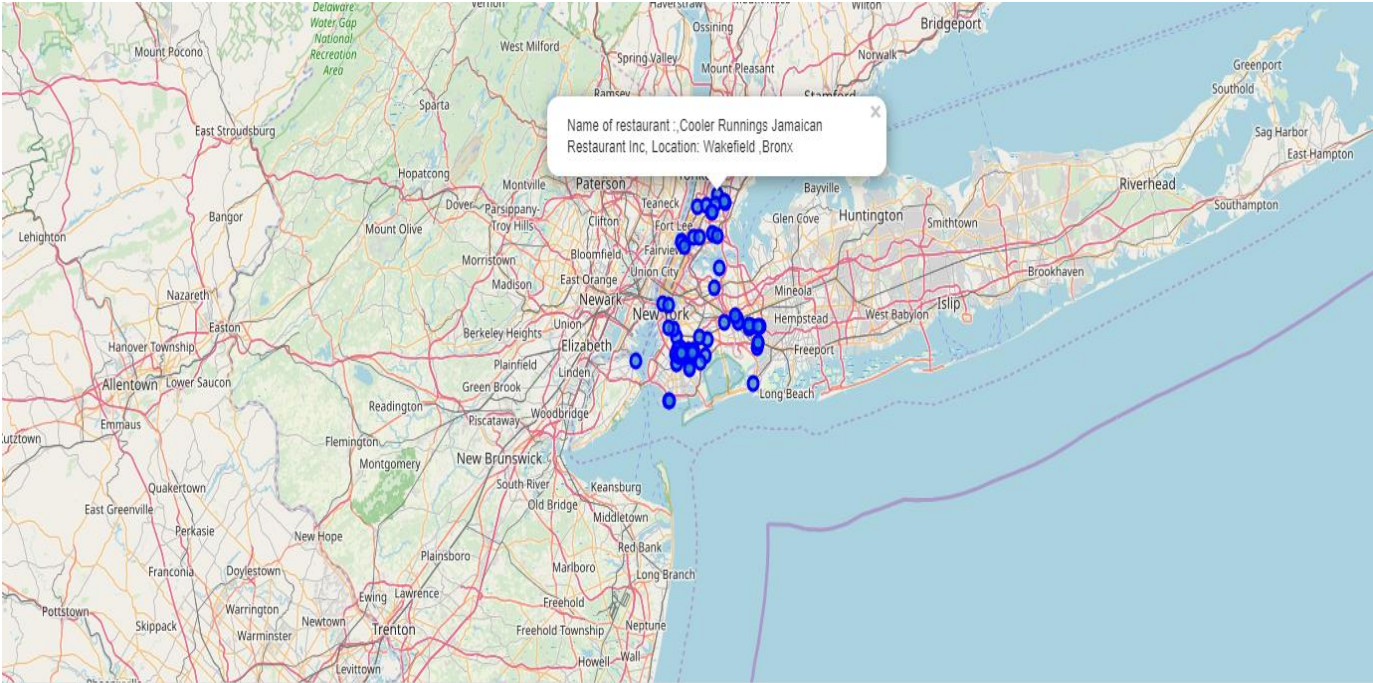
Number of locations	
Venue_Category	
Italian Restaurant	39
American Restaurant	15
Mexican Restaurant	15
Chinese Restaurant	15
Sushi Restaurant	10
Fast Food Restaurant	8
Japanese Restaurant	6
Asian Restaurant	4
Spanish Restaurant	4
Eastern European Restaurant	3

Table 6: Top 10 most prevalent restaurants in Staten Island

Number of Caribbean restaurants in New York City by borough

Number of restaurants	
Boroughs	
Brooklyn	32
Queens	16
Bronx	14
Manhattan	5
Staten Island	1

Name and location of all Caribbean restaurants superimposed on the map of New York City





## **DISCUSSION**

There are 68 Caribbean restaurants in New York City which accounts for only 4.9% of all restaurants in the City. Italian restaurants and Chinese restaurants are the most prevalent with over 160 and 140 locations respectively. There are more Caribbean restaurants in Brooklyn than in any other borough. If selecting the location for opening a new Caribbean restaurant depends on the prevalence of existing Caribbean restaurants, then Brooklyn would be the place to open it. If on the other hand, it depends on the lack thereof then Staten Island or Manhattan would be the place to open it.

## **CONCLUSION**

Deciding on the geographical location for a new restaurant is very important along with being aware of the prevalence of existing competitors. However, other factors such as the demographics, and financial position of the neighborhood should also be considered.