
Zomato data analysis Questions and their Solutions

Objective Question:

Q1. What is the total no. of tables present in the data?

Ans: There are 2 tables present in data one is Raw data and other is country code.

Q2. What is the total no. of attributes present in the data?

Ans: There are 20 attributes present in the original data.

Q3. How many categorical columns are there in the data? [Search about categorical and continuous data, and try to answer this question.]

Ans: There are 12 categorical columns present in data.

Has_Booking_Table, Has_Online_delivery, Is_delivering_now, Switch_to_order_menu, restaurant_name, Country_code, City, Address, Locality, Locality verbose, Cuisines, Currency.

Q4. The data consists of some inconsistent and missing values so ensure that the data used for further analysis is cleaned?

Ans: Yes, there are total 9 missing value in cuisines column so I remove those 9 rows because I am dealing with very large dataset and there are some null values in latitude and longitude so I replace those null values with average value.

Q5. Using the LookUp functions, fill up the countries in the original data using the country code?

Ans: I filled it counties into original data using vlookup functions
=VLOOKUP(C2,'Country Description'!\$A\$2:\$B\$16,2,0).

Where:

Column C - Contain the has country code in row data sheet.

Column A:B- Table array of country description sheet.

Q6. Create a table to represent the number of restaurants opened in each country?

Ans: In below use pivot table to extract the count of restaurants.

| Country | Count of Restaurants |
|--------------------------|----------------------|
| Australia | 24 |
| Brazil | 60 |
| Canada | 4 |
| India | 8652 |
| Indonesia | 21 |
| New Zealand | 40 |
| Philippines | 22 |
| Qatar | 20 |
| Singapore | 20 |
| South Africa | 60 |
| Sri Lanka | 20 |
| Turkey | 34 |
| United Arab Emirates | 60 |
| United Kingdom | 80 |
| United States of America | 425 |
| Grand Total | 9542 |

Q7. Also, the management wants to look at the number of restaurants opened each year, so provide them with something here?

Ans: So in the Zomato row data I just extract the year from DateKey_opening and create pivot table and count the restaurant each year.

Extract year : = YEAR(Column)

| Year | Count of Restaurant |
|-------------|---------------------|
| 2010 | 1079 |
| 2011 | 1096 |
| 2012 | 1022 |
| 2013 | 1059 |
| 2014 | 1049 |
| 2015 | 1023 |
| 2016 | 1026 |
| 2017 | 1086 |
| 2018 | 1102 |
| Grand Total | 9542 |

Q8. What is the total number of restaurants in India in the price range of 4?

Ans: There are 388 restaurants present in India at price range 4 I used counifs function to calculate the data: =COUNTIFS(Row_data!\$E\$2:\$E\$9543,"India",Row_data!\$S\$2:\$S\$9543,4).

Where:

Column E - Contain the country data column.

Column S – Contain the price range data with 1 to 4.

Q9. What is the average number of voters for the restaurants in each country according to the data?

Ans: For extracting the average of votes we are using the pivot table to extract the average votes.

| Countries | Average of Votes |
|-----------|------------------|
|-----------|------------------|

| | |
|--------------------------|--------------------|
| Australia | 111.4166667 |
| Brazil | 19.61666667 |
| Canada | 103 |
| India | 137.212552 |
| Indonesia | 772.0952381 |
| New Zealand | 243.025 |
| Philippines | 407.4090909 |
| Qatar | 163.8 |
| Singapore | 31.9 |
| South Africa | 315.1666667 |
| Sri Lanka | 146.45 |
| Turkey | 431.4705882 |
| United Arab Emirates | 493.5166667 |
| United Kingdom | 205.4875 |
| United States of America | 430.8752941 |
| Grand Total | 156.7720604 |

Q10. Calculate the average rating for all the restaurants that have price_range < 4 and provide online delivery. Use only the “IF” function, Logical Operators, and Aggregation functions to solve this problem? [Note: Don’t use Conditional aggregation in this question.]

Ans: I calculate the average rating it give me **3.273812**.

I created one more column for that and fill the value basically I use first If function =IF(AND(S2<4,P2="Yes"),W2," ") where: S- price_range column, P- Online delivery column and W- Rating column. If rating below 4 and online delivery is true then I fill that column and if it is false then I leave blank as it after that I simply use average function to calculate the price.

Q11. Using Conditional formatting highlight the rows of restaurants that are located in the countries or cities that you’ve suggested to the management for opening new restaurants.

Ans: I used the conditional formatting and highlight the rows of entire data where I suggest to open new restaurants.

Q12. Create a new customized price column that consists of the abbreviation/symbol of the currency along with the Average_cost_for_two value. [Use string operations to do this task]

Ans: I created it first I extract the currency symbol using string function MID.

=MID(N2,FIND("(",N2)+1,FIND(")",N2)-FIND("(",N2)-1)
after that I concatenate the with average_cost_for_two values

Where:

Column N - Contain the currency cost.

Q13. How can you create an array formula in Excel or Google Sheets to count the number of restaurants listed that do not offer online delivery, are in the lowest price range, and have an average cost for two people less than or equal to 250 Indian Rupees?

Ans:

{=SUM(IF((P2:P9543="No")*(S2:S9543<2)*(V2:V9543<=250),1,0))}

Where:

Column P - Contain the has online delivery with Yes/No.

Column S – Contain the price range data with 1 to 4 so lowest means price range 1.

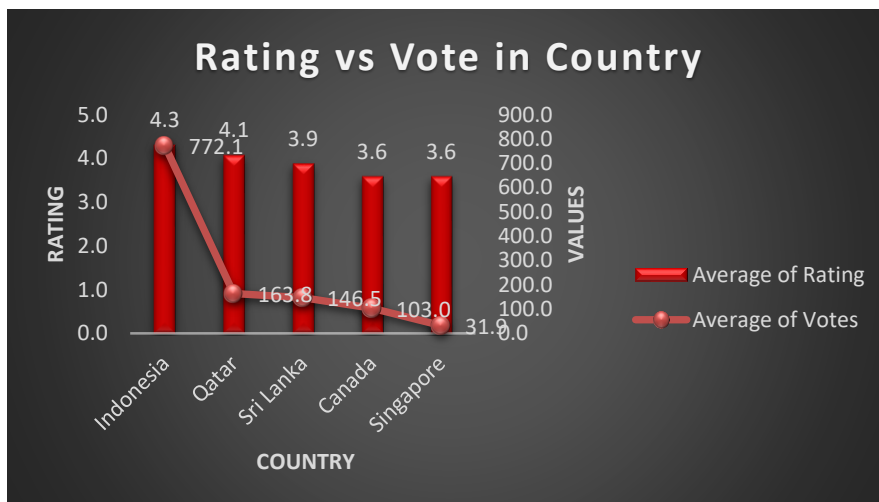
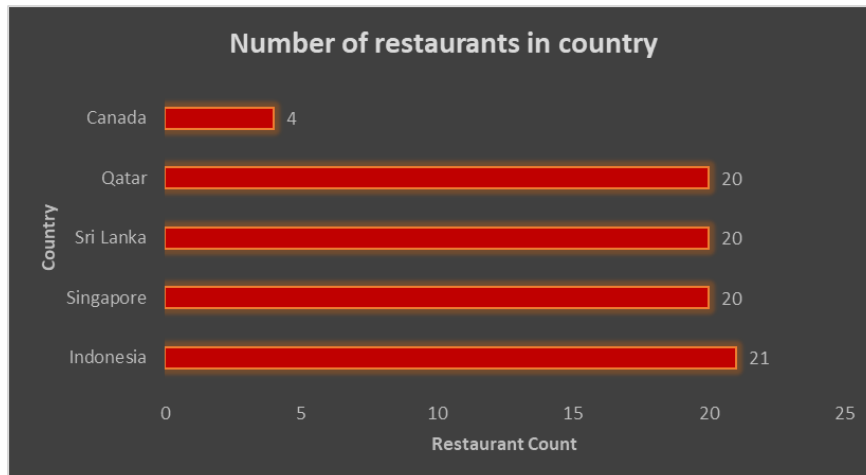
Column V – Contain the average cost of two people in Indian currency.

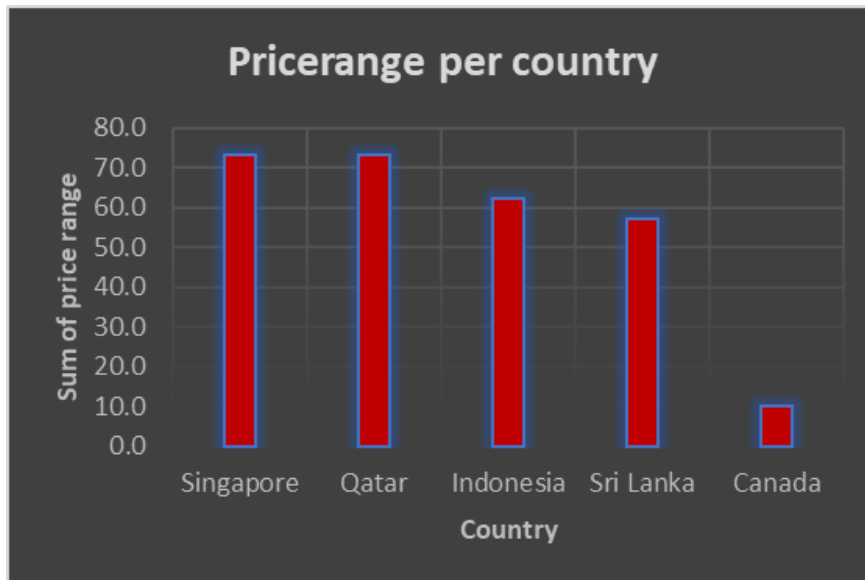
So I predicate that whose price range is lower than 4 is lower price and It give total **1699** restaurants based on the condition as it mention in question.

Subjective Question:

Q1. Suggest a few countries where the team can open newer restaurants with lesser competition. Which visualization/technique will you use here to justify the suggestions?

Ans:





| Country | Count of RestaurantID |
|--------------------|-----------------------|
| Indonesia | 21 |
| Singapore | 20 |
| Sri Lanka | 20 |
| Qatar | 20 |
| Canada | 4 |
| Grand Total | 85 |

| Country | Average of Rating | Average of Votes |
|--------------------|--------------------|--------------------|
| Indonesia | 4.3 | 772.1 |
| Qatar | 4.1 | 163.8 |
| Sri Lanka | 3.9 | 146.5 |
| Canada | 3.6 | 103.0 |
| Singapore | 3.6 | 31.9 |
| Grand Total | 3.936470588 | 276.1058824 |
| | | |

| Country | Sum of Price_range |
|-----------|--------------------|
| Singapore | 73.0 |
| Qatar | 73.0 |
| Indonesia | 62.0 |

| | |
|--------------------|------------|
| Sri Lanka | 57.0 |
| Canada | 10.0 |
| Grand Total | 275 |

Insights:

- Number of restaurants: Indicates which countries has fewer restaurants so crowd would be less.
- Average rating and votes: Helps the understand the rating criteria and average votes to understood the good rating when customer gives good feedback.
- Price range: Indicate the price range of per country.

Recommendations:

- From the above data check those where country has fewer restaurants bottom 5 restaurants we snapshot country are: Canada, Singapore, Sri Lanka, Qatar and Indonesia. Because in this country has lesser crowd.
- Also checking the rating and feedback of users it showcase that if rating and customer feedback are good then team must be open new restaurants.
- Price range help to understood the price of restaurants for every restaurants of cuisines to understood what kind of cuisines customer like the most.

Q2. Come up with the names of States and cities in the suggested countries suitable for opening restaurants?

Ans:

| Country | Average of Rating | Count of RestaurantID |
|------------------|-------------------|-----------------------|
| Canada | 3.6 | 4.0 |
| Chatham-Kent | 3.7 | 1 |
| Consort | 3 | 1 |
| Vineland Station | 4.3 | 1 |
| Yorkton | 3.3 | 1 |
| Indonesia | 4.3 | 21.0 |
| Bandung | 4.2 | 1 |
| Bogor | 3.85 | 2 |
| Jakarta | 4.35625 | 16 |
| Tangerang | 4.3 | 2 |
| Qatar | 4.1 | 20.0 |

| | | |
|--------------------|--------------------|-------------|
| Doha | 4.06 | 20 |
| Singapore | 3.6 | 20.0 |
| Singapore | 3.575 | 20 |
| Sri Lanka | 3.9 | 20.0 |
| Colombo | 3.87 | 20 |
| Grand Total | 3.936470588 | 85 |

Insights and Recommendations:

- Find the number of restaurants and average of votes the indicates as previous Q-1 to check which state / city has good rating and votes where team opens new restaurants. So in above we should focus to open new restaurants.

Canada :- Chatham-Kent, Consort, Vineland Station and Yorkton.

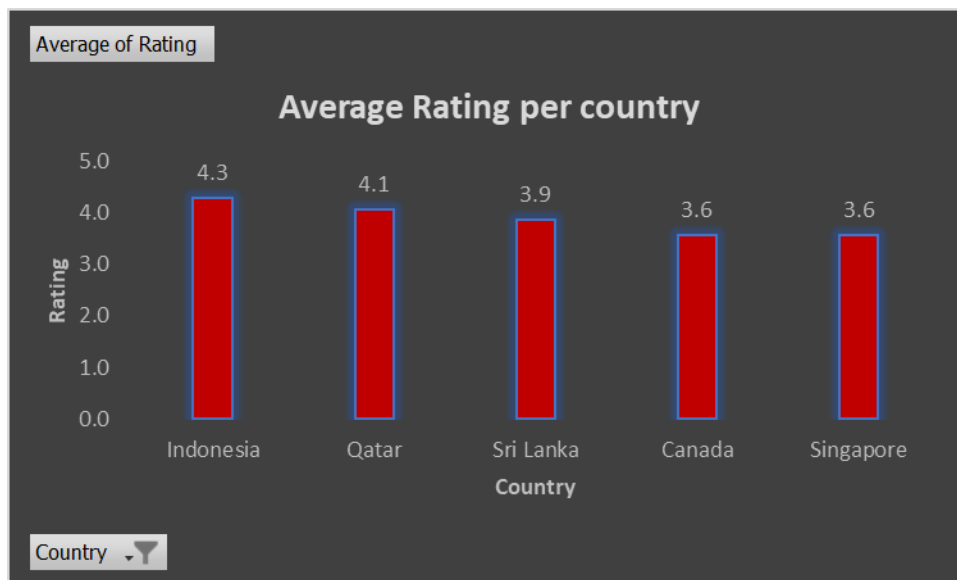
Indonesia :- Bandung, Bogor, Jakarta and Tangerang.

Qatar :- Doha

Singapore :- Singapore

Sri Lanka :- Colombo

Q3. According to the countries you suggested, what is the current quality regarding ratings for restaurants that are open there?



Indonesia Restaurants name per rating



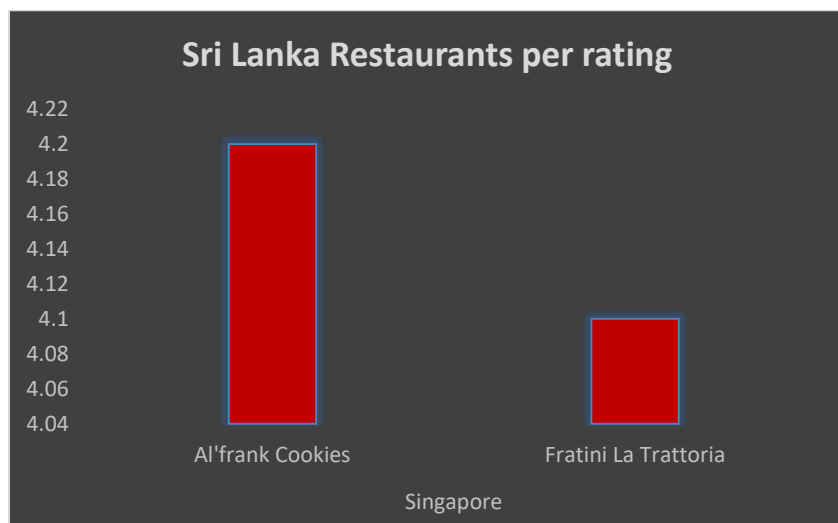
| Country | Average of Rating |
|------------------|-------------------|
| Indonesia | 4.5 |
| Talaga Sampireun | 4.9 |
| Sushi Masa | 4.9 |
| Toodz House | 4.6 |
| Union Deli | 4.6 |

| | |
|-----------------------------|------------|
| Satoo - Hotel Shangri-La | 4.6 |
| Zenbu | 4.4 |
| Flip Burger | 4.4 |
| Lucky Cat Coffee & Kitchen | 4.3 |
| Avec Moi Restaurant and Bar | 4.3 |
| Noah's Barn Coffeenery | 4.2 |
| MONKS | 4.2 |
| 3 Wise Monkeys | 4.2 |
| Skye | 4.1 |
| Grand Total | 4.5 |

Canada Restaurants name per rating

| Country | Average of Rating |
|-----------------------|-------------------|
| Canada | 4.3 |
| Lake House Restaurant | 4.3 |
| Grand Total | 4.3 |

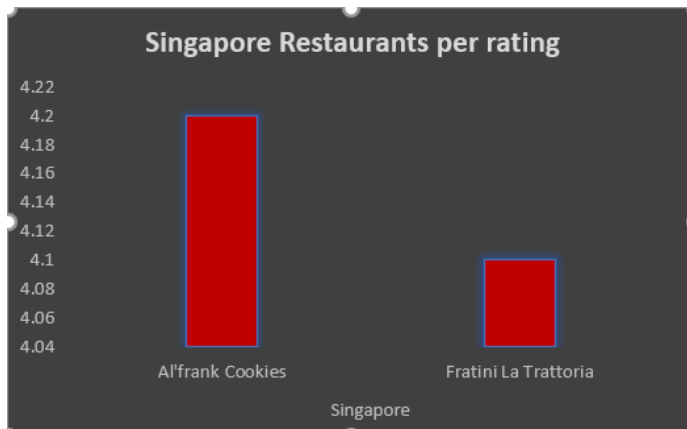
Sri Lanka Restaurants name per rating



| Country | Average of Rating |
|------------------------------|-------------------|
| Sri Lanka | 4.3 |
| Ministry of Crab | 4.9 |
| Simply Strawberries By Jagro | 4.5 |
| Butter Boutique | 4.2 |

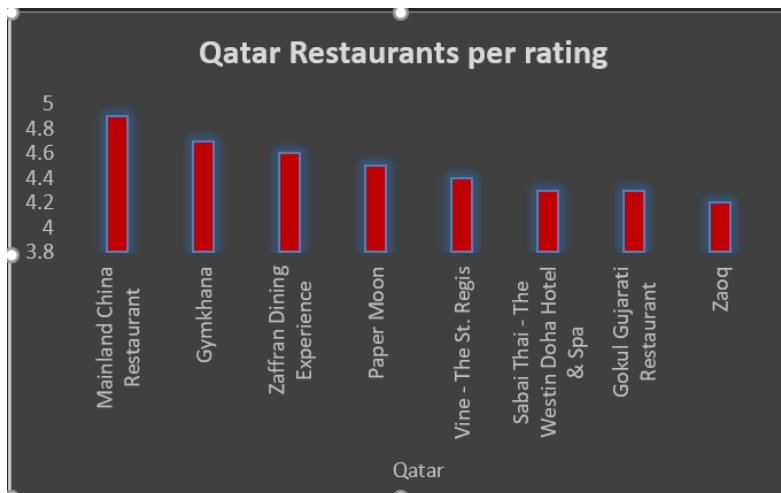
| | |
|--------------------|--------------------|
| Cricket Club Cafe | 4.2 |
| Arabian Knights | 4.2 |
| The Sizzle | 4.2 |
| Burger's King | 4.1 |
| Cafe Beverly | 4.1 |
| Carnival Ice Cream | 4.1 |
| Grand Total | 4.277777778 |

Singapore Restaurants name per rating



| Country | Average of Rating |
|-----------------------------|-------------------|
| Singapore | 4.2 |
| Al'frank Cookies | 4.2 |
| Fratini La Trattoria | 4.1 |
| Grand Total | 4.15 |

Qatar Restaurants name per rating



| Country | Average of Rating |
|---|-------------------|
| Qatar | 4.5 |
| Mainland China Restaurant | 4.9 |
| Gymkhana | 4.7 |
| Zaffran Dining Experience | 4.6 |
| Paper Moon | 4.5 |
| Vine - The St. Regis | 4.4 |
| Sabai Thai - The Westin Doha Hotel & Spa | 4.3 |
| Gokul Gujarati Restaurant | 4.3 |
| Zaoq | 4.2 |
| Grand Total | 4.4875 |

Insights:

- Average rating of suggestion country: Identify the average rating of country.
- Restaurants rating in each country: Extract the rating of every restaurants name.

Recommendations:

- Get the average rating of each restaurants to understood the rating like rating is good or not but in the above countries and its restaurants are good rating so its good if open in new restaurants in above country

Q4. Also, what is the current expenditure on food in the suggested countries, so we can keep our financial expenditure in control?

Ans: We change every suggestion country of price per table of two table and price range as well.

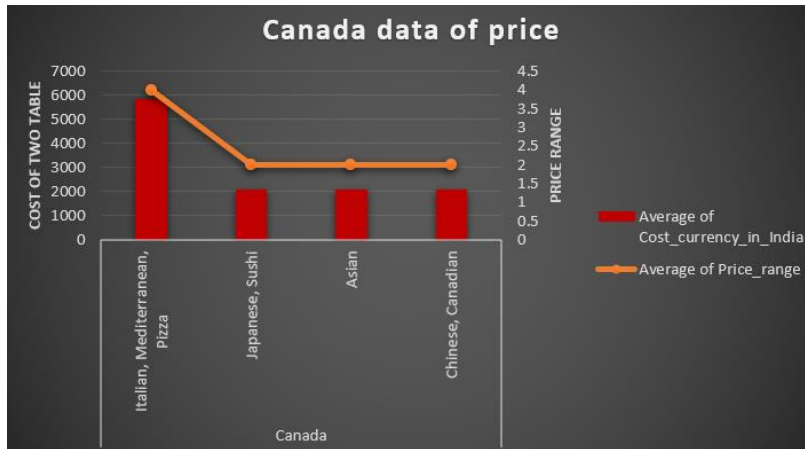
Indonesia:

| Country | Average of Cost_currency_in_India | Average of Price_range |
|-------------------------------|-----------------------------------|------------------------|
| Indonesia | 34647585.71 | 3 |
| Asian, Indonesian, Western | 85368800 | 3 |
| Japanese | 48019950 | 3 |
| Peranakan, Indonesian | 26677750 | 3 |
| Western, Asian, Cafe | 26677750 | 3 |
| Desserts, Bakery, Western | 21342200 | 3 |
| Italian, Continental | 18440000 | 3 |
| Cafe, Coffee and Tea, Western | 16006650 | 3 |
| Grand Total | 34647585.71 | 3 |



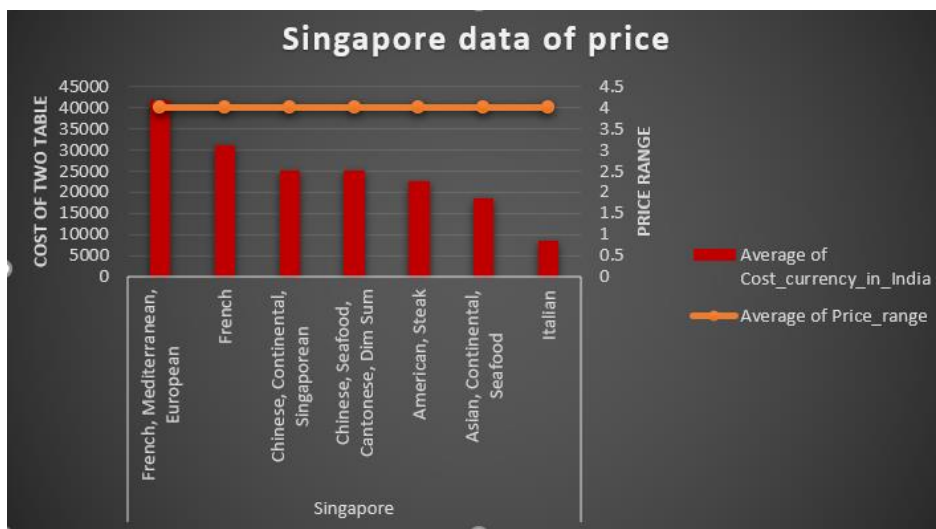
Canada

| Country | Average of Cost_currency_in_India | Average of Price_range |
|-------------------------------|-----------------------------------|------------------------|
| Canada | 3041.375 | 2.5 |
| Italian, Mediterranean, Pizza | 5873 | 4 |
| Japanese, Sushi | 2097.5 | 2 |
| Asian | 2097.5 | 2 |
| Chinese, Canadian | 2097.5 | 2 |
| Grand Total | 3041.375 | 2.5 |



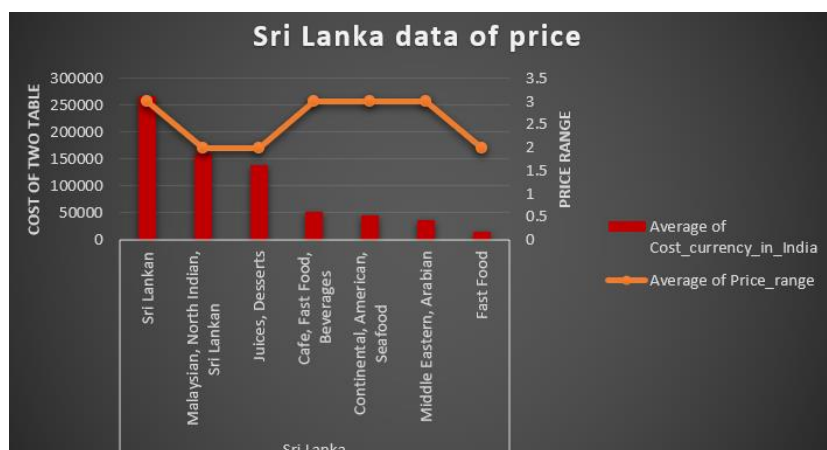
Singapore

| Country | Average of Cost_currency_in_India | Average of Price_range |
|--------------------------------------|-----------------------------------|------------------------|
| Singapore | 25537.0625 | 4 |
| French, Mediterranean, European | 41950 | 4 |
| French | 31252.75 | 4 |
| Chinese, Continental, Singaporean | 25170 | 4 |
| Chinese, Seafood, Cantonese, Dim Sum | 25170 | 4 |
| American, Steak | 22653 | 4 |
| Asian, Continental, Seafood | 18458 | 4 |
| Italian | 8390 | 4 |
| Grand Total | 25537.0625 | 4 |



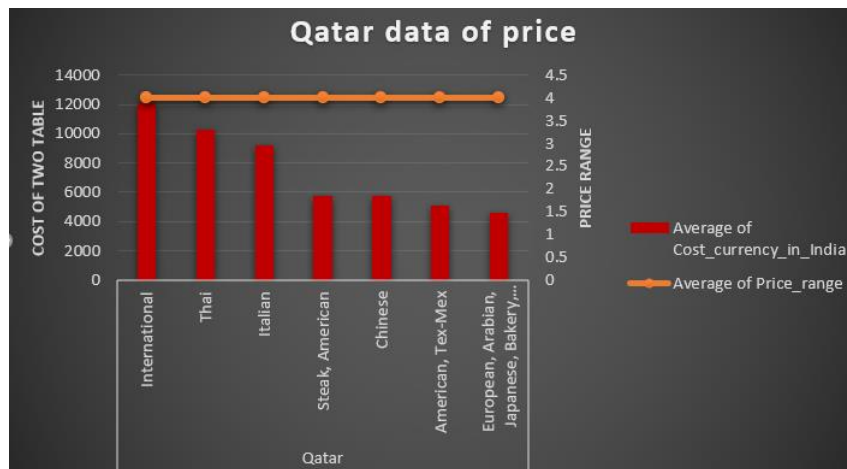
Sri Lanka:

| Country | Average of Cost_currency_in_India | Average of Price_range |
|-------------------------------------|-----------------------------------|------------------------|
| Sri Lanka | 101924.9 | 2.571428571 |
| Sri Lankan | 266777.5 | 3 |
| Malaysian, North Indian, Sri Lankan | 160066.5 | 2 |
| Juices, Desserts | 138724.3 | 2 |
| Cafe, Fast Food, Beverages | 52290 | 3 |
| Continental, American, Seafood | 44820 | 3 |
| Middle Eastern, Arabian | 35856 | 3 |
| Fast Food | 14940 | 2 |
| Grand Total | 101924.9 | 2.571428571 |



Qatar

| Country | Average of Cost_currency_in_India | Average of Price_range |
|---|-----------------------------------|------------------------|
| Qatar | 8110.71875 | 4 |
| International | 12101.25 | 4 |
| Thai | 10257.25 | 4 |
| Italian | 9220 | 4 |
| Steak, American | 5762.5 | 4 |
| Chinese | 5762.5 | 4 |
| American, Tex-Mex | 5071 | 4 |
| European, Arabian, Japanese, Bakery, Desserts | 4610 | 4 |
| Grand Total | 8110.71875 | 4 |



Insights:

- Average cost per table: Identify the average cost of two table when they order the food of every cuisines in every restaurants.
- Price range: Price range of every restaurants.

Recommendations:

- Cuisines price per two person: Identify the every cuisines to price so we can sure that when open a new restaurants what price range and cuisines price we take. So In above data and graph we should follow the same price range of every cuisines in new restaurants

Q5. Come up with the names of restaurants from the recommended states that are our biggest competitors and also those that are rated in the lower brackets, i.e. 1-2 or 2-3.

Ans: Check of each country of restaurants name

Qatar:

| Country | Average of Cost_currency_in_India | Average of Rating |
|---------------------------|-----------------------------------|-------------------|
| Qatar | 8105.916667 | 4.322222222 |
| Mainland China Restaurant | 5762.5 | 4.9 |

| | | |
|--|--------------------|--------------------|
| Gymkhana | 5762.5 | 4.7 |
| Zaffran Dining Experience | 6915 | 4.6 |
| Paper Moon | 9220 | 4.5 |
| Vine - The St. Regis | 12677.5 | 4.4 |
| Sabai Thai - The Westin Doha Hotel & Spa | 10257.25 | 4.3 |
| Texas Roadhouse | 5762.5 | 4 |
| Applebee's | 5071 | 3.8 |
| Coral - InterContinental Doha | 11525 | 3.7 |
| Grand Total | 8105.916667 | 4.322222222 |

Insights and Recommendations:

- In the above data of table we filter the top data of average price of two table which is greater than 5000 to understand the data and get the restaurants name for good competitor in the market and in suggestion country only 2 restaurants has 3 rating.

Sri Lanka

| Country | Average of Cost_currency_in_India | Average of Rating |
|------------------------------|-----------------------------------|--------------------|
| Sri Lanka | 101924.9 | 4.042857143 |
| Simply Strawberries By Jagro | 138724.3 | 4.5 |
| Arabian Knights | 35856 | 4.2 |
| Cricket Club Cafe | 44820 | 4.2 |
| Burger's King | 14940 | 4.1 |
| Upali's | 266777.5 | 4 |
| Cafe Shaze | 52290 | 3.8 |
| Malay Restaurant | 160066.5 | 3.5 |
| Grand Total | 101924.9 | 4.042857143 |

Insights and Recommendations:

- In the above data of table we filter the top data of average price of two table which is greater than 10000 to understand the data get the restaurants name for good competitor in the market and in suggestion country only 2 restaurants has 3 rating.

Indonesia

| Country | Average of Cost_currency_in_India | Average of Rating |
|------------------|-----------------------------------|-------------------|
| Indonesia | 14883033.5 | 4.265 |
| Talaga Sampireun | 784000 | 4.9 |

| | | |
|-----------------------------|----------|-----|
| Satoo - Hotel Shangri-La | 85368800 | 4.6 |
| Toodz House | 2465100 | 4.6 |
| Union Deli | 21342200 | 4.6 |
| Flip Burger | 300600 | 4.4 |
| Zenbu | 10094000 | 4.4 |
| Lucky Cat Coffee & Kitchen | 1368000 | 4.3 |
| Avec Moi Restaurant and Bar | 8067500 | 4.3 |
| 3 Wise Monkeys | 48019950 | 4.2 |
| MONKS | 26677750 | 4.2 |
| Noah's Barn Coffeenery | 16006650 | 4.2 |
| Skye | 18440000 | 4.1 |
| Lemongrass | 26677750 | 4 |
| OJJU | 10094000 | 3.9 |
| Onokabe | 751500 | 3.7 |
| Momo Milk | 7469770 | 3.7 |
| Fish Streat | 6082550 | 3.7 |

Insights and Recommendations:

- In the above data of table we filter the top data of average price of two table which is greater than 300000 to understood the data get the restaurants name for good competitor in the market and in suggestion country only 4 restaurants has 3 rating.

Canada

| Country | Average of Cost currency in India | Average of Rating |
|-----------------------|-----------------------------------|-------------------|
| Canada | 3041.375 | 3.575 |
| Arigato Sushi | 2097.5 | 3.3 |
| Consort Restaurant | 2097.5 | 3 |
| Lake House Restaurant | 5873 | 4.3 |
| Tokyo Sushi | 2097.5 | 3.7 |
| Grand Total | 3041.375 | 3.575 |

Insights and Recommendations:

- In the above data of these restaurants name for good competitor in the market and in suggestion country only 4 restaurants has 3 rating.

Singapore

| Country | Average of Cost_currency_in_India | Average of Rating |
|------------------------|-----------------------------------|--------------------|
| Singapore | 19331.95833 | 3.616666667 |
| Artichoke Cafe | 6292.5 | 3.2 |
| Colony | 18458 | 3.8 |
| Cut By Wolfgang Puck | 22653 | 4 |
| Fratini La Trattoria | 8390 | 4.1 |
| Jaan | 36077 | 3.8 |
| Potato Head Folk | 6712 | 3.1 |
| Restaurant Andre | 41950 | 3.8 |
| Rhubarb Le Restaurant | 26428.5 | 3.9 |
| Sky On 57 | 25170 | 3.4 |
| Summer Pavilion | 25170 | 3.9 |
| Super Loco | 7970.5 | 3.2 |
| The Refinery Singapore | 6712 | 3.2 |
| Grand Total | 19331.95833 | 3.616666667 |

Insights and Recommendations:

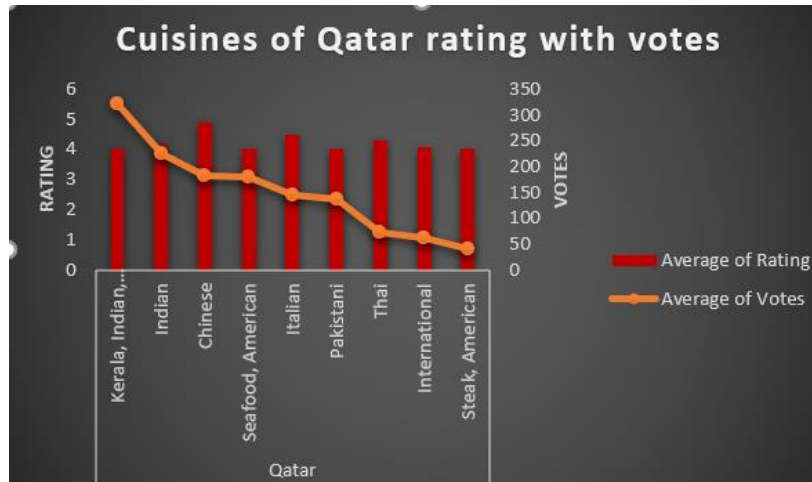
- In the above data of these restaurants name for good competitor in the market and in suggestion country only 10 restaurants has 3 rating.

Q6. Which cuisines should we focus on in the newer restaurants to get better feedback? Does the choice of cuisines affect the restaurant ratings?

Qatar

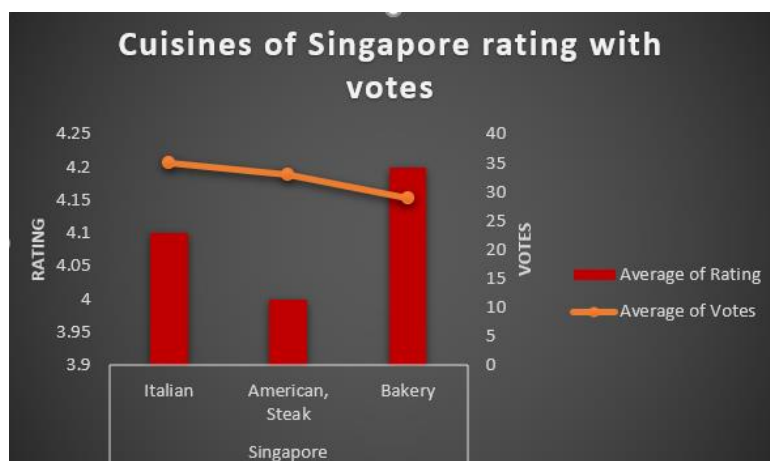
| Country | Average of Rating | Average of Votes |
|---------------------------------|-------------------|------------------|
| Qatar | 4.18 | 164.8 |
| Kerala, Indian, Chinese, Bakery | 4 | 322 |
| Indian | 4.18 | 226.4 |
| Chinese | 4.9 | 182 |
| Seafood, American | 4 | 180 |
| Italian | 4.5 | 145 |
| Pakistani | 4 | 136 |

| | | |
|--------------------|-------------|--------------|
| Thai | 4.3 | 73 |
| International | 4.05 | 62.5 |
| Steak, American | 4 | 41 |
| Grand Total | 4.18 | 164.8 |



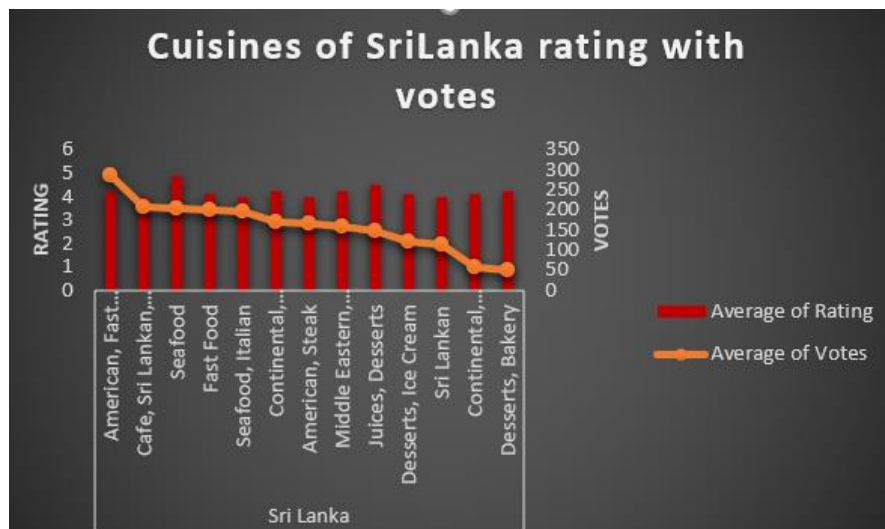
Singapore

| Country | Average of Rating | Average of Votes |
|--------------------|-------------------|--------------------|
| Singapore | 4.1 | 32.33333333 |
| Italian | 4.1 | 35 |
| American, Steak | 4 | 33 |
| Bakery | 4.2 | 29 |
| Grand Total | 4.1 | 32.33333333 |



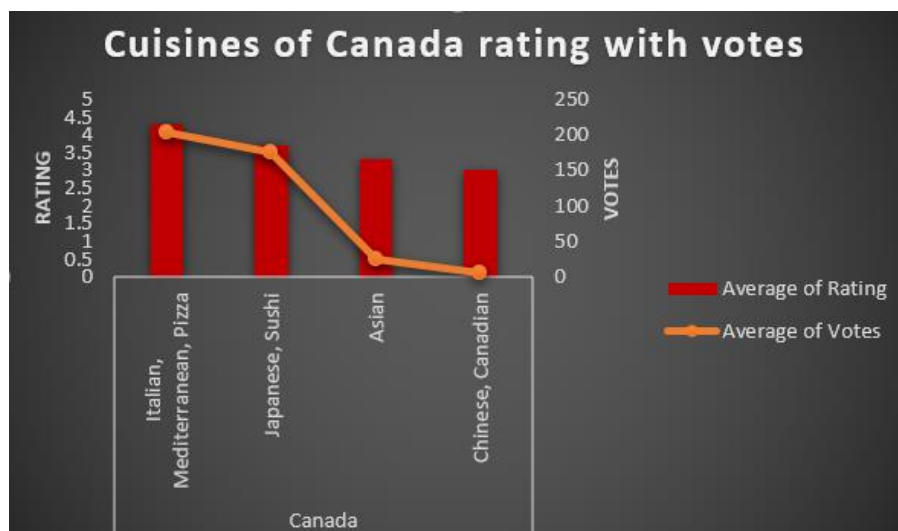
Sri Lanka

| Country | Average of Rating | Average of Votes |
|---|--------------------|--------------------|
| Sri Lanka | 4.192307692 | 159.7692308 |
| American, Fast Food, Steak, Beverages | 4.2 | 286 |
| Cafe, Sri Lankan, Continental, American | 4 | 209 |
| Seafood | 4.9 | 203 |
| Fast Food | 4.1 | 199 |
| Seafood, Italian | 4 | 196 |
| Continental, American, Seafood | 4.2 | 171 |
| American, Steak | 4 | 166 |
| Middle Eastern, Arabian | 4.2 | 158 |
| Juices, Desserts | 4.5 | 146 |
| Desserts, Ice Cream | 4.1 | 122 |
| Sri Lankan | 4 | 114 |
| Continental, American | 4.1 | 58 |
| Desserts, Bakery | 4.2 | 49 |
| Grand Total | 4.192307692 | 159.7692308 |

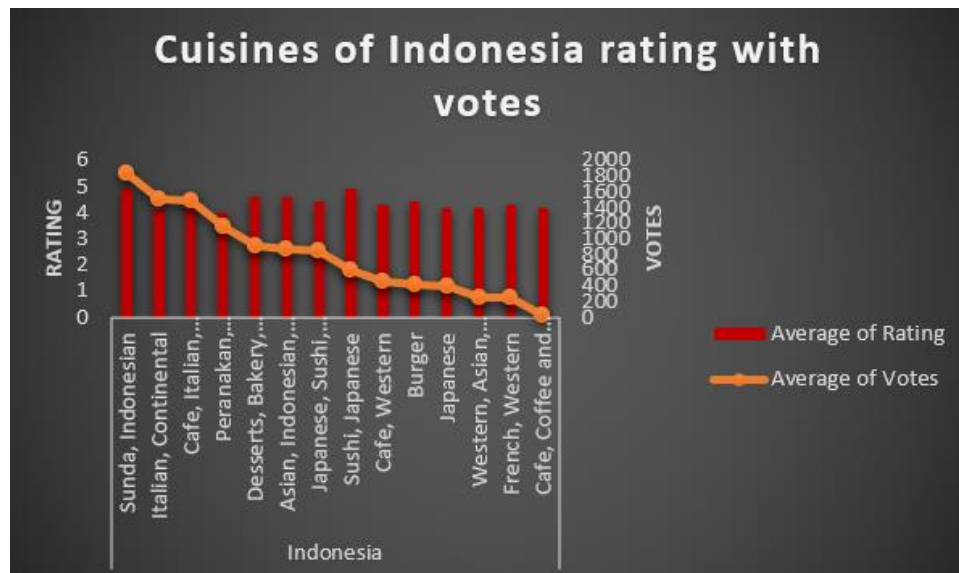


Canada

| Country | Average of Rating | Average of Votes |
|-------------------------------|-------------------|------------------|
| Canada | 3.575 | 103 |
| Italian, Mediterranean, Pizza | 4.3 | 204 |
| Japanese, Sushi | 3.7 | 176 |
| Asian | 3.3 | 26 |
| Chinese, Canadian | 3 | 6 |
| Grand Total | 3.575 | 103 |



| Country | Average of Rating | Average of Votes |
|--|-------------------|------------------|
| Indonesia | 4.46875 | 916 |
| Sunda, Indonesian | 4.9 | 1838 |
| Italian, Continental | 4.1 | 1498 |
| Cafe, Italian, Coffee and Tea, Western, Indonesian | 4.6 | 1476 |
| Peranakan, Indonesian | 4 | 1159 |
| Desserts, Bakery, Western | 4.6 | 903 |
| Asian, Indonesian, Western | 4.6 | 873 |
| Japanese, Sushi, Ramen | 4.4 | 841 |
| Sushi, Japanese | 4.9 | 605 |
| Cafe, Western | 4.3 | 458 |
| Burger | 4.4 | 410 |
| Japanese | 4.2 | 395 |
| Western, Asian, Cafe | 4.2 | 259 |
| French, Western | 4.3 | 243 |
| Cafe, Coffee and Tea, Western | 4.2 | 22 |
| Grand Total | 4.46875 | 916 |

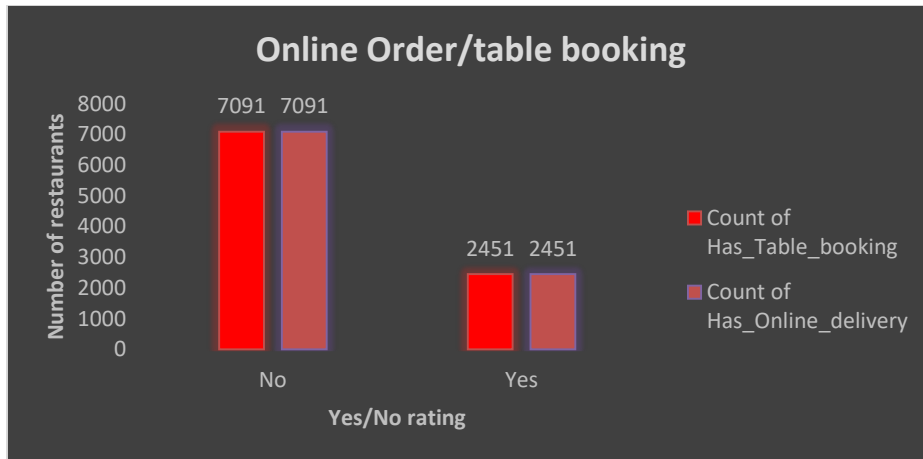


Insights and Recommendations:

- In all the suggestion country as I mentioned in above data we filter the rating above and equal 4 and define the votes as well for user feedback so it's important to good feedback of every cuisines when open a new restaurants.
- We focus on above cuisines as I mentioned in above data table.

Q7. According to our current data, should we go for online delivery and table booking? Does that affect the customer's ratings?

| Country | Count of Has_Table_booking | Count of Has_Online_delivery |
|-------------|----------------------------|------------------------------|
| No | 7091 | 7091 |
| Yes | 2451 | 2451 |
| Grand Total | 9542 | 9542 |



Insights and Recommendations:

- According to the graph and values it's clearly mentioned that we should not go for online order and booking table and if we go then its effect the rating of restaurant. So my perspective we should not go for online order and delivery.

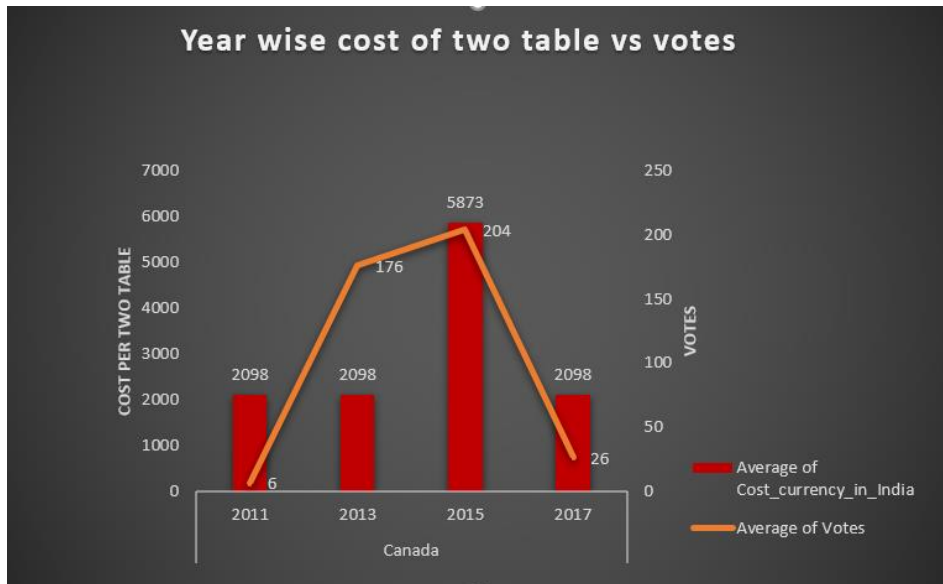
Q8. Should the team keep the rate of cuisines higher? Will that affect the feedback? According to our data are the rates of cuisines and ratings, correlated?

Ans:

In suggestion country try to find the relation between average price per two table and user feedback with year wise.

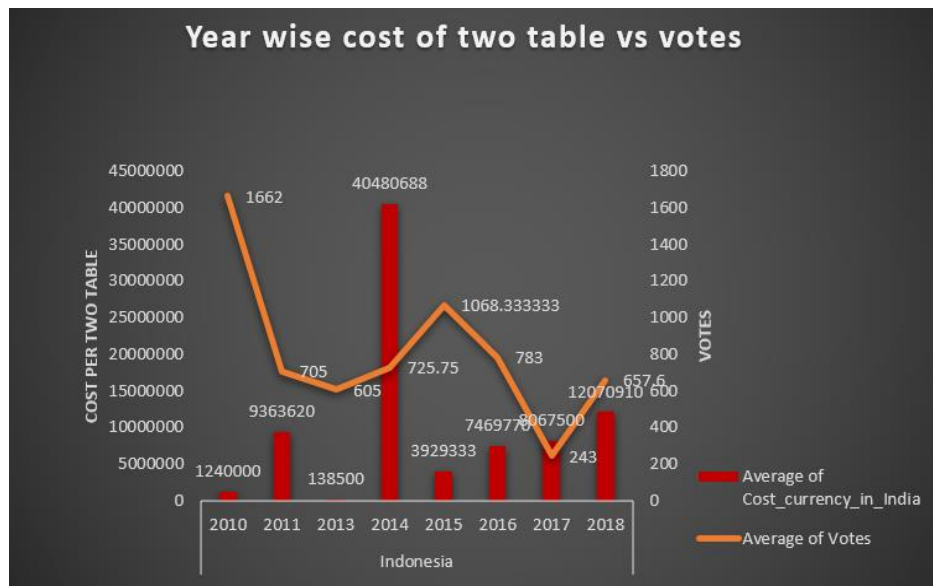
1. Canada

| Country | Average of Cost_currency_in_India | Average of Votes |
|-------------|-----------------------------------|------------------|
| Canada | 3041 | 103 |
| 2011 | 2098 | 6 |
| 2013 | 2098 | 176 |
| 2015 | 5873 | 204 |
| 2017 | 2098 | 26 |
| Grand Total | 3041 | 103 |



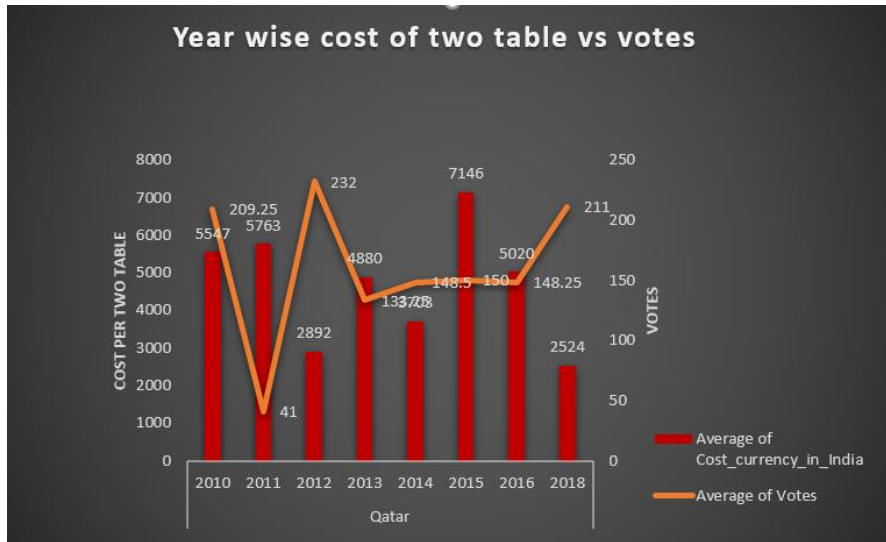
2. Indonesia

| Country | Average of Cost_currency_in_India | Average of Votes |
|--------------------|-----------------------------------|--------------------|
| Indonesia | 14180913 | 772.0952381 |
| 2010 | 1240000 | 1662 |
| 2011 | 9363620 | 705 |
| 2013 | 138500 | 605 |
| 2014 | 40480688 | 725.75 |
| 2015 | 3929333 | 1068.333333 |
| 2016 | 7469770 | 783 |
| 2017 | 8067500 | 243 |
| 2018 | 12070910 | 657.6 |
| Grand Total | 14180913 | 772.0952381 |



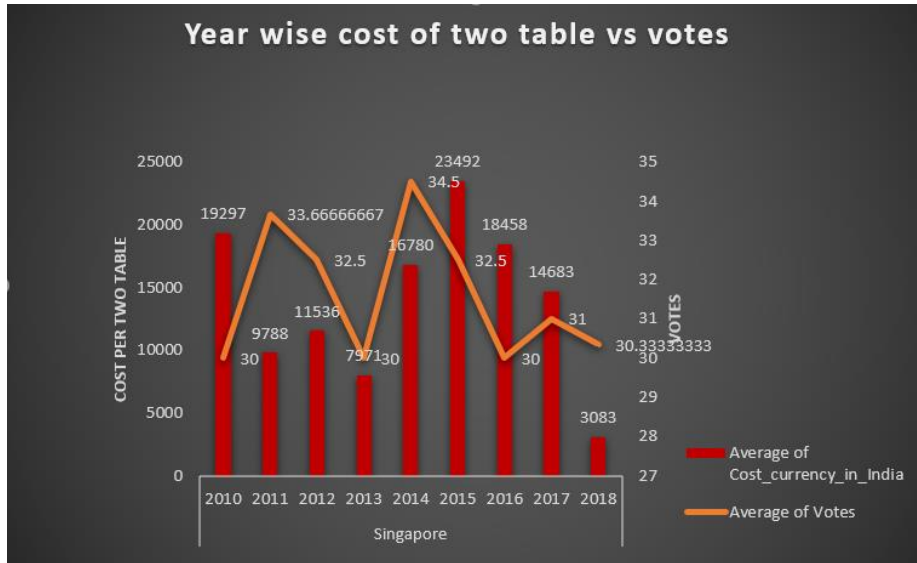
3. Qatar

| Country | Average of Cost_currency_in_India | Average of Votes |
|--------------------|-----------------------------------|------------------|
| Qatar | 4878 | 163.8 |
| 2010 | 5547 | 209.25 |
| 2011 | 5763 | 41 |
| 2012 | 2892 | 232 |
| 2013 | 4880 | 133.25 |
| 2014 | 3703 | 148.5 |
| 2015 | 7146 | 150 |
| 2016 | 5020 | 148.25 |
| 2018 | 2524 | 211 |
| Grand Total | 4878 | 163.8 |



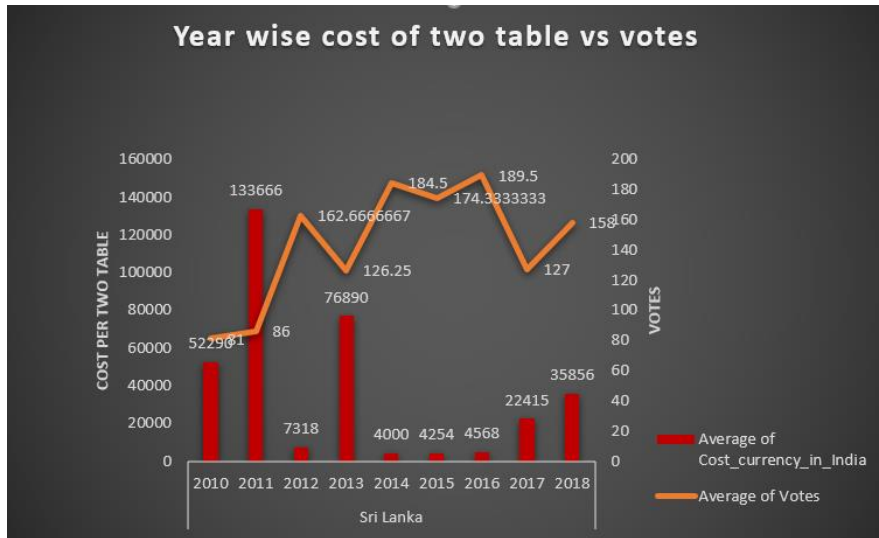
4. Singapore

| Country | Average of Cost_currency_in_India | Average of Votes |
|--------------------|-----------------------------------|------------------|
| Singapore | 12985 | 31.9 |
| 2010 | 19297 | 30 |
| 2011 | 9788 | 33.66666667 |
| 2012 | 11536 | 32.5 |
| 2013 | 7971 | 30 |
| 2014 | 16780 | 34.5 |
| 2015 | 23492 | 32.5 |
| 2016 | 18458 | 30 |
| 2017 | 14683 | 31 |
| 2018 | 3083 | 30.33333333 |
| Grand Total | 12985 | 31.9 |



5. Sri Lanka

| Country | Average of Cost_currency_in_India | Average of Votes |
|--------------------|-----------------------------------|------------------|
| Sri Lanka | 37986 | 146.45 |
| 2010 | 52290 | 81 |
| 2011 | 133666 | 86 |
| 2012 | 7318 | 162.6666667 |
| 2013 | 76890 | 126.25 |
| 2014 | 4000 | 184.5 |
| 2015 | 4254 | 174.3333333 |
| 2016 | 4568 | 189.5 |
| 2017 | 22415 | 127 |
| 2018 | 35856 | 158 |
| Grand Total | 37986 | 146.45 |



Insights:

- Year: Extract the year of every country to understand the data of cost of price per two table.
- Average cost per two table: Convert the price into Indian currency of every country except the Indian currency so it is easy to analyze the data.
- Votes: Extract the user feedback year wise.

Recommendations:

- We extract the year, average cost per two table and user feedback data and in the above charts and data table we did not find any relation that when we open new restaurants and we should the cuisines rate higher then it effect the feedback based on our data we capture.

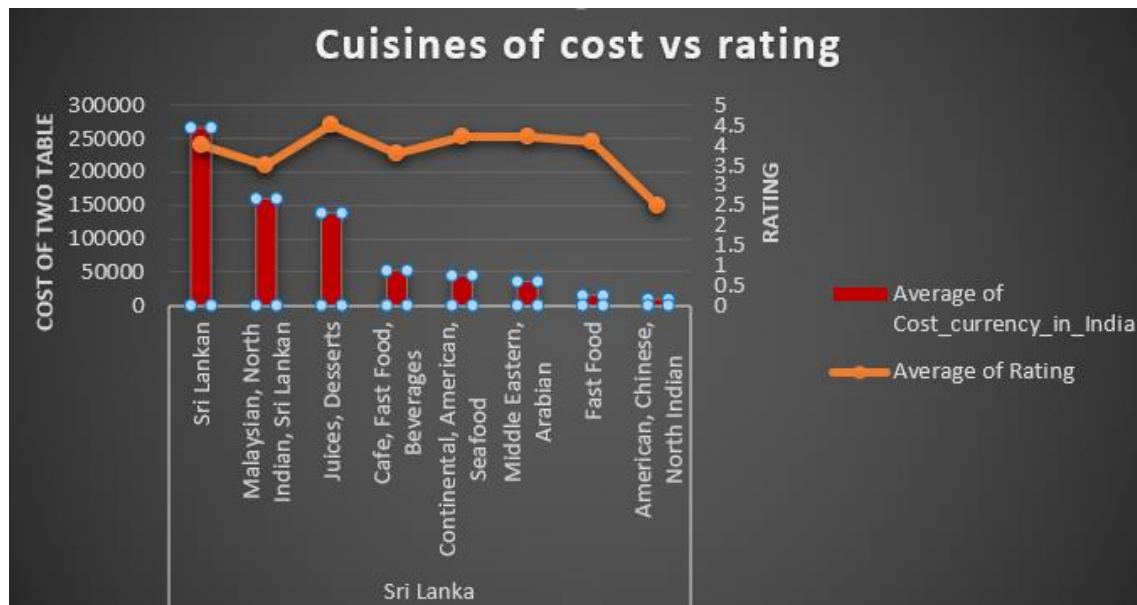
According to our data are the rates of cuisines and ratings, correlated?

Let's understand with each suggestion country of cuisines vs rating.

1. Sri Lanka

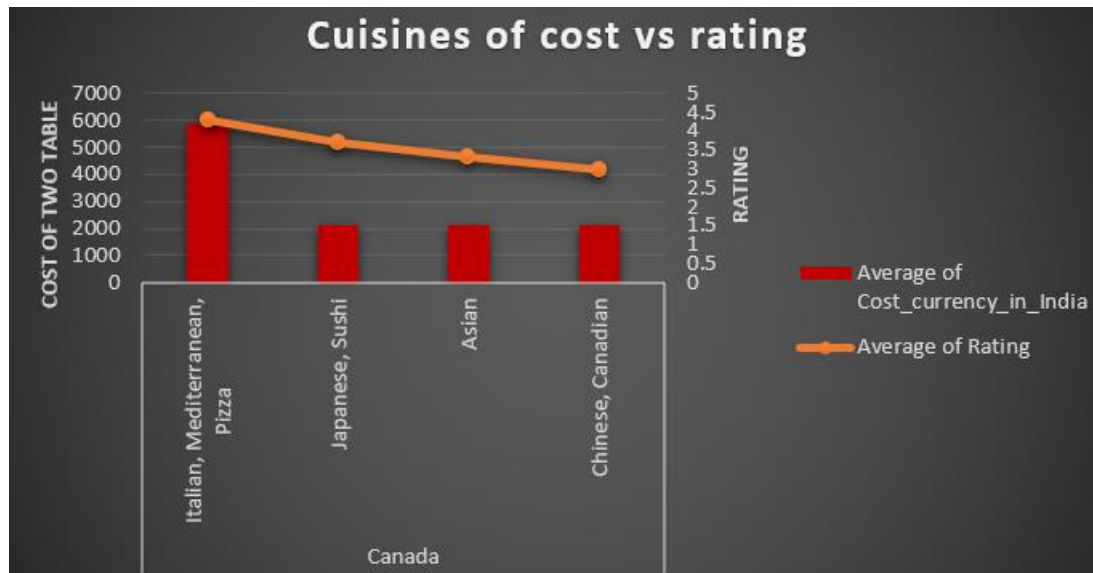
| Country | Average of Cost_currency_in_India | Average of Rating |
|------------|-----------------------------------|-------------------|
| Sri Lanka | 90324.2875 | 3.85 |
| Sri Lankan | 266777.5 | 4 |

| | | |
|-------------------------------------|-------------------|-------------|
| Malaysian, North Indian, Sri Lankan | 160066.5 | 3.5 |
| Juices, Desserts | 138724.3 | 4.5 |
| Cafe, Fast Food, Beverages | 52290 | 3.8 |
| Continental, American, Seafood | 44820 | 4.2 |
| Middle Eastern, Arabian | 35856 | 4.2 |
| Fast Food | 14940 | 4.1 |
| American, Chinese, North Indian | 9120 | 2.5 |
| Grand Total | 90324.2875 | 3.85 |



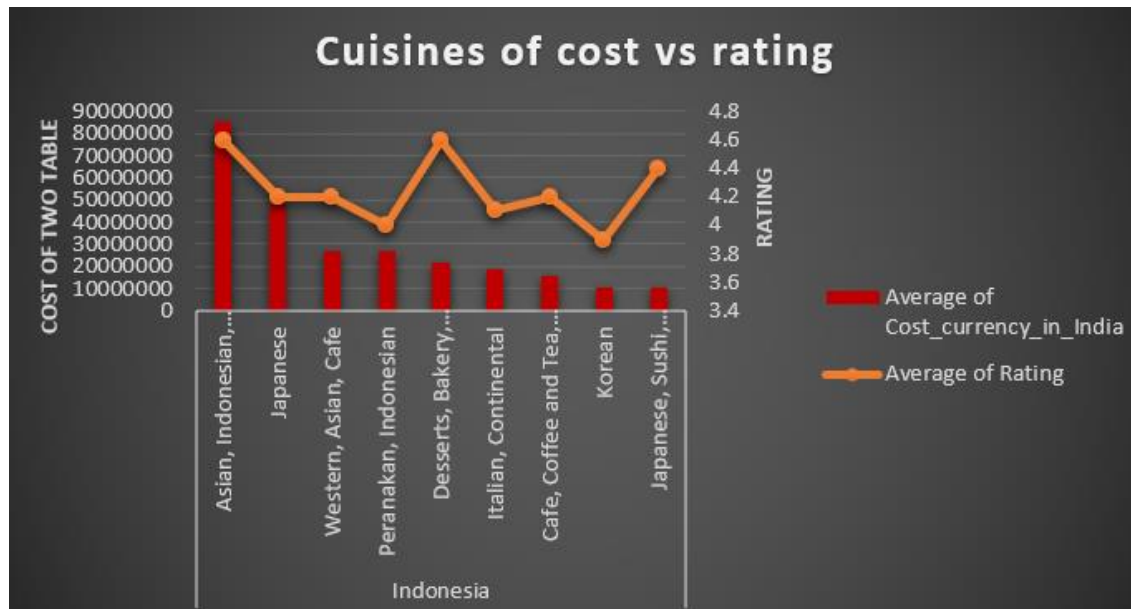
2. Canada

| Country | Average of Cost_currency_in_India | Average of Rating |
|-------------------------------|-----------------------------------|-------------------|
| Canada | 3041.375 | 3.575 |
| Italian, Mediterranean, Pizza | 5873 | 4.3 |
| Japanese, Sushi | 2097.5 | 3.7 |
| Asian | 2097.5 | 3.3 |
| Chinese, Canadian | 2097.5 | 3 |
| Grand Total | 3041.375 | 3.575 |



3. Indonesia

| Country | Average of Cost_currency_in_India | Average of Rating |
|-------------------------------|-----------------------------------|--------------------|
| Indonesia | 29191233.33 | 4.244444444 |
| Asian, Indonesian, Western | 85368800 | 4.6 |
| Japanese | 48019950 | 4.2 |
| Western, Asian, Cafe | 26677750 | 4.2 |
| Peranakan, Indonesian | 26677750 | 4 |
| Desserts, Bakery, Western | 21342200 | 4.6 |
| Italian, Continental | 18440000 | 4.1 |
| Cafe, Coffee and Tea, Western | 16006650 | 4.2 |
| Korean | 10094000 | 3.9 |
| Japanese, Sushi, Ramen | 10094000 | 4.4 |
| Grand Total | 29191233.33 | 4.244444444 |



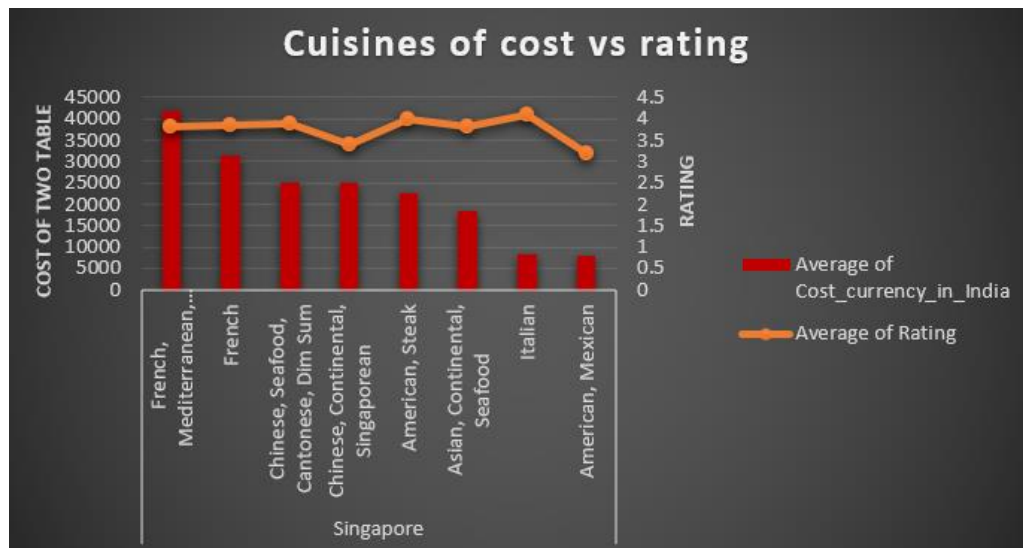
4. Qatar

| Country | Average of Cost_currency_in_India | Average of Rating |
|---|-----------------------------------|--------------------|
| Qatar | 6445.916154 | 4.184615385 |
| International | 12101.25 | 4.05 |
| Thai | 10257.25 | 4.3 |
| Italian | 9220 | 4.5 |
| Steak, American | 5762.5 | 4 |
| Chinese | 5762.5 | 4.9 |
| American, Tex-Mex | 5071 | 3.8 |
| European, Arabian, Japanese, Bakery, Desserts | 4610 | 3.9 |
| Indian | 3782.232 | 4.18 |
| Grand Total | 6445.916154 | 4.184615385 |

5. Singapore

| Country | Average of Cost_currency_in_India | Average of Rating |
|--------------------------------------|-----------------------------------|--------------------|
| Singapore | 23585.22222 | 3.766666667 |
| French, Mediterranean, European | 41950 | 3.8 |
| French | 31252.75 | 3.85 |
| Chinese, Seafood, Cantonese, Dim Sum | 25170 | 3.9 |
| Chinese, Continental, Singaporean | 25170 | 3.4 |
| American, Steak | 22653 | 4 |

| | | |
|-----------------------------|--------------------|--------------------|
| Asian, Continental, Seafood | 18458 | 3.8 |
| Italian | 8390 | 4.1 |
| American, Mexican | 7970.5 | 3.2 |
| Grand Total | 23585.22222 | 3.766666667 |



Insights and Recommendations:

I extract the data in each suggestion country respectively with average cost per two person with average rating and in the above data analysis I didn't find any correlation between price and rating.

Q9. What is the distribution of the number of restaurants of different price ranges in all the countries?

Ans:

| Row Labels | 1 | 2 | 3 | 4 | Grand Total |
|-------------|------|------|------|-----|-------------|
| Australia | 4 | 14 | 5 | 1 | 24 |
| Brazil | 2 | 7 | 16 | 35 | 60 |
| Canada | | 3 | | 1 | 4 |
| India | 4295 | 2858 | 1111 | 388 | 8652 |
| Indonesia | | 1 | 20 | | 21 |
| New Zealand | 3 | 4 | 17 | 16 | 40 |
| Philippines | | 1 | 12 | 9 | 22 |
| Qatar | | 1 | 5 | 14 | 20 |
| Singapore | | 1 | 5 | 14 | 20 |

| | | | | | |
|--------------------------|-------------|-------------|-------------|------------|-------------|
| South Africa | | 4 | 17 | 39 | 60 |
| Sri Lanka | | 6 | 11 | 3 | 20 |
| Turkey | | 11 | 18 | 5 | 34 |
| United Arab Emirates | | 9 | 29 | 22 | 60 |
| United Kingdom | 4 | 28 | 32 | 16 | 80 |
| United States of America | 130 | 165 | 107 | 23 | 425 |
| Grand Total | 4438 | 3113 | 1405 | 586 | 9542 |

Q10. Explain your approach in brief for suggesting countries/cities in order to open new restaurants, if the objective and subjective questions would have not been given to assist you.

Ans:

- 1). Data Cleaning of row data to make It usable
- 2). Find the total numbers of restaurants present in every cities and I will be target only those restaurants where restaurants are very low.
- 3). Calculate the users feedback and rating those restaurants if rating is very good then and users provide the very good feedback.
- 4). I will also check in those locations what kind and type of Cuisines are most famous and what people like it
- 5). I will check location and area as well as crowed Obvious I will not open any new restaurants in rural area because is it no points for that and online service available(order, table) that area or not.
- 6). Check the price range as well what kind of dishes peoples like most and what are the price ranges it mentioned in market.
- 7). I will check which months sells goes high on demand what peoples like the most so that months I will increase the little bit price because of better margin and profit area

I will list all the points and open new restaurants in those location.

