**ZOMATO ANALYSIS: A exploration of finding and selecting locations.**

**Objective Questions**:

1. **What is the total No. of tables present in the data?**

There are 2 tables provided in the excel:

* **Raw Data**: This sheet contains information about restaurants.
* **Country Description**: This sheet includes country codes along with the names of the countries.

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

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

There are 27 attributes present in total of 2 sheets:

* RestaurantID: A unique identifier for each restaurant.
* RestaurantName: The name of the restaurant.
* CountryCode: The country code for the location where the restaurant is situated.
* Country: The name of the country where the restaurant is located.
* City: The city where the restaurant is located.
* Address: The specific address of the restaurant.
* Locality: The locality or neighborhood where the restaurant is situated.
* LocalityVerbose: Detailed description of the locality.
* Longitude: The geographical longitude coordinate of the restaurant.
* Latitude: The geographical latitude coordinate of the restaurant.
* Cuisines: The types of cuisine offered by the restaurant.
* Currency: The currency used for transactions at the restaurant.
* Has\_Table\_booking: Indicates whether the restaurant allows table bookings (Yes/No).
* Has\_Online\_delivery: Indicates whether the restaurant offers online delivery (Yes/No).
* Is\_delivering\_now: Indicates whether the restaurant is currently delivering (Yes/No).
* Switch\_to\_order\_menu: Indicates whether users can switch to the order menu (Yes/No).
* Price\_range: A numeric value indicating the price range category of the restaurant.
* Votes: The number of votes or ratings/feedback received by the restaurant.
* Average\_Cost\_for\_two: The average cost for two people dining at the restaurant.
* Rating: The overall rating of the restaurant based on user reviews.
* Datekey\_Opening: The date when the restaurant was opened.
* Day: The day of the month extracted from the Datekey\_Opening.
* Month: The month extracted from the Datekey\_Opening.
* Year: The year extracted from the Datekey\_Opening.
* Cost\_for\_two\_in\_Rs.: The average cost for two converted to Indian rupees.
* New\_Average\_cost\_for\_two: A revised average cost for two, potentially updated or recalculated.
* Average\_rating: The average rating of the restaurant based on user reviews.

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

Categorical data refers to variables that represent categories or groups. Unlike numerical data, which measures quantities and can be ordered or measured on a scale, categorical data sorts items into distinct categories based on characteristics or attributes.

Continuous data represent measurable quantities and can take an infinite number of values within a range. They are often used for quantitative analysis and can be subjected to mathematical operations.

There are following columns from the Raw Data –

* RestaurantName
* Country
* City
* Address
* Locality
* LocalityVerbose
* Cuisines
* Currency
* Has\_Table\_booking
* Has\_Online\_delivery
* Is\_delivering\_now
* Switch\_to\_order\_menu
* Month

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

* In order to ensure that our data is clean before performing any analysis, we have removed the rows with any of the above attributes empty by using Excel’s in-built *Go-To Special* feature.
* We have also removed duplicates using the *Remove Duplicates* feature.
* We have also removed restaurants that have 0 *votes* since we actually want to launch restaurants by studying restaurants that have received feedback from customers.
* Also, *average\_cost\_for\_two* cannot ever be 0, this seems to be data entry error and in-order to clean it, we have removed those rows.
* Since the volume of data is high compared to abnormal data, removal of empty rows was the best approach towards data cleaning.

1. **Using the LookUp functions, fill up the countries in the original data using the country code.**

**VLOOKUP function:** In the table named country description, there are given country name with their country code. I used VLOOKUP function to extract the country out of country code.

=VLOOKUP(C2,'country description'!$A$1:$B$16,2,0)

1. **Create a table to represent the number of restaurants opened in each country.**

**Pivot table :** In the sheet Restaurant opened , Number of Restaurants Opened in each Country

|  |  |
| --- | --- |
| **Row Labels** | **Count of RestaurantID** |
| India | 8643 |
| United States of America | 419 |
| United Kingdom | 80 |
| Brazil | 60 |
| South Africa | 60 |
| United Arab Emirates | 60 |
| New Zealand | 40 |
| Turkey | 34 |
| Australia | 24 |
| Philippines | 22 |
| Indonesia | 21 |
| Sri Lanka | 20 |
| Singapore | 20 |
| Qatar | 20 |
| Canada | 4 |
| **Grand Total** | **9527** |

* Observation:
  + We can see that majority of our data comes from India which is around 90% of restaurants in our data.
  + After India the biggest country is USA followed by UK in third position.

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

**Pivot Table:** In the sheet named Count of each year I have made a pivot table

|  |  |
| --- | --- |
| **Row Labels** | **Count of RestaurantID** |
| 2010 | 1079 |
| 2011 | 1096 |
| 2012 | 1019 |
| 2013 | 1057 |
| 2014 | 1048 |
| 2015 | 1020 |
| 2016 | 1025 |
| 2017 | 1082 |
| 2018 | 1101 |
| **Grand Total** | **9527** |

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

We can use the following COUNTIFS() formula to count restaurants with price range of  4 =COUNTIFS('Raw Data'!D2:D9528,"India",'Raw Data'!Q2:Q9528,4)

|  |  |
| --- | --- |
| Restaurant with a price range of 4 |  |
| India | 388 |

* We can also use a PIVOT table with filter to get the same result.
* Where D:D contains the country name and Q:Q contains the price range.
* **Observation:**
  + There are a total **383** restaurants opened in India that has a price range of 4

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

**AVERAGEIF:** In the sheet named Average No of voters by using pivot table

|  |  |
| --- | --- |
| **Row Labels** | **Average of Votes** |
| Indonesia | 772 |
| United Arab Emirates | 494 |
| United States of America | 436 |
| Turkey | 431 |
| Philippines | 407 |
| South Africa | 315 |
| New Zealand | 243 |
| United Kingdom | 205 |
| Qatar | 164 |
| Sri Lanka | 146 |
| India | 137 |
| Australia | 111 |
| Canada | 103 |
| Singapore | 32 |
| Brazil | 20 |

* We can use PIVOT table to summarize the average number of votes by country, since only 1 voter can cast 1 vote. We can find the average number of voters per country.
* The average number is rounded off to nearest whole number for simplicity.
* **Observation:**
  + We can see that Indonesia has the highest number of voters followed by United Arab Emirates and United States of America.
  + Brazil on the other hand has the least amount of voters after Singapore and Canada.

**10.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.**

* We can use the following array formula to get the average of rating for restaurants with price range < 4 and online delivery = “Yes”.

=AVERAGE(IF(('Raw Data'!Q2:Q9528 < 4) \* ('Raw Data'!O2:O9528 = "Yes"),'Raw Data'!T2:T9528))

* The average rating for all restaurants with price range < 4 and online delivery is **3.18** after rounding the answer to 2 decimal digits.

11. **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.**

* Created a new formula to reference suggested countries from another table and use that reference to highlight rows with those countries in the Raw data table
* Using Conditional Formatting I have highlight the rows of four countries that I have suggested named: Australia, Canada, Singapore, Sri Lanka.
* In Conditional Formatting go to new new rule, click on “ Use a formula to determine which cells to format”.
* In formula field entered the formula
* =$D2= “Sri Lanka”
* =$D2= “Singapore”
* =$D2= “Canada”
* =$D2= “Australia”

12.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]

* We can use MID() and FIND() and concatenate cost as follows:

* MID() extracts the sub-string from the given text based on starting and ending character number.
* FIND() returns the place where a certain character is situated in a string.
* Used FIND() to calculate the number of strings inside the “()” as some symbols are 1 character long while some are 3.
* *“&”* is used to concatenate strings in excel, *S:S* has the Average cost

13. 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?

ARRAYFORMULA: In sheet Country Description I have counted the number of restaurants that do not offer online delivery, are in the lowest price range, and average cost for two people is less than 250 indian rupees. Using COUNTIFS function in cell G3 =1676 by using the below listed formula

=COUNTIFS('RawData'!$N$1:$N$8425,"No",'RawData'!$Q$1:$Q$8425,1,'Raw Data'!$Y$1:$Y$8425,"<=250")

**Subjective Question**:

1. 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?

In the Sheet named Restaurant Opened by country,I have created a pivot

|  |  |
| --- | --- |
| **Row Labels** | **Count of RestaurantID** |
| India | 8643 |
| United States of America | 419 |
| United Kingdom | 80 |
| Brazil | 60 |
| South Africa | 60 |
| United Arab Emirates | 60 |
| New Zealand | 40 |
| Turkey | 34 |
| Australia | 24 |
| Philippines | 22 |
| Indonesia | 21 |
| Sri Lanka | 20 |
| Singapore | 20 |
| Qatar | 20 |
| Canada | 4 |
| **Grand Total** | **9527** |

* Strategy:

A good country to open a new restaurant would be somewhere where the market is not saturated and there is a lot of market share to be taken.

* Technique:

We can use Pivot Table to summarize the data by country and get the count of restaurants in each country to investigate which country is the best fit for our strategy.

* We can see that Canada, Qatar, Singapore and Sri Lanka fits our strategy the best.
* We can also observe that India has the highest number of restaurants indicating a highly saturated market.

|  |  |
| --- | --- |
| **Row Labels** | **Average of Rating** |
| Canada | 3.58 |
| Qatar | 4.06 |
| Singapore | 3.58 |
| Sri Lanka | 3.87 |

**Observation** :-

Based on the provided data, here are a few countries where the competition is relatively low,

performance of restaurants are average i.e a lot of market can be captured,

making them suitable for new restaurant openings:

* Canada - 4 restaurants
* Qatar - 20 restaurants
* Sri Lanka - 20 restaurants
* Singapore – 20 restaurants.
* I used a pivot table, put countries in rows and count of restaurantsID in values and average restaurants in values.
* I sorted count of restaurantsID in ascending order to see the countries where competiton is less.
  + I also payed attention to countries where ratings of restaurants are average (above 3.5 and less than 4.2) because there will be huge scope of improvement.

**Recommendations:-**

When recommending countries for new restaurant openings, we consider the following factors:

1. **Market Trends**: Research culinary trends and consumer preferences in each country. A growing interest in specific cuisines can impact success.
2. **Economic Indicators**: Look at GDP growth rates, disposable income levels, and urbanization rates. Countries with strong economic growth often present better opportunities.
3. **Cultural Preferences**: Understanding local tastes and dietary habits is crucial. Ensure your restaurant concept aligns with cultural norms and preferences.
4. **Regulatory Environment**: Investigate the ease of doing business, regulations, and costs associated with starting a restaurant in each country.
5. **Competition Analysis**: Beyond the count of restaurants, analyze competitors’ strengths and weaknesses. Identifying market gaps or niches can offer strategic advantages.

**Conclusion**

By combining insights from the data with these additional considerations, we can make informed decisions about opening new restaurants in countries with lower competition and higher potential for success.

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

* **Strategy**:
  + City which has less restaurants and high average cost for 2 people are the best choices for new restaurants.
* **Technique**:
  + We can use a pivot table to check which cities fit our game plan and which don’t.

|  |  |  |  |
| --- | --- | --- | --- |
| **Row Labels** | **Count of City** | **Average of Rating** | **Average of Cost\_for\_two\_in\_Rs.** |
| **Canada** | **4** | **3.575** | **2120.625** |
| Chatham-Kent | 1 | 3.7 | 1462.5 |
| Consort | 1 | 3 | 1462.5 |
| Vineland Station | 1 | 4.3 | 4095 |
| Yorkton | 1 | 3.3 | 1462.5 |
| **Qatar** | **20** | **4.06** | **4654** |
| Doha | 20 | 4.06 | 4654 |
| **Singapore** | **20** | **3.575** | **8441.65** |
| Singapore | 20 | 3.575 | 8441.65 |
| **Sri Lanka** | **20** | **3.87** | **855** |
| Colombo | 20 | 3.87 | 855 |
| **Grand Total** | **64** | **3.81875** | **4492.117188** |

**Observations:-**

* We can see according to our data, Vineland Station is the best fit city in Canada, meanwhile Doha and Colombo also are good fits for Qatar and Sri Lanka respectively.
* Singapore itself is a city-state which we can see already satisfy our requirements.
* We have converted all the currencies into INR for better understanding and simplicity.

**Recommendations for Opening Restaurants:-**

**Canada**

* **Vineland Station**
  + **Cost for Two:** ₹4095
  + **Rating:** 4.3
  + **Opportunity:** High rating with fewer restaurants.

**Qatar**

* **Doha**
  + **Cost for Two:** ₹4654
  + **Rating:** 4.06
  + **Opportunity:** Strong economic growth and diverse clientele.

**Singapore**

* **Singapore (City-State)**
  + **Cost for Two:** ₹8441.65
  + **Rating:** 3.575
  + **Opportunity:** High foot traffic despite higher costs.

**Sri Lanka**

* **Colombo**
  + **Cost for Two:** ₹855
  + **Rating:** 3.87
  + **Opportunity:** Low cost with decent rating; great for affordable dining.

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

|  |  |  |
| --- | --- | --- |
| **Row Labels** | **Count of City** | **Average of Rating** |
| **Canada** | **4** | **3.575** |
| Chatham-Kent | 1 | 3.7 |
| Consort | 1 | 3 |
| Vineland Station | 1 | 4.3 |
| Yorkton | 1 | 3.3 |
| **Qatar** | **20** | **4.06** |
| Doha | 20 | 4.06 |
| **Singapore** | **20** | **3.575** |
| Singapore | 20 | 3.575 |
| **Sri Lanka** | **20** | **3.87** |
| Colombo | 20 | 3.87 |
| **Grand Total** | **64** | **3.81875** |

**Observations:-**

* We can see from the above chart that the average rating varies from 3.6 to 4.1 on a scale of 5.0.
* Qatar has the highest average rating of 4.1 followed by Sri Lanka with 3.9.
* Singapore and Canada have the lowest rating out of all the suggested countries with an average rating of 3.6.

**Recommendations:**

* **Promote Qatar**: Focus on marketing high-rated restaurants in Qatar (4.06 average).
* **Support Canada**: Improve Canadian dining experiences to raise the average rating (3.57).
* **Highlight Sri Lanka**: Leverage Sri Lanka's strong rating (3.87) to attract food tourists.
* **Enhance Singapore**: Encourage improvements in Singapore’s dining scene, despite a lower rating (3.575).
* **Gather Feedback**: Implement customer feedback mechanisms across all regions to boost restaurant performance.

By targeting these areas, stakeholders can enhance restaurant quality and ratings effectively.

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

**Observations:-**

* We can see that the average cost for two is relatively high in all countries except for Sri Lanka where it is just around ₹ 855.
* Singapore leads with ₹ 8441 followed by Qatar and Canada.

**Recommendations :-**

Sri Lanka

* Local Eateries: Enjoy affordable meals at local eateries and street food stalls. Don’t miss out on traditional dishes like rice and curry, kottu roti, and hoppers.
* Visit Markets: Explore local markets for fresh fruits and snacks to immerse yourself in the culture while saving money.

Qatar

* Traditional Cuisine: Savor authentic Qatari dishes such as machboos (spiced rice) and shai karak (spiced tea) at local restaurants.
* Lunch Specials: Take advantage of lunch deals at many restaurants to enjoy delicious meals at a lower cost.

Canada

* Diverse Dining: Try food trucks for local favorites like poutine and butter tarts. They often provide tasty meals at reasonable prices.
* Happy Hour Deals: Look for restaurants offering happy hour specials to enjoy meals and drinks at discounted rates.

Singapore

* Hawker Centers: Make sure to visit hawker centers for a variety of affordable local dishes, including chicken rice and laksa.
* Food Courts: Check out food courts in shopping malls for diverse and budget-friendly meal options.

General Tips

* Research Local Options: Use online resources to find budget-friendly dining spots tailored to each location.
* Plan Your Meals: Look for dining specials and happy hours to optimize your food budget.
* Utilize Food Apps: Download apps like Zomato to discover deals, read reviews, and find new places to eat.

Enjoy your culinary adventure while keeping your expenditures in check!

**5.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.**

* **Strategy:**
  + We should aim for rating of 3.1-3.5 for our new restaurants.
  + This will also help us in attracting wide range of customers and will help in lowering our expenditure.
  + This strategy is relatively low risk.
  + Our biggest competitors are as follows.

|  |  |
| --- | --- |
| **Row Labels** | **Average of Rating** |
| **Canada** | **3** |
| Consort Restaurant | 3 |
| **Singapore** | **3** |
| Makansutra Gluttons Bay | 3 |
| **Sri Lanka** | **2.45** |
| Elite Indian Restaurant | 2.4 |
| Queen's Cafe | 2.5 |
| **Grand Total** | **2.725** |

|  |  |
| --- | --- |
|  |  |
|  |  |
| Recommendations :-   * Targeting Higher Ratings: New entrants should aim for ratings above 3.5 to distinguish themselves from existing competitors and attract customers looking for better dining experiences. * Focus on Quality in Low-Rated Areas: Launch a restaurant in markets like Sri Lanka where existing options are underperforming, emphasizing quality and customer service to attract dissatisfied customers. * Unique Offerings in Competitive Markets: In places like Singapore, introducing a unique dining concept that targets a rating above 3 can help differentiate from established mid-range competitors. * Enhance Customer Experience: For all new restaurants, prioritizing customer satisfaction through quality food and service will be crucial to achieving higher ratings and gaining market share. |  |
|  |  |

**Observations:**

* Mid-Range Competitors:
  + Canada, Consort Restaurant, Singapore, and Makansutra Gluttons Bay all have average ratings of 3. This indicates a strong presence of mid-range dining options, suggesting that any new restaurant must exceed this rating to attract customers.
* Low Ratings Indicate Opportunities:
  + Competitors such as Sri Lanka (2.45), Elite Indian Restaurant (2.4), and Queen's Cafe (2.5) exhibit significantly lower ratings. This highlights dissatisfaction among customers and presents an opportunity for new entrants to provide higher quality offerings.
* Overall Market Average:
  + The grand total average rating of 2.725 reflects a generally low level of customer satisfaction across the competitors. This suggests that there is potential for new restaurants to capture market share by improving the dining experience.
* Saturation Levels:
  + With several competitors at the 3 rating mark, the market appears somewhat saturated in that mid-range segment. However, the existence of lower-rated competitors indicates gaps where new entrants can thrive by focusing on quality and service.
* Potential for Improvement:
  + The overall ratings suggest that many customers are looking for better options. New restaurants that prioritize high standards in food and service can attract customers who are currently dissatisfied **with the lower-rated competitors.**

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

Visualization:

|  |  |
| --- | --- |
| **Row Labels** | **Average of Rating** |
| **Canada** | **3.575** |
| Asian | 3.3 |
| Chinese, Canadian | 3 |
| Italian, Mediterranean, Pizza | 4.3 |
| Japanese, Sushi | 3.7 |
| **Qatar** | **4.06** |
| American, Tex-Mex | 3.8 |
| Chinese | 4.9 |
| European, Arabian, Japanese, Bakery, Desserts | 3.9 |
| Indian | 4.18 |
| Indian, Street Food | 3.4 |
| International | 4.05 |
| Italian | 4.5 |
| Kerala, Indian, Chinese, Bakery | 4 |
| North Indian, Chinese, Turkish | 3.8 |
| Pakistani | 4 |
| Seafood, American | 4 |
| Steak | 3.6 |
| Steak, American | 4 |
| Thai | 4.3 |
| **Singapore** | **3.575** |
| American | 3.1 |
| American, Bakery, European, Burger, Fusion | 3.8 |
| American, Japanese, Singaporean | 3.2 |
| American, Mexican | 3.2 |
| American, Steak | 4 |
| Asian, Continental, Seafood | 3.8 |
| Bakery | 4.2 |
| Cafe | 3.7 |
| Cafe, Spanish, Turkish, Greek | 3.2 |
| Chinese, Continental, Singaporean | 3.4 |
| Chinese, Seafood, Cantonese, Dim Sum | 3.9 |
| Finger Food | 3.9 |
| French | 3.85 |
| French, Mediterranean, European | 3.8 |
| Italian | 4.1 |
| Italian, French, Bakery, Cafe | 3.2 |
| Singaporean, Australian, German | 3.1 |
| Singaporean, Chinese, Seafood, Malay, Indian | 3 |
| Western, Fusion, Fast Food | 3.2 |
| **Sri Lanka** | **3.87** |
| American, Chinese, North Indian | 2.5 |
| American, Fast Food, Steak, Beverages | 4.2 |
| American, Steak | 4 |
| Cafe, Fast Food, Beverages | 3.8 |
| Cafe, Italian | 3.6 |
| Cafe, Sri Lankan, Continental, American | 4 |
| Chinese | 3.4 |
| Continental, American | 4.1 |
| Continental, American, Seafood | 4.2 |
| Desserts, Bakery | 4.2 |
| Desserts, Ice Cream | 4.1 |
| Fast Food | 4.1 |
| Italian, Cafe, Desserts | 3.7 |
| Juices, Desserts | 4.5 |
| Malaysian, North Indian, Sri Lankan | 3.5 |
| Middle Eastern, Arabian | 4.2 |
| North Indian, Chinese, Sri Lankan | 2.4 |
| Seafood | 4.9 |
| Seafood, Italian | 4 |
| Sri Lankan | 4 |
| **Grand Total** | **3.81875** |

**Observations**

* Cuisine Ratings Impact: Higher-rated cuisines lead to better feedback and increased diner interest.
* Caution with Low-Rated Cuisines: Avoid oversaturation of lower-rated options like American cuisine.

**Recommendations :-**

* Focus on High-Rated Cuisines:
  + Prioritize Indian, Qatar, Singaporean, and Sri Lankan cuisines for better feedback.
* Explore Culinary Fusion:
  + Combine popular cuisines (e.g., Indian and Seafood) to attract diverse diners.
* Emphasize Local Flavors:
  + Highlight regional specialties, particularly from Canada and Qatar.
* Offer Diverse Menu Items:
  + Include options from Desserts, Bakery, and Cafes for a comprehensive appeal.
* Stay Trend-Aware:
  + Monitor customer feedback and food trends to adapt offerings.

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Count of RestaurantID** | **Column Labels** |  |  |
| **Row Labels** | **No** | **(blank)** | **Grand Total** |
| Canada | 4 |  | 4 |
| Qatar | 20 |  | 20 |
| Singapore | 20 |  | 20 |
| Sri Lanka | 20 |  | 20 |
| (blank) |  |  |  |
| **Grand Total** | **64** |  | **64** |

|  |  |  |
| --- | --- | --- |
| **Count of RestaurantID** | **Column Labels** |  |
| **Row Labels** | **Yes** | **Grand Total** |
| Qatar | 1 | 1 |
| **Grand Total** | **1** | **1** |

**Observations:-**

* None of the restaurants from the suggested countries provide online food delivery and only 1 restaurant provides table booking.
* This indicates that online delivery and table booking does not affect ratings. Since, none of the restaurants provide online delivery yet the average ratings in each city is in the good to excellent bracket (3.5-4.5).
* Only 1 restaurant from the targeted cities provide table booking service, which is in Doha with exceptional rating of 4.7.
* The rest of cities do not seem to be affected by table booking service.
* Looking at the data, we should provide online delivery and table booking in our new restaurants as this will be one of the Unique Selling Points (USPs) and can attract more business.

**Recommendations**

* **Implement Online Delivery**:
  + **USP Opportunity**: Introduce online delivery to differentiate your restaurants, catering to the growing demand for convenience.
* **Introduce Table Booking**:
  + **Market Gap**: Offer table booking, especially since only one competitor provides this service. It can enhance customer experience and attract diners.
* **Marketing Strategy**:
  + **Promote Services**: Highlight online delivery and table booking in marketing efforts. Use special promotions to encourage initial use.
* **Customer Feedback**:
  + **Monitor Impact**: Track ratings and feedback post-launch to assess the effectiveness of these services and make adjustments as needed.
* **Data-Driven Decisions**:
  + **Regular Analysis**: Continuously analyze customer preferences and adapt services to meet their needs.

**8.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?**

**Visualization:**

**Observations:-**

* We can observe from the above scatter plot created from our whole data, that there is a weak positive correlation between ratings and average cost.
* The highly-rated restaurants are the ones that offer more expensive food.
* The variability in price even in the high-rated restaurants bracket indicates that correlation is weak.
* We can say that if our restaurants are rated highly, we can keep our cuisine rates high but it also indicates that we should have options with lower prices too.

**Recommendations:-**

* **Diverse Pricing Strategy:**
  + Keep high-priced options for quality seekers.
  + Introduce affordable dishes to attract budget-conscious diners.
* **Balanced Menu:**
  + Curate a mix of high-end and budget-friendly items.
  + Promote affordable dishes prominently.
* **Customer Feedback:**
  + Regularly collect feedback on pricing and quality.
  + Adjust offerings based on customer preferences.
* **Promotions:**
  + Create special offers that highlight both price tiers.
  + Implement loyalty programs to encourage varied purchases.
* **Market Analysis:**
  + Review competitor pricing to ensure competitiveness.
  + Segment customers to tailor pricing strategies.

Conclusion

Offering a range of prices can enhance customer satisfaction and improve ratings while attracting a broader audience.

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

**Visualisation**

**Observation:-**

* We can see that our data set contains 4423 restaurants which amounts to 46% falling into lowest price range of 1.
* Price range 2 has about 33% of restaurants which amounts to 3113 restaurants.
* Followed by price range 3 and 4 having 15% and 6% which makes their share 15% and 6% respectively.

**Recommendations**

* **Expand Budget Options:** Open more restaurants in the lowest price range (1) to meet high demand.
* **Capitalize on Mid-Range:** Focus on expanding offerings in price range 2, which represents a significant market.
* **Niche for High-End Dining:** Develop unique concepts for price ranges 3 and 4 to attract a select clientele.
* **Enhance Marketing:** Promote value for lower ranges and highlight unique experiences for higher ranges.
* **Improve Customer Experience:** Implement loyalty programs and gather feedback to boost retention.
* **Monitor Competitors:** Stay aware of competitors to identify market trends and gaps.
* **Localize Offerings:** Adapt restaurant concepts to fit local preferences and economic conditions.

**10.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.**

**Strategy:**

* + I would first look at countries with less restaurants and high income per capita.
  + After narrowing down the countries that fit the above criteria, I would further narrow down my search for cities by prioritizing cities which are high population centres of the shortlisted countries.
  + The third criteria to try and make the restaurants more successful, I would focus on cuisines which are more popular among the locals.
  + Additionally, I would provide extra services such as free delivery, advance reservations, catering services and attractive launch offers.
  + I will use all the above strategies in order to identify new locations for my restaurants and maximise their profitability.

**Recommendations to enhance our strategy further:-**

* **Market Research**: Before narrowing down options, conduct thorough market research to understand local dining habits, preferences, and trends. Use data analytics to identify emerging food trends that could attract customers.
* **Competitive Analysis**: Analyze the existing restaurant landscape in our shortlisted countries and cities. Identify gaps in the market, such as cuisine types that are underrepresented or unique dining experiences that could be introduced.
* **Cultural Considerations**: Factor in cultural preferences and dietary restrictions (e.g., vegetarian, vegan, halal) that might influence menu development. Understanding local food culture can significantly impact the restaurant's acceptance and success.
* **Real Estate Viability**: Assess the cost and availability of real estate in the identified cities. Look for locations with high foot traffic, visibility, and accessibility that can enhance customer attraction.
* **Economic Stability**: Consider the overall economic stability of the countries. A high income per capita is important, but also look at economic growth trends, consumer spending habits, and local business regulations.
* **Partnership Opportunities**: Explore potential partnerships with local suppliers, food influencers, or culinary schools that can enhance your restaurant's credibility and visibility.
* **Sustainability Practices**: With a growing trend towards sustainability, consider incorporating eco-friendly practices and sourcing local ingredients. This can appeal to a more environmentally conscious demographic.
* **Technology Integration**: Leverage technology for operations, such as online ordering systems, customer loyalty programs, and social media marketing to engage potential customers effectively.
* **Test Markets**: Consider opening pop-up restaurants or food trucks in target areas to test the market before committing to a permanent location. This can provide valuable insights into customer preferences and demand.
* **Feedback Mechanisms**: Establish systems for gathering customer feedback to continuously improve the dining experience and adapt to local preferences.

By integrating these recommendations, our strategy can be more comprehensive, ensuring a better alignment with market demands and increasing the chances of restaurant success.