Mexican Restaurants Workshop

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Introduction

The following workshop focuses on a database containing information about Mexican restaurants ratings by consumers in 2012. The project goal is to test the factors of restaurants on types of consumers and their effect on the restaurants' ratings, which will bring the main value - a high-potential restaurant model.

In order to thoroughly and correctly understand the data, at first stage, we need to research and examine the objects, schema structure, data types, keys and other characteristics in order not to encounter surprises later on. For your convenience, a detailed info attached.

Restaurants Database

The Restaurant's database contains 5 tables. Data Dictionary table describes the content in each table

Table Name	Description	PK	FK	FK tbls relate	Note	#Rows
restaurants	Restaurant details: location, name,price,parking type etc.	resturant_id			Restaurants in 3 states & 4 cities. 3 have same name	130
consumers	Consumer details: area, preferes,education, status, role	consumer_Id		Rating, consumer Pref		138
ratings	The ratings given by the consumers to restaurants.		resturants_id, consumer_Id	Restaurant	Rating between 0-2 to 3 fields: Food, Service, Overall	1160
Restaurants cuisines	list of cuisines each restaurant associated with.		resturant_ID	Restaurant, rating	23 distinct cuisines, 93 restaurants out of all in cuisine tbl	112
Consumer preferences	Consumer cuisine preferences.		consumer_Id	Rating, consumers	101 distinct preferences	330

Data Observation

The main KPI is consumer ratings. On this basis, we can assess which restaurant has an added-value that out of the 3 categories examined, these have high priority for customers. The categories affect the restaurant. However, questions arise about the importance of the categories such as: Do they have a similar weight? Same rated amount, What are the key factors of each category for high ranking or important features in the restaurant? Is there inter-categorical correlation? Are there prominent customer priorities? The three categories are valuable but understanding their importance, customer priority and sub-category impact on the category, this can build a clear customer image and a restaurant with high potential and model.

The main workshop fields are following :

A. Prices
B. Consumer Budget & Restaurants Price Level
C. Parking options
D. Consumer Transportation
E. Smoking areas
F. Alcohol Serving
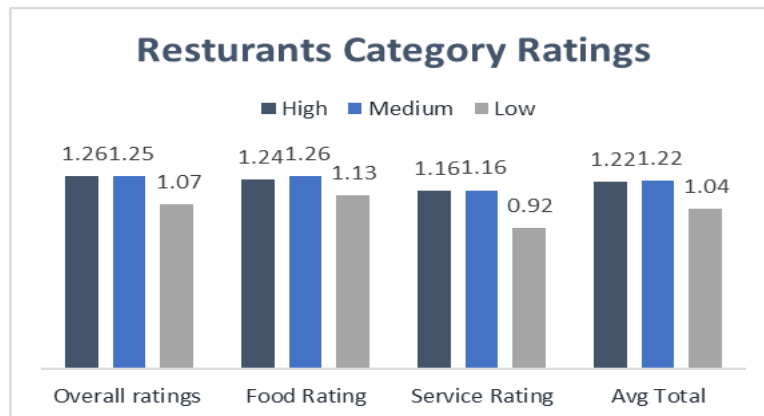G. Conclusions & Recommendations

Summarizing

 If I invest in a restaurant, I want it to be **Medium-Priced**, ignoring consumer budget because medium level points to all budgets and it has the highest rating. This type rate is 32% higher than grand Avg and Medium Food rating is 24% higher. Places that use 'features' gain higher ratings. It lets users discover options that'll transform them to be engaging. Some of them are: **Smoking Area** (Bar Only), increase Overall rating by 18% and 8% compared to places not use area or smoking section only respectively. **Alcohol serving** (Full Bar) increased by 8%, compared to places that didn't use any. Valet **Parking availability** increase rating (more than 10% Overall and 23% by service category). As so, this offered service contributes not only because of the service, but also because it targets car users who rated the highest of all park services -avg of 1.35 vs 1.21 non car.. Nevertheless, Non park doesn't negatively impact places such as Public that places need to avoid from.   A restaurant using the presented objects, can get high ratings.

Prices

Segmentation of the Mexican restaurant market shows that close to 50% is intended for a medium price, 35% at a low price and 19% at a high price. Thus, it can be concluded that the restaurants are mainly target customers with an average-low budget, since they constitute close to 80%. These aspects give an understanding of the customer.

Resturants Price Distribution

19%

35%

46%
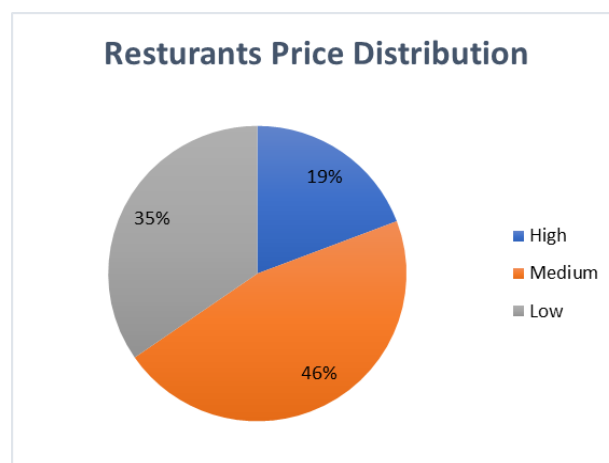
■ High
■ Medium
■ Low

Restaurant price-ranges can let us assess how the different rating categories affect it, what weight they have and whether in high priced restaurants ratings would be above others.

Resturants Category Ratings

■ High   ■ Medium   ■ Low

|	Overall ratings	Food Rating	Service Rating	Avg Total
High	1.26	1.24	1.16	1.22
Medium	1.25	1.26	1.16	1.22
Low	1.07	1.13	0.92	1.04

Comparing restaurants rating scores, let us see the similarity rating scores of food, service overall, and grand average between 'High' and 'Medium' price ranges, no matter the Price level. Moreover, the low price has significantly lower values than other two by 10% (Food rt) to 26% (Service rt). The lowest factor at Low level restaurants is Service rating which is high below others. Improving Service will impact on other aspects as well.
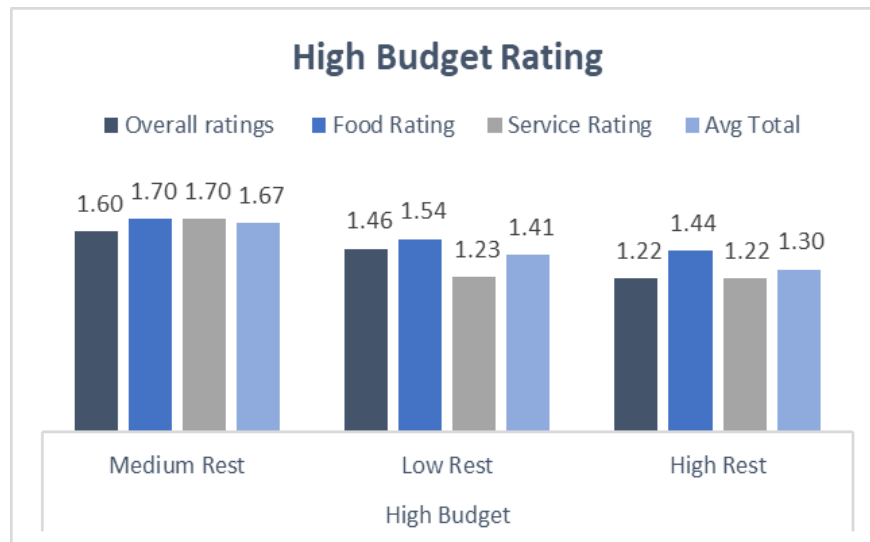
Does the Consumer Budget really matter? Restaurant Price Preference

Distributing the consumer's budget lets us assess what restaurant price consumers would rate high/medium/low. Out of total consumers (138), Medium budget share is close to 70%, and low budget share also has a high share (25%). Same as restaurant price level, Mexican restaurants point to specific types of customer level - Medium & Low.
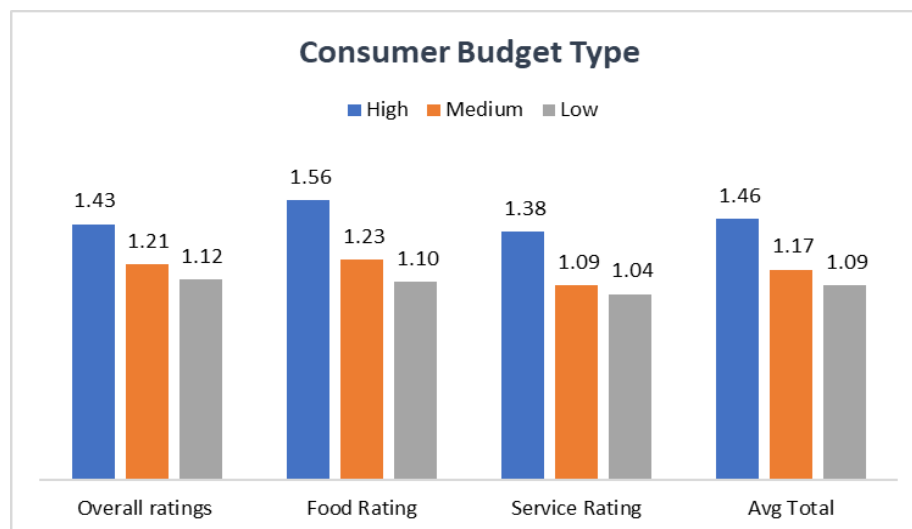Note:7 consumers didn't mention their budget, but still rated restaurants 69 times.

Consumers Budget Distribuation

- High 4%
- Medium 69%
- Low 27%
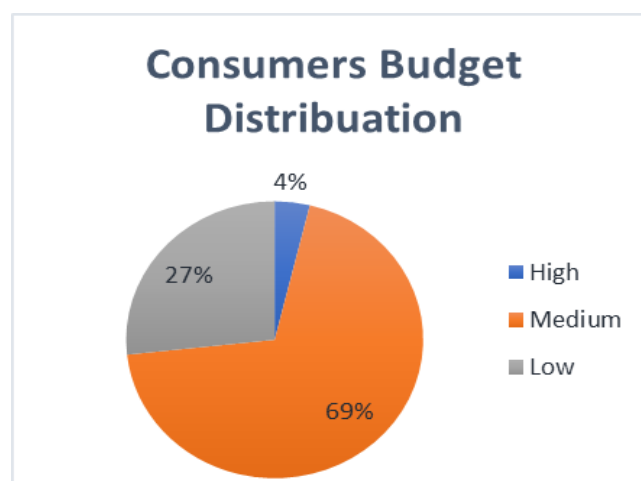
Preliminary instinct indicates: High budget > High Price restaurant preference and rating. However, not always it's correct. Those with a high budget tend to rank higher restaurants at medium price and in surprisingly, also low-price restaurants. An unusual thing. Medium restaurant level is their top preference.

High Budget Rating

■ Overall ratings ■ Food Rating ■ Service Rating ■ Avg Total

Medium Rest: 1.60, 1.70, 1.70, 1.67
Low Rest: 1.46, 1.54, 1.23, 1.41
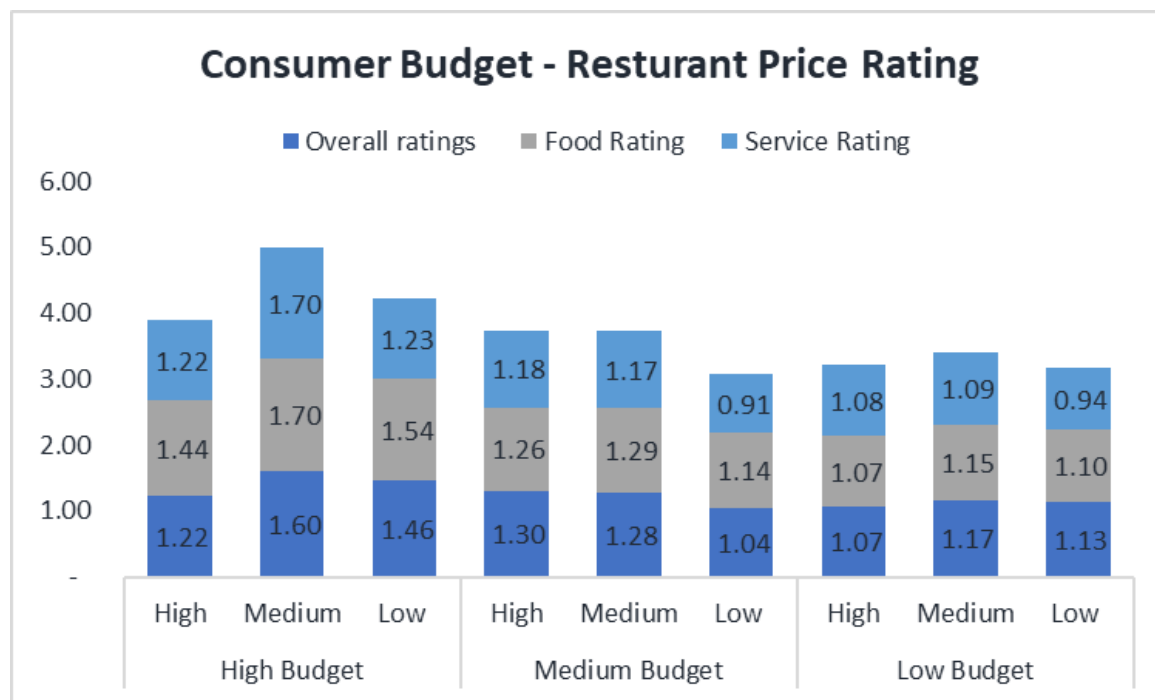High Rest: 1.22, 1.44, 1.22, 1.30

High Budget

In the restaurant category in general, the issue that stands out in its absence for those with a high budget in high and low price restaurants is the low level of service and take care of it that can give restaurants added value. Despite the low ratings by the 5 High budget consumers to high price restaurants, they still rate higher other restaurant prices compared to Medium and Low budget types by 24% and 34% respectively.

Consumer Budget Type

■ High ■ Medium ■ Low

Overall ratings: 1.43, 1.21, 1.12
Food Rating: 1.56, 1.23, 1.10
Service Rating: 1.38, 1.09, 1.04
Avg Total: 1.46, 1.17, 1.09

Consumer Budget - Restaurant Price Preferences

The Stacked Column chart shows the difference between types of budgets and prices of restaurants. Although high-budgets are a small group, they lead restaurants at three levels to cumulatively high scores and by category compared to medium and low-budget ones, and their lowest rate is 1.22 compared to others that is 1.04. Moreover, high budget consumers are the only ones who rate low restaurants above Medium and in addition, restaurants that are low in others rate, are high above the restaurant rating of other budgets. It shows the power that high budget group has even though it is small. Nevertheless, Low budget users name the lowest restaurant ratings.

Consumer Budget - Resturant Price Rating

Legend: ■ Overall ratings   ■ Food Rating   ■ Service Rating

|	High Budget			Medium Budget			Low Budget		
	High	Medium	Low	High	Medium	Low	High	Medium	Low
Service Rating	1.22	1.70	1.23	1.18	1.17	0.91	1.08	1.09	0.94
Food Rating	1.44	1.70	1.54	1.26	1.29	1.14	1.07	1.15	1.10
Overall ratings	1.22	1.60	1.46	1.30	1.28	1.04	1.07	1.17	1.13

Recommendation

Following group analysis, the highest rating is mostly Medium & High priced-restaurant. On the other hand, most consumers prefer Medium priced-restaurants. Moreover, expanding HIgh price-restaurants & High-Budget users can let us get more data-driven decisions: out of total restaurants ratings, only 20% of High-priced were rated while 50% of Medium. More data - get a clearer picture. A main issue restaurants need to take care of is the services.This could probably change the view and get higher ratings.
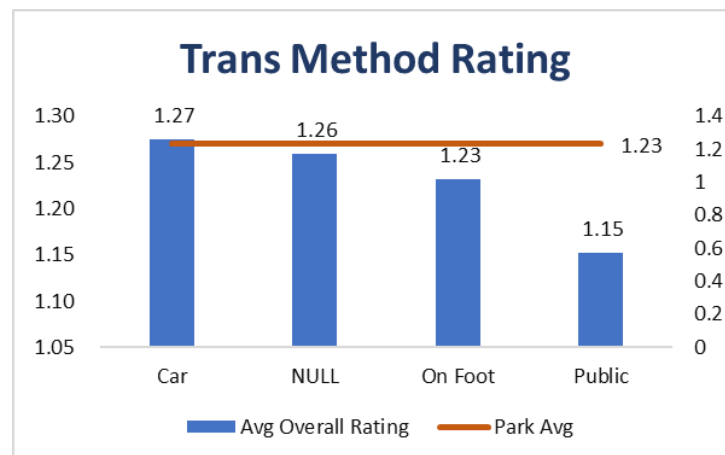
Parking Options

Restaurants have one of the parking options for guests: None, Public, Yes and Valet. An overview of the type of parking can give a focus to assess which type of parking (if any) is valuable/marginal or negative for restaurants. A restaurant with "Valet" parking solution is wise, as the car owner receives this service rate restaurant the highest from all with 1.34. consumer preferences for Public is the lowest and restaurants should avoid using it as it has a negative effect on the Consumer's rating and it's below grand average (1.23). Graph shows the immaterial difference between having a parking solution and not and it doesn't affect the rating.

Parking Type Rating

	Valet	Yes	None	Public
Avg Overall Rating	1.34	1.21	1.20	1.15
Park Avg	1.23			
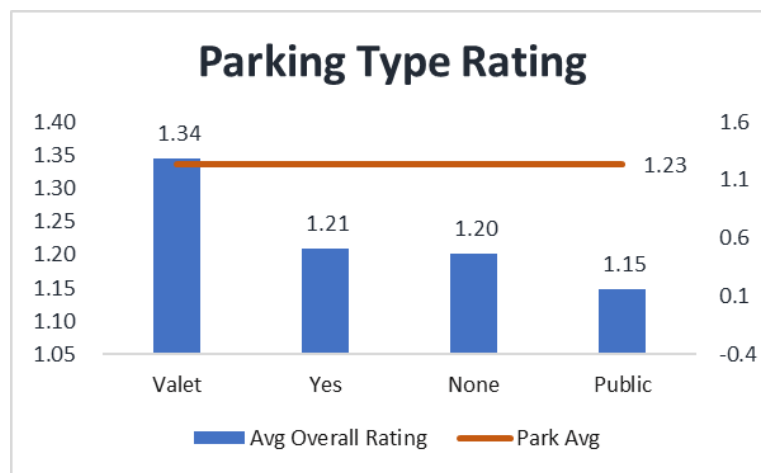
Transportation method segment presents the lowest rate to Public mode -1.15 same as parking. Consumers using the 'Car' Method rated the highest average with 1.27, while consumers with unknown methods rated close to the top with average 1.26, and the On-foot method rated as Grand Avg methods - 1.23.

Trans Method Rating

|	Car	NULL	On Foot	Public
Avg Overall Rating	1.27	1.26	1.23	1.15
Park Avg	1.23			

The best combination for restaurant high rating is Car owner & Valet parking type. Drilling down to see rating categories for parking segments, Car method leads in all combinations for ratings except for Public Parking, Valet option is the most popular and highest rate although only 3 restaurants use it.
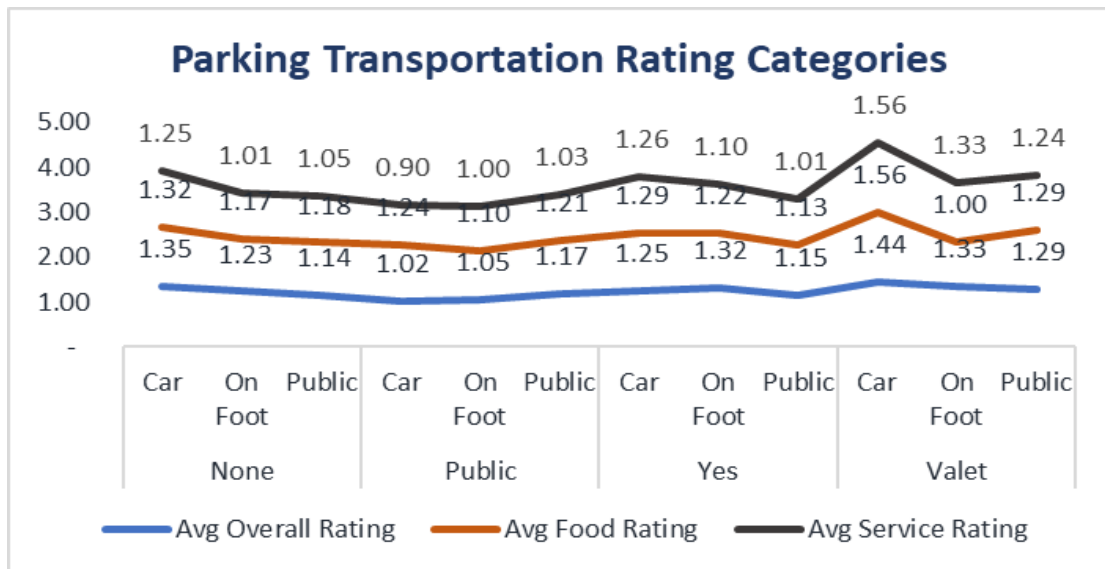
Car Owner Rating: Good or Bad?

There isn't a big change between car ownership but the car owners are the highest rankers also by using different transportation methods (in the chart above).
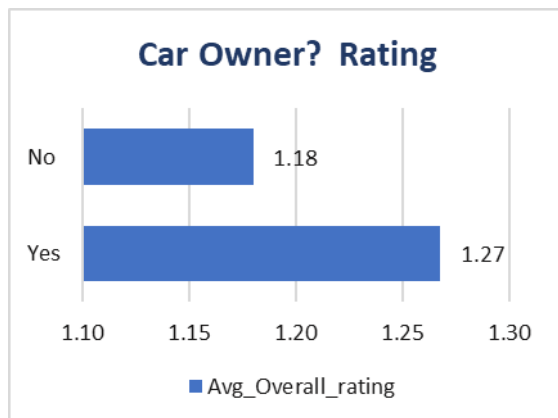

Concludes: There isn't a big difference between a restaurant that has and hasn't a parking solution but if needed, then the Valet is the ideal also because it rated highest and also because car owners are the highest rated while needing to avoid Public parking which reduces ratings.

Smoking Areas

Restaurants have smoking available places: Non, Yes,Bar Only or Smoking Section. The area with the highest rating by far others is the 'Bar Only' - 1.37 and for smokers it's the popular area with top rating -2.0. When a restaurant provides a smoking section, the rating increases to 1.27, but when a restaurant doesn't allow smoking at all, it negatively affects the rating. Non-Smoker (109 users) rate a higher grand average (1.22) compared to smokers (26 users) average- 1.11. Moreover, it seems Non-smoker don't matter if there is a smoking area while for smokers it does and if there isn't it affects the rate.
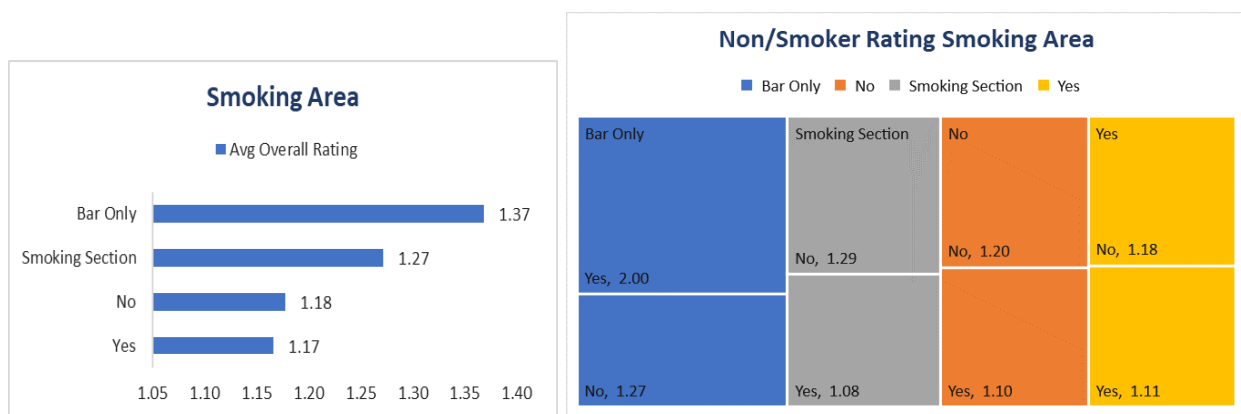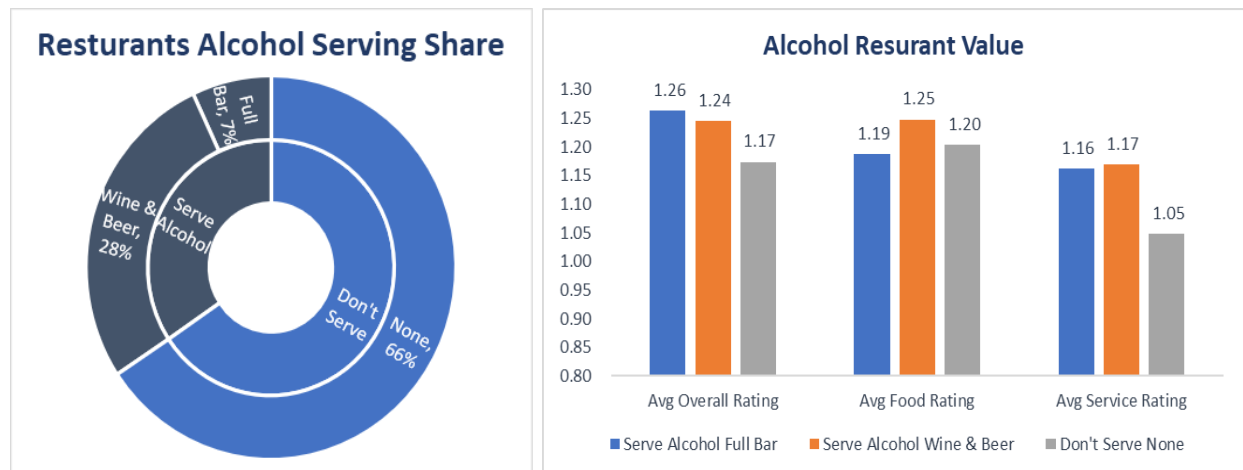

Concludes: If a restaurant knows their users are most smokers, then it's recommended to add a smoking area, and Bar only preference. For non-smokers, it doesn't matter. Nevertheless, they rate the restaurants higher.
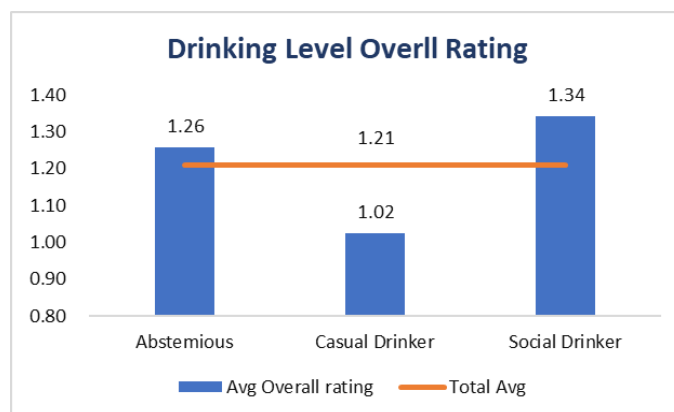
Alcohol Servings

Restaurants Alcohol serves are Non, Wine & Bear or Full Bar. Close to 70% of restaurants prefer not to serve any. Splitting restaurants to serve/ not serve and its impacts on consumers, let us see how important it is to get high rates. Alcohol increases ratings averages, while a place that doesn't
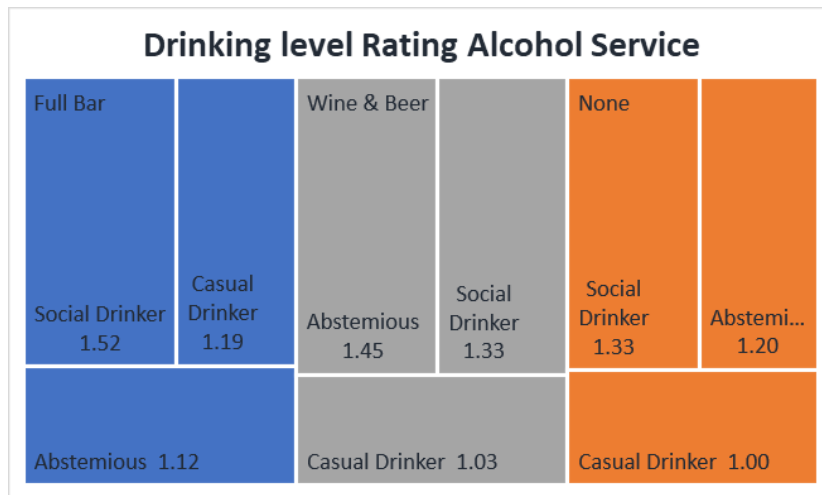
serve is rated high below others and it impacts mostly on service rating.

Resturants Alcohol Serving Share

Full Bar, 7%

Wine & Beer, 28%

Serve Alcohol

Don't Serve

None, 66%

Alcohol Resurant Value

	Avg Overall Rating	Avg Food Rating	Avg Service Rating
Serve Alcohol Full Bar	1.26	1.19	1.16
Serve Alcohol Wine & Beer	1.24	1.25	1.17
Don't Serve None	1.17	1.20	1.05

■ Serve Alcohol Full Bar   ■ Serve Alcohol Wine & Beer   ■ Don't Serve None

How Much Do You Drink and How High Do You Rate ?

Social drinker Consumer (40 cons) ranked restaurants at the top - 1.34, and Abstemious (51) also ranked high - 1.26, while Casual drinker (47) ranked high below (1.02). Different drinking levels contributes/ negative impact on restaurants. Distributing Alcohol service and drinking level, Abstemious don't necessarily prefer NON alcohol places and their preference is Wine & Beer, while Social /Casual drinkers prefer Full Bar. They like to have diverse options. Therefore, to get high rates, a restaurant should have alcohol service and specifically Full Bar for Social & Casual drinks, and also a place for smokers where the 'Bar Only' option got the highest rating.

Drinking Level Overll Rating

	Abstemious	Casual Drinker	Social Drinker
Avg Overall rating	1.26	1.02	1.34

■ Avg Overall rating   ── Total Avg

Drinking level Rating Alcohol Service

Full Bar	**Wine & Beer**	**None**
Social Drinker 1.52 / Casual Drinker 1.19	Abstemious 1.45 / Social Drinker 1.33	Social Drinker 1.33 / Abstemi... 1.20
Abstemious 1.12	Casual Drinker 1.03	Casual Drinker 1.00

Restaurant Profile Characteristics

Main characters a restaurant needs to have to get high rate and satisfy consumers built of:

Price Range	Medium Priced	Should be Medium-Priced Restaurant
Parking & Transportation	Valet parking Or None	None preferred than Public (Negative effect)
Smoking & Smoking Area	Bar Only	Recommend to have Smoking area especially Bar
Alcohol Servings	Full bar	Recommend to have Alcohol Servings
Car Ownership	Yes	Car Owners rate higher than Non owners. Top Consumer
Budget Type	High	Highest rankers for all restaurant prices.
Drinker level	Social Drinker	Social rate the higher among drink segments