

A world map with regions color-coded in shades of red, pink, and grey. North America and parts of Europe and Asia are in dark red. Most of Europe, Africa, and South America are in light pink. Russia, China, and several countries in Africa and South America are in grey. The word 'PRESENTATION' is centered over the map in large black letters.

# PRESENTATION

**Global Cost of Living Analysis 2024: Insights for Strategic Investment Decisions**

# 1.1 INTRODUCTION

The Global Cost of Living Analysis 2024 project will create an overview of the economic climate in 121 countries according to different indices such as Cost of Living Index, Rent, Groceries, Restaurant Price Index, and Local Purchasing Power Index. This dataset is very useful for investors since it provides data on the difference between the cost of living index and the purchasing power index. The profiling of countries with endowments for investment presents strategic planning in real estate, retail, and hospitality sectors. Finally, the project offers numerous strategic suggestions for the actors to operate within the global economy and capture fresh opportunities.

## 1.2 Business Understanding

The dataset provides various indices related to the cost of living across 121 countries for the year 2024. These indices include the Cost of Living Index, Rent Index, Groceries Index, Restaurant Price Index, and Local Purchasing Power Index. Investors can use this data to understand the economic environment of different countries, which can influence investment decisions, particularly in sectors like real estate, retail, and hospitality.

## 1.3 Objectives

The primary objective is to identify the top 10 countries where investors can potentially invest based on the Rent Index, Groceries Index, Restaurant Price Index, and Local Purchasing Power Index. The goal is to find countries that offer a favorable balance between cost and purchasing power, which can lead to higher returns on investment.

## 1.4 Data Understanding

The data used for the analysis is from [Kaggle](#) giving the a cvs data cost of living index by country

The dataset includes the following indices:

Rent Index: Measures the cost of renting properties.

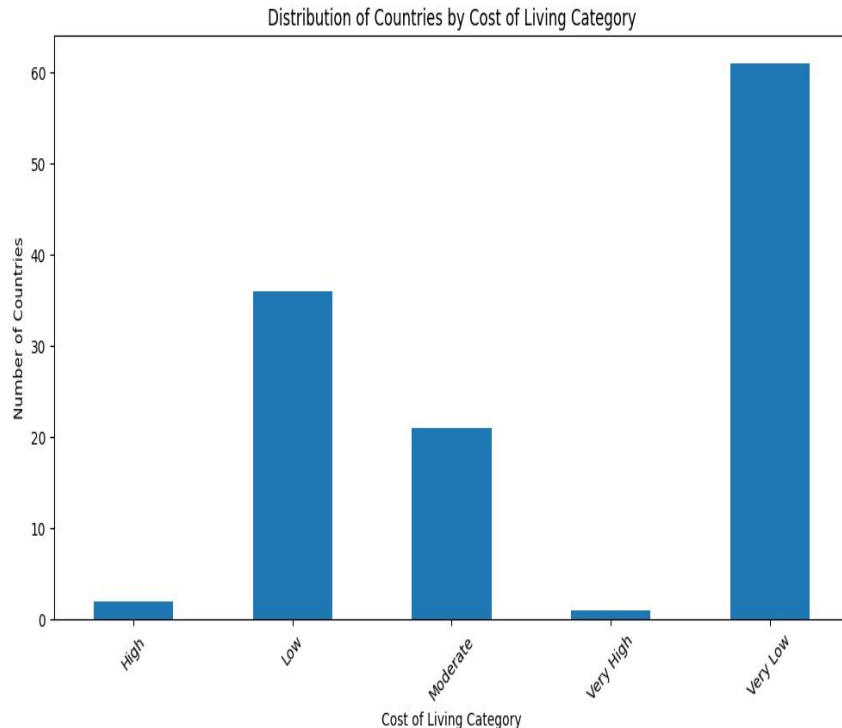
Groceries Index: Reflects the cost of groceries. Restaurant Price Index: Indicates the cost of dining out.

Local Purchasing Power Index: Represents the relative purchasing power of a country's average income.

cost of living index: Represents the relative day to day usage of people in the country

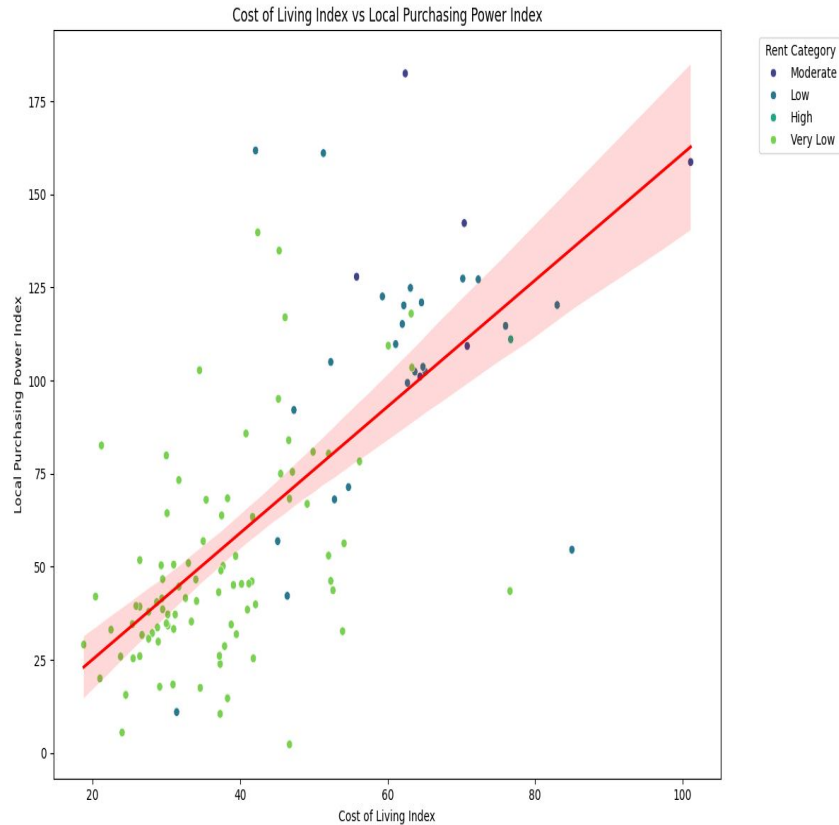
# 2.0 Data Analysis

## 2.1 Distribution of country by Cost of living



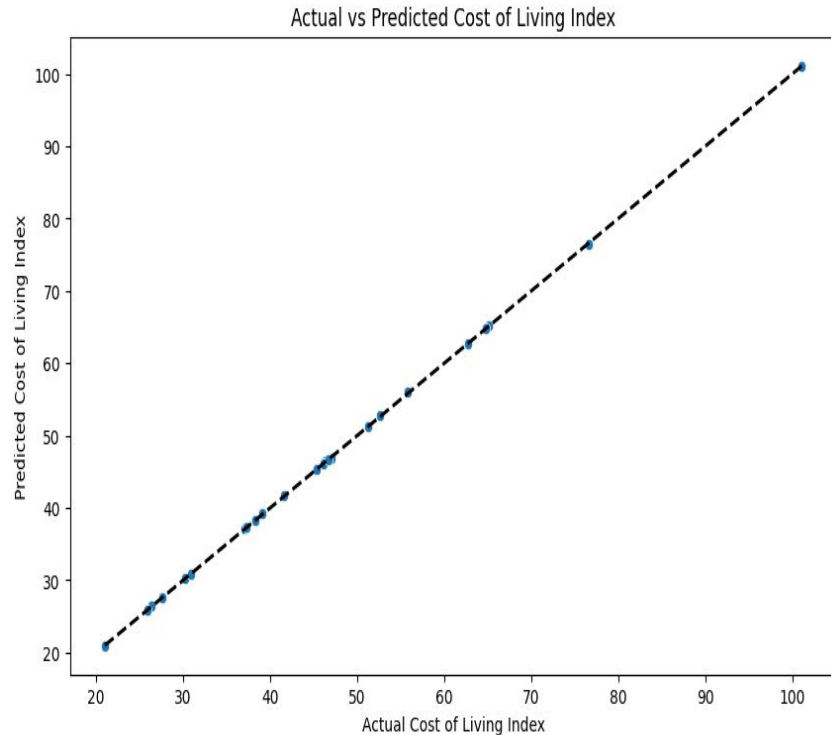
- A majority of countries are in the Very Low and Low categories meaning that the majority of countries are actually cheap to live in.
- The number of countries categorized as “Moderate” is relatively less.
- Only a handful of countries fall into the “High” or ‘Very High’ categories when it comes to the cost of living.
- This visualization is useful in explaining worldwide cost of living by depicting which categories are more widespread in countries.

## 2.2. Cost of Living Index VS Local Purchasing Power Index



- This graph establishes a link between the cost of living in a particular country and purchasing power of the people. This means that a higher value for the purchasing power with a low cost of living means high affordability.
- Investors can use this data to identify countries with favorable economic conditions for business expansion or relocation.

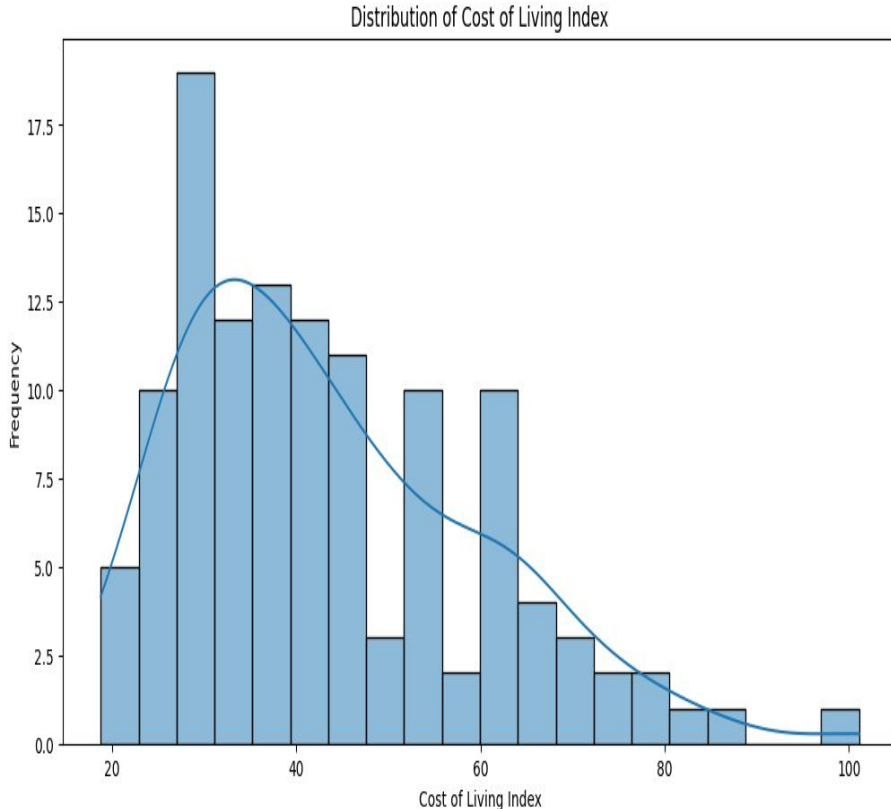
## 2.3 'Actual vs Predicted Cost of Living Index'



- **Predictive Power:** The model's high R-squared value (0.999983298808485 ) indicates that the selected factors (Rent Index, Cost of Living Plus Rent Index, Groceries Index, Restaurant Price Index, and Local Purchasing Power Index) are excellent predictors of the overall Cost of Living Index.
- **Economic Indicators:** This is a key indicator that has affected the cost of living amongst countries. Businesses and policymakers can focus on these areas to understand or influence living costs.
- **Market Analysis:** Companies considering international expansion can use this model to predict and compare living costs across different countries, aiding in decision-making for market entry, pricing strategies, or employee compensation packages.
- **Investment Decisions:** Investors can leverage these insights for real estate investments or when considering the economic stability of different countries.

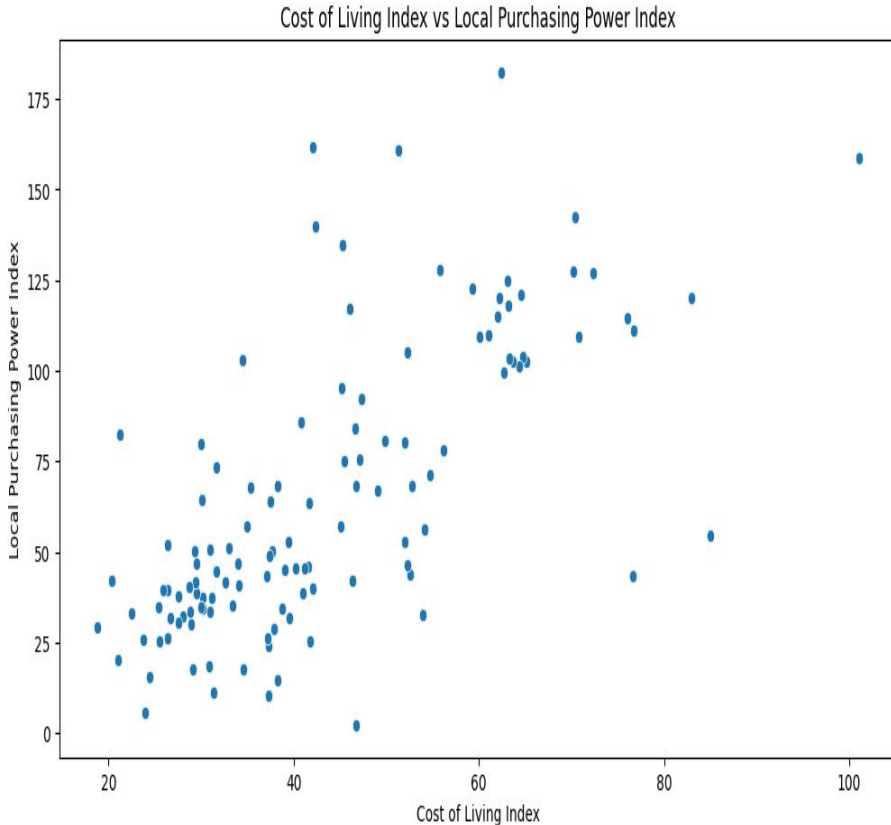


## 2.4. Distribution of Cost of Living Index



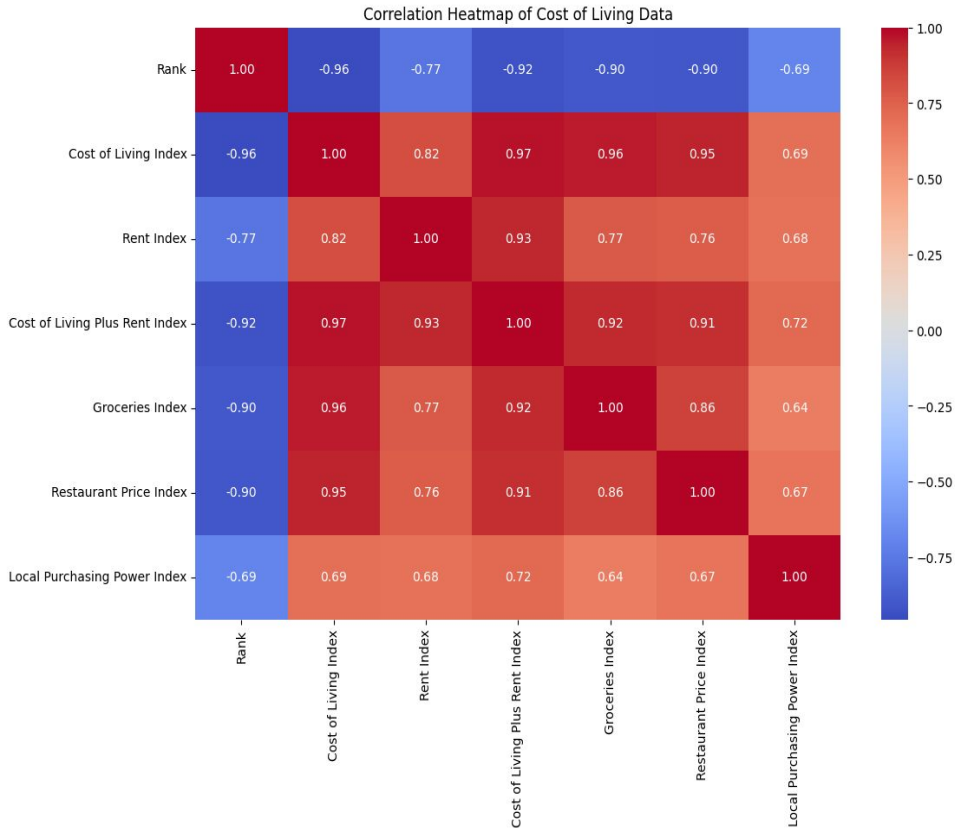
- Central tendency: The peak of the distribution indicates the most common Cost of Living Index values.
- Spread: The width of the histogram shows the range of Cost of Living Index values across countries.
- Outliers: Countries with exceptionally high or low Cost of Living Index values can be identified at the extremes. expansion opportunities.

## 2.5 Cost of Living Index vs Local Purchasing Power Index



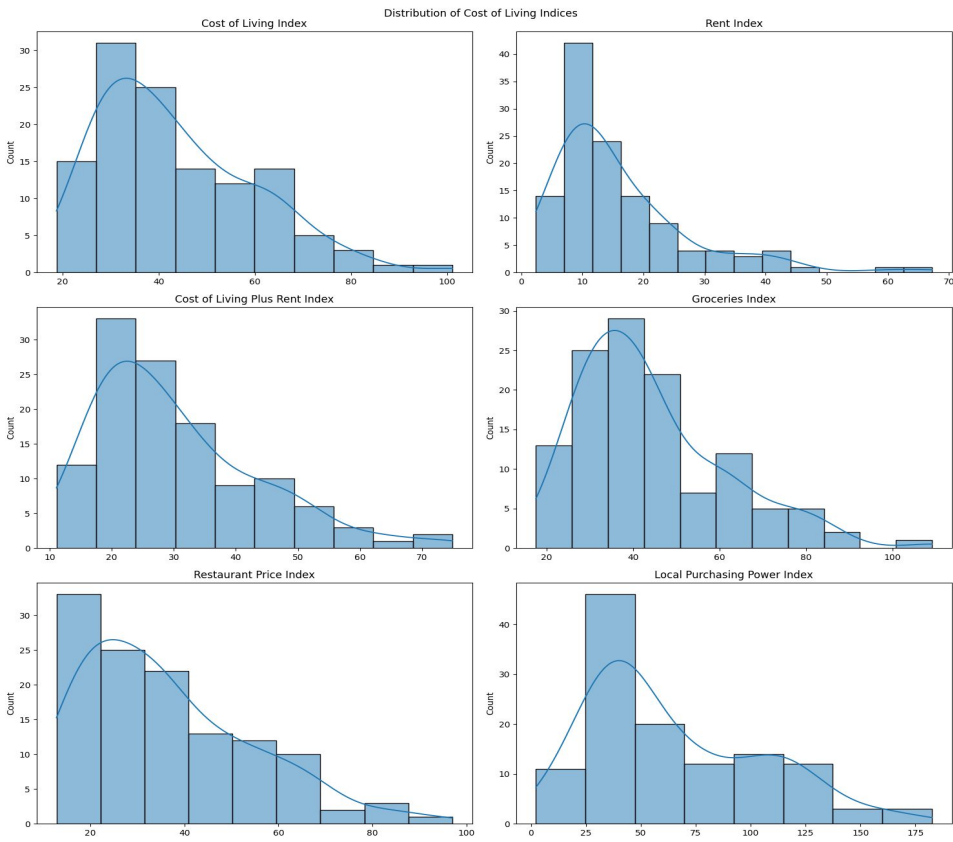
- **Correlation:** The scatter plot makes it easy to see if there is any relationship between the Cost of Living Index and the Local Purchasing Power Index. This would imply that as the general inflation rises, the ability to purchase more goods and services also rises, and as the ability to purchase goes down, so does the general inflation.
- **Clusters:** It can show groups of countries with similar economic features. For instance, group of countries characterized by high cost of living and high purchasing power parity might comprise one cluster.
- **Outliers:** In general, it is easy to identify such observations that may be considered as outliers. These are countries that fall outside the ordinary and may have special economic characteristics.
- **Trend Analysis:** From the analysis of the overall pattern, the businesses and the policy makers can get an insight of what the general outlook of the economy will look like and therefore be in a position to make informed decisions.
- **Comparative Analysis:** It makes it easier to compare the relative positioning of different countries and determine the countries with a balanced or unbalanced cost of living and purchasing power.

## 2.6 Correlation Heatmap of Cost of Living Data



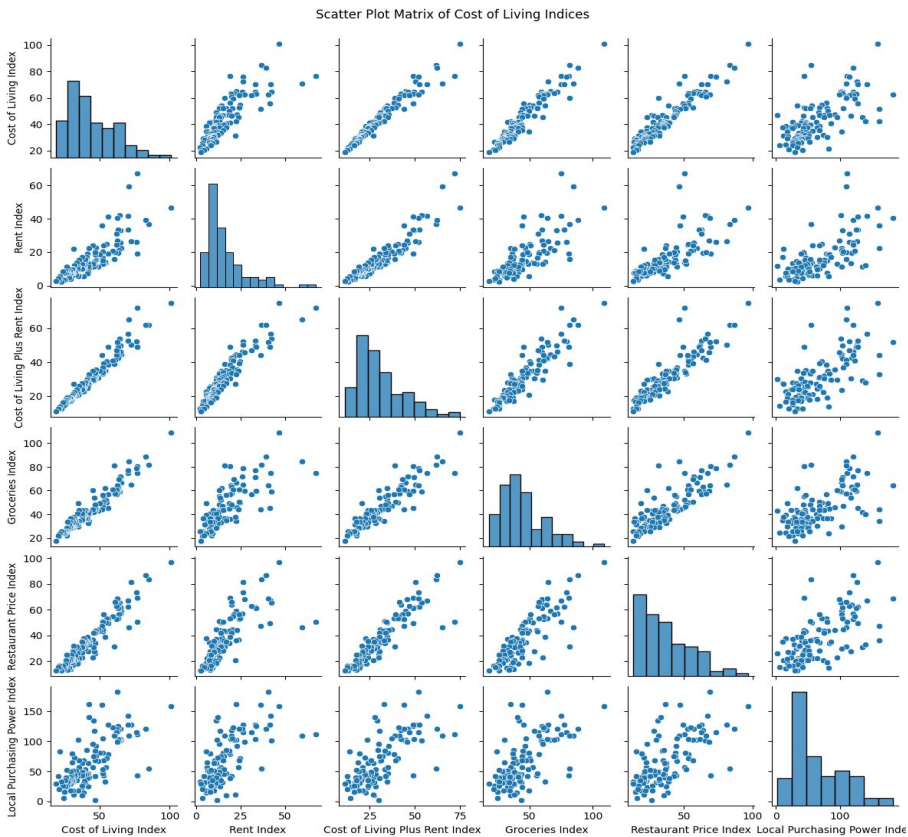
- The correlation heatmap above highlights the connection of variables of numerical nature in the given set. In the heatmap, each cell is a correlation coefficient that ranges between -1 and 1. A value to this one suggests that there is a significantly strong positive relationship between the two variables, or a value close to one indicates a strong negative relationship between the two variables. Hence, values close to 0 imply a lack of association.

## 2.7 Distribution of Cost of Living Indices



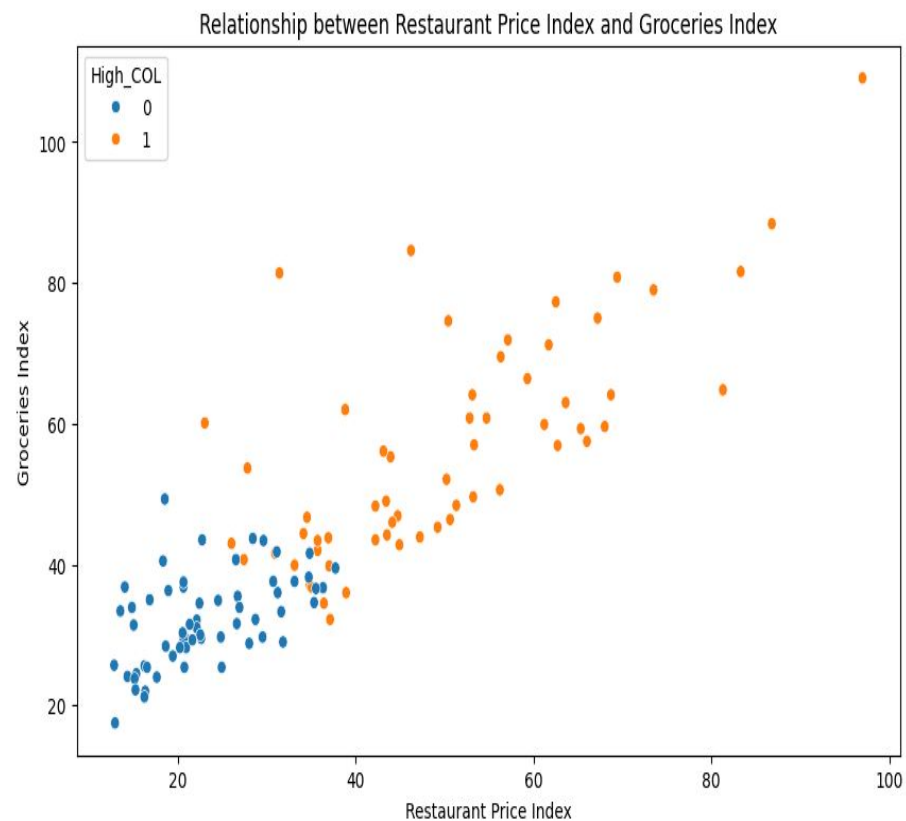
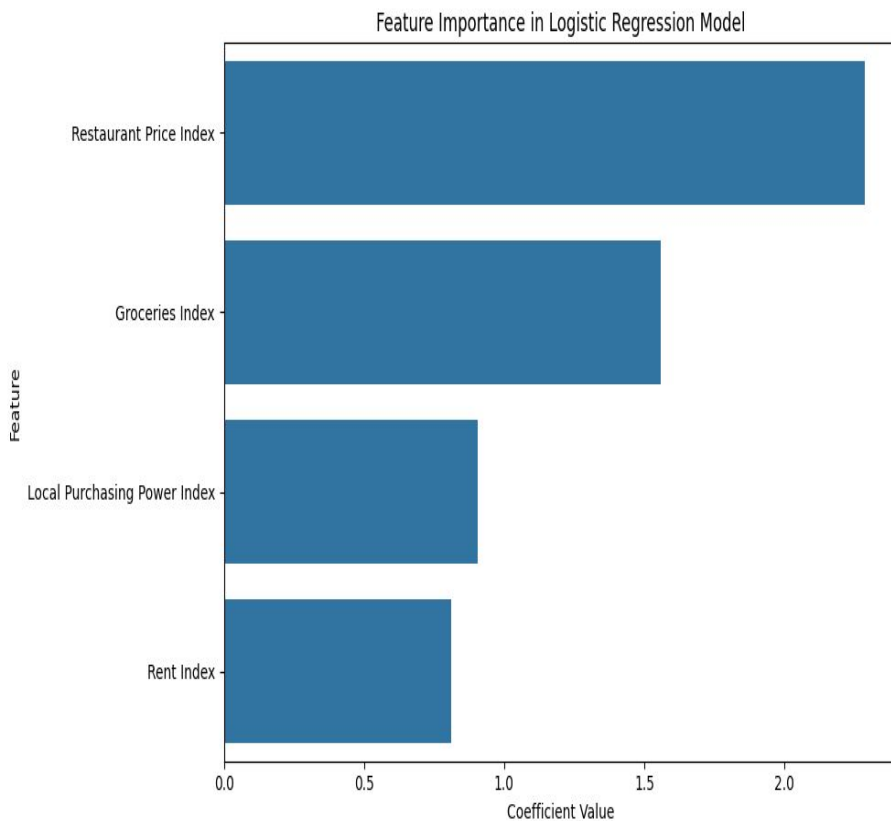
- The histograms presented depict the distribution of each index across the countries. Most of the indices are positively skewed showing that a few countries have much higher values compared to most other countries.

## 2.8 Scatter Plot Matrix of Cost of Living Indices



- This scatter plot matrix provides a visual representation of the relationships between different indices. It confirms the strong correlations we observed in the heatmap and shows some interesting patterns:
- There's a clear positive relationship between most indices. The Local Purchasing Power Index shows more scattered relationships with other indices, indicating it's not as strongly related to the other cost of living measures.

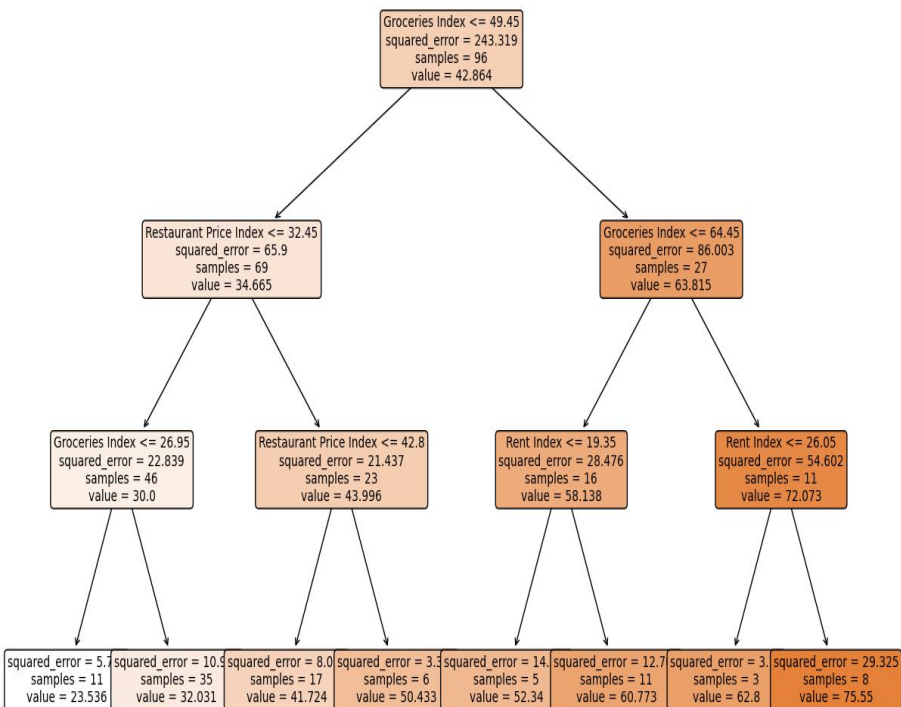
## 2.9 Feature Importance in Logistic Regression Model and Relationship between Restaurant price index and grocery Index



- The coefficients show how relevant each feature is to the model to determine whether a country has a high Cost Of Living index. Their correlation is as follows, Restaurant Price Index > Groceries Index.
- It confirms what we see in the coefficients: According to the Data, the Restaurant Price Index and Groceries Index makes the most significant impact when it comes to establishing which country has high Living Costs.
- Restaurant and grocery prices are the best predictors of cost of living index, which represents overall cost. This implies that the cost of food is central to defining the cost of living-friendly status of a country.
- In turn, the Local Purchasing Power and Rent Index are valuable for analysis, but they contribute less in defining high cost of living countries in this model. This might mean that even though rents are high, there are perhaps other comparative advantages in the expensive nations such as the ability to pay for relatively steep rental fees due to increased wages.
- Because the model has a relatively high accuracy of 92%, it can be said that these indices itself are quite valid indicators of the total cost of living. This could be useful to organizations that aspire to expand their operations in foreign countries or to policymakers concerned with the economy.
- Based on the scatter plot data generated, it is perfectly clear to note that countries that possess high restaurant and grocery prices are indeed high cost of living countries. This could be particularly useful for initial examinations of new markets or for monitoring shifts in the economic environment.

## 2.10 Simple Decision Tree for Cost of Living Index Prediction

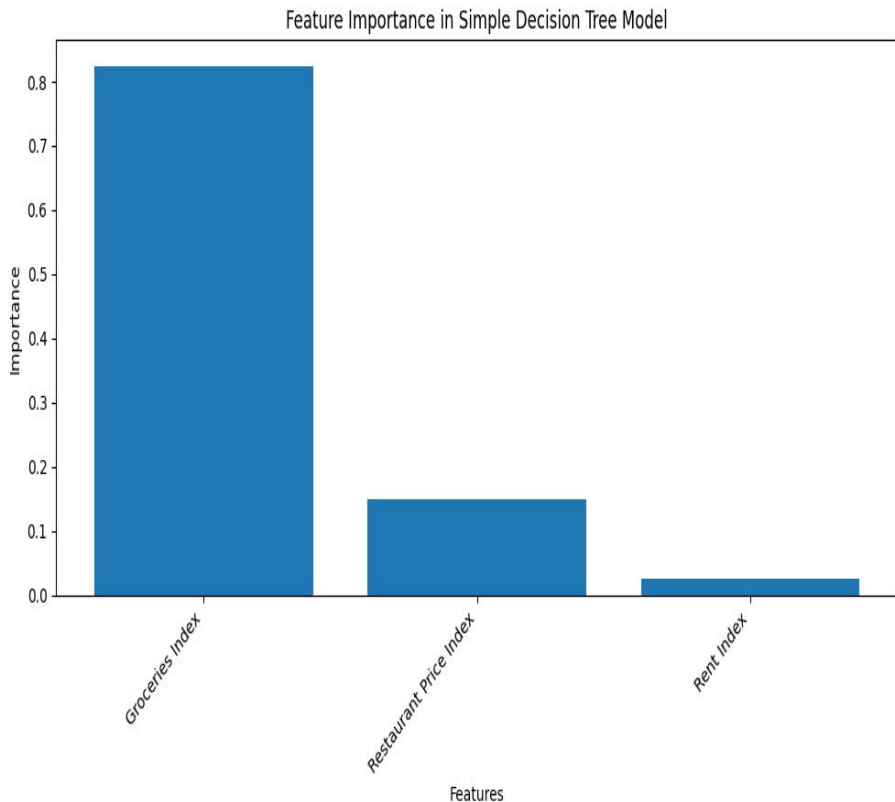
Simple Decision Tree for Cost of Living Index Prediction



- Groceries Index is the most important feature, accounting for about 82.3% of the decision-making in the tree.
- Restaurant Price Index is the second most important, contributing about 15% to the decisions.
- Rent Index has the least impact among these three, with only about 2.7% importance.



## 2.11 Feature Importance in Simple Decision Tree Model



- These findings imply that to organizations and economics comparing costs of living between countries, food prices topped by restaurants are more important than the rest.

## 3.1 Conclusion

- Based on the analysis, we can draw the following conclusions:
  1. Countries with a high Local Purchasing Power Index generally offer better investment opportunities as residents have more disposable income.
  2. A lower Rent Index can indicate more affordable real estate investments, but it may also reflect lower demand or economic challenges.
  3. The Groceries and Restaurant Price Indices provide insights into the cost of living and consumer spending habits, which can affect retail and hospitality sectors.

## 4.1 Recommendation

1. Focus on High Purchasing Power: Prioritize countries with a high Local Purchasing Power Index, as this indicates a strong economy and potential for consumer spending.
2. Balance Cost and Demand: Look for countries with a moderate Rent Index, suggesting a balance between affordability and demand.
3. Consider Consumer Spending: Evaluate the Groceries and Restaurant Price Indices to understand consumer spending patterns, which can impact retail and hospitality investments.
4. Diversify Investments: Consider a mix of countries with varying indices to diversify risk and capitalize on different economic conditions.

## 4.2 Recommendation on Investors

1. Switzerland: Consider high-end real estate investments or luxury goods markets, leveraging the high local purchasing power.
2. Iceland and Luxembourg: Look into sustainable energy projects and financial services, respectively, as these are key industries in these countries.
3. Bahamas: Look into tourism-related investments since it has high restaurant index
4. Diversification: Spread investments across these countries to balance risk and take advantage of different economic strengths.
5. Local Partnerships: Consider partnering with local businesses or investors to navigate the specific economic landscapes of each country.
6. Long-term Perspective: These countries generally offer stability and strong economic fundamentals, making them suitable for long-term investment strategies.
7. .Regular Monitoring: Keep track of economic indicators and policy changes in these countries, as they can affect investment performance.

## 5.0 Summary

Based on the analysis of the Cost of Living Index by Country 2024 dataset, the top 10 countries for investment are Switzerland, Iceland, Luxembourg, Singapore, United States, Hong Kong , Australia, Denmark, Norway, and Bahamas. These countries offer a favorable balance of rent costs, grocery prices, restaurant prices, and local purchasing power, making them attractive for investments