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Project Name: Zomato Market Presence Analysis

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Acknowledgement

I would like to express my heartfelt gratitude to all those who provided support, guidance, and encouragement throughout the development of this project, **"Zomato Market Presence Analysis using Power BI."**

First and foremost, I would like to thank **Rakesh**, under whose supervision this project was undertaken. Their valuable insights, constructive feedback, and technical knowledge played a crucial role in shaping the direction of this work and ensuring its successful completion.

I am also deeply grateful to **Shruthisha A** for coordinating the project activities and providing a structured framework for us to work within. Their consistent monitoring and motivation ensured that I stayed on track and completed the project on time.

I would also like to thank **my institution**, whose resources and environment allowed me to explore and apply real-world data analytics concepts. The access to tools like **Microsoft Power BI** and hands-on learning opportunities significantly enhanced my understanding of data modeling, DAX calculations, and business intelligence visualization.

Lastly, I wish to express appreciation to my **peers, friends, and family** for their constant encouragement, moral support, and timely feedback throughout the project lifecycle.

This project has been a highly enriching and insightful experience. It has not only allowed me to apply technical concepts in a practical scenario but also taught me the importance of data-driven decision-making in today's business landscape.

Table of Content

CHAPTER 1

Concepts Used in the Project

In this project, I have used multiple core concepts from the field of data analytics and business intelligence to perform an in-depth analysis of Zomato's global market presence. The entire process was carried out using **Power BI**, a powerful tool for data visualization and business intelligence. The following concepts were applied throughout the project:

1. **Data Integration and Preparation**: Multiple datasets were provided, each representing different continents. These Excel files were individually loaded into Power BI and appended using Power Query to create a unified dataset representing all restaurant listings globally. Supporting datasets such as the Fact Table (with cost, rating, and currency), Conversion Table (currency-to-INR rates), and Country Code table were merged using proper relational joins.
2. **Data Modeling**: Power BI's Data Model view was used to create logical relationships between the datasets. Keys such as Restaurant ID, Currency, and Country Code were used to establish many-to-one relationships, ensuring proper filtering across visuals. The merged data model was essential for performing accurate aggregations and calculations.
3. **DAX (Data Analysis Expressions)**: DAX was heavily used to create calculated columns and measures. Key measures such as total restaurant count, average rating, and average cost for two (in INR) were implemented using functions like CALCULATE, AVERAGE, COUNT, RELATED, and AVERAGEX.
4. **Currency Conversion Logic**: As restaurant costs were provided in local currencies, they were standardized into INR using the Conversion Rate table. The AVERAGEX function along with RELATED allowed

contextual row-level multiplication before averaging the results per country.

5. **Visual Analytics**: Power BI visuals such as table views, bar charts, and KPI cards were used to present the data. Grouping was performed by Country and optionally by Continent (using a derived column), allowing users to interactively explore market presence.
6. **Data Cleaning and Transformation**: Null values, duplicates, and formatting inconsistencies were handled in Power Query. This step ensured data quality before performing aggregations or applying visuals.

These concepts allowed for a comprehensive and interactive analysis of Zomato's restaurant network, empowering stakeholders with meaningful insights across regions and performance metrics.

CHAPTER 2

Source Code

DAX Measures:

Total Restaurants:

```
Total Restaurants =COUNT('Merge3'[Restaurant ID])
```

Average Rating:

```
Average Rating = CALCULATE(AVERAGE('Merge3'[Aggregate rating])
```

Average Cost in INR:

```
AverageCostINR = 'Merge3'[Average Cost for two] * RELATED ('Sheet1' [Conversion Rate])
```

Continent Column:

```
Continent =
    SWITCH(TRUE(),
        'Merge3'[Country] IN {"India", "China", "UAE"}, "Asia",
        'Merge3'[Country] IN {"UK", "Germany", "France"}, "Europe",
        'Merge3'[Country] IN {"Brazil", "Argentina"}, "South America",
        'Merge3'[Country] IN {"USA", "Canada"}, "North America",
        'Merge3'[Country] IN {"South Africa", "Nigeria"}, "Africa",
        'Merge3'[Country] IN {"Australia", "New Zealand"}, "Oceania",
        "Other")
```

CHAPTER 3

Description of Source Code

The source code in this project consists mainly of DAX expressions (measures and calculated columns) implemented in Power BI. These were created within the final merged dataset named merge3, which consolidates restaurant metadata, ratings, cost, currency, and country information.

1. Total Restaurants

This measure counts the number of restaurants listed per country:

```
Total Restaurants =COUNT ('Merge3'[Restaurant ID])
```

CALCULATE ensures that the count is filtered by context (i.e., per country).

2. Average Rating

This measure calculates the average of the Aggregate rating field:

```
Average Rating = CALCULATE (AVERAGE ('Merge3' [Aggregate rating])
```

It returns a float value, typically between 0 and 5, representing restaurant quality.

3. Average Cost (INR)

This measure calculates the average cost for two, converted into INR:

```
AverageCostINR = 'Merge3' [Average Cost for two] * RELATED ('Sheet1' [Conversion Rate])
```

The AVERAGEX function allows row-by-row evaluation of cost × rate, followed by averaging. RELATED retrieves the appropriate conversion rate based on currency.

Relationships Used:

- 'merge3'[Currency] → 'Conversion Rate'[Currency]
- 'merge3'[Country Code] → 'Country Master'[Country Code]

These relationships ensure that conversion and grouping work properly when creating country-level summaries.

Summary of Insights:

- Zomato has a strong presence in **Asia**, especially **India.**
- **Average customer ratings** vary significantly across countries, which may reflect user satisfaction, food quality, or cultural review behavior.
- **Cost of dining** has been normalized using INR for easier global comparison.
- Despite international presence, **majority of data points belong to India**, suggesting opportunity for international market expansion.

CHAPTER 4

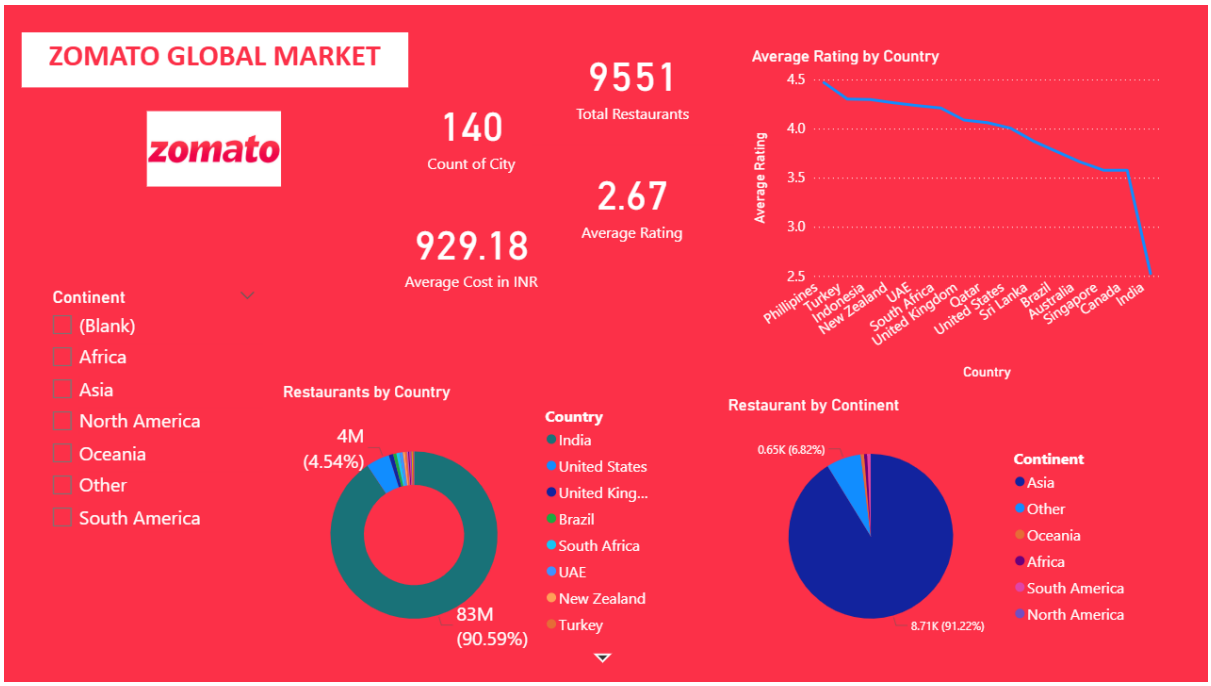
Output

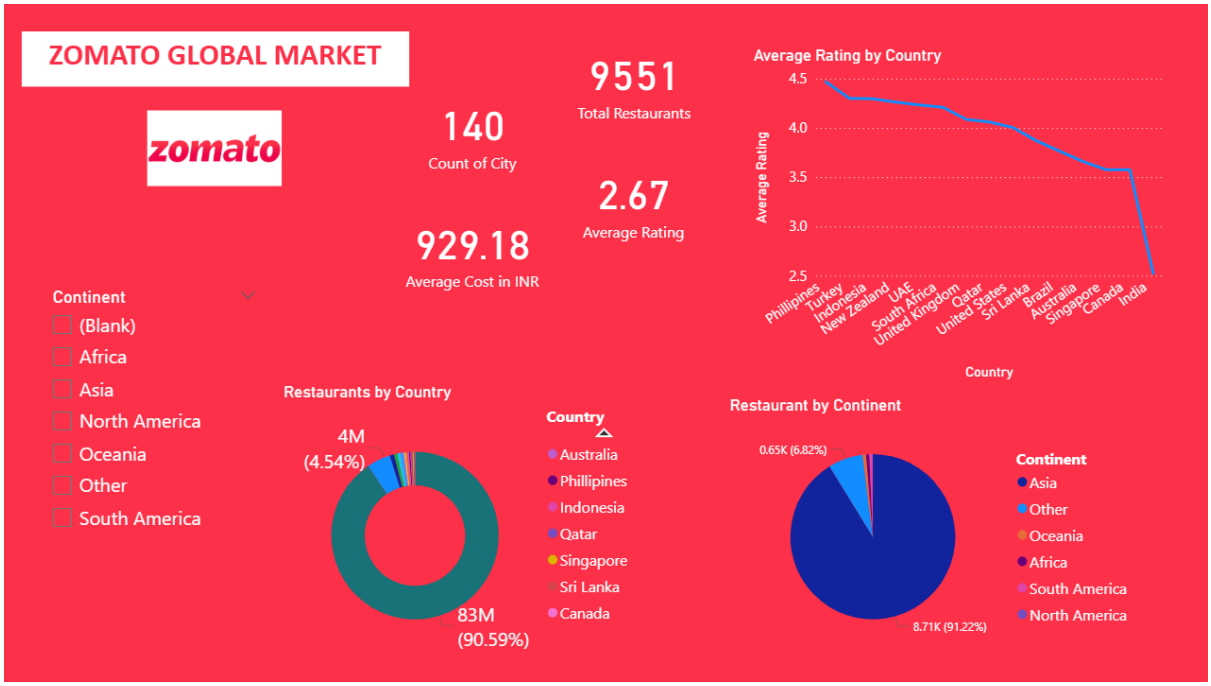
The final Power BI dashboard displays Zomato's market presence globally, with a focus on country-wise performance metrics. The core output table provides:

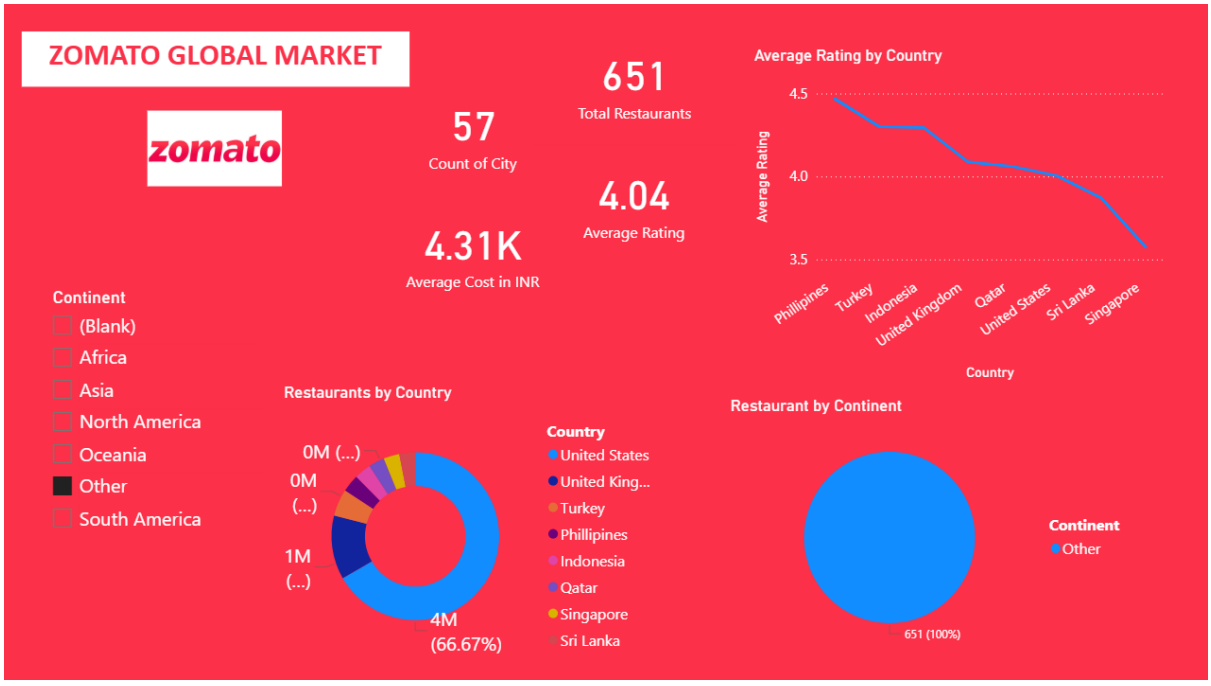
- Number of restaurants per country
- Average cost for two (converted to INR)
- Average rating from customer reviews

These visuals allow users to interactively explore Zomato's performance in different markets. For example, hovering over a country in the map visual shows exact metrics, and selecting a continent filter all other visuals accordingly.

VISUAL SCREENSHOTS




ZOMATO GLOBAL MARKET
zomato
140
Count of City
9551
Total Restaurants
2.67
Average Rating
929.18
Average Cost in INR
Average Rating by Country
4.5
4.0
3.5
3.0
2.5
Average Rating
Phillipines
Turkey
Indonesia
New Zealand
UAE
South Africa
United Kingdom
Qatar
United States
Sri Lanka
Brazil
Australia
Singapore
Canada
India
Country
Continent
(Blank)
Africa
Asia
North America
Oceania
Other
South America
Restaurants by Country
4M
(4.54%)
83M
(90.59%)
Country
Australia
Phillipines
Indonesia
Qatar
Singapore
Sri Lanka
Canada
Restaurant by Continent
0.65K (6.82%)
8.71K (91.22%)
Continent
Asia
Other
Oceania
Africa
South America
North America


ZOMATO GLOBAL MARKET
zomato
57
Count of City
651
Total Restaurants
4.04
Average Rating
4.31K
Average Cost in INR
Average Rating by Country
4.5
4.0
3.5
Average Rating
Phillipines
Turkey
Indonesia
United Kingdom
Qatar
United States
Sri Lanka
Singapore
Country
Continent
(Blank)
Africa
Asia
North America
Oceania
Other
South America
Restaurants by Country
0M (...)
0M
(...)
1M
(...)
4M
(66.67%)
Country
United States
United King...
Turkey
Phillipines
Indonesia
Qatar
Singapore
Sri Lanka
Restaurant by Continent
651 (100%)
Continent
Other

1. Key KPIs

- **Total Restaurants: 9,551** - Represents the total number of restaurants listed globally.
- **City Count: 140** - Number of cities Zomato operates in based on the dataset.
- **Average Rating: 2.67** - Global average rating across all listed restaurants.
- **Average Cost in INR: ₹929.18** - Average meal cost for two people, normalized into INR via conversion rate.

2. Line Chart – Average Rating by Country

Displays the average user rating per country. From the chart:

- Countries like **Philippines, Turkey, and Indonesia** have **higher ratings (above 4.0)**
- Countries like **India, Canada, Singapore** show **lower ratings (~2.5–3.5)**

This suggests regional customer satisfaction levels and possibly market maturity differences.

3. Donut Chart – Restaurants by Country

- Dominated by **India (83M – 90.59%)**, indicating Zomato's primary market.
- Other contributors include:
  - **United States**
  - **United Kingdom**
  - **Brazil**
  - **UAE**
  - **South Africa**
- This chart highlights Zomato's strongest operational countries in terms of restaurant listings.

4. Pie Chart – Restaurant by Continent

- Majority of restaurants are from **Asia (91.22%)**
- **Oceania** and **North America** follow with smaller shares
- Very few restaurants in **South America** and **Africa**

This shows that Zomato is heavily focused in Asia, with room to expand into other regions.

5. Slicer – Continent Filter

An interactive slicer allows users to filter the entire dashboard by **continent**, dynamically updating all visuals. This helps regional analysis and trend isolation.

Conclusion

The project has demonstrated how Power BI can be used effectively to understand Zomato's market presence through data-driven storytelling. By integrating and transforming multiple datasets, and using DAX measures and visual tools, I was able to provide meaningful insights into where Zomato operates most, how its ratings vary, and what customers might expect in terms of cost.

The analysis shows Zomato's dominant presence in Asia, especially India, while highlighting opportunities for expansion into underrepresented regions. This project also gave me hands-on experience with data modeling, DAX, and dashboard design — all crucial skills in data analytics and business intelligence.

From a learning perspective, this project helped me understand:

- Data preparation and transformation using Power Query
- Data modelling and relationship building
- Writing efficient DAX measures for aggregations and conversions
- Designing interactive visual dashboards to support decision-making

In conclusion, this project highlights the power of data in understanding business reach, consumer trends, and regional performance. It also emphasizes the importance of clean, well-modelled data and appropriate tools like Power BI in delivering insights that are actionable and scalable. With the increasing need for data literacy in modern organizations, this project has equipped me with practical skills and hands-on experience in solving real-world business problems using data analytics.

Bibliography

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- DAX Guide: https://dax.guide
- Microsoft Learn: https://learn.microsoft.com/power-bi
- Power BI Official Documentation: https://learn.microsoft.com/en-us/power-bi/
- Zomato Restaurant Dataset (CSV/Excel)