**Decomposition and Structured Research Plan**

**Research Plan Outline**

**Objective**:

To understand and segment Zomato’s customers based on their demographics, purchasing behavior, and preferences to tailor marketing strategies and improve service offerings.

**Key Questions to Answer**:

* Who are Zomato’s customers?
* What segments can we split them into based on demographics, order history, and preferences?
* What is their purchasing behavior (frequency, order size, time of order, preferred cuisine)?
* How do different customer segments contribute to overall revenue?
* What are the retention rates and customer lifetime value (CLV) across different segments?

**Hypotheses**:

* Customers can be segmented into different groups based on age, location, and order of frequency.
* High frequency customers contribute to a large share of revenue compared to occasional customers.
* Customers preferring premium restaurants have a higher average order value.
* Younger customers prefer fast food while older customers prefer traditional cuisine.
* customers who prefer high-rated restaurants have higher retention rates.

**Visualizations**:

* Demographic breakdown: Bar charts and pie charts showing the distribution of customers by age, location, etc.
* Segment analysis: Cluster analysis visualized using scatter plots.
* Purchasing behavior: Line charts showing order frequency over time, histograms for order value distribution.
* Revenue Contribution: Pareto charts showing revenue contribution by customer segments.
* Retention and CLV: Cohort analysis and CLV bar charts.

**Data preparation**:

* **Users Table**: Clean and preprocess user demographic data (e.g. age, location).
* **Orders Table**: Aggregate order data to calculate order frequency, average order value, preferred order times, etc.
* **Food and Menu Tables**: Link to orders to determine popular items and cuisine preferences.
* **Restaurants Table**: Add ratings and types of restaurants for a deeper analysis of preferences.

**Dashboard Assembly**:

* Design a user-friendly dashboard layout to include key visualizations.
* Implement interactive filters and drill-downs for detailed analysis.
* Optimize the dashboard for performance and real-time data updates.