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MUKESH PATEL SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING

Report on

Visual Analytics

Topic: Quick Commerce Platform Analysis

Submitted By:

Akanksha Poojary (A048)

Pratham Pradhan (A049)

Riya Sanghai (A051)

Under the Guidance Of:

Prof. Bhavna Bose

Department of Information Technology

Vile Parle (W), Mumbai – 400056

Chapter 1: Introduction

Quick commerce platforms like Blinkit, JioMart, and Swiggy Instamart have redefined last-mile delivery by promising groceries and essentials within minutes. To evaluate their performance, delivery times, repeat purchase behavior, and order distribution were analyzed. Using Tableau dashboards, this report visualizes platform-level performance, identifies key trends, and compares consistency across product categories.

1.1 About the Dataset

- The dataset captures 100,000 orders across Blinkit, JioMart, and Swiggy Instamart. Each record includes:
    - Platform Name
    - Order ID
    - Delivery Time (minutes)
    - Product Category (e.g., Grocery, Dairy, Snacks)
    - Order Value (INR)
    - Delivery Delay (Yes/No)
    - Repeat Purchase Rate
    - Service Rating

Chapter 2: Problem Statement

In an intensely competitive Indian quick commerce market, consumers demand speed, consistency, and reliability. However, it remains unclear which platform excels at delivery performance, product demand, or customer retention. Fragmented metrics complicate decision-making on whether to focus efforts on reducing delays, improving speed, or enhancing repeat purchases.

2.1 Core Challenges

- Delivery consistency varies by platform and product category.
- Order volumes are uneven across Blinkit, JioMart, and Swiggy Instamart.
- High-value categories may still face delivery delays.
- Understanding repeat purchase rates is critical for retention.

2.2 Objective

Analyze platform performance through delivery speed, order value, and customer loyalty. Combine multiple views to identify leaders in speed and reliability, product categories with the highest demand, and patterns in customer retention.

Chapter 3: Methodology

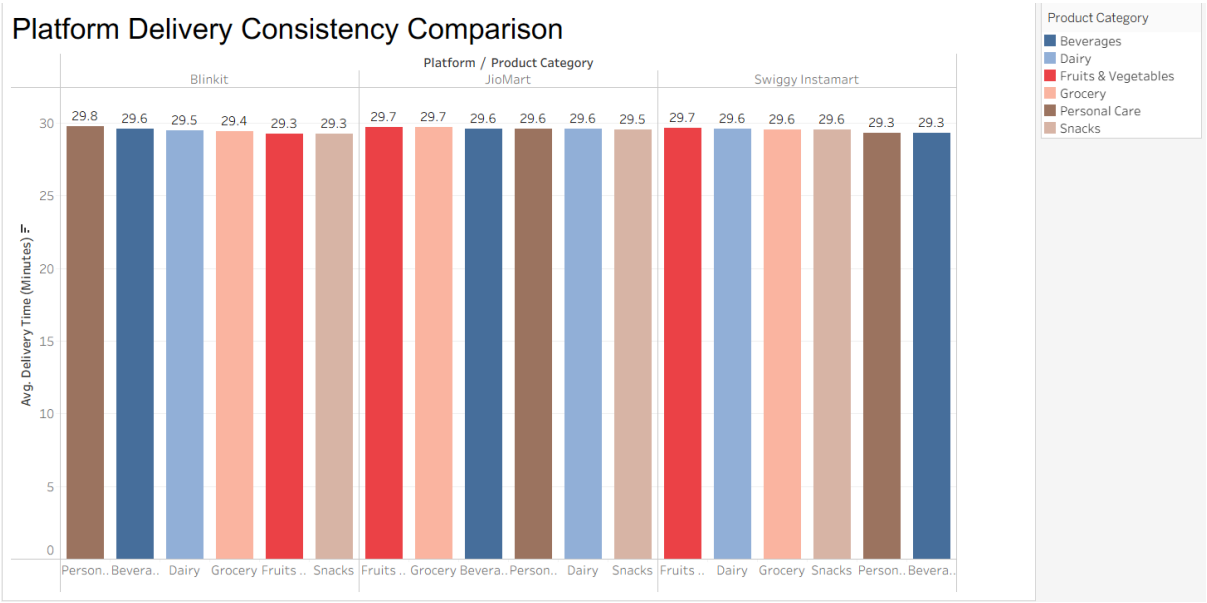
3.1 Steps We Followed

- Cleaned the dataset, ensured unique order IDs.
- Built calculated fields for delays, repeat purchases, and averages.
- Created six Tableau sheets comparing delivery times, order values, and retention metrics.
- Integrated sheets into a final dashboard with interactive filters.

3.2 Sheet-by-Sheet Explanation

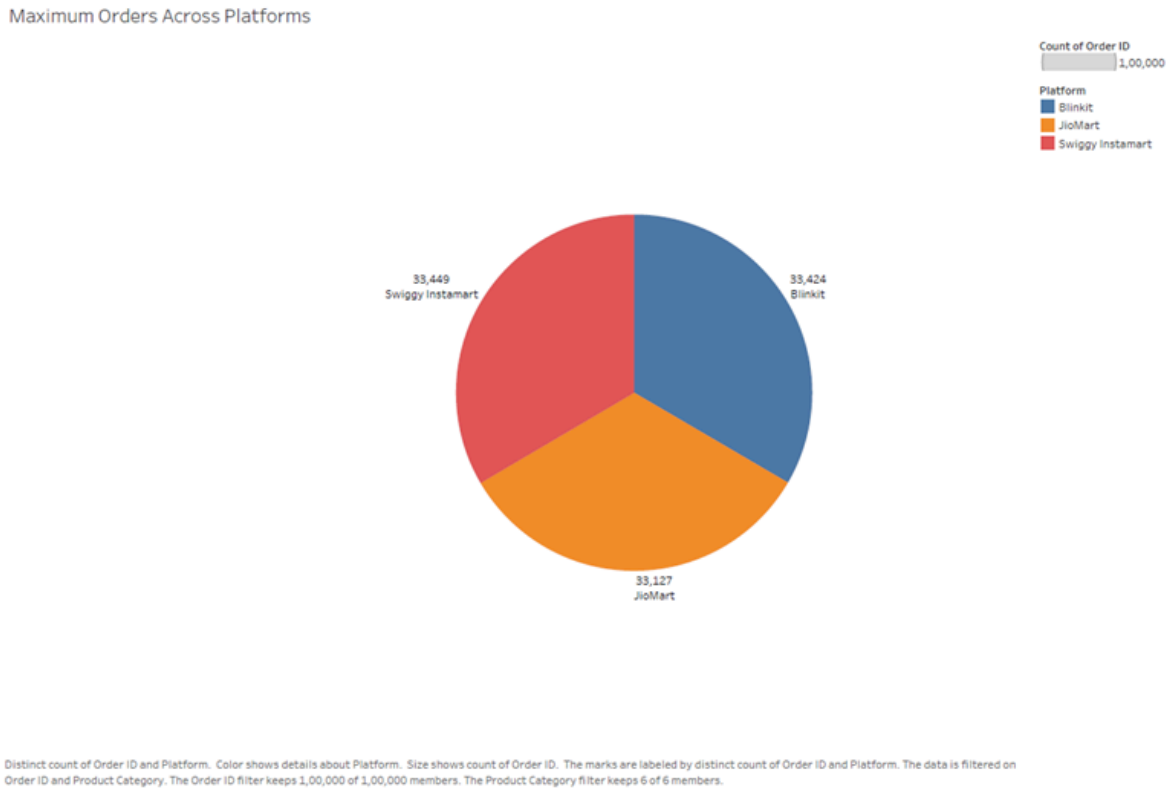
3.2.1 Sheet 1 — Delivery Consistency Comparison

This sheet compares average delivery times across product categories. All three platforms show delivery averages near 29–30 minutes, but consistency varies slightly depending on category.



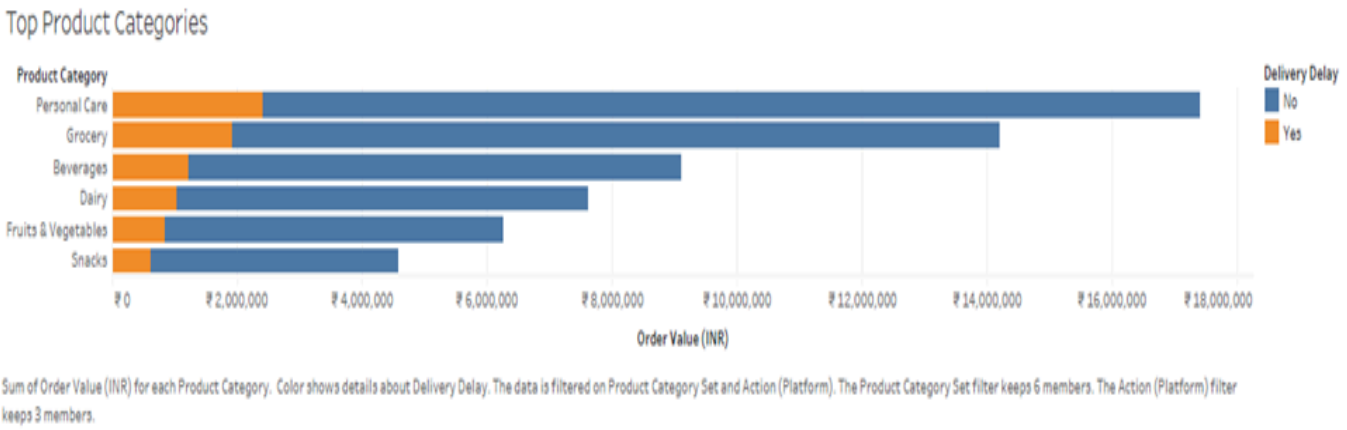
3.2.2 Sheet 2 — Maximum Orders Across Platforms

Order counts are nearly equal, with ~33,000 per platform, showing competitive parity. This suggests none of the three platforms overwhelmingly dominates in order volume.



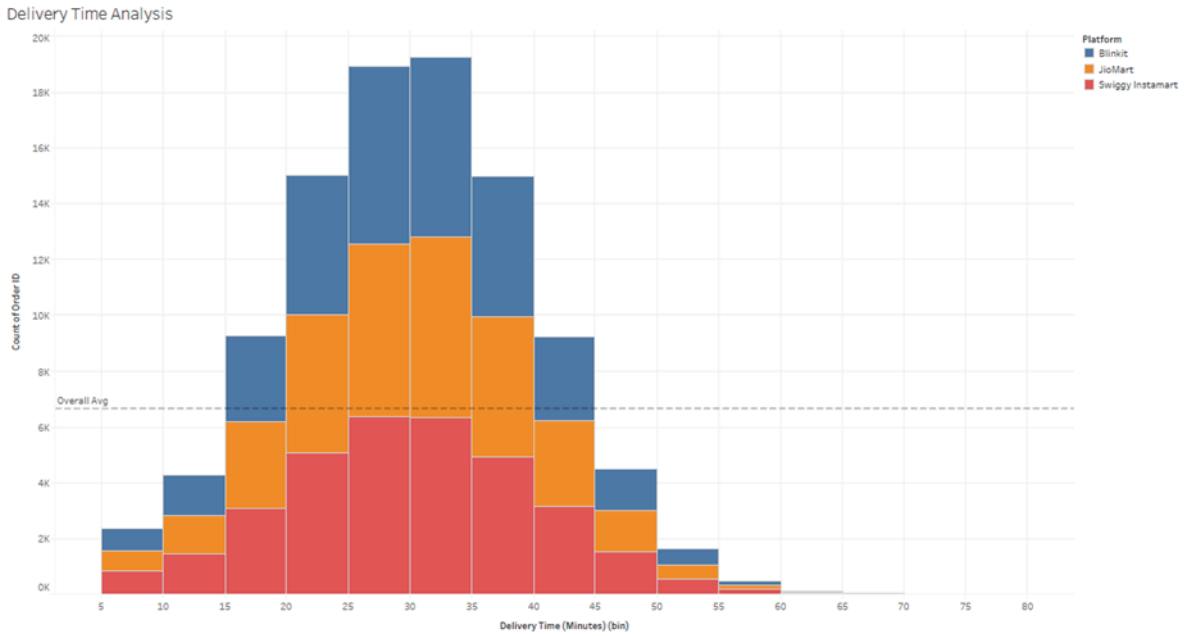
3.2.3 Sheet 3 — Top Product Categories

High-value categories include Grocery, Personal Care, and Beverages. However, delays are still observed in these top categories, highlighting operational inefficiencies.



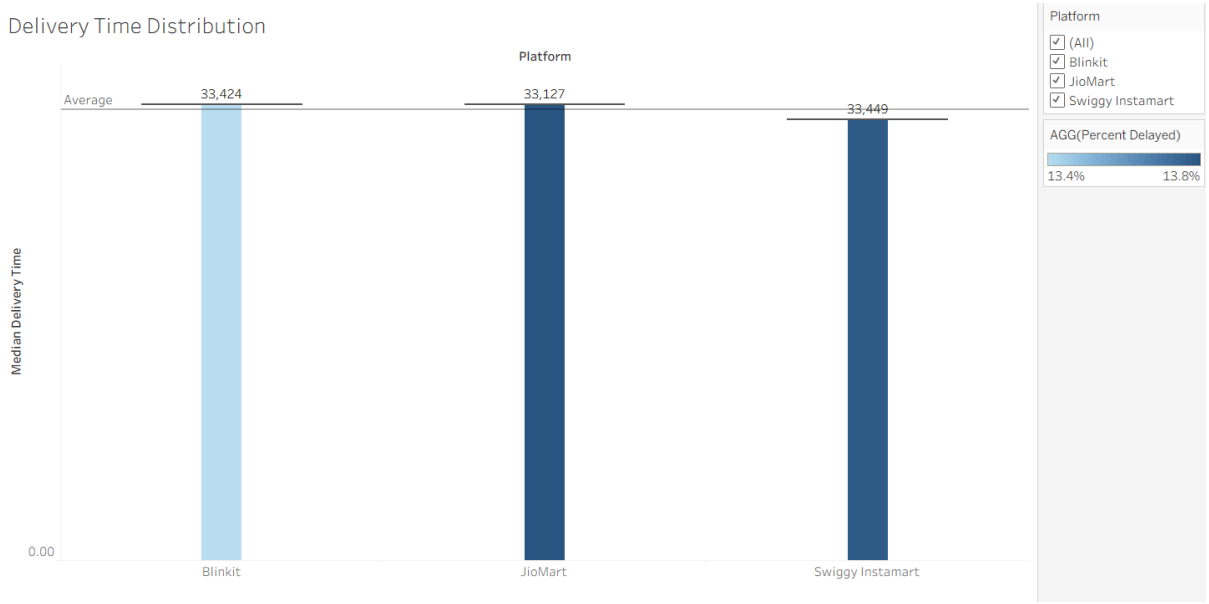
3.2.4 Sheet 4 — Delivery Time Analysis

A distribution of delivery times shows most orders within 20–35 minutes. Outliers beyond 40 minutes indicate occasional delays that may impact customer satisfaction.



3.2.5 Sheet 5 — Delivery Time Distribution Comparison

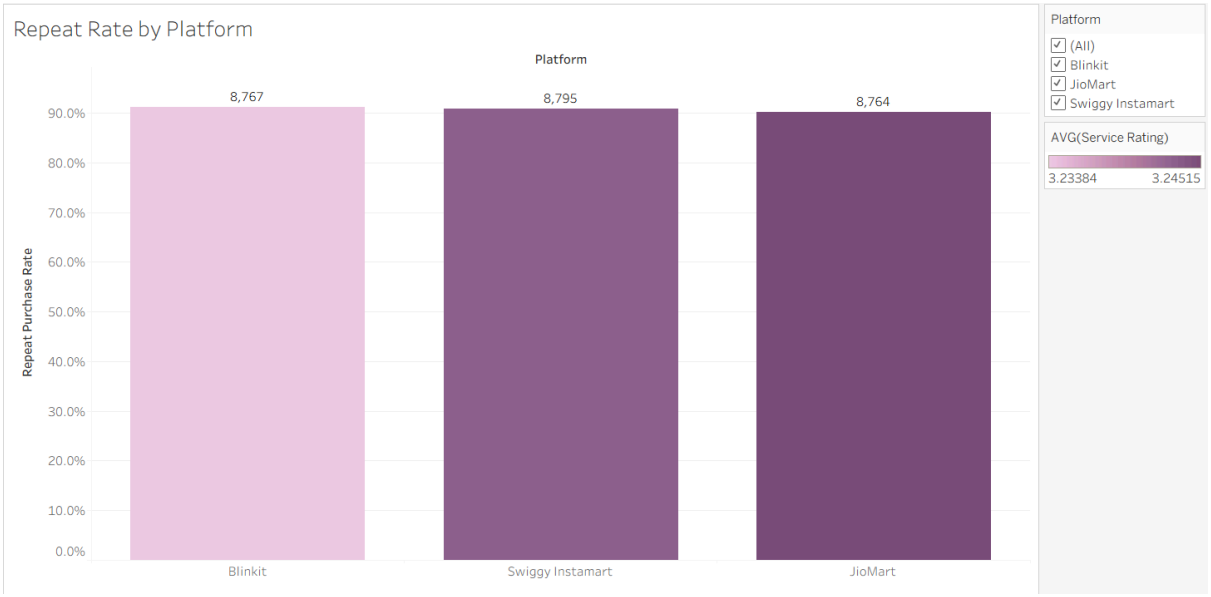
Median delivery times for Blinkit, JioMart, and Swiggy Instamart are closely aligned (~29–30 minutes). Delay percentages range around 13–14%, suggesting improvement opportunities.



3.2.6 Sheet 6 — Repeat Purchase Rate and Service Rating

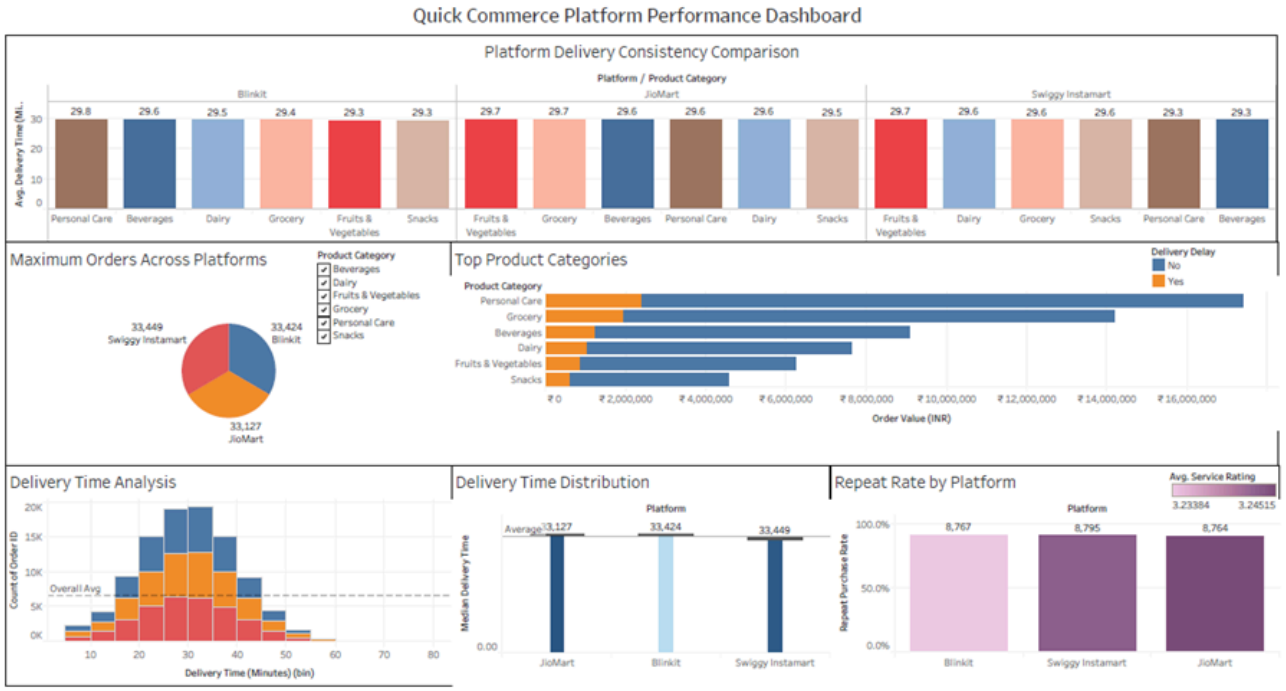
Analyzes customer retention and satisfaction.

Repeat purchase rates are between 70–80% across platforms, showing strong loyalty. Average service ratings are above 3.2/5, suggesting generally positive experiences.



3.2.7 Final Dashboard

The integrated dashboard consolidates delivery times, orders, and repeat behavior. Interactive filters allow comparison by platform and product category, providing a complete performance view.



3.3 Short Story that Connects All Sheets

The story begins with delivery consistency, showing similar averages across platforms. Next, maximum orders confirm near-equal market shares. Product category analysis highlights grocery and personal care as top drivers of value, but also prone to delays. Delivery time analysis reveals most orders within 30 minutes, though 13–14% still face delays. Finally, repeat purchase rates and service ratings indicate strong customer loyalty, suggesting that reliability is as important as speed in customer retention.

Chapter 4: Conclusion

Blinkit, JioMart, and Swiggy Instamart perform similarly in delivery speed and order volume; differentiation lies in handling high-value categories and fostering customer retention. Addressing delivery delays and enhancing service quality will be key for competitive advantage.

4.1 Key Takeaways

- Delivery averages around 30 minutes across platforms.
- Order distribution is balanced (~33,000 orders each).
- Grocery and Personal Care dominate revenue but have delivery delays (~13–14%).
- Repeat purchase rates over 70% demonstrate strong loyalty.

4.2 Further Improvements

- Optimize logistics to reduce delivery delays.
- Enhance consistency in critical categories like Grocery.
- Improve user experience to raise service ratings beyond 3.2/5.
- Implement real-time delivery monitoring and alerts.

How Tableau Helped:

Tableau played a crucial role in transforming large volumes of complex and fragmented quick commerce data into clear, actionable insights. Key benefits observed include:

Ease of Visual Exploration:
Tableau's intuitive drag-and-drop interface and broad variety of visualization options—such as bar charts, scatter plots, histograms, and interactive maps—enabled rapid exploration of delivery performance, order volumes, and customer behavior. This made it easy to detect patterns, cluster data points, and highlight outliers, even for users without deep technical expertise.

Powerful Comparative Analysis:
By enabling multi-dimensional visualizations and the creation of calculated fields (e.g., delivery delay percentages, repeat purchase rates), Tableau allowed simultaneous comparison across platforms, product categories, and time periods. Features such as dual-axis charts and drill-downs facilitated nuanced assessment of scale, growth trends, and volatility, enriching the analysis.

Effective Storytelling and User Engagement:
Interactive dashboards allowed seamless filtering and drill-down from summary views to detailed analytics, tailoring the narrative and enabling users to answer specific questions. This feature supported data storytelling, making complex operational and customer loyalty insights accessible for varied stakeholders—decision makers, analysts, and business users.

Handling Large and Diverse Datasets:
Tableau efficiently managed the sizable dataset of over 100,000 orders, supporting real-time interaction without performance issues. The capability to integrate multiple worksheets into one dashboard with linked filters enhanced coherence and insight generation.

Bridging Data and Decisions:
Beyond displaying "what the numbers are," Tableau helped uncover "why they matter" by visually marrying different variables and temporal trends, making the data a practical tool for strategic improvements. This empowered actionable interventions in logistics optimization, customer retention strategies, and competitive positioning.

References

- Dataset of Quick Commerce Platforms (Blinkit, JioMart, Swiggy Instamart)
- Industry Articles on Indian Quick Commerce (2024–25)