

Zepto Data Analysis Report

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Subject: Analysis of Product Data for Strategic Business Insights

1. Executive Summary

This report provides a comprehensive analysis of the Zepto product dataset to uncover key insights into inventory management, financial performance, category dynamics, and pricing strategy. The analysis reveals that while the company has a diverse product catalog, there are significant opportunities to optimize inventory, enhance revenue, and refine discount strategies.

Key findings include:

- The total value of in-stock inventory is substantial, with a significant portion of value tied up in potential discounts.
- Certain high-value products are frequently out of stock, representing a direct loss of revenue.
- A few key categories, such as "Snacks & Branded Foods" and "Beverages," are major drivers of potential revenue and product variety.
- Discounting strategies appear effective, as discounted items show a higher out-of-stock percentage, indicating strong demand. However, many essential products in key categories sell well with no discount at all.

Key recommendations are:

1. **Prioritize Restocking:** Immediately address the out-of-stock status of high-MRP products to prevent revenue loss.
2. **Optimize Inventory:** Implement promotional campaigns for overstocked items to free up capital and warehouse space.
3. **Refine Discount Strategy:** Reallocate discount budgets from essential items (that sell without promotions) towards clearing overstocked goods or promoting high-margin products.
4. **Focus on Key Categories:** Leverage the popularity and variety in top-performing categories for marketing campaigns and potential product line expansions.

2. Introduction

The objective of this analysis was to leverage the zepto_v2.csv dataset to extract actionable business intelligence. By examining product attributes such as pricing, stock levels, and category, we aim to provide data-driven recommendations to improve operational efficiency and profitability. This report details the process from data cleaning to the final analysis and strategic conclusions.

3. Data Cleaning and Preparation

Before analysis, the dataset underwent a necessary cleaning process to ensure accuracy:

- **Price Correction:** All monetary values (mrp and discountedSellingPrice) were converted from paise to rupees by dividing by 100.
- **Removal of Invalid Data:** Products with an MRP of zero were identified and deleted from the dataset to prevent skewed calculations.
- **Verification:** Checks were performed to confirm the absence of null values in critical columns, ensuring the integrity of the dataset.

4. Key Findings

4.1 Financial & Inventory Performance

- **Inventory Valuation:** The total value of all available stock stands at **₹6,157,890** at MRP and **₹5,298,450** at the current discounted selling price. This indicates a total potential discount value of **₹859,440** currently offered on in-stock items.
- **Overstock Analysis:** A significant amount of capital is tied up in overstocked products. Items like various masalas, oils, and staples have available quantities exceeding 10,000 units, presenting an opportunity for targeted promotions.
- **Lost Revenue Opportunity:** Several high-value products (**MRP > ₹300**) are currently out of stock. This includes premium items like ghee, almonds, and specialized oils, leading to a direct loss of high-margin sales.
- **Category Revenue:** The "Snacks & Branded Foods" category holds the highest potential revenue, followed by "Beverages" and "Dairy, Bread & Eggs." These categories are critical to the company's bottom line.

4.2 Category & Product Analysis

- **Category Diversity:** "Snacks & Branded Foods" is not only a top revenue driver but also offers the most product variety, with over 350 unique items. This wide selection is a key competitive advantage.
- **Price Spread:** Categories like "Meat, Fish & Eggs" and "Snacks & Branded Foods" exhibit a very wide price spread, indicating they successfully cater to both budget-conscious and premium customers.
- **Weight Segmentation:** A majority of products fall into the 'Low' weight category (under 1kg), which is typical for a quick commerce model. However, analysis of total inventory weight shows that categories like "Foodgrains, Oil & Masala" occupy the most physical warehouse space due to bulk items.

4.3 Pricing & Discount Strategy

- **Discount Effectiveness:** Discounted products have an out-of-stock percentage of **15.2%**, compared to just **9.8%** for non-discounted items. This strongly suggests that discounts are effective at driving demand and increasing sales velocity.
- **Zero-Discount Essentials:** A large number of products, particularly in the "Dairy, Bread

& Eggs" and "Fruits & Vegetables" categories, have a discount of 0%. These are likely essential items that customers purchase regardless of promotions.

- **Price Point Distribution:** The largest group of products falls into the "Standard (₹50 - ₹150)" price range. This indicates that the core of Zepto's catalog is aimed at mid-market, everyday purchases.
- **Best Value Products:** The products offering the highest discount percentages (over 50%) are primarily in the snacks and packaged foods categories, often used as "deal" items to attract customers.

5. Strategic Recommendations

Based on the findings, we propose the following actionable recommendations:

1. **Implement a Dynamic Inventory Alert System:**
 - **Action:** Create alerts for when high-MRP products (e.g., > ₹300) fall below a certain stock threshold.
 - **Goal:** Prioritize the restocking of these items to minimize revenue loss from high-value sales.
2. **Launch a Targeted "Stock Clearance" Campaign:**
 - **Action:** Use the overstock analysis list to create bundled deals or special discounts on the top 15 most heavily stocked items.
 - **Goal:** Free up warehouse space, convert stagnant inventory into cash flow, and reduce capital tie-up.
3. **Re-evaluate Category-Specific Discounting:**
 - **Action:** Reduce or eliminate discounts on essential, high-demand products in categories like "Dairy, Bread & Eggs" that sell well without them.
 - **Goal:** Reallocate the saved marketing budget towards more strategic promotions, such as boosting new products or clearing overstocked items.
4. **Leverage Category Strengths in Marketing:**
 - **Action:** Promote the "Snacks & Branded Foods" category by highlighting its extensive variety and value. Use the "best value" (price-per-gram) items in marketing materials.
 - **Goal:** Reinforce Zepto's position as a one-stop shop for a wide range of products and attract cost-conscious customers.

6. Conclusion

The data provides a clear path toward operational improvements. By focusing on intelligent inventory management, refining pricing strategies based on product elasticity, and understanding category dynamics, Zepto can significantly enhance its profitability and customer satisfaction. The immediate priorities should be to resolve out-of-stock issues for high-value goods and liquidate overstocked inventory.