Blinkit Grocery Data Power BI Project Report

Author: Sudheer Laveti

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1. Executive Summary

This Power BI project analyses sales data from Blinkit, a leading grocery delivery service, to uncover sales trends, product performance, and the influence of outlet-specific characteristics on total sales. The data is explored through multiple visualizations, including bar charts, line charts, and donut charts. This report will provide a detailed breakdown of the analysis, including insights into sales distribution by item type, outlet characteristics, and key performance indicators (KPIs).

2. Objectives of the Analysis

The primary objectives of this analysis are:

- To explore total sales across different dimensions such as item type, outlet location, outlet size, and establishment year.
- To assess product ratings and their relationship to sales performance.
- To visualize the distribution of fat content among grocery items.
- To provide insights for potential business improvements such as product assortment, sales strategy, and outlet expansion decisions.

3. Dataset Overview

3.1. Data Sources

The dataset used in this analysis contains the following key attributes:

- **Item Identifier**: A unique code representing each product.
- **Fat Content**: Indicates the fat content of the products, categorized into "Low Fat" and "Regular".
- **Item Type**: Describes the category of each product (e.g., Dairy, Vegetables, Snacks).
- **Outlet Identifier**: A unique code representing each outlet.
- **Outlet Size**: Describes the size of the outlet (Small, Medium, or Large).
- **Outlet Location Type**: Categorizes outlets based on their geographic location (e.g., Tier 1, Tier 2 cities).
- **Outlet Establishment Year**: The year in which the outlet was established.
- **Item Outlet Sales**: Represents the total sales for each product in the respective outlets.

- **Customer Ratings**: Provides the average rating for each product based on customer feedback.

4. Analysis and Visualizations

4.1. Total Sales, Average Sales, and Key Metrics Overview

Visualization: Summary Dashboard

- This dashboard provides a high-level overview of:
    - **Total Sales**: Sum of sales across all products and outlets.
    - **Average Sales per Item**: Average sales per product across different outlets.
    - **Average Rating**: Average customer rating across all products.
    - **Number of Items Sold**: Total number of items sold across all outlets.

Key Insights:

- The **Total Sales** metric shows a clear peak in sales during specific periods, which might align with promotional events or peak shopping times.
- **Average Rating** is relatively high, suggesting overall customer satisfaction with the product offerings.
- **Average Sales per Item** helps identify top-performing items that are contributing significantly to overall revenue.

Actionable Insight: The business can focus on top-rated items with high sales, combining the data from ratings and sales performance to optimize its product offerings.

4.2. Fat Content Distribution

Visualization: Donut Chart

- The donut chart displays the proportion of products categorized by **Fat Content** (Low Fat vs. Regular).

Key Insights:

- Regular-fat items dominate the dataset, suggesting that consumers may prefer regular-fat items, or that the product assortment has more regular-fat items.
- Low-fat items, though fewer in number, might still cater to a health-conscious customer base.

Actionable Insight: A deeper analysis of sales performance of low-fat items versus regular-fat items could help Blinkit better align its inventory with consumer preferences. A marketing

campaign focusing on low-fat products might help increase their sales among health-conscious customers.

4.3. Sales by Outlet Location Type

Visualization: Clustered Bar Chart

- The chart shows total sales distributed across different outlet location types (e.g., Tier 1 cities, Tier 2 cities).

Key Insights:

- **Tier 1 cities** generate the highest sales, which suggests a higher demand in urban areas.
- **Tier 2 cities** contribute a significant portion but trail behind Tier 1 in terms of total sales.

Actionable Insight: The business can allocate more resources to Tier 1 cities where sales are higher, while also identifying growth opportunities in Tier 2 cities. Further segmentation could be done to see what products perform best in different cities.

4.4. Sales by Item Type

Visualization: Stacked Bar Chart

- The chart displays total sales distributed across different **Item Types** (e.g., Dairy, Vegetables, Snacks).

Key Insights:

- **Dairy products** and **Snacks** contribute the highest sales volumes, indicating customer preferences toward these categories.
- Categories like **Frozen Foods** and **Fruits** have lower total sales, suggesting lower demand or less focus on these categories.

Actionable Insight: The company could introduce promotions or bundled offers for low-performing categories to boost their sales. Meanwhile, continued investment in high-performing categories could maintain their momentum.

4.5. Sales by Outlet Establishment Year

4.6. Sales by Outlet Size

Visualization: Donut Chart

- The chart breaks down total sales by **Outlet Size** (Small, Medium, Large).

Key Insights:

- **Medium-sized outlets** generate the most sales, followed by **Large outlets**.
- **Small outlets** have the lowest sales, which could be due to limited inventory or foot traffic.

Actionable Insight: The company could explore strategies to increase sales in smaller outlets, such as increasing product variety or enhancing visibility through digital platforms. For medium and large outlets, maintaining sufficient inventory and optimizing store layout could further boost sales.

4.7. Sales by Outlet Location Type

Visualization: Funnel Chart

- This chart summarizes sales across different **Outlet Location Types**.

Key Insights:

- **Tier 1 cities** continue to outperform other locations in terms of sales.
- The funnel shows a steep drop-off in sales in **Tier 3 cities**, indicating that these areas might need more attention to improve sales.

Actionable Insight: Blinkit could focus on expanding its presence in underperforming areas by adapting product offerings, increasing marketing efforts, or improving customer service in Tier 3 cities.

5. Key Insights and Recommendations

5.1. Insights

- **Top Performers**: Dairy and Snacks are high-performing categories in terms of sales volume.
- **Outlet Location Impact**: Outlets in Tier 1 cities consistently outperform others, suggesting a higher demand and larger customer base in urban areas.
- **Outlet Age**: Older outlets perform better than newer ones, indicating customer loyalty to established locations.
- **Fat Content**: Regular-fat items are preferred by customers, though low-fat items could see a boost with targeted marketing.

5.2. Recommendations

- **Expand in Tier 1 Cities**: Allocate more resources to high-demand areas to capitalize on sales growth.
- **Improve Performance in Tier 3 Cities**: Consider tailored product offerings, localized marketing campaigns, and enhanced customer service to improve sales in lower-tier cities.
- **Focus on High-Performing Categories**: Continue promoting Dairy and Snacks, but also consider boosting underperforming categories like Frozen Foods through promotions or bundled offers.
- **Enhance Sales in Smaller Outlets**: Invest in optimizing product assortments, layout, and visibility for smaller outlets to increase sales potential.

6. Conclusion

This analysis of Blinkit's grocery sales data offers a comprehensive view of how different factors—such as outlet location, size, item type, and fat content—affect total sales. With these insights, Blinkit can optimize its product offerings, focus on high-performing outlets, and identify areas for improvement in underperforming locations or categories. The visualizations created in Power BI provide a clear and actionable framework for decision-making.

7. Appendix: Visualizations

The following visualizations were created using Power BI to analyze Blinkit's grocery sales data. Each chart corresponds to a key section of the report and provides deeper insights into the analysis.