IN-DEPTH ANALYSIS OF BLINKIT

OVERVIEW

Blinkit is India's third-largest online grocery delivery service, boasting a net worth of $8 billion. Founded in December 2013 by **Albinder Dhindsa** and **Saurabh Kumar** as Grofers, the company rebranded to Blinkit on December 13, 2021, to emphasize its quick delivery capabilities. Six months later, on June 24, 2022, Blinkit was acquired by Zomato.

ABOUT THE DATASET

The dataset "Blinkit Grocery Data" is a comprehensive collection of outlet sales data, product types, and revenue information for each year. It serves as a valuable resource for analysts and business professionals seeking insights into sales performance and trends over time.

This dataset contains detailed information about the outlets, including the types of products they offer, the revenue generated, and various other attributes such as ratings, product IDs, and opening dates. It provides a diverse and extensive representation of the Blinkit database.

BUSINESS REQUIRMENT

To conduct a comprehensive analysis of Blinkit's sales performance, Customer Satisfaction, and Inventory distribution to identify key insights and opportunities for optimization using various KPI's and visualizations in Power BI.

- **Total Sales by Fat Content:**
    1. **Objective:** Analyze the impact of fat content on total sales.
    2. **Additional KPI Metrics:** Assess how other KPI's (Average sales, Number of Items, Average Rating) vary with fat content.
    3. **Chart Type:** Donut Chart

- **Total sales by Item Type:**
    1. **Objective:** Identify the performance of different item types in terms of total sales.
    2. **Additional KPI Metrics:** Assess how other KPI's (Average sales, Number of Items, Average Rating) vary with fat content.
    3. **Chart type:** Bar Chart.
- **Fat contents by Outlets for Total sales:**
    1. **Objective:** Compare total sales across different outlets segmented by fat content.
    2. **Additional KPI Metrics:** Assess how other KPI's (Average sales, Number of Items, Average Rating) vary with fat content.
    3. **Chart Type:** Stacked Column Chart.

- **Total Sales by outlet Establishment:**
    1. **Objective:** Evaluate how the age or type of outlet establishment influences Total Sales.
    2. **Chart type:** Line Chart.
- **Sales by outlet Size:**
    1. **Objective:** Analyze the correlation between outlet size and total sales.
    2. **Chart Type:** Donut/ Pie Chart.
- **Sales by outlet Locations:**
    1. **Objective:** Asses the geographical distribution of sales across different locations.
    2. **Chart type:** Funnel Map
- **All metrics by outlet type:**
    1. **Objective:** Provide a comprehensive view of all key metrics (Total Sales, Average Sales, Number of Items, Average Rating) broken down by different outlet types.
    2. **Chart Type:** Matrix Card.

TOOLS AND TECHNOLOGIES

- **POWER BI:**
    A. PURPOSE: Data Cleaning, Transformation, Visualization and Advanced Data Analysis.
    B. USAGE: Conducting complex calculations, Generating Visualization and performing Statistical Analysis.
    C. Interactive Dashboard creation and Report making.

DATA SOURCE

This dataset is available in my Gdrive, I will provide the link for that for you reference below.

https://docs.google.com/spreadsheets/d/1bp5jueBIfZz_QV9zIrnbiH-BDscwPNEG/edit?usp=sharing&ouid=106666146711813681154&rtpof=true&sd=true

COLUMNS IN OUR DATASET

1. **Item Fat Content**: Indicates the fat content of the item, typically categorized as low fat, regular fat, etc.
2. **Item Identifier**: A unique identifier for each item in the dataset.
3. **Item Type**: The category or type of the item (e.g., dairy, beverages, snacks).
4. **Outlet Establishment Year**: The year in which the outlet was established.
5. **Outlet Identifier**: A unique identifier for each outlet/store.
6. **Outlet Location Type**: The type of location where the outlet is situated (e.g., urban, rural).
7. **Outlet Size**: The size of the outlet (e.g., small, medium, large).
8. **Outlet Type**: The type of outlet (e.g., supermarket, grocery store).
9. **Item Visibility**: The visibility of the item in the outlet, which might refer to shelf space or display prominence.
10. **Item Weight**: The weight of the item.
11. **Sales:** The sales figures for the item, typically indicating the number of units sold or revenue generated.
12. **Rating:** The customer rating of the item, usually on a scale (e.g., 1 to 5).

DATA CLEANING AND TRANSFORMATION

I will be performing the entire operation in Power Query after importing the data into Power BI from the Excel (.xlsx) file.

Checking for Null Values:

ITEM WEIGHT: This column has more then 1400 null values out of 8524 rows of data we have. We can't remove them or make any changes to them as we don't have specific instruction for that, so we are leaving it as it is.

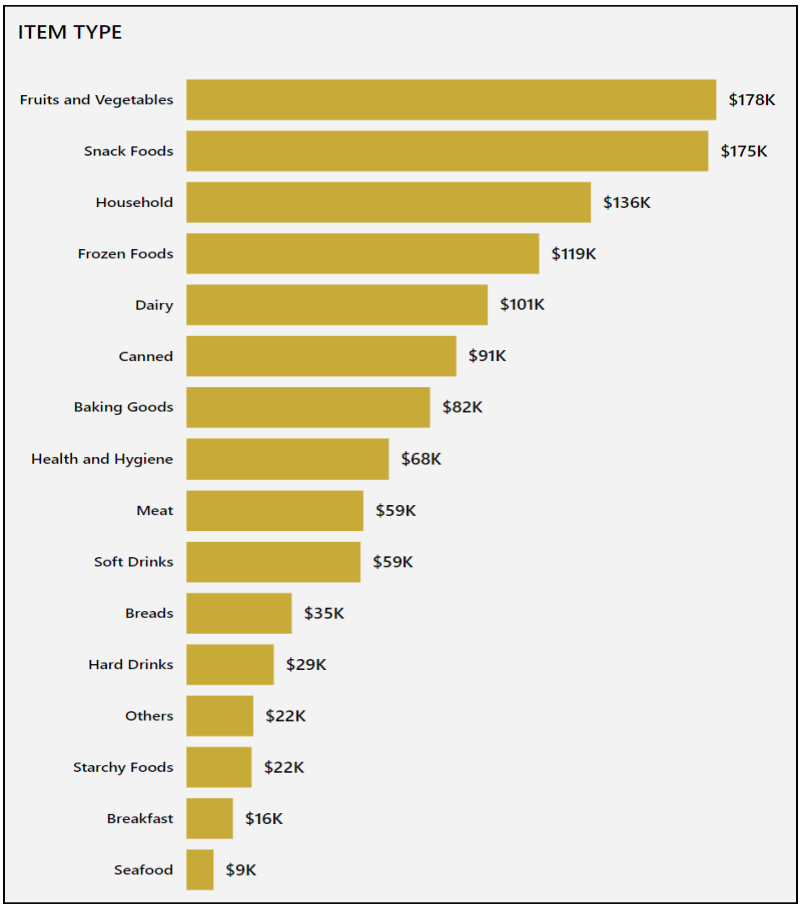
Checking for messy values:

ITEM FAT CONTENT: This column contains four types of data: 'Regular,' 'Low Fat,' 'LF,' and 'Reg,' instead of just 'Regular' and 'Low Fat.' Therefore, I will replace 'Reg' with 'Regular' and 'LF' with 'Low Fat.

Item wise Sales:

By analysing the bar chart, it's evident that the majority of the company's sales come from fruits, vegetables, and snack foods, generating approximately $353k out of the total $1.2m in sales, which accounts for 29.41% of the overall revenue.

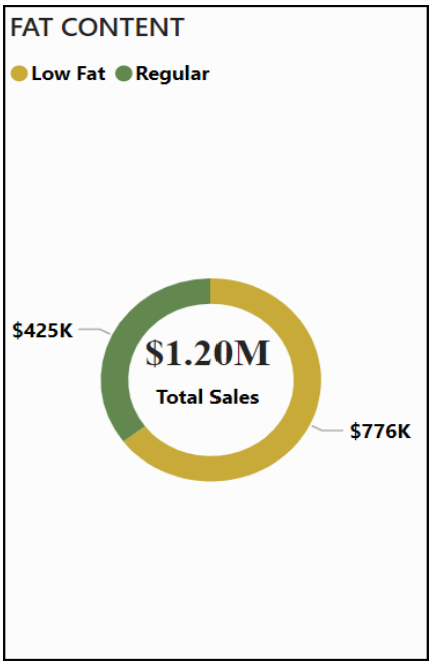
On the other hand, seafood and breakfast items are the least popular, with only $25k in sales, representing a mere 2.08% of the total sales.



Fat content wise sales:

By analysing the donut chart, I can confidently say that most people are conscious about their health and are purchasing more low-fat products. Consequently, we have achieved a total sale of $776k so far from selling only low-fat products, which accounts for 64.67% of our total sales.

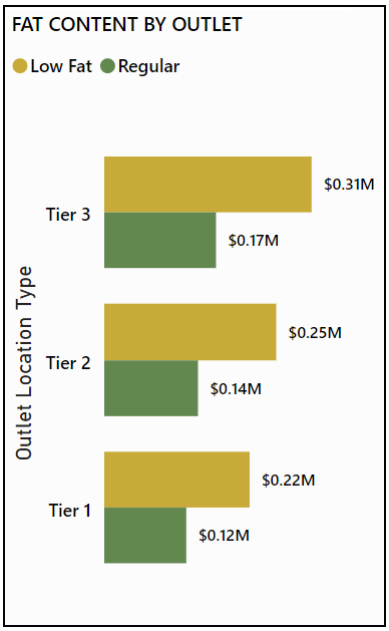
On the other hand, a significant number of customers are also buying regular fat content products, contributing to a total sale of $425k, which represents 35.41% of our total sales.



Sales of Fat content by Outlets:

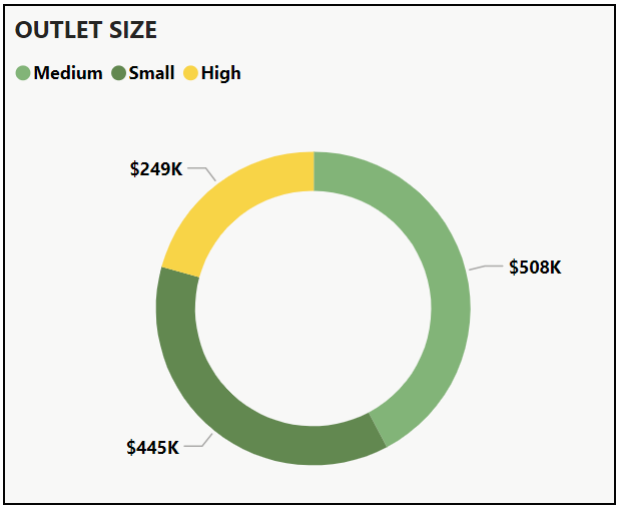
By analysing the clustered bar graph, I can conclude that Tier-3 cities are contributing the most to our sales, accounting for 40% of the total. These cities are the highest consumers of low-fat products, generating $0.31 million in revenue from low-fat products and $0.17 million from regular fat content products.

On the other hand, Tier-1 cities are the lowest consumers of our products, contributing only 28% to the total sales.



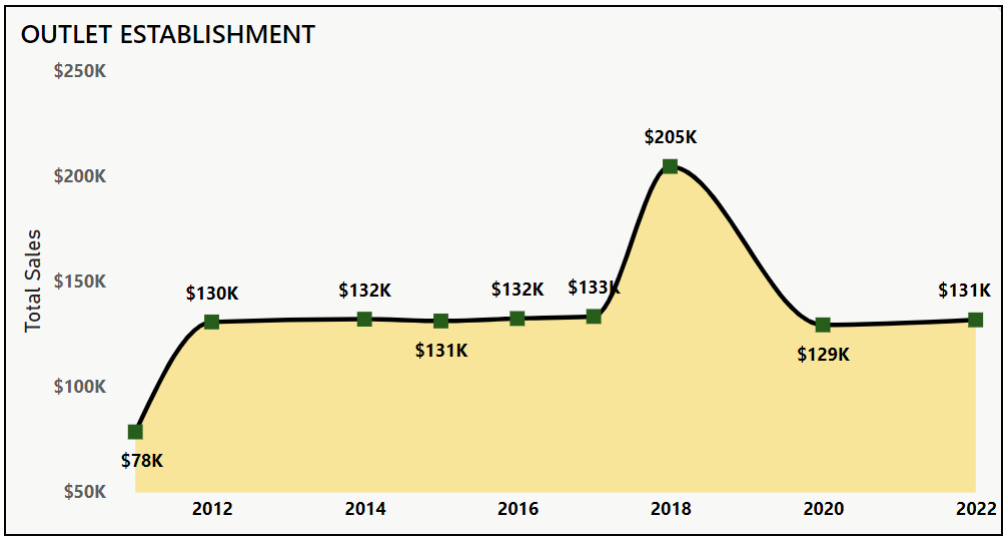
Sales by Outlet size:

Surprisingly, the outlet size doesn't significantly impact our profits. The company is making more profit from small and medium-sized outlets, while larger outlets are generating fewer sales. This trend may vary depending on the city tiers, but it is certainly unexpected. Small outlets are generating 37% of our revenue, and medium-sized outlets contribute 42.3% to the total revenue, whereas large outlets account for only 20.75% of sales.



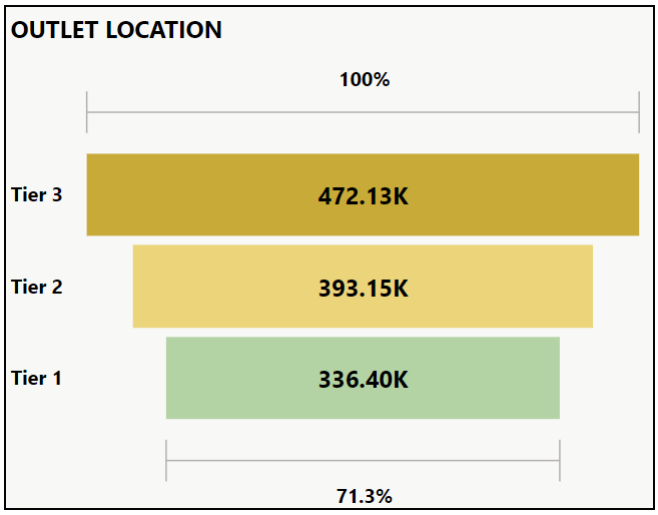
Year wise sales:

Looking at the line chart, I can say that our sales remained constant from the company's foundation until 2017. In 2018, we saw a significant increase in sales, surging from an average of $130k per year to $205k per year. However, sales dropped back to the average by the end of 2019, likely due to the impact of COVID-19 and lockdowns, which seemed to affect sales until 2022, when Zomato acquired the company.



Total sales by outlet location:

This funnel chart reveals that Tier-3 cities are our primary source of profit, contributing significantly to our sales with 39.34% of the total profit. Tier-2 cities generate 32.75% of the profit, while Tier-1 cities account for 28% of the total revenue.



Details of Outlet Type:

This matrix card presents various metrics such as outlet type, total sales, number of items, average sales, average rating, and item visibility.

It highlights that the majority of our sales come from Supermarket Type-1 outlets, which generate 65.5% of our total sales.

Out of the 8,523 items we have, these outlets sell over 5,500 items, accounting for 64.5% of our total items, with an average rating of 4.

Outlet Type	Total Sales	No of Items	AVG Sales	AVG Rating	Item Visibility
Grocery Store	$151.94K	1083	$140	4	0.10
Supermarket Type1	$787.55K	5577	$141	4	0.06
Supermarket Type2	$131.48K	928	$142	4	0.06
Supermarket Type3	$130.71K	935	$140	4	0.06

SUGGESTIONS FOR IMPROVMENT

1. Focus on Tier-3 Cities:

- Since Tier-3 cities are contributing the most to sales and profits, it would be beneficial to further invest in marketing and distribution channels in these areas to maximize revenue.

2. Enhance Sales in Tier-1 Cities:

- With Tier-1 cities contributing the least to overall sales, consider conducting targeted marketing campaigns and introducing promotions to increase visibility and attractiveness of the products in these areas.

3. Optimize Outlet Performance:

- Given that small and medium-sized outlets are outperforming large outlets in terms of revenue, the company should explore strategies to support and expand these smaller outlets. Providing them with better inventory, promotional materials, and support could help boost their sales even further.

4. Increase Focus on High-Performing Outlets:

- Since Supermarket Type-1 outlets are responsible for a significant portion of sales, consider increasing support and resources for these outlets. This could include exclusive promotions, better stock management, and enhanced customer service training.

5. Adapt to Market Changes:

- The significant drop in sales during the COVID-19 pandemic highlights the need for adaptability. The company should develop strategies to mitigate such risks in the future, such as diversifying sales channels (e.g., online sales) and improving supply chain resilience.

6. Innovate and Expand Product Line:

- Given the success of low-fat products, consider expanding the product line to include more health-conscious options. Additionally, staying attuned to market trends and consumer preferences will help in introducing new products that meet evolving demands.

FINAL CONCLUSION

In conclusion, the analysis reveals that Tier-3 cities and small to medium-sized outlets are pivotal to our company's success, significantly contributing to sales and profits. To drive growth, we should focus on enhancing support for these high-performing segments, while also implementing strategies to boost sales in underperforming Tier-1 cities and large outlets. By adapting to market changes, leveraging customer feedback, and expanding our product offerings, we can optimize performance and ensure sustained growth in a competitive market.

Link to the Complete Power Bi Dashboard: https://github.com/Nihar-Padhi/Power-Bi

THE AUTHOR

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