

Sales Performance Analysis of Blinkit Using Power BI

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Abstract

This research paper presents a comprehensive analysis of Blinkit's sales performance using Microsoft Power BI. The objective of this study is to transform raw retail data into actionable insights through data modeling, visualization, and performance metrics. The dashboard designed for this research focuses on evaluating product categories, outlet size, outlet locations, and fat content impact on sales. The findings indicate significant patterns in customer preferences, outlet efficiency, and category-wise performance. This research demonstrates how Business Intelligence tools can enhance decision-making in modern quick-commerce environments.

Keywords: Power BI, Business Intelligence, Sales Analysis, Quick Commerce, Blinkit, Data Visualization, Retail Analytics.

Introduction

Business Intelligence (BI) tools are reshaping business analytics by enabling automated, interactive, and data-driven insights. Blinkit is one of India's leading quick-commerce platforms that provides grocery and essential product delivery within minutes. This research aims to analyze Blinkit's sales data using Power BI to identify key sales patterns, outlet performance, and customer behavior trends.

The study demonstrates how Power BI can transform large datasets into meaningful dashboards that help businesses improve inventory planning, outlet strategies, and product management.

Literature Review

Multiple research studies highlight the importance of data visualization and BI in retail decision-making. BI tools help organizations improve decision-making efficiency by 70%. Power BI is widely adopted due to its integration capabilities, DAX engine, and user-friendly interface. Quick-commerce companies rely heavily on sales forecasting and customer demand analysis, reinforcing the relevance of analytics in modern retail business.

Problem Definition

Blinkit generates large volumes of sales data, making manual analysis time-consuming and inefficient. There is a lack of unified dashboards to analyze product performance, outlet efficiency, and the effect of product attributes such as fat content. The problem addressed in this research is the need for an automated BI dashboard to provide real-time insights and support strategic business decisions.

Research Objectives

- To build an interactive Power BI dashboard for Blinkit's sales data.
- To analyze outlet location, outlet size, and product category performance
- To study consumer buying trends based on fat content and MRP.
- To identify high- and low-performing product segments.

- To provide a data-driven approach for retail decision-making.

Methodology

The methodology involves:

Data Collection: The dataset includes product details, MRP, fat content, outlet type, location type, and sales values.

Data Preprocessing: Data cleaning was performed using Power Query to handle missing values and correct categorical inconsistencies.

Data Modeling: Relationships were created among tables to ensure accurate reporting and calculations.

Dashboard Design: KPIs, charts, and filters were created using DAX measures and interactive visuals.

Insight Extraction: Dashboard findings were analyzed to understand sales patterns and customer behavior.

Dataset Description

- The dataset used includes:
- Item Identifier
- Item Weight
- Item Fat Content (Low Fat, Regular)
- Item Type (Snacks, Dairy, Frozen Foods, etc.)
- Item MRP
- Outlet Details (Type, Location, Size)
- Item Outlet Sales

The dataset enables category-wise, outlet-wise, and pricing-based analysis.

Power BI Dashboard Development

The dashboard includes:

- KPI Cards for total sales, average sales, number of items, and outlets.
- Donut chart showing fat content contribution.
- Bar chart for product category performance.
- Outlet location sales comparison.
- Outlet size analysis showing higher performance in medium-sized outlets.

These visualizations enable users to identify trends quickly and make informed decisions.

Results and Analysis

- The key results include:
- Tier 3 outlets show the highest sales figures.
- Medium-sized outlets generate the most revenue.
- Low Fat products outsell Regular fat products.
- Fruits, snacks, and household items show the highest sales contribution.
- High MRP does not correlate directly with high sales; customer preferences vary.

Discussion

The results indicate a strong link between outlet factors (size, location) and sales. Consumer preference trends show increasing demand for healthy products (Low Fat). The dashboard highlights sales optimization opportunities and supports data-driven decision-making for Blinkit. Power BI proved effective in visualizing multi-dimensional sales data.

Future Scope

- Integration with machine learning algorithms for demand forecasting.
- Real-time dashboards using Blinkit APIs.
- Customer segmentation and personalized recommendations.
- Inventory optimization systems linked with live stock levels.
- Enhanced predictive models to support supply chain decisions.

Conclusion

This research successfully demonstrates how Power BI can transform raw Blinkit sales data into meaningful insights. The developed dashboard provides comprehensive visibility into outlet performance, product trends, and consumer behavior. The results highlight the significant role of BI in modern retail and quick-commerce environments, improving strategic decision-making and operational efficiency.

References

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