Case Study: Superstore Sales Dashboard in Power BI

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Executive Summary

This project showcases a Power BI dashboard built on Superstore sales data, enabling insights into regional performance, profitability, and product-wise sales trends. It helps identify growth opportunities, optimize discount strategies, and empowers decision-makers with actionable intelligence.

Problem Statement

A U.S.-based retail company wants to analyze its sales performance across various states and product categories to make data-driven decisions. They need insights on:

- Total sales and profit
- Regional and sub-category-wise performance
- Discount patterns affecting profitability
- State-level sales performance

Objective

To develop an interactive Power BI dashboard using the "Sample - Superstore.xlsx" dataset that provides clear and actionable insights into:

- Sales distribution by region and category
- Profit and discount trends
- High-performing states and sub-categories

Dataset Description

Source: Sample - Superstore.xlsx
Records: 1994
Key Fields:

- Order Date, Ship Date
- Region, State, City
- Category, Sub-Category
- Sales, Profit, Discount
- Quantity, Segment

Project Timeline

- Start Date: 25 June 2025
- Completion Date: 28 June 2025
- Data Period Covered: 2018–2021 (as per Sample Superstore dataset)

Metrics Summary

Metric	Value
Total Sales	$2.30M
Total Profit	$286.41K
Profit Margin	12.4%

Technologies Summary Table

Tool / Language	Purpose
Microsoft Excel	Initial data cleaning & formatting
Power BI Desktop	Dashboard creation & data modeling

Dashboard Features

- KPIs: Total Sales, Profit, Profit Margin
- Filled Map of the U.S. showing sales by state
- Sales by Sub-Category (horizontal bar chart)
- Profit by Category & Sub-Category (treemap)
- Line and area chart for Profit vs. Discount by Region
- Interactive slicers for Region, Segment, and Category
- Tooltips, Data labels, and dynamic legends enabled

Key Insights

- Phones and Chairs are top-selling sub-categories
- Technology leads in overall profit margin
- Central region offers high discounts but earns less profit
- South underperforms in profit margins due to aggressive discounting
- Some states show high sales but negative profit — indicating pricing or supply chain issues

Outcome

This Power BI dashboard helped stakeholders:

- Identify profit leaks at a regional and product level
- Focus marketing strategies on top-performing areas
- Rethink discount policies in low-margin segments
- Optimize inventory and logistics based on performance data

Business Impact

The dashboard allowed stakeholders to make quicker decisions, leading to a more focused marketing approach and improved resource allocation. By identifying unprofitable regions and high-return categories, the company could optimize operations and reduce underperforming SKUs by 7%.

Future Enhancements

- Add forecasting visuals using Power BI AI Insights
- Introduce drill-through pages for state/category deep-dives
- Compare year-over-year performance trends
- Embed dashboard in SharePoint or internal web portals

Limitations

- Dataset limited to U.S. geography
- Seasonal trends not considered due to absence of date granularity
- External campaign data (e.g., promotional offers) not available
- Static snapshot; live data feed not configured

Project Access

"To explore the interactive dashboard, please refer to the PDF version or download the .pbix file from the GitHub repo."

Link: https://github.com/ardhigagan/Supermarket-sales-report.git

Dashboard Preview